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# World energy balances



International  
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# 2018



# World energy balances

2018

## INTERNATIONAL ENERGY AGENCY

The IEA examines the full spectrum of energy issues including oil, gas and coal supply and demand, renewable energy technologies, electricity markets, energy efficiency, access to energy, demand side management and much more. Through its work, the IEA advocates policies that will enhance the reliability, affordability and sustainability of energy in its 30 member countries, 7 association countries and beyond.

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# INTRODUCTION

*World Energy Balances* presents comprehensive energy balances for all the world's largest energy producing and consuming countries. It contains statistics on production, trade and consumption in a common unit for each source of energy for all OECD countries, the seven IEA Association countries, and over 100 other key energy producing and consuming countries, and main geographical regions, including the World. Non-OECD countries cover developing countries in Africa, Latin America and Asia, Central and Eastern European countries, and Eurasia. The consistency and complementarity of OECD and non-OECD countries' data ensure an accurate picture of the global energy situation.

Complementing the data in physical units of the sister publication *World Energy Statistics*, this book includes graphs and detailed data by country for all energy sources – coal, gas, oil, electricity, renewables and waste - expressed in balance format, for the year 2016. Alongside this, there are summary time series on production, trade, final consumption by sector, as well as key energy and economic indicators. It also presents provisional 2017 supply data for OECD countries, and initial 2017 estimates for non-OECD countries production and trade of natural gas, primary coal and oil.

In this release, energy balances and energy indicators are displayed for the world and the main geographic regions, then for OECD countries, Association countries, and finally for the other non-OECD countries.

The energy balance is a presentation of the basic supply and demand data for all fuels in a manner which shows them together but separately and expressed in a common energy unit. This allows for the easy comparison of the contribution each fuel makes to the economy and their interrelationships through the conversion of one fuel into another.

This volume has been prepared in close collaboration with other international organisations, including Eurostat, the Economic Commission for Europe of the United Nations (UNECE), the Organización Latinoamericana de Energía (OLADE), the Asia Pacific Energy Research Centre (APEREC), the United Nations Statistics Division (UNSD), and the Forestry Department of the Food and Agriculture Organisation of the United Nations (FAO).

While every effort is made to ensure the accuracy of the data, quality is not homogeneous throughout the publication, reflecting the availability of data. In some countries data are based on secondary sources, and where incomplete or unavailable, on estimates. In general, data are likely to be more accurate for production, trade and total consumption than for individual sectors in transformation or final consumption.

General issues of data quality, as well as country notes and sources, should always be consulted when using data. In addition, limited official data are available for 2017 from non-OECD countries, therefore estimations have been used in most cases.

Data were collected by the team in the Energy Data Centre (EDC) of the IEA Secretariat, headed by Duncan Millard.

Within the IEA, for OECD members, data were prepared: by Beatriz Martinez for coal, by Aidan Kennedy, Mark Mateo and Julian Smith for electricity, by Dae Yong Kwon and Samantha Mead for renewables, by Angela Ortega Pastor and Laura Thomson for oil, and by Faidon Papadimoulis and Aitor Soler Garcia for natural gas. OECD fuel data were prepared under the responsibility of Vladimir Kubecek and Julian Prime for coal, electricity and renewables, and under the responsibility of Erica Robin for oil and natural gas. OECD energy balances data were prepared

by Rémi Gigoux, under the responsibility of Roberta Quadrelli. Non-OECD countries statistics were prepared by Nicolas Coënt, Laila El-Ashmawy, Musa Erdogan, Markus Fager-Pintilä, Julia Guyon, Nikolaos Kordevas, Agnieszka Koscielniak, Dae Yong Kwon and Claire Morel, under the responsibility of Céline Rouquette.

Roberta Quadrelli and Céline Rouquette have the overall responsibility for this report. The publication and its statistics were produced by Laila El-Ashmawy, Rémi Gigoux and Nikolaos Kordevas. Desktop publishing was carried out by Sharon Burghraeve.

We would like to thank our numerous contacts worldwide in national administrations and in public and private companies for their helpful co-operation.

Complete supply and consumption data from 1971 to 2016 and selected estimates for 2017 are available on our online data service and on CD-ROM. Moreover, data can also be obtained on a pay-per-view basis. Details are available at [www.iea.org/statistics](http://www.iea.org/statistics).

Enquiries about data, methodology, or comments and suggestions should be addressed to [stats@iea.org](mailto:stats@iea.org)

## What's new?

### **New IEA Member: Mexico**

Mexico became the International Energy Agency's 30th member country on 17 February 2018. Accordingly, starting with the 2018 edition, Mexico appears in the list of IEA Members and is included in the IEA zone aggregates for data starting in 1971 and for the entire time series.

### **New Association country: Brazil**

Brazil joined the IEA as an Association country in October 2017. Accordingly, Brazil is now included in the IEA and Accession/Association countries aggregate for data starting in 1971 and for the entire time series.

# WORLD ENERGY BALANCES: AN OVERVIEW

## Global trends

This overview provides a detailed look at energy developments based on complete supply and demand data for 2016 for 150 countries and regions and where available provisional official supply or production data for 2017.

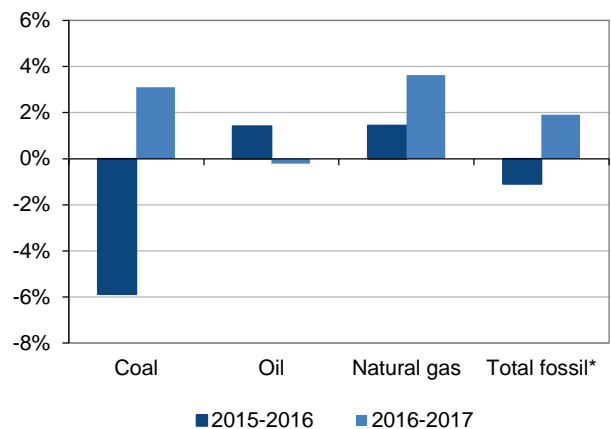
In 2016, global energy demand as measured by TPES increased slightly compared to 2015 (+0.7%) to a little less than 13 800 Mtoe. Such stability resulted from different trends: in non-OECD countries, energy demand rose by 0.9%, but by 0.1% in OECD countries. However, energy demand growth accelerated in 2017 in OECD countries (+0.5%), as discussed in more detail in the OECD section.

## Production

For 2017, global country level production data is preliminary and restricted to fossil fuels. Based on these data, production growth of fossil fuels increased after two years of decrease (+1.9% - Figure 1). This was driven by a surge in coal production after two years of decrease (+3.1% in 2017, -5.9% in 2016, -2.3% in 2015). Natural gas production continued to grow and at a higher pace (more than twice the 2016 growth rate, +3.6% in 2017). Crude oil production was fairly stable in 2017 (-0.2%), as opposed to +1.4% in 2016. The increase in coal production was particularly strong in many regions: China (+54 Mtoe, +3.1%), OECD countries (+23 Mtoe, +2.8%) and other non-OECD Asia countries (+23 Mtoe, +3.9%).

Natural gas production increased in all regions in 2017, particularly in non-OECD Europe and Eurasia (+42 Mtoe, +5.8%) and OECD (+25 Mtoe, +2.3%).

**Figure 1. Annual average change in global fossil fuels production by fuel**



\* In this graph total fossil fuels exclude peat and oil shale.

As for crude oil, growth in OECD and Africa (+2.5% and +5.1% respectively in 2017, +47 Mtoe combined) was offset by a decline in the Middle East, non-OECD Americas and non-OECD Asia including China (-1.4%, -3.9% and -3.6% respectively, so -51 Mtoe combined).

The remainder of the article looks at the detail of 2016 world production and use, and 2017 OECD supply.

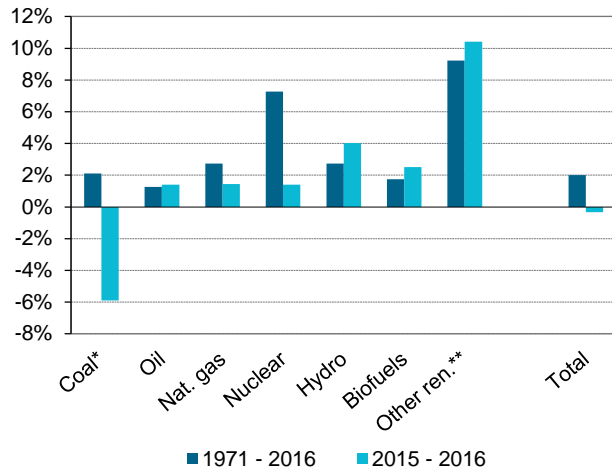
World energy production was 13 764 Mtoe in 2016 - 0.3% less than in 2015. Oil, natural gas and nuclear all grew at the same pace (+1.4%), setting new records in many countries.

Fossil fuels accounted for 81% of production - a 0.6 percentage point decrease compared to 2015. Growth in oil and natural gas was entirely offset by the coal production's sharp decline for the second year in a row (-5.9% in 2016, after -2.3% in 2015),



after 15 years of continuous growth. Together the production of these three fossil fuels decreased by 1.1% in 2016 (Figure 2).

**Figure 2. Annual average change in global energy production by fuel**



\* In this graph peat and oil shale are aggregated with coal.

\*\* Includes geothermal, solar thermal, solar photovoltaic and wind.

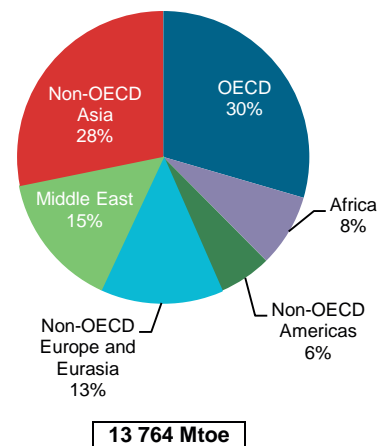
Among non-fossil sources, biofuels and waste slightly increased their share of the world energy production in 2016 (9.8% compared to 9.5% in 2015), with reviving growth (+2.5% compared to +1.1% in 2015, +0.9% in 2014).

Hydro sharply increased in 2016 (+4.0%) after having been flat in 2015 (-0.03%) due to comparatively bad weather conditions in some regions and the first decline in global production since 1989. Nevertheless hydro provided 2.5% of global production in 2016, not much more than in 2015 (2.4%). Other renewable sources such as solar PV, wind, solar thermal, geothermal, kept on expanding at a fast pace (+31.1%, +14.2%, +3.2%, +4.0%, respectively) but still accounted for less than 2% of global primary energy production together. Finally, nuclear kept constant in 2016 compared to 2015, both in terms of its share of energy production (4.9%) and growth (1.4%).

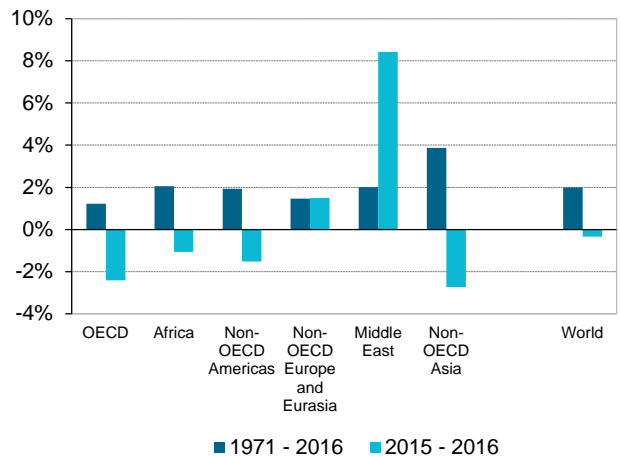
At a regional level, the OECD was the largest energy producing area just ahead of non-OECD Asia<sup>1</sup> in 2016 as in 2015 (Figure 3). OECD economies produced 30% of global energy, whereas non-OECD Asia accounted for 28% (respectively 30% and 29% in 2015). Though production decreased in both regions (-2.4% in OECD, -2.7% in non-OECD Asia),

1. In this chapter, non OECD Asia includes China region unless otherwise specified.

**Figure 3. Total production by region 2016**



**Figure 4. Annual average change in energy production by region**



they still each produced around 4 000 Mtoe, double the amount produced by the Middle East, the third biggest producing region (+8.4% in 2016 - Figure 4).

The United States remained the biggest energy producer in OECD by far in 2016, with 1 915 Mtoe, even though its production fall was the largest in volume terms in the region (-107 Mtoe). The decrease of the US production in 2016 was not offset by growth in Canada, Australia and Norway (+17.3 Mtoe together), respectively second, third and fourth biggest producers in OECD. Energy production grew in 20 of the 35 member countries of the OECD. OECD countries produced 4 064 Mtoe of energy in 2016.

In non-OECD Asia, energy production significantly decreased (-2.7%), at 3 881 Mtoe in 2016, in the wake of a strong decrease in China (-6.1%), that was not compensated by increases in the two next bigger

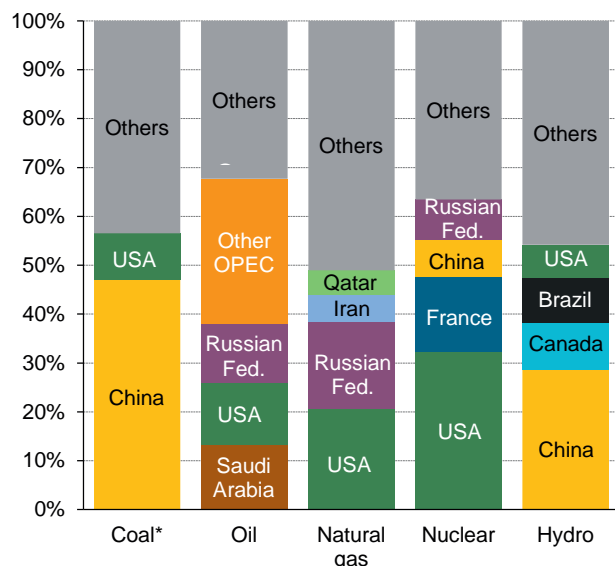
producers India (+3.6%) and Indonesia (+1.9%). In China, energy production in 2016 amounted to almost 2 400 Mtoe (-6.1%), the decline in coal production (-8.7%) and crude oil (-6.9%) being only partly compensated by growth in natural gas, hydro, nuclear and power renewables productions (+1.7%, +4.3%, +24.9%, and +18.2% respectively). In India, energy production increased by 3.6% in 2016, due to increases in coal (+2.9%) and biofuels and waste (+6.6%).

In 2016, the Middle East ranked third, with 2 043 Mtoe of energy produced. Production of energy in the Middle East grew by 8.4%, following an increase of crude oil production in the top producing economies. With 1 862 Mtoe, non-OECD Europe and Eurasia produced 1.5% more energy in 2016 than in 2015.

Africa produced 1 107 Mtoe in 2016, non-OECD Americas 806 Mtoe, a -1.1% and -1.5% decrease respectively.

The IEA family (IEA member economies, Association and Accession countries) represented 53% of the global energy production in 1971, and 56% in 2016.

**Figure 5. Largest producers by fuel in 2016**



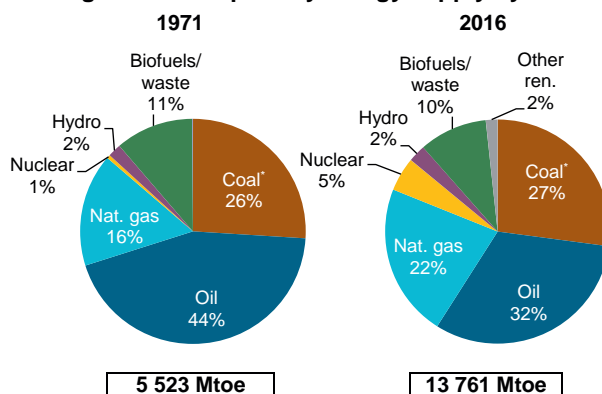
\* In this graph peat and oil shale are aggregated with coal.

Energy production is not evenly distributed across countries: for each fuel, less than five countries generally account for more than half of global production (Figure 5). China was not far from producing half of the world coal in 2016, and 29% of hydro. The United States and France combined produced almost 50% of all nuclear. Saudi Arabia, The Russian Federation and the United States contributed slightly less than 40% of the world crude oil – these last two also accounting for 40% of the world natural gas.

## Total Primary Energy Supply (TPES)

Between 1971 and 2016, world total primary energy supply (TPES) increased by almost 2.5 times (from 5 523 Mtoe to 13 761 Mtoe) and also changed structure somewhat (Figure 6). While remaining the dominant fuel in 2016, oil fell from 44% to 32% of TPES. The share of coal has increased constantly between 1999 and 2011, influenced mainly by increased consumption in China: in 2011 it reached its highest level since 1971 (29%), peaking at 71% of TPES in China. It has declined since then and represented 27% of world TPES in 2016 (one percentage point less than in 2015). Meanwhile natural gas grew from 16% to 22% and nuclear from 1% to 5%.

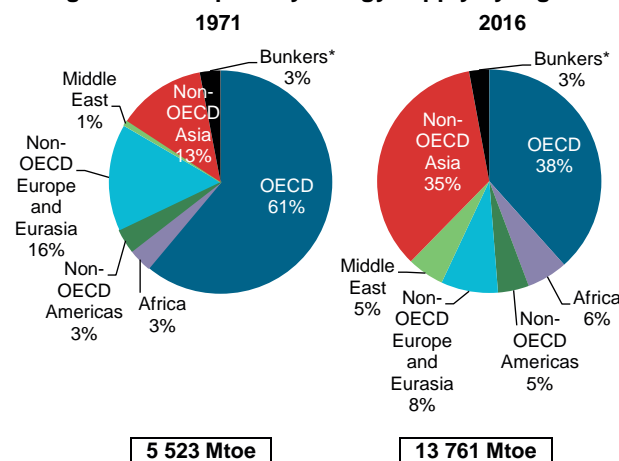
**Figure 6. Total primary energy supply by fuel**



\* In this graph peat and oil shale are aggregated with coal.

Energy demand has evolved differently across the regions between 1971 and 2016. The OECD's share of global TPES fell from 61% in 1971 to 38% in 2016 (Figure 7). It is now almost on par with non-OECD Asia, where energy demand grew seven-fold, and

**Figure 7. Total primary energy supply by region**

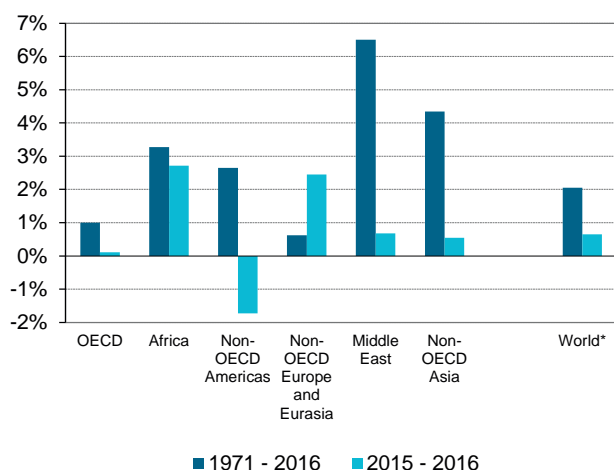


\* Includes international marine and aviation bunkers.

whose share of TPES almost tripled over the period. Though its share of global energy demand halved between 1971 and 2016, non-OECD Europe and Eurasia remained the third biggest energy consuming region, with more than 1 100 Mtoe TPES. It was followed by Africa, where energy demand over the period has multiplied by four, reaching 820 Mtoe.

Between 2015 and 2016, global TPES growth accelerated again, compared to the previous year: it increased by 89 Mtoe (+0.7%), reaching 13 761 Mtoe in 2016. During 2016 TPES increased mostly in non-OECD Asia excluding China, Africa, and non-OECD Europe and Eurasia (+3.3%, +2.7% and +2.4% respectively). It decreased by 1.7% in non-OECD Americas, by 1.1% in China, and was fairly stable (+0.1%) in OECD (Figure 8). The IEA family group accounted for 71% of TPES in 2016.

**Figure 8. Annual average change in TPES by region**



\* World also includes international marine and aviation bunkers.

Non-OECD countries account for a continuously growing share of the world energy consumption. In 2016, China accounted for 21.5% of global TPES while the United States accounted for 15.7% (Table 1). India and the Russian Federation ranked third and fourth, respectively. Japan, the second largest OECD consuming country, was in fifth position. Together, these five countries accounted for more than half of the global TPES in 2016.

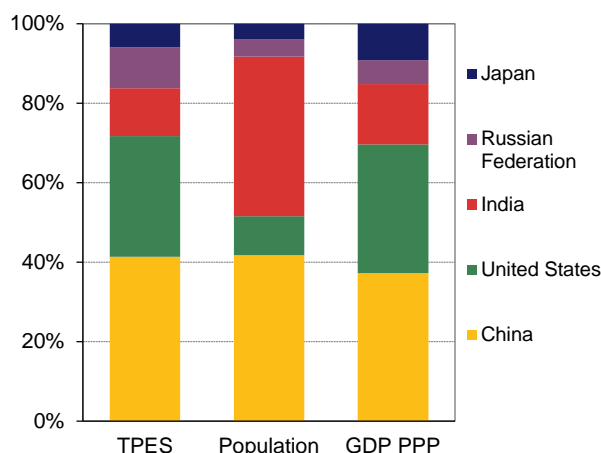
Global energy demand was even more concentrated in 2016 compared to 1971, as the top ten countries represented 62% of global energy demand, as opposed to 56% in 1971.

**Table 1. TPES – top ten countries in 2016 and 1971**

Country	TPES (Mtoe)	Share in world TPES	
		2016	1971
People’s Rep. of China	2 958	22%	7%
United States	2 167	16%	29%
India	862	6%	3%
Russian Federation	732	5%	N/A
Japan	426	3%	5%
Germany	310	2%	6%
Brazil	285	2%	1%
Korea	282	2%	0.3%
Canada	280	2%	3%
Islamic Republic of Iran	248	2%	3%
Rest of the world	5 211	38%	44%
<b>World</b>	<b>13 761</b>	<b>100%</b>	<b>100%</b>

In 2016, the top five countries in terms of TPES accounted for less than half of the world GDP<sup>2</sup>, and world population (48% and 44% respectively) but consumed 52% of total world energy. However, the relative shares of GDP, population and TPES of these five countries significantly varied from one to another (Figure 9).

**Figure 9. Top five energy consumers: 2016 relative shares\***



\* Relative shares within the top five, which differ from shares in the world total.

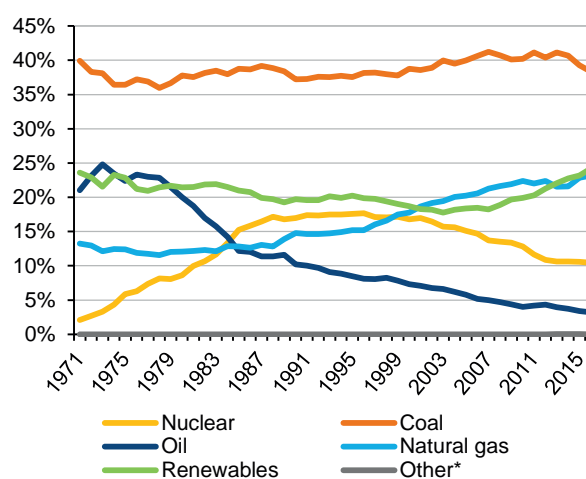
The United States consumed 16% of world energy, with slightly less than 5% of the world’s population. Conversely, China and India consumed 22% and 6% of global energy respectively, but accounted for 20% and 19% of the global population. The Russian Federation and Japan also consumed significant amounts of energy

2. In this chapter, GDP refers to GDP using purchasing power parities.

in 2016 (5.3% and 3.1% of global TPES respectively). However, energy intensities differed significantly. To produce the same amount of wealth, as measured by GDP in PPP, the Russian Federation consumed 2.6 times as much energy as Japan (the country with the lowest energy intensity of the five top energy consumers), and twice as much than India, in 2016; naturally such comparisons reflect the importance of specific industries in each country.

Though still dominant, power generation from coal has been decreasing for the three last years, reaching 38.4% of the electricity produced globally in 2016, its lowest share since 2001 (Figure 10). Generation from gas grew slowly to reach 15% in 1990; since then steady increases have seen it grow to 23.2% in 2016. This is a slightly smaller share than renewables (24.2%) which initially was dominated by hydro, but recent growth has come from the development of wind and solar PV. Nuclear production had steadily increased in the 1970s and 1980s, before plateauing at around 17% of electricity production and then declining since the 2000s to reach approximately 10%. Power production from oil peaked at almost 25% of power production in 1973, just before the oil crisis, and has been declining since then. From being the second fuel used for electricity production after coal, it has become the fifth, just above 3% of the global electricity generation in 2016. Whilst globally the use of oil for electricity generation has fallen sharply, it still accounts for over 70% of electricity generation in a number of countries including Lebanon, Iraq or Jamaica. Oil and natural gas combined provided 100% of power production in countries such as Bahrain, Qatar, Trinidad and Tobago and Brunei Darussalam.

**Figure 10. World electricity generation mix 1971-2016**

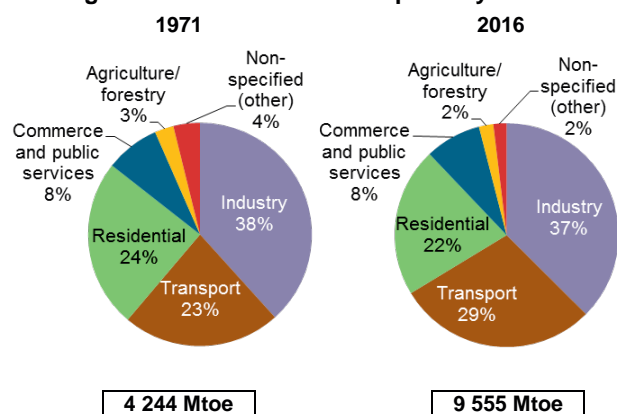


\* Other includes non-renewable waste and non-renewable heat.

## Total Final Consumption (TFC)

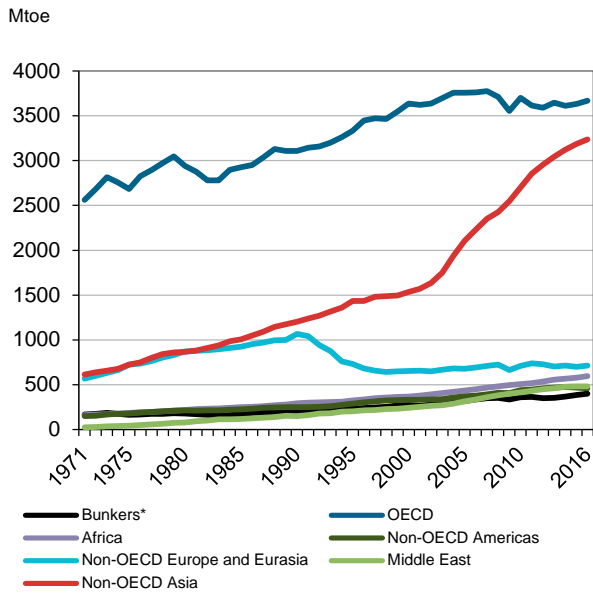
Between 1971 and 2016, total final consumption (TFC) was multiplied by 2.25 (Figure 11). However, the energy use by most economy sectors<sup>3</sup> did not change and has been fairly stable for several years. Energy use in transport significantly increased, from 23% of TFC in 1971 to 29% in 2016 as well as in 2015. Nevertheless, in 2016 industry remained the largest consuming sector, only one percentage point lower than in 1971 (37%). The residential sector ranked third in 2016 (22%).

**Figure 11. Total final consumption by sector**



3. In this chapter, each sector of final consumption includes its respective non-energy use quantity.

**Figure 12. Total final consumption by region**



\* Includes international marine and aviation bunkers.

Total final consumption has soared in non-OECD Asia including China since the early 2000s to account for 34% of global TFC in 2016, whilst the mainly increasing trend stopped in OECD with the 2008 economic global crisis, and total final consumption is oscillating around a plateau of yet over 3 500 Mtoe (38% of global TFC, Figure 12).

The following sections briefly describe OECD trends up to 2017 and 1971-2016 energy trends in six different regions of the world: OECD, Africa, non-OECD Americas, non-OECD Asia, non-OECD Europe and Eurasia, and the Middle East.



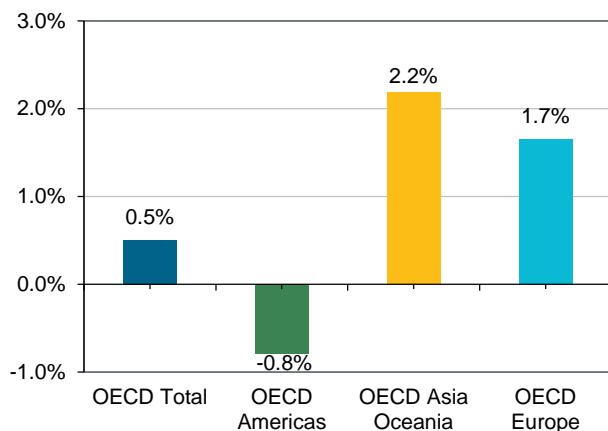
## OECD

### Key supply trends in 2017

The total primary energy supply (TPES) of the OECD increased slightly in 2017<sup>4</sup> (5 301 Mtoe), a 0.5% increase compared to 2016 corresponding to an additional 27 Mtoe. OECD regional trends stayed similar to those observed in the previous year.

In OECD Europe, TPES increased by 1.7% following last year's 0.6%, led mostly by Turkey (8%, 11 Mtoe growth) and Spain. In OECD Asia-Oceania, TPES increased by 2.2% at an even faster rate than last year, which can be credited to Korea (4%, 12 Mtoe). On the other hand, in OECD Americas TPES decreased by almost 1% again in 2017 (Figure 13), led by the 1.4% (30 Mtoe) reduction in the United States which was partially offset by a significant growth in Canada (4%, 11 Mtoe).

**Figure 13. OECD total primary energy supply 2016-2017 change**



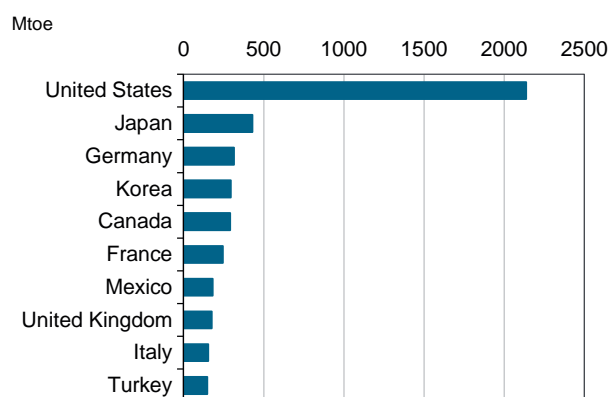
The United States reduction was mainly due to a decreased use of coal and natural gas which both saw declines of 3% of their respective TPES shares in 2017. Simultaneously, the small decrease in oil TPES (1%, -8 Mtoe) was mostly compensated by the increase in renewables TPES (+8 Mtoe, but 5% increase). Interestingly, even though the variation of total oil supply was not significant at the US level, a shift from secondary oil products to primary ones occurred. This is well illustrated by a 5% production

4. All the energy supply data for 2017 described in this chapter are provisional.

increase of primary oil products and a 13% increase in exports of secondary oil products to reach 212 Mtoe in 2017 – a new record for the US.

In 2017, the United States represented 40% of all OECD TPES, a weight comparable to that of the following largest nine countries when taken all together (Figure 14).

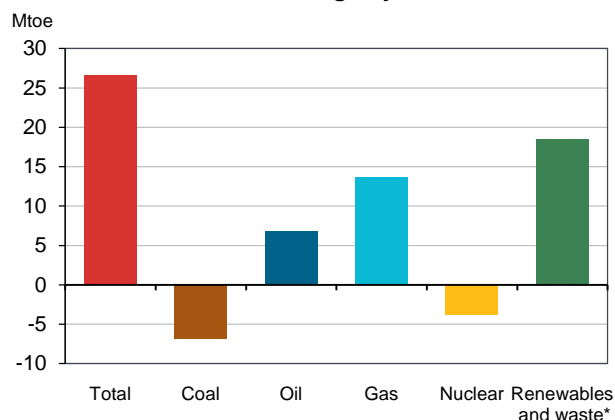
**Figure 14. Top ten OECD countries by TPES\* in 2017**



\*Total primary energy supply.

At the OECD level, growth in supply of natural gas and renewables and waste are the drivers of the overall trend, while coal and oil supply trends are cancelling out each other (Figure 15). The OECD increased its use of natural gas (27% of OECD TPES, +1% and +13 Mtoe). Like previous years, renewables and waste TPES increased significantly in 2017, reaching 11% of OECD TPES after a 3% increase in 2017 (+17 Mtoe), linked to its use in electricity generation.

**Figure 15. OECD total primary energy supply 2016-2017 change by source**

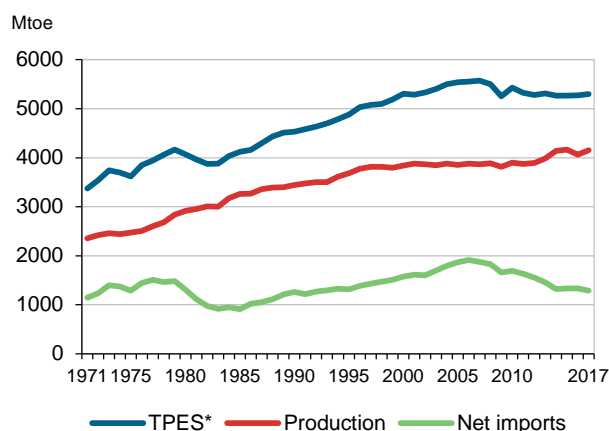


\*Includes hydro, geothermal, solar, wind, biofuels, waste.

After a slight decline in 2016, energy production in the OECD rebounded in 2017 to reach production levels

similar to 2015 (Figure 16). This 2.3% year-on-year increase allowed the OECD to reach a total energy production of 4 156 Mtoe, which represents the second highest production total in the history of the OECD – the highest having been recorded in 2015.

**Figure 16. OECD energy supply and production 1971-2017**

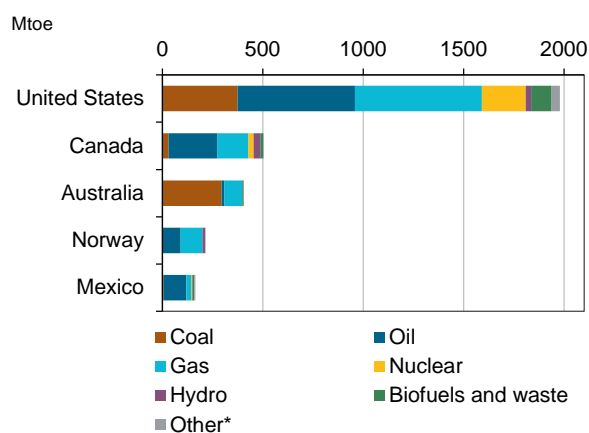


\*Total primary energy supply.

Simultaneously, 2017 also saw the net imports of the OECD drop to a record low since 1995 at 1 290 Mtoe, a 3.2% year-on-year decrease. This means that the OECD has reduced its net imports by one-third a decade after registering its all-time high on net imports in 2006.

About half of the energy production in OECD occurs in the United States (48%), with levels in 2017 almost four times larger than those of the second largest producer, Canada (12% - Figure 17).

**Figure 17. Top five OECD producing countries 2017**



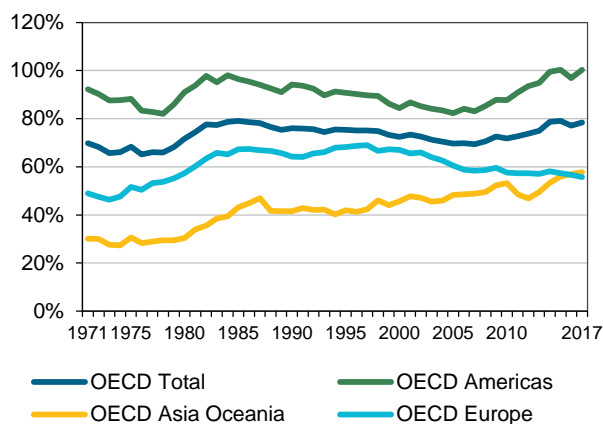
\*Other includes geothermal, solar, wind, and heat.

Trends in energy production differed across OECD countries. In the United States, total energy production

increased again in 2017 by 3.3% (63 Mtoe) after a record decline in 2016 – a decrease of 5.3% in total energy production. The 2017 increase in the US in production was driven mostly by coal (7%) and oil (5%), both growing by 25 Mtoe. Coal production increased again in 2017 after 2 years of steep decline (respectively -11% in 2015 and -19% in 2016). This rise in production levels resulted in an increase of five percentage-points in self-sufficiency for the US (defined as production/TPES) compared to 2016, and allowed the country to reach overall self-sufficiency levels unseen since 1975.

Driven by the trend in the United States, the OECD Americas became self-sufficient again in 2017 with a self-sufficiency slightly above 100%, a feat only achieved once in the history of the OECD in 2015. For the first time the OECD Asia Oceania region (58%) achieved a self-sufficient level above OECD Europe (56%), reflecting the steady increase in energy production levels occurring mainly in Australia (+16 Mtoe, 4% in 2017) but also in Japan (+5 Mtoe, 14% in 2017) over the last few years (Figure 18).

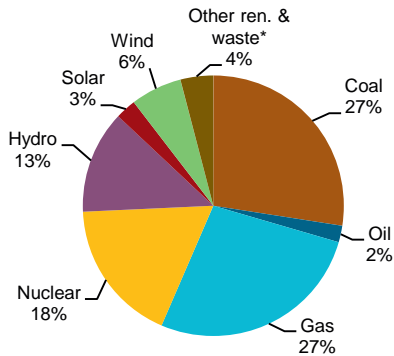
**Figure 18. OECD energy self-sufficiency 1971-2017**



About a quarter of OECD's TPES is used for electricity generation, where important structural changes have been occurring over the last few years. Overall, the OECD electricity generation mix was still dominated by fossil fuels, representing 56% of the mix in 2017 (Figure 19), a slightly lower level to that of 2016.

Within the fossil sources, fuel-switching from coal to natural gas continued in 2017, albeit to a lesser extent, as it was not as marked as previous years in the United States. Coal went from 30% in 2015 to 27% in 2017 (3 011 TWh), while gas is now at a similar 27% as well, but remains second (2 957 TWh).

**Figure 19. OECD electricity generation mix 2017**

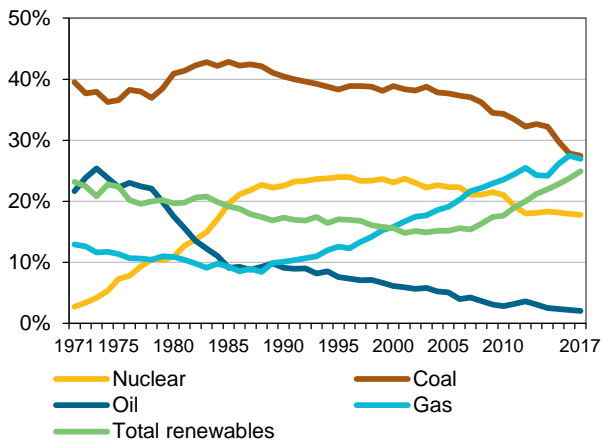


\*Includes geothermal, tide, biofuels, all waste and heat.

In the United States only, coal electricity generation decreased by 3% in 2017, reducing from 50% of the mix in 2005, to 40% in 2014 and 31% in 2017, whilst gas electricity generation grew from 18% in 2005 to 31% in 2017. However, gas generation decreased in the US in 2017 for the first time since 2013, declining by 106 TWh and going from 33% of the electricity mix to 31%. This decline was however almost entirely offset by significant increase of solar, wind and hydro electricity generation in 2017 (+83 TWh).

Similar trends were observed in OECD Europe, while coal electricity generation remained more stable in OECD Asia Oceania (Figure 20).

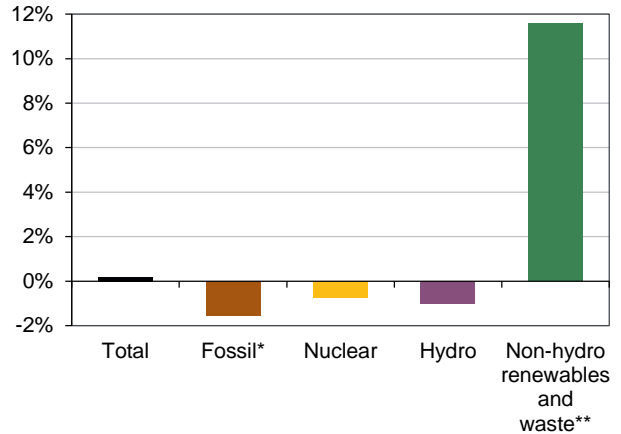
**Figure 20. OECD electricity generation mix 1971-2017**



In the OECD, fossil fuel use in electricity generation continued its decline in 2017 with a 97 TWh decrease (-1.5%), with decreases in electricity generated from coal (-33 TWh) and natural gas (-47 TWh). Non-hydro renewables and waste more than compensated this decrease by generating 148 TWh more than in 2016,

a 12% increase to reach 1 421 TWh. Solar photo-voltaics (+22%, 48 TWh) and wind (+15%, 91 TWh) both saw significant increase of their electricity output and again led the way in 2017 in terms of growth at the OECD level (Figure 21).

**Figure 21. OECD electricity generation 2016-2017 change**

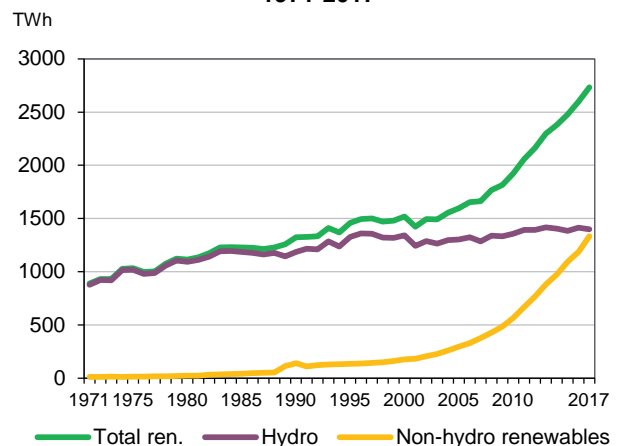


\*Fossil includes coal, peat, oil shale, oil and gas.

\*\*Includes geothermal, solar, wind, biofuels, all waste and heat.

The share of non-hydro renewables and waste continued its upwards trend and achieved a record 13% of total electricity generation in the OECD, comparable with the 13% of conventional hydro. Total renewable sources (hydro and non-hydro) accounted for 2 732 TWh and reached a quarter of total electricity generation (25%), which represented again another all-time high (Figure 22).

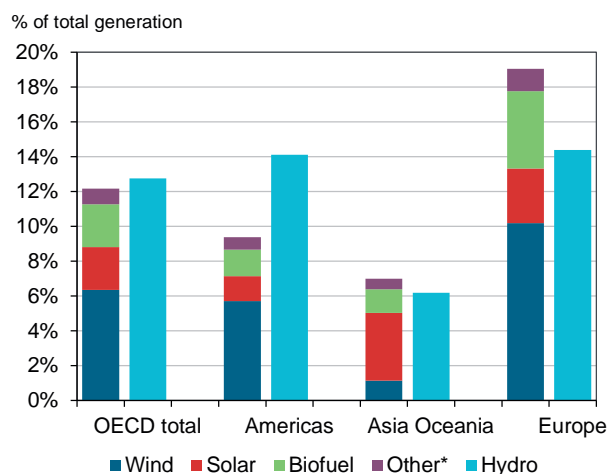
**Figure 22. OECD renewable electricity generation 1971-2017**



In OECD Asia Oceania and OECD Europe, non-hydro renewables provided a larger share of electricity than hydro in 2017 – for the first time ever in the case of OECD Asia Oceania – while the gap between the two is thinning every year at the OECD level

(Figure 23). In OECD Europe especially, 19% of total electricity generation in 2017 can be allocated to non-hydro renewables, significantly more than hydro (14%), bringing the total of all renewables to 33% of total generation.

**Figure 23. OECD electricity generation in 2017 shares of renewable sources, by region**

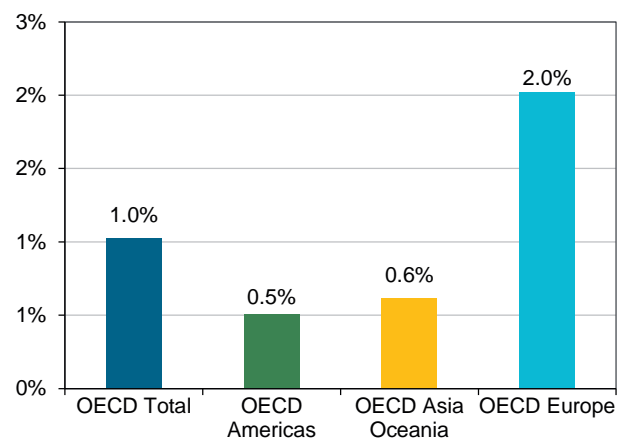


\*Other includes geothermal, solar thermal, tide and renewable municipal waste.

## Key demand trends in 2016

Alongside trends towards less-carbon intensive electricity generation, 2016 also saw total final consumption (TFC) in the OECD increase by 1% to reach 3 669 Mtoe, 37 Mtoe more than in 2015 (Figure 24). This trend represents the largest increase for the OECD since 2013 (+1.7%) which was followed by a 1% decrease in consumption the following year.

**Figure 24. OECD Total final consumption 2015-2016 change by region**

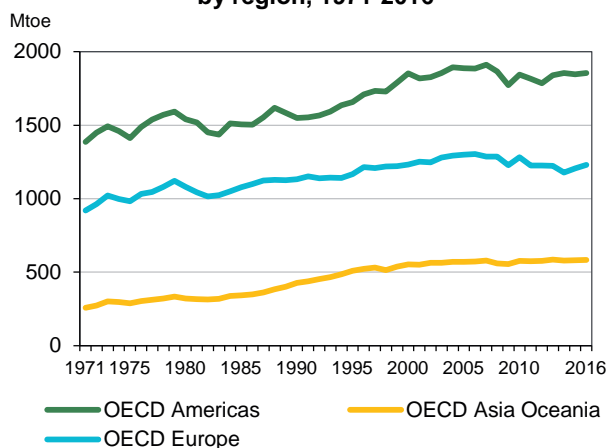


At the OECD regional level, in 2016 final consumption kept increasing for a second year in a row at rates

above 2% in OECD Europe, driven by rises in road transport (+8 Mtoe) and residential (+9 Mtoe).

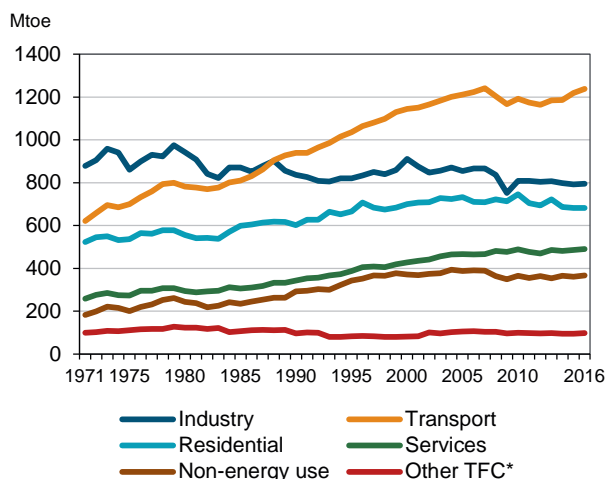
In 2016 TFC increased as well in the other OECD regions at a slower rate of approximately 0.5%. (Figure 25).

**Figure 25. OECD Total final consumption by region, 1971-2016**



At the sectoral level, the OECD's increase in final energy consumption in 2016 was largely driven by growth in transport (+19 Mtoe). Transport energy consumption increased consistently across the three OECD regions, and accounted for over a third of the OECD TFC. Longer-term trends show that transport has emerged as the largest and fastest growing sector, with the 2016 increase (1.6%) comparable to pre-crisis growth rates and level virtually back to those of 2008 (Figure 26). This increase in transport was particularly significant in road energy consumption in Mexico, Poland, Turkey, and the United States.

**Figure 26. Energy consumption per sector in OECD 1971-2016**



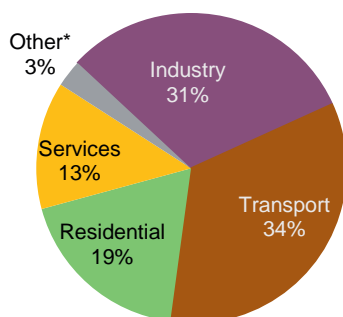
\*Other TFC includes agriculture, forestry, fishing and non-specified (other).

On the other hand, energy use in industry, residential and services was on average stable over the last few years across OECD. In 2016 however all these sectors saw a rise in their energy consumption, with increases respectively of 0.4% for industry, 0.1% for residential and 0.9% for commerce and services, at the OECD level.

Residential energy use increased in most northern and continental European countries in 2016 in response to meteorological conditions and colder climate, with reported increases of 8% in Finland, 5% in Czech Republic, Germany and France, 4% in Sweden and Switzerland among others.

The structure of OECD TFC shows that transport was again the largest energy consuming sector in 2016, accounting for roughly a third of final energy consumption, followed by industry with 31% (Figure 27). Such shares were very stable over the last few years, but have reversed since 1971, when industry accounted for 41% of TFC and transport for 24%.

**Figure 27. OECD Total final consumption by sector 2016**

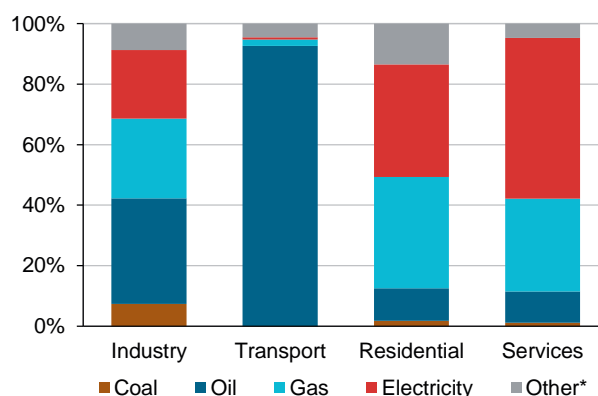


\*Other includes agriculture, forestry, fishing and non-specified.

Differences in economic structure affect the energy mix at national level, as sectors use fuels differently. In particular, transport almost completely relies on oil, while residential and services in the OECD use a lot of electricity and gas. Coal, mainly used for electricity generation, is used very little by final consumers (Figure 28). More specifically in 2016, while transport strongly relied on oil products (mainly gasoline and diesel), electricity accounted for 37% and 53% of total energy consumption in residential and commerce/services, respectively, with these shares increasing over time.

With slight variations in TFC and a growing GDP, the general decoupling of economic growth from energy

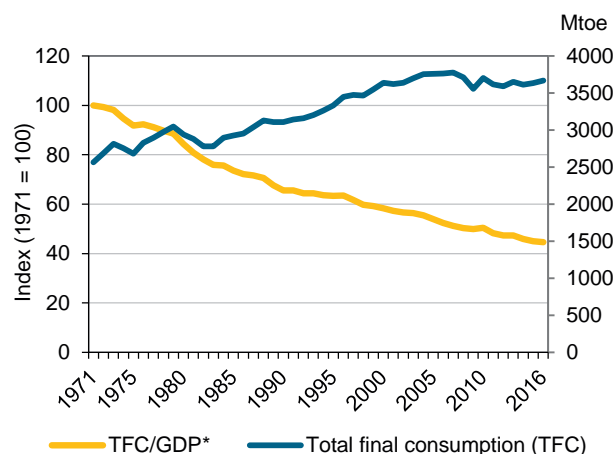
**Figure 28. Total final consumption by sector: shares by energy source, 2016**



\*Other includes biofuels and waste, direct use of geothermal/solar thermal and heat.

consumption observed over the years continued across the OECD (Figure 29). As a result final energy intensity – defined as TFC over GDP – for the OECD decreased significantly since 1971, starting at 0.168 toe per thousand 2010 USD PPP to reach 0.075 in 2016.

**Figure 29. Final energy intensity\* in OECD 1971-2016**



\*GDP based on 2010 USD PPP. Total final consumption in Mtoe.

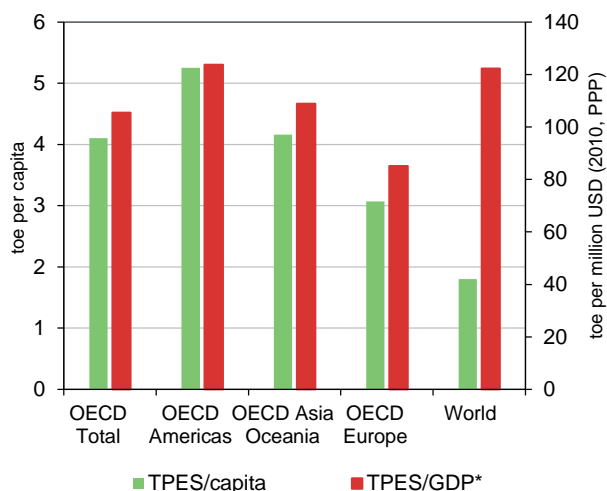
## The OECD and IEA in the world

With 4.1 toe per capita in 2017 (compared to a world average of 1.8 toe per capita), the OECD is the most energy-intensive region, in terms of TPES/population (Figure 30). Several factors explain these high levels: an electrification rate of virtually 100%, a high rate of cars per household, large industry and service sectors, high heating degree-days and a high GDP per capita. However, this indicator decreased for the OECD from its 2014 level of 4.2 toe per capita.



While OECD levels of energy per capita are generally larger than the world average by a factor of two, with some regional variations, OECD levels of energy intensity of the economy (TPES/GDP, based on PPP) tend to be slightly lower than the world average, possibly reflecting a less energy-intensive economic structure and a generally more advanced development in efficient use of energy, with high efficiency in transformation and some final consumption sectors.

**Figure 30. OECD energy indicators by region 2017**



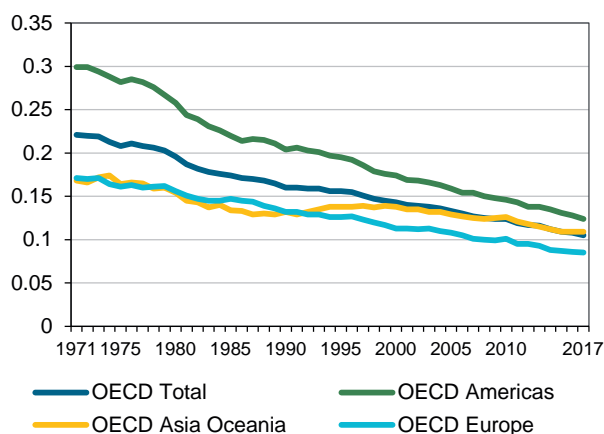
\*GDP based on 2010 USD PPP.

While energy intensity is on a declining trend across the whole OECD (27% lower in 2017 compared to 2000), levels have been historically lower in OECD Europe than in OECD Americas, with OECD average comparable with the levels of Asia Oceania since around the year 2005 (Figure 31).

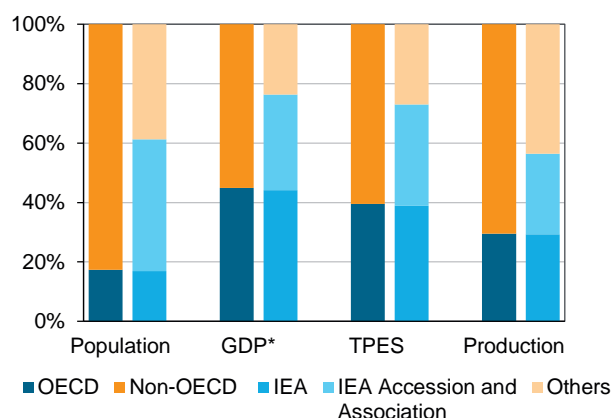
In 2016, the OECD accounted for 17% of global population, 45% of GDP, 39% of TPES and 30% of energy production (Figure 32). These shares have remained stable over the last few years, but we can observe a slight decline in the OECD share of global TPES in 2016 (-0.5%). However, they have significantly changed since 1971, when the region accounted for 61% of the global energy supply, and 65% of GDP.

These shares are significantly larger when considering the full group of countries tightly connected with the IEA: IEA (which in this edition includes Mexico for the first time), its Accession (Chile) and Association countries (Brazil, China, India, Indonesia, Morocco, Singapore and Thailand) altogether accounted for around three quarters of the world GDP and TPES in 2016. More precisely, the IEA family group accounted for 61% of global population, 76% of GDP, 73% of TPES, 56% of energy production, and 70% of TFC.

**Figure 31. TPES per GDP of OECD by region 1971-2017**



**Figure 32. OECD and IEA in the world, 2016**



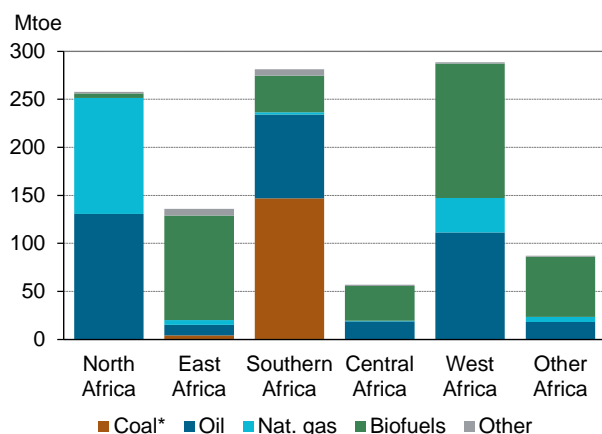
\*GDP based on 2010 USD PPP.

## Africa

In 2016, Africa produced 8.0% of the world's energy, a similar share as in 1971 (7.8%). African production is dominated by biofuels and waste (35%), and oil (34%), followed by natural gas (15%) and coal (14%). Africa's share of global TPES increased from 3.5% in 1971 to 5.9% in 2016; and despite many African countries being dependent on imports of fossil fuels, as a region it is energy self-sufficient and a net exporter of coal, natural gas and crude oil.

Fossil fuels production is unevenly distributed across Africa (Figure 33). West Africa was the main producer of crude oil in 2016, due to Nigeria (more than 24% of the African crude oil). North Africa produces mainly crude oil and natural gas: in 2016 Algeria accounted for almost 48% of the natural gas and 19% of the crude oil in Africa, and Egypt for 9% of crude oil and 18% of natural gas. Southern Africa is characterized by the high share of coal and of crude oil; South Africa, the fifth largest coal exporter in the world, produced 96% of African coal in 2016 whereas Angola is the second biggest producer of crude oil in Africa, with 23% of the region production. Energy production in East and Central Africa remains dominated by solid biofuels.

**Figure 33. Energy production by sub-region in 2016**  
Africa



\* In this graph peat and oil shale are aggregated with coal.

North Africa includes Algeria, Egypt, Libya, Morocco and Tunisia;

East Africa includes Eritrea, Ethiopia, Kenya, Mauritius, Mozambique, South Sudan, Sudan and United Republic of Tanzania;

Southern Africa includes Angola, Botswana, Namibia, South Africa, Zambia and Zimbabwe;

Central Africa includes Cameroon, Congo and Democratic Republic of Congo;

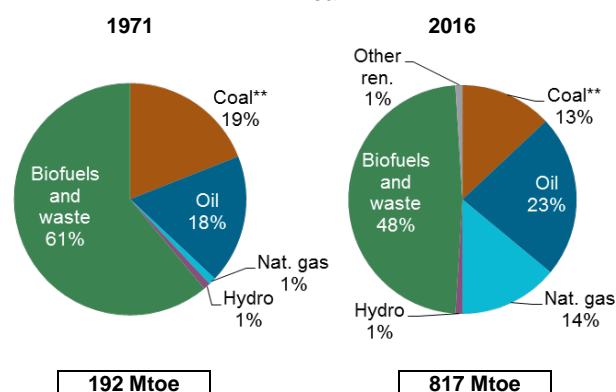
West Africa includes Benin, Côte d'Ivoire, Gabon, Ghana, Niger, Nigeria, Senegal and Togo.

In 2016, Africa's crude oil production continued declining (-5.9%, following -1.3% in 2015, -5.0% in 2014 and -7.9% in 2013), led by Nigeria (-13%) and

Libya (-5%). Production also decreased in Ghana, South Africa and South Sudan (-14%, -17% and -20%, respectively) but increased in Algeria (+2%) and Côte d'Ivoire (+49%, reaching 670 ktoe). Africa represented 8% of world crude oil output and it exported 78% of this production in 2016.

The production and consumption of biofuels (mainly fuelwood) is significantly higher across Africa (48% of total TPES in 2016) than the world average (10% of total TPES). The presence of large forests, agro-industry, agriculture, a large rural population, and a low GDP per capita have resulted in a large use of solid biofuels for cooking. Because of the extensive use of wood and charcoal with its low efficiency, energy intensity<sup>5</sup> is higher than the world average.

**Figure 34: Total primary energy supply\* by fuel**  
Africa



\* Excluding electricity trade.

\*\* In this graph peat and oil shale are aggregated with coal.

However, the share of biofuels and waste in TPES, dominated by solid biofuels, has decreased significantly between 1971 and 2016 (Figure 34), due to increased electrification, and particularly the recent development of power generation from natural gas. Natural gas share in TPES increased steeply from 1% in 1971 to 14% in 2016. Coal continued to represent an important share of African TPES (13% in 2016) even if it has declined since 1971. Its share is largely due to South Africa, where coal represented in 2016 89% of the country's primary production, 70% of TPES, 91% of electricity generation and 24% of total final consumption.

In 2016, power generation in Africa was almost nine times the level in 1971 (Figure 35), whilst also seeing a significant change in the fuel mix. Natural gas was barely nil in 1971 but in 2016 provided almost

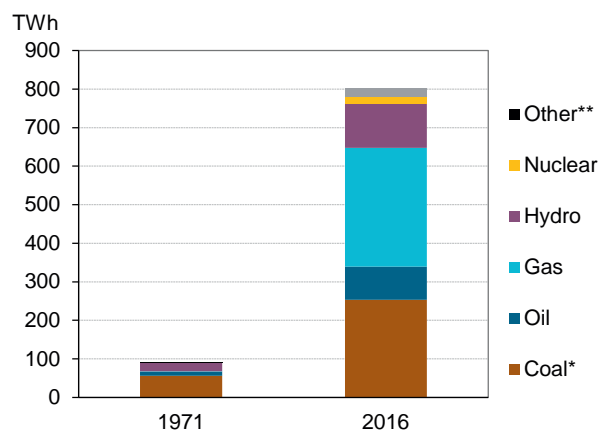
5. Measured by the ratio TPES/GDP.

308 TWh of electricity, a 37% share (compared to 27% in OECD, 40% in non-OECD Europe and Eurasia, and 69% in the Middle East). Its share in the power mix reached even higher level in gas-producing countries such as Algeria (98%), Nigeria (82%), and neighbouring importing countries like Tunisia (96%). In 1971, coal was the first fuel used for power generation in Africa (61%); in 2016 it ranked second after natural gas and accounted for 31% of power generation, providing 254 TWh. Hydro was the second provider of electricity in Africa in 1971 (23 TWh, 26% of the power produced in the continent) and ranked third in 2016 with 116 TWh.

Electricity production reflects the disparity in fossil fuel resources between sub-regions of Africa. In 2016, North African countries plus South Africa, represented only 25% of the population but generated 79% of the electricity in Africa. Access rates are increasing, but electricity remains a scarcity for most Sub-Saharan African countries, with national electrification rates in 2016 averaging 42%, compared

to 51% for the whole continent, but only 22% in rural Sub-Saharan areas, and much less in some countries (2% in Burkina Faso, 1% in Chad, Central African Republic, Djibouti and even less in the Democratic Republic of Congo, Niger or South Sudan)<sup>6</sup>.

**Figure 35. Electricity generation by fuel, Africa**



\* In this graph peat and oil shale are aggregated with coal.

\*\* Other includes non-renewable waste and non-renewable heat.

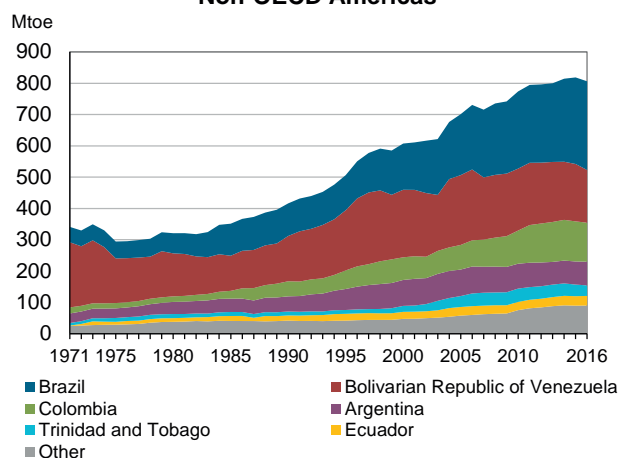
6. Electrification rate extracted from the World Energy Outlook 2017 electricity database: [www.iea.org/energyaccess/database/](http://www.iea.org/energyaccess/database/)

## Non-OECD Americas

In 2016, non-OECD Americas' main energy producers were, in descending order, Brazil, the Bolivarian Republic of Venezuela, Colombia, Argentina, Trinidad and Tobago and Ecuador (Figure 36). Together they produced 89% of the region's total energy production (806 Mtoe). Brazil alone was responsible for 35% of the region's production in 2016.

Non-OECD Americas produced 12 Mtoe less in 2016 compared to 2015. This -1.5% decrease was mainly due to a production drop in Venezuela (-8.1%), Colombia (-2.8%) and Trinidad and Tobago (-9.6%) that the increase of energy production in Brazil (+2.4%), Argentina (+2.7%) and Ecuador (+1.8%) did not offset.

**Figure 36. Energy production by country Non-OECD Americas**

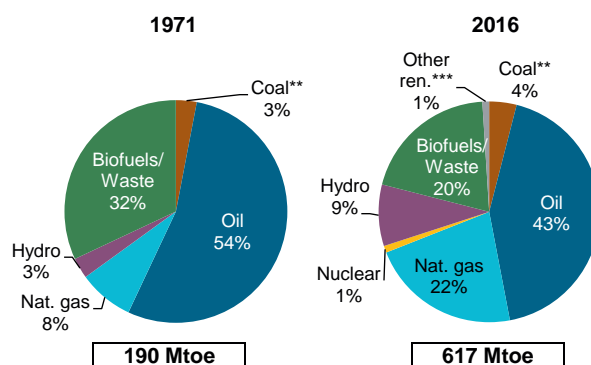


In Colombia, which accounted for 95% of the region's coal, coal production increased by 5.8%, reaching a level of 58.8 Mtoe. In Venezuela, crude oil production declined for the fifth year in a row (-10%). On the contrary in Brazil, non-OECD Americas' second oil producer, crude oil production rose by 3% in 2016. The region's natural gas production was fairly stable in 2016 (+0.4%), as increased production in Argentina (+7.1%) and Venezuela (+6.6%) was offset by lower productions in some of the region main providers, Trinidad and Tobago (-9.5%) and Bolivia (-4.7%).

Overall the energy mix in non-OECD Americas in 2016 was similar to 2015: oil provided the biggest share of TPES in the region (43% - Figure 37), followed by natural gas (22%) and biofuels and waste (20%).

Thirty-one per cent of Non-OECD Americas TPES came from renewables, whereas this share was only 14%

**Figure 37. Total primary energy supply\* by fuel Non-OECD Americas**

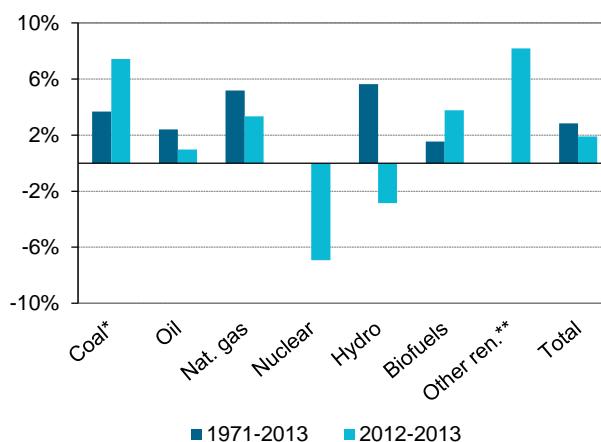


\* Excluding electricity trade.  
 \*\* In this graph peat and oil shale are aggregated with coal.  
 \*\*\* Includes geothermal, solar thermal, solar photovoltaic and wind.

in the world. With a 20% share of the TPES (twice more than globally), liquid biofuels (and in particular transport biofuels in Brazil) in addition to traditional solid biofuels, are significant in non-OECD Americas. Following a steady 3% increase in the last three years, biofuels production increased at a slower pace (+0.7%) in 2016. On the contrary, after four years of decline, hydro production increased by 3.8% in 2016, mainly due to the higher production in Brazil (+5.9%) and Paraguay (+14.4%). Hydro accounted for 55% of total Non-OECD Americas power generation, a much higher share than globally (16%).

In 2016, other renewables (solar thermal, solar photovoltaic, wind, geothermal), saw a 21% increase in production compared to 2015 (Figure 38), led by a +41% production increase in Brazil, the biggest producer of other renewables in the region.

**Figure 38. Annual change in TPES by fuel Non-OECD Americas**

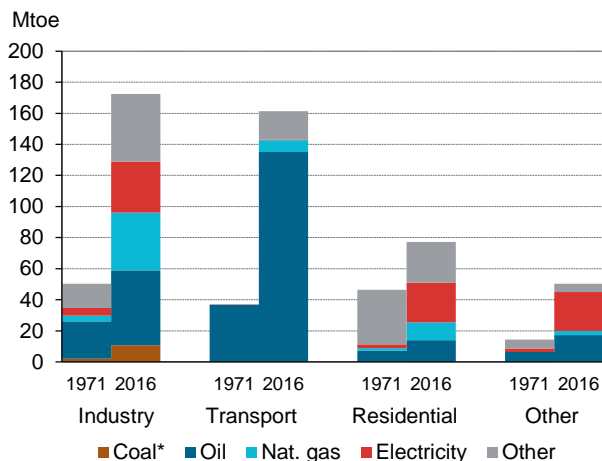


\* In this graph peat and oil shale are aggregated with coal.  
 \*\* Includes geothermal, solar thermal, solar photovoltaic and wind.

In 2016, industry remained the biggest energy consuming sector (37%), followed by transport (35%) and residential (17%). Industry increased from 50 Mtoe in 1971 to 173 Mtoe in 2016. However, transport saw the largest increase in growing energy final consumption by more than four times since 1971 (Figure 39). Residential nearly doubled over the period, and ranked third in 2016.

In 1971, oil accounted for half of total final consumption (TFC) and it peaked at 55% in 1979 before the second oil crisis. However the increasing role of electricity and gas in the residential and the industry sectors lead to a slowly diminishing share of oil in TFC to 46% in 2016. The share of electricity has almost tripled during that period, reaching 18% in 2016. Natural gas consumption increased from less than 4% to 13%, mainly driven by industry (from 7% to 22%) and residential (from 4% to 15%) use.

**Figure 39. Total final consumption by sector and fuel Non-OECD Americas**



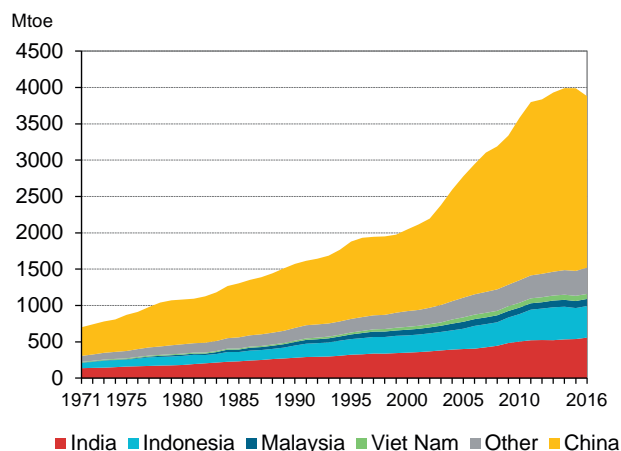
\* In this graph peat and oil shale are aggregated with coal.



## Non-OECD Asia

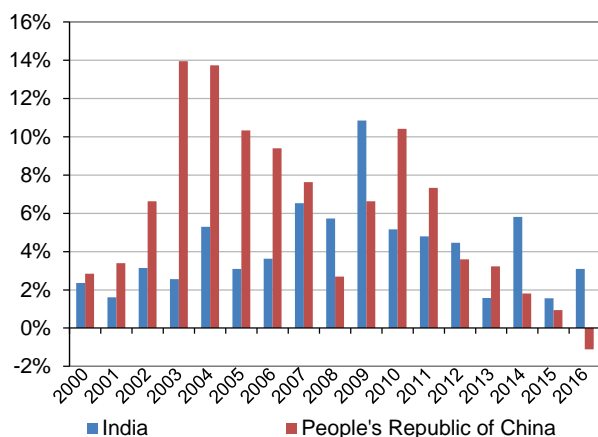
Since the early 1990s non-OECD Asia has been the second largest energy producing region in the world behind the OECD, accounting for almost 28.2% of global production in 2016. China alone provided 60.8% of energy production in the region in 2016 (Figure 40) compared to 63.0% the previous year. India and Indonesia together accounted for a quarter of the region production (14.4% and 11.2% respectively).

**Figure 40. Energy production by country Non-OECD Asia**



In 2016, non-OECD Asia's total primary energy supply (TPES) increased again, but at a much slower rate compared to previous years (+0.5% in 2016 compared to 1.2% in 2015 and +2.7% in 2014). It thus seems decoupled from the economic growth, where GDP increased by 6.1% in Asia in 2016. This decoupling is particularly true in China, where GDP increased by 6.6% in 2016, while TPES decreased by 1.1%. In India, GDP increased by more than 7% in 2016 whilst

**Figure 41. TPES annual change India and People's Republic of China**

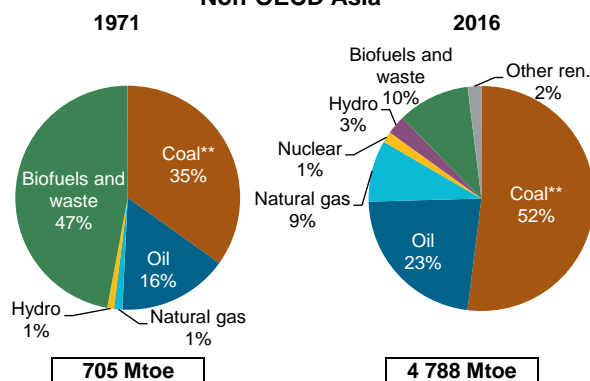


TPES increased by 3%. TPES in India has been growing at a rate of 5.0% per annum since 2006, compared to 3.4% between 1996 and 2006, and is now growing at a faster rate than in China (Figure 41).

In 2016, non-OECD Asia accounted for 34.8% of global TPES. However, since its production does not cover its demand, the region is a net importer. China and India's self-sufficiency continued to decline in 2016 (79% and 65% respectively) since they peaked - at 108% in 1985 for China and 96% in 1984 for India. Indonesia covered 189% of its energy needs in 2016, but still is a net importer of crude oil.

In 2016, the share of biofuels in TPES decreased to 10% from 47% in 1971; natural gas has reached 9% of TPES, from negligible in 1971. Coal has been by far the main energy source in non-OECD Asia since 2012, supplying more than half of its energy demand (Figure 42), compared to 27% globally. This is also the case in the main energy consuming countries (Figure 43).

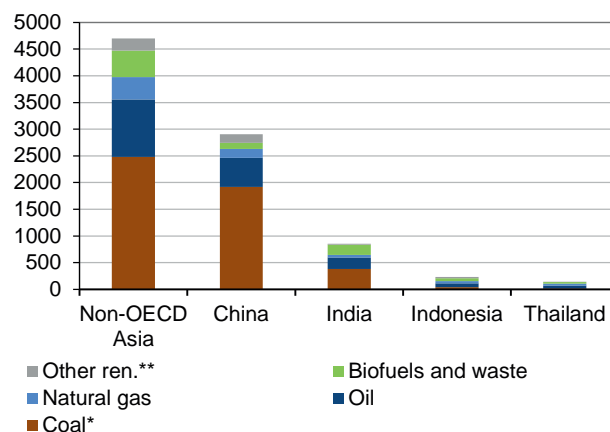
**Figure 42. Total primary energy supply\* by fuel Non-OECD Asia**



\* Excluding electricity trade.

\*\* In this graph peat and oil shale are aggregated with coal.

**Figure 43. TPES by country in 2016 Non-OECD Asia**

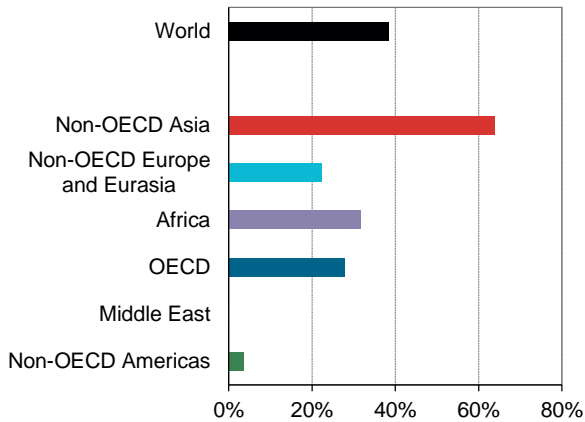


\* In this graph peat and oil shale are aggregated with coal.

\*\* Includes geothermal, solar thermal, solar photovoltaic and wind.

Coal's significance is partly explained by its use in power generation: in 2016, coal represented 64% of the regional electricity mix, versus 38% globally (Figure 44). Coal provided 69% of electricity in China, 75% in India and 54% in Indonesia. In China, the power mix is gradually shifting from coal to other sources of energy (natural gas, nuclear, hydro and other renewables).

**Figure 44. Share of coal in electricity generation in 2016**

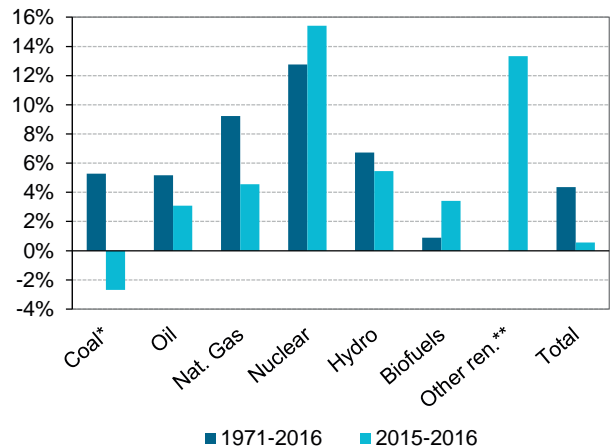


In 2016, total electricity generation in non-OECD Asia increased by 6.1%, mainly driven by India (+7.6%, almost 1 500 TWh produced in 2016) and China (+5.9%, close to 6 200 TWh produced in 2016). Electricity production has grown in the region at an average annual rate of 8.1% since 1971.

The use of coal in TPES decreased in 2016 whilst the use of oil, gas, biofuels and hydro increased. However, the most significant growth came from nuclear followed by other renewables (geothermal, solar photovoltaic, solar thermal and wind, Figure 45).

Total final consumption in non-OECD Asia has increased by five times over four decades (Figure 46) and the mix has changed considerably. The share of traditional biofuels (biomass, waste) has fallen to a third of its 1971 level (53% of total energy consumption in 1971 compared to 13% in 2016), resulting in coal, with approximately the same share in 1971 and 2016 (29% and 27% respectively) now being the biggest fuel consumed. The share of oil in total final consumption has doubled (from 15% to 30%), and that of electricity rose from 3% to 20%. With a seven-fold increase, industry is by far the biggest energy consuming sector in non-OECD Asia, representing 51% of the region total final consumption in 2016.

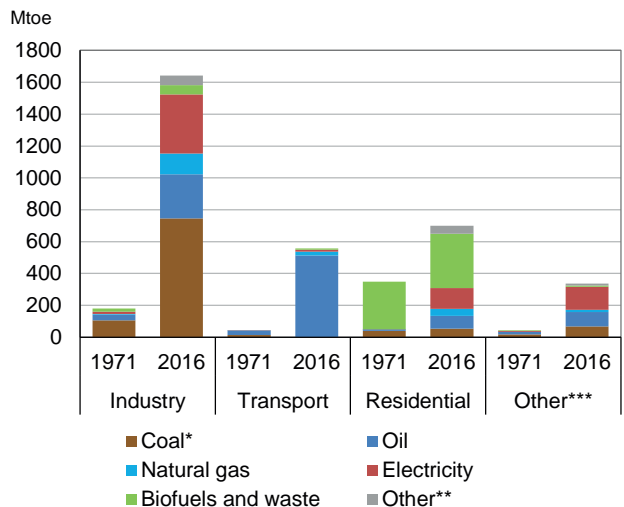
**Figure 45. Annual growth in TPES by fuel Non-OECD Asia**



\* In this graph peat and oil shale are aggregated with coal.

\*\* Includes geothermal, solar thermal, solar photovoltaic and wind.

**Figure 46. Total final consumption by sector and fuel Non-OECD Asia**



\* In this graph peat and oil shale are aggregated with coal.

\*\* Includes direct use of geothermal, solar thermal and heat.

\*\*\* Includes non-energy use.

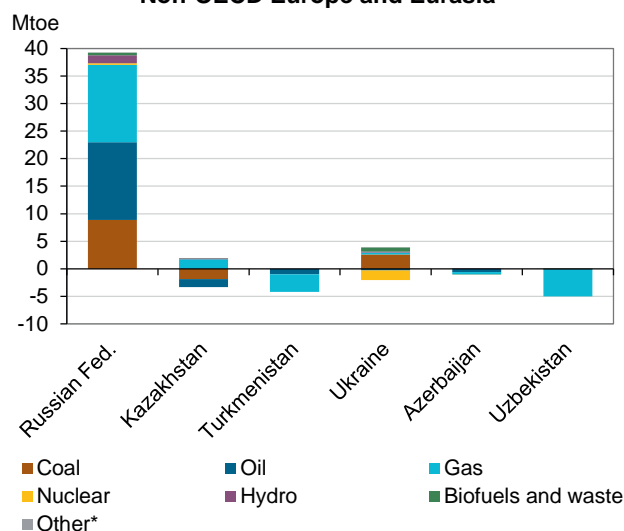
Though coal is still the main fuel consumed in industry (45% in 2016) it is now followed by electricity (23%).

The residential sector is now the second largest consumer behind industry, and has doubled between 1971 and 2016. Though traditional biomass is still the main fuel consumed in the residential sector, electricity, oil and natural gas have significantly increased. Energy consumption has multiplied 13 times in the transport sector, relying mainly on oil.

## Non-OECD Europe and Eurasia

In 2016, total energy production in non-OECD Europe and Eurasia increased by 1.5% (+27 Mtoe), contrasting with a decline observed in all other regions except the Middle East. This growth was largely driven by a 2.9% increase of energy production in the Russian Federation, which represented 74% of the total regional production. Production of natural gas, crude oil and coal all increased in the Russian Federation between 2015 and 2016 (by 14 Mtoe for the two former, and by 9 Mtoe for the latter). By contrast, energy production decreased in all other major energy producers in the region, except Ukraine (Figure 47).

**Figure 47. Top producers**  
Annual change in production in 2016  
Non-OECD Europe and Eurasia



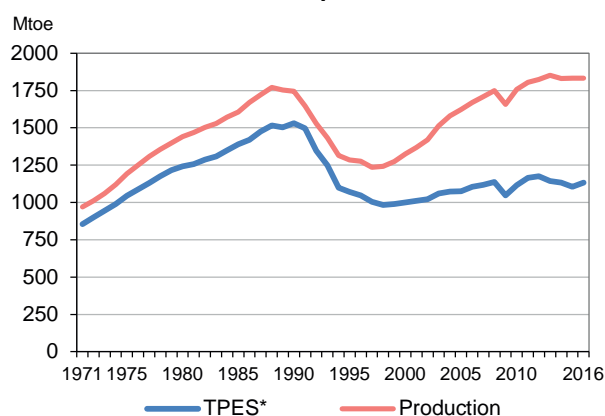
\*Other includes hydro, geothermal, solar, wind, and heat

Preliminary data for 2017 shows that the Russian Federation was the second world's largest producer and remained the first net exporter of natural gas (respectively 694 bcm and 217 bcm), the third largest producer of crude oil (548 Mt), and was the sixth largest producer and third net exporter of coal (161 Mt). Turkmenistan remained the sixth largest exporter of natural gas and Kazakhstan the eighth largest exporter of coal.

Energy production is very unevenly distributed across non-OECD Europe and Eurasia. Although the region as a whole is energy self-sufficient (Figure 48), it includes some of the most energy import-dependent countries in the world: in 2016, only 3% of Malta's energy consumption was covered by domestic production.

The self-sufficiency ratio was 6% for Cyprus and 15% for Belarus. In contrast, Azerbaijan produced four times more energy than it consumed.

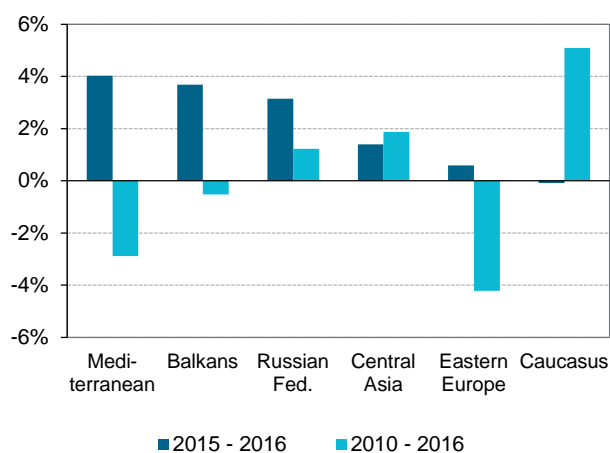
**Figure 48. Energy production and use, 1971-2016**  
Non-OECD Europe and Eurasia



\*Excludes electricity trade.

In 2016, energy use as measured by the Total Primary Energy Supply (TPES) in non-OECD Europe and Eurasia increased by 2.4% (27 Mtoe), the first annual increase observed since 2012. At sub-regional level, the highest growth (4%) was observed in the Mediterranean countries Cyprus, Gibraltar and Malta (Figure 49). These countries however represented less than 1% of the region. The Russian Federation's energy use increased by 3.1% (22 Mtoe) between 2015 and 2016.

**Figure 49. Annual average change**  
in total primary energy supply by sub-region  
Non-OECD Europe and Eurasia



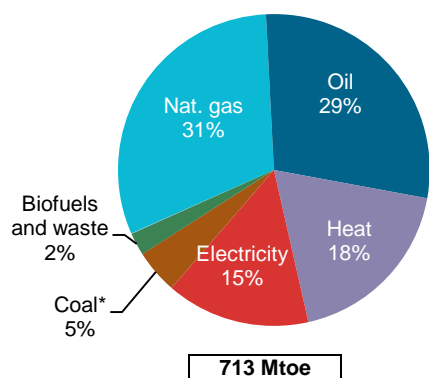
Balkans is Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Former Yugoslav Republic of Macedonia, Kosovo, Montenegro, Romania and Serbia;  
Caucasus is Armenia, Azerbaijan and Georgia  
Central Asia is Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan;  
Mediterranean is Cyprus, Gibraltar and Malta  
Eastern Europe is Belarus, Moldova, Ukraine and Lithuania.

Note: Estonia, Latvia and Slovenia are OECD members. Lithuania was not an OECD Member at the time of preparation of this publication. Accordingly, Lithuania does not appear in the list of OECD Members and is not included in the zone aggregates.

Energy use also increased in Ukraine (+1.6%) and Kazakhstan (+5.0%), respectively the second and third largest energy consumers in the region.

In 2016, natural gas had the largest share in the regional total final consumption (31%), followed by oil (29%), heat (18%) and electricity (15%). Biofuels and waste represented only 2% of total final consumption in non-OECD Europe and Eurasia in 2016, but this share is likely underestimated (Figure 50): for instance, Georgia and the Republic of Moldova were recently able to carry out a detailed survey on household consumption which revealed that biofuels and waste are a main source of energy for households.

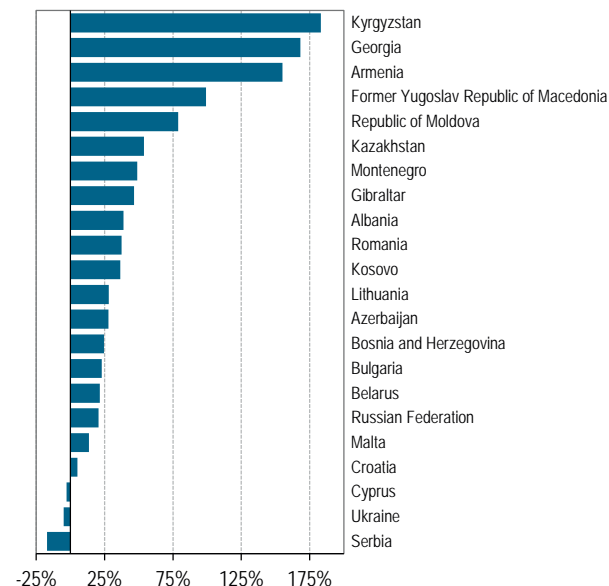
**Figure 50. Total final consumption by fuel  
Non-OECD Europe and Eurasia  
2016**



\* In this graph peat and oil shale are aggregated with coal

Over the past decade (2006-2016), road transport consumption in non-OECD Europe in Eurasia has increased by 23%, increasing demand for oil products. Road transport consumption more than doubled in Armenia and Georgia -Figure 51).

**Figure 51. Road transport,  
change in energy consumption 2006-2016  
Selected countries - Non-OECD Europe and Eurasia**

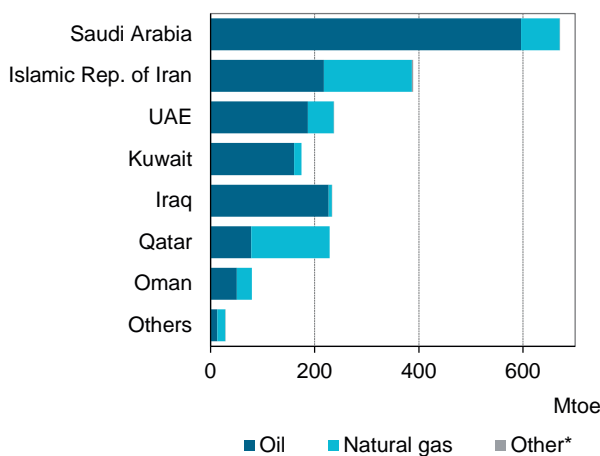


The regional electricity mix in 2016 was dominated by natural gas (40%), followed by coal (22%), and nuclear (17%). Non-OECD Europe and Eurasia was the second largest nuclear-producing region in the world, with the Russian Federation, Ukraine, Bulgaria, Romania, and Armenia producing a total of 307 TWh (11.8% of world). Renewables, largely hydropower, accounted for 19% of the regional electricity mix in 2016, with a record high share in Tajikistan and Kyrgyzstan (over 90% of power generation). Solar and wind electricity generation, though increasing (+1.9% from 2015), accounted only for 1.0% of regional electricity output.

## Middle East

With energy production more than 2.5 times as large as its demand, the Middle East has the highest energy self-sufficiency ratio in the world. The region produced nearly 15% of global energy in 2016, an increase from just over 13% for the previous five years. This growth is largely driven by oil and gas, where the Middle East produced 34% of global oil, and nearly 17% of the world's gas. The Middle East's global share of natural gas production has increased every year since 1997.

**Figure 52. Energy production in 2016 Middle East**



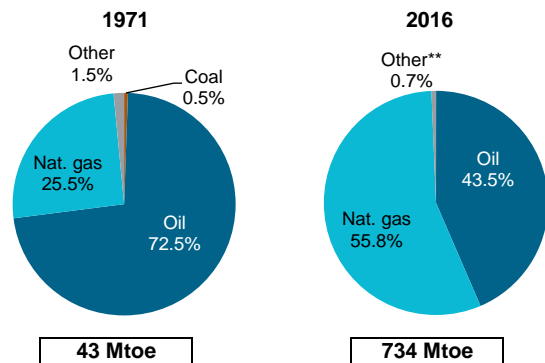
\* Includes coal, nuclear, hydro, other renewables, biofuels and waste

Saudi Arabia was still by far the largest oil producer in the region with 39%, followed by Iraq and Iran, with 15% and 14% respectively (Figure 52). With 33% of the Middle East's natural gas production, Iran maintained its position as the region's largest producer of natural gas in 2016, closely followed by Qatar at 30% of the regional production. Iran's natural gas production increased by 9% in 2016, indicating faster growth compared to the 5% increase seen in 2015. Meanwhile natural gas production in Qatar was fairly steady with 1% growth in 2016 compared to 3% in 2015.

In 2016, the major growth in oil production was seen in Iran and Iraq, with 33% and 28% respectively. Other notable growth in oil production was seen in Kuwait and Qatar, each with 4%. Oil production continued to decline in Syria (-5%) in 2016, though not as drastically as in 2015 - with a nearly 40% decline. Similarly, Yemen also saw a dramatic deterioration of oil production, with a 39% drop due to political unrest and the halting of oil and gas activities in 2015.

Alongside increasing its production, the Middle East is also the fastest growing region in terms of TPES. Over the period from 1971 to 2016, TPES grew on average by 7% per year. In 2016, this supply is almost exclusively based on oil and natural gas (Figure 53). Natural gas has partially displaced oil, more than doubling its share between 1971 and 2016.

**Figure 53. Total primary energy supply\* by fuel Middle East**

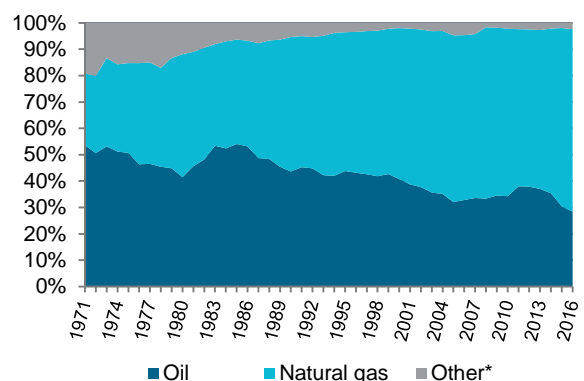


\* Excluding electricity trade.

\*\* Includes coal, nuclear, hydro, other renewables, biofuels and waste

Key factors driving the rapid development of natural gas in the Middle East are power generation and the petrochemical sector. This is illustrated by the share of oil in electricity production continuing to shrink, starting with 54% in 1971 and reaching 28% in 2016 (Figure 54).

**Figure 54. Electricity generation by source Middle East**



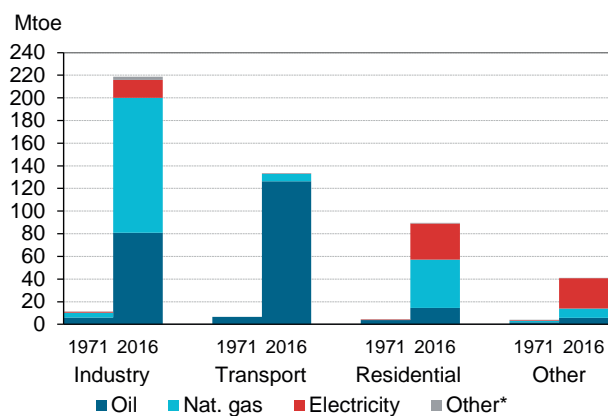
\* Includes coal, nuclear, hydro, other renewables, biofuels and waste.

In contrast, the share of natural gas in electricity production continually increased, from 27% to 69% in the same period. In 2016, natural gas continued to provide almost all the electricity generated in Bahrain, Qatar, the United Arab Emirates, and in Oman. In Iran and Jordan, natural gas's share in electricity generation

reached over 80% in 2016. In Jordan, this change has come swiftly, with natural gas generating just 48% of the electricity in 2015, as a result of the government promoting the fuel swap.

Over the last four decades, total final consumption expanded in all sectors, particularly industry and transport, which increased twenty fold. In 2016 oil accounted for 95%, 37% and 16% of final consumption in transport, industry and residential, respectively (Figure 55). Oil is responsible for 47% of total energy consumption in the Middle East. Also in 2016, natural gas met 55% and 47% of final consumption in industry and residential, respectively. Electricity tripled its share in final energy consumption from 5.6% in 1971 to 15.5% in 2016.

**Figure 55. Total final consumption by sector and fuel Middle East**



\* Includes coal, other renewables, biofuels and waste



# PART I

## EXPLANATORY NOTES

## ABBREVIATIONS

Btu:	British thermal unit
GWh:	gigawatt hour
kcal:	kilocalorie
kg:	kilogramme
kJ:	kilojoule
Mt:	million tonnes
m <sup>3</sup> :	cubic metre
t:	metric ton = tonne = 1 000 kg
TJ:	terajoule
toe:	tonne of oil equivalent = 10 <sup>7</sup> kcal
CHP:	combined heat and power
GCV:	gross calorific value
GDP:	gross domestic product
HHV:	higher heating value = GCV
LHV:	lower heating value = NCV
NCV:	net calorific value
PPP:	purchasing power parity
TPES:	total primary energy supply
AfDB:	African Development Bank
EU-28:	European Union - 28
FAO:	Food and Agriculture Organisation of the United Nations
IEA:	International Energy Agency
IPCC:	Intergovernmental Panel on Climate Change
ISIC:	International Standard Industrial Classification
OECD:	Organisation for Economic Co-Operation and Development
OLADE:	Organización Latinoamericana de Energía
UN:	United Nations
UNIPED:	International Union of Producers and Distributors of Electrical Energy
c	confidential
e	estimated
..	not available
-	nil
x	not applicable

# 1. METHODOLOGICAL NOTES

In this publication, Part I presents key explanations on the IEA energy balances methodologies and on the data presented in the book. Part II presents the 2016 energy balance table and graphs on key data and indicators by country and regional aggregate, with additional information on the provisional 2017 supply for OECD countries and, to the extent available, for Association countries<sup>1</sup>; as well as country notes. Part III presents summary tables with time series, for selected data and indicators for all countries and regional aggregates at a glance.

This publication is based on the data in physical units published in the IEA *World Energy Statistics*. It follows the definitions of the *United Nations International Recommendations for Energy Statistics (IRES)*<sup>2</sup> which form the basis of the IEA energy balance methodology, briefly summarised below.

## Energy balance: key concepts

Energy data are generally collected independently across different commodities. Energy statistics are the simplest format to present all the data together, assembling the individual balances of all products, each expressed in its own physical unit (e.g. TJ for natural gas, kt for coal, etc). These are called commodity balances.

However, energy products can be converted into one another through a number of transformation processes. Therefore, it is very useful to also develop one comprehensive national energy balance, to understand how products are transformed into one another, and to highlight the various relationships among them.

By presenting all the data in a common energy unit, the energy balance allows users to see the total

amount of energy used and the relative contribution of each different source, for the whole economy and for each individual consumption sector; to compute the different fuel transformation efficiencies; to develop various aggregated indicators (for example consumption per capita or per unit of GDP) and to estimate CO<sub>2</sub> emissions from fuel combustion.

The energy balance is a natural starting point to study the evolution of the energy market, forecast energy demand, monitor impacts of energy policies and assess potential areas for action. The statistician also uses the energy balance to check data accuracy, as large statistical differences in energy units, apparent energy gains or large losses in transformation processes, or large unexplained variations in shares or in high-level indicators may all indicate underlying data problems.

The energy balance takes the form of a matrix where columns present all the different energy sources (“products”) categories and rows represent all the different “flows”, grouped in three main blocks: energy supply, transformation/energy use and final consumption.

To develop an energy balance from the set of commodity balances, the two main steps are: i) all the data are converted to a common energy unit – also allowing to compute a “total” product; and ii) some re-formatting is performed to avoid double counting when summing all products together. For example, for secondary products (e.g. motor gasoline) the production appears in the production row in commodity balances, but is reported as an output of the relevant transformation (e.g. oil refineries) in an energy balance, where the production row only refers to production of primary products (e.g. crude oil).

The methodological assumptions underlying energy balances, discussed in the next section, are particularly important to understand differences across balances derived by different national and international organisations starting from the same energy commodity data.

1. China, India, Indonesia, Morocco, Singapore and Thailand.

2. <https://unstats.un.org/UNSD/energy/ires/default.htm>.

## IEA energy balances methodology

The unit adopted by the IEA is the tonne of oil equivalent (toe), defined as  $10^7$  kilocalories (41.868 gigajoules). This quantity of energy is, within a few per cent, equal to the net heat content of 1 tonne of crude oil. Conversion of the IEA energy balances to other energy units would be straightforward.

The main methodological choices underlying energy balances that can differentiate the final balances layout across organisations are: i) “net” versus “gross” energy content; ii) calorific values; and iii) primary energy conventions.

### Net versus gross energy content

The IEA energy balances are based on a “net” energy content, which excludes the energy lost to produce water vapour during combustion. All the elements of the energy balance are expressed on the same net basis to ensure comparability. Even elements (e.g. natural gas) that in commodity balances may be already in energy units but on a different basis (e.g. “gross”) are converted (e.g. from “gross” to “net”).

The difference between the “net” and the “gross” calorific value for each fuel is the latent heat of vaporisation of the water produced during combustion of the fuel. For coal and oil, the net calorific value is about 5% less than gross, for most forms of natural and manufactured gas the difference is 9-10%, while for electricity and heat there is no difference as they are not combusted.

### Calorific values

Generally, the IEA adopts country-specific, time-varying, and for some products flow-dependent, net calorific values supplied by national administrations for most products; and regional default values (in conjunction with Eurostat for the European countries) for the oil products. More detailed explanations on the IEA conversion to energy units for the different energy sources are given in Section 2, Units and conversions.

### Primary energy conventions

A very important methodological choice is the definition of the “**primary energy equivalent**” for the electricity and heat produced from non-combustible sources, such as nuclear, geothermal, solar, hydro, wind. The information collected is generally the amount of electricity and heat produced, represented

in the balance as an output of transformation. Conventions are needed to compute the most appropriate corresponding primary energy, input to the transformation, both in form and in amount.

The principle adopted by the IEA is that the **primary energy form** is *the first energy form downstream in the production process for which multiple energy uses are practical*. For example, the first energy form that can be used as energy in the case of nuclear is the nuclear heat of the reactor, most of which is then transformed into electricity. The application of this principle leads to the choice of the following primary energy forms:

- **Electricity** for primary electricity (hydro, wind, tide/wave/ocean and solar photovoltaic).
- **Heat** for heat and secondary electricity (nuclear, geothermal and solar thermal).

Once the primary energy form is identified for all electricity and heat generated from non-combustible sources, the IEA adopts the **physical energy content method** to compute the corresponding primary energy equivalent amounts: the primary energy equivalent is simply the physical energy content of the corresponding primary energy form.

For primary electricity, such as hydro and solar PV, as electricity is identified as the primary energy form, the primary energy equivalent is simply the gross electricity generated in the plant.

For nuclear electricity, the primary energy equivalent is the quantity of heat generated in the reactors. In the absence of country-specific information, the IEA estimates the primary energy equivalent from the electricity generated by assuming an efficiency of 33%, derived as the average efficiency of nuclear power plants across Europe. Note that the principle of using the heat from nuclear reactors as the primary energy form for the energy statistics has an important effect on any indicators of energy supply dependence. Under the present convention, the primary nuclear heat appears as an indigenous resource. However, the majority of countries using nuclear power import their nuclear fuel, and if this fact could be taken into account, it would lead to an increase in the supply dependence on other countries.

For geothermal electricity, the primary energy equivalent is the quantity of heat and a similar back-calculation is used where the quantities of steam supplied to the plant are not measured, assuming a thermal efficiency of 10%. This figure is only approximate and reflects the fact that the steam from

geothermal sources is generally of low quality. If data for the steam input to geothermal power plants are available, they are used directly as primary energy equivalent.

Similarly, for solar thermal plants the heat supply is back-calculated assuming a 33% efficiency of conversion of heat into electricity, reflecting relatively low working temperatures, although central receiver systems can reach higher temperatures and therefore higher efficiencies.

In summary, for geothermal and solar thermal, if no country-specific information is reported, the primary energy equivalent is calculated using the following efficiencies:

- 10% for geothermal electricity;
- 50% for geothermal heat;
- 33% for solar thermal electricity;
- 100% for solar thermal heat.

An alternative to the physical energy content method is the **partial substitution method**, used in the past by the IEA. In this case, the primary energy equivalent of the electricity generated from non-combustible sources is computed as the hypothetical amount of energy necessary to generate the same amount of electricity in thermal power plants, assuming an average generation efficiency. The method was abandoned by the IEA and other organisations because it had little meaning for countries with significant hydro electricity generation, and because the actual substitution values were hard to establish, as they depended on the efficiency of the marginal electricity production. It also had unreal effects on the energy balance, as transformation losses appeared without a physical basis.

Since the two methods differ significantly in the treatment of solar, hydro, etc., the share of renewables in total energy supply varies depending on the method. To interpret shares of various energy sources in total supply, it is important to understand the conventions used to calculate the primary energy supply.

## Balances tables description

The energy balances shown in Part II are presented in tabular format: columns for the various sources of energy and rows for the different origins and uses.

Note that the tables for World, regional aggregates and OECD countries are in million tonnes of oil equivalent (Mtoe), while those for non-OECD countries are

in thousand tonnes of oil equivalent (ktoe) with a few exceptions for the Association countries.

## Columns

Across the top of the table from left to right, there are eleven columns with the following headings:

**Column 1:** *Coal* includes all coal, both primary (including hard coal and lignite) and derived fuels (including patent fuel, coke oven coke, gas coke, BKB, gas works gas, coke oven gas, blast furnace gas and other recovered gases).

As the column *coal* includes both primary and secondary fuels, values reported in this column under transformation rows (e.g. blast furnaces) refer to the sum of all transformation input and output quantities, and therefore represent transformation losses.

*For presentational purposes, peat (including peat products) and oil shale are also included in this column, where applicable.*

**Column 2:** *Crude oil* comprises crude oil, natural gas liquids, refinery feedstocks, and additives as well as other hydrocarbons (including emulsified oils, synthetic crude oil, mineral oils extracted from bituminous minerals such as oil shale, bituminous sand, etc., and oils from coal liquefaction).

**Column 3:** *Oil products* comprise refinery gas, ethane, LPG, aviation gasoline, motor gasoline, jet fuels, kerosene, gas/diesel oil, fuel oil, naphtha, white spirit, lubricants, bitumen, paraffin waxes, petroleum coke and other oil products.

**Column 4:** *Natural gas* includes natural gas (excluding natural gas liquids).

**Column 5:** *Nuclear* shows the primary heat equivalent of the electricity produced by a nuclear power plant with an average thermal efficiency of 33%.

**Column 6:** *Hydro* shows the energy content of the electricity produced in hydro power plants. Hydro output excludes output from pumped storage plants.

**Column 7:** *Geothermal/Solar/etc.* shows production of geothermal, solar, wind and tide/wave/ocean energy and the use of these energy forms for electricity and heat generation. Unless the actual efficiency of the geothermal process is known, the quantity of geothermal energy entering electricity generation is inferred from the electricity production at geothermal plants assuming an average thermal efficiency of 10%. Similarly, for solar thermal electricity, a default of 33% is used if the actual efficiency is not known. For solar PV, wind and tide/wave/ocean energy, the quantities



entering electricity generation are equal to the electrical energy generated. Other uses shown in this column relate to geothermal and solar thermal heat. If the heat is distributed in the transformation sector, then the default efficiencies are 50% for geothermal heat and 100% for solar thermal heat. The production is included in the transformation sector as an input and the consumption of the heat is included in the heat column. If the heat is used directly, then the consumption is shown in the geothermal/solar column directly in the sector where the heat was consumed.

**Column 8: Biofuels/Waste** comprises solid biofuels, liquid biofuels, biogases, industrial waste and municipal waste. Biofuels are defined as any plant matter used directly as fuel or converted into fuels (e.g. charcoal) or electricity and/or heat. Included here are wood, vegetal waste (including wood waste and crops used for energy production), ethanol, animal materials/wastes and sulphite lyes (also known as “black liquor”) which is an alkaline spent liquor from the digesters in the production of sulphate or soda pulp during the manufacture of paper where the energy content is derived from the lignin removed from the wood pulp and which is usually 65-70% solid in its concentrated form.

Municipal waste comprises wastes produced by residential and commercial/public services that are mainly collected by local authorities for disposal in a central location for the production of heat and/or power. Hospital waste is included in this category.

Note that for biofuels, only the amounts of biomass specifically used for energy purposes (a small part of the total) are included in the energy statistics. Therefore, the non-energy use of biomass is not taken into consideration and the quantities are null by definition.

Data under this heading are often based on incomplete information. Thus the data give only a broad impression of developments, and are not strictly comparable between countries. In some cases complete categories of vegetal fuel are omitted due to lack of information. Please refer to individual country data when consulting regional aggregates.

As the column *Biofuel/Waste* includes both primary and secondary fuels, such as wood and charcoal, values reported in this column under the other transformation row (including charcoal plants) refer to the sum of all transformation input and output quantities, and therefore represent transformation losses.

**Column 9: Electricity** shows final consumption and trade in electricity, which is accounted at the same

heat value as electricity in final consumption (i.e. 1 GWh = 0.000086 Mtoe).

**Column 10: Heat** shows the disposition of heat produced for sale. The large majority of the heat included in this column results from the combustion of fuels although some small amounts are produced from electrically powered heat pumps and boilers. Any heat extracted from ambient air by heat pumps is shown as production.

**Column 11: Total** equals the total of Columns 1 to 10.

## Rows

The categories on the left hand side of the table have the following functions:

**Row 1: Production** is the production of primary energy, i.e. hard coal, brown coal, peat, oil shale, crude oil, NGL, natural gas, biofuels and waste, nuclear, hydro, geothermal, solar, wind and the heat from heat pumps that is extracted from the ambient environment. Production is calculated after removal of impurities (e.g. sulphur from natural gas). Calculation of production of hydro, geothermal, etc. and nuclear electricity is explained in the section on Units and conversions.

**Row 2/3: Imports and exports** comprise amounts having crossed the national territorial boundaries of the country, whether or not customs clearance has taken place.

**For coal:** Imports and exports comprise the amount of fuels obtained from or supplied to other countries, whether or not there is an economic or customs union between the relevant countries. Coal in transit should not be included.

**For oil and natural gas:** Quantities of crude oil and oil products imported or exported under processing agreements (i.e. refining on account) are included. Quantities of oil in transit are excluded. Crude oil, NGL and natural gas are reported as coming from the country of origin; refinery feedstocks and oil products are reported as coming from the country of last consignment. Re-exports of oil imported for processing within bonded areas are shown as exports of product from the processing country to the final destination. Imported LNG which is exported to another country after regasification is considered both as an import and as an export of gas.

**For electricity:** Amounts are considered as imported or exported when they have crossed the national territorial boundaries of the country. If electricity is



“wheeled” or transited through a country, the amount is shown as both an import and an export.

**Row 4:** *International marine bunkers* covers those quantities delivered to ships of all flags that are engaged in international navigation. The international navigation may take place at sea, on inland lakes and waterways, and in coastal waters. Consumption by ships engaged in domestic navigation is excluded. The domestic/international split is determined on the basis of port of departure and port of arrival, and not by the flag or nationality of the ship. Consumption by fishing vessels and by military forces is also excluded. See *domestic navigation* (Row 40), *fishing* (Row 46) and *non-specified “other”* (Row 47).

**Row 5:** *International aviation bunkers* includes deliveries of aviation fuels to aircraft for international aviation. Fuels used by airlines for their road vehicles are excluded. The domestic/international split should be determined on the basis of departure and landing locations and not by the nationality of the airline. For many countries this incorrectly excludes fuel used by domestically owned carriers for their international departures.

*Note that international aviation bunkers and international marine bunkers are subtracted out of supply, based on the IRES. This differs from the treatment of international aviation bunkers in the annual oil statistics published in the Oil Information publication.*

**Row 6:** *Stock changes* reflects the difference between opening stock levels on the first day of the year and closing levels on the last day of the year of stocks on national territory held by producers, importers, energy transformation industries and large consumers. A stock build is shown as a negative number, and a stock draw as a positive number.

**Row 7:** *Total primary energy supply (TPES)* is made up of *production* (Row 1) + *imports* (Row 2) - *exports* (Row 3) - *international marine bunkers* (Row 4) - *international aviation bunkers* (Row 5) ± *stock changes* (Row 6). Note, exports, bunkers and stock changes incorporate the algebraic sign directly in the number.

**Row 8:** *Transfers* include interproduct transfers, products transferred and recycled products (e.g. used lubricants which are reprocessed).

**Row 9:** *Statistical differences* are essentially the difference between supply and demand. They include the sum of the unexplained statistical differences for individual fuels, as they appear in the basic energy statistics. They also include the statistical differences

that arise because of the variety of conversion factors in the coal and oil columns. See introduction to the *World Energy Statistics* for further details.

**Row 10:** *Electricity plants* refers to plants which are designed to produce electricity only. If one or more units of the plant is a CHP unit (and the inputs and outputs cannot be distinguished on a unit basis) then the whole plant is designated as a CHP plant. Both main activity producer<sup>3</sup> and autoproducer<sup>4</sup> plants are included here. Columns 1 through 8 show the use of primary and secondary fuels for the production of electricity as negative entries. Heat from chemical processes used for electricity generation will appear in Column 10. Gross electricity produced (including power stations' own consumption) appears as a positive quantity in the electricity column. Transformation losses appear in the total column as a negative number.

**Row 11:** *Combined heat and power plants (CHP)*, refers to plants which are designed to produce both heat and electricity, sometimes referred as co-generation power stations. If possible, fuel inputs and electricity/heat outputs are on a unit basis rather than on a plant basis. However, if data are not available on a unit basis, the convention for defining a CHP plant noted above is adopted. Both main activity producer and autoproducer plants are included here. *Note that for autoproducer CHP plants, all fuel inputs to electricity production are taken into account, while only the part of fuel inputs to heat sold is shown. Fuel inputs for the production of heat consumed within the autoproducer's establishment are not included here but are included with figures for the final consumption of fuels in the appropriate consuming sector.*

Columns 1 through 8 show the use of primary and secondary fuels for the production of electricity and heat as negative entries. Total gross electricity produced appears as a positive quantity in the electricity column and heat produced appears as a positive number in the heat column. Transformation losses appear in the total column as a negative number.

**Row 12:** *Heat plants* refers to plants (including heat pumps and electric boilers) designed to produce heat only, which is sold to a third party under the provisions of a contract. Both main activity producer and autoproducer plants are included here. Heat pumps

3. Main activity producers generate electricity and/or heat for sale to third parties, as their primary activity. They may be privately or publicly owned. Note that the sale need not take place through the public grid.

4. Autoproducer undertakings generate electricity and/or heat, wholly or partly for their own use as an activity which supports their primary activity. They may be privately or publicly owned.

that are operated within the residential sector where the heat is not sold are not considered a transformation process and are not included here – the electricity consumption appears as residential use.

Columns 1 through 8 show the use of primary and secondary fuels in a heating system that transmits and distributes heat from one or more energy sources to, among others, residential, industrial, and commercial consumers, for space heating, cooking, hot water and industrial processes.

**Row 13: Blast furnaces** contains inputs to and outputs of fuels from blast furnaces. It is often difficult to correctly account for all inputs and outputs in energy transformation industries, and to separate energy that is transformed from energy that is combusted. As a result, in certain cases the data in the total column are positive numbers, indicating a problem in the underlying energy data.

**Row 14: Gas works** contains the inputs to and outputs from plants manufacturing gases for distribution to the public, either directly or after blending with natural gas. The coal column will contain the output of gas works gas minus any inputs of coal and coal products into the gas works. Inputs of oil products or natural gas into the gas works will figure as negative numbers with conversion losses appearing in the total column.

**Row 15: Coke/patent fuel/BKB/PB plants** contains losses in transformation of coal from primary to secondary fuels and from secondary to tertiary fuels (hard coal to coke and patent fuel, lignite to BKB, peat to peat briquettes (PB), etc.).

**Row 16: Oil refineries** shows the use of primary energy for the manufacture of finished oil products and the corresponding output. Thus, the total reflects transformation losses. In certain cases the data in the total column are positive numbers. This can be due either to problems in the primary refinery balance, or to the fact that the IEA uses regional net calorific values for oil products.

**Row 17: Petrochemical plants** covers backflows returned from the petrochemical industry. Note that backflows from oil products that are used for non-energy purposes (i.e. white spirit and lubricants) are not included here, but in non-energy use.

**Row 18: Liquefaction plants** includes diverse liquefaction processes, such as coal liquefaction plants and gas-to-liquid plants.

**Row 19: Other transformation** covers non-specified transformation not shown elsewhere, such as the transformation of primary solid biofuels into charcoal.

**Row 20: Energy industry own use** contains the primary and secondary energy consumed by transformation industries for heating, pumping, traction and lighting purposes [ISIC<sup>5</sup> 05, 06, 19 and 35, Group 091 and Classes 0892 and 0721]. These quantities are shown as negative figures. Included here are, for example, own use of energy in coal mines, own consumption in power plants (which includes net electricity consumed for pumped storage) and energy used for oil and gas extraction.

**Row 21: Losses** includes losses in energy distribution, transmission and transport.

**Row 22: Total final consumption (TFC)** is the sum of consumption by the different end-use sectors and also includes *non-energy use*. Backflows from the petrochemical industry are not included in final consumption (see Row 17, *petrochemical plants* and Row 52, *of which petrochemical feedstocks*).

**Rows 23-36: Industry consumption** is specified by sub-sector as listed below. Energy used for transport by industry is not included here but is reported under transport. *Non-energy use* in industry is excluded from *industry* and reported separately (see Rows 50-52).

*Iron and steel industry* [ISIC Group 241 and Class 2431];

*Chemical and petrochemical industry* [ISIC Divisions 20 and 21] excluding petrochemical feedstocks;

*Non-ferrous metals basic industries* [ISIC Group 242 and Class 2432];

*Non-metallic minerals* such as glass, ceramic, cement, etc. [ISIC Division 23];

*Transport equipment* [ISIC Divisions 29 and 30];

*Machinery* comprises fabricated metal products, machinery and equipment other than transport equipment [ISIC Divisions 25 to 28];

*Mining (excluding fuels) and quarrying* [ISIC Divisions 07 and 08 and Group 099];

*Food and tobacco* [ISIC Divisions 10 to 12];

*Paper, pulp and printing* [ISIC Divisions 17 and 18];

*Wood and wood products* (other than pulp and paper) [ISIC Division 16];

*Construction* [ISIC Divisions 41 to 43];

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5. International Standard Industrial Classification of All Economic Activities, Series M, No. 4 / Rev. 4, United Nations, New York, 2008.

*Textile and leather* [ISIC Divisions 13 to 15];

*Non-specified* (any manufacturing industry not included above) [ISIC Divisions 22, 31 and 32].

Note: Most countries have difficulties supplying an industrial breakdown for all fuels. In these cases, the *non-specified* industry row has been used. Regional aggregates of industrial consumption should therefore be used with caution.

**Rows 37-43:** *Transport* includes all fuels used for transport [ISIC Divisions 49 to 51] except international marine bunkers and international aviation bunkers. It includes transport in industry and covers *domestic aviation, road, rail, pipeline transport, domestic navigation* and *non-specified transport*. Domestic aviation includes deliveries of aviation fuels to aircraft for domestic aviation – commercial, private, agriculture, etc. It includes use for purposes other than flying, e.g. bench testing of engines, but not airline use of fuel for road transport. The domestic/international split should be determined on the basis of departure and landing locations and not by the nationality of the airline. Note that this may include journeys of considerable length between two airports in a country (e.g. San Francisco to Honolulu). For many countries, the split between international aviation and domestic aviation incorrectly allocates fuel use for both domestic and international departures of domestically owned carriers to domestic air. Fuel used for ocean, coastal and inland fishing (included under *fishing*) and military consumption (included in *other non-specified*) are excluded from transport. *Non-energy use* in transport is excluded from *transport* and reported separately (see Row 53).

**Rows 44-49:** *Other* covers *residential* [ISIC Divisions 97 and 98, although this is only a small part of residential], *commercial and public services* [ISIC Divisions 33, 36-39, 45-47, 52, 53, 55, 56, 58-66, 68-75, 77-82, 84 (excluding Class 8422), 85-88, 90-96 and 99], *agriculture/forestry* [ISIC Divisions 01 and 02], *fishing* [ISIC Division 03] and *non-specified consumption*. *Non-specified* includes military fuel use for all mobile and stationary consumption (e.g. ships, aircraft, road and energy used in living quarters) regardless of whether the fuel delivered is for the military of that country or for the military of another country. In many cases administrations find it impossible to distinguish energy consumption in *commercial and public services* from *residential* consumption. Some cannot distinguish consumption in *agriculture* from that in *residential*. In these cases,

residential will also include consumption in *agriculture* and/or *commercial/public services*. The *other* total is, therefore, more accurate than its components.

**Rows 50-54:** *Non-energy use* covers those fuels that are used as raw materials in the different sectors and are not consumed as a fuel or transformed into another fuel. *Non-energy use* is shown separately in final consumption under the heading *non-energy use*.

Note that for biofuels, only the amounts of biomass specifically used for energy purposes (a small part of the total) are included in the energy statistics. Therefore, the non-energy use of biomass is not taken into consideration and the quantities are null by definition.

*of which: chemical/petrochemical.* Fuels used for chemical feedstocks and non-energy products in the petrochemical industry, which includes cracking and reforming processes for the purpose of producing ethylene, propylene, butylene, synthesis gas, aromatics, butadene and other hydrocarbon-based raw materials in processes *such* as steam cracking, aromatics plants and steam reforming [part of ISIC Group 201].

**Rows 55-57:** *Electricity generated* shows the total electricity generated by installations separated into electricity plants and CHP plants. Production includes electricity from combustible fuels, nuclear, hydro (excluding pumped storage production), geothermal, etc. (see, however, the notes on Rows 10 and 11). Electricity produced by *heat* from chemical processes is shown in the *heat* column.

**Rows 58-60:** *Heat generated* shows the total heat generated by installations separated into CHP plants and heat plants. Heat produced by electric boilers is shown in the *electricity* column. Heat produced by heat pumps, heat from chemical processes and heat from non-specified combustible fuels is shown in *the heat* column.

## Graphs description

The graphs in Part II show for each country and regional aggregate the data and indicators described below.

### *Figure 1: Energy production*

Presents total primary energy production, *expressed* in Mtoe. The product *Hydro/other* includes hydro, geothermal, solar, wind, tide/wave/ocean and primary electricity and heat from other sources.

**Figure 2: Total primary energy supply**

This graph excludes electricity trade. The product *Hydro/other* includes hydro, geothermal, solar, wind, tide/wave/ocean and primary electricity and heat from other sources.

**Figure 3: Energy self-sufficiency**

Presents total energy production divided by TPES as a percentage.

**Figure 4 (OECD and Association countries): Breakdown of sectoral total final consumption by source**

This graph includes non-energy use.

The sector *Other* includes commercial and public services, agriculture/forestry, fishing and non-specified.

The product *Other* includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.

**Figure 4 (non-OECD, except Association countries): Oil product demand**

This graph presents the demand for oil products, expressed in millions of tons, including international marine and aviation bunkers.

**FO** is residual fuel oil.

**Middle distillates** include a range of refined petroleum products situated between the lighter fractions and heavier products: other kerosene, diesel.

**Aviation fuels** include kerosene-type jet fuel, gasoline-type jet fuel and aviation gasoline.

**Mogas** is motor gasoline, including additives and excluding biofuels.

**LPG** includes LPG, NGL, ethane and naphtha.

**Other** includes direct use of crude oil, refinery gas and other products, such as bitumen, white spirit, and lubricants.

**Figure 5: Electricity generation by source**

The product *Other renewables/Waste* includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste and primary electricity and heat from other sources.

**Figure 6: Selected indicators**

Presents indices where 1971=100 of four aggregated indicators: TPES/GDP, TPES per capita, TFC/GDP and Electricity per capita.

Notes on the graphs: peat and oil shale are aggregated with the product *coal*, when applicable; the GDP data used to calculate the indicators are at 2010 constant US dollars, converted from national currencies using purchasing power parities.

## Key OECD indicators tables and global summary tables

The key indicators tables of Part II for OECD countries as well as the Association countries, and the summary tables of Part III for all countries show indicators derived from the following data.

**Energy production:** The key indicators tables for OECD countries of Part II present total primary energy production. The summary tables of Part III present primary energy production by different sources separately (coal, crude oil and NGL, natural gas, nuclear energy, hydro energy, geothermal energy, energy from solar, wind tide, etc., of biofuels and waste, ) and also include a table on the secondary production of oil products, expressed in Mtoe.

**Net imports:** imports minus exports of total energy (Part II) and of coal, oil, natural gas, electricity, and total energy (Part III), expressed in Mtoe.

**Primary energy supply:** Total primary energy supply (Part II), and separate primary supply of coal, oil, natural gas, biofuels and waste, renewables, total (Part III), expressed in Mtoe.

**Net oil imports:** imports minus exports of oil, expressed in Mtoe (Part II).

**Oil supply:** primary supply of oil, expressed in Mtoe (Part II).

**Electricity generation:** share of coal, oil, natural gas, nuclear, hydro, renewables, other, expressed in % of total generation, as well as total electricity generation in Gwh (Part III).

**Electricity consumption:** domestic consumption, i.e. gross production + imports - exports - losses, expressed in TWh (Part II).

**Final consumption:** expressed in Mtoe, and detailed for coal, oil, natural gas, electricity, and total, including non-energy use (Part III).

**Consumption in industry:** consumption of coal, oil, natural gas, electricity, and total consumption of energy in the industry sector, including non-energy use, expressed in Mtoe (Part III).



**Consumption in transport:** consumption of oil, electricity, and total consumption of energy in the transport sector, including non-energy use, expressed in Mtoe (Part III).

**Self-sufficiency:** expressed as a ratio between production and primary energy supply, for total (Part III), and for total, coal, oil and natural gas (Part II).

**GDP using exchanges rates:** expressed in billion 2010 USD.

**For OECD countries,** the main source of these series for 1970 to 2017 is the OECD *National Accounts Statistics* database [ISSN: 2074-3947 (online)], last published in book format as *National Accounts of OECD Countries, Volume 2018 Issue1: Main Aggregates*, OECD 2018. GDP data for **Australia, France, Greece, Korea, Sweden** and the **United Kingdom** for 1960 to 1969 and **Denmark** for 1966 to 1969 as well as for **Netherlands** for 1969 were taken from the same source. GDP data for 1960 to 1969 for the other countries have been estimated using the growth rates from the series in the *OECD Economic Outlook* No 98 and other data previously published by the OECD. Growth rates from these sources were also used to estimate data for the **Czech Republic** (prior to 1990), **Hungary** (prior to 1991) and **Poland** (prior to 1990) and the **Slovak Republic** (prior to 1992). Data for **Chile** (prior to 1986) and **Estonia** (prior to 1992) are IEA Secretariat estimates based on GDP growth rates from the World Bank.

**For non-OECD countries,** the main source of the GDP data is *World Development Indicators*, The World Bank, Washington D.C., 2018. GDP figures for, **Gibraltar, Democratic People's Republic of Korea, Former Soviet Union** (before 1990), **Syrian Arab Republic, Chinese Taipei, Former Yugoslavia** (before 1990) and a few countries within the regions<sup>6</sup> **Other Africa, Other non-OECD Americas** and **Other non-OECD Asia** are based on the CHELEM-CEPII online databases, Bureau van Dijk, 2018.

GDP figures for **Albania** (1971-1979), **Angola** (1971-1984), **Bahrain** (1971-1980 and 2016), **Bosnia and Herzegovina** (1990-1993), **Brunei** (1971-1974), **Bulgaria** (1971-1979), **Croatia** (1990-1994), **Cuba** (2016), **Eritrea** (2012-2016), **Ethiopia** (1971-1980), **Haiti** (1971-1997), **Iran** (2016), **Jordan** (1971-1974), **Kuwait** (1971-1991 and 2016), **Lebanon** (1971-1987), **Libya** (1971-1998 and 2012-2016), **Lithuania** (1990-1994), **Mauritius** (1971-1975), **Moldova** (1990-1994), **Mozambique** (1971-1979), **Oman** (2016), **Romania** (1971-1989), **Russia** (1990-1994),

**Tanzania** (1971-1987), **United Arab Emirates** (1971-1974), **Venezuela** (2013-2016) and **Vietnam** (1971-1983), **Yemen** (1971-1989), have been estimated based on the growth rates of the CHELEM-CEPII online database, Bureau van Dijk, 2018

The GDP 2016 figure for **Greenland** is calculated based on historical data based on *World Development Indicators*, The World Bank, Washington D.C., 2018

For **Curaçao**, GDP figures are based on historical CHELEM-CEPII GDP data for Netherlands Antilles before the country's dissolution, and on Curaçao/Sint Maarten nominal GDP ratios calculated based on information received from Curaçao Central bank. For **South Sudan**, GDP figures are based on data from the International Monetary Fund.

The GDP data have been compiled for all individual countries at market prices in 2010 US dollars.

**GDP using purchasing power parities:** expressed in billion 2010 USD. Purchasing power parities are the rates of currency conversion that equalise the purchasing power of different currencies. A given sum of money, when converted into different currencies at the PPP rates, buys the same basket of goods and services in all countries. In other words, PPPs are the rates of currency conversion which eliminate the differences in price levels between different countries. The PPPs selected to convert the GDP from national currencies to US dollars were aggregated using the Èltetö, Köves and Szulc (EKS) Eurostat-OECD method and rebased on the United States. For a more detailed description of the methodology please see *Eurostat-OECD Methodological Manual on Purchasing Power Parities*, 2012 edition, European Union / OECD 2012.

**For OECD countries,** see *GDP using exchange rates* for sources.

**For non-OECD countries,** the main source of the GDP PPP data is *World Development Indicators*, The World Bank, Washington, D.C., 2018. However, this source is available for GDP PPP (constant 2011 US dollars scaled to the levels of 2010 using current PPP US dollars) only from 1990. Therefore, prior to 1990 GDP PPP data have been calculated based on the PPP conversion factor (GDP) to market exchange rate ratio.

GDP PPP figures for **Democratic People's Republic of Korea, Former Soviet Union** (before 1990), **Syrian Arab Republic, Chinese Taipei, Former Yugoslavia** (before 1990) and a few countries within the regions<sup>6</sup> **Other Africa, Other non-OECD Americas** and

**Other non-OECD Asia** are based on the CHELEM-CEPII online databases, Bureau van Dijk, 2018. The GDP PPP data have been converted from GDP using purchasing power parity rates. These data have been scaled to the price levels of 2010.

For **Gibraltar**, GDP PPP figures are based on historical CHELEM-CEPII GDP PPP data and government of Gibraltar national accounts.

For **Curaçao**, GDP PPP figures are based on historical CHELEM-CEPII GDP data for Netherlands Antilles before its dissolving, and for 2012-2015 GDP PPP is calculated based on historical GDP PPP / GDP ratio.

For **South Sudan**, GDP PPP figures are based on International Monetary Fund data.

GDP PPP figures for **Bahrain** (2016), **Bosnia and Herzegovina** (1990-1993), **Croatia** (1990-1994), **Cuba**, **Eritrea** (2012-2016), **Haiti** (1990-1997), **Iraq** (1990-1999), **Kuwait** (1990-1991), **Libya** (1990-1998 and 2012-2016), **Lithuania** (1990-1994), **Moldova** (1990-1994), **Oman** (2016), **Serbia** (1990-1994), **Qatar** (1990-2000) and **Venezuela** (2015-2016) have been estimated using the ratio of GDP PPP and GDP data based on CHELEM-CEPII online database, Bureau van Dijk, 2018. These data have been scaled to the price levels of 2010.

The GDP PPP reflect the changes to power purchasing parity rates based on the 2011 International Comparison Program (ICP), published in 2014. The ICP has worked for 6 years to better estimate the value of the PPP 'basket of goods' for all countries for which the World Bank calculates GDP PPP. For many countries, this value has significantly changed in comparison to previous ICP exercises. This leads to significant revisions to GDP PPP for many countries compared to previous publications.

Please note that the regional totals shown for OECD and other regions were calculated by summing individual countries' GDP data. This calculation yields slightly different results to the GDP totals published by OECD in its national accounts which are derived from chained-linked indices. GDP data from the World Bank have also been summed rather than using chain-linked indices.

**Population: For OECD countries**, the main source of these series for 1970 to 2017 when available is the *OECD National Accounts Statistics* database [ISSN: 2074-3947 (online)], last published in book format as *National Accounts of OECD Countries, Volume 2018 Issue 1: Main Aggregates*, OECD 2018. Data for 1960 to 1969 have been estimated using the growth rates from the population series published in the *OECD Factbook 2015* (online database version). Growth rates from the *OECD Factbook 2015* were also used to estimate data for **Chile** (prior to 1986), **Estonia** (prior to 1993), **Israel** (prior to 1995), the **Slovak Republic** (prior to 1990) and **Slovenia** (prior to 1995).

**For non-OECD countries**, the main source of the population data is *World Development Indicators*, The World Bank, Washington D.C., 2018.

Population data for **Former Soviet Union** (before 1990), **Chinese Taipei**, **Former Yugoslavia** (before 1990), **Eritrea** (2012-2016), **Kuwait** (1992-1994) and for a few countries within the regions<sup>6</sup> **Other Africa**, **Other non-OECD Americas** and **Other non-OECD Asia** are based on the CHELEM-CEPII online database, Bureau van Dijk, Paris, 2018. Population data for **Cyprus**<sup>6</sup> are taken from the Eurostat online database. Population data for **Gibraltar** are taken from the government of Gibraltar *Key Indicators* publication available online.

**Industrial Production Index (OECD):** The main source of these series is the OECD database Main Economic Indicators, July 2018. Industrial production refers to the goods produced by establishments engaged in mining (including oil extraction), manufacturing, and production of electricity, gas and water. These are Sections B, C, D and E of ISIC Rev. 4 or NACE Rev. 2 classifications. From 1991, the industrial production index for Germany refers to unified Germany and has been linked to the series for western Germany. Data for Mexico include construction (Section F). For OECD Total and OECD Europe, the IPI has been chain linked and data refer to all OECD countries from 1990 onwards; prior to 1990 **Chile**, the **Czech Republic**, **Estonia**, **Hungary**, **Israel**, **Poland**, the **Slovak Republic**, **Slovenia** and **Switzerland** are not included.

6. Please refer to the section on Geographical coverage.



## 2. UNITS AND CONVERSIONS

### General conversion factors for energy

To:	TJ	Gcal	Mtoe	MBtu	GWh
From:	multiply by:				
terajoule (TJ)	1	$2.388 \times 10^2$	$2.388 \times 10^{-5}$	$9.478 \times 10^2$	$2.778 \times 10^{-1}$
gigacalorie (Gcal)	$4.187 \times 10^{-3}$	1	$1.000 \times 10^{-7}$	3.968	$1.163 \times 10^{-3}$
million tonnes of oil equivalent (Mtoe)	$4.187 \times 10^4$	$1.000 \times 10^7$	1	$3.968 \times 10^7$	$1.163 \times 10^4$
million British thermal units (MBtu)	$1.055 \times 10^{-3}$	$2.520 \times 10^{-1}$	$2.520 \times 10^{-8}$	1	$2.931 \times 10^{-4}$
gigawatt hour (GWh)	3.600	$8.598 \times 10^2$	$8.598 \times 10^{-5}$	$3.412 \times 10^3$	1

### Conversion factors for mass

To:	kg	t	lt	st	lb
From:	multiply by:				
kilogramme (kg)	1	$1.000 \times 10^{-3}$	$9.842 \times 10^{-4}$	$1.102 \times 10^{-3}$	2.205
tonne (t)	$1.000 \times 10^3$	1	$9.842 \times 10^{-1}$	1.102	$2.205 \times 10^3$
long ton (lt)	$1.016 \times 10^3$	1.016	1	1.120	$2.240 \times 10^3$
short ton (st)	$9.072 \times 10^2$	$9.072 \times 10^{-1}$	$8.929 \times 10^{-1}$	1	$2.000 \times 10^3$
pound (lb)	$4.536 \times 10^{-1}$	$4.536 \times 10^{-4}$	$4.464 \times 10^{-4}$	$5.000 \times 10^{-4}$	1

### Conversion factors for volume

To:	gal US	gal UK	bbl	ft <sup>3</sup>	l	m <sup>3</sup>
From:	multiply by:					
US gallon (gal US)	1	$8.327 \times 10^{-1}$	$2.381 \times 10^{-2}$	$1.337 \times 10^{-1}$	3.785	$3.785 \times 10^{-3}$
UK gallon (gal UK)	1.201	1	$2.859 \times 10^{-2}$	$1.605 \times 10^{-1}$	4.546	$4.546 \times 10^{-3}$
barrel (bbl)	$4.200 \times 10^1$	$3.497 \times 10^1$	1	5.615	$1.590 \times 10^2$	$1.590 \times 10^{-1}$
cubic foot (ft <sup>3</sup> )	7.481	6.229	$1.781 \times 10^{-1}$	1	$2.832 \times 10^1$	$2.832 \times 10^{-2}$
litre (l)	$2.642 \times 10^{-1}$	$2.200 \times 10^{-1}$	$6.290 \times 10^{-3}$	$3.531 \times 10^{-2}$	1	$1.000 \times 10^{-3}$
cubic metre (m <sup>3</sup> )	$2.642 \times 10^2$	$2.200 \times 10^2$	6.290	$3.531 \times 10^1$	$1.000 \times 10^3$	1

## Decimal prefixes

10 <sup>1</sup>	deca (da)	10 <sup>-1</sup>	deci (d)
10 <sup>2</sup>	hecto (h)	10 <sup>-2</sup>	centi (c)
10 <sup>3</sup>	kilo (k)	10 <sup>-3</sup>	milli (m)
10 <sup>6</sup>	mega (M)	10 <sup>-6</sup>	micro (μ)
10 <sup>9</sup>	giga (G)	10 <sup>-9</sup>	nano (n)
10 <sup>12</sup>	tera (T)	10 <sup>-12</sup>	pico (p)
10 <sup>15</sup>	peta (P)	10 <sup>-15</sup>	femto (f)
10 <sup>18</sup>	exa (E)	10 <sup>-18</sup>	atto (a)

## Energy content

### Coal

Coal has separate net calorific values for production, imports, exports, inputs to electricity/heat generation and coal used in coke ovens, blast furnaces and industry. For electricity/heat generation, coal inputs to each type of plant (i.e. main activity electricity plant, auto-producer electricity plant, main activity CHP plant, autoproducer CHP plant, main activity heat plant, autoproducer heat plant) are converted to energy units using average factors calculated from the annual *Electricity Questionnaire*. All other flows are converted using an average net calorific value. Country-specific net calorific values for 2015 are given in the section on Net calorific values.

### Crude oil

Country-specific net calorific values (NCV) for production, imports and exports by country are used to calculate the balances. The average value is used to convert all the other flows to heat values. Country-specific net calorific values for 2015 are given in the section on Net calorific values.

### Gases

*World Energy Statistics* expresses the following gases in terajoules, using their gross calorific value.

$$1 \text{ terajoule} = 0.00002388 \text{ Mtoe.}$$

To calculate the net heat content of a gas from its gross heat content, multiply the gross heat content by the appropriate following factor.

Gas	Ratio NCV to GCV
Natural gas	0.9
Gas works gas	0.9
Coke oven gas	0.9
Blast furnace gas	1.0
Other recovered gases	1.0

### Biofuels and Waste

The heat content of primary solid biofuels, biogases, municipal waste and industrial waste, expressed in terajoules on a net calorific value basis, is presented in *World Energy Statistics*. The IEA Secretariat does not receive information on volumes and other characteristics of these fuels.

$$1 \text{ terajoule} = 0.00002388 \text{ Mtoe.}$$

Data for charcoal are converted from tonnes using the average net calorific values given in the section on Net calorific values.

Unless country-specific information has been provided, data for biogasoline are converted from tonnes using 26 800 kJ/kg. Biodiesels and other liquid biofuels are assumed to have a net calorific value of 36 700 kJ/kg unless otherwise specified.

### Oil products

The IEA applies regional default conversion factors (in conjunction with Eurostat for the European countries) for the oil products, allowing country-specific values for some non-OECD countries. Regional and country-specific net calorific values are given in the section on Net calorific values.

### Electricity

Figures for electricity production, trade, and final consumption are calculated using the energy content of the electricity (i.e. at a rate of 1 TWh = 0.086 Mtoe).

Hydro-electricity production (excluding pumped storage) and electricity produced by other non-thermal means (wind, tide/wave/ocean, solar PV, etc.) are accounted for similarly using 1 TWh = 0.086 Mtoe.

The primary energy equivalent of nuclear electricity is calculated from the gross generation by assuming a 33% conversion efficiency, i.e. 1 TWh = (0.086 ÷ 0.33) Mtoe.

In the case of electricity produced from geothermal heat, if the actual geothermal efficiency is not known, then the primary equivalent is calculated assuming an efficiency of 10%, so 1 TWh = (0.086 ÷ 0.1) Mtoe.

For electricity produced from solar thermal heat, the primary equivalent is calculated assuming an efficiency of 33%, so 1 TWh = (0.086 ÷ 0.33) Mtoe, unless the actual efficiency is known.

## Heat

Information on heat is supplied in terajoules and 1 terajoule = 0.00002388 Mtoe.

In the case of heat produced in a geothermal plant, if the actual geothermal efficiency is not known, then the primary equivalent is calculated assuming an efficiency of 50%, so 1 TJ =  $(0.00002388 \div 0.5)$  Mtoe.

For heat produced in a solar thermal plant, the primary equivalent is equal to the heat consumed, i.e. 1 TJ = 0.00002388 Mtoe.

For direct use of geothermal and solar thermal heat, all the heat consumed is accounted for in production and consumption.

## Examples

The following examples indicate how to calculate the net calorific content (in Mtoe) of the quantities expressed in original units.

From original units	To Mtoe (on a NCV basis)
Coking coal production (Poland) for 2016 in thousand tonnes	divide by 41 868 and then multiply by 29.606
Natural gas in terajoules (gross)	multiply by 0.00002388 and then multiply by 0.9
Motor gasoline (Poland) in thousand tonnes	divide by 41 868 and then multiply by 44.000
Heat in terajoules (net)	multiply by 0.00002388



## 3. NOTES ON DATA QUALITY

### Methodology

For OECD member countries, the data shown in this publication are derived from information provided in the five annual OECD questionnaires<sup>1</sup>: “Oil”, “Natural Gas”, “Solid Fossil Fuels and Manufactured Gases”, “Renewables” and “Electricity and Heat” completed by the national administrations. For the member countries of the European Union and the Economic Commission for Europe of the United Nations (UNECE) and a few others, the data shown in this publication are mostly based on information provided by the national administrations through the same annual questionnaires. The commodity balances for all other countries are based on national energy data of heterogeneous nature, converted and adapted to fit the IEA format and methodology.

Considerable effort has been made to ensure that the data presented in this publication adhere to the IEA definitions reported in the section on Methodological notes. These definitions, based on the *United Nations International Recommendations on Energy Statistics*<sup>2</sup>, are used by most of the international organisations that collect energy statistics.

Nevertheless, energy statistics at the national level are often collected using criteria and definitions which differ, sometimes considerably, from those of international organisations. This is especially true for non-OECD countries, who voluntarily submit data to the IEA. The IEA Secretariat has identified most of these differences and, where possible, adjusted the data to meet international definitions.

Recognised anomalies occurring in specific countries are presented in the section on Country notes and

sources. Country notes present the most important deviations from the IEA methodology, and are by no means a comprehensive list of anomalies by country.

### Estimation

In addition to adjustments addressing differences in definitions, estimations<sup>3</sup> are sometimes required to complete major aggregates, when key statistics are missing.

The IEA Secretariat has attempted to provide all the elements of energy balances down to the level of final consumption, for all countries and years. Providing all the elements of supply, as well as all inputs and outputs of the main transformation activities (such as oil refining and electricity generation), has often required estimations. Estimations have been generally made after consultation with national statistical offices, oil companies, electricity utilities and national energy experts.

### Time series and political changes

The IEA Secretariat reviews its databases each year. In the light of new assessments, important revisions may be made to time series of individual countries during the course of this review. Therefore, some data in this publication have been substantially revised with respect to previous editions. Please always consult the section on Country notes and sources.

It is also the case that energy statistics for some countries undergo continuous changes in their coverage or

1. See link to the annual questionnaires:

[www.iea.org/statistics/resources/questionnaires/annual/](http://www.iea.org/statistics/resources/questionnaires/annual/)

2. <https://unstats.un.org/UNSD/energy/ires/default.htm>.

3. Data may not include all informal and/or illegal trade, production or consumption of energy products, although the IEA Secretariat makes efforts to estimate these where reliable information is available.

methodology. Consequently, breaks in time series are considered to be unavoidable.

For example, energy balances for the individual countries of the Former Soviet Union and the Former Yugoslavia have been constructed since 1990 and are not available for previous years. These balances are generally based on official submissions, but estimations also have been made by the IEA Secretariat. The section on Country notes and sources describes in detail these elements country by country.

## Classification of fuel uses

National statistical sources often lack adequate information on the consumption of fuels in different categories of end use. Many countries do not conduct annual surveys of consumption in the main sectors of economic activity, and published data may be based on out-of-date surveys. Therefore, sectoral disaggregation of consumption should generally be interpreted with caution.

In many countries of non-OECD Europe and Eurasia and in China, the sectoral classification of fuel consumption before the reforms of the 1990's significantly differed from that of market economies. Sectoral consumption was defined according to the economic branch of the user, rather than according to the purpose or use of the fuel. For example, consumption of gasoline in the vehicle fleet of an enterprise attached to the economic branch 'Iron and steel' was classified as consumption in the 'Iron and steel' industry itself.

Where possible, data have been adjusted to fit international classifications, for example by assuming that most gasoline is consumed in transport. However, it has not been possible to reclassify products other than gasoline and jet fuel as easily, and few other adjustments have been made to other products.

## Imports and exports

For a given product, imports and exports may not sum up to zero at the world level for a number of reasons. Fuels may be classified differently (i.e. fuel oil exports may be reported as refinery feedstocks by the importing country; NGL exports may be reported as LPG by the importing country, etc.). Other possible reasons include discrepancies in conversion factors, inclusion of international bunkers in exports, timing differences, data reported on a fiscal year basis instead of calendar year for certain countries, and under-reporting of imports and exports for fiscal reasons.

## Specific issues by fuel

### Coal

Data on sectoral coal consumption are usually reported in metric tonnes. Net calorific values of different coal types used in different end use sectors are not always available. In the absence of specific information, the IEA Secretariat estimates end use net calorific values based on the available net calorific values for production, imports and exports.

### Oil

The IEA Secretariat collects comprehensive statistics for oil supply and use, including oil for own use of refineries, oil delivered to international bunkers, and oil used as petrochemical feedstock. National statistics often do not report all these amounts.

Reported production of refined products may refer to net rather than gross refinery output; consumption of oil products may be limited to sales to domestic markets and may not include deliveries to international shipping or aircraft. Oil consumed as petrochemical feedstock in integrated refinery/petrochemical complexes is often not included in available official statistics.

Where possible, the IEA Secretariat has estimated those unreported data, in consultation with the oil industry. In the absence of any other indication, refinery fuel use is estimated to be a percentage (e.g. 5%) of refinery throughput, and where possible, split between refinery gas and fuel oil. For a description of some adjustments made to the sectoral consumption of oil products, see the above section 'Classification of fuel uses'.

### Natural gas

Natural gas should be comprised mainly of methane; other gases, such as ethane and heavier hydrocarbons, should be reported under the heading of 'oil'. The IEA defines natural gas production as the marketable production, i.e. net of field losses, flaring, venting and re-injection.

However, the lack of adequate definitions makes it difficult or impossible to identify all quantities of gas at all different stages of its separation into dry gas (methane) and heavier fractions. National data for natural gas do not always explicitly show separate quantities for field losses, flaring, venting and re-injection.

Natural gas supply and demand statistics are normally reported in volumetric units and it is difficult to obtain accurate data on the calorific value. In the absence of



specific information, the IEA generally applies an average gross calorific value of 38 TJ/million m<sup>3</sup>.

Reliable consumption data for natural gas at a disaggregated level are often difficult to find. This is especially true for some of the largest natural gas consuming countries in the Middle East. Therefore, industrial use of natural gas for these countries is frequently missing from the data published here.

## Electricity

The IEA classification shows ‘main activity producers’ separately from ‘autoproducers’ of electricity and heat. For non-OECD countries, data on autoproducers are not always reported. In such cases, the quantities of fuels used as input to electricity are included under the appropriate end-use sector.

When statistics of production of electricity from biofuels and waste are available, they are included in total electricity production. However, these data are not comprehensive; e.g. some generation from waste biomass in sugar refining may be unreported.

When unreported, inputs of fuels for electricity generation are estimated using information on electricity output, fuel efficiency and type of generation capacity.

Off-grid electricity generation may be still underreported due to measurement difficulties, especially for developing countries.

## Heat

For heat, transition economies (countries of non-OECD Europe and Eurasia) and China used to adopt a different methodology from that adopted in market economies. They allocated the transformation of primary fuels (coal, oil and gas) by industry into heat *for consumption on site* to the transformation activity “*heat production*”, **not** to industrial consumption, as in the IEA methodology<sup>4</sup>. The transformation output of *Heat* was then allocated to the various end use sectors. The losses occurring in the transformation of fuels into heat in industry were not included in final consumption of industry.

Although a number of countries have switched to the practice of international organisations, this important issue reduces the possibility of cross-country comparisons for sectoral end use consumption between transition economies and market economies.

4. For autoproducer plants, the international methodology restricts the inclusion of heat in transformation processes to that sold to third parties.

## Biofuels and waste

The IEA publishes data on production, domestic supply and consumption of biofuels and waste for all countries and all regions.

Data for non-OECD countries are often based on secondary sources and may be of variable quality, which makes comparisons between countries difficult. For many countries, historical data are derived from surveys which were often irregular, irreconcilable and conducted at a local rather than national level.

Where historical series were incomplete or unavailable, they were estimated using a methodology consistent with the projection framework of the IEA’s 1998 edition of *World Energy Outlook* (September 1998). First, nation-wide domestic supply per capita of biofuels and wastes was compiled or estimated for 1995. Then, per capita supply for the years 1971 to 1994 was estimated using a log/log equation with either GDP per capita or percentage of urban population as exogenous variables, depending on the region. Finally, supply of total biofuels and waste after 1996 was estimated assuming a growth rate either constant, equal to the population growth rate, or based on the 1971-1994 trend.

Those estimated time series should be treated very cautiously. The chart below provides a broad indication of the estimation methodology and of the data quality by region.

Region	Main source of data	Data quality	Exogenous variables
Africa	FAO database and AfDB	low	population growth rate
Non-OECD Americas	national and OLADE	high	none
Asia	surveys	high to low	population growth rate
Non-OECD Europe and Eurasia	questionnaires and FAO	high to medium	none
Middle East	FAO	medium to low	none

Given the importance of vegetal fuels in the energy picture of many developing countries, balances down to final consumption by end-use for individual products or product categories have been compiled for all countries.

The IEA hopes that the inclusion of these data will encourage national administrations and other agencies active in the field to enhance the level and quality of data collection and coverage for biofuels and waste. More details on the methodology used by each country may be provided on request and comments are welcome.



## 4. GEOGRAPHICAL COVERAGE

### In this publication:

**World** includes OECD Total; Africa; Non-OECD Americas; Non-OECD Asia (excluding China); China (People's Republic of China and Hong Kong, China); Non-OECD Europe and Eurasia; Middle East; World aviation bunkers and World marine bunkers. It is also the sum of Africa, Americas, Asia, Europe, Oceania, World aviation bunkers and World marine bunkers.

**Africa** includes Algeria; Angola; Benin; Botswana; Burkina Faso; Burundi; Cabo Verde; Cameroon; Central African Republic; Chad; Comoros; the Republic of the Congo (Congo); Côte d'Ivoire; the Democratic Republic of the Congo; Djibouti; Egypt; Equatorial Guinea; Eritrea; Ethiopia; Gabon; Gambia; Ghana; Guinea; Guinea-Bissau; Kenya; Lesotho; Liberia; Libya; Madagascar; Malawi; Mali; Mauritania; Mauritius; Morocco; Mozambique; Namibia; Niger; Nigeria; Réunion; Rwanda; Sao Tome and Principe; Senegal; the Seychelles; Sierra Leone; Somalia; South Africa; South Sudan (from 2012); Sudan; Swaziland; the United Republic of Tanzania (Tanzania); Togo; Tunisia; Uganda; Zambia; Zimbabwe.

**Americas** includes Antigua and Barbuda; Argentina; Aruba; the Bahamas; Barbados; Belize; Bermuda; the Plurinational State of Bolivia (Bolivia); Bonaire (from 2012); the British Virgin Islands; Brazil; Canada; the Cayman Islands; Chile; Colombia; Costa Rica; Cuba; Curaçao<sup>1</sup>; Dominica; the Dominican Republic; Ecuador; El Salvador; the Falkland Islands (Malvinas);

1. The Netherlands Antilles was dissolved on 10 October 2010 resulting in two new 'constituent countries' (Curaçao and Sint Maarten) with the other islands joining The Netherlands as "special municipalities". However, due to lack of detailed data the IEA Secretariat's data and estimates under the "Netherlands Antilles" still refer to the whole territory of the Netherlands Antilles as it was known prior to 10 October 2010 up to the end of 2011. Data refer only to the island of Curaçao from 2012. The other islands of the former Netherlands Antilles are added to Other non-OECD Americas from 2012.

Guatemala; French Guiana; Grenada; Guadeloupe; Guyana; Haiti; Honduras; Jamaica; Martinique; Mexico; Montserrat; Nicaragua; Panama; Paraguay; Peru; Puerto Rico (for natural gas and electricity)<sup>2</sup>; Saba (from 2012); Saint Kitts and Nevis; Saint Lucia; Saint Pierre and Miquelon; Saint Vincent and the Grenadines; Sint Eustatius (from 2012); Sint Maarten (from 2012); Suriname; Trinidad and Tobago; the Turks and Caicos Islands; the United States; Uruguay; the Bolivarian Republic of Venezuela (Venezuela).

**Asia** (from 1990) includes Afghanistan; Armenia; Azerbaijan; Bahrain; Bangladesh; Bhutan; Brunei Darussalam; Cambodia; the People's Republic of China; Cyprus<sup>3</sup>; Georgia; Hong Kong, China; India; Indonesia; the Islamic Republic of Iran; Iraq; Israel<sup>4</sup>; Japan; Jordan; the Democratic People's Republic of Korea; Korea; Kazakhstan; Kuwait; Kyrgyzstan; Lao People's Democratic Republic; Lebanon; Macau, China; Malaysia; the Maldives; Mongolia; Myanmar; Nepal; Oman; Pakistan; the Philippines; Qatar; Saudi Arabia; Singapore; Sri Lanka; the Syrian Arab Republic; Tajikistan; Chinese Taipei; Thailand; Timor-Leste;

2. Oil statistics as well as coal trade statistics for Puerto Rico are included under the United States.

#### 3. Note by Turkey:

*The information in this document with reference to "Cyprus" relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the "Cyprus issue".*

#### **Note by all the European Union member states of the OECD and the European Union:**

*The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.*

4. The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Turkey; Turkmenistan; the United Arab Emirates; Uzbekistan; Viet Nam; and Yemen.

**Europe** (from 1990) includes Albania; Austria; Belarus; Belgium; Bosnia and Herzegovina; Bulgaria; Croatia; the Czech Republic; Denmark; Estonia; Finland; the Former Yugoslav Republic of Macedonia; France; Germany; Gibraltar; Greece; Hungary; Iceland; Ireland; Italy; Kosovo<sup>5</sup>; Latvia; Lithuania; Luxembourg; Malta; the Republic of Moldova (Moldova); Montenegro; the Netherlands; Norway; Poland; Portugal; Romania; the Russian Federation; Serbia<sup>6</sup>; the Slovak Republic; Slovenia; Spain; Sweden; Switzerland; Ukraine; the United Kingdom.

**Oceania** includes Australia; New Zealand; Cook Islands; Fiji; French Polynesia; Kiribati; New Caledonia; Palau; Papua New Guinea; Samoa; the Solomon Islands; Tonga; Vanuatu.

The **International Energy Agency (IEA)** includes Australia; Austria; Belgium; Canada; the Czech Republic; Denmark; Estonia<sup>7</sup>; Finland; France; Germany; Greece; Hungary; Ireland; Italy; Japan; Korea; Luxembourg; Mexico; the Netherlands; New Zealand; Norway; Poland; Portugal; the Slovak Republic; Spain; Sweden; Switzerland; Turkey; the United Kingdom; the United States.

The **IEA and Accession/Association countries** includes: IEA member countries: Australia; Austria; Belgium; Canada; the Czech Republic; Denmark; Estonia<sup>7</sup>; Finland; France; Germany; Greece; Hungary; Ireland; Italy; Japan; Korea; Luxembourg; Mexico; the Netherlands; New Zealand; Norway; Poland; Portugal; the Slovak Republic; Spain; Sweden; Switzerland; Turkey; the United Kingdom and the United States; Accession country: Chile; Association countries: Brazil; the People's Republic of China; India; Indonesia; Morocco; Singapore; Thailand.

The **Organisation for Economic Co-Operation and Development (OECD)** includes Australia; Austria; Belgium; Canada; Chile; the Czech Republic; Denmark; Estonia; Finland; France; Germany;

Greece; Hungary; Iceland; Ireland; Israel; Italy; Japan; Korea; Latvia<sup>8</sup>; Luxembourg; Mexico; the Netherlands; New Zealand; Norway; Poland; Portugal; the Slovak Republic; Slovenia; Spain; Sweden; Switzerland; Turkey; the United Kingdom; the United States.

Lithuania was not an OECD Member at the time of preparation of this publication. Accordingly, Lithuania does not appear in the list of OECD Members and is not included in the zone aggregates.

**OECD Americas** includes Canada; Chile; Mexico; the United States.

**OECD Asia Oceania** includes Australia; Israel; Japan; Korea; New Zealand.

**OECD Europe** includes Austria; Belgium; the Czech Republic; Denmark; Estonia; Finland; France; Germany; Greece; Hungary; Iceland; Ireland; Italy; Latvia<sup>8</sup>; Luxembourg; the Netherlands; Norway; Poland; Portugal; the Slovak Republic; Slovenia; Spain; Sweden; Switzerland; Turkey; the United Kingdom.

Estonia, Latvia and Slovenia are included starting in 1990. Prior to 1990, Estonia and Latvia are included in Former Soviet Union and Slovenia is included in Former Yugoslavia.

Within the **OECD**:

- **Australia** excludes the overseas territories;
- **Denmark** excludes Greenland and the Faroe Islands, except prior to 1990, where data on oil for Greenland were included with the Danish statistics. The administration is planning to revise the series back to 1974 to exclude these amounts;
- **France** includes Monaco and excludes the following overseas departments: Guadeloupe; French Guiana; Martinique; Mayotte; and Réunion; and collectivities: New Caledonia; French Polynesia; Saint Barthélemy; Saint Martin; Saint Pierre and Miquelon; and Wallis and Futuna;
- **Germany** includes the new federal states of Germany from 1970 onwards;
- The statistical data for **Israel** are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is

5. This designation is without prejudice to positions on status, and is in line with United Nations Security Council Resolution 1244/99 and the Advisory Opinion of the International Court of Justice on Kosovo's declaration of independence.

6. Serbia includes Montenegro until 2004 and Kosovo until 1999.

7. Estonia is included starting in 1990. Prior to 1990, data for Estonia are included in Former Soviet Union.

8. Latvia is included starting in 1990. Prior to 1990, data for Latvia are included in Former Soviet Union.

without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law;

- **Italy** includes San Marino and the Holy See;
- **Japan** includes Okinawa;
- **Netherlands** excludes Suriname, Aruba and the other former Netherlands Antilles (Bonaire, Curaçao, Saba, Saint Eustatius and Sint Maarten);
- **Portugal** includes the Azores and Madeira;
- **Spain** includes the Canary Islands;
- **Switzerland** includes Liechtenstein for oil data; data for other fuels do not include Liechtenstein;
- Shipments of coal and oil to the Channel Islands and the Isle of Man from the **United Kingdom** are not classed as exports. Supplies of coal and oil to these islands are, therefore, included as part of UK supply. Exports of natural gas to the Isle of Man are included with the exports to Ireland;
- **United States** includes the 50 states and the District of Columbia but generally excludes all territories, and all trade between the U.S. and its territories. Oil statistics include Guam, Puerto Rico<sup>9</sup> and the United States Virgin Islands; trade statistics for coal include international trade to and from Puerto Rico and the United States Virgin Islands.

**Non-OECD Europe and Eurasia** includes Albania; Armenia; Azerbaijan; Belarus; Bosnia and Herzegovina; Bulgaria; Croatia; Cyprus<sup>3</sup>; the Former Yugoslav Republic of Macedonia; Georgia; Gibraltar; Kazakhstan; Kosovo<sup>5</sup>; Kyrgyzstan; Lithuania<sup>10</sup>; Malta; the Republic of Moldova (Moldova); Montenegro; Romania; the Russian Federation; Serbia<sup>6</sup>; Tajikistan; Turkmenistan; Ukraine; Uzbekistan; the Former Soviet Union; the Former Yugoslavia.

**Non-OECD Asia excluding China** includes Bangladesh; Brunei Darussalam; Cambodia (from 1995); India; Indonesia; the Democratic People's Republic of Korea; Malaysia; Mongolia (from 1985); Myanmar; Nepal; Pakistan; the Philippines; Singapore; Sri Lanka; Chinese Taipei; Thailand; Viet Nam; **Other non-OECD Asia**.

**China** includes the (People's Republic of) China; Hong Kong, China.

**Non-OECD Americas** includes Argentina; the Plurinational State of Bolivia (Bolivia); Brazil; Colombia; Costa Rica; Cuba; Curaçao<sup>1</sup>; the Dominican Republic; Ecuador; El Salvador; Guatemala; Haiti; Honduras; Jamaica; Nicaragua; Panama; Paraguay; Peru; Suriname (from 2000), Trinidad and Tobago; Uruguay; the Bolivarian Republic of Venezuela (Venezuela); **Other non-OECD Americas**.

**Middle East** includes Bahrain; the Islamic Republic of Iran; Iraq; Jordan; Kuwait; Lebanon; Oman; Qatar; Saudi Arabia; the Syrian Arab Republic; the United Arab Emirates; Yemen.

**Other Africa** includes Botswana (until 1980); Burkina Faso; Burundi; Cabo Verde; Central African Republic; Chad; Comoros; Djibouti; Equatorial Guinea; Gambia; Guinea; Guinea-Bissau; Lesotho; Liberia; Madagascar; Malawi; Mali; Mauritania; Namibia (until 1990); Niger (until 1999); Réunion; Rwanda; Sao Tome and Principe; the Seychelles; Sierra Leone; Somalia; Swaziland; Uganda.

**Other non-OECD Americas** includes Anguilla, Antigua and Barbuda; Aruba; the Bahamas; Barbados; Belize; Bermuda; Bonaire (from 2012); the British Virgin Islands; the Cayman Islands; Dominica; the Falkland Islands (Malvinas); the French Guiana; Grenada; Guadeloupe; Guyana; Martinique; Montserrat; Puerto Rico (for natural gas and electricity)<sup>9</sup>; Saba (from 2012); Saint Eustatius (from 2012); Saint Kitts and Nevis; Saint Lucia; Saint Pierre and Miquelon; Saint Vincent and the Grenadines; Sint Maarten (from 2012); Suriname (until 1999); the Turks and Caicos Islands.

**Other non-OECD Asia** includes Afghanistan; Bhutan; Cambodia (until 1994); Cook Islands; Fiji; French Polynesia; Kiribati; Lao People's Democratic Republic; Macau, China; the Maldives; Mongolia (until 1984); New Caledonia; Palau (from 1994); Papua New Guinea; Samoa; the Solomon Islands; Timor-Leste; Tonga; Vanuatu.

The **European Union - 28 (EU-28)** (from 1990) includes Austria; Belgium; Bulgaria; Croatia; Cyprus<sup>3</sup>; the Czech Republic; Denmark; Estonia; Finland; France; Germany; Greece; Hungary; Ireland; Italy; Latvia; Lithuania; Luxembourg; Malta; the Netherlands; Poland; Portugal; Romania; the Slovak Republic; Slovenia; Spain; Sweden; the United Kingdom.

9. Natural gas and electricity data for Puerto Rico are included under Other non-OECD Americas.

10. Lithuania was not an OECD Member at the time of preparation of this publication. Accordingly, Lithuania does not appear in the list of OECD Members and is still included in the non-OECD aggregates.



Please note that in the interest of having comparable data, all these countries are included since 1990 despite different entry dates into the European Union.

**G7** includes Canada; France; Germany; Italy; Japan; United Kingdom; the United States.

**G8** includes Canada; France; Germany; Italy; Japan; the Russian Federation; the United Kingdom; the United States.

**G20** includes Argentina; Australia; Brazil; Canada; China (including Hong Kong, China); India; Indonesia; Japan; Korea; Mexico; the Russian Federation; Saudi Arabia; South Africa; Turkey; the United States; the European Union – 28.

The **Organisation of the Petroleum Exporting Countries (OPEC)** includes Algeria; Angola; Ecuador; Gabon; the Islamic Republic of Iran; Iraq; Kuwait; Libya; Nigeria; Qatar; Saudi Arabia; the United Arab Emirates; the Bolivarian Republic of Venezuela (Venezuela).<sup>11</sup>

Please note that the following countries have not been considered:

- **Non-OECD Europe and Eurasia:** Andorra; Faroe Islands (after 1990); Liechtenstein<sup>12</sup> (except for oil data); the Palestinian Authority; Svalbard; Jan Mayen Islands;
- **Africa:** British Indian Ocean Territory; French Southern and Antarctic Lands; Mayotte; Saint Helena; Western Sahara;
- **Non-OECD Americas:** Bouvet Island; Saint Barthélemy; Greenland (after 1990); Saint Martin (French Part); South Georgia and the South Sandwich Islands;
- Antarctica;
- **Non-OECD Asia excluding China:** American Samoa; Cocos (Keeling) Islands; Christmas Island; Heard Island and McDonald Islands; Marshall Islands; Micronesia (Federated States of); Nauru; Niue; Norfolk Island; Northern Mariana Islands; Pitcairn; Tokelau; Tuvalu; United States Minor Outlying Islands; Wallis and Futuna Islands.

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11. Data for Equatorial Guinea, that joined OPEC in May 2017, and for Congo, that joined OPEC in June 2018, are not included in the OPEC aggregate in this edition.

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12. Oil data for Liechtenstein are included under Switzerland.



# **PART II**

## **ENERGY BALANCES AND INDICATORS BY REGION AND COUNTRY**



# WORLD AND REGIONAL TOTALS

World

Figure 1. Energy production

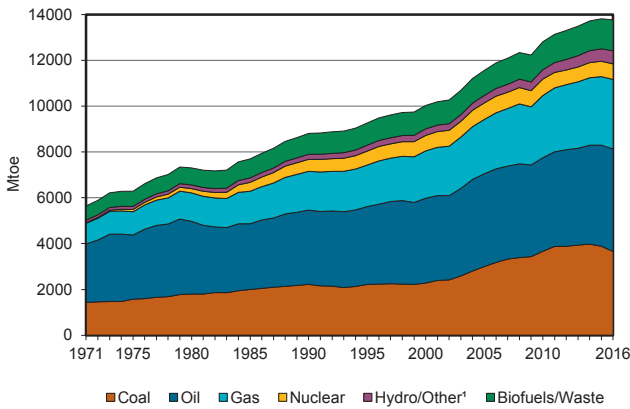


Figure 2. Total primary energy supply<sup>2</sup>

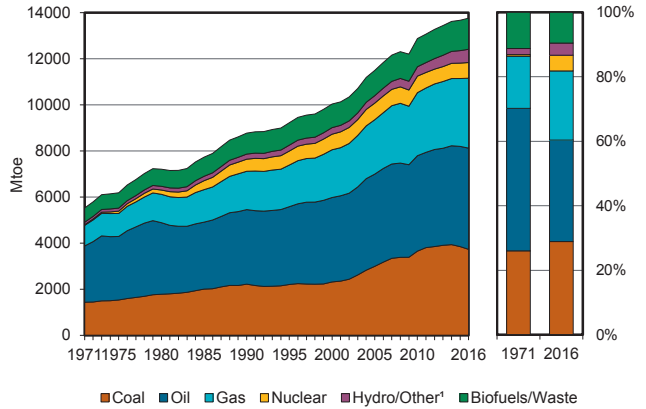


Figure 3. Energy self-sufficiency<sup>3</sup>

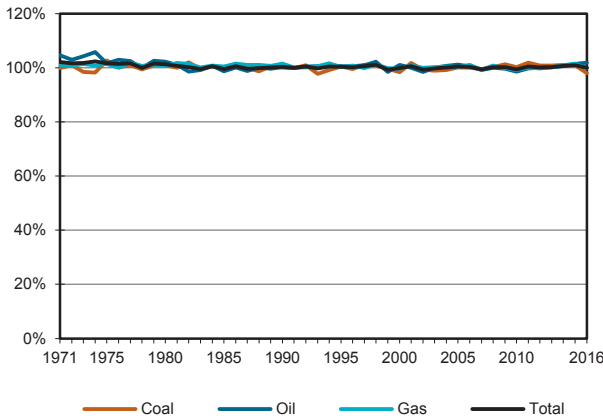


Figure 4. Oil products demand<sup>4</sup>

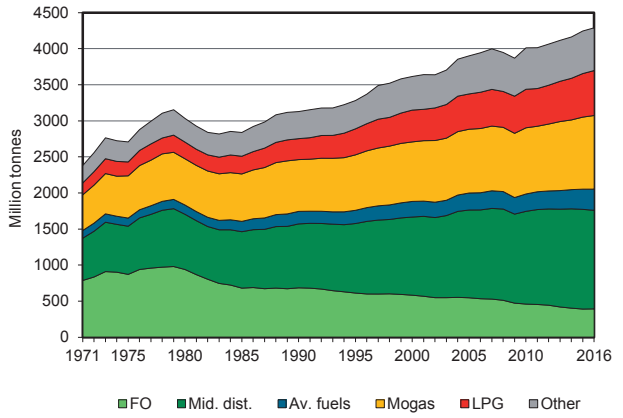


Figure 5. Electricity generation by source

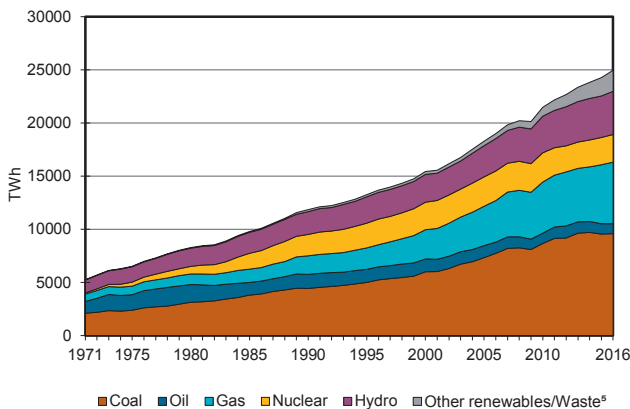
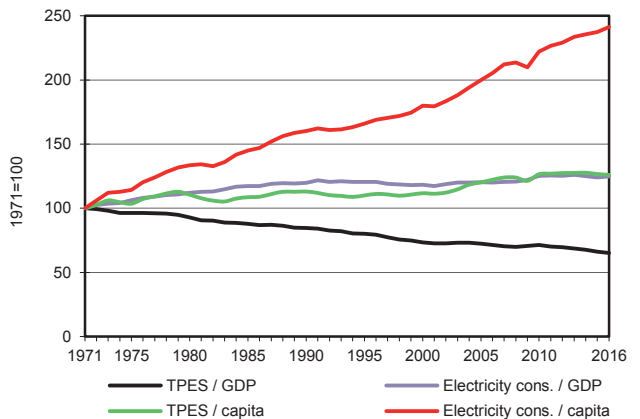


Figure 6. Selected indicators<sup>6</sup>



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## World

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal <sup>1</sup>	Crude oil <sup>2</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	3657.19	4473.27	-	3032.41	679.65	349.22	225.63	1344.87	-	1.76	13763.99
Imports	795.23	2379.32	1329.40	915.52	-	-	-	23.92	62.11	0.01	5505.50
Exports	-833.43	-2354.63	-1414.63	-932.53	-	-	-	-19.44	-62.25	-0.01	-5616.91
Stock changes	111.90	-15.32	-7.21	19.55	-	-	-	-0.06	-	-	108.86
<b>TPES</b>	<b>3730.89</b>	<b>4482.63</b>	<b>-92.43</b>	<b>3034.95</b>	<b>679.65</b>	<b>349.22</b>	<b>225.63</b>	<b>1349.29</b>	<b>-0.14</b>	<b>1.77</b>	<b>13761.45</b>
Transfers	-1.36	-233.00	262.09	-	-	-	-	-	-	-	27.73
Statistical differences	28.63	11.25	14.35	-11.26	-	-	0.09	0.84	-1.14	-0.35	42.41
Electricity plants	-1672.04	-40.48	-178.55	-868.18	-672.06	-349.22	-177.96	-120.97	1811.30	-0.72	-2268.88
CHP plants	-623.84	-0.01	-17.99	-314.57	-7.59	-	-2.56	-60.58	335.99	239.30	-451.86
Heat plants	-23.38	-0.83	-10.95	-61.70	-	-	-1.56	-13.13	-0.46	102.63	-9.39
Blast furnaces	-207.69	-	-0.05	-0.01	-	-	-	-0.04	-	-	-207.78
Gas works	-13.32	-	-2.17	5.42	-	-	-	-0.27	-	-	-10.34
Coke/pat.fuel/BKB/PB plants	-89.82	-	-2.32	-0.03	-	-	-	-0.12	-	-	-92.29
Oil refineries	-	-4246.76	4165.65	-	-	-	-	-	-	-	-81.11
Petrochemical plants	-	35.90	-35.37	-	-	-	-	-	-	-	0.53
Liquefaction plants	-12.08	15.16	-	-16.47	-	-	-	-	-	-	-13.40
Other transformation	-0.30	10.75	-0.54	-13.01	-	-	-	-90.54	-	-0.68	-94.32
Energy industry own use	-75.28	-11.24	-208.00	-296.17	-	-	-0.00	-13.46	-181.96	-36.50	-822.61
Losses	-4.91	-8.69	-0.47	-18.71	-	-	-0.01	-0.14	-169.65	-22.26	-224.84
<b>TFC</b>	<b>1035.50</b>	<b>14.68</b>	<b>3893.25</b>	<b>1440.26</b>	<b>-</b>	<b>-</b>	<b>43.63</b>	<b>1050.88</b>	<b>1793.94</b>	<b>283.18</b>	<b>9553.32</b>
<b>INDUSTRY</b>	<b>826.95</b>	<b>6.66</b>	<b>299.71</b>	<b>537.77</b>	<b>-</b>	<b>-</b>	<b>0.92</b>	<b>198.33</b>	<b>746.69</b>	<b>135.57</b>	<b>2752.60</b>
Iron and steel	293.80	-	6.65	51.93	-	-	-	3.43	95.81	13.70	465.32
Chemical and petrochemical	119.29	0.04	57.95	120.65	-	-	0.00	2.18	106.98	57.16	464.26
Non-ferrous metals	23.79	-	5.02	16.67	-	-	0.00	0.10	92.26	4.16	142.00
Non-metallic minerals	221.58	0.00	36.05	52.22	-	-	0.00	8.96	52.34	2.83	373.98
Transport equipment	2.53	-	2.00	12.59	-	-	0.00	0.03	25.06	3.84	46.05
Machinery	11.63	-	6.07	25.72	-	-	0.00	0.20	79.07	9.67	132.37
Mining and quarrying	7.58	-	21.97	7.98	-	-	0.00	0.18	27.61	2.15	67.46
Food and tobacco	30.57	0.01	10.19	47.92	-	-	0.00	31.78	44.65	11.22	176.34
Paper pulp and printing	16.86	0.01	3.95	24.14	-	-	0.11	60.22	38.81	12.18	156.28
Wood and wood products	1.92	-	2.18	3.00	-	-	0.00	8.84	9.09	2.33	27.36
Construction	4.35	-	29.91	8.29	-	-	0.00	0.37	16.39	0.91	60.21
Textile and leather	12.02	0.01	3.09	7.23	-	-	0.00	0.27	30.06	9.66	62.34
Non-specified	81.02	6.59	114.67	159.45	-	-	0.80	81.75	128.57	5.77	578.62
<b>TRANSPORT</b>	<b>0.07</b>	<b>0.01</b>	<b>2533.20</b>	<b>101.89</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>81.97</b>	<b>30.73</b>	<b>-</b>	<b>2747.87</b>
World aviation bunkers	-	-	186.31	-	-	-	-	-	-	-	186.31
Domestic aviation	-	-	118.95	-	-	-	-	-	-	-	118.95
Road	-	-	1926.98	41.97	-	-	-	81.57	4.38	-	2054.90
Rail	0.06	-	28.68	-	-	-	-	0.31	21.06	-	50.11
Pipeline transport	-	0.01	0.36	59.69	-	-	-	-	2.75	-	62.81
World marine bunkers	-	-	212.15	0.05	-	-	-	-	-	-	212.19
Domestic navigation	-	-	50.31	0.10	-	-	-	0.09	-	-	50.50
Non-specified	0.01	0.01	9.45	0.07	-	-	-	0.01	2.54	-	12.09
<b>OTHER</b>	<b>152.78</b>	<b>0.02</b>	<b>423.17</b>	<b>631.82</b>	<b>-</b>	<b>-</b>	<b>42.71</b>	<b>770.58</b>	<b>1016.51</b>	<b>147.61</b>	<b>3185.21</b>
Residential	72.73	-	209.30	431.24	-	-	31.64	728.60	488.44	99.20	2061.15
Comm. and public services	33.90	-	85.72	187.45	-	-	7.88	28.28	395.52	36.99	775.73
Agriculture/forestry	16.08	0.01	104.20	9.66	-	-	2.07	9.84	52.79	3.21	197.87
Fishing	0.00	-	5.68	0.06	-	-	0.05	0.01	0.55	0.05	6.41
Non-specified	30.08	0.01	18.27	3.42	-	-	1.06	3.84	79.21	8.16	144.05
<b>NON-ENERGY USE</b>	<b>55.70</b>	<b>8.00</b>	<b>637.17</b>	<b>168.78</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>869.64</b>
in industry/transf./energy	55.38	8.00	595.49	168.78	-	-	-	-	-	-	827.64
of which: chem./petrochem.	3.47	7.95	447.24	167.62	-	-	-	-	-	-	626.28
in transport	-	-	9.77	-	-	-	-	-	-	-	9.77
in other	0.32	-	31.91	-	-	-	-	-	-	-	32.23
<b>Electricity and Heat Output</b>											
<b>Electr. Generated - TWh</b>	<b>9594.34</b>	<b>130.17</b>	<b>801.18</b>	<b>5793.90</b>	<b>2605.99</b>	<b>4061.47</b>	<b>1411.78</b>	<b>570.57</b>	<b>-</b>	<b>3.63</b>	<b>24973.02</b>
Electricity plants	7293.16	130.16	736.32	4513.76	2579.29	4061.47	1401.83	345.79	-	2.69	21064.47
CHP plants	2301.18	0.01	64.86	1280.14	26.69	-	9.95	224.78	-	0.94	3908.55
<b>Heat Generated - PJ</b>	<b>6053.21</b>	<b>19.06</b>	<b>597.46</b>	<b>6091.67</b>	<b>26.63</b>	<b>-</b>	<b>450.67</b>	<b>1053.86</b>	<b>11.38</b>	<b>85.98</b>	<b>14389.92</b>
CHP plants	5200.63	0.15	205.26	3939.71	26.63	-	26.11	620.64	0.48	43.37	10062.97
Heat plants	852.59	18.90	392.19	2151.97	-	-	424.57	433.22	10.90	42.61	4326.95

1. Includes peat and oil shale.

2. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

Africa

Figure 1. Energy production

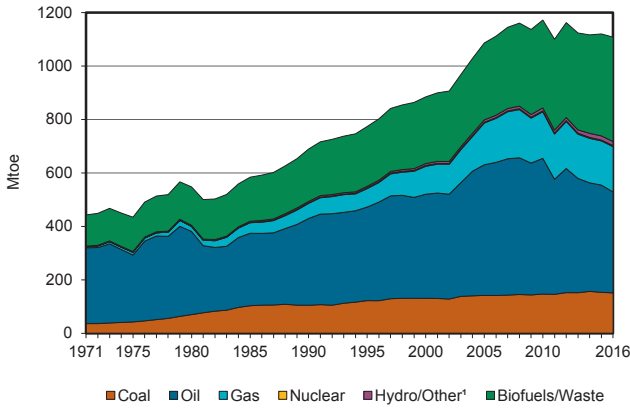


Figure 2. Total primary energy supply<sup>2</sup>

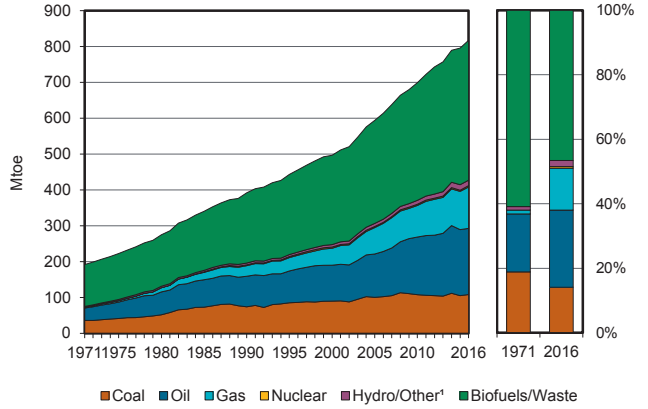


Figure 3. Energy self-sufficiency<sup>3</sup>

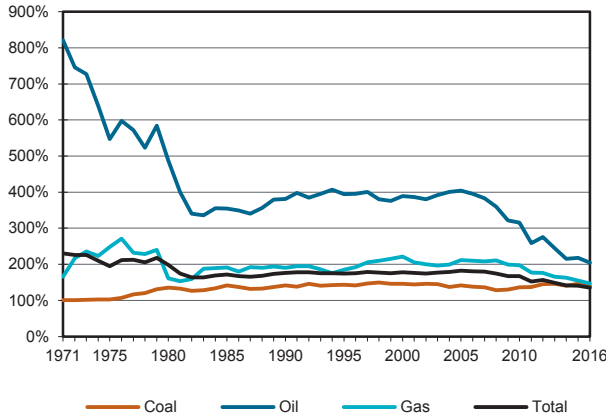


Figure 4. Oil products demand<sup>4</sup>

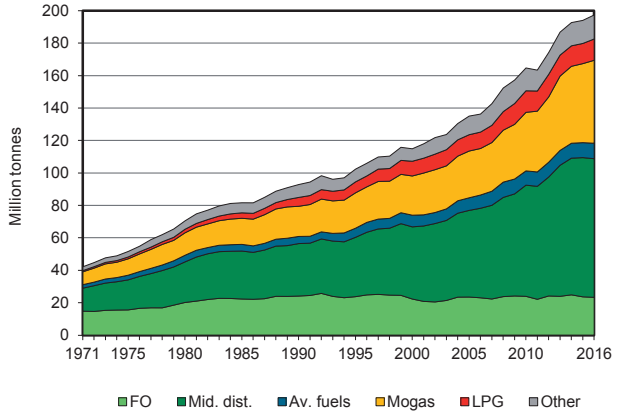


Figure 5. Electricity generation by source

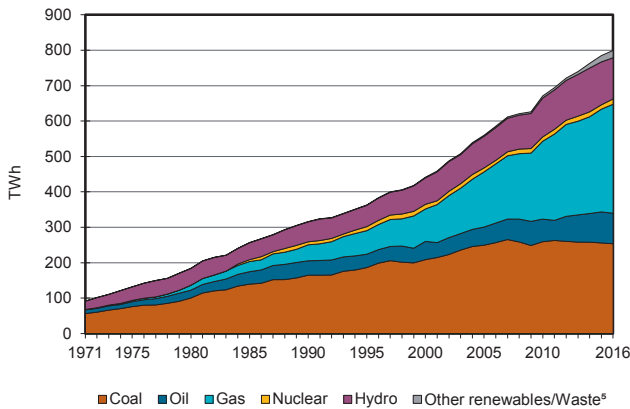
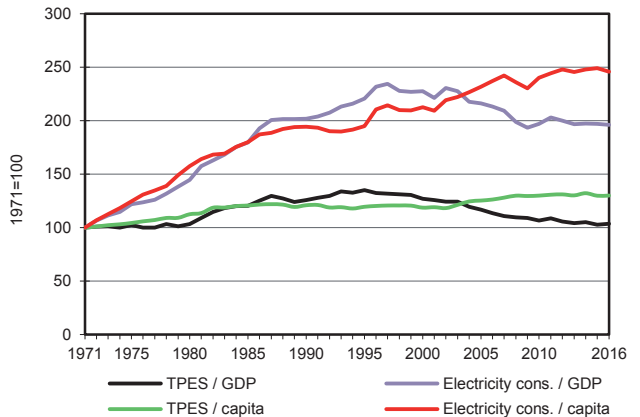


Figure 6. Selected indicators<sup>6</sup>



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.



## Africa

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal <sup>1</sup>	Crude oil <sup>2</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	151.17	377.35	-	169.58	3.92	9.99	5.08	390.49	-	0.09	1107.67
Imports	7.67	35.50	119.64	22.87	-	-	-	0.00	3.60	-	189.28
Exports	-53.25	-295.57	-39.61	-76.98	-	-	-	-0.33	-3.17	-	-468.92
Intl. marine bunkers	-	-	-5.95	-	-	-	-	-	-	-	-5.95
Intl. aviation bunkers	-	-	-7.52	-	-	-	-	-	-	-	-7.52
Stock changes	2.66	1.13	-0.55	-	-	-	-	-	-	-	3.24
<b>TPES</b>	<b>108.24</b>	<b>118.40</b>	<b>66.02</b>	<b>115.47</b>	<b>3.92</b>	<b>9.99</b>	<b>5.08</b>	<b>390.16</b>	<b>0.43</b>	<b>0.09</b>	<b>817.82</b>
Transfers	-	-17.36	18.63	-	-	-	-	-	-	-	1.27
Statistical differences	-0.88	3.33	-1.56	-4.74	-	-	-	0.26	-1.57	-	-5.15
Electricity plants	-67.34	-1.62	-19.62	-58.62	-3.92	-9.99	-4.91	-0.64	68.80	-0.09	-97.95
CHP plants	-	-	-	-0.04	-	-	-	-0.44	0.08	-	-0.40
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-0.90	-	-	-	-	-	-	-	-	-	-0.90
Gas works	-3.95	-	-	-	-	-	-	-	-	-	-3.95
Coke/pat.fuel/BKB/PB plants	-0.79	-	-	-	-	-	-	-	-	-	-0.79
Oil refineries	-	-106.60	105.37	-	-	-	-	-	-	-	-1.23
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-5.20	5.23	-	-2.73	-	-	-	-	-	-	-2.70
Other transformation	-	-	-	-	-	-	-	-69.69	-	-	-69.69
Energy industry own use	-10.50	-0.60	-3.25	-13.28	-	-	-	-0.00	-4.21	-	-31.83
Losses	-	-0.79	-0.14	-0.51	-	-	-	-0.03	-8.97	-	-10.44
<b>TFC</b>	<b>18.69</b>	<b>0.01</b>	<b>165.46</b>	<b>35.55</b>	<b>-</b>	<b>-</b>	<b>0.17</b>	<b>319.62</b>	<b>54.57</b>	<b>-</b>	<b>594.07</b>
<b>INDUSTRY</b>	<b>11.88</b>	<b>-</b>	<b>18.38</b>	<b>14.39</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>20.71</b>	<b>21.86</b>	<b>-</b>	<b>87.22</b>
Iron and steel	3.06	-	0.00	0.57	-	-	-	-	0.48	-	4.12
Chemical and petrochemical	0.80	-	0.06	1.48	-	-	-	0.01	1.24	-	3.59
Non-ferrous metals	1.17	-	0.08	0.06	-	-	-	-	2.87	-	4.18
Non-metallic minerals	2.30	-	1.97	2.59	-	-	-	0.12	0.87	-	7.84
Transport equipment	0.00	-	0.00	0.01	-	-	-	-	0.02	-	0.04
Machinery	0.03	-	0.00	0.02	-	-	-	-	0.05	-	0.11
Mining and quarrying	0.23	-	2.38	0.03	-	-	-	0.03	3.19	-	5.86
Food and tobacco	0.10	-	0.33	0.92	-	-	-	0.01	0.56	-	1.92
Paper pulp and printing	0.05	-	0.02	0.10	-	-	-	-	0.18	-	0.36
Wood and wood products	0.02	-	0.00	0.00	-	-	-	0.00	0.09	-	0.11
Construction	-	-	0.98	1.08	-	-	-	0.00	0.19	-	2.25
Textile and leather	0.00	-	0.05	0.09	-	-	-	0.06	0.17	-	0.37
Non-specified	4.11	-	12.50	7.44	-	-	-	20.48	11.94	-	56.47
<b>TRANSPORT</b>	<b>0.00</b>	<b>0.01</b>	<b>115.45</b>	<b>1.26</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.03</b>	<b>0.48</b>	<b>-</b>	<b>117.22</b>
Domestic aviation	-	-	2.46	-	-	-	-	-	-	-	2.46
Road	-	-	111.47	0.33	-	-	-	0.03	0.00	-	111.84
Rail	0.00	-	0.73	-	-	-	-	-	0.40	-	1.13
Pipeline transport	-	0.01	-	0.92	-	-	-	-	0.03	-	0.96
Domestic navigation	-	-	0.77	-	-	-	-	-	-	-	0.77
Non-specified	-	-	0.02	-	-	-	-	-	0.04	-	0.06
<b>OTHER</b>	<b>5.27</b>	<b>-</b>	<b>23.77</b>	<b>9.76</b>	<b>-</b>	<b>-</b>	<b>0.17</b>	<b>298.87</b>	<b>32.24</b>	<b>-</b>	<b>370.09</b>
Residential	3.21	-	14.65	8.70	-	-	0.05	285.23	18.92	-	330.76
Comm. and public services	1.62	-	1.85	0.16	-	-	0.00	9.19	9.19	-	22.01
Agriculture/forestry	0.32	-	4.78	0.06	-	-	-	2.90	1.98	-	10.04
Fishing	-	-	0.07	-	-	-	-	-	-	-	0.07
Non-specified	0.13	-	2.41	0.84	-	-	0.12	1.56	2.15	-	7.21
<b>NON-ENERGY USE</b>	<b>1.52</b>	<b>-</b>	<b>7.87</b>	<b>10.14</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>19.54</b>
in industry/transf./energy	1.52	-	7.72	10.14	-	-	-	-	-	-	19.38
of which: chem./petrochem.	1.52	-	0.90	10.14	-	-	-	-	-	-	12.57
in transport	-	-	0.11	-	-	-	-	-	-	-	0.11
in other	-	-	0.05	-	-	-	-	-	-	-	0.05
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>253.52</b>	<b>6.21</b>	<b>79.99</b>	<b>307.89</b>	<b>15.03</b>	<b>116.23</b>	<b>18.67</b>	<b>1.94</b>	<b>-</b>	<b>1.57</b>	<b>801.05</b>
Electricity plants	253.52	6.21	79.99	307.46	15.03	116.23	18.67	1.43	-	1.57	800.12
CHP plants	-	-	-	0.42	-	-	-	0.52	-	-	0.94
<b>Heat generated - PJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>3.73</b>	<b>3.73</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	3.73	3.73

1. Includes peat.

2. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Americas

Figure 1. Energy production

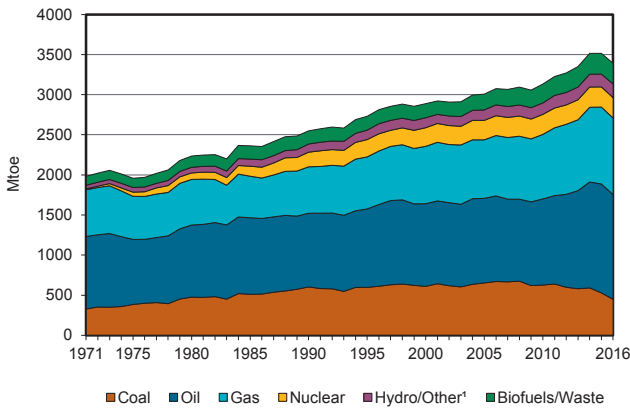


Figure 2. Total primary energy supply<sup>2</sup>

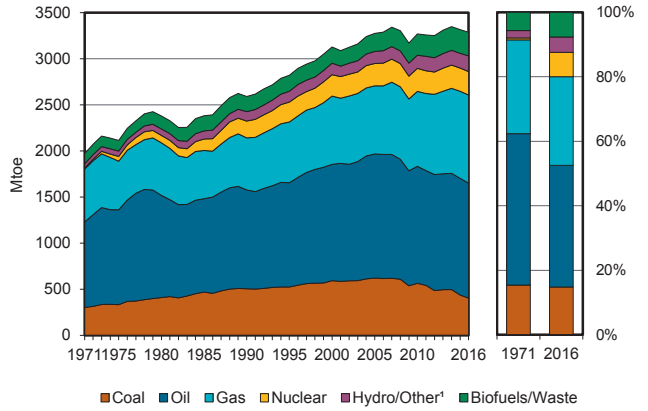


Figure 3. Energy self-sufficiency<sup>3</sup>

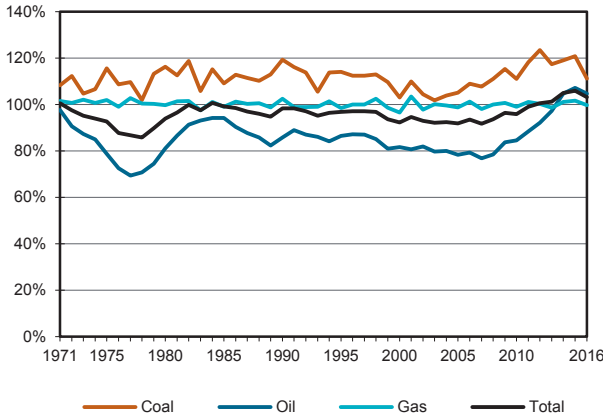


Figure 4. Oil products demand<sup>4</sup>

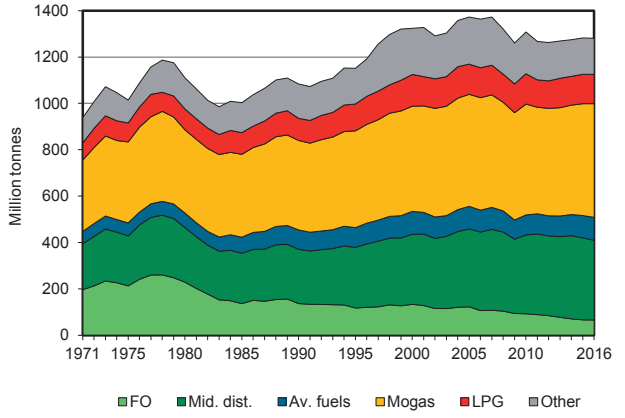


Figure 5. Electricity generation by source

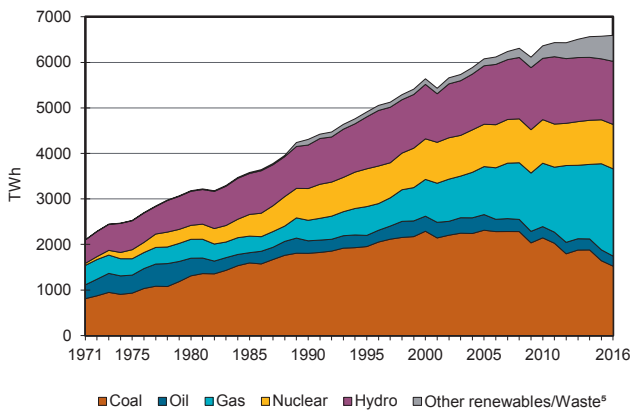
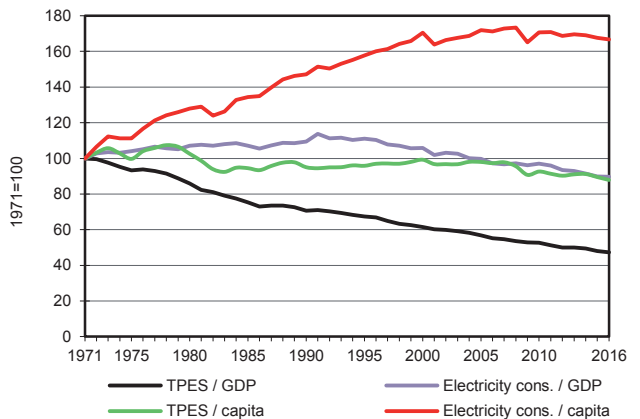


Figure 6. Selected indicators<sup>6</sup>



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Americas

2016

Million tonnes of oil equivalent

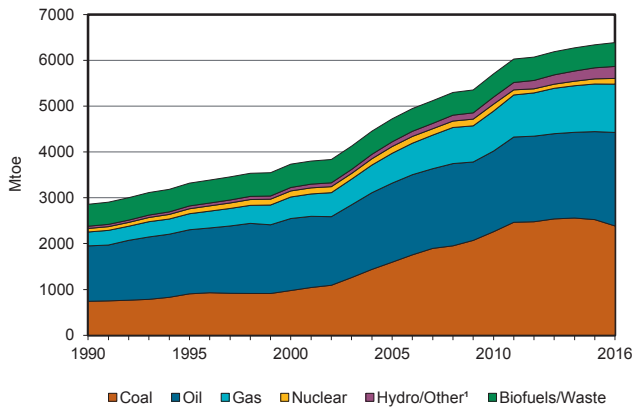
SUPPLY AND CONSUMPTION	Coal <sup>1</sup>	Crude oil <sup>2</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	448.67	1305.98	-	953.60	254.25	119.14	51.48	257.46	-	0.08	3390.66
Imports	39.86	534.83	228.71	146.62	-	-	-	4.98	11.70	-	966.71
Exports	-110.34	-481.28	-267.67	-153.56	-	-	-	-6.67	-11.85	-	-1031.36
Intl. marine bunkers	-	-	-31.47	-	-	-	-	-	-	-	-31.47
Intl. aviation bunkers	-	-	-39.32	-	-	-	-	-	-	-	-39.32
Stock changes	25.32	-1.73	-1.34	9.38	-	-	-	-0.12	-	-	31.52
<b>TPES</b>	<b>403.51</b>	<b>1357.80</b>	<b>-111.09</b>	<b>956.05</b>	<b>254.25</b>	<b>119.14</b>	<b>51.48</b>	<b>255.66</b>	<b>-0.14</b>	<b>0.08</b>	<b>3286.74</b>
Transfers	-	-105.31	114.47	-	-	-	-	-	-	-	9.15
Statistical differences	1.82	-2.08	22.34	-15.53	-	-	-0.00	0.20	-1.11	-	5.64
Electricity plants	-348.27	-1.97	-42.57	-299.26	-254.25	-119.14	-48.10	-23.81	529.98	-0.08	-607.47
CHP plants	-8.74	-	-3.85	-50.38	-	-	-	-20.70	37.05	12.64	-33.98
Heat plants	-0.00	-	-	-	-	-	-	-0.19	-	0.10	-0.09
Blast furnaces	-8.71	-	-	-	-	-	-	-0.04	-	-	-8.75
Gas works	-1.93	-	-0.35	1.38	-	-	-	-	-	-	-0.90
Coke/pat.fuel/BKB/PB plants	-2.56	-	-1.39	-	-	-	-	-	-	-	-3.95
Oil refineries	-	-1256.19	1231.15	-	-	-	-	-	-	-	-25.04
Petrochemical plants	-	3.64	-3.01	-	-	-	-	-	-	-	0.64
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	8.06	-	-8.27	-	-	-	-4.86	-	-	-5.07
Energy industry own use	-1.99	-0.41	-67.98	-125.60	-	-	-	-12.41	-38.01	-4.05	-250.45
Losses	-0.26	-0.09	-0.24	-1.65	-	-	-	-0.08	-46.64	-1.46	-50.42
<b>TFC</b>	<b>32.87</b>	<b>3.44</b>	<b>1137.49</b>	<b>456.73</b>	<b>-</b>	<b>-</b>	<b>3.38</b>	<b>193.77</b>	<b>481.13</b>	<b>7.24</b>	<b>2316.06</b>
<b>INDUSTRY</b>	<b>31.97</b>	<b>0.44</b>	<b>64.82</b>	<b>176.89</b>	<b>-</b>	<b>-</b>	<b>0.01</b>	<b>81.13</b>	<b>132.07</b>	<b>5.78</b>	<b>493.12</b>
Iron and steel	12.00	-	0.90	17.17	-	-	-	2.91	8.80	0.19	41.97
Chemical and petrochemical	2.91	-	8.28	54.50	-	-	-	0.38	16.68	3.47	86.22
Non-ferrous metals	1.11	-	2.36	5.44	-	-	0.00	0.01	13.66	0.10	22.67
Non-metallic minerals	6.81	-	8.88	14.03	-	-	-	3.00	6.43	0.00	39.16
Transport equipment	0.00	-	0.20	4.58	-	-	-	0.00	4.51	0.13	9.42
Machinery	0.05	-	0.90	9.11	-	-	-	0.01	8.44	0.09	18.61
Mining and quarrying	0.37	-	8.19	4.05	-	-	-	0.06	8.21	-	20.87
Food and tobacco	3.43	-	1.71	23.10	-	-	-	23.47	11.66	0.58	63.95
Paper pulp and printing	2.07	0.01	1.55	13.21	-	-	-	43.20	13.32	0.53	73.88
Wood and wood products	-	-	1.17	1.51	-	-	-	1.37	1.93	0.27	6.26
Construction	-	-	10.38	0.81	-	-	-	0.15	5.74	0.00	17.09
Textile and leather	0.19	-	0.08	1.53	-	-	-	0.07	2.52	0.15	4.54
Non-specified	3.04	0.43	20.22	27.85	-	-	0.01	6.49	30.17	0.25	88.47
<b>TRANSPORT</b>	<b>-</b>	<b>0.01</b>	<b>816.60</b>	<b>28.68</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>58.78</b>	<b>2.02</b>	<b>-</b>	<b>906.09</b>
Domestic aviation	-	-	65.28	-	-	-	-	-	-	-	65.28
Road	-	-	723.19	6.72	-	-	-	58.43	0.44	-	788.78
Rail	-	-	15.12	-	-	-	-	0.28	1.00	-	16.40
Pipeline transport	-	-	0.03	21.94	-	-	-	-	0.57	-	22.53
Domestic navigation	-	-	12.17	-	-	-	-	0.07	-	-	12.24
Non-specified	-	0.01	0.82	0.03	-	-	-	-	0.01	-	0.86
<b>OTHER</b>	<b>0.62</b>	<b>-</b>	<b>95.59</b>	<b>217.55</b>	<b>-</b>	<b>-</b>	<b>3.37</b>	<b>53.85</b>	<b>347.04</b>	<b>1.46</b>	<b>719.48</b>
Residential	0.08	-	36.67	128.12	-	-	0.70	46.07	167.11	-	378.73
Comm. and public services	0.54	-	21.85	86.47	-	-	1.83	3.05	151.04	1.44	266.22
Agriculture/forestry	-	-	32.98	2.31	-	-	0.00	4.64	8.31	0.00	48.25
Fishing	0.00	-	0.32	0.01	-	-	-	0.00	0.03	-	0.37
Non-specified	0.00	-	3.77	0.63	-	-	0.84	0.09	20.55	0.02	25.91
<b>NON-ENERGY USE</b>	<b>0.28</b>	<b>3.00</b>	<b>160.48</b>	<b>33.61</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>197.37</b>
in industry/transf./energy	0.05	3.00	150.24	33.61	-	-	-	-	-	-	186.91
of which: chem./petrochem.	-	3.00	97.40	33.61	-	-	-	-	-	-	134.01
in transport	-	-	4.36	-	-	-	-	-	-	-	4.36
in other	0.23	-	5.88	-	-	-	-	-	-	-	6.11
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>1523.59</b>	<b>4.03</b>	<b>217.11</b>	<b>1916.50</b>	<b>975.78</b>	<b>1385.62</b>	<b>409.02</b>	<b>162.52</b>	<b>-</b>	<b>0.39</b>	<b>6594.56</b>
Electricity plants	1481.87	4.03	198.23	1646.41	975.78	1385.62	405.12	66.25	-	0.39	6163.69
CHP plants	41.72	-	18.89	270.09	-	-	3.91	96.28	-	-	430.87
<b>Heat generated - PJ</b>	<b>30.96</b>	<b>-</b>	<b>31.62</b>	<b>407.56</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>63.42</b>	<b>-</b>	<b>3.34</b>	<b>536.90</b>
CHP plants	30.95	-	31.62	407.56	-	-	-	59.12	-	-	529.25
Heat plants	0.02	-	-	-	-	-	-	4.30	-	3.34	7.66

1. Includes peat.

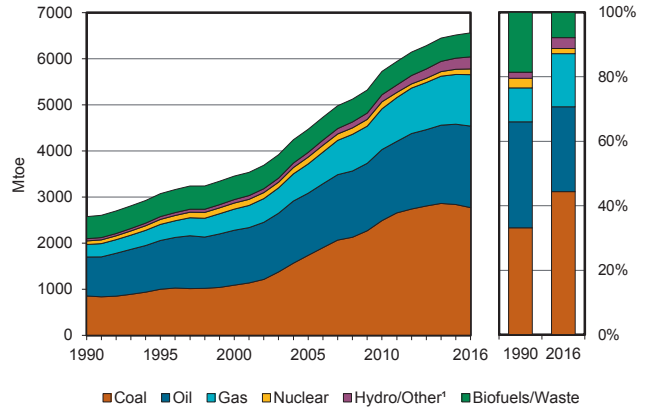
2. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Asia

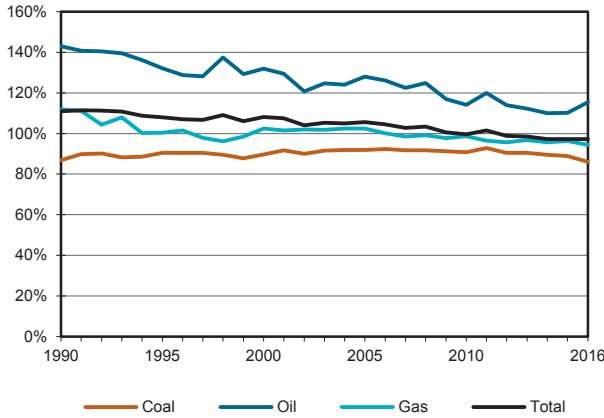
**Figure 1. Energy production**



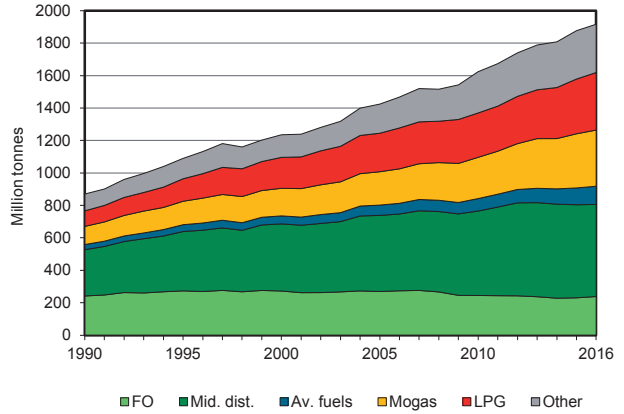
**Figure 2. Total primary energy supply<sup>2</sup>**



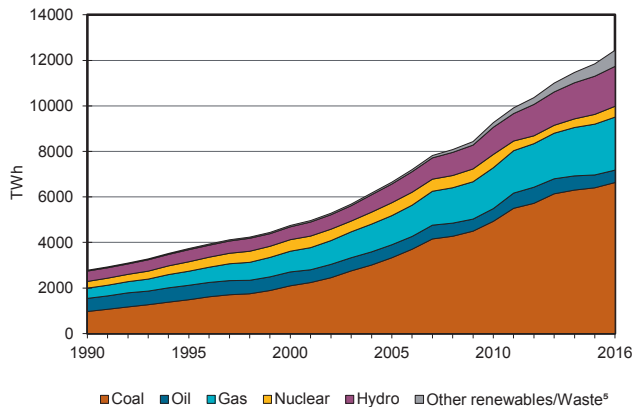
**Figure 3. Energy self-sufficiency<sup>3</sup>**



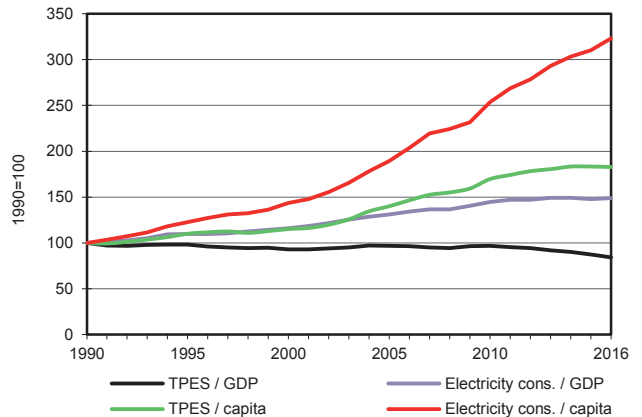
**Figure 4. Oil products demand<sup>4</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>6</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Asia

2016

Million tonnes of oil equivalent

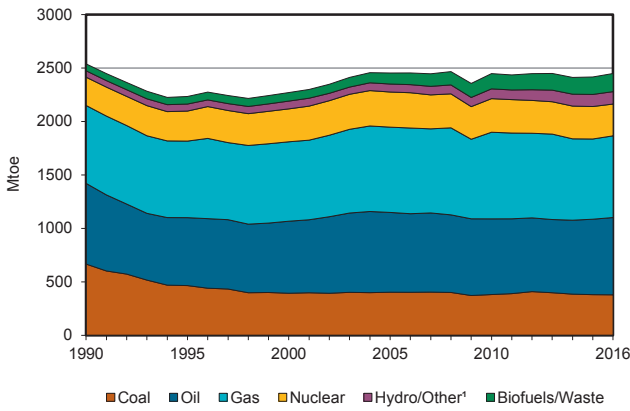
SUPPLY AND CONSUMPTION	Coal <sup>1</sup>	Crude oil <sup>2</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	2385.12	2040.49	-	1053.86	124.23	150.85	111.44	519.39	-	0.05	6385.44
Imports	584.07	1165.52	560.23	345.24	-	-	-	1.45	8.64	-	2665.16
Exports	-268.20	-1178.50	-603.04	-284.68	-	-	-	-0.91	-7.92	-	-2343.25
Intl. marine bunkers	-	-	-115.24	-	-	-	-	-	-	-	-115.24
Intl. aviation bunkers	-	-	-79.54	-	-	-	-	-	-	-	-79.54
Stock changes	69.03	-17.04	-4.41	1.76	-	-	-	-0.09	-	-	49.24
<b>TPES</b>	<b>2770.03</b>	<b>2010.47</b>	<b>-242.01</b>	<b>1116.18</b>	<b>124.23</b>	<b>150.85</b>	<b>111.44</b>	<b>519.85</b>	<b>0.72</b>	<b>0.05</b>	<b>6561.82</b>
Transfers	-1.36	-110.95	122.49	-	-	-	-	-	-	-	10.18
Statistical differences	33.98	8.20	-3.68	4.96	-	-	-0.00	0.20	2.11	-0.27	45.51
Electricity plants	-1082.12	-36.88	-105.97	-438.52	-124.23	-150.85	-74.66	-73.32	897.56	-0.04	-1189.03
CHP plants	-495.22	-	-3.21	-45.80	-	-	-	-0.49	172.67	107.14	-264.90
Heat plants	-8.64	-	-5.15	-2.14	-	-	-0.34	-2.15	-0.09	16.17	-2.32
Blast furnaces	-151.25	-	-	-	-	-	-	-	-	-	-151.25
Gas works	-7.13	-	-1.65	3.71	-	-	-	-0.02	-	-	-5.08
Coke/pat.fuel/BKB/PB plants	-71.63	-	-0.51	-	-	-	-	-0.12	-	-	-72.25
Oil refineries	-	-1879.04	1841.53	-	-	-	-	-	-	-	-37.52
Petrochemical plants	-	17.42	-17.33	-	-	-	-	-	-	-	0.09
Liquefaction plants	-5.73	9.24	-	-13.74	-	-	-	-	-	-	-10.23
Other transformation	-	0.88	-0.53	-0.44	-	-	-	-15.38	-	-0.34	-15.81
Energy industry own use	-52.86	-9.86	-86.93	-111.84	-	-	-	-0.11	-92.53	-13.95	-368.09
Losses	-2.76	-1.00	-0.04	-8.54	-	-	-0.00	-	-81.87	-2.04	-96.24
<b>TFC</b>	<b>925.32</b>	<b>8.48</b>	<b>1497.03</b>	<b>503.84</b>	<b>-</b>	<b>-</b>	<b>36.44</b>	<b>428.47</b>	<b>898.58</b>	<b>106.72</b>	<b>4404.88</b>
<b>INDUSTRY</b>	<b>743.01</b>	<b>6.17</b>	<b>165.76</b>	<b>216.99</b>	<b>-</b>	<b>-</b>	<b>0.74</b>	<b>64.05</b>	<b>455.58</b>	<b>66.29</b>	<b>1718.59</b>
Iron and steel	255.99	-	4.85	11.79	-	-	-	0.04	68.18	5.58	346.44
Chemical and petrochemical	111.93	0.02	31.56	38.50	-	-	-	0.47	67.46	33.33	283.27
Non-ferrous metals	19.86	-	1.85	4.75	-	-	-	0.03	55.78	3.65	85.92
Non-metallic minerals	205.23	-	18.04	11.75	-	-	-	1.35	36.54	0.31	273.23
Transport equipment	2.23	-	1.21	4.72	-	-	-	0.00	14.62	1.03	23.81
Machinery	11.39	-	3.74	8.07	-	-	-	0.01	57.88	1.13	82.21
Mining and quarrying	6.63	-	6.63	1.64	-	-	-	0.00	9.75	1.14	25.80
Food and tobacco	25.08	-	5.16	6.89	-	-	-	4.84	19.02	3.91	64.90
Paper pulp and printing	13.61	-	1.41	2.99	-	-	-	3.56	12.68	5.17	39.41
Wood and wood products	1.84	-	0.59	0.53	-	-	-	0.38	4.18	0.25	7.78
Construction	4.29	-	13.48	0.88	-	-	-	0.03	7.31	0.26	26.25
Textile and leather	11.75	-	2.65	3.29	-	-	-	0.09	25.25	8.05	51.08
Non-specified	73.19	6.15	74.58	121.17	-	-	0.74	53.24	76.94	2.47	408.48
<b>TRANSPORT</b>	<b>0.04</b>	<b>-</b>	<b>784.60</b>	<b>36.74</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>8.50</b>	<b>14.02</b>	<b>-</b>	<b>843.90</b>
Domestic aviation	-	-	36.49	-	-	-	-	-	-	-	36.49
Road	-	-	702.65	32.83	-	-	-	8.49	3.77	-	747.75
Rail	0.03	-	7.87	-	-	-	-	0.00	9.86	-	17.76
Pipeline transport	-	-	0.08	3.91	-	-	-	-	0.15	-	4.14
Domestic navigation	-	-	30.85	-	-	-	-	0.01	-	-	30.86
Non-specified	0.00	-	6.66	-	-	-	-	-	0.23	-	6.90
<b>OTHER</b>	<b>130.95</b>	<b>-</b>	<b>214.57</b>	<b>178.55</b>	<b>-</b>	<b>-</b>	<b>35.71</b>	<b>355.92</b>	<b>428.98</b>	<b>40.43</b>	<b>1385.10</b>
Residential	57.35	-	114.15	126.01	-	-	28.36	344.21	201.61	27.08	898.76
Comm. and public services	29.12	-	41.86	49.24	-	-	5.34	9.58	135.07	5.25	275.45
Agriculture/forestry	14.57	-	45.51	2.19	-	-	1.90	0.08	35.71	0.12	100.08
Fishing	-	-	3.20	0.04	-	-	-	0.00	0.33	0.00	3.58
Non-specified	29.91	-	9.86	1.07	-	-	0.10	2.06	56.26	7.99	107.24
<b>NON-ENERGY USE</b>	<b>51.32</b>	<b>2.31</b>	<b>332.10</b>	<b>71.56</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>457.29</b>
in industry/transf./energy	51.32	2.31	303.47	71.56	-	-	-	-	-	-	428.66
of which: chem./petrochem.	1.00	2.27	246.57	70.47	-	-	-	-	-	-	320.31
in transport	-	-	3.37	-	-	-	-	-	-	-	3.37
in other	-	-	25.26	-	-	-	-	-	-	-	25.26
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>6633.99</b>	<b>119.92</b>	<b>424.70</b>	<b>2327.66</b>	<b>476.79</b>	<b>1754.38</b>	<b>520.01</b>	<b>189.20</b>	<b>-</b>	<b>0.14</b>	<b>12446.78</b>
Electricity plants	4805.78	119.92	414.69	2159.05	476.79	1754.38	520.01	187.93	-	0.14	10438.68
CHP plants	1828.21	-	10.02	168.60	-	-	-	1.27	-	-	2008.10
<b>Heat generated - PJ</b>	<b>4269.74</b>	<b>-</b>	<b>229.15</b>	<b>563.04</b>	<b>-</b>	<b>-</b>	<b>19.07</b>	<b>77.80</b>	<b>3.61</b>	<b>2.16</b>	<b>5164.57</b>
CHP plants	3944.30	-	51.97	480.26	-	-	-	9.07	-	2.16	4487.75
Heat plants	325.44	-	177.19	82.79	-	-	19.07	68.73	3.61	-	676.82

1. Includes peat.

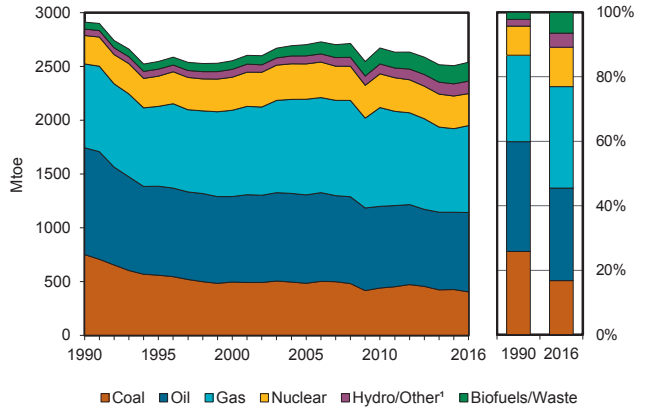
2. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Europe

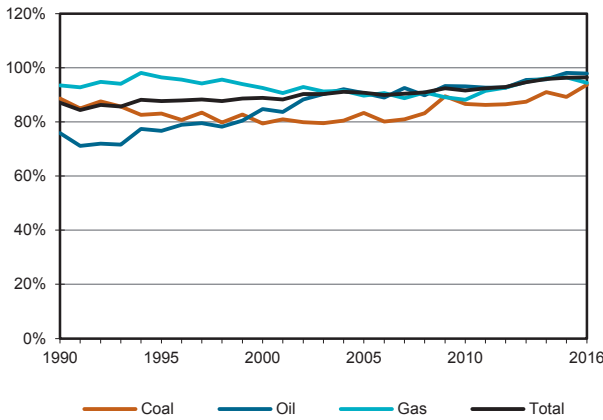
**Figure 1. Energy production**



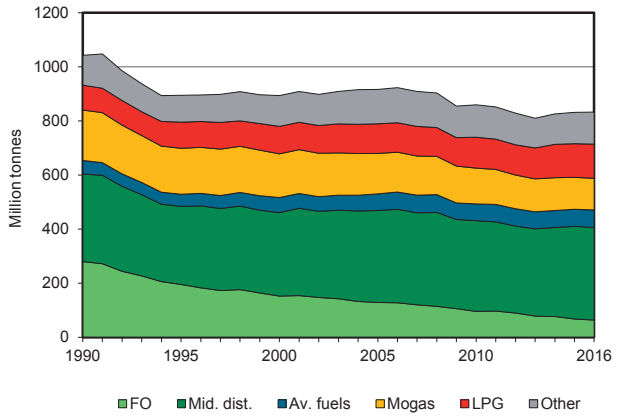
**Figure 2. Total primary energy supply<sup>2</sup>**



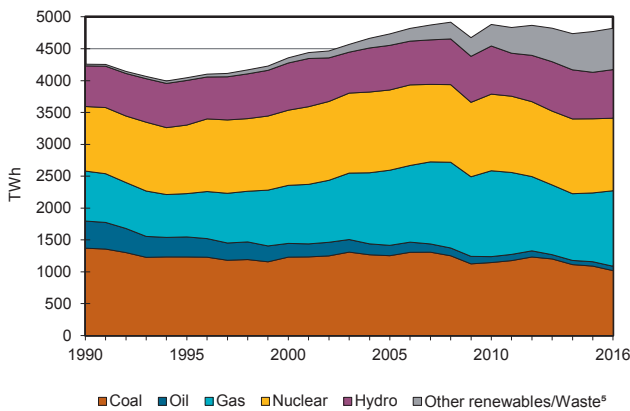
**Figure 3. Energy self-sufficiency<sup>3</sup>**



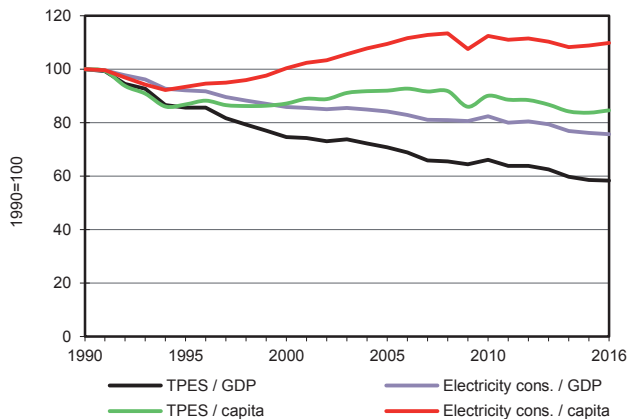
**Figure 4. Oil products demand<sup>4</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>6</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.



## Europe

2016

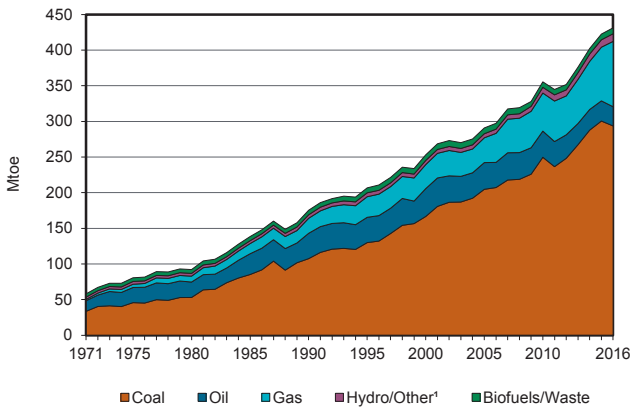
Million tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal <sup>1</sup>	Crude oil <sup>2</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	378.56	722.55	-	763.74	297.25	65.53	50.60	169.23	-	1.54	2449.01
Imports	162.72	620.56	387.30	395.67	-	-	-	17.48	38.16	0.01	1621.89
Exports	-148.76	-380.81	-499.73	-359.50	-	-	-	-11.53	-39.31	-0.01	-1439.65
Intl. marine bunkers	-	-	-58.39	-0.05	-	-	-	-	-	-	-58.44
Intl. aviation bunkers	-	-	-54.77	-	-	-	-	-	-	-	-54.77
Stock changes	11.15	2.21	-0.69	8.43	-	-	-	0.15	-	-	21.25
<b>TPES</b>	<b>403.66</b>	<b>964.51</b>	<b>-226.29</b>	<b>808.29</b>	<b>297.25</b>	<b>65.53</b>	<b>50.60</b>	<b>175.34</b>	<b>-1.15</b>	<b>1.54</b>	<b>2539.29</b>
Transfers	-	3.82	-0.45	-	-	-	-	-	-	-	3.36
Statistical differences	-6.52	1.01	-2.89	3.11	-	-	0.09	0.18	-0.74	-0.08	-5.84
Electricity plants	-134.55	-	-7.52	-60.90	-289.66	-65.53	-43.89	-22.85	289.75	-0.48	-335.62
CHP plants	-119.20	-0.01	-10.91	-215.98	-7.59	-	-2.48	-38.22	124.86	119.49	-150.05
Heat plants	-14.75	-0.83	-5.81	-59.57	-	-	-1.22	-10.80	-0.38	86.36	-6.98
Blast furnaces	-46.03	-	-0.05	-0.01	-	-	-	-	-	-	-46.09
Gas works	-0.31	-	-0.18	0.33	-	-	-	-0.25	-	-	-0.41
Coke/pat.fuel/BKB/PB plants	-14.61	-	-0.43	-0.03	-	-	-	-0.00	-	-	-15.07
Oil refineries	-	-975.83	958.42	-	-	-	-	-	-	-	-17.41
Petrochemical plants	-	14.83	-15.02	-	-	-	-	-	-	-	-0.20
Liquefaction plants	-1.15	0.68	-	-	-	-	-	-	-	-	-0.47
Other transformation	-0.30	1.67	-0.01	-4.17	-	-	-	-0.59	-	-0.35	-3.74
Energy industry own use	-8.98	-0.30	-45.60	-35.06	-	-	-0.00	-0.94	-44.43	-18.50	-153.81
Losses	-1.88	-6.81	-0.06	-7.99	-	-	-0.01	-0.02	-30.69	-18.77	-66.23
<b>TFC</b>	<b>55.38</b>	<b>2.73</b>	<b>643.23</b>	<b>428.03</b>	<b>-</b>	<b>-</b>	<b>3.09</b>	<b>101.84</b>	<b>337.20</b>	<b>169.22</b>	<b>1740.73</b>
<b>INDUSTRY</b>	<b>36.91</b>	<b>0.03</b>	<b>45.91</b>	<b>120.95</b>	<b>-</b>	<b>-</b>	<b>0.06</b>	<b>28.21</b>	<b>128.71</b>	<b>63.50</b>	<b>424.28</b>
Iron and steel	22.41	-	0.88	22.04	-	-	-	0.48	17.95	7.92	71.68
Chemical and petrochemical	3.50	0.03	17.95	23.92	-	-	0.00	1.23	21.22	20.36	88.21
Non-ferrous metals	0.42	-	0.37	3.64	-	-	0.00	0.01	16.58	0.41	21.43
Non-metallic minerals	6.82	0.00	6.96	22.63	-	-	0.00	4.43	7.90	2.51	51.25
Transport equipment	0.30	-	0.58	3.28	-	-	0.00	0.02	5.91	2.68	12.78
Machinery	0.17	-	1.40	8.46	-	-	0.00	0.19	12.56	8.44	31.22
Mining and quarrying	0.26	-	2.43	2.14	-	-	0.00	0.10	4.87	1.01	10.80
Food and tobacco	1.40	0.00	2.87	15.91	-	-	0.00	1.33	12.66	6.73	40.90
Paper pulp and printing	1.07	-	0.93	7.44	-	-	0.00	13.29	12.17	6.47	41.37
Wood and wood products	0.04	-	0.41	0.87	-	-	0.00	5.65	2.69	1.82	11.48
Construction	0.06	-	4.52	5.45	-	-	0.00	0.19	3.10	0.65	13.96
Textile and leather	0.07	-	0.30	2.20	-	-	0.00	0.04	2.07	1.45	6.13
Non-specified	0.40	-	6.31	2.97	-	-	0.06	1.25	9.02	3.05	23.06
<b>TRANSPORT</b>	<b>0.02</b>	<b>-</b>	<b>379.95</b>	<b>34.88</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>14.49</b>	<b>13.67</b>	<b>-</b>	<b>443.01</b>
Domestic aviation	-	-	11.21	-	-	-	-	-	-	-	11.21
Road	-	-	357.22	2.00	-	-	-	14.44	0.17	-	373.83
Rail	0.02	-	3.84	-	-	-	-	0.03	9.50	-	13.39
Pipeline transport	-	-	0.24	32.75	-	-	-	-	1.98	-	34.97
Domestic navigation	-	-	5.73	0.10	-	-	-	0.00	-	-	5.83
Non-specified	0.00	-	1.72	0.04	-	-	-	0.01	2.02	-	3.78
<b>OTHER</b>	<b>15.88</b>	<b>0.02</b>	<b>84.88</b>	<b>220.74</b>	<b>-</b>	<b>-</b>	<b>3.02</b>	<b>59.14</b>	<b>194.83</b>	<b>105.73</b>	<b>684.23</b>
Residential	12.09	-	43.28	164.71	-	-	2.17	50.36	94.50	72.12	439.24
Comm. and public services	2.59	-	19.19	50.15	-	-	0.64	6.40	93.49	30.31	202.77
Agriculture/forestry	1.15	0.01	18.16	5.01	-	-	0.16	2.23	6.41	3.09	36.21
Fishing	0.00	-	2.03	0.00	-	-	0.05	0.01	0.18	0.05	2.33
Non-specified	0.04	0.01	2.22	0.87	-	-	-	0.14	0.23	0.16	3.67
<b>NON-ENERGY USE</b>	<b>2.57</b>	<b>2.69</b>	<b>132.48</b>	<b>51.46</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>189.21</b>
in industry/transf./energy	2.48	2.69	129.82	51.46	-	-	-	-	-	-	186.45
of which: chem./petrochem.	0.95	2.68	99.99	51.39	-	-	-	-	-	-	155.01
in transport	-	-	1.93	-	-	-	-	-	-	-	1.93
in other	0.10	-	0.72	-	-	-	-	-	-	-	0.82
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>1017.87</b>	<b>0.01</b>	<b>68.77</b>	<b>1184.94</b>	<b>1138.39</b>	<b>762.07</b>	<b>435.71</b>	<b>212.58</b>	<b>-</b>	<b>1.52</b>	<b>4821.87</b>
Electricity plants	589.20	-	32.95	353.71	1111.70	762.07	429.79	88.82	-	0.59	3368.82
CHP plants	428.68	0.01	35.82	831.24	26.69	-	5.92	123.77	-	0.94	1453.06
<b>Heat generated - PJ</b>	<b>1752.51</b>	<b>19.06</b>	<b>336.69</b>	<b>5121.06</b>	<b>26.63</b>	<b>-</b>	<b>430.19</b>	<b>912.65</b>	<b>7.77</b>	<b>76.75</b>	<b>8683.30</b>
CHP plants	1225.38	0.15	121.68	3051.89	26.63	-	24.70	552.45	0.48	41.21	5044.56
Heat plants	527.13	18.90	215.01	2069.18	-	-	405.49	360.19	7.29	35.54	3638.74

1. Includes peat.

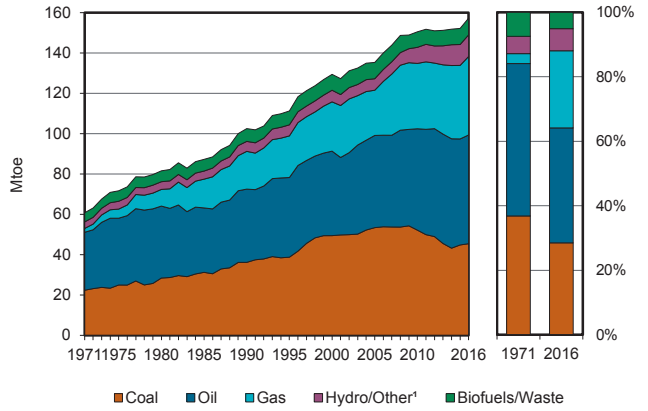
2. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Oceania

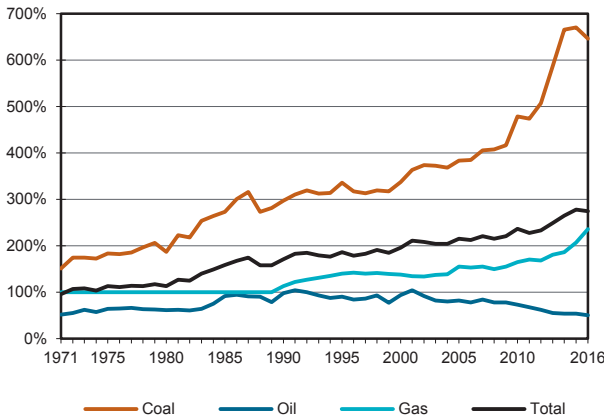
**Figure 1. Energy production**



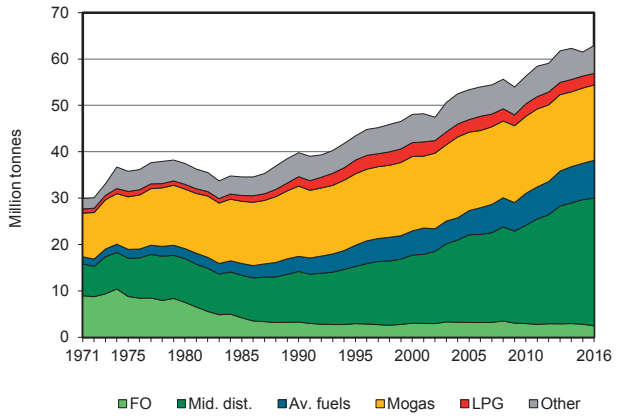
**Figure 2. Total primary energy supply<sup>2</sup>**



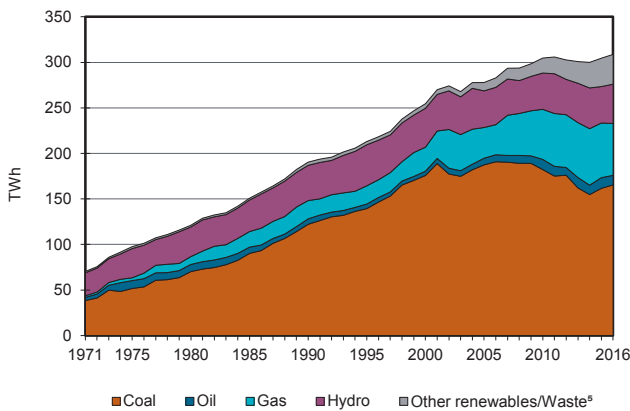
**Figure 3. Energy self-sufficiency<sup>3</sup>**



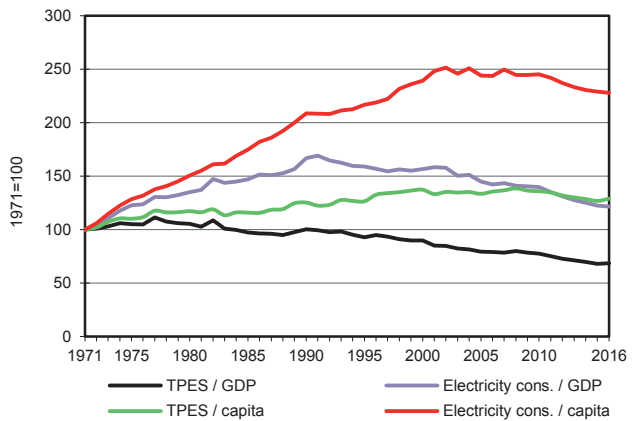
**Figure 4. Oil products demand<sup>4</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>6</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Oceania

2016

Million tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	293.66	26.90	-	91.62	-	3.71	7.02	8.28	-	-	431.20
Imports	0.91	22.90	33.52	5.13	-	-	-	0.00	-	-	62.45
Exports	-252.87	-18.46	-4.58	-57.81	-	-	-	-0.00	-	-	-333.73
Intl. marine bunkers	-	-	-1.10	-	-	-	-	-	-	-	-1.10
Intl. aviation bunkers	-	-	-5.16	-	-	-	-	-	-	-	-5.16
Stock changes	3.74	0.10	-0.22	-0.02	-	-	-	-	-	-	3.61
<b>TPES</b>	<b>45.44</b>	<b>31.44</b>	<b>22.47</b>	<b>38.92</b>	-	<b>3.71</b>	<b>7.02</b>	<b>8.29</b>	-	-	<b>157.28</b>
Transfers	-	-3.20	6.96	-	-	-	-	-	-	-	3.76
Statistical differences	0.23	0.79	0.14	0.94	-	-	-	0.00	0.17	-	2.26
Electricity plants	-39.76	-	-2.88	-10.89	-	-3.71	-6.39	-0.35	25.21	-0.03	-38.81
CHP plants	-0.68	-	-0.02	-2.38	-	-	-0.08	-0.73	1.34	0.03	-2.52
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-0.79	-	-	-	-	-	-	-	-	-	-0.79
Gas works	0.00	-	-	-0.00	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-0.23	-	-	-	-	-	-	-	-	-	-0.23
Oil refineries	-	-29.10	29.18	-	-	-	-	-	-	-	0.09
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	0.13	-	-0.12	-	-	-	-0.02	-	-	-0.00
Energy industry own use	-0.95	-0.06	-4.25	-10.40	-	-	-	-	-2.77	-	-18.43
Losses	-0.01	-	-	-0.01	-	-	-	-	-1.49	-	-1.51
<b>TFC</b>	<b>3.24</b>	<b>0.02</b>	<b>51.59</b>	<b>16.06</b>	-	-	<b>0.55</b>	<b>7.18</b>	<b>22.45</b>	-	<b>101.09</b>
<b>INDUSTRY</b>	<b>3.18</b>	<b>0.02</b>	<b>4.83</b>	<b>8.55</b>	-	-	<b>0.11</b>	<b>4.22</b>	<b>8.48</b>	-	<b>29.39</b>
Iron and steel	0.34	-	0.02	0.36	-	-	-	-	0.40	-	1.12
Chemical and petrochemical	0.15	-	0.10	2.25	-	-	-	0.10	0.38	-	2.97
Non-ferrous metals	1.24	-	0.36	2.78	-	-	-	0.05	3.38	-	7.80
Non-metallic minerals	0.42	-	0.20	1.21	-	-	-	0.06	0.59	-	2.49
Transport equipment	-	-	-	-	-	-	-	-	0.00	-	0.00
Machinery	-	-	0.03	0.06	-	-	-	-	0.13	-	0.22
Mining and quarrying	0.10	-	2.34	0.12	-	-	-	0.00	1.59	-	4.14
Food and tobacco	0.56	0.00	0.12	1.10	-	-	-	2.13	0.75	-	4.66
Paper pulp and printing	0.07	-	0.05	0.40	-	-	0.11	0.18	0.45	-	1.25
Wood and wood products	0.02	-	0.01	0.08	-	-	-	1.43	0.19	-	1.73
Construction	-	-	0.54	0.08	-	-	-	-	0.05	-	0.67
Textile and leather	0.01	0.01	0.01	0.12	-	-	-	-	0.05	-	0.21
Non-specified	0.27	-	1.06	0.00	-	-	-	0.28	0.51	-	2.13
<b>TRANSPORT</b>	-	-	<b>38.15</b>	<b>0.28</b>	-	-	-	<b>0.16</b>	<b>0.55</b>	-	<b>39.14</b>
Domestic aviation	-	-	3.52	-	-	-	-	-	-	-	3.52
Road	-	-	32.44	0.09	-	-	-	0.16	-	-	32.70
Rail	-	-	1.13	-	-	-	-	-	0.30	-	1.43
Pipeline transport	-	-	0.02	0.18	-	-	-	-	0.02	-	0.22
Domestic navigation	-	-	0.79	-	-	-	-	-	-	-	0.79
Non-specified	-	-	0.24	0.01	-	-	-	-	0.23	-	0.48
<b>OTHER</b>	<b>0.07</b>	-	<b>4.37</b>	<b>5.22</b>	-	-	<b>0.44</b>	<b>2.80</b>	<b>13.42</b>	-	<b>26.31</b>
Residential	0.01	-	0.55	3.70	-	-	0.36	2.73	6.31	-	13.66
Comm. and public services	0.03	-	0.97	1.43	-	-	0.06	0.06	6.72	-	9.28
Agriculture/forestry	0.03	-	2.78	0.09	-	-	0.01	0.00	0.38	-	3.28
Fishing	-	-	0.07	-	-	-	-	-	0.00	-	0.07
Non-specified	-	-	0.01	-	-	-	-	0.00	0.02	-	0.02
<b>NON-ENERGY USE</b>	-	-	<b>4.24</b>	<b>2.00</b>	-	-	-	-	-	-	<b>6.24</b>
in industry/transf./energy	-	-	4.24	2.00	-	-	-	-	-	-	6.24
of which: chem./petrochem.	-	-	2.38	2.00	-	-	-	-	-	-	4.38
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>165.37</b>	-	<b>10.61</b>	<b>56.92</b>	-	<b>43.17</b>	<b>28.36</b>	<b>4.33</b>	-	-	<b>308.75</b>
Electricity plants	162.79	-	10.48	47.13	-	43.17	28.23	1.38	-	-	293.17
CHP plants	2.58	-	0.13	9.79	-	-	0.13	2.95	-	-	15.58
<b>Heat generated - PJ</b>	-	-	-	-	-	-	<b>1.41</b>	-	-	-	<b>1.42</b>
CHP plants	-	-	-	-	-	-	1.41	-	-	-	1.42
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.



# OTHER REGIONAL TOTALS

IEA

Figure 1. Energy production

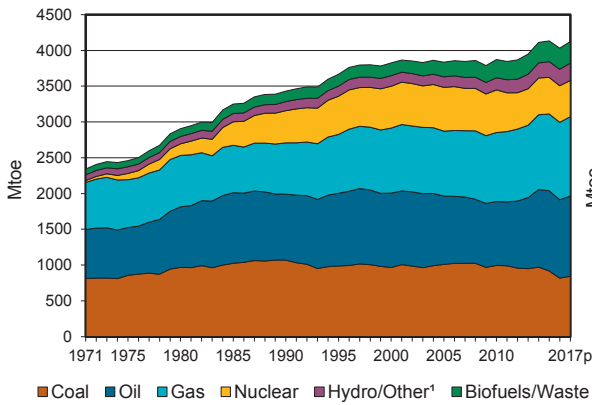


Figure 2. Total primary energy supply<sup>2</sup>

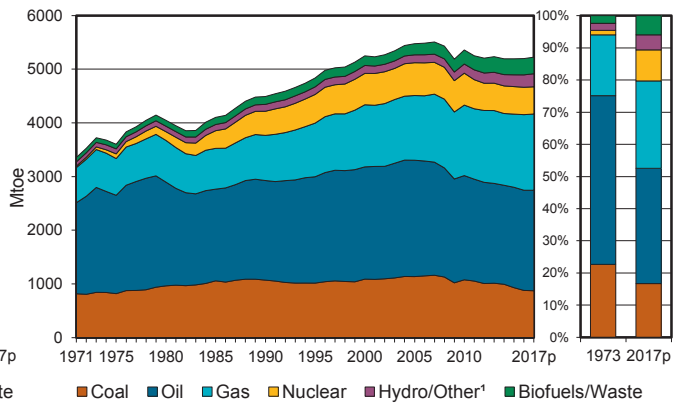


Figure 3. Energy self-sufficiency

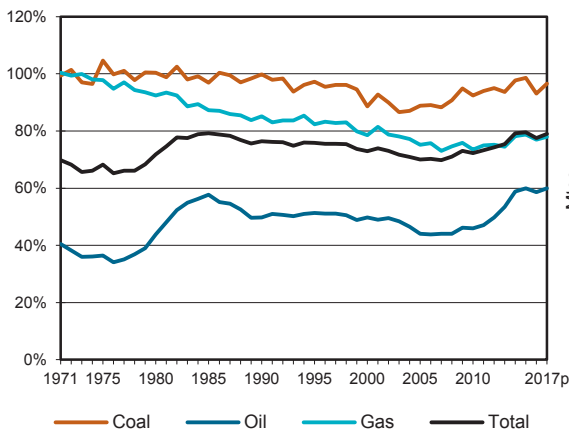


Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>

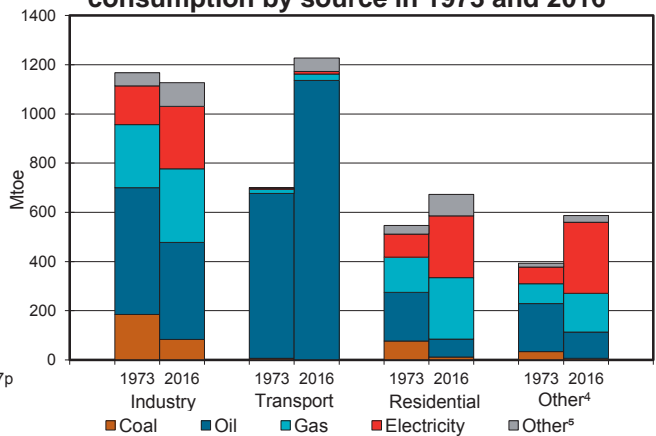


Figure 5. Electricity generation by source

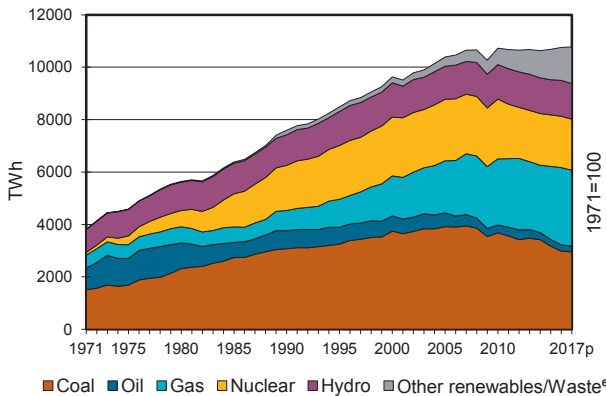
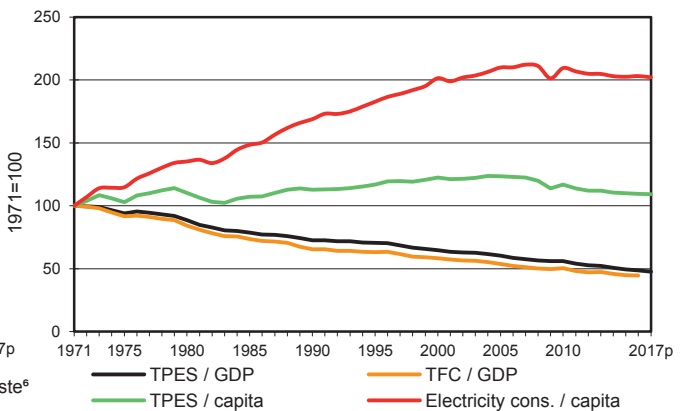


Figure 6. Selected indicators



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.



## IEA

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal <sup>1</sup>	Crude oil <sup>2</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./ Solar/ etc.	Biofuels/ Waste	Electricity	Heat	Total
Production	818.54	1093.60	-	1083.76	510.75	117.69	112.42	294.63	-	0.72	4032.10
Imports	368.24	1420.05	611.94	655.98	-	-	-	21.61	39.77	0.01	3117.60
Exports	-346.86	-421.56	-663.06	-349.13	-	-	-	-13.10	-39.50	-0.01	-1833.23
Intl. marine bunkers	-	-	-76.36	-0.05	-	-	-	-	-	-	-76.41
Intl. aviation bunkers	-	-	-97.13	-	-	-	-	-	-	-	-97.13
Stock changes	39.11	-2.06	0.92	16.98	-	-	-	-0.17	-	-	54.77
<b>TPES</b>	<b>879.03</b>	<b>2090.03</b>	<b>-223.70</b>	<b>1407.53</b>	<b>510.75</b>	<b>117.69</b>	<b>112.42</b>	<b>302.96</b>	<b>0.27</b>	<b>0.73</b>	<b>5197.71</b>
Transfers	-	-96.94	111.32	-	-	-	-	-	-	-	14.38
Statistical differences	1.66	-2.28	18.26	-0.39	-	-	0.00	0.29	1.58	-0.44	18.69
Electricity plants	-616.99	-2.40	-40.55	-415.04	-503.67	-117.69	-102.28	-50.76	829.94	-0.41	-1019.83
CHP plants	-73.66	-	-11.93	-108.52	-7.07	-	-0.08	-43.18	94.86	56.15	-93.44
Heat plants	-3.83	-	-1.08	-8.26	-	-	-0.82	-7.47	-0.45	18.04	-3.88
Blast furnaces	-52.50	-	-0.05	-0.01	-	-	-	-	-	-	-52.56
Gas works	-2.21	-	-1.85	3.20	-	-	-	-0.26	-	-	-1.11
Coke/pat. fuel/BKB/PB plants	-11.34	-	-0.93	-0.03	-	-	-	-0.12	-	-	-12.41
Oil refineries	-	-2024.48	1993.76	-	-	-	-	-	-	-	-30.72
Petrochemical plants	-	32.13	-32.23	-	-	-	-	-	-	-	-0.10
Liquefaction plants	-1.15	0.68	-	-	-	-	-	-	-	-	-0.47
Other transformation	-0.16	9.18	-0.00	-9.33	-	-	-	-0.14	-	-0.68	-1.14
Energy industry own use	-15.39	-0.11	-107.31	-135.40	-	-	-0.00	-1.01	-65.65	-8.54	-333.41
Losses	-1.33	-	-0.05	-1.68	-	-	-0.00	-0.02	-56.70	-6.41	-66.19
<b>TFC</b>	<b>102.14</b>	<b>5.81</b>	<b>1703.66</b>	<b>732.06</b>	<b>-</b>	<b>-</b>	<b>9.24</b>	<b>200.30</b>	<b>803.86</b>	<b>58.44</b>	<b>3615.51</b>
<b>INDUSTRY</b>	<b>81.03</b>	<b>0.03</b>	<b>84.60</b>	<b>261.76</b>	<b>-</b>	<b>-</b>	<b>0.46</b>	<b>71.73</b>	<b>253.63</b>	<b>24.89</b>	<b>778.13</b>
Iron and steel	33.52	-	2.49	24.88	-	-	-	0.06	27.30	0.70	88.95
Chemical and petrochemical	10.45	0.02	18.55	74.42	-	-	0.00	1.98	38.87	11.60	155.89
Non-ferrous metals	2.13	-	1.61	11.69	-	-	0.00	0.09	22.93	0.24	38.69
Non-metallic minerals	18.81	-	13.73	27.10	-	-	0.00	6.09	14.66	0.24	80.63
Transport equipment	0.35	-	1.08	8.54	-	-	0.00	0.02	13.35	0.73	24.07
Machinery	0.18	-	2.80	18.21	-	-	0.00	0.18	30.68	0.66	52.69
Mining and quarrying	0.35	-	8.03	4.37	-	-	0.00	0.13	8.13	0.12	21.13
Food and tobacco	5.57	0.00	4.35	38.23	-	-	0.00	4.69	22.38	1.95	77.18
Paper, pulp and printing	4.74	-	2.16	19.89	-	-	0.11	48.23	24.92	3.07	103.12
Wood and wood products	0.07	-	1.47	2.45	-	-	-	7.60	4.77	0.68	17.04
Construction	0.03	-	16.06	3.08	-	-	0.00	0.35	8.35	0.05	27.92
Textile and leather	0.87	0.01	0.64	4.61	-	-	0.00	0.11	6.15	0.68	13.07
Non-specified	3.96	-	11.62	24.28	-	-	0.35	2.20	31.15	4.18	77.75
<b>TRANSPORT</b>	<b>0.01</b>	<b>-</b>	<b>1128.76</b>	<b>26.07</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>55.36</b>	<b>9.66</b>	<b>-</b>	<b>1219.85</b>
Domestic aviation	-	-	76.19	-	-	-	-	-	-	-	76.19
Road	-	-	1014.32	4.15	-	-	-	54.97	0.53	-	1073.97
Rail	0.01	-	17.32	-	-	-	-	0.31	7.41	-	25.05
Pipeline transport	-	-	0.05	21.78	-	-	-	-	0.71	-	22.53
Domestic navigation	-	-	20.06	0.10	-	-	-	0.08	-	-	20.24
Non-specified	-	-	0.81	0.05	-	-	-	0.00	1.00	-	1.87
<b>OTHER</b>	<b>18.18</b>	<b>-</b>	<b>172.61</b>	<b>406.86</b>	<b>-</b>	<b>-</b>	<b>8.78</b>	<b>73.22</b>	<b>540.58</b>	<b>33.54</b>	<b>1253.78</b>
Residential	11.85	-	72.47	250.18	-	-	5.23	60.47	251.14	22.00	673.35
Comm. and public services	5.20	-	50.23	150.00	-	-	2.63	8.50	257.24	11.17	484.97
Agriculture/forestry	1.09	-	43.20	5.77	-	-	0.83	3.18	12.05	0.21	66.33
Fishing	-	-	3.69	0.04	-	-	0.04	0.01	0.39	-	4.16
Non-specified	0.04	-	3.02	0.87	-	-	0.04	1.06	19.76	0.17	24.97
<b>NON-ENERGY USE</b>	<b>2.92</b>	<b>5.78</b>	<b>317.69</b>	<b>37.37</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>363.75</b>
in industry/transf./energy	2.74	5.78	303.15	37.37	-	-	-	-	-	-	349.03
of which: chem./petrochem.	1.73	5.78	229.99	37.37	-	-	-	-	-	-	274.86
in transport	-	-	7.64	-	-	-	-	-	-	-	7.64
in other	0.18	-	6.89	-	-	-	-	-	-	-	7.07
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>2984.31</b>	<b>11.72</b>	<b>228.03</b>	<b>2947.45</b>	<b>1959.74</b>	<b>1368.69</b>	<b>908.14</b>	<b>346.12</b>	<b>-</b>	<b>1.28</b>	<b>10755.49</b>
Electricity plants	2701.26	11.72	184.76	2363.54	1933.05	1368.69	902.76	185.20	-	0.69	9651.66
CHP plants	283.05	-	43.28	583.92	26.69	-	5.38	160.92	-	0.59	1103.82
<b>Heat generated - PJ</b>	<b>739.10</b>	<b>-</b>	<b>165.24</b>	<b>1317.39</b>	<b>5.04</b>	<b>-</b>	<b>53.46</b>	<b>805.44</b>	<b>8.14</b>	<b>42.44</b>	<b>3136.24</b>
CHP plants	608.14	-	134.15	1037.23	5.04	-	11.16	555.04	0.48	19.48	2370.72
Heat plants	130.96	-	31.08	280.16	-	-	42.30	250.40	7.66	22.97	765.52

1. Includes peat and oil shale.

2. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## IEA

## Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal <sup>1</sup>	Crude oil <sup>2</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./ Solar/ etc.	Biofuels/ Waste	Electricity	Heat	Total
Production	842.69	1121.39	-	1108.41	506.84	116.40	126.11	301.12	-	0.69	4123.66
Imports	374.09	1443.59	623.03	713.96	-	-	-	21.85	39.63	0.01	3216.16
Exports	-352.91	-462.41	-700.52	-404.06	-	-	-	-14.73	-40.93	-0.01	-1975.57
Intl. marine bunkers	-	-	-78.81	-	-	-	-	-	-	-	-78.81
Intl. aviation bunkers	-	-	-102.34	-	-	-	-	-	-	-	-102.34
Stock changes	9.08	18.07	9.72	2.41	-	-	-	0.17	-	-	39.45
<b>TPES</b>	<b>872.94</b>	<b>2120.64</b>	<b>-248.92</b>	<b>1420.72</b>	<b>506.84</b>	<b>116.40</b>	<b>126.11</b>	<b>308.41</b>	<b>-1.30</b>	<b>0.69</b>	<b>5222.55</b>
Electricity and Heat Output											
Elec. generated - TWh	2955.29	7.66	215.06	2897.75	1944.63	1353.78	1048.22	351.45	-	1.24	10775.09
Heat generated - PJ	711.00	-	145.72	1306.21	6.06	-	56.52	815.87	8.30	35.76	3085.43

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes peat and oil shale.
2. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	2445.8	2906.5	3431.3	3825.4	3873.3	4133.7	4032.1	4123.7
Net imports (Mtoe)	1394.1	1291.2	1229.1	1533.7	1639.0	1284.6	1284.4	1240.6
Total primary energy supply (Mtoe)	3723.3	4049.1	4491.7	5248.4	5359.8	5194.2	5197.7	5222.6
Net oil imports (Mtoe)	1370.8	1216.1	1068.8	1218.6	1223.9	945.6	947.4	903.7
Oil supply (Mtoe)	1954.2	1932.2	1854.6	2090.7	1940.9	1870.1	1866.3	1871.7
Electricity consumption (TWh) <sup>1</sup>	4122.4	5234.9	7079.8	9088.3	10130.9	10076.2	10162.9	10168.2
GDP (billion 2010 USD)	17767.5	21486.5	29189.8	37968.4	44230.2	48314.2	49134.2	50304.5
GDP PPP (billion 2010 USD)	17003.2	20655.7	27980.3	36725.9	43157.0	47418.0	48261.8	49460.0
Population (millions)	906.18	969.62	1050.19	1130.11	1211.24	1246.06	1253.30	1260.15
Industrial production index (2010=100)	..	..	..	..	..	..	..	-
Total self-sufficiency <sup>2</sup>	0.66	0.72	0.76	0.73	0.72	0.80	0.78	0.79
Coal self-sufficiency <sup>2</sup>	0.97	1.00	1.00	0.89	0.92	0.99	0.93	0.97
Oil self-sufficiency <sup>2</sup>	0.36	0.44	0.50	0.50	0.46	0.60	0.59	0.60
Natural gas self-sufficiency <sup>2</sup>	1.00	0.92	0.85	0.79	0.74	0.79	0.77	0.78
TPES/GDP (toe per thousand 2010 USD)	0.21	0.19	0.15	0.14	0.12	0.11	0.11	0.10
TPES/GDP PPP (toe per thousand 2010 USD)	0.22	0.20	0.16	0.14	0.12	0.11	0.11	0.11
TPES/population (toe per capita)	4.11	4.18	4.28	4.64	4.43	4.17	4.15	4.14
Net oil imports/GDP (toe per thousand 2010 USD)	0.08	0.06	0.04	0.03	0.03	0.02	0.02	0.02
Oil supply/GDP (toe per thousand 2010 USD)	0.11	0.09	0.06	0.06	0.04	0.04	0.04	0.04
Oil supply/population (toe per capita)	2.16	1.99	1.77	1.85	1.60	1.50	1.49	1.49
Share of renewables in TPES	0.05	0.05	0.06	0.06	0.08	0.09	0.10	0.10
Share of renewables in electricity generation	0.21	0.20	0.17	0.15	0.18	0.23	0.24	0.25
TFC/GDP (toe per thousand 2010 USD)	0.16	0.14	0.11	0.10	0.08	0.07	0.07	..
TFC/GDP PPP (toe per thousand 2010 USD)	0.17	0.14	0.11	0.10	0.09	0.08	0.08	..
TFC/population (toe per capita)	3.10	3.02	2.93	3.18	3.02	2.87	2.89	..
Elect. cons./GDP (kWh per 2010 USD)	0.23	0.24	0.24	0.24	0.23	0.21	0.21	0.20
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	0.24	0.25	0.25	0.25	0.24	0.21	0.21	0.21
Elect. cons./population (kWh per capita)	4549	5399	6742	8042	8364	8087	8109	8069
Industry cons. <sup>3</sup> /industrial production (2010=100)	..	..	..	..	..	..	..	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	..	..	..	..	..	..	..	..

IEA excludes Estonia prior to 1990.

1. Electricity consumption equals domestic supply less losses.
2. Production divided by TPES. Coal self-sufficiency also includes peat, when applicable.
3. Includes non-energy use.

## IEA and Accession/Association countries

Figure 1. Energy production

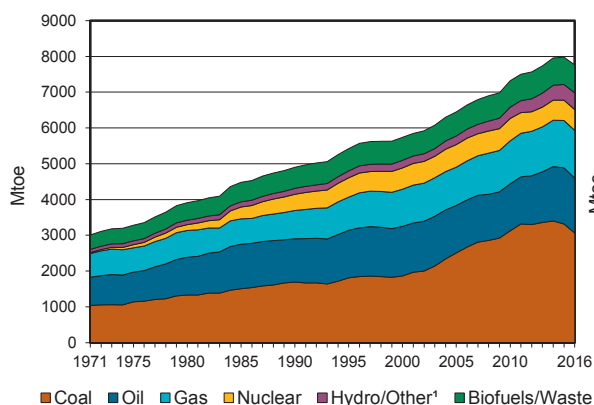


Figure 2. Total primary energy supply<sup>2</sup>

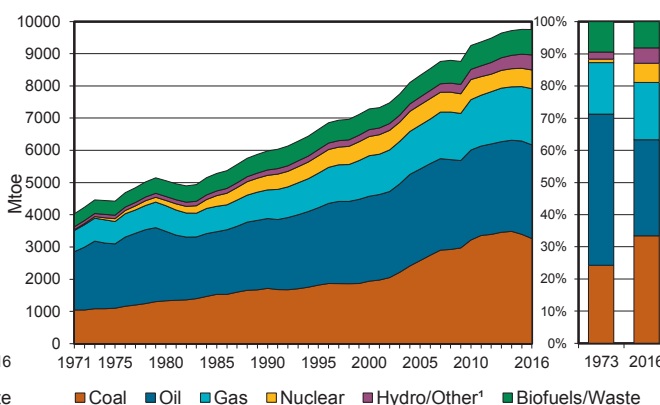


Figure 3. Energy self-sufficiency

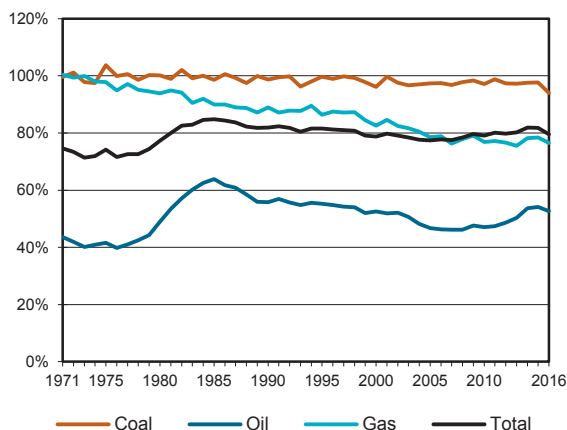


Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>

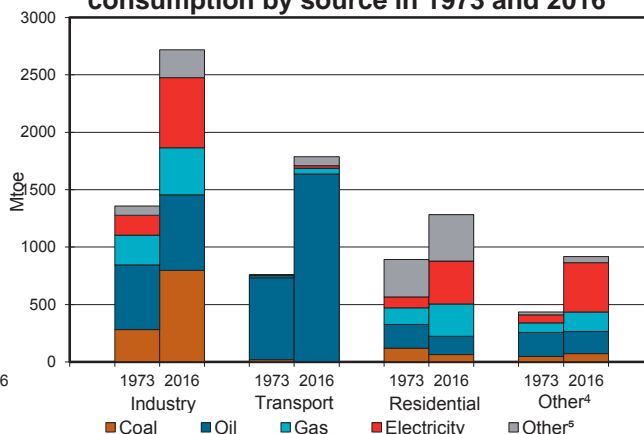


Figure 5. Electricity generation by source

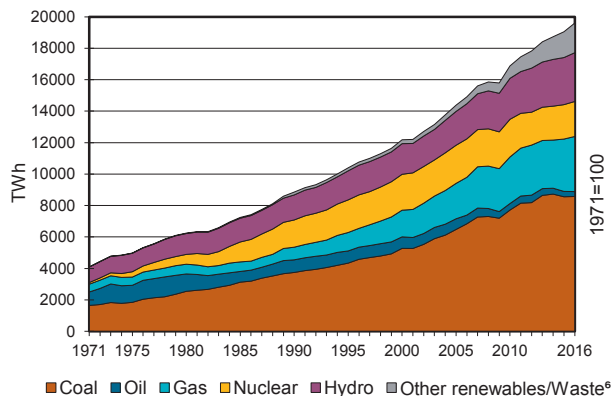
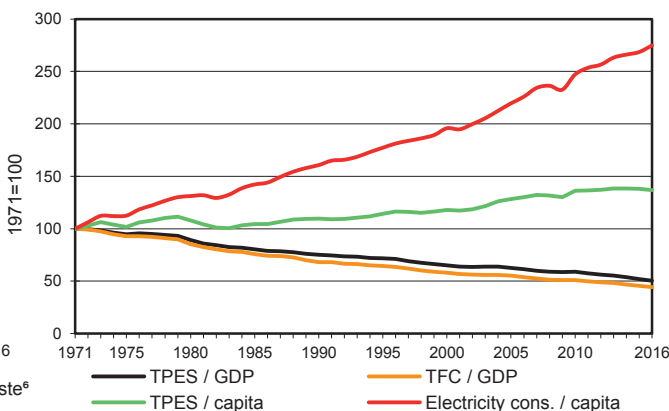


Figure 6. Selected indicators



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.

## IEA and Accession/Association countries

2016

Million tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal <sup>1</sup>	Crude oil <sup>2</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	3065.46	1532.11	-	1335.22	580.33	266.60	199.86	781.12	-	0.80	7761.52
Imports	656.57	2155.11	897.30	770.91	-	-	-	22.16	46.50	0.01	4548.56
Exports	-568.11	-487.72	-904.16	-377.73	-	-	-	-14.74	-41.88	-0.01	-2394.34
Intl. marine bunkers	-	-	-139.48	-0.05	-	-	-	-	-	-	-139.53
Intl. aviation bunkers	-	-	-127.43	-	-	-	-	-	-	-	-127.43
Stock changes	107.32	-13.45	-3.62	17.00	-	-	-	-0.10	-	-	107.15
<b>TPES</b>	<b>3261.24</b>	<b>3186.06</b>	<b>-277.39</b>	<b>1745.35</b>	<b>580.33</b>	<b>266.60</b>	<b>199.86</b>	<b>788.44</b>	<b>4.62</b>	<b>0.80</b>	<b>9755.94</b>
Transfers	-1.36	-98.25	115.27	-	-	-	-	-	-	-	15.66
Statistical differences	35.33	-5.22	16.12	-6.75	-	-	-	0.42	1.34	-0.44	40.80
Electricity plants	-1491.49	-2.53	-58.47	-502.16	-573.26	-266.60	-156.56	-112.85	1432.86	-0.49	-1731.56
CHP plants	-532.99	-	-13.06	-127.06	-7.07	-	-0.08	-56.18	252.59	146.03	-337.84
Heat plants	-12.47	-	-5.98	-8.26	-	-	-	-9.08	-0.45	31.17	-5.89
Blast furnaces	-173.57	-	-0.05	-0.01	-	-	-	-0.04	-	-	-173.66
Gas works	-9.34	-	-1.85	5.12	-	-	-	-0.26	-	-	-6.32
Coke/pat. fuel/BKB/PB plants	-73.95	-	-1.76	-0.03	-	-	-	-0.12	-	-	-75.85
Oil refineries	-	-3114.41	3063.89	-	-	-	-	-	-	-	-50.52
Petrochemical plants	-	35.07	-35.18	-	-	-	-	-	-	-	-0.10
Liquefaction plants	-6.89	4.12	-	-	-	-	-	-	-	-	-2.77
Other transformation	-0.16	9.90	-0.00	-10.23	-	-	-	-12.90	-	-0.68	-14.08
Energy industry own use	-59.63	-3.32	-164.71	-178.15	-	-	-0.00	-13.25	-138.30	-20.39	-577.74
Losses	-1.57	-0.60	-0.16	-4.32	-	-	-0.00	-0.10	-117.82	-7.55	-132.12
<b>TFC</b>	<b>933.17</b>	<b>10.82</b>	<b>2636.68</b>	<b>913.51</b>	<b>-</b>	<b>-</b>	<b>42.39</b>	<b>584.09</b>	<b>1434.84</b>	<b>148.46</b>	<b>6703.95</b>
<b>INDUSTRY</b>	<b>743.96</b>	<b>2.87</b>	<b>197.83</b>	<b>335.94</b>	<b>-</b>	<b>-</b>	<b>0.90</b>	<b>155.10</b>	<b>611.09</b>	<b>85.34</b>	<b>2133.02</b>
Iron and steel	270.91	-	5.24	30.50	-	-	-	2.96	81.23	5.55	396.39
Chemical and petrochemical	113.32	0.02	43.85	90.67	-	-	0.00	2.05	93.93	42.98	386.82
Non-ferrous metals	21.79	-	4.52	15.60	-	-	0.00	0.10	76.72	3.88	122.61
Non-metallic minerals	198.28	-	31.92	35.76	-	-	0.00	8.61	45.93	0.55	321.04
Transport equipment	2.50	-	1.78	11.14	-	-	0.00	0.02	23.25	1.74	40.43
Machinery	11.36	-	5.52	23.66	-	-	0.00	0.18	70.93	1.74	113.39
Mining and quarrying	6.73	-	16.27	5.88	-	-	0.00	0.13	19.90	0.99	49.89
Food and tobacco	28.83	0.00	7.85	41.81	-	-	0.00	27.91	37.99	5.57	149.96
Paper, pulp and printing	15.56	-	3.51	22.73	-	-	0.11	58.67	35.01	7.98	143.57
Wood and wood products	1.89	-	1.89	2.67	-	-	-	7.60	8.05	0.92	23.02
Construction	4.25	-	24.14	3.25	-	-	0.00	0.35	14.66	0.28	46.94
Textile and leather	9.73	0.01	2.69	6.62	-	-	0.00	0.17	27.84	8.33	55.38
Non-specified	58.81	2.83	48.65	45.64	-	-	0.79	46.36	75.66	4.84	283.58
<b>TRANSPORT</b>	<b>0.03</b>	<b>-</b>	<b>1627.81</b>	<b>50.80</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>78.56</b>	<b>21.46</b>	<b>-</b>	<b>1778.66</b>
Domestic aviation	-	-	106.64	-	-	-	-	-	-	-	106.64
Road	-	-	1447.88	27.22	-	-	-	78.17	4.33	-	1557.61
Rail	0.03	-	24.31	-	-	-	-	0.31	15.37	-	40.02
Pipeline transport	-	-	0.05	23.43	-	-	-	-	0.76	-	24.24
Domestic navigation	-	-	46.14	0.10	-	-	-	0.08	-	-	46.32
Non-specified	0.00	-	2.78	0.05	-	-	-	0.00	1.01	-	3.84
<b>OTHER</b>	<b>136.29</b>	<b>-</b>	<b>320.24</b>	<b>452.87</b>	<b>-</b>	<b>-</b>	<b>41.49</b>	<b>350.43</b>	<b>802.29</b>	<b>63.12</b>	<b>2166.73</b>
Residential	63.85	-	158.23	283.58	-	-	30.79	327.06	372.83	45.56	1281.89
Comm. and public services	29.47	-	70.63	162.35	-	-	7.66	16.50	319.38	13.51	619.49
Agriculture/forestry	15.52	-	81.95	6.02	-	-	2.05	5.80	41.22	0.24	152.81
Fishing	0.00	-	3.95	0.04	-	-	0.04	0.01	0.39	-	4.43
Non-specified	27.45	-	5.49	0.88	-	-	0.94	1.06	68.47	3.81	108.10
<b>NON-ENERGY USE</b>	<b>52.89</b>	<b>7.95</b>	<b>490.80</b>	<b>73.90</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>625.54</b>
in industry/transf./energy	52.56	7.95	450.10	73.90	-	-	-	-	-	-	584.51
of which: chem./petrochem.	1.73	7.95	339.29	73.90	-	-	-	-	-	-	422.86
in transport	-	-	9.18	-	-	-	-	-	-	-	9.18
in other	0.32	-	31.52	-	-	-	-	-	-	-	31.85
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>8576.78</b>	<b>11.72</b>	<b>299.54</b>	<b>3502.99</b>	<b>2226.80</b>	<b>3100.59</b>	<b>1336.22</b>	<b>544.08</b>	<b>-</b>	<b>2.98</b>	<b>19601.69</b>
Electricity plants	6589.74	11.72	250.79	2849.99	2200.11	3100.59	1330.84	327.56	-	2.39	16663.52
CHP plants	1987.05	-	48.75	653.20	26.69	-	5.38	216.52	-	0.59	2938.17
<b>Heat generated - PJ</b>	<b>4507.73</b>	<b>-</b>	<b>339.75</b>	<b>1637.38</b>	<b>5.04</b>	<b>-</b>	<b>53.46</b>	<b>855.50</b>	<b>8.14</b>	<b>45.78</b>	<b>7452.78</b>
CHP plants	4051.51	-	134.15	1357.22	5.04	-	11.16	555.04	0.48	19.48	6134.08
Heat plants	456.22	-	205.60	280.16	-	-	42.30	300.46	7.66	26.31	1318.70

1. Includes peat and oil shale.

2. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## IEA and Accession/Association countries

## Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal <sup>1</sup>	Crude oil <sup>2</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	3155.51	1555.38	..	1366.92	..	..	..	..	..	..	..
Imports	678.26	..	..	846.34	..	..	..	..	..	..	..
Exports	-577.33	..	..	-432.06	..	..	..	..	..	..	..
Intl. marine bunkers	..	..	..	..	..	..	..	..	..	..	..
Intl. aviation bunkers	..	..	..	..	..	..	..	..	..	..	..
Stock changes	14.67	..	..	..	..	..	..	..	..	..	..
<b>TPES</b>	<b>3271.10</b>	..	..	..	..	..	..	..	..	..	..
Electricity and Heat Output											
Elec. generated - TWh	..	..	..	..	..	..	..	..	..	..	..
Heat generated - PJ	..	..	..	..	..	..	..	..	..	..	..

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes peat and oil shale.

2. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	3181.9	3910.9	4901.4	5739.1	7319.7	7978.0	7761.5	..
Net imports (Mtoe)	1418.1	1303.2	1251.8	1716.6	2202.7	2093.6	2154.2	..
Total primary energy supply (Mtoe)	4461.2	5058.8	5985.1	7289.4	9260.0	9759.0	9755.9	..
Net oil imports (Mtoe)	1395.5	1236.7	1113.8	1471.1	1743.1	1622.9	1660.5	..
Oil supply (Mtoe)	2097.6	2154.8	2167.9	2636.2	2792.2	2895.5	2908.7	..
Electricity consumption (TWh) <sup>1</sup>	4416.5	5775.2	8224.9	11346.2	15759.1	17820.0	18380.1	..
GDP (billion 2010 USD)	19068.9	23469.4	32316.2	43554.6	55840.7	63904.6	65473.8	..
GDP PPP (billion 2010 USD)	19473.3	24346.2	34184.6	48138.7	67526.5	80702.9	83365.6	..
Population (millions)	2677.49	2997.28	3483.99	3943.87	4341.03	4517.50	4552.93	..
Industrial production index (2010=100)	..	..	..	..	..	..	..	..
Total self-sufficiency <sup>2</sup>	0.71	0.77	0.82	0.79	0.79	0.82	0.80	..
Coal self-sufficiency <sup>2</sup>	0.98	1.00	0.99	0.96	0.97	0.98	0.94	0.96
Oil self-sufficiency <sup>2</sup>	0.40	0.49	0.56	0.53	0.47	0.54	0.53	..
Natural gas self-sufficiency <sup>2</sup>	1.00	0.94	0.89	0.83	0.77	0.78	0.77	..
TPES/GDP (toe per thousand 2010 USD)	0.23	0.22	0.19	0.17	0.17	0.15	0.15	..
TPES/GDP PPP (toe per thousand 2010 USD)	0.23	0.21	0.18	0.15	0.14	0.12	0.12	..
TPES/population (toe per capita)	1.67	1.69	1.72	1.85	2.13	2.16	2.14	..
Net oil imports/GDP (toe per thousand 2010 USD)	0.07	0.05	0.03	0.03	0.03	0.03	0.03	..
Oil supply/GDP (toe per thousand 2010 USD)	0.11	0.09	0.07	0.06	0.05	0.05	0.04	..
Oil supply/population (toe per capita)	0.78	0.72	0.62	0.67	0.64	0.64	0.64	..
Share of renewables in TPES	0.12	0.12	0.13	0.12	0.11	0.12	0.13	..
Share of renewables in electricity generation	0.22	0.22	0.20	0.18	0.20	0.24	0.25	..
TFC/GDP (toe per thousand 2010 USD)	0.18	0.16	0.13	0.12	0.11	0.10	0.10	..
TFC/GDP PPP (toe per thousand 2010 USD)	0.18	0.16	0.12	0.11	0.09	0.08	0.08	..
TFC/population (toe per capita)	1.29	1.26	1.21	1.28	1.44	1.47	1.47	..
Elect. cons./GDP (kWh per 2010 USD)	0.23	0.25	0.25	0.26	0.28	0.28	0.28	..
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	0.23	0.24	0.24	0.24	0.23	0.22	0.22	..
Elect. cons./population (kWh per capita)	1650	1927	2361	2877	3630	3945	4037	..
Industry cons. <sup>3</sup> /industrial production (2010=100)	..	..	..	..	..	..	..	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	..	..	..	..	..	..	..	..

IEA excludes Estonia prior to 1990.

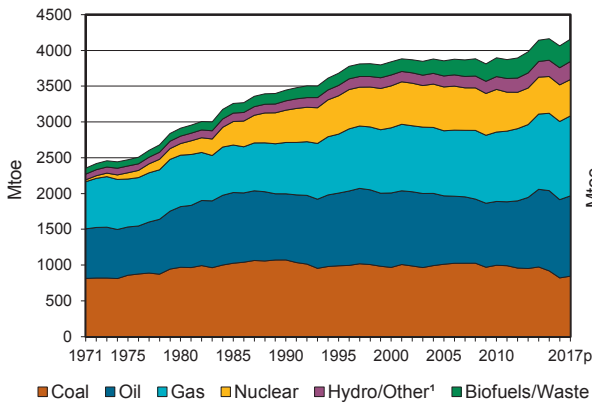
1. Electricity consumption equals domestic supply less losses.

2. Production divided by TPES. Coal self-sufficiency also includes peat, when applicable.

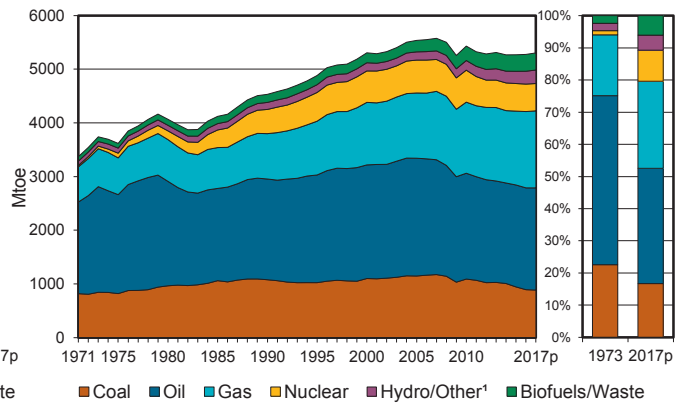
3. Includes non-energy use.

### OECD Total

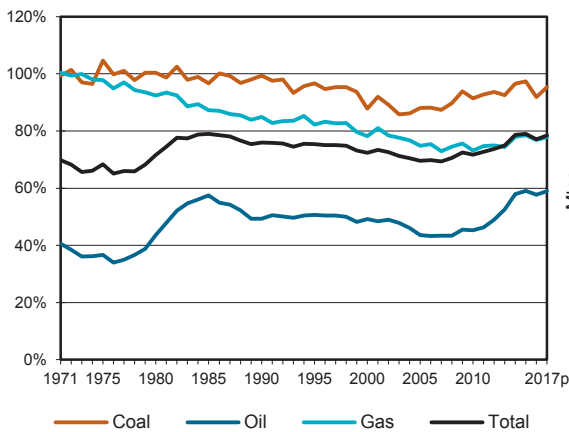
**Figure 1. Energy production**



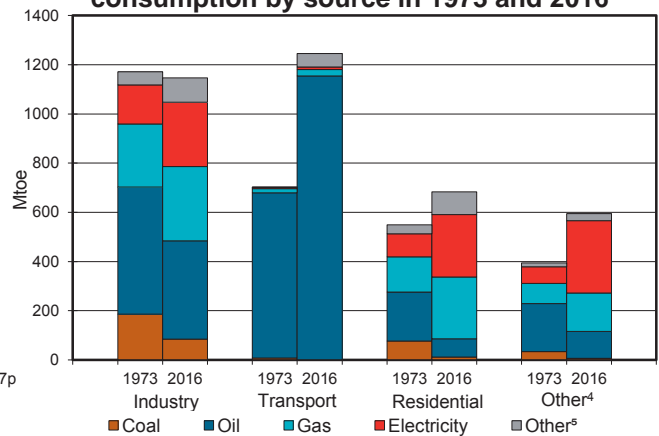
**Figure 2. Total primary energy supply<sup>2</sup>**



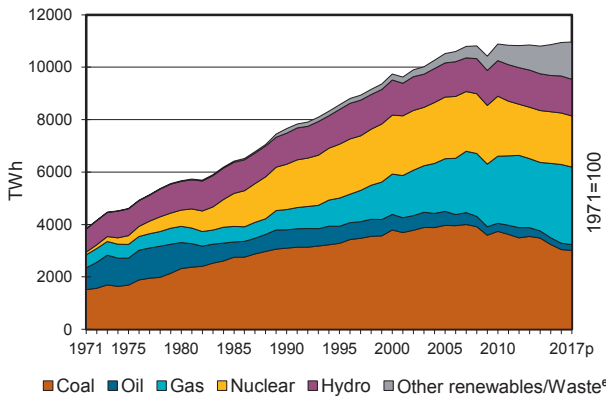
**Figure 3. Energy self-sufficiency**



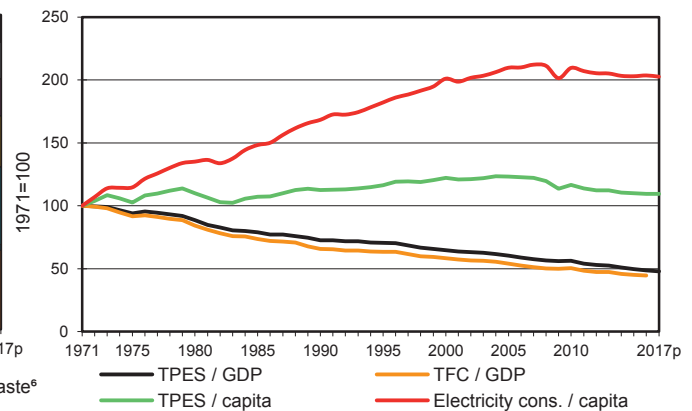
**Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.



## OECD Total

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal <sup>1</sup>	Crude oil <sup>2</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./ Solar/ etc.	Biofuels/ Waste	Electricity	Heat	Total
Production	820.54	1093.97	-	1092.36	512.24	121.45	116.93	305.34	-	0.72	4063.54
Imports	380.43	1442.50	630.67	661.55	-	-	-	21.83	40.91	0.01	3177.90
Exports	-347.32	-421.59	-672.12	-349.44	-	-	-	-14.06	-41.12	-0.01	-1845.67
Intl. marine bunkers	-	-	-77.13	-0.05	-	-	-	-	-	-	-77.18
Intl. aviation bunkers	-	-	-99.13	-	-	-	-	-	-	-	-99.13
Stock changes	39.26	-1.74	0.82	17.14	-	-	-	-0.17	-	-	55.31
<b>TPES</b>	<b>892.90</b>	<b>2113.14</b>	<b>-216.89</b>	<b>1421.57</b>	<b>512.24</b>	<b>121.45</b>	<b>116.93</b>	<b>312.93</b>	<b>-0.22</b>	<b>0.73</b>	<b>5274.78</b>
Transfers	-	-96.02	110.46	-	-	-	-	-	-	-	14.44
Statistical differences	2.00	-1.91	17.76	-0.35	-	-	0.09	0.52	1.35	-0.42	19.02
Electricity plants	-629.40	-2.40	-41.39	-424.01	-505.16	-121.45	-103.12	-50.78	844.34	-0.41	-1033.77
CHP plants	-74.75	-	-11.93	-109.31	-7.07	-	-2.56	-47.78	96.58	57.20	-99.62
Heat plants	-3.84	-	-1.08	-8.35	-	-	-1.53	-7.65	-0.46	18.71	-4.20
Blast furnaces	-52.61	-	-0.05	-0.01	-	-	-	-	-	-	-52.66
Gas works	-2.20	-	-1.85	3.20	-	-	-	-0.26	-	-	-1.11
Coke/pat. fuel/BKB/PB plants	-11.31	-	-0.93	-0.03	-	-	-	-0.12	-	-	-12.39
Oil refineries	-	-2048.87	2017.96	-	-	-	-	-	-	-	-30.91
Petrochemical plants	-	32.13	-32.23	-	-	-	-	-	-	-	-0.10
Liquefaction plants	-1.15	0.68	-	-	-	-	-	-	-	-	-0.47
Other transformation	-0.16	9.18	-0.00	-9.33	-	-	-	-0.22	-	-0.68	-1.22
Energy industry own use	-15.53	-0.11	-108.39	-135.72	-	-	-0.00	-1.01	-66.37	-8.58	-335.72
Losses	-1.34	-	-0.05	-1.74	-	-	-0.01	-0.05	-57.33	-6.61	-67.12
<b>TFC</b>	<b>102.59</b>	<b>5.81</b>	<b>1731.38</b>	<b>735.92</b>	<b>-</b>	<b>-</b>	<b>9.79</b>	<b>205.60</b>	<b>817.89</b>	<b>59.94</b>	<b>3668.93</b>
<b>INDUSTRY</b>	<b>81.45</b>	<b>0.03</b>	<b>89.13</b>	<b>264.25</b>	<b>-</b>	<b>-</b>	<b>0.47</b>	<b>74.15</b>	<b>260.62</b>	<b>25.00</b>	<b>795.10</b>
Iron and steel	33.70	-	2.50	24.96	-	-	-	0.06	27.55	0.70	89.48
Chemical and petrochemical	10.45	0.02	18.56	74.60	-	-	0.00	2.01	38.94	11.63	156.21
Non-ferrous metals	2.13	-	1.61	11.73	-	-	0.00	0.09	24.17	0.24	39.97
Non-metallic minerals	18.84	-	14.01	27.22	-	-	0.00	6.17	14.74	0.24	81.21
Transport equipment	0.35	-	1.08	8.55	-	-	0.00	0.02	13.42	0.73	24.15
Machinery	0.18	-	2.81	18.25	-	-	0.00	0.18	31.03	0.66	53.10
Mining and quarrying	0.40	-	10.31	4.55	-	-	0.00	0.13	10.46	0.12	25.95
Food and tobacco	5.62	0.00	4.38	38.29	-	-	0.00	4.70	22.64	1.96	77.59
Paper, pulp and printing	4.76	-	2.36	20.13	-	-	0.11	49.74	25.46	3.07	105.63
Wood and wood products	0.07	-	1.48	2.47	-	-	-	7.94	4.90	0.73	17.59
Construction	0.03	-	16.12	3.09	-	-	0.00	0.35	8.36	0.05	28.02
Textile and leather	0.87	0.01	0.64	4.63	-	-	0.00	0.11	6.18	0.68	13.12
Non-specified	4.05	-	13.25	25.81	-	-	0.36	2.64	32.76	4.19	83.07
<b>TRANSPORT</b>	<b>0.01</b>	<b>-</b>	<b>1146.52</b>	<b>26.10</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>55.41</b>	<b>9.77</b>	<b>-</b>	<b>1237.81</b>
Domestic aviation	-	-	76.70	-	-	-	-	-	-	-	76.70
Road	-	-	1031.12	4.18	-	-	-	55.01	0.58	-	1090.89
Rail	0.01	-	17.44	-	-	-	-	0.31	7.47	-	25.22
Pipeline transport	-	-	0.05	21.78	-	-	-	-	0.71	-	22.53
Domestic navigation	-	-	20.40	0.10	-	-	-	0.08	-	-	20.58
Non-specified	-	-	0.81	0.05	-	-	-	0.01	1.01	-	1.88
<b>OTHER</b>	<b>18.21</b>	<b>-</b>	<b>175.77</b>	<b>407.93</b>	<b>-</b>	<b>-</b>	<b>9.32</b>	<b>76.05</b>	<b>547.51</b>	<b>34.94</b>	<b>1269.72</b>
Residential	11.87	-	73.82	250.86	-	-	5.67	63.15	254.38	22.84	682.59
Comm. and public services	5.21	-	51.11	150.28	-	-	2.68	8.61	260.39	11.66	489.94
Agriculture/forestry	1.09	-	43.40	5.78	-	-	0.84	3.20	12.31	0.23	66.84
Fishing	0.00	-	4.13	0.04	-	-	0.05	0.01	0.40	0.04	4.66
Non-specified	0.04	-	3.31	0.96	-	-	0.08	1.09	20.03	0.18	25.68
<b>NON-ENERGY USE</b>	<b>2.93</b>	<b>5.78</b>	<b>319.97</b>	<b>37.63</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>366.30</b>
in industry/transf./energy	2.74	5.78	305.39	37.63	-	-	-	-	-	-	351.54
of which: chem./petrochem.	1.73	5.78	231.27	37.63	-	-	-	-	-	-	276.41
in transport	-	-	7.68	-	-	-	-	-	-	-	7.68
in other	0.18	-	6.90	-	-	-	-	-	-	-	7.08
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>3043.76</b>	<b>11.72</b>	<b>231.25</b>	<b>3003.49</b>	<b>1965.45</b>	<b>1412.47</b>	<b>920.25</b>	<b>353.31</b>	<b>-</b>	<b>1.28</b>	<b>10942.97</b>
Electricity plants	2755.70	11.72	187.97	2416.21	1938.76	1412.47	910.30	185.32	-	0.69	9819.13
CHP plants	288.06	-	43.28	587.28	26.69	-	9.95	167.99	-	0.59	1123.84
<b>Heat generated - PJ</b>	<b>744.30</b>	<b>-</b>	<b>165.45</b>	<b>1336.85</b>	<b>5.04</b>	<b>-</b>	<b>87.09</b>	<b>818.52</b>	<b>8.85</b>	<b>42.44</b>	<b>3208.53</b>
CHP plants	613.20	-	134.17	1053.38	5.04	-	26.11	562.94	0.48	19.48	2414.79
Heat plants	131.10	-	31.28	283.47	-	-	60.98	255.57	8.38	22.97	793.74

1. Includes peat and oil shale.

2. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## OECD Total

## Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal <sup>1</sup>	Crude oil <sup>2</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./ Solar/ etc.	Biofuels/ Waste	Electricity	Heat	Total
Production	844.67	1121.80	-	1117.27	508.47	120.22	131.33	311.48	-	0.69	4155.94
Imports	385.85	1467.46	641.65	719.86	-	-	-	22.11	40.77	0.01	3277.70
Exports	-353.32	-462.44	-709.21	-404.30	-	-	-	-15.66	-42.59	-0.01	-1987.52
Intl. marine bunkers	-	-	-79.64	-	-	-	-	-	-	-	-79.64
Intl. aviation bunkers	-	-	-104.19	-	-	-	-	-	-	-	-104.19
Stock changes	8.87	18.04	9.61	2.34	-	-	-	0.29	-	-	39.14
<b>TPES</b>	<b>886.07</b>	<b>2144.85</b>	<b>-241.79</b>	<b>1435.17</b>	<b>508.47</b>	<b>120.22</b>	<b>131.33</b>	<b>318.23</b>	<b>-1.83</b>	<b>0.69</b>	<b>5301.42</b>
Electricity and Heat Output											
Elec. generated - TWh	3011.29	7.66	217.71	2956.52	1950.92	1398.13	1062.88	358.32	-	1.24	10964.66
Heat generated - PJ	716.16	-	145.94	1325.07	6.06	-	90.84	830.56	9.03	35.76	3159.41

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes peat and oil shale.
2. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Key indicators

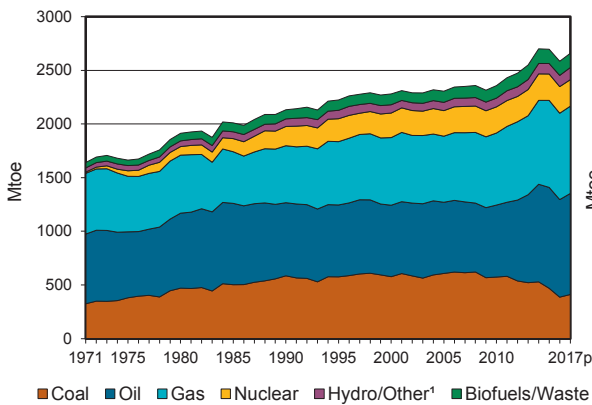
	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	2457.6	2913.4	3445.5	3841.5	3897.0	4163.8	4063.5	4155.9
Net imports (Mtoe)	1401.0	1304.3	1258.4	1576.3	1688.4	1332.2	1332.2	1290.2
Total primary energy supply (Mtoe)	3740.7	4067.9	4533.1	5305.1	5431.1	5268.8	5274.8	5301.4
Net oil imports (Mtoe)	1377.4	1228.5	1090.2	1246.5	1255.9	976.9	979.5	937.5
Oil supply (Mtoe)	1967.5	1945.5	1875.6	2116.7	1971.0	1898.7	1896.3	1903.1
Electricity consumption (TWh) <sup>1</sup>	4140.5	5259.9	7139.5	9190.2	10276.8	10243.8	10337.7	10344.6
GDP (billion 2010 USD)	17864.0	21610.5	29399.3	38347.6	44767.4	48949.3	49786.9	50975.2
GDP PPP (billion 2010 USD)	17113.3	20797.3	28256.1	37170.9	43793.4	48171.4	49034.1	50252.5
Population (millions)	919.75	984.90	1072.95	1156.45	1240.41	1276.85	1284.48	1291.72
Industrial production index (2010=100)	..	57.1	72.9	94.6	100.0	107.4	107.7	110.9
Total self-sufficiency <sup>2</sup>	0.66	0.72	0.76	0.72	0.72	0.79	0.77	0.78
Coal self-sufficiency <sup>2</sup>	0.97	1.00	0.99	0.88	0.91	0.97	0.92	0.95
Oil self-sufficiency <sup>2</sup>	0.36	0.44	0.49	0.49	0.45	0.59	0.58	0.59
Natural gas self-sufficiency <sup>2</sup>	1.00	0.92	0.85	0.78	0.73	0.79	0.77	0.78
TPES/GDP (toe per thousand 2010 USD)	0.21	0.19	0.15	0.14	0.12	0.11	0.11	0.10
TPES/GDP PPP (toe per thousand 2010 USD)	0.22	0.20	0.16	0.14	0.12	0.11	0.11	0.11
TPES/population (toe per capita)	4.07	4.13	4.22	4.59	4.38	4.13	4.11	4.10
Net oil imports/GDP (toe per thousand 2010 USD)	0.08	0.06	0.04	0.03	0.03	0.02	0.02	0.02
Oil supply/GDP (toe per thousand 2010 USD)	0.11	0.09	0.06	0.06	0.04	0.04	0.04	0.04
Oil supply/population (toe per capita)	2.14	1.98	1.75	1.83	1.59	1.49	1.48	1.47
Share of renewables in TPES	0.05	0.05	0.06	0.06	0.08	0.10	0.10	0.10
Share of renewables in electricity generation	0.21	0.20	0.17	0.16	0.18	0.23	0.24	0.25
TFC/GDP (toe per thousand 2010 USD)	0.16	0.14	0.11	0.10	0.08	0.07	0.07	..
TFC/GDP PPP (toe per thousand 2010 USD)	0.17	0.14	0.11	0.10	0.09	0.08	0.08	..
TFC/population (toe per capita)	3.06	2.99	2.90	3.15	2.99	2.84	2.86	..
Elect. cons./GDP (kWh per 2010 USD)	0.23	0.24	0.24	0.24	0.23	0.21	0.21	0.20
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	0.24	0.25	0.25	0.25	0.24	0.21	0.21	0.21
Elect. cons./population (kWh per capita)	4502	5341	6654	7947	8285	8023	8048	8008
Industry cons. <sup>3</sup> /industrial production (2010=100)	..	177.1	131.6	115.4	100.0	90.9	91.4	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	..	199.8	131.1	111.9	100.0	85.3	85.6	..

OECD Total excludes Estonia, Latvia and Slovenia prior to 1990. Please refer to section 'Geographical coverage'.

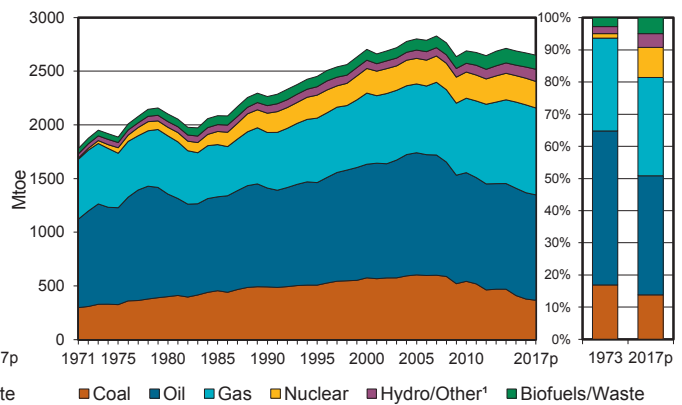
1. Electricity consumption equals domestic supply less losses.
2. Production divided by TPES. Coal self-sufficiency also includes peat, when applicable.
3. Includes non-energy use.

## OECD Americas

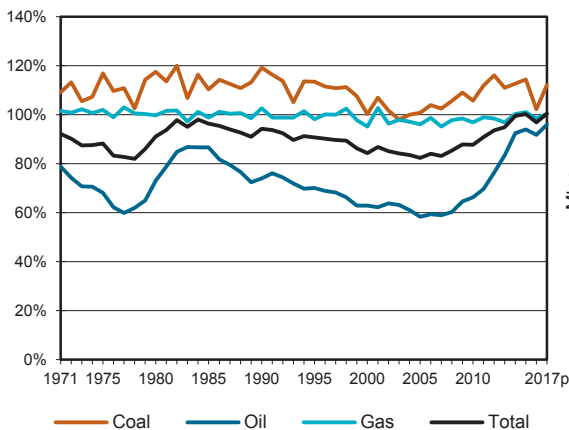
**Figure 1. Energy production**



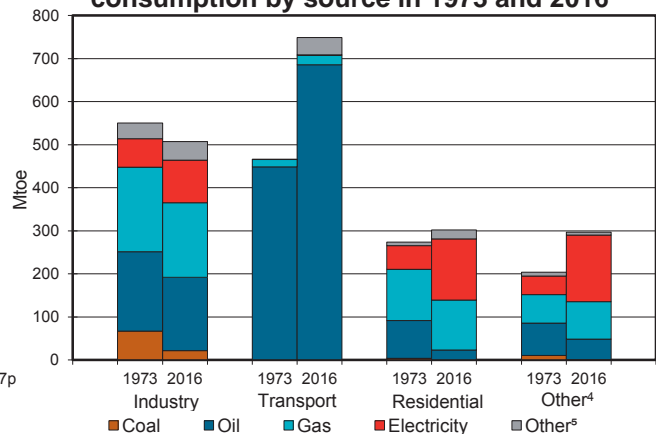
**Figure 2. Total primary energy supply<sup>2</sup>**



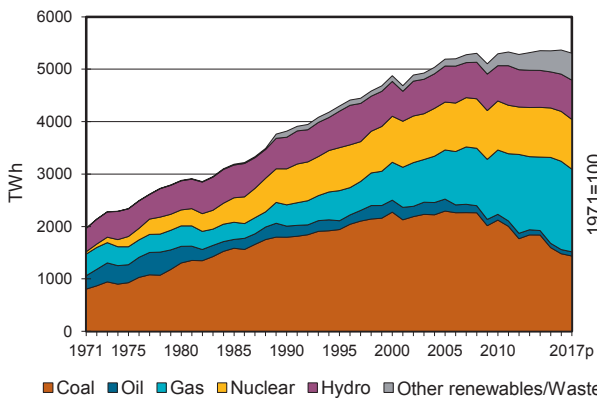
**Figure 3. Energy self-sufficiency**



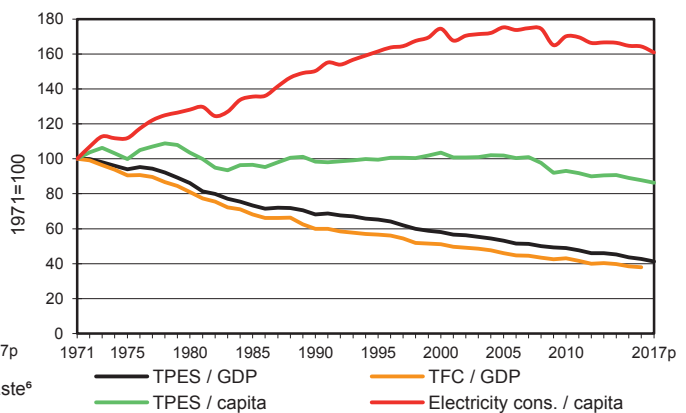
**Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.

## OECD Americas

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	386.46	909.11	-	804.80	247.96	61.11	43.36	131.61	-	-	2584.40
Imports	22.03	498.34	138.72	125.75	-	-	-	4.17	6.98	-	795.99
Exports	-54.75	-285.13	-218.44	-121.77	-	-	-	-4.21	-7.29	-	-691.58
Intl. marine bunkers	-	-	-18.21	-	-	-	-	-	-	-	-18.21
Intl. aviation bunkers	-	-	-29.56	-	-	-	-	-	-	-	-29.56
Stock changes	24.26	-4.54	-0.16	9.39	-	-	-	-0.31	-	-	28.63
<b>TPES</b>	<b>378.00</b>	<b>1117.78</b>	<b>-127.64</b>	<b>818.17</b>	<b>247.96</b>	<b>61.11</b>	<b>43.36</b>	<b>131.25</b>	<b>-0.31</b>	<b>-</b>	<b>2669.68</b>
Transfers	-	-95.55	103.15	-	-	-	-	-	-	-	7.61
Statistical differences	2.27	-3.16	21.40	-13.96	-	-	-0.00	0.22	-0.43	-	6.34
Electricity plants	-339.82	-	-15.91	-253.05	-247.96	-61.11	-40.79	-18.51	431.16	-	-545.99
CHP plants	-6.58	-	-2.72	-47.85	-	-	-	-11.53	30.29	12.64	-25.76
Heat plants	-0.00	-	-	-	-	-	-	-0.19	-	0.10	-0.09
Blast furnaces	-5.35	-	-	-	-	-	-	-	-	-	-5.35
Gas works	-1.93	-	-0.33	1.36	-	-	-	-	-	-	-0.90
Coke/pat. fuel/BKB/PB plants	-2.87	-	-	-	-	-	-	-	-	-	-2.87
Oil refineries	-	-1023.49	1001.95	-	-	-	-	-	-	-	-21.54
Petrochemical plants	-	0.06	-0.07	-	-	-	-	-	-	-	-0.00
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	7.35	-	-7.38	-	-	-	-0.07	-	-	-0.10
Energy industry own use	-1.65	-	-56.24	-99.51	-	-	-	-0.14	-33.74	-4.05	-195.33
Losses	-0.01	-	-	-0.06	-	-	-	-0.03	-29.46	-1.46	-31.01
<b>TFC</b>	<b>22.05</b>	<b>3.00</b>	<b>923.60</b>	<b>397.73</b>	<b>-</b>	<b>-</b>	<b>2.57</b>	<b>101.01</b>	<b>397.50</b>	<b>7.24</b>	<b>1854.69</b>
<b>INDUSTRY</b>	<b>21.37</b>	<b>-</b>	<b>36.88</b>	<b>150.74</b>	<b>-</b>	<b>-</b>	<b>0.01</b>	<b>37.46</b>	<b>99.33</b>	<b>5.78</b>	<b>351.57</b>
Iron and steel	6.10	-	0.30	12.17	-	-	-	0.00	4.72	0.19	23.48
Chemical and petrochemical	2.61	-	3.53	50.67	-	-	-	0.30	13.07	3.47	73.64
Non-ferrous metals	0.17	-	0.50	4.40	-	-	-	0.00	10.27	0.10	15.44
Non-metallic minerals	5.11	-	5.12	10.93	-	-	-	0.58	4.80	0.00	26.54
Transport equipment	0.00	-	0.20	4.53	-	-	-	0.00	4.32	0.13	9.18
Machinery	0.05	-	0.90	9.09	-	-	-	0.01	8.37	0.09	18.52
Mining and quarrying	0.07	-	6.58	3.66	-	-	-	0.06	6.74	-	17.11
Food and tobacco	3.07	-	0.74	20.29	-	-	-	1.34	7.63	0.58	33.65
Paper, pulp and printing	1.70	-	0.78	12.05	-	-	-	33.03	10.82	0.53	58.91
Wood and wood products	-	-	1.16	1.49	-	-	-	1.24	1.86	0.27	6.01
Construction	-	-	9.91	0.81	-	-	-	0.15	5.69	0.00	16.56
Textile and leather	0.06	-	-	1.13	-	-	-	-	1.61	0.15	2.96
Non-specified	2.43	-	7.16	19.52	-	-	0.01	0.74	19.43	0.25	49.56
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>681.56</b>	<b>21.06</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>40.37</b>	<b>1.69</b>	<b>-</b>	<b>744.68</b>
Domestic aviation	-	-	61.01	-	-	-	-	-	-	-	61.01
Road	-	-	595.60	1.07	-	-	-	40.02	0.44	-	637.12
Rail	-	-	14.17	-	-	-	-	0.28	0.73	-	15.17
Pipeline transport	-	-	0.03	19.99	-	-	-	-	0.52	-	20.54
Domestic navigation	-	-	10.64	-	-	-	-	0.07	-	-	10.71
Non-specified	-	-	0.12	-	-	-	-	-	0.00	-	0.12
<b>OTHER</b>	<b>0.55</b>	<b>-</b>	<b>64.68</b>	<b>203.36</b>	<b>-</b>	<b>-</b>	<b>2.56</b>	<b>23.18</b>	<b>296.48</b>	<b>1.46</b>	<b>592.27</b>
Residential	0.01	-	22.78	116.59	-	-	0.67	19.92	141.58	-	301.55
Comm. and public services	0.54	-	19.19	84.47	-	-	1.81	2.10	129.98	1.44	239.52
Agriculture/forestry	-	-	22.45	2.31	-	-	-	1.16	5.37	0.00	31.30
Fishing	0.00	-	0.26	0.00	-	-	-	-	0.01	-	0.27
Non-specified	-	-	-	-	-	-	0.08	-	19.54	0.02	19.63
<b>NON-ENERGY USE</b>	<b>0.13</b>	<b>3.00</b>	<b>140.48</b>	<b>22.57</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>166.18</b>
in industry/transf./energy	0.05	3.00	130.30	22.57	-	-	-	-	-	-	155.91
of which: chem./petrochem.	-	3.00	88.32	22.57	-	-	-	-	-	-	113.89
in transport	-	-	4.33	-	-	-	-	-	-	-	4.33
in other	0.09	-	5.85	-	-	-	-	-	-	-	5.93
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>1480.99</b>	<b>-</b>	<b>79.84</b>	<b>1684.19</b>	<b>951.63</b>	<b>710.74</b>	<b>359.78</b>	<b>99.42</b>	<b>-</b>	<b>-</b>	<b>5366.58</b>
Electricity plants	1449.47	-	66.43	1425.38	951.63	710.74	355.88	54.82	-	-	5014.35
CHP plants	31.52	-	13.41	258.81	-	-	3.91	44.59	-	-	352.24
<b>Heat generated - PJ</b>	<b>30.96</b>	<b>-</b>	<b>31.62</b>	<b>407.56</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>63.42</b>	<b>-</b>	<b>-</b>	<b>533.56</b>
CHP plants	30.95	-	31.62	407.56	-	-	-	59.12	-	-	529.25
Heat plants	0.02	-	-	-	-	-	-	4.30	-	-	4.31

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## OECD Americas

## Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./ Solar/ etc.	Biofuels/ Waste	Electricity	Heat	Total
Production	411.14	940.97	-	813.12	247.30	64.39	48.74	132.54	-	-	2658.20
Imports	22.27	499.95	141.94	135.79	-	-	-	3.17	6.68	-	809.81
Exports	-76.38	-323.92	-244.47	-144.10	-	-	-	-4.52	-7.34	-	-800.73
Intl. marine bunkers	-	-	-21.63	-	-	-	-	-	-	-	-21.63
Intl. aviation bunkers	-	-	-30.80	-	-	-	-	-	-	-	-30.80
Stock changes	9.46	14.94	4.21	4.86	-	-	-	0.12	-	-	33.59
<b>TPES</b>	<b>366.49</b>	<b>1131.93</b>	<b>-150.75</b>	<b>809.68</b>	<b>247.30</b>	<b>64.39</b>	<b>48.74</b>	<b>131.32</b>	<b>-0.66</b>	<b>-</b>	<b>2648.44</b>
Electricity and Heat Output											
Elec. generated - TWh	1437.79	-	79.20	1578.87	949.12	748.91	413.64	99.59	-	-	5307.12
Heat generated - PJ	38.79	-	20.95	385.46	-	-	-	64.51	-	-	509.71

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	1707.0	1913.4	2132.5	2280.2	2357.6	2696.2	2584.4	2658.2
Net imports (Mtoe)	270.4	249.4	219.7	424.1	371.7	90.7	104.4	9.1
Total primary energy supply (Mtoe)	1950.5	2101.4	2264.0	2703.3	2689.3	2688.8	2669.7	2648.4
Net oil imports (Mtoe)	298.1	304.3	295.0	445.0	397.3	123.9	133.5	73.5
Oil supply (Mtoe)	934.3	955.0	920.6	1058.1	1012.2	999.7	990.1	981.2
Electricity consumption (TWh) <sup>1</sup>	2087.7	2625.3	3487.5	4596.7	4960.4	5013.0	5042.9	4979.7
GDP (billion 2010 USD)	6495.2	7900.4	10797.2	15115.5	17854.2	19963.2	20275.3	20745.3
GDP PPP (billion 2010 USD)	6641.0	8148.5	11087.0	15559.3	18379.1	20585.1	20917.8	21397.3
Population (millions)	301.59	333.81	378.12	429.38	475.16	496.06	500.21	504.45
Industrial production index (2010=100)	..	..	..	..	..	..	..	-
Total self-sufficiency <sup>2</sup>	0.88	0.91	0.94	0.84	0.88	1.00	0.97	1.00
Coal self-sufficiency <sup>2</sup>	1.06	1.18	1.19	1.00	1.06	1.14	1.02	1.12
Oil self-sufficiency <sup>2</sup>	0.71	0.73	0.74	0.63	0.66	0.94	0.92	0.96
Natural gas self-sufficiency <sup>2</sup>	1.02	1.00	1.03	0.95	0.97	1.01	0.98	1.00
TPES/GDP (toe per thousand 2010 USD)	0.30	0.27	0.21	0.18	0.15	0.13	0.13	0.13
TPES/GDP PPP (toe per thousand 2010 USD)	0.29	0.26	0.20	0.17	0.15	0.13	0.13	0.12
TPES/population (toe per capita)	6.47	6.30	5.99	6.30	5.66	5.42	5.34	5.25
Net oil imports/GDP (toe per thousand 2010 USD)	0.05	0.04	0.03	0.03	0.02	0.01	0.01	0.00
Oil supply/GDP (toe per thousand 2010 USD)	0.14	0.12	0.09	0.07	0.06	0.05	0.05	0.05
Oil supply/population (toe per capita)	3.10	2.86	2.43	2.46	2.13	2.02	1.98	1.95
Share of renewables in TPES	0.05	0.06	0.07	0.06	0.07	0.08	0.09	0.09
Share of renewables in electricity generation	0.21	0.20	0.19	0.16	0.17	0.20	0.22	0.24
TFC/GDP (toe per thousand 2010 USD)	0.23	0.20	0.14	0.12	0.10	0.09	0.09	..
TFC/GDP PPP (toe per thousand 2010 USD)	0.23	0.19	0.14	0.12	0.10	0.09	0.09	..
TFC/population (toe per capita)	4.95	4.61	4.10	4.32	3.88	3.72	3.71	..
Elect. cons./GDP (kWh per 2010 USD)	0.32	0.33	0.32	0.30	0.28	0.25	0.25	0.24
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	0.31	0.32	0.32	0.30	0.27	0.24	0.24	0.23
Elect. cons./population (kWh per capita)	6922	7865	9223	10705	10440	10106	10082	9872
Industry cons. <sup>3</sup> /industrial production (2010=100)	..	..	..	..	..	..	..	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	..	..	..	..	..	..	..	..

1. Electricity consumption equals domestic supply less losses.

2. Production divided by TPES. Coal self-sufficiency also includes peat, when applicable.

3. Includes non-energy use.

### OECD Asia Oceania

Figure 1. Energy production

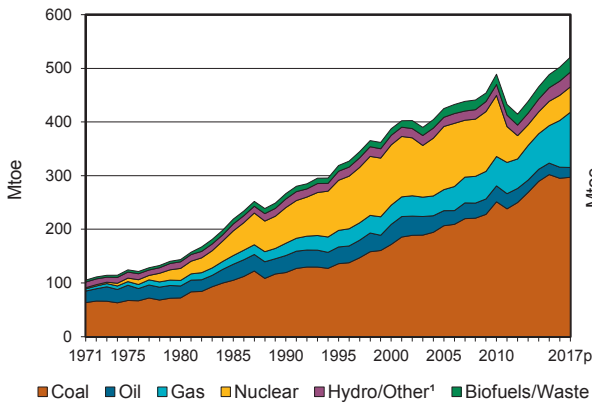


Figure 2. Total primary energy supply<sup>2</sup>

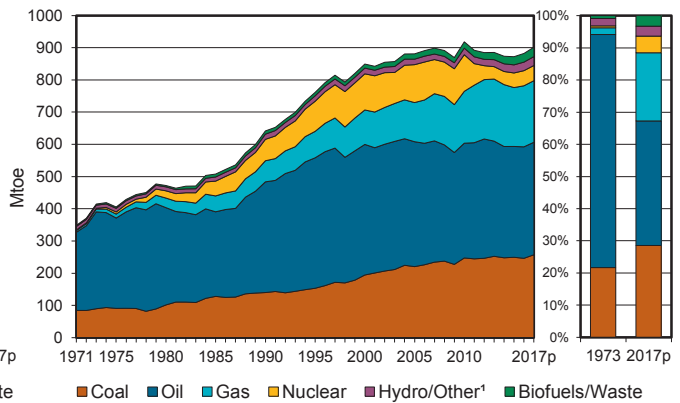


Figure 3. Energy self-sufficiency

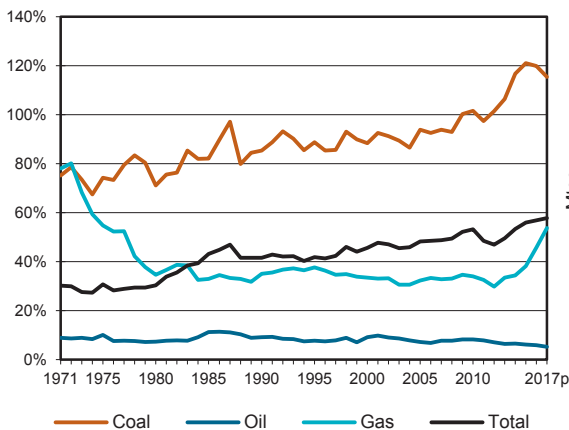


Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>

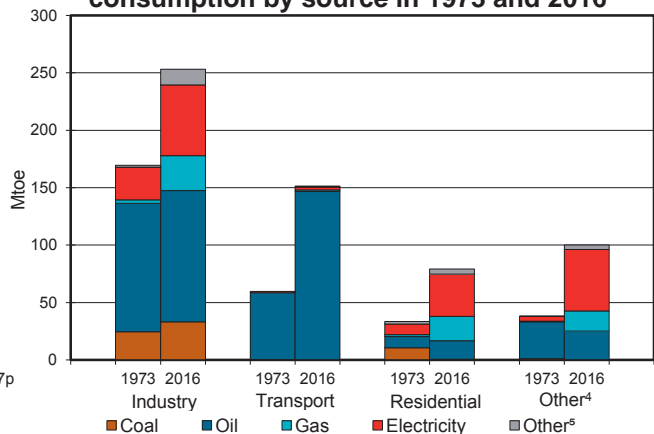


Figure 5. Electricity generation by source

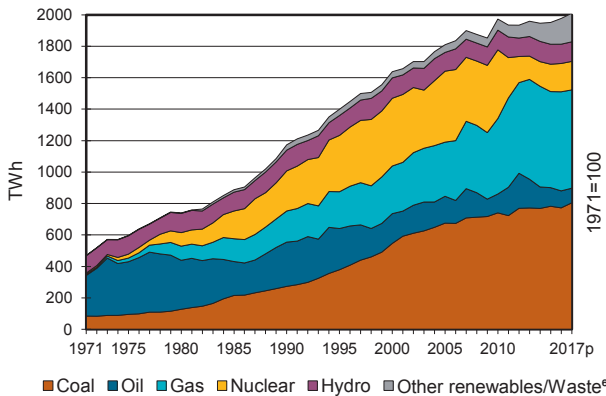
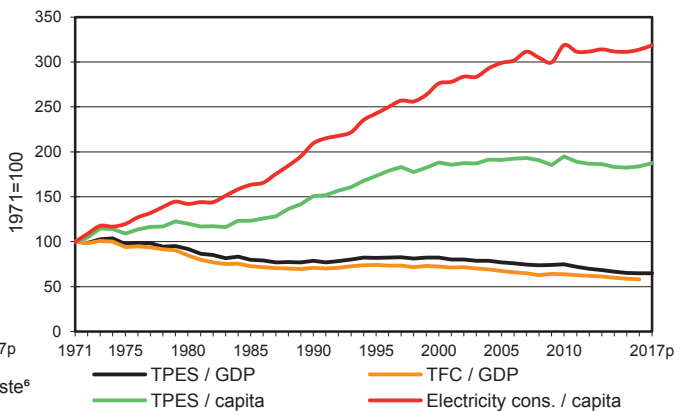


Figure 6. Selected indicators



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.



## OECD Asia Oceania

2016

Million tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal <sup>1</sup>	Crude oil <sup>2</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./ Solar/ etc.	Biofuels/ Waste	Electricity	Heat	Total
Production	295.13	20.65	-	86.91	46.91	10.54	15.92	25.95	-	0.05	502.06
Imports	201.47	348.47	113.20	144.24	-	-	-	0.95	-	-	808.33
Exports	-253.59	-13.79	-89.94	-43.09	-	-	-	-	-0.48	-	-400.90
Intl. marine bunkers	-	-	-16.18	-	-	-	-	-	-	-	-16.18
Intl. aviation bunkers	-	-	-17.56	-	-	-	-	-	-	-	-17.56
Stock changes	3.24	0.93	0.24	1.58	-	-	-	-	-	-	5.99
<b>TPES</b>	<b>246.25</b>	<b>356.26</b>	<b>-10.25</b>	<b>189.64</b>	<b>46.91</b>	<b>10.54</b>	<b>15.92</b>	<b>26.89</b>	<b>-0.48</b>	<b>0.05</b>	<b>881.73</b>
Transfers	-	-5.34	8.77	-	-	-	-	-	-	-	3.44
Statistical differences	1.34	1.26	-2.83	10.27	-	-	0.00	0.18	1.95	-0.35	11.82
Electricity plants	-165.13	-2.40	-19.05	-106.26	-46.91	-10.54	-14.29	-9.22	163.62	-0.07	-210.26
CHP plants	-8.26	-	-1.67	-8.52	-	-	-0.08	-1.01	6.37	4.75	-8.42
Heat plants	-	-	-0.18	-0.38	-	-	-	-0.54	-0.09	1.05	-0.13
Blast furnaces	-27.73	-	-	-	-	-	-	-	-	-	-27.73
Gas works	0.00	-	-1.34	1.51	-	-	-	-0.00	-	-	0.16
Coke/pat. fuel/BKB/PB plants	-5.47	-	-0.51	-	-	-	-	-0.12	-	-	-6.09
Oil refineries	-	-365.10	363.42	-	-	-	-	-	-	-	-1.68
Petrochemical plants	-	15.42	-15.31	-	-	-	-	-	-	-	0.12
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	0.13	-	-0.12	-	-	-	-0.02	-	-	-0.00
Energy industry own use	-7.12	-0.11	-19.17	-15.13	-	-	-	-0.10	-10.20	-0.10	-51.93
Losses	-0.01	-	-	-0.01	-	-	-	-	-7.16	-0.06	-7.24
<b>TFC</b>	<b>33.88</b>	<b>0.13</b>	<b>301.88</b>	<b>71.00</b>	<b>-</b>	<b>-</b>	<b>1.54</b>	<b>16.07</b>	<b>154.01</b>	<b>5.27</b>	<b>583.79</b>
<b>INDUSTRY</b>	<b>32.18</b>	<b>0.03</b>	<b>24.14</b>	<b>28.26</b>	<b>-</b>	<b>-</b>	<b>0.11</b>	<b>10.69</b>	<b>61.59</b>	<b>2.80</b>	<b>159.80</b>
Iron and steel	16.23	-	1.56	4.24	-	-	-	0.04	10.88	0.00	32.95
Chemical and petrochemical	4.13	0.02	7.09	5.47	-	-	-	0.57	9.37	1.80	28.44
Non-ferrous metals	1.46	-	0.79	3.43	-	-	-	0.08	5.28	0.00	11.04
Non-metallic minerals	6.45	-	2.85	2.55	-	-	-	1.38	3.08	0.00	16.30
Transport equipment	0.07	-	0.45	1.25	-	-	-	0.00	4.52	0.01	6.30
Machinery	0.00	-	0.76	2.34	-	-	-	0.00	11.85	0.00	14.95
Mining and quarrying	0.10	-	2.58	0.23	-	-	-	0.00	2.07	-	4.98
Food and tobacco	0.59	0.00	1.58	3.46	-	-	-	2.27	4.22	0.11	12.24
Paper, pulp and printing	1.83	-	0.81	1.18	-	-	0.11	3.65	4.03	0.24	11.85
Wood and wood products	0.02	-	0.10	0.23	-	-	-	1.81	0.75	0.01	2.92
Construction	-	-	2.78	0.15	-	-	-	0.03	0.62	-	3.57
Textile and leather	0.07	0.01	0.39	0.61	-	-	-	0.09	1.51	0.40	3.08
Non-specified	1.23	-	2.41	3.14	-	-	0.00	0.76	3.41	0.22	11.18
<b>TRANSPORT</b>	<b>0.00</b>	<b>-</b>	<b>145.27</b>	<b>1.55</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1.05</b>	<b>2.29</b>	<b>-</b>	<b>150.16</b>
Domestic aviation	-	-	8.07	-	-	-	-	-	-	-	8.07
Road	-	-	131.23	1.36	-	-	-	1.05	-	-	133.63
Rail	0.00	-	1.40	-	-	-	-	-	2.04	-	3.44
Pipeline transport	-	-	0.02	0.18	-	-	-	-	0.02	-	0.22
Domestic navigation	-	-	4.36	-	-	-	-	-	-	-	4.36
Non-specified	-	-	0.19	0.01	-	-	-	-	0.23	-	0.43
<b>OTHER</b>	<b>0.71</b>	<b>-</b>	<b>40.74</b>	<b>38.94</b>	<b>-</b>	<b>-</b>	<b>1.43</b>	<b>4.33</b>	<b>90.13</b>	<b>2.47</b>	<b>178.75</b>
Residential	0.57	-	16.16	21.34	-	-	1.01	1.52	36.78	1.72	79.09
Comm. and public services	0.11	-	14.84	17.42	-	-	0.31	1.67	50.84	0.75	85.93
Agriculture/forestry	0.03	-	6.10	0.09	-	-	0.12	0.06	2.03	-	8.43
Fishing	-	-	2.36	0.00	-	-	-	-	0.22	-	2.58
Non-specified	0.00	-	1.28	0.09	-	-	-	1.08	0.28	-	2.73
<b>NON-ENERGY USE</b>	<b>1.00</b>	<b>0.10</b>	<b>91.73</b>	<b>2.24</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>95.07</b>
in industry/transf./energy	1.00	0.10	89.93	2.24	-	-	-	-	-	-	93.27
of which: chem./petrochem.	1.00	0.10	83.00	2.24	-	-	-	-	-	-	86.33
in transport	-	-	1.35	-	-	-	-	-	-	-	1.35
in other	-	-	0.45	-	-	-	-	-	-	-	0.45
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>772.51</b>	<b>11.72</b>	<b>96.40</b>	<b>630.09</b>	<b>180.06</b>	<b>122.55</b>	<b>119.10</b>	<b>44.38</b>	<b>-</b>	<b>0.14</b>	<b>1976.94</b>
Electricity plants	748.89	11.72	92.02	587.65	180.06	122.55	118.97	40.86	-	0.14	1902.86
CHP plants	23.61	-	4.38	42.44	-	-	0.13	3.52	-	-	74.08
<b>Heat generated - PJ</b>	<b>90.07</b>	<b>-</b>	<b>37.87</b>	<b>80.54</b>	<b>-</b>	<b>-</b>	<b>6.43</b>	<b>24.28</b>	<b>3.61</b>	<b>2.16</b>	<b>244.95</b>
CHP plants	90.07	-	36.61	65.04	-	-	1.41	5.61	-	2.16	200.89
Heat plants	-	-	1.26	15.51	-	-	5.01	18.67	3.61	-	44.06

1. Includes oil shale.

2. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## OECD Asia Oceania

## Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal <sup>1</sup>	Crude oil <sup>2</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./ Solar/ etc.	Biofuels/ Waste	Electricity	Heat	Total
Production	296.94	18.27	-	102.73	47.25	10.70	16.89	27.82	-	0.05	520.65
Imports	209.74	350.26	116.66	146.95	-	-	-	1.14	-	-	824.76
Exports	-246.55	-12.51	-91.75	-58.01	-	-	-	-	-0.48	-	-409.29
Intl. marine bunkers	-	-	-15.81	-	-	-	-	-	-	-	-15.81
Intl. aviation bunkers	-	-	-18.22	-	-	-	-	-	-	-	-18.22
Stock changes	-2.90	2.43	-0.05	-0.53	-	-	-	-	-	-	-1.04
<b>TPES</b>	<b>257.23</b>	<b>358.45</b>	<b>-9.16</b>	<b>191.15</b>	<b>47.25</b>	<b>10.70</b>	<b>16.89</b>	<b>28.96</b>	<b>-0.48</b>	<b>0.05</b>	<b>901.05</b>
Electricity and Heat Output											
Elec. generated - TWh	804.50	7.66	85.18	625.20	181.34	124.44	134.30	46.71	-	0.14	2009.47
Heat generated - PJ	85.09	-	35.90	81.44	-	-	6.44	24.22	3.61	2.06	238.76

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes oil shale.
2. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	114.3	143.6	266.6	387.4	489.0	488.3	502.1	520.7
Net imports (Mtoe)	328.9	345.7	396.5	489.0	467.6	417.2	407.4	415.5
Total primary energy supply (Mtoe)	414.6	472.2	641.6	849.1	918.0	871.6	881.7	901.1
Net oil imports (Mtoe)	302.5	303.0	331.5	399.8	357.5	354.0	357.9	362.7
Oil supply (Mtoe)	300.7	302.1	343.7	405.3	356.2	344.1	346.0	349.3
Electricity consumption (TWh) <sup>1</sup>	536.9	704.2	1125.4	1572.2	1892.6	1877.3	1898.3	1933.0
GDP (billion 2010 USD)	3008.5	3799.1	5919.9	7299.1	8472.1	9206.5	9346.1	9539.4
GDP PPP (billion 2010 USD)	2405.0	3060.5	4854.8	6142.7	7285.7	7964.3	8096.7	8272.3
Population (millions)	162.87	177.01	191.80	203.28	211.92	215.26	215.99	216.62
Industrial production index (2010=100)	..	..	..	..	..	..	..	-
Total self-sufficiency <sup>2</sup>	0.28	0.30	0.42	0.46	0.53	0.56	0.57	0.58
Coal self-sufficiency <sup>2</sup>	0.74	0.71	0.85	0.88	1.02	1.21	1.20	1.15
Oil self-sufficiency <sup>2</sup>	0.09	0.07	0.09	0.09	0.08	0.06	0.06	0.05
Natural gas self-sufficiency <sup>2</sup>	0.68	0.35	0.35	0.34	0.34	0.38	0.46	0.54
TPES/GDP (toe per thousand 2010 USD)	0.14	0.12	0.11	0.12	0.11	0.09	0.09	0.09
TPES/GDP PPP (toe per thousand 2010 USD)	0.17	0.15	0.13	0.14	0.13	0.11	0.11	0.11
TPES/population (toe per capita)	2.55	2.67	3.35	4.18	4.33	4.05	4.08	4.16
Net oil imports/GDP (toe per thousand 2010 USD)	0.10	0.08	0.06	0.05	0.04	0.04	0.04	0.04
Oil supply/GDP (toe per thousand 2010 USD)	0.10	0.08	0.06	0.06	0.04	0.04	0.04	0.04
Oil supply/population (toe per capita)	1.85	1.71	1.79	1.99	1.68	1.60	1.60	1.61
Share of renewables in TPES	0.03	0.04	0.04	0.03	0.04	0.05	0.05	0.05
Share of renewables in electricity generation	0.17	0.17	0.12	0.09	0.09	0.12	0.12	0.13
TFC/GDP (toe per thousand 2010 USD)	0.10	0.09	0.07	0.08	0.07	0.06	0.06	..
TFC/GDP PPP (toe per thousand 2010 USD)	0.13	0.11	0.09	0.09	0.08	0.07	0.07	..
TFC/population (toe per capita)	1.85	1.82	2.22	2.72	2.72	2.70	2.70	..
Elect. cons./GDP (kWh per 2010 USD)	0.18	0.19	0.19	0.22	0.22	0.20	0.20	0.20
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	0.22	0.23	0.23	0.26	0.26	0.24	0.23	0.23
Elect. cons./population (kWh per capita)	3296	3978	5867	7734	8931	8722	8789	8924
Industry cons. <sup>3</sup> /industrial production (2010=100)	..	..	..	..	..	..	..	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	..	..	..	..	..	..	..	..

1. Electricity consumption equals domestic supply less losses.
2. Production divided by TPES. Coal self-sufficiency also includes peat, when applicable.
3. Includes non-energy use.

## OECD Europe

Figure 1. Energy production

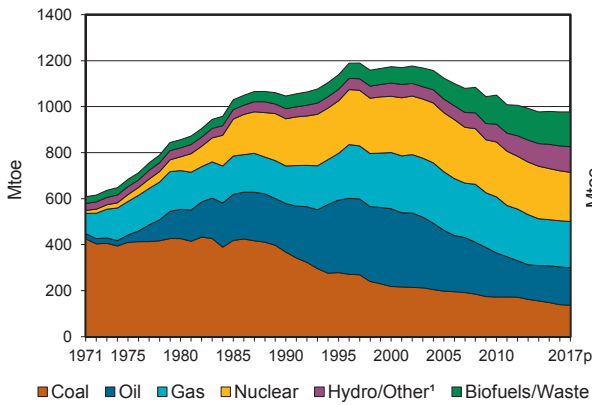


Figure 2. Total primary energy supply<sup>2</sup>

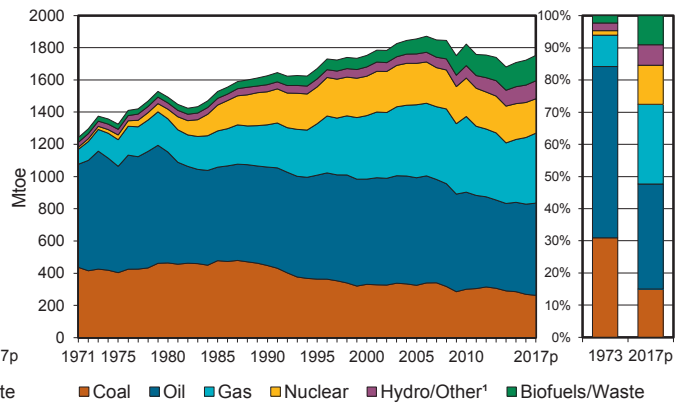


Figure 3. Energy self-sufficiency

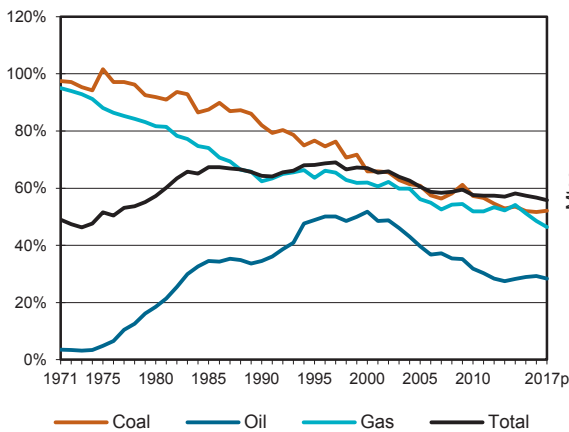


Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>

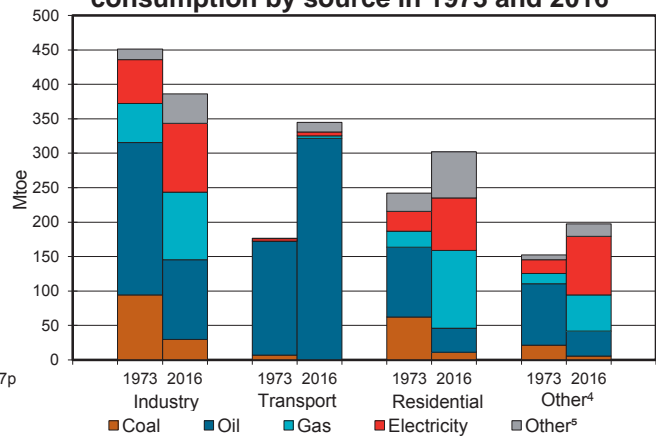


Figure 5. Electricity generation by source

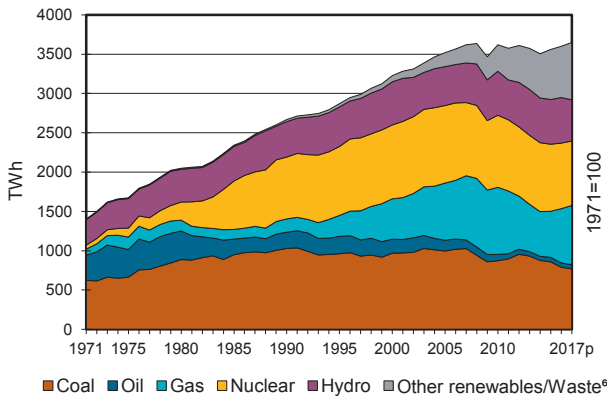
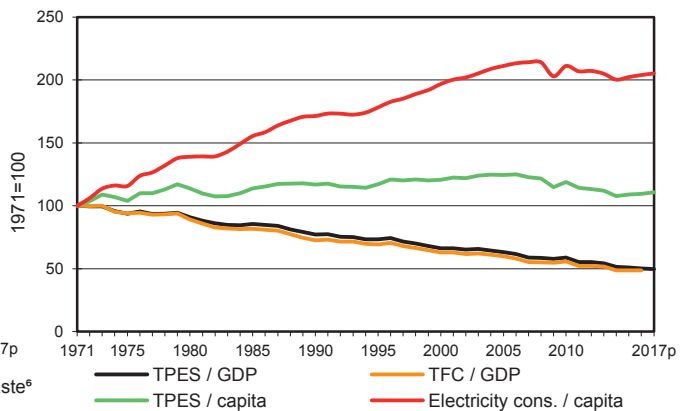


Figure 6. Selected indicators



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.

## OECD Europe

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal <sup>1</sup>	Crude oil <sup>2</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./ Solar/ etc.	Biofuels/ Waste	Electricity	Heat	Total
Production	138.95	164.21	-	200.65	217.37	49.80	57.65	147.79	-	0.67	977.08
Imports	156.93	595.69	378.75	391.56	-	-	-	16.72	33.93	0.01	1573.59
Exports	-38.98	-122.68	-363.75	-184.57	-	-	-	-9.85	-33.36	-0.01	-753.19
Intl. marine bunkers	-	-	-42.74	-0.05	-	-	-	-	-	-	-42.79
Intl. aviation bunkers	-	-	-52.01	-	-	-	-	-	-	-	-52.01
Stock changes	11.76	1.87	0.75	6.17	-	-	-	0.14	-	-	20.69
<b>TPES</b>	<b>268.66</b>	<b>639.09</b>	<b>-78.99</b>	<b>413.76</b>	<b>217.37</b>	<b>49.80</b>	<b>57.65</b>	<b>154.79</b>	<b>0.57</b>	<b>0.67</b>	<b>1723.37</b>
Transfers	-	4.86	-1.47	-	-	-	-	-	-	-	3.39
Statistical differences	-1.61	-0.01	-0.81	3.33	-	-	0.09	0.12	-0.17	-0.07	0.86
Electricity plants	-124.45	-	-6.43	-64.70	-210.29	-49.80	-48.04	-23.04	249.57	-0.34	-277.52
CHP plants	-59.91	-	-7.54	-52.94	-7.07	-	-2.48	-35.24	59.93	39.81	-65.45
Heat plants	-3.84	-	-0.90	-7.97	-	-	-1.53	-6.92	-0.38	17.56	-3.99
Blast furnaces	-19.53	-	-0.05	-0.01	-	-	-	-	-	-	-19.59
Gas works	-0.27	-	-0.18	0.33	-	-	-	-0.25	-	-	-0.38
Coke/pat. fuel/BKB/PB plants	-2.97	-	-0.43	-0.03	-	-	-	-	-	-	-3.43
Oil refineries	-	-660.28	652.59	-	-	-	-	-	-	-	-7.69
Petrochemical plants	-	16.64	-16.86	-	-	-	-	-	-	-	-0.22
Liquefaction plants	-1.15	0.68	-	-	-	-	-	-	-	-	-0.47
Other transformation	-0.16	1.70	-0.00	-1.83	-	-	-	-0.13	-	-0.68	-1.11
Energy industry own use	-6.76	-	-32.99	-21.08	-	-	-0.00	-0.77	-22.44	-4.43	-88.46
Losses	-1.32	-	-0.05	-1.67	-	-	-0.01	-0.02	-20.70	-5.09	-28.86
<b>TFC</b>	<b>46.66</b>	<b>2.68</b>	<b>505.90</b>	<b>267.19</b>	<b>-</b>	<b>-</b>	<b>5.67</b>	<b>88.53</b>	<b>266.38</b>	<b>47.43</b>	<b>1230.45</b>
<b>INDUSTRY</b>	<b>27.91</b>	<b>-</b>	<b>28.11</b>	<b>85.25</b>	<b>-</b>	<b>-</b>	<b>0.35</b>	<b>25.99</b>	<b>99.70</b>	<b>16.42</b>	<b>283.73</b>
Iron and steel	11.37	-	0.65	8.56	-	-	-	0.02	11.95	0.50	33.05
Chemical and petrochemical	3.71	-	7.94	18.46	-	-	0.00	1.15	16.51	6.36	54.13
Non-ferrous metals	0.50	-	0.32	3.89	-	-	0.00	0.01	8.63	0.13	13.50
Non-metallic minerals	7.28	-	6.04	13.74	-	-	0.00	4.21	6.86	0.23	38.37
Transport equipment	0.28	-	0.43	2.78	-	-	0.00	0.02	4.57	0.59	8.67
Machinery	0.13	-	1.15	6.82	-	-	0.00	0.16	10.81	0.57	19.63
Mining and quarrying	0.22	-	1.15	0.66	-	-	0.00	0.07	1.64	0.12	3.86
Food and tobacco	1.96	-	2.06	14.54	-	-	0.00	1.09	10.79	1.26	31.70
Paper, pulp and printing	1.24	-	0.77	6.90	-	-	0.00	13.05	10.61	2.30	34.87
Wood and wood products	0.05	-	0.22	0.75	-	-	-	4.88	2.30	0.45	8.66
Construction	0.03	-	3.44	2.14	-	-	0.00	0.18	2.06	0.05	7.89
Textile and leather	0.75	-	0.26	2.88	-	-	0.00	0.02	3.05	0.13	7.09
Non-specified	0.39	-	3.68	3.15	-	-	0.34	1.14	9.92	3.72	22.34
<b>TRANSPORT</b>	<b>0.01</b>	<b>-</b>	<b>319.69</b>	<b>3.49</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>13.99</b>	<b>5.79</b>	<b>-</b>	<b>342.97</b>
Domestic aviation	-	-	7.62	-	-	-	-	-	-	-	7.62
Road	-	-	304.30	1.75	-	-	-	13.95	0.14	-	320.14
Rail	0.01	-	1.87	-	-	-	-	0.03	4.70	-	6.61
Pipeline transport	-	-	0.00	1.60	-	-	-	-	0.17	-	1.78
Domestic navigation	-	-	5.40	0.10	-	-	-	0.00	-	-	5.50
Non-specified	-	-	0.51	0.03	-	-	-	0.01	0.78	-	1.33
<b>OTHER</b>	<b>16.95</b>	<b>-</b>	<b>70.35</b>	<b>165.63</b>	<b>-</b>	<b>-</b>	<b>5.33</b>	<b>48.54</b>	<b>160.89</b>	<b>31.01</b>	<b>498.69</b>
Residential	11.29	-	34.87	112.94	-	-	3.99	41.71	76.02	21.12	301.95
Comm. and public services	4.56	-	17.09	48.40	-	-	0.55	4.85	79.57	9.47	164.49
Agriculture/forestry	1.06	-	14.84	3.38	-	-	0.73	1.97	4.91	0.23	27.12
Fishing	-	-	1.51	0.04	-	-	0.05	0.01	0.18	0.04	1.82
Non-specified	0.04	-	2.03	0.87	-	-	-	0.01	0.21	0.16	3.32
<b>NON-ENERGY USE</b>	<b>1.79</b>	<b>2.68</b>	<b>87.76</b>	<b>12.82</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>105.05</b>
in industry/transf./energy	1.70	2.68	85.16	12.82	-	-	-	-	-	-	102.36
of which: chem./petrochem.	0.73	2.68	59.95	12.82	-	-	-	-	-	-	76.19
in transport	-	-	1.99	-	-	-	-	-	-	-	1.99
in other	0.10	-	0.60	-	-	-	-	-	-	-	0.70
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>790.26</b>	<b>-</b>	<b>55.01</b>	<b>689.21</b>	<b>833.77</b>	<b>579.18</b>	<b>441.37</b>	<b>209.51</b>	<b>-</b>	<b>1.14</b>	<b>3599.44</b>
Electricity plants	557.34	-	29.52	403.18	807.08	579.18	435.45	89.63	-	0.55	2901.92
CHP plants	232.93	-	25.49	286.03	26.69	-	5.92	119.88	-	0.59	697.53
<b>Heat generated - PJ</b>	<b>623.28</b>	<b>-</b>	<b>95.97</b>	<b>848.74</b>	<b>5.04</b>	<b>-</b>	<b>80.66</b>	<b>730.82</b>	<b>5.25</b>	<b>40.28</b>	<b>2430.02</b>
CHP plants	492.19	-	65.94	580.78	5.04	-	24.70	498.21	0.48	17.32	1684.65
Heat plants	131.09	-	30.03	267.96	-	-	55.96	232.61	4.77	22.97	745.37

1. Includes peat and oil shale.

2. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## OECD Europe

## Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal <sup>1</sup>	Crude oil <sup>2</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./ Solar/ etc.	Biofuels/ Waste	Electricity	Heat	Total
Production	136.60	162.56	-	201.42	213.92	45.12	65.69	151.12	-	0.64	977.09
Imports	153.84	617.25	383.04	437.12	-	-	-	17.79	34.08	0.01	1643.13
Exports	-30.39	-126.01	-372.99	-202.19	-	-	-	-11.14	-34.78	-0.01	-777.50
Intl. marine bunkers	-	-	-42.20	-	-	-	-	-	-	-	-42.20
Intl. aviation bunkers	-	-	-55.17	-	-	-	-	-	-	-	-55.17
Stock changes	2.31	0.67	5.45	-2.00	-	-	-	0.17	-	-	6.60
<b>TPES</b>	<b>262.35</b>	<b>654.48</b>	<b>-81.88</b>	<b>434.35</b>	<b>213.92</b>	<b>45.12</b>	<b>65.69</b>	<b>157.95</b>	<b>-0.69</b>	<b>0.64</b>	<b>1751.94</b>
Electricity and Heat Output											
Elec. generated - TWh	769.00	-	53.33	752.45	820.46	524.77	514.94	212.02	-	1.10	3648.06
Heat generated - PJ	592.28	-	89.09	858.17	6.06	-	84.40	741.84	5.42	33.69	2410.95

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes peat and oil shale.

2. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	636.3	856.4	1046.4	1173.9	1050.4	979.2	977.1	977.1
Net imports (Mtoe)	801.7	709.3	642.2	663.2	849.1	824.2	820.4	865.6
Total primary energy supply (Mtoe)	1375.5	1494.3	1627.5	1752.6	1823.8	1708.3	1723.4	1751.9
Net oil imports (Mtoe)	776.8	621.2	463.7	401.7	501.2	499.0	488.0	501.3
Oil supply (Mtoe)	732.4	688.5	611.4	653.3	602.5	554.9	560.1	572.6
Electricity consumption (TWh) <sup>1</sup>	1515.9	1930.4	2526.7	3021.3	3423.8	3353.4	3396.5	3431.9
GDP (billion 2010 USD)	8360.3	9911.0	12682.3	15932.9	18441.2	19779.6	20165.6	20690.6
GDP PPP (billion 2010 USD)	8067.3	9588.3	12314.3	15468.9	18128.6	19622.0	20019.6	20582.8
Population (millions)	455.29	474.07	503.04	523.79	553.34	565.54	568.29	570.65
Industrial production index (2010=100)	55.2	62.4	77.2	93.5	100.0	107.1	108.9	113.3
Total self-sufficiency <sup>2</sup>	0.46	0.57	0.64	0.67	0.58	0.57	0.57	0.56
Coal self-sufficiency <sup>2</sup>	0.95	0.92	0.82	0.66	0.57	0.52	0.52	0.52
Oil self-sufficiency <sup>2</sup>	0.03	0.18	0.35	0.52	0.32	0.29	0.29	0.28
Natural gas self-sufficiency <sup>2</sup>	0.93	0.82	0.62	0.62	0.52	0.51	0.48	0.46
TPES/GDP (toe per thousand 2010 USD)	0.16	0.15	0.13	0.11	0.10	0.09	0.09	0.08
TPES/GDP PPP (toe per thousand 2010 USD)	0.17	0.16	0.13	0.11	0.10	0.09	0.09	0.09
TPES/population (toe per capita)	3.02	3.15	3.24	3.35	3.30	3.02	3.03	3.07
Net oil imports/GDP (toe per thousand 2010 USD)	0.09	0.06	0.04	0.03	0.03	0.03	0.02	0.02
Oil supply/GDP (toe per thousand 2010 USD)	0.09	0.07	0.05	0.04	0.03	0.03	0.03	0.03
Oil supply/population (toe per capita)	1.61	1.45	1.22	1.25	1.09	0.98	0.99	1.00
Share of renewables in TPES	0.05	0.05	0.06	0.07	0.11	0.14	0.14	0.14
Share of renewables in electricity generation	0.22	0.21	0.18	0.19	0.24	0.33	0.33	0.33
TFC/GDP (toe per thousand 2010 USD)	0.12	0.11	0.09	0.08	0.07	0.06	0.06	..
TFC/GDP PPP (toe per thousand 2010 USD)	0.13	0.11	0.09	0.08	0.07	0.06	0.06	..
TFC/population (toe per capita)	2.25	2.28	2.25	2.35	2.32	2.13	2.17	..
Elect. cons./GDP (kWh per 2010 USD)	0.18	0.19	0.20	0.19	0.19	0.17	0.17	0.17
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	0.19	0.20	0.21	0.20	0.19	0.17	0.17	0.17
Elect. cons./population (kWh per capita)	3330	4072	5023	5768	6188	5930	5977	6014
Industry cons. <sup>3</sup> /industrial production (2010=100)	202.3	176.2	136.0	115.2	100.0	88.5	87.7	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	299.8	228.2	138.3	119.9	100.0	81.1	79.7	..

OECD Europe excludes Estonia, Latvia, Slovenia prior to 1990. Please refer to section 'Geographical coverage'.

1. Electricity consumption equals domestic supply less losses.

2. Production divided by TPES. Coal self-sufficiency also includes peat, when applicable.

3. Includes non-energy use.

### Non-OECD Total

Figure 1. Energy production

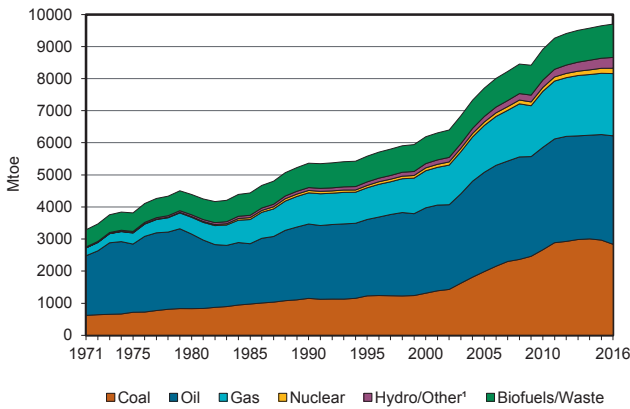


Figure 2. Total primary energy supply<sup>2</sup>

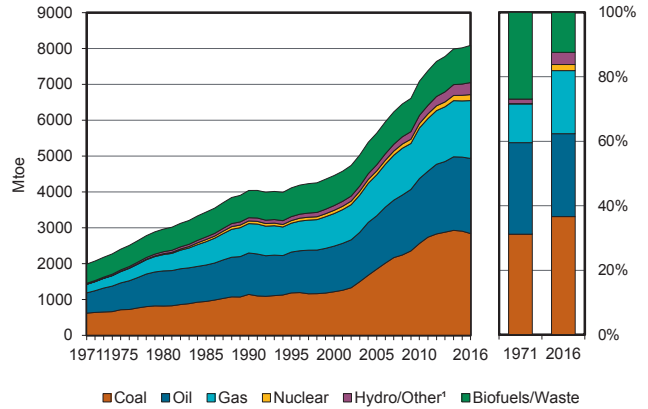


Figure 3. Energy self-sufficiency<sup>3</sup>

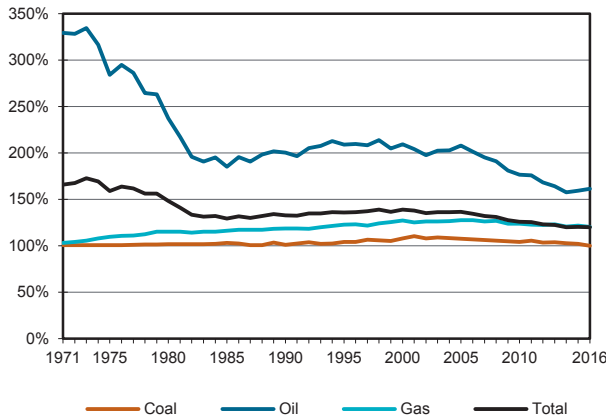


Figure 4. Oil products demand<sup>4</sup>

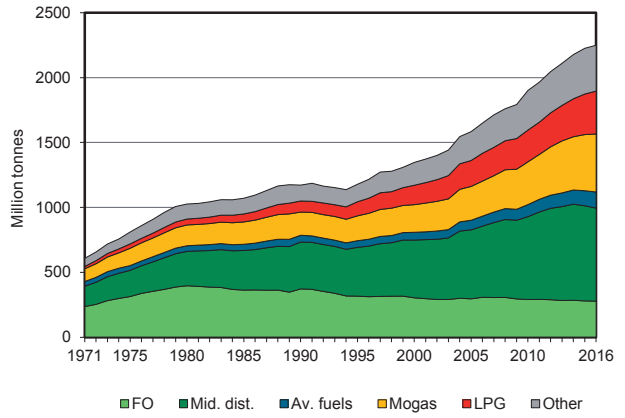


Figure 5. Electricity generation by source

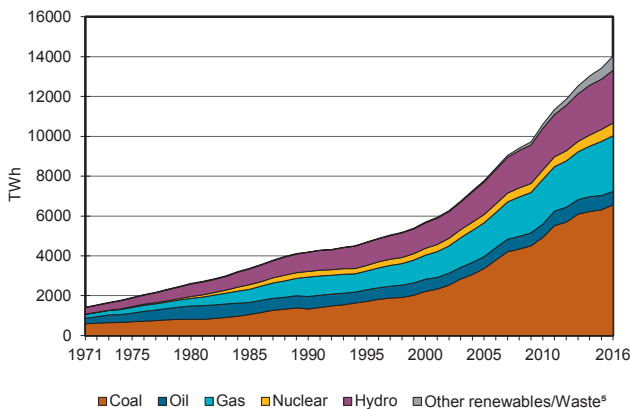
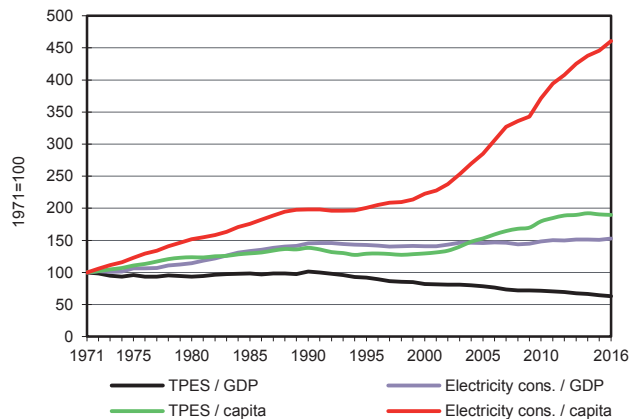


Figure 6. Selected indicators<sup>6</sup>



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.



## Non-OECD Total

2016

Million tonnes of oil equivalent

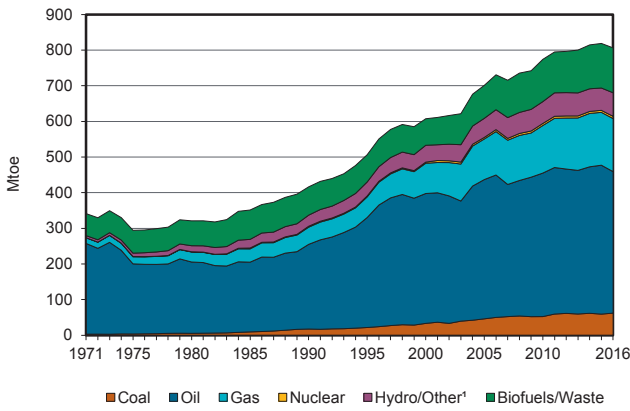
SUPPLY AND CONSUMPTION	Coal <sup>1</sup>	Crude oil <sup>2</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	2836.65	3379.30	-	1940.05	167.41	227.77	108.70	1039.53	-	1.04	9700.45
Imports	414.80	936.81	698.73	253.97	-	-	-	2.09	21.20	-	2327.60
Exports	-486.11	-1933.04	-742.50	-583.09	-	-	-	-5.38	-21.12	-	-3771.23
Intl. marine bunkers	-	-	-135.01	-	-	-	-	-	-	-	-135.01
Intl. aviation bunkers	-	-	-87.18	-	-	-	-	-	-	-	-87.18
Stock changes	72.64	-13.58	-8.03	2.41	-	-	-	0.11	-	-	53.55
<b>TPES</b>	<b>2837.98</b>	<b>2369.49</b>	<b>-274.00</b>	<b>1613.34</b>	<b>167.41</b>	<b>227.77</b>	<b>108.70</b>	<b>1036.36</b>	<b>0.08</b>	<b>1.04</b>	<b>8088.17</b>
Transfers	-1.36	-136.98	151.63	-	-	-	-	-	-	-	13.29
Statistical differences	26.63	13.16	-3.41	-10.90	-	-	-0.00	0.32	-2.49	0.07	23.39
Electricity plants	-1042.64	-38.08	-137.17	-444.18	-166.90	-227.77	-74.83	-70.19	966.96	-0.31	-1235.11
CHP plants	-549.09	-0.01	-6.06	-205.26	-0.52	-	-	-12.81	239.41	182.10	-352.23
Heat plants	-19.55	-0.83	-9.87	-53.36	-	-	-0.02	-5.48	-0.00	83.92	-5.19
Blast furnaces	-155.08	-	-	-	-	-	-	-0.04	-	-	-155.12
Gas works	-11.12	-	-0.32	2.22	-	-	-	-0.01	-	-	-9.23
Coke/pat.fuel/BKB/PB plants	-78.51	-	-1.39	-	-	-	-	-0.00	-	-	-79.90
Oil refineries	-	-2197.89	2147.69	-	-	-	-	-	-	-	-50.20
Petrochemical plants	-	3.77	-3.13	-	-	-	-	-	-	-	0.63
Liquefaction plants	-10.93	14.48	-	-16.47	-	-	-	-	-	-	-12.92
Other transformation	-0.14	1.56	-0.53	-3.67	-	-	-	-90.32	-	-	-93.10
Energy industry own use	-59.75	-11.12	-99.61	-160.45	-	-	-	-12.45	-115.59	-27.92	-486.88
Losses	-3.56	-8.69	-0.43	-16.97	-	-	-0.00	-0.09	-112.33	-15.66	-157.72
<b>TFC</b>	<b>932.91</b>	<b>8.87</b>	<b>1763.41</b>	<b>704.30</b>	<b>-</b>	<b>-</b>	<b>33.84</b>	<b>845.28</b>	<b>976.04</b>	<b>223.24</b>	<b>5487.89</b>
<b>INDUSTRY</b>	<b>745.50</b>	<b>6.62</b>	<b>210.58</b>	<b>273.52</b>	<b>-</b>	<b>-</b>	<b>0.45</b>	<b>124.18</b>	<b>486.08</b>	<b>110.57</b>	<b>1957.50</b>
Iron and steel	260.10	-	4.14	26.97	-	-	-	3.37	68.26	13.00	375.84
Chemical and petrochemical	108.84	0.03	39.39	46.05	-	-	-	0.17	68.03	45.54	308.05
Non-ferrous metals	21.66	-	3.41	4.94	-	-	0.00	0.01	68.09	3.92	102.03
Non-metallic minerals	202.75	0.00	22.04	25.00	-	-	-	2.79	37.60	2.59	292.77
Transport equipment	2.18	-	0.92	4.04	-	-	-	0.00	11.64	3.11	21.90
Machinery	11.46	-	3.26	7.48	-	-	0.00	0.02	48.04	9.00	79.27
Mining and quarrying	7.19	-	11.66	3.43	-	-	-	0.06	17.15	2.03	41.51
Food and tobacco	24.95	0.00	5.81	9.63	-	-	0.00	27.08	22.02	9.26	98.75
Paper pulp and printing	12.10	0.01	1.59	4.01	-	-	-	10.49	13.34	9.10	50.64
Wood and wood products	1.84	-	0.70	0.53	-	-	0.00	0.90	4.19	1.60	9.77
Construction	4.31	-	13.78	5.20	-	-	-	0.02	8.02	0.86	32.20
Textile and leather	11.15	-	2.45	2.60	-	-	0.00	0.16	23.88	8.97	49.22
Non-specified	76.97	6.59	101.42	133.63	-	-	0.44	79.11	95.81	1.58	495.55
<b>TRANSPORT</b>	<b>0.05</b>	<b>0.01</b>	<b>988.22</b>	<b>75.74</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>26.56</b>	<b>20.96</b>	<b>-</b>	<b>1111.56</b>
Domestic aviation	-	-	42.25	-	-	-	-	-	-	-	42.25
Road	-	-	895.86	37.80	-	-	-	26.56	3.80	-	964.01
Rail	0.05	-	11.24	-	-	-	-	0.00	13.59	-	24.89
Pipeline transport	-	0.01	0.32	37.92	-	-	-	-	2.04	-	40.28
Domestic navigation	-	-	29.91	-	-	-	-	0.01	-	-	29.92
Non-specified	0.01	0.01	8.64	0.03	-	-	-	-	1.53	-	10.21
<b>OTHER</b>	<b>134.58</b>	<b>0.02</b>	<b>247.41</b>	<b>223.89</b>	<b>-</b>	<b>-</b>	<b>33.39</b>	<b>694.53</b>	<b>469.00</b>	<b>112.67</b>	<b>1915.49</b>
Residential	60.86	-	135.49	180.38	-	-	25.97	665.45	234.06	76.36	1378.56
Comm. and public services	28.69	-	34.61	37.16	-	-	5.20	19.67	135.13	25.33	285.79
Agriculture/forestry	14.99	0.01	60.80	3.88	-	-	1.23	6.65	40.49	2.98	131.02
Fishing	0.00	-	1.55	0.01	-	-	-	0.01	0.15	0.02	1.75
Non-specified	30.04	0.01	14.96	2.46	-	-	0.99	2.75	59.18	7.99	118.37
<b>NON-ENERGY USE</b>	<b>52.78</b>	<b>2.22</b>	<b>317.20</b>	<b>131.14</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>503.34</b>
in industry/transf./energy	52.63	2.22	290.10	131.14	-	-	-	-	-	-	476.10
of which: chem./petrochem.	1.74	2.17	215.97	129.99	-	-	-	-	-	-	349.87
in transport	-	-	2.09	-	-	-	-	-	-	-	2.09
in other	0.14	-	25.01	-	-	-	-	-	-	-	25.16
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>6550.58</b>	<b>118.46</b>	<b>569.93</b>	<b>2790.41</b>	<b>640.53</b>	<b>2649.00</b>	<b>491.52</b>	<b>217.27</b>	<b>-</b>	<b>2.35</b>	<b>14030.06</b>
Electricity plants	4537.46	118.45	548.36	2097.55	640.53	2649.00	491.52	160.48	-	2.00	11245.35
CHP plants	2013.13	0.01	21.57	692.86	-	-	-	56.79	-	0.35	2784.71
<b>Heat generated - PJ</b>	<b>5308.91</b>	<b>19.06</b>	<b>432.01</b>	<b>4754.83</b>	<b>21.59</b>	<b>-</b>	<b>363.59</b>	<b>235.35</b>	<b>2.53</b>	<b>43.54</b>	<b>11181.39</b>
CHP plants	4587.42	0.15	71.10	2886.33	21.59	-	-	57.70	-	23.89	7648.18
Heat plants	721.49	18.90	360.91	1868.50	-	-	363.59	177.65	2.53	19.65	3533.21

1. Includes peat.

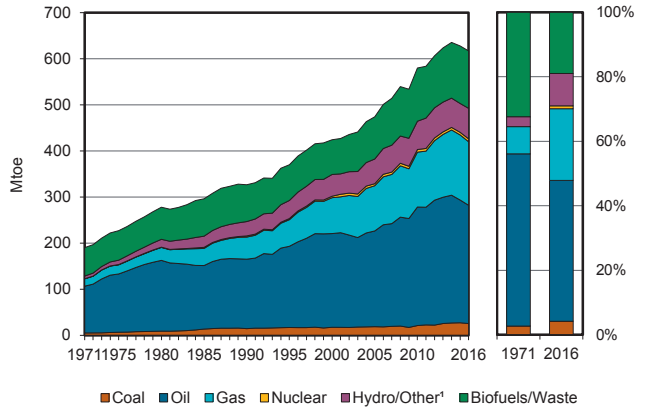
2. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Non-OECD Americas

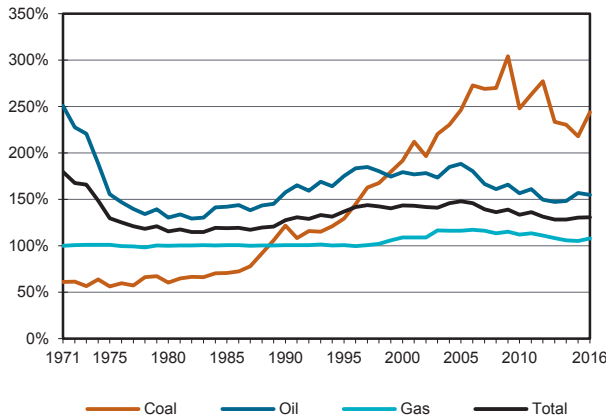
**Figure 1. Energy production**



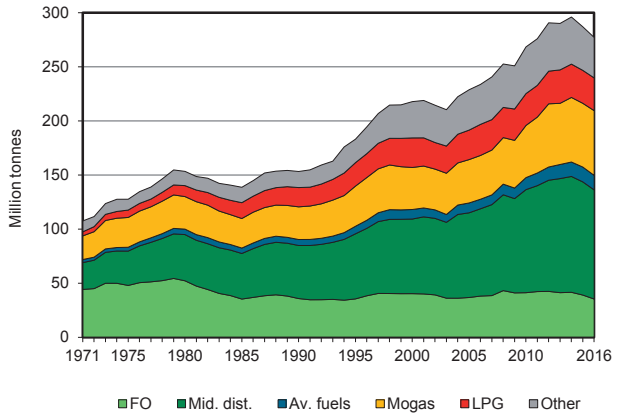
**Figure 2. Total primary energy supply<sup>2</sup>**



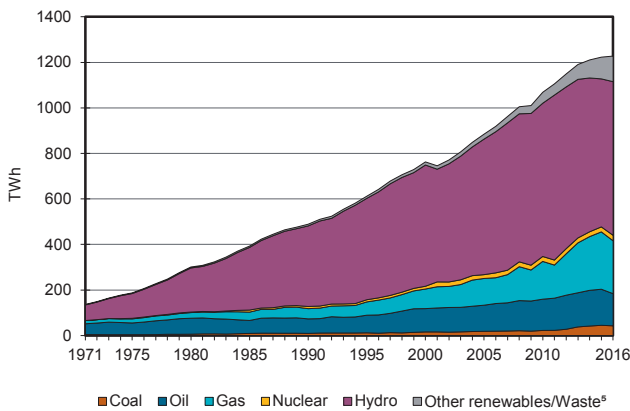
**Figure 3. Energy self-sufficiency<sup>3</sup>**



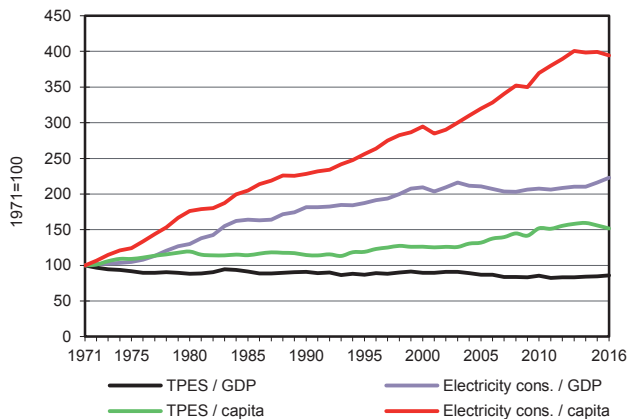
**Figure 4. Oil products demand<sup>4</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>6</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Non-OECD Americas

2016

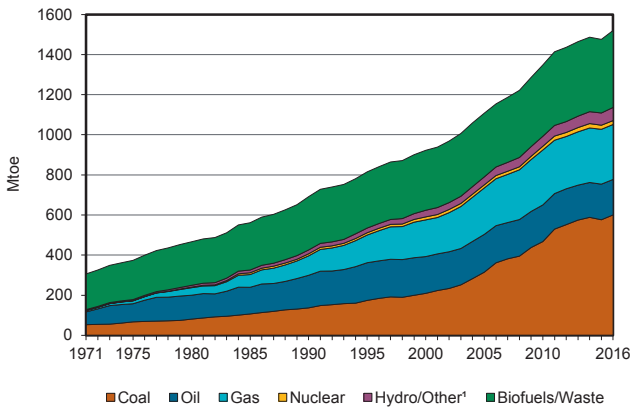
Million tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal <sup>1</sup>	Crude oil <sup>2</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	62.21	396.87	-	148.81	6.29	58.03	8.12	125.86	-	0.08	806.26
Imports	17.83	36.49	89.99	20.86	-	-	-	0.81	4.73	-	170.72
Exports	-55.59	-196.15	-49.23	-31.79	-	-	-	-2.46	-4.56	-	-339.78
Intl. marine bunkers	-	-	-13.26	-	-	-	-	-	-	-	-13.26
Intl. aviation bunkers	-	-	-9.77	-	-	-	-	-	-	-	-9.77
Stock changes	1.06	2.81	-1.17	-0.01	-	-	-	0.19	-	-	2.89
<b>TPES</b>	<b>25.52</b>	<b>240.02</b>	<b>16.56</b>	<b>137.88</b>	<b>6.29</b>	<b>58.03</b>	<b>8.12</b>	<b>124.40</b>	<b>0.17</b>	<b>0.08</b>	<b>617.06</b>
Transfers	-	-9.77	11.31	-	-	-	-	-	-	-	1.55
Statistical differences	-0.45	1.08	0.94	-1.58	-	-	-	-0.03	-0.68	-	-0.70
Electricity plants	-8.45	-1.97	-26.66	-46.21	-6.29	-58.03	-7.31	-5.30	98.83	-0.08	-61.48
CHP plants	-2.16	-	-1.13	-2.52	-	-	-	-9.17	6.76	-	-8.22
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-3.36	-	-	-	-	-	-	-0.04	-	-	-3.40
Gas works	-	-	-0.02	0.01	-	-	-	-	-	-	-0.00
Coke/pat.fuel/BKB/PB plants	0.30	-	-1.39	-	-	-	-	-	-	-	-1.08
Oil refineries	-	-232.70	229.20	-	-	-	-	-	-	-	-3.50
Petrochemical plants	-	3.58	-2.94	-	-	-	-	-	-	-	0.64
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	0.71	-	-0.89	-	-	-	-4.79	-	-	-4.97
Energy industry own use	-0.34	-0.41	-11.74	-26.09	-	-	-	-12.27	-4.28	-	-55.13
Losses	-0.25	-0.09	-0.24	-1.60	-	-	-	-0.05	-17.17	-	-19.40
<b>TFC</b>	<b>10.82</b>	<b>0.45</b>	<b>213.89</b>	<b>59.00</b>	<b>-</b>	<b>-</b>	<b>0.81</b>	<b>92.76</b>	<b>83.63</b>	<b>-</b>	<b>461.37</b>
<b>INDUSTRY</b>	<b>10.60</b>	<b>0.44</b>	<b>27.95</b>	<b>26.15</b>	<b>-</b>	<b>-</b>	<b>0.00</b>	<b>43.67</b>	<b>32.74</b>	<b>-</b>	<b>141.55</b>
Iron and steel	5.91	-	0.60	5.01	-	-	-	2.90	4.08	-	18.49
Chemical and petrochemical	0.29	-	4.75	3.83	-	-	-	0.08	3.61	-	12.58
Non-ferrous metals	0.94	-	1.85	1.04	-	-	0.00	0.01	3.39	-	7.23
Non-metallic minerals	1.70	-	3.77	3.10	-	-	-	2.42	1.64	-	12.63
Transport equipment	-	-	-	0.05	-	-	-	-	0.18	-	0.23
Machinery	0.00	-	0.00	0.01	-	-	-	-	0.07	-	0.09
Mining and quarrying	0.29	-	1.61	0.39	-	-	-	-	1.46	-	3.75
Food and tobacco	0.36	-	0.97	2.81	-	-	-	22.13	4.03	-	30.31
Paper pulp and printing	0.37	0.01	0.77	1.16	-	-	-	10.16	2.50	-	14.97
Wood and wood products	-	-	0.01	0.02	-	-	-	0.13	0.08	-	0.24
Construction	-	-	0.48	0.00	-	-	-	0.00	0.05	-	0.53
Textile and leather	0.13	-	0.08	0.40	-	-	-	0.07	0.90	-	1.59
Non-specified	0.60	0.43	13.06	8.33	-	-	0.00	5.75	10.74	-	38.92
<b>TRANSPORT</b>	<b>-</b>	<b>0.01</b>	<b>135.04</b>	<b>7.62</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>18.42</b>	<b>0.33</b>	<b>-</b>	<b>161.41</b>
Domestic aviation	-	-	4.26	-	-	-	-	-	-	-	4.26
Road	-	-	127.59	5.65	-	-	-	18.42	0.00	-	151.66
Rail	-	-	0.95	-	-	-	-	-	0.28	-	1.23
Pipeline transport	-	-	-	1.94	-	-	-	-	0.05	-	1.99
Domestic navigation	-	-	1.53	-	-	-	-	-	-	-	1.53
Non-specified	-	0.01	0.70	0.03	-	-	-	-	0.01	-	0.74
<b>OTHER</b>	<b>0.07</b>	<b>-</b>	<b>30.91</b>	<b>14.19</b>	<b>-</b>	<b>-</b>	<b>0.81</b>	<b>30.67</b>	<b>50.56</b>	<b>-</b>	<b>127.21</b>
Residential	0.07	-	13.89	11.54	-	-	0.03	26.15	25.52	-	77.19
Comm. and public services	-	-	2.67	2.01	-	-	0.02	0.95	21.06	-	26.70
Agriculture/forestry	-	-	10.52	-	-	-	0.00	3.48	2.94	-	16.95
Fishing	-	-	0.06	0.01	-	-	-	0.00	0.02	-	0.10
Non-specified	0.00	-	3.77	0.63	-	-	0.77	0.09	1.02	-	6.28
<b>NON-ENERGY USE</b>	<b>0.15</b>	<b>-</b>	<b>20.00</b>	<b>11.05</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>31.20</b>
in industry/transf./energy	0.00	-	19.94	11.05	-	-	-	-	-	-	31.00
of which: chem./petrochem.	-	-	9.08	11.05	-	-	-	-	-	-	20.12
in transport	-	-	0.03	-	-	-	-	-	-	-	0.03
in other	0.14	-	0.03	-	-	-	-	-	-	-	0.18
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>42.60</b>	<b>4.03</b>	<b>137.27</b>	<b>232.31</b>	<b>24.15</b>	<b>674.88</b>	<b>49.24</b>	<b>63.11</b>	<b>-</b>	<b>0.39</b>	<b>1227.98</b>
Electricity plants	32.40	4.03	131.80	221.03	24.15	674.88	49.24	11.42	-	0.39	1149.34
CHP plants	10.20	-	5.47	11.28	-	-	-	51.69	-	-	78.64
<b>Heat generated - PJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>3.34</b>	<b>3.34</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	3.34	3.34

1. Includes peat.

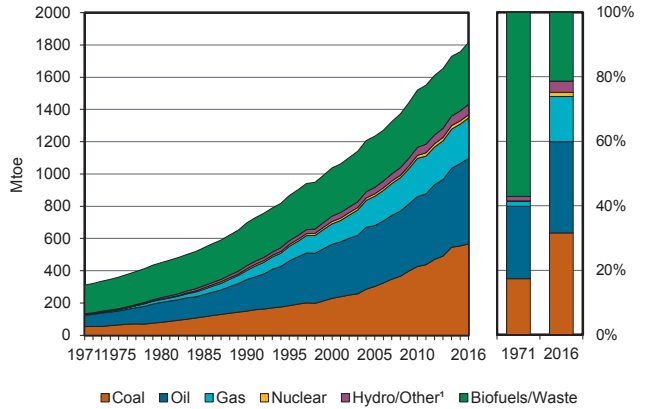
2. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

### Non-OECD Asia (excluding China)

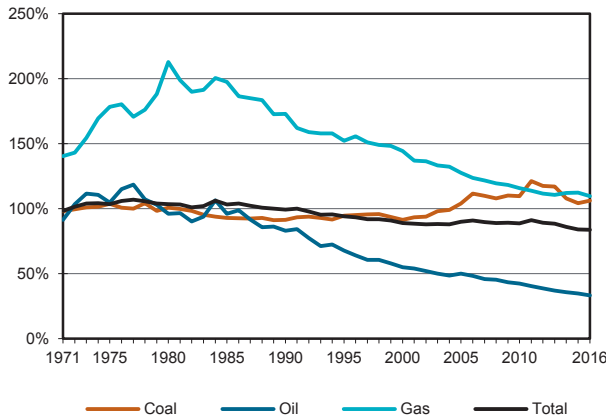
**Figure 1. Energy production**



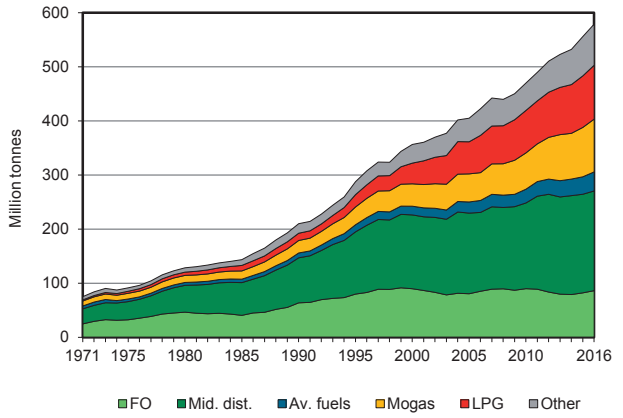
**Figure 2. Total primary energy supply²**



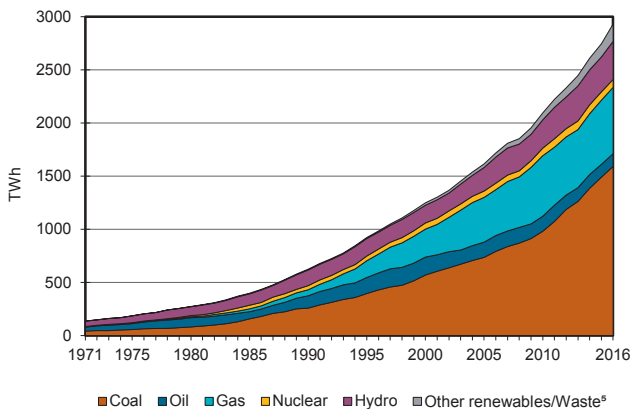
**Figure 3. Energy self-sufficiency³**



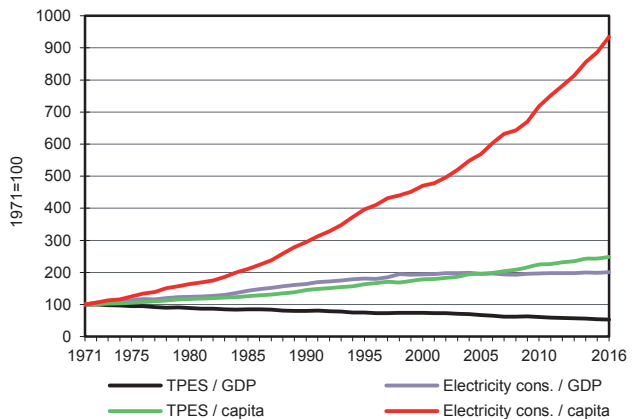
**Figure 4. Oil products demand⁴**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators⁶**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Non-OECD Asia (excluding China)

2016

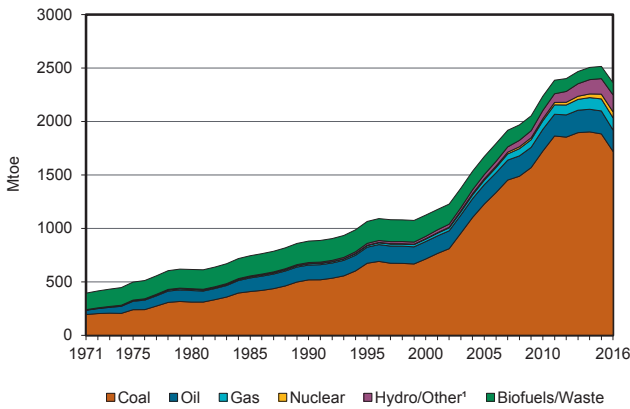
Million tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal <sup>1</sup>	Crude oil <sup>2</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	600.36	176.70	-	274.25	19.40	30.85	34.67	383.91	-	-	1520.14
Imports	213.40	419.31	288.76	64.29	-	-	-	0.37	3.79	-	989.93
Exports	-243.62	-56.43	-219.60	-87.73	-	-	-	-0.91	-2.92	-	-611.20
Intl. marine bunkers	-	-	-52.66	-	-	-	-	-	-	-	-52.66
Intl. aviation bunkers	-	-	-28.66	-	-	-	-	-	-	-	-28.66
Stock changes	-4.26	6.64	-2.85	-0.71	-	-	-	-0.08	-	-	-1.27
<b>TPES</b>	<b>565.89</b>	<b>546.22</b>	<b>-15.01</b>	<b>250.10</b>	<b>19.40</b>	<b>30.85</b>	<b>34.67</b>	<b>383.29</b>	<b>0.87</b>	<b>-</b>	<b>1816.27</b>
Transfers	-	-4.27	4.96	-	-	-	-	-	-	-	0.69
Statistical differences	-6.67	-3.84	-4.82	-0.35	-	-	-0.00	-0.01	1.64	0.00	-14.05
Electricity plants	-367.88	-	-29.10	-121.72	-19.40	-30.85	-33.86	-37.94	248.60	-	-392.15
CHP plants	-9.76	-	-0.31	-0.19	-	-	-	-	3.49	1.08	-5.68
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-16.57	-	-	-	-	-	-	-	-	-	-16.57
Gas works	-0.02	-	-	-	-	-	-	-	-	-	-0.02
Coke/pat.fuel/BKB/PB plants	-5.01	-	-	-	-	-	-	-	-	-	-5.01
Oil refineries	-	-536.28	525.96	-	-	-	-	-	-	-	-10.32
Petrochemical plants	-	-0.00	-	-	-	-	-	-	-	-	-0.00
Liquefaction plants	-	0.63	-	-1.18	-	-	-	-	-	-	-0.56
Other transformation	-	-	-	-0.06	-	-	-	-15.25	-	-	-15.31
Energy industry own use	-2.82	-0.35	-21.65	-23.58	-	-	-	-	-14.40	-0.06	-62.86
Losses	-0.22	-0.20	-	-4.00	-	-	-	-	-32.46	-0.03	-36.91
<b>TFC</b>	<b>156.94</b>	<b>1.90</b>	<b>460.04</b>	<b>99.00</b>	<b>-</b>	<b>-</b>	<b>0.81</b>	<b>330.08</b>	<b>207.76</b>	<b>0.99</b>	<b>1257.53</b>
<b>INDUSTRY</b>	<b>141.27</b>	<b>-</b>	<b>59.33</b>	<b>41.30</b>	<b>-</b>	<b>-</b>	<b>0.04</b>	<b>57.55</b>	<b>85.88</b>	<b>0.24</b>	<b>385.61</b>
Iron and steel	50.82	-	1.92	0.72	-	-	-	-	8.71	-	62.18
Chemical and petrochemical	6.05	-	9.96	6.12	-	-	-	0.00	8.64	-	30.78
Non-ferrous metals	3.10	-	0.13	0.04	-	-	-	-	1.89	-	5.16
Non-metallic minerals	41.28	-	9.00	1.10	-	-	-	0.00	5.11	-	56.49
Transport equipment	-	-	0.03	0.72	-	-	-	-	1.42	-	2.16
Machinery	0.14	-	1.14	0.27	-	-	-	0.00	8.09	-	9.64
Mining and quarrying	-	-	2.80	0.00	-	-	-	0.00	0.11	-	2.91
Food and tobacco	1.41	-	2.70	0.24	-	-	-	4.69	4.85	-	13.89
Paper pulp and printing	3.45	-	0.31	0.96	-	-	-	0.09	1.98	-	6.79
Wood and wood products	-	-	0.26	0.02	-	-	-	-	0.37	-	0.65
Construction	0.04	-	1.43	0.12	-	-	-	0.00	0.12	-	1.71
Textile and leather	2.69	-	1.83	0.10	-	-	-	-	5.41	-	10.03
Non-specified	32.27	-	27.82	30.91	-	-	0.04	52.76	39.18	0.24	183.21
<b>TRANSPORT</b>	<b>0.02</b>	<b>-</b>	<b>240.72</b>	<b>7.69</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>5.13</b>	<b>1.88</b>	<b>-</b>	<b>255.44</b>
Domestic aviation	-	-	8.37	-	-	-	-	-	-	-	8.37
Road	-	-	222.81	7.28	-	-	-	5.12	-	-	235.22
Rail	0.02	-	4.06	-	-	-	-	-	1.88	-	5.95
Pipeline transport	-	-	-	0.41	-	-	-	-	-	-	0.41
Domestic navigation	-	-	5.27	-	-	-	-	0.01	-	-	5.28
Non-specified	0.00	-	0.21	-	-	-	-	-	-	-	0.22
<b>OTHER</b>	<b>15.39</b>	<b>-</b>	<b>73.43</b>	<b>13.55</b>	<b>-</b>	<b>-</b>	<b>0.77</b>	<b>267.40</b>	<b>120.00</b>	<b>0.75</b>	<b>491.29</b>
Residential	4.16	-	41.62	10.58	-	-	0.67	258.92	56.91	0.41	373.27
Comm. and public services	4.70	-	9.45	2.65	-	-	0.07	7.68	32.99	0.30	57.83
Agriculture/forestry	0.02	-	17.92	0.18	-	-	-	0.01	18.63	0.00	36.77
Fishing	-	-	0.81	-	-	-	-	0.00	0.11	-	0.92
Non-specified	6.52	-	3.63	0.14	-	-	0.04	0.79	11.35	0.04	22.50
<b>NON-ENERGY USE</b>	<b>0.26</b>	<b>1.90</b>	<b>86.56</b>	<b>36.46</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>125.19</b>
in industry/transf./energy	0.26	1.90	86.35	36.46	-	-	-	-	-	-	124.98
of which: chem./petrochem.	-	1.90	60.08	36.46	-	-	-	-	-	-	98.45
in transport	-	-	0.21	-	-	-	-	-	-	-	0.21
in other	-	-	0.00	-	-	-	-	-	-	-	0.00
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>1592.41</b>	<b>-</b>	<b>119.62</b>	<b>623.91</b>	<b>74.45</b>	<b>358.83</b>	<b>91.65</b>	<b>71.02</b>	<b>-</b>	<b>-</b>	<b>2931.89</b>
Electricity plants	1553.40	-	118.75	623.15	74.45	358.83	91.65	71.02	-	-	2891.25
CHP plants	39.01	-	0.86	0.76	-	-	-	-	-	-	40.64
<b>Heat generated - PJ</b>	<b>45.15</b>	<b>-</b>	<b>0.06</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>45.21</b>
CHP plants	45.15	-	0.06	-	-	-	-	-	-	-	45.21
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes peat.

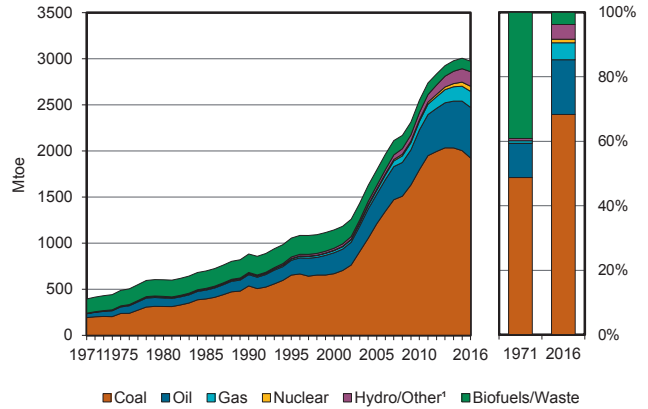
2. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## China (P.R. of China and Hong Kong, China)

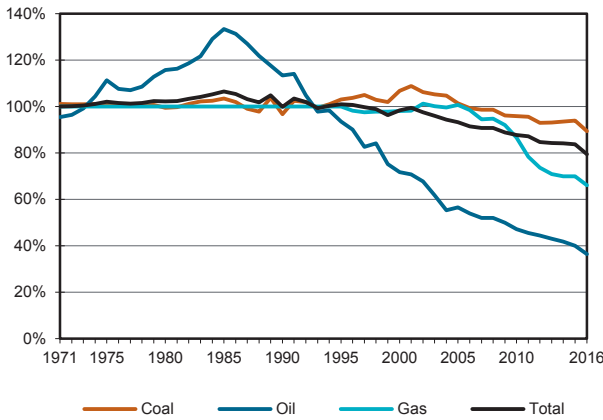
**Figure 1. Energy production**



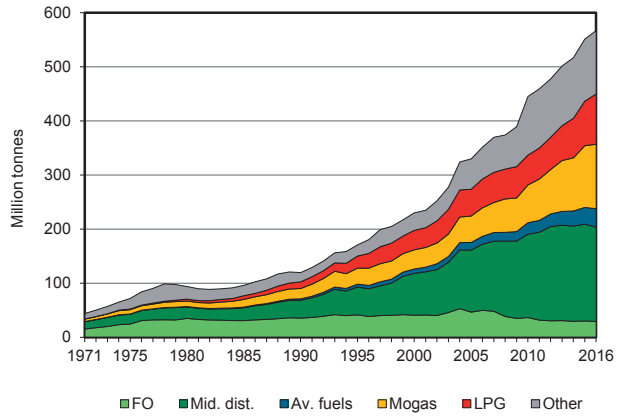
**Figure 2. Total primary energy supply<sup>2</sup>**



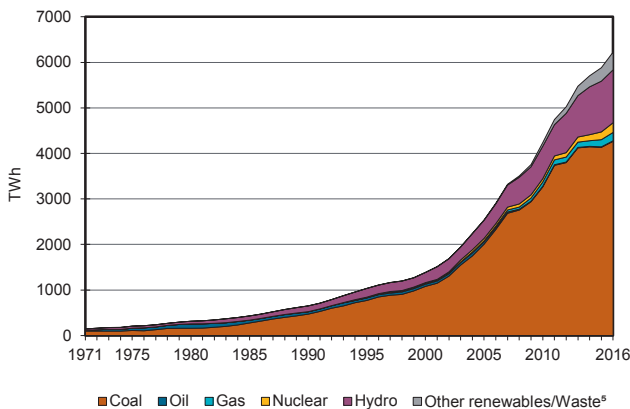
**Figure 3. Energy self-sufficiency<sup>3</sup>**



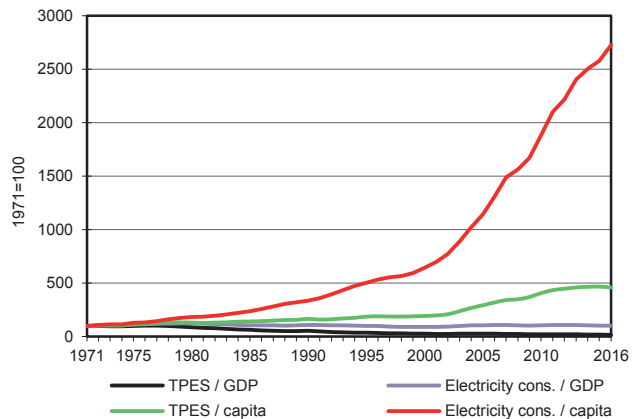
**Figure 4. Oil products demand<sup>4</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>6</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.



## China (P.R. of China and Hong Kong, China)

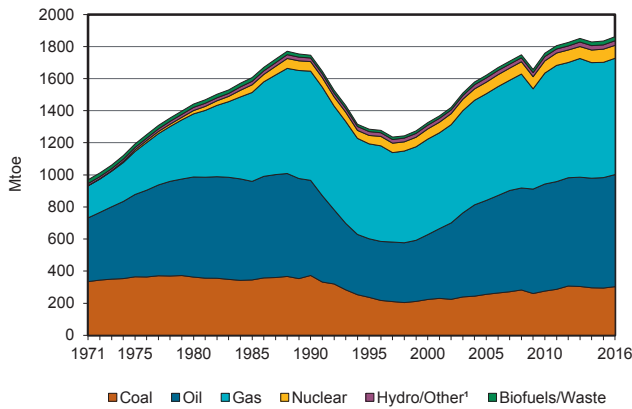
2016

Million tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	1718.90	199.89	-	114.54	55.57	99.96	58.61	113.11	-	-	2360.59
Imports	142.94	381.01	75.60	61.79	-	-	-	0.00	1.53	-	662.87
Exports	-12.14	-2.94	-54.01	-2.83	-	-	-	-	-1.73	-	-73.66
Intl. marine bunkers	-	-	-18.62	-	-	-	-	-	-	-	-18.62
Intl. aviation bunkers	-	-	-15.15	-	-	-	-	-	-	-	-15.15
Stock changes	73.39	-17.43	0.54	-	-	-	-	-	-	-	56.50
<b>TPES</b>	<b>1923.09</b>	<b>560.53</b>	<b>-11.64</b>	<b>173.50</b>	<b>55.57</b>	<b>99.96</b>	<b>58.61</b>	<b>113.11</b>	<b>-0.20</b>	<b>-</b>	<b>2972.53</b>
Transfers	-1.36	-1.83	3.79	-	-	-	-	-	-	-	0.60
Statistical differences	39.67	-0.06	2.50	-2.68	-	-	-0.00	-0.01	-0.08	-	39.33
Electricity plants	-566.49	-0.13	-2.51	-19.64	-55.57	-99.96	-26.97	-26.18	384.65	-	-412.81
CHP plants	-457.25	-	-	-16.01	-	-	-	-0.03	150.64	89.89	-232.77
Heat plants	-8.63	-	-4.90	-	-	-	-	-1.61	-	13.13	-2.01
Blast furnaces	-104.48	-	-	-	-	-	-	-	-	-	-104.48
Gas works	-7.11	-	-0.30	2.21	-	-	-	-0.01	-	-	-5.22
Coke/pat.fuel/BKB/PB plants	-58.72	-	-	-	-	-	-	-	-	-	-58.72
Oil refineries	-	-555.24	541.16	-	-	-	-	-	-	-	-14.07
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-5.73	3.44	-	-	-	-	-	-	-	-	-2.29
Other transformation	-	-	-	-	-	-	-	-	-	-	-
Energy industry own use	-42.15	-3.20	-33.07	-21.61	-	-	-	-	-59.65	-11.85	-171.53
Losses	-	-0.40	-0.01	-2.01	-	-	-	-	-26.49	-1.14	-30.06
<b>TFC</b>	<b>710.83</b>	<b>3.10</b>	<b>495.00</b>	<b>113.75</b>	<b>-</b>	<b>-</b>	<b>31.64</b>	<b>85.27</b>	<b>448.87</b>	<b>90.02</b>	<b>1978.48</b>
<b>INDUSTRY</b>	<b>554.49</b>	<b>2.83</b>	<b>50.74</b>	<b>42.58</b>	<b>-</b>	<b>-</b>	<b>0.40</b>	<b>-</b>	<b>284.74</b>	<b>60.45</b>	<b>996.23</b>
Iron and steel	184.03	-	0.88	4.22	-	-	-	-	45.41	4.85	239.40
Chemical and petrochemical	101.30	-	14.25	10.40	-	-	-	-	48.17	31.38	205.50
Non-ferrous metals	15.62	-	0.94	3.38	-	-	-	-	49.56	3.64	73.13
Non-metallic minerals	153.91	-	5.86	6.46	-	-	-	-	27.41	0.31	193.96
Transport equipment	2.15	-	0.70	2.60	-	-	-	-	8.68	1.01	15.14
Machinery	11.18	-	1.84	5.34	-	-	-	-	37.47	1.09	56.92
Mining and quarrying	6.04	-	2.40	0.92	-	-	-	-	8.43	0.87	18.66
Food and tobacco	22.84	-	0.80	2.66	-	-	-	-	9.82	3.62	39.73
Paper pulp and printing	8.18	-	0.32	1.00	-	-	-	-	6.80	4.91	21.21
Wood and wood products	1.82	-	0.22	0.21	-	-	-	-	2.98	0.24	5.48
Construction	4.22	-	7.27	0.16	-	-	-	-	6.24	0.23	18.12
Textile and leather	8.31	-	0.43	1.78	-	-	-	-	16.97	7.65	35.14
Non-specified	34.88	2.83	14.84	3.45	-	-	0.40	-	16.78	0.66	73.84
<b>TRANSPORT</b>	<b>0.02</b>	<b>-</b>	<b>269.66</b>	<b>17.43</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2.37</b>	<b>9.74</b>	<b>-</b>	<b>299.23</b>
Domestic aviation	-	-	20.38	-	-	-	-	-	-	-	20.38
Road	-	-	222.52	17.09	-	-	-	2.37	3.76	-	245.74
Rail	0.02	-	3.16	-	-	-	-	-	5.99	-	9.16
Pipeline transport	-	-	0.00	0.34	-	-	-	-	-	-	0.34
Domestic navigation	-	-	21.67	-	-	-	-	-	-	-	21.67
Non-specified	0.00	-	1.92	-	-	-	-	-	-	-	1.92
<b>OTHER</b>	<b>106.49</b>	<b>-</b>	<b>72.61</b>	<b>43.44</b>	<b>-</b>	<b>-</b>	<b>31.24</b>	<b>82.89</b>	<b>154.39</b>	<b>29.58</b>	<b>520.64</b>
Residential	49.42	-	39.62	32.11	-	-	24.99	82.89	73.43	23.56	326.02
Comm. and public services	19.96	-	15.30	11.23	-	-	4.97	-	31.04	2.34	84.85
Agriculture/forestry	14.44	-	17.68	0.09	-	-	1.22	-	9.39	0.03	42.85
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	22.67	-	-	-	-	-	0.07	0.00	40.52	3.65	66.91
<b>NON-ENERGY USE</b>	<b>49.82</b>	<b>0.27</b>	<b>101.99</b>	<b>10.30</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>162.39</b>
in industry/transf./energy	49.82	0.27	75.82	10.30	-	-	-	-	-	-	136.22
of which: chem./petrochem.	-	0.27	64.49	10.30	-	-	-	-	-	-	75.06
in transport	-	-	1.54	-	-	-	-	-	-	-	1.54
in other	-	-	24.63	-	-	-	-	-	-	-	24.63
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>4266.56</b>	<b>-</b>	<b>10.73</b>	<b>183.51</b>	<b>213.29</b>	<b>1162.57</b>	<b>312.50</b>	<b>76.21</b>	<b>-</b>	<b>-</b>	<b>6225.37</b>
Electricity plants	2572.75	-	10.73	125.51	213.29	1162.57	312.50	76.11	-	-	4473.46
CHP plants	1693.80	-	-	58.00	-	-	-	0.10	-	-	1751.90
<b>Heat generated - PJ</b>	<b>3768.63</b>	<b>-</b>	<b>174.51</b>	<b>319.99</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>50.06</b>	<b>-</b>	<b>-</b>	<b>4313.20</b>
CHP plants	3443.37	-	-	319.99	-	-	-	-	-	-	3763.36
Heat plants	325.26	-	174.51	-	-	-	-	50.06	-	-	549.84

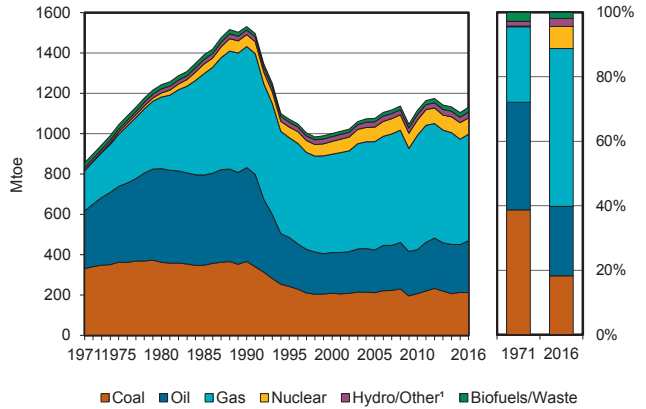
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Non-OECD Europe and Eurasia

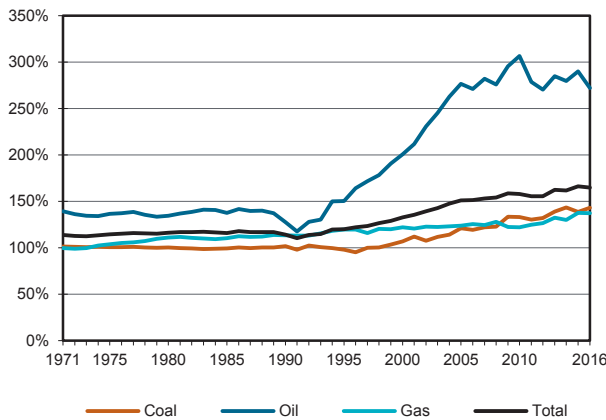
**Figure 1. Energy production**



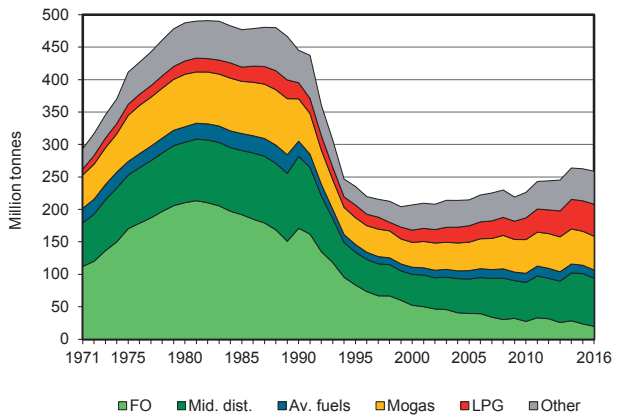
**Figure 2. Total primary energy supply²**



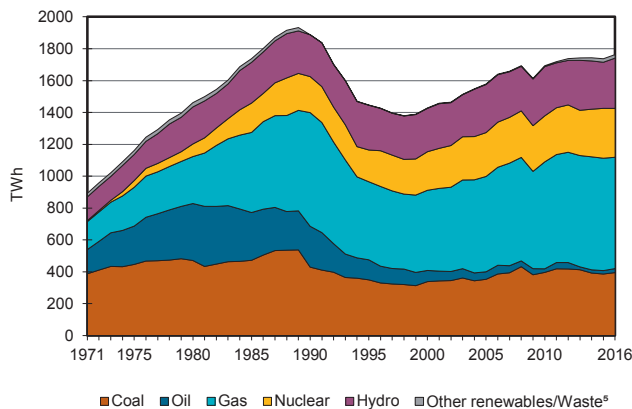
**Figure 3. Energy self-sufficiency³**



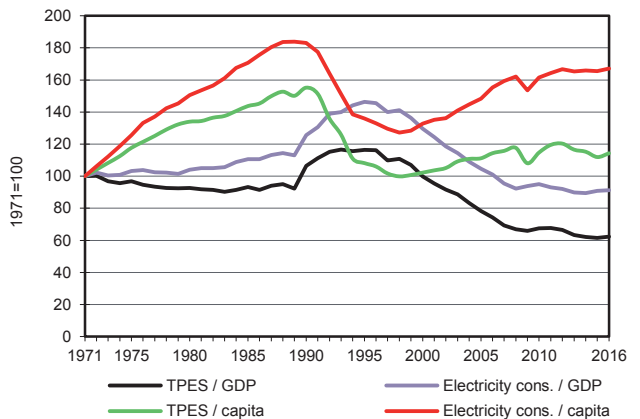
**Figure 4. Oil products demand⁴**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators⁶**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Non-OECD Europe and Eurasia

2016

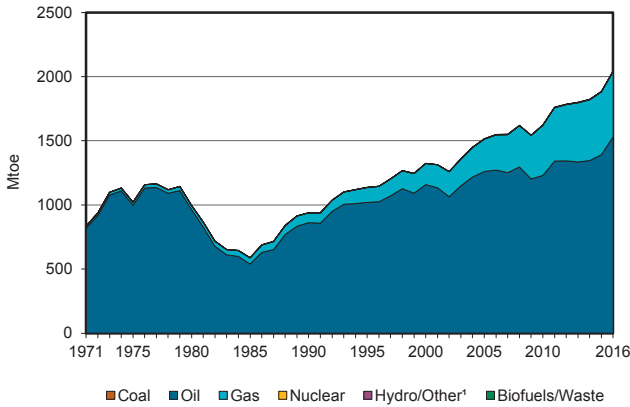
Million tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal <sup>1</sup>	Crude oil <sup>2</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	303.26	698.47	-	725.02	80.51	27.11	1.79	25.33	-	0.87	1862.37
Imports	30.41	51.69	41.87	52.23	-	-	-	0.83	6.00	-	183.03
Exports	-121.43	-359.06	-150.43	-251.39	-	-	-	-1.67	-8.09	-	-892.08
Intl. marine bunkers	-	-	-16.99	-	-	-	-	-	-	-	-16.99
Intl. aviation bunkers	-	-	-7.69	-	-	-	-	-	-	-	-7.69
Stock changes	-0.21	-0.12	-1.04	3.13	-	-	-	0.00	-	-	1.75
<b>TPES</b>	<b>212.03</b>	<b>390.97</b>	<b>-134.29</b>	<b>528.99</b>	<b>80.51</b>	<b>27.11</b>	<b>1.79</b>	<b>24.49</b>	<b>-2.09</b>	<b>0.87</b>	<b>1130.39</b>
Transfers	-	-1.52	1.68	-	-	-	-	-	-	-	0.16
Statistical differences	-5.65	0.30	-0.98	-1.73	-	-	-0.00	0.06	-0.58	0.07	-8.51
Electricity plants	-32.31	-	-2.44	-18.90	-79.99	-27.11	-1.55	-0.12	73.20	-0.14	-89.38
CHP plants	-79.92	-0.01	-4.62	-186.50	-0.52	-	-	-3.17	78.44	91.14	-105.15
Heat plants	-10.91	-0.83	-4.97	-53.36	-	-	-0.02	-3.88	-0.00	70.79	-3.18
Blast furnaces	-29.28	-	-	-	-	-	-	-	-	-	-29.28
Gas works	-0.03	-	-	-	-	-	-	-	-	-	-0.03
Coke/pat.fuel/BKB/PB plants	-14.20	-	-	-	-	-	-	-0.00	-	-	-14.20
Oil refineries	-	-379.95	366.36	-	-	-	-	-	-	-	-13.60
Petrochemical plants	-	0.19	-0.19	-	-	-	-	-	-	-	-0.00
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-0.14	0.43	-0.00	-2.72	-	-	-	-0.46	-	-	-2.89
Energy industry own use	-3.77	-1.92	-16.25	-36.88	-	-	-	-0.18	-27.47	-16.01	-102.48
Losses	-3.06	-7.03	-0.03	-8.76	-	-	-0.00	-0.00	-15.01	-14.48	-48.38
<b>TFC</b>	<b>32.75</b>	<b>0.63</b>	<b>204.27</b>	<b>220.14</b>	<b>-</b>	<b>-</b>	<b>0.22</b>	<b>16.73</b>	<b>106.49</b>	<b>132.23</b>	<b>713.46</b>
<b>INDUSTRY</b>	<b>24.60</b>	<b>0.56</b>	<b>23.50</b>	<b>52.33</b>	<b>-</b>	<b>-</b>	<b>0.00</b>	<b>2.25</b>	<b>45.05</b>	<b>49.89</b>	<b>198.18</b>
Iron and steel	16.12	-	0.74	14.88	-	-	-	0.47	9.20	8.15	49.56
Chemical and petrochemical	0.39	0.03	10.16	8.00	-	-	-	0.08	5.56	14.15	38.38
Non-ferrous metals	0.83	-	0.40	0.43	-	-	-	0.00	9.39	0.28	11.34
Non-metallic minerals	2.71	0.00	1.27	10.80	-	-	-	0.25	2.49	2.28	19.81
Transport equipment	0.02	-	0.19	0.66	-	-	-	0.00	1.35	2.10	4.32
Machinery	0.10	-	0.28	1.83	-	-	0.00	0.02	2.35	7.92	12.51
Mining and quarrying	0.63	-	2.48	2.03	-	-	-	0.03	3.89	1.16	10.21
Food and tobacco	0.24	0.00	1.02	3.00	-	-	0.00	0.24	2.75	5.64	12.90
Paper pulp and printing	0.04	-	0.18	0.79	-	-	-	0.24	1.87	4.20	7.31
Wood and wood products	0.00	-	0.20	0.29	-	-	0.00	0.77	0.66	1.36	3.29
Construction	0.05	-	3.62	3.85	-	-	-	0.01	1.43	0.63	9.59
Textile and leather	0.02	-	0.06	0.24	-	-	0.00	0.02	0.43	1.33	2.09
Non-specified	3.44	0.53	2.90	5.52	-	-	-	0.12	3.68	0.69	16.88
<b>TRANSPORT</b>	<b>0.01</b>	<b>-</b>	<b>101.06</b>	<b>34.90</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.61</b>	<b>8.50</b>	<b>-</b>	<b>145.08</b>
Domestic aviation	-	-	5.41	-	-	-	-	-	-	-	5.41
Road	-	-	91.15	0.97	-	-	-	0.61	0.04	-	92.77
Rail	0.01	-	2.35	-	-	-	-	0.00	5.05	-	7.41
Pipeline transport	-	-	0.26	33.93	-	-	-	-	1.97	-	36.15
Domestic navigation	-	-	0.67	-	-	-	-	-	-	-	0.67
Non-specified	0.00	-	1.23	0.00	-	-	-	-	1.44	-	2.67
<b>OTHER</b>	<b>7.35</b>	<b>0.02</b>	<b>26.48</b>	<b>92.14</b>	<b>-</b>	<b>-</b>	<b>0.22</b>	<b>13.87</b>	<b>52.94</b>	<b>82.34</b>	<b>275.35</b>
Residential	4.00	-	11.22	74.86	-	-	0.10	11.89	27.13	52.39	181.60
Comm. and public services	2.41	-	3.45	14.70	-	-	0.11	1.59	21.26	22.69	66.21
Agriculture/forestry	0.21	0.01	7.08	1.88	-	-	0.01	0.26	4.17	2.95	16.56
Fishing	0.00	-	0.61	0.00	-	-	-	0.00	0.02	0.02	0.65
Non-specified	0.72	0.01	4.12	0.68	-	-	-	0.14	0.36	4.30	10.33
<b>NON-ENERGY USE</b>	<b>0.80</b>	<b>0.05</b>	<b>53.23</b>	<b>40.78</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>94.85</b>
in industry/transf./energy	0.80	0.05	52.84	40.78	-	-	-	-	-	-	94.45
of which: chem./petrochem.	0.22	-	41.09	39.86	-	-	-	-	-	-	81.16
in transport	-	-	0.20	-	-	-	-	-	-	-	0.20
in other	-	-	0.19	-	-	-	-	-	-	-	0.19
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>395.01</b>	<b>0.01</b>	<b>25.05</b>	<b>698.55</b>	<b>307.01</b>	<b>315.35</b>	<b>17.24</b>	<b>4.96</b>	<b>-</b>	<b>0.38</b>	<b>1763.54</b>
Electricity plants	124.89	-	9.81	76.15	307.01	315.35	17.24	0.47	-	0.03	850.95
CHP plants	270.11	0.01	15.24	622.39	-	-	-	4.49	-	0.35	912.59
<b>Heat generated - PJ</b>	<b>1495.12</b>	<b>19.06</b>	<b>257.43</b>	<b>4434.84</b>	<b>21.59</b>	<b>-</b>	<b>363.59</b>	<b>185.29</b>	<b>2.53</b>	<b>36.47</b>	<b>6815.91</b>
CHP plants	1098.90	0.15	71.04	2566.34	21.59	-	-	57.70	-	23.89	3839.61
Heat plants	396.22	18.90	186.40	1868.50	-	-	363.59	127.59	2.53	12.57	2976.30

1. Includes peat.

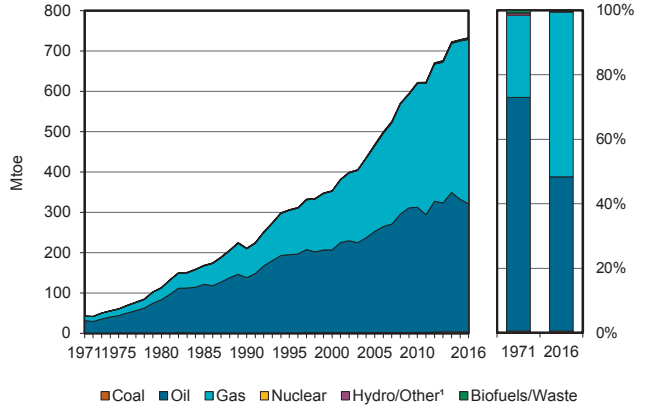
2. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

### Middle East

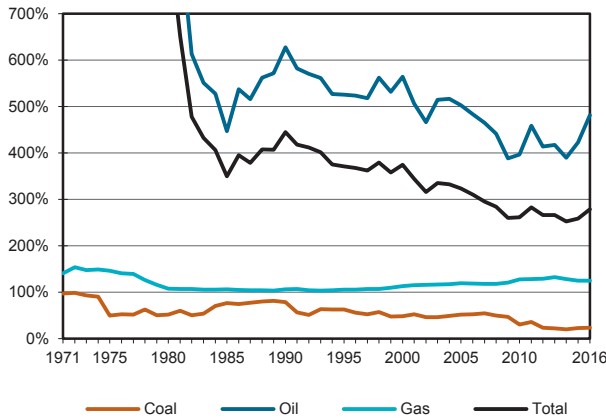
**Figure 1. Energy production**



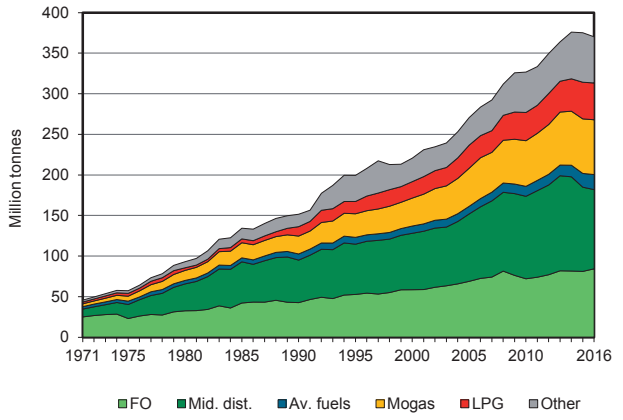
**Figure 2. Total primary energy supply<sup>2</sup>**



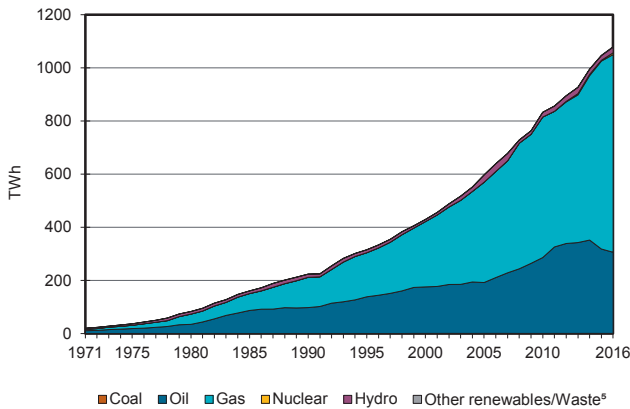
**Figure 3. Energy self-sufficiency<sup>3</sup>**



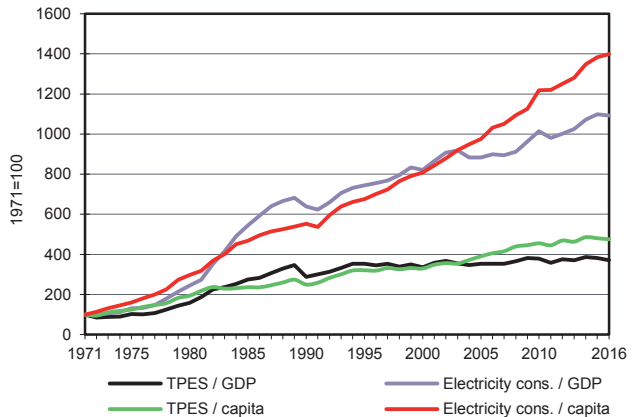
**Figure 4. Oil products demand<sup>4</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>6</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency. Maximum scale refers to values greater than or equal to 700%.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Middle East

2016

Million tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	0.74	1530.02	-	507.86	1.72	1.82	0.42	0.83	-	-	2043.41
Imports	2.55	12.83	82.86	31.92	-	-	-	0.07	1.55	-	131.77
Exports	-0.07	-1022.88	-229.62	-132.38	-	-	-	-	-0.65	-	-1385.60
Intl. marine bunkers	-	-	-27.54	-	-	-	-	-	-	-	-27.54
Intl. aviation bunkers	-	-	-18.40	-	-	-	-	-	-	-	-18.40
Stock changes	-0.00	-6.61	-2.95	0.00	-	-	-	-	-	-	-9.56
<b>TPES</b>	<b>3.22</b>	<b>513.35</b>	<b>-195.64</b>	<b>407.40</b>	<b>1.72</b>	<b>1.82</b>	<b>0.42</b>	<b>0.90</b>	<b>0.89</b>	<b>-</b>	<b>734.09</b>
Transfers	-	-102.23	111.26	-	-	-	-	-	-	-	9.03
Statistical differences	0.61	12.36	0.50	0.18	-	-	-	0.05	-1.23	-	12.47
Electricity plants	-0.17	-34.36	-56.83	-179.08	-1.72	-1.82	-0.24	-0.01	92.88	-	-181.34
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-0.48	-	-	-	-	-	-	-	-	-	-0.48
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-0.09	-	-	-	-	-	-	-	-	-	-0.09
Oil refineries	-	-387.12	379.64	-	-	-	-	-	-	-	-7.48
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	5.18	-	-12.56	-	-	-	-	-	-	-7.38
Other transformation	-	0.42	-0.53	-	-	-	-	-0.13	-	-	-0.24
Energy industry own use	-0.17	-4.64	-13.66	-39.01	-	-	-	-	-5.58	-	-63.05
Losses	-0.03	-0.17	-	-0.09	-	-	-	-	-12.24	-	-12.53
<b>TFC</b>	<b>2.89</b>	<b>2.79</b>	<b>224.74</b>	<b>176.84</b>	<b>-</b>	<b>-</b>	<b>0.19</b>	<b>0.81</b>	<b>74.73</b>	<b>-</b>	<b>482.99</b>
<b>INDUSTRY</b>	<b>2.66</b>	<b>2.79</b>	<b>30.68</b>	<b>96.76</b>	<b>-</b>	<b>-</b>	<b>0.00</b>	<b>-</b>	<b>15.82</b>	<b>-</b>	<b>148.70</b>
Iron and steel	0.16	-	-	1.56	-	-	-	-	0.38	-	2.09
Chemical and petrochemical	-	-	0.20	16.21	-	-	-	-	0.81	-	17.23
Non-ferrous metals	-	-	-	-	-	-	-	-	0.98	-	0.98
Non-metallic minerals	0.84	-	0.18	0.94	-	-	-	-	0.08	-	2.05
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	0.06	-	-	-	-	0.06	-	0.12
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	1.66	2.79	30.29	77.98	-	-	0.00	-	13.50	-	126.22
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>126.30</b>	<b>6.84</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.04</b>	<b>-</b>	<b>133.18</b>
Domestic aviation	-	-	1.37	-	-	-	-	-	-	-	1.37
Road	-	-	120.31	6.47	-	-	-	-	-	-	126.78
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	0.06	0.37	-	-	-	-	-	-	0.43
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	4.56	-	-	-	-	-	0.04	-	4.60
<b>OTHER</b>	<b>0.01</b>	<b>-</b>	<b>20.22</b>	<b>50.82</b>	<b>-</b>	<b>-</b>	<b>0.19</b>	<b>0.81</b>	<b>58.88</b>	<b>-</b>	<b>130.93</b>
Residential	0.01	-	14.49	42.59	-	-	0.14	0.37	32.14	-	89.73
Comm. and public services	-	-	1.89	6.42	-	-	0.04	0.26	19.58	-	28.19
Agriculture/forestry	-	-	2.82	1.67	-	-	-	-	3.37	-	7.85
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	1.02	0.16	-	-	-	0.18	3.78	-	5.15
<b>NON-ENERGY USE</b>	<b>0.22</b>	<b>-</b>	<b>47.54</b>	<b>22.42</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>70.18</b>
in industry/transf./energy	0.22	-	47.43	22.42	-	-	-	-	-	-	70.07
of which: chem./petrochem.	-	-	40.33	22.18	-	-	-	-	-	-	62.51
in transport	-	-	0.01	-	-	-	-	-	-	-	0.01
in other	-	-	0.11	-	-	-	-	-	-	-	0.11
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>0.49</b>	<b>108.20</b>	<b>197.27</b>	<b>744.25</b>	<b>6.62</b>	<b>21.15</b>	<b>2.23</b>	<b>0.03</b>	<b>-</b>	<b>-</b>	<b>1080.23</b>
Electricity plants	0.49	108.20	197.27	744.25	6.62	21.15	2.23	0.03	-	-	1080.23
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - PJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.



# OECD COUNTRIES



## Australia

Figure 1. Energy production

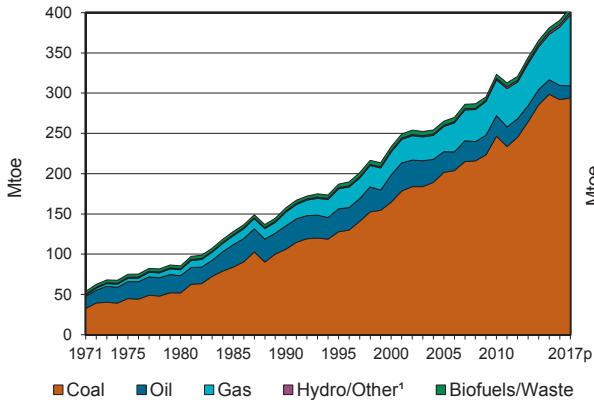


Figure 2. Total primary energy supply<sup>2</sup>

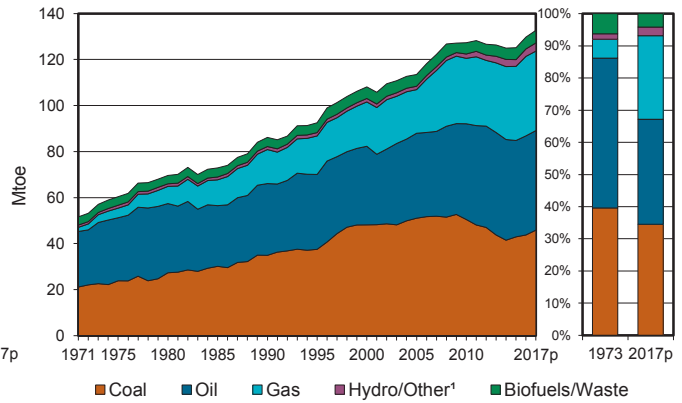


Figure 3. Energy self-sufficiency

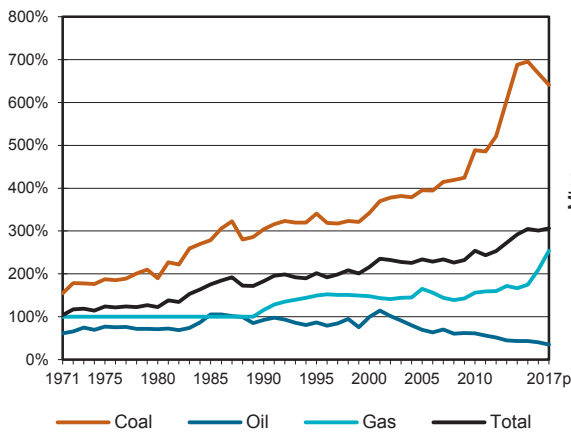


Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>

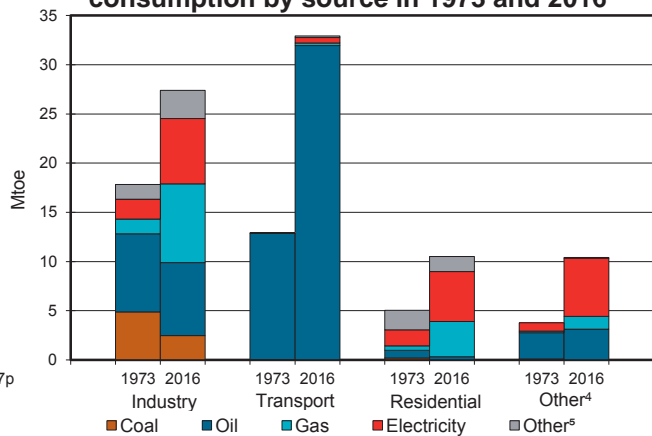


Figure 5. Electricity generation by source

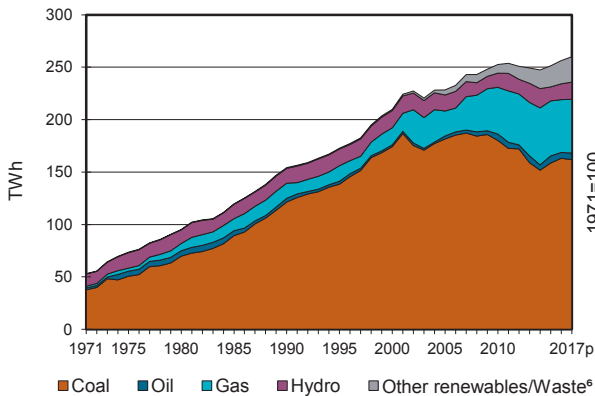
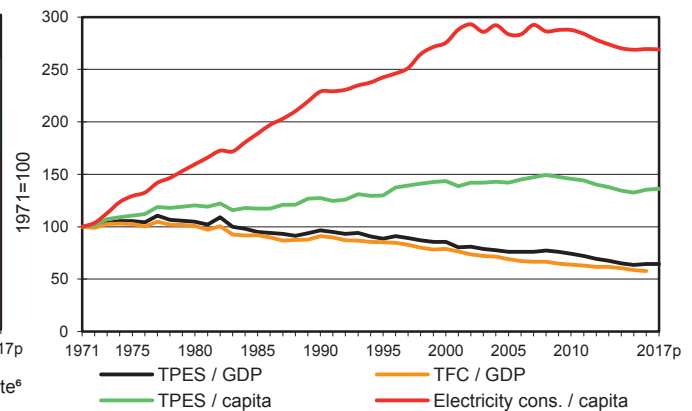


Figure 6. Selected indicators



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.

## Australia

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./ Solar/ etc.	Biofuels/ Waste	Electricity	Heat	Total
Production	292.03	17.57	-	72.51	-	1.30	1.94	5.15	-	-	390.49
Imports	0.16	16.19	27.39	5.13	-	-	-	-	-	-	48.87
Exports	-252.01	-11.66	-1.78	-43.09	-	-	-	-	-	-	-308.56
Intl. marine bunkers	-	-	-0.64	-	-	-	-	-	-	-	-0.64
Intl. aviation bunkers	-	-	-4.09	-	-	-	-	-	-	-	-4.09
Stock changes	3.57	0.16	-0.06	-	-	-	-	-	-	-	3.68
<b>TPES</b>	<b>43.75</b>	<b>22.26</b>	<b>20.81</b>	<b>34.55</b>	-	<b>1.30</b>	<b>1.94</b>	<b>5.15</b>	-	-	<b>129.75</b>
Transfers	-	-0.66	4.18	-	-	-	-	-	-	-	3.52
Statistical differences	0.26	0.69	0.59	0.92	-	-	-	0.00	0.00	-	2.47
Electricity plants	-39.36	-	-1.20	-9.92	-	-1.30	-1.58	-0.33	20.89	-	-32.79
CHP plants	-0.50	-	-0.02	-2.10	-	-	-	-0.58	1.15	-	-2.05
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-0.61 e	-	-	-	-	-	-	-	-	-	-0.61
Gas works	0.00	-	-	-0.00	-	-	-	-	-	-	-
Coke/pat. fuel/BKB/PB plants	-0.24	-	-	-	-	-	-	-	-	-	-0.24
Oil refineries	-	-22.35	22.38	-	-	-	-	-	-	-	0.02
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	0.13	-	-0.12	-	-	-	-	-	-	0.01
Energy industry own use	-0.84	-0.06	-3.92	-10.19	-	-	-	-	-2.66	-	-17.67
Losses	-	-	-	-	-	-	-	-	-1.17	-	-1.17
<b>TFC</b>	<b>2.47</b>	<b>0.02</b>	<b>42.81</b>	<b>13.15</b>	-	-	<b>0.36</b>	<b>4.25</b>	<b>18.22</b>	-	<b>81.25</b>
<b>INDUSTRY</b>	<b>2.46</b>	<b>0.02</b>	<b>3.61</b>	<b>7.24</b>	-	-	-	<b>2.85</b>	<b>6.65</b>	-	<b>22.82</b>
Iron and steel	0.31 e	-	0.02	0.30	-	-	-	-	0.28	-	0.90
Chemical and petrochemical	0.15	-	0.10	1.50	-	-	-	0.10	0.35	-	2.19
Non-ferrous metals	1.24	-	0.36	2.78	-	-	-	0.05	2.94	-	7.36
Non-metallic minerals	0.37	-	0.20	1.18	-	-	-	0.06	0.39	-	2.20
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	0.03	0.06	-	-	-	-	0.12	-	0.20
Mining and quarrying	0.10	-	2.28	0.11	-	-	-	0.00	1.56	-	4.05
Food and tobacco	0.20	0.00	0.12	0.77	-	-	-	2.13	0.54	-	3.75
Paper, pulp and printing	0.07	-	0.05	0.31	-	-	-	0.18	0.35	-	0.95
Wood and wood products	0.00	-	0.01	0.05	-	-	-	0.34	0.06	-	0.47
Construction	-	-	0.44	0.07	-	-	-	-	0.02	-	0.52
Textile and leather	0.01	0.01	0.01	0.11	-	-	-	-	0.05	-	0.18
Non-specified	0.02	-	0.01	0.00	-	-	-	-	0.00	-	0.03
<b>TRANSPORT</b>	-	-	<b>31.93</b>	<b>0.28</b>	-	-	-	<b>0.16</b>	<b>0.54</b>	-	<b>32.92</b>
Domestic aviation	-	-	3.14	-	-	-	-	-	-	-	3.14
Road	-	-	26.93	0.09	-	-	-	0.16	-	-	27.18
Rail	-	-	1.08	-	-	-	-	-	0.30	-	1.38
Pipeline transport	-	-	0.02	0.18	-	-	-	-	0.02	-	0.22
Domestic navigation	-	-	0.58	-	-	-	-	-	-	-	0.58
Non-specified	-	-	0.19	0.01	-	-	-	-	0.23	-	0.43
<b>OTHER</b>	<b>0.01</b>	-	<b>3.44</b>	<b>4.87</b>	-	-	<b>0.36</b>	<b>1.23</b>	<b>11.03</b>	-	<b>20.94</b>
Residential	0.00	-	0.34	3.56	-	-	0.35	1.18	5.09	-	10.52
Comm. and public services	0.01	-	0.80	1.25	-	-	0.01	0.06	5.79	-	7.92
Agriculture/forestry	-	-	2.30	0.05	-	-	-	-	0.15	-	2.51
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>NON-ENERGY USE</b>	-	-	<b>3.82</b>	<b>0.75</b>	-	-	-	-	-	-	<b>4.57</b>
in industry/transf./energy	-	-	3.82	0.75	-	-	-	-	-	-	4.57
of which: chem./petrochem.	-	-	2.38	0.75	-	-	-	-	-	-	3.13
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>163.13</b>	-	<b>5.58</b>	<b>50.41</b>	-	<b>15.07</b>	<b>18.41</b>	<b>3.72</b>	-	-	<b>256.32</b>
Electricity plants	161.17	-	5.45	41.61	-	15.07	18.41	1.28	-	-	242.99
CHP plants	1.96	-	0.13	8.80	-	-	-	2.44	-	-	13.33
<b>Heat generated - PJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Australia

## Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./ Solar/ etc.	Biofuels/ Waste	Electricity	Heat	Total
Production	293.89	15.31	-	87.85	-	1.41	2.14	5.47	-	-	406.07
Imports	0.16	16.76	28.60	4.70	-	-	-	-	-	-	50.22
Exports	-244.84	-10.75	-2.14	-58.01	-	-	-	-	-	-	-315.75
Intl. marine bunkers	-	-	-0.72	-	-	-	-	-	-	-	-0.72
Intl. aviation bunkers	-	-	-4.23	-	-	-	-	-	-	-	-4.23
Stock changes	-3.35	0.03	0.42	-	-	-	-	-	-	-	-2.91
<b>TPES</b>	<b>45.86</b>	<b>21.35</b>	<b>21.92</b>	<b>34.54</b>	<b>-</b>	<b>1.41</b>	<b>2.14</b>	<b>5.47</b>	<b>-</b>	<b>-</b>	<b>132.68</b>
Electricity and Heat Output											
Elec. generated - TWh	161.90	-	6.29	51.26	-	16.35	20.56	3.63	-	-	259.97
Heat generated - PJ	-	-	-	-	-	-	-	-	-	-	-

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	68.0	85.4	157.5	233.6	323.4	381.2	390.5	406.1
Net imports (Mtoe)	-8.4	-16.6	-64.5	-127.1	-185.9	-249.6	-259.7	-265.5
Total primary energy supply (Mtoe)	57.1	69.6	86.1	108.1	127.3	125.1	129.8	132.7
Net oil imports (Mtoe)	9.2	11.3	5.1	3.6	20.5	28.4	30.1	32.5
Oil supply (Mtoe)	26.6	30.1	31.2	34.2	41.6	41.9	43.1	43.3
Electricity consumption (TWh) <sup>1</sup>	56.6	86.9	145.5	195.2	236.3	238.5	243.0	246.6
GDP (billion 2010 USD)	417.6	502.7	675.3	957.4	1297.3	1493.1	1522.4	1557.0
GDP PPP (billion 2010 USD)	303.2	365.0	490.3	695.2	942.0	1084.2	1105.4	1130.6
Population (millions)	13.61	14.81	17.28	19.28	22.34	24.13	24.52	24.92
Industrial production index (2010=100)	..	51.7	68.0	85.2	100.0	109.0	110.5	111.9
Total self-sufficiency <sup>2</sup>	1.19	1.23	1.83	2.16	2.54	3.05	3.01	3.06
Coal self-sufficiency <sup>2</sup>	1.78	1.90	3.04	3.42	4.89	6.96	6.67	6.41
Oil self-sufficiency <sup>2</sup>	0.75	0.71	0.93	0.99	0.61	0.43	0.41	0.35
Natural gas self-sufficiency <sup>2</sup>	1.00	1.00	1.16	1.48	1.56	1.75	2.10	2.54
TPES/GDP (toe per thousand 2010 USD)	0.14	0.14	0.13	0.11	0.10	0.08	0.09	0.09
TPES/GDP PPP (toe per thousand 2010 USD)	0.19	0.19	0.18	0.16	0.14	0.12	0.12	0.12
TPES/population (toe per capita)	4.19	4.70	4.98	5.61	5.70	5.19	5.29	5.33
Net oil imports/GDP (toe per thousand 2010 USD)	0.02	0.02	0.01	0.00	0.02	0.02	0.02	0.02
Oil supply/GDP (toe per thousand 2010 USD)	0.06	0.06	0.05	0.04	0.03	0.03	0.03	0.03
Oil supply/population (toe per capita)	1.95	2.03	1.81	1.77	1.86	1.74	1.76	1.74
Share of renewables in TPES	0.08	0.07	0.06	0.06	0.05	0.06	0.06	0.07
Share of renewables in electricity generation	0.18	0.14	0.10	0.08	0.09	0.13	0.15	0.16
TFC/GDP (toe per thousand 2010 USD)	0.10	0.09	0.08	0.07	0.06	0.05	0.05	..
TFC/GDP PPP (toe per thousand 2010 USD)	0.13	0.13	0.12	0.10	0.08	0.08	0.07	..
TFC/population (toe per capita)	2.91	3.16	3.28	3.61	3.43	3.35	3.31	..
Elect. cons./GDP (kWh per 2010 USD)	0.14	0.17	0.22	0.20	0.18	0.16	0.16	0.16
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	0.19	0.24	0.30	0.28	0.25	0.22	0.22	0.22
Elect. cons./population (kWh per capita)	4158	5869	8419	10129	10579	9884	9911	9897
Industry cons. <sup>3</sup> /industrial production (2010=100)	..	145.7	125.9	122.0	100.0	93.0	91.3	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	..	222.6	136.1	130.0	100.0	96.0	97.7	..

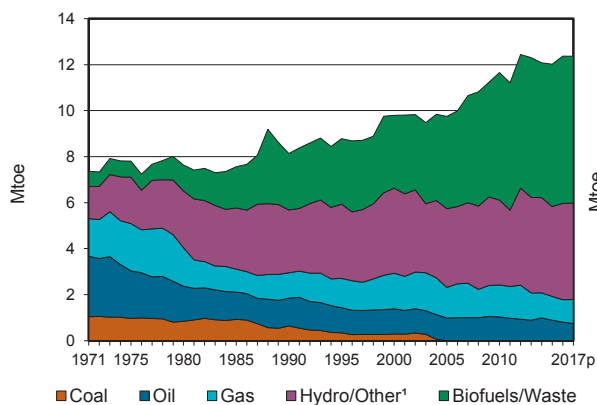
1. Electricity consumption equals domestic supply less losses.

2. Production divided by TPES.

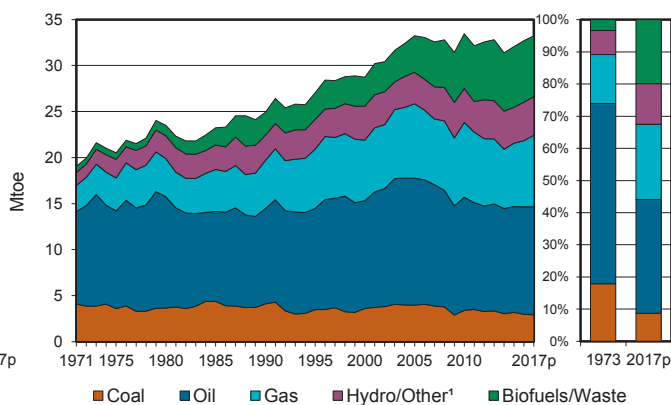
3. Includes non-energy use.

## Austria

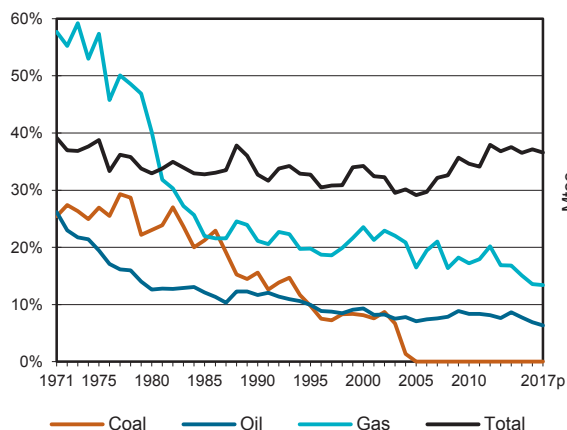
**Figure 1. Energy production**



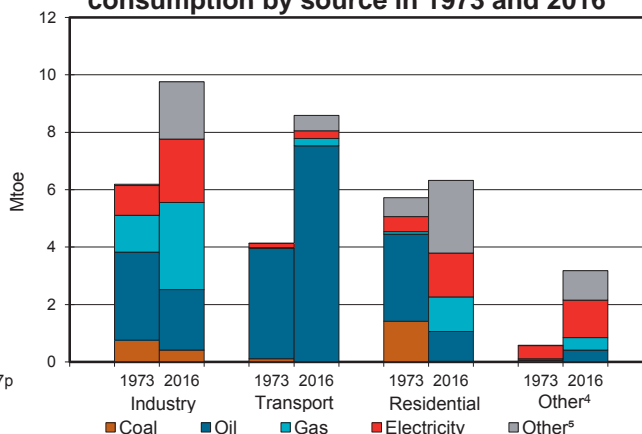
**Figure 2. Total primary energy supply<sup>2</sup>**



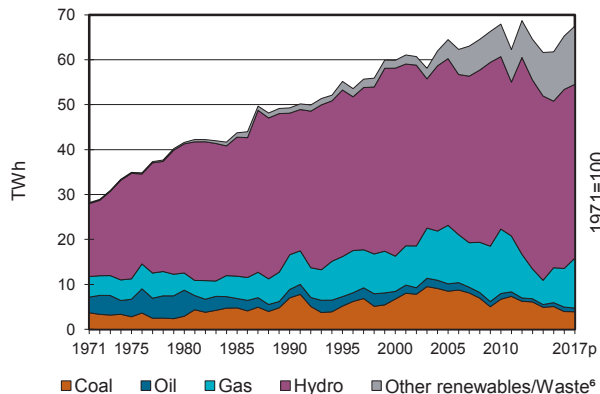
**Figure 3. Energy self-sufficiency**



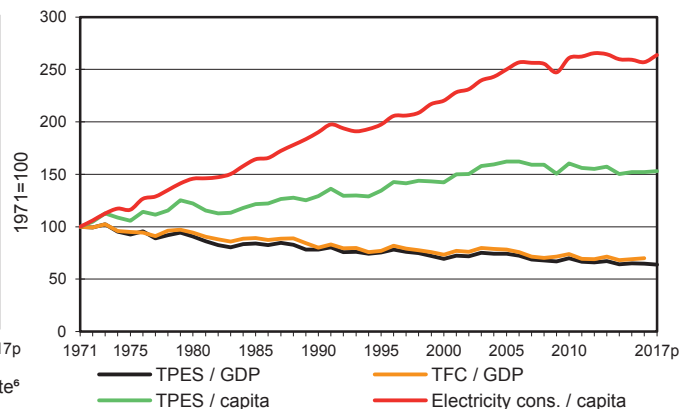
**Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.

## Austria

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal <sup>1</sup>	Crude oil <sup>2</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	0.80	-	0.97	-	3.43	0.76	6.40	-	0.00	12.37
Imports	2.87	7.59	6.39	11.86	-	-	-	0.87	2.27	-	31.84
Exports	-0.03	-	-2.53	-5.70	-	-	-	-0.59	-1.65	-	-10.50
Intl. marine bunkers	-	-	-0.02	-	-	-	-	-	-	-	-0.02
Intl. aviation bunkers	-	-	-0.76	-	-	-	-	-	-	-	-0.76
Stock changes	0.13	0.23	-0.03	0.05	-	-	-	-0.00	-	-	0.38
<b>TPES</b>	<b>2.97</b>	<b>8.62</b>	<b>3.06</b>	<b>7.18</b>	<b>-</b>	<b>3.43</b>	<b>0.76</b>	<b>6.68</b>	<b>0.62</b>	<b>0.00</b>	<b>33.32</b>
Transfers	-	0.17	-0.17	-	-	-	-	-	-	-	0.00
Statistical differences	-0.00	0.00	-	-	-	-	-	-0.00	-	-	-0.01
Electricity plants	-0.68	-	-0.03	-0.49	-	-3.43	-0.54	-0.73	4.72	-0.00	-1.18
CHP plants	-0.18	-	-0.29	-1.19	-	-	-	-1.04	0.90	1.19	-0.60
Heat plants	-	-	-0.03	-0.28	-	-	-0.03	-0.71	-	0.87	-0.18
Blast furnaces	-1.13	-	-0.01	-	-	-	-	-	-	-	-1.14
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat. fuel/BKB/PB plants	-0.06	-	-	-	-	-	-	-	-	-	-0.06
Oil refineries	-	-8.80	8.75	-	-	-	-	-	-	-	-0.05
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-0.00	-	-	-0.00
Energy industry own use	-0.45	-	-0.21	-0.29	-	-	-	-0.04	-0.62	-	-1.62
Losses	-0.02	-	-	-0.00	-	-	-	-	-0.29	-0.32	-0.63
<b>TFC</b>	<b>0.43</b>	<b>-</b>	<b>11.08</b>	<b>4.93</b>	<b>-</b>	<b>-</b>	<b>0.19</b>	<b>4.16</b>	<b>5.32</b>	<b>1.74</b>	<b>27.84</b>
<b>INDUSTRY</b>	<b>0.39</b>	<b>-</b>	<b>0.56</b>	<b>2.69</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1.73</b>	<b>2.21</b>	<b>0.26</b>	<b>7.84</b>
Iron and steel	0.25	-	0.00	0.37	-	-	-	0.00	0.21	0.01	0.83
Chemical and petrochemical	0.02	-	0.02	0.38	-	-	-	0.12	0.39	0.03	0.95
Non-ferrous metals	0.00	-	0.00	0.14	-	-	-	0.01	0.09	0.00	0.25
Non-metallic minerals	0.05	-	0.06	0.42	-	-	-	0.27	0.16	0.00	0.96
Transport equipment	-	-	0.00	0.03	-	-	-	0.00	0.06	0.02	0.12
Machinery	-	-	0.03	0.28	-	-	-	0.01	0.30	0.02	0.64
Mining and quarrying	-	-	0.01	0.07	-	-	-	0.00	0.06	0.00	0.14
Food and tobacco	0.00	-	0.06	0.31	-	-	-	0.16	0.20	0.07	0.81
Paper, pulp and printing	0.06	-	0.00	0.46	-	-	-	0.74	0.40	0.02	1.69
Wood and wood products	-	-	0.02	0.08	-	-	-	0.37	0.15	0.06	0.68
Construction	-	-	0.34	0.08	-	-	-	0.05	0.06	0.02	0.54
Textile and leather	-	-	0.00	0.03	-	-	-	0.00	0.03	0.00	0.07
Non-specified	-	-	0.01	0.04	-	-	-	0.01	0.11	0.01	0.19
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>7.50</b>	<b>0.26</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.53</b>	<b>0.27</b>	<b>-</b>	<b>8.56</b>
Domestic aviation	-	-	0.03	-	-	-	-	-	-	-	0.03
Road	-	-	7.43	0.02	-	-	-	0.53	0.00	-	7.97
Rail	-	-	0.04	-	-	-	-	0.00	0.17	-	0.22
Pipeline transport	-	-	-	0.24	-	-	-	-	0.02	-	0.26
Domestic navigation	-	-	0.00	-	-	-	-	-	-	-	0.00
Non-specified	-	-	-	-	-	-	-	0.00	0.08	-	0.08
<b>OTHER</b>	<b>0.02</b>	<b>-</b>	<b>1.44</b>	<b>1.64</b>	<b>-</b>	<b>-</b>	<b>0.19</b>	<b>1.89</b>	<b>2.84</b>	<b>1.48</b>	<b>9.50</b>
Residential	0.02	-	1.03	1.21	-	-	0.14	1.60	1.53	0.80	6.33
Comm. and public services	0.00	-	0.19	0.42	-	-	0.05	0.12	1.21	0.66	2.65
Agriculture/forestry	-	-	0.22	0.01	-	-	0.00	0.17	0.10	0.01	0.52
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>NON-ENERGY USE</b>	<b>0.02</b>	<b>-</b>	<b>1.58</b>	<b>0.34</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1.94</b>
in industry/transf./energy	0.02	-	1.55	0.34	-	-	-	-	-	-	1.91
of which: chem./petrochem.	0.02	-	1.09	0.34	-	-	-	-	-	-	1.45
in transport	-	-	0.03	-	-	-	-	-	-	-	0.03
in other	-	-	0.00	-	-	-	-	-	-	-	0.00
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>3.97</b>	<b>-</b>	<b>0.99</b>	<b>8.59</b>	<b>-</b>	<b>39.84</b>	<b>6.33</b>	<b>5.54</b>	<b>-</b>	<b>0.02</b>	<b>65.27</b>
Electricity plants	3.38	-	0.20	2.93	-	39.84	6.33	2.17	-	0.02	54.86
CHP plants	0.59	-	0.79	5.66	-	-	-	3.37	-	-	10.41
<b>Heat generated - PJ</b>	<b>3.62</b>	<b>-</b>	<b>5.42</b>	<b>30.60</b>	<b>-</b>	<b>-</b>	<b>0.63</b>	<b>45.89</b>	<b>-</b>	<b>0.11</b>	<b>86.26</b>
CHP plants	3.62	-	4.29	20.19	-	-	-	21.77	-	-	49.88
Heat plants	-	-	1.13	10.40	-	-	0.63	24.12	-	0.11	36.39

1. Includes peat.

2. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Austria

## Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal <sup>1</sup>	Crude oil <sup>2</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	0.75	-	1.04	-	3.33	0.86	6.39	-	0.00	12.37
Imports	3.03	7.57	6.49	11.51	-	-	-	0.87	2.52	-	31.99
Exports	-0.04	-0.01	-2.52	-4.47	-	-	-	-0.62	-1.96	-	-9.62
Intl. marine bunkers	-	-	-0.02	-	-	-	-	-	-	-	-0.02
Intl. aviation bunkers	-	-	-0.73	-	-	-	-	-	-	-	-0.73
Stock changes	-0.09	0.09	0.12	-0.28	-	-	-	-0.03	-	-	-0.19
<b>TPES</b>	<b>2.91</b>	<b>8.39</b>	<b>3.34</b>	<b>7.80</b>	<b>-</b>	<b>3.33</b>	<b>0.86</b>	<b>6.60</b>	<b>0.56</b>	<b>0.00</b>	<b>33.79</b>
Electricity and Heat Output											
Elec. generated - TWh	3.92	-	0.82	11.09	-	38.69	7.48	5.45	-	0.01	67.46
Heat generated - PJ	4.07	-	4.82	30.80	-	-	0.61	47.26	-	0.09	87.64

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes peat.
2. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	7.9	7.6	8.1	9.8	11.7	12.0	12.4	12.4
Net imports (Mtoe)	13.9	16.1	17.4	19.1	21.8	20.4	21.4	22.4
Total primary energy supply (Mtoe)	21.5	23.2	24.9	28.6	33.7	32.9	33.3	33.8
Net oil imports (Mtoe)	9.7	11.0	9.7	11.0	11.7	11.5	11.5	11.5
Oil supply (Mtoe)	12.1	12.1	10.4	11.7	12.3	11.5	11.7	11.7
Electricity consumption (TWh) <sup>1</sup>	27.5	35.4	46.9	56.7	70.1	71.9	72.2	74.6
GDP (billion 2010 USD)	171.2	208.3	260.2	336.5	391.9	414.0	420.0	432.8
GDP PPP (billion 2010 USD)	153.6	186.9	233.5	302.0	351.7	371.5	376.9	388.4
Population (millions)	7.59	7.55	7.68	8.01	8.36	8.63	8.74	8.80
Industrial production index (2010=100)	33.2	40.7	53.3	77.4	100.0	110.4	113.6	118.1
Total self-sufficiency <sup>2</sup>	0.37	0.33	0.33	0.34	0.35	0.37	0.37	0.37
Coal self-sufficiency <sup>2</sup>	0.26	0.23	0.16	0.08	0.00	0.00	-	-
Oil self-sufficiency <sup>2</sup>	0.22	0.13	0.12	0.09	0.08	0.08	0.07	0.06
Natural gas self-sufficiency <sup>2</sup>	0.59	0.40	0.21	0.24	0.17	0.15	0.14	0.13
TPES/GDP (toe per thousand 2010 USD)	0.13	0.11	0.10	0.09	0.09	0.08	0.08	0.08
TPES/GDP PPP (toe per thousand 2010 USD)	0.14	0.12	0.11	0.09	0.10	0.09	0.09	0.09
TPES/population (toe per capita)	2.83	3.07	3.24	3.57	4.02	3.82	3.81	3.84
Net oil imports/GDP (toe per thousand 2010 USD)	0.06	0.05	0.04	0.03	0.03	0.03	0.03	0.03
Oil supply/GDP (toe per thousand 2010 USD)	0.07	0.06	0.04	0.03	0.03	0.03	0.03	0.03
Oil supply/population (toe per capita)	1.60	1.60	1.35	1.46	1.47	1.33	1.34	1.33
Share of renewables in TPES	0.11	0.16	0.20	0.23	0.27	0.30	0.30	0.30
Share of renewables in electricity generation	0.61	0.70	0.66	0.73	0.66	0.77	0.78	0.76
TFC/GDP (toe per thousand 2010 USD)	0.10	0.09	0.08	0.07	0.07	0.07	0.07	..
TFC/GDP PPP (toe per thousand 2010 USD)	0.11	0.10	0.08	0.08	0.08	0.07	0.07	..
TFC/population (toe per capita)	2.19	2.47	2.57	2.93	3.29	3.14	3.19	..
Elect. cons./GDP (kWh per 2010 USD)	0.16	0.17	0.18	0.17	0.18	0.17	0.17	0.17
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	0.18	0.19	0.20	0.19	0.20	0.19	0.19	0.19
Elect. cons./population (kWh per capita)	3621	4685	6111	7076	8385	8330	8258	8474
Industry cons. <sup>3</sup> /industrial production (2010=100)	202.8	169.6	136.1	105.7	100.0	92.0	93.5	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	461.1	232.7	169.1	119.3	100.0	91.9	92.8	..

1. Electricity consumption equals domestic supply less losses.
2. Production divided by TPES. Coal self-sufficiency also includes peat, when applicable.
3. Includes non-energy use.

## Belgium

Figure 1. Energy production

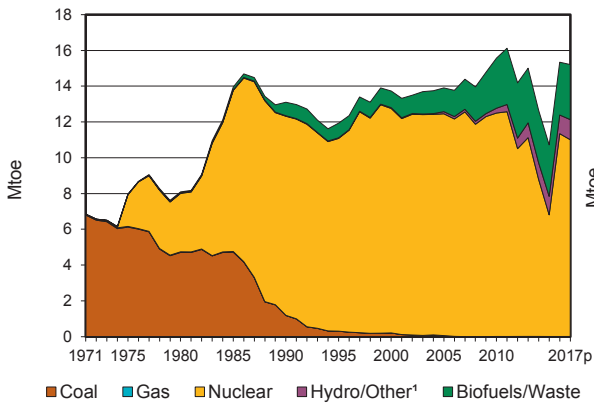


Figure 2. Total primary energy supply<sup>2</sup>

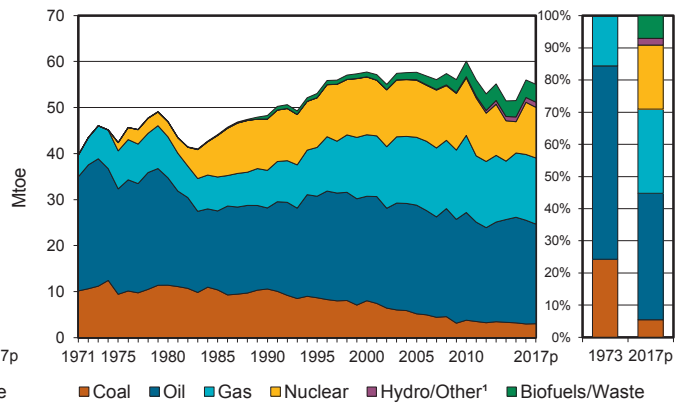


Figure 3. Energy self-sufficiency

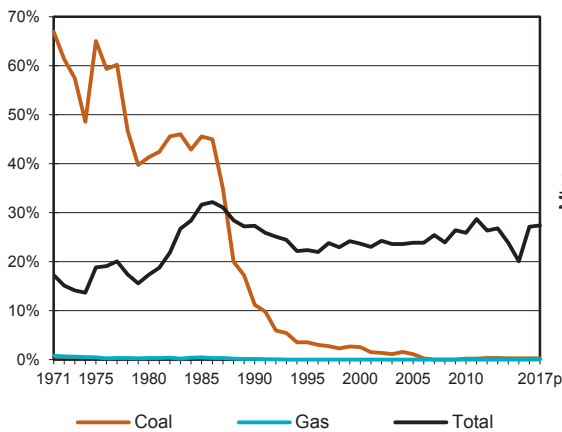


Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>

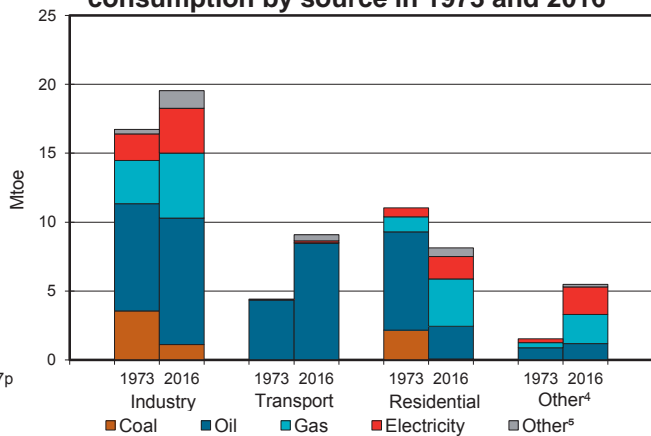


Figure 5. Electricity generation by source

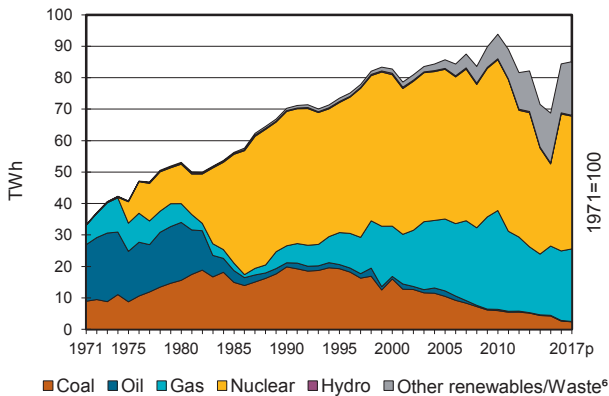
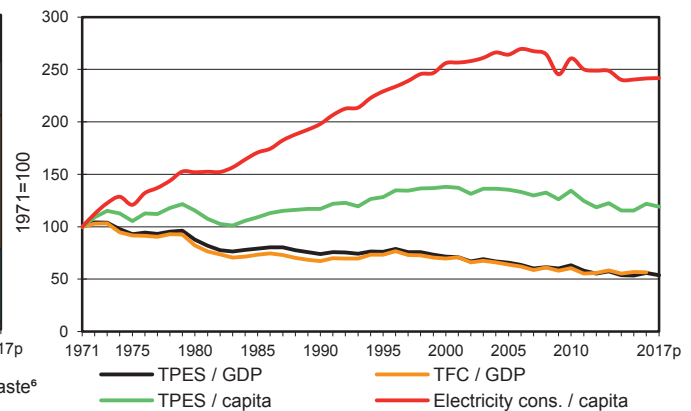


Figure 6. Selected indicators



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.



## Belgium

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	0.01	-	-	-	11.34	0.03	0.76	2.95	-	0.25	15.34
Imports	2.87	33.90	25.44	14.96	-	-	-	1.10	1.26	-	79.52
Exports	-0.05	-2.68	-26.40	-0.58	-	-	-	-0.24	-0.73	-	-30.67
Intl. marine bunkers	-	-	-6.66	-	-	-	-	-	-	-	-6.66
Intl. aviation bunkers	-	-	-1.44	-	-	-	-	-	-	-	-1.44
Stock changes	0.15	0.06	0.30	-0.08	-	-	-	-	-	-	0.43
<b>TPES</b>	<b>2.97</b>	<b>31.28</b>	<b>-8.75</b>	<b>14.30</b>	<b>11.34</b>	<b>0.03</b>	<b>0.76</b>	<b>3.81</b>	<b>0.53</b>	<b>0.25</b>	<b>56.52</b>
Transfers	-	1.48	-1.36	-	-	-	-	-	-	-	0.12
Statistical differences	0.03	0.01	0.01	-0.02	-	-	-	-	0.01	-0.00	0.02
Electricity plants	-0.53	-	-0.00	-1.77	-11.34	-0.03	-0.73	-0.92	5.97	-0.25	-9.61
CHP plants	-0.01	-	-0.03	-1.84	-	-	-	-0.86	1.29	0.64	-0.81
Heat plants	-	-	-	-	-	-	-0.00	-	-	0.00	-0.00
Blast furnaces	-0.97 e	-	-	-	-	-	-	-	-	-	-0.97
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat. fuel/BKB/PB plants	-0.04	-	-	-	-	-	-	-	-	-	-0.04
Oil refineries	-	-34.04	33.91	-	-	-	-	-	-	-	-0.13
Petrochemical plants	-	1.27	-1.32	-	-	-	-	-	-	-	-0.05
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-	-	-	-
Energy industry own use	-0.26	-	-1.24	-0.34	-	-	-	-0.03	-0.43	-0.13	-2.44
Losses	-0.00	-	-	-0.02	-	-	-0.00	-	-0.33	-0.01	-0.37
<b>TFC</b>	<b>1.19</b>	<b>-</b>	<b>21.20</b>	<b>10.29</b>	<b>-</b>	<b>-</b>	<b>0.02</b>	<b>2.00</b>	<b>7.04</b>	<b>0.50</b>	<b>42.25</b>
<b>INDUSTRY</b>	<b>0.89</b>	<b>-</b>	<b>1.87</b>	<b>3.82</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.84</b>	<b>3.26</b>	<b>0.42</b>	<b>11.11</b>
Iron and steel	0.51 e	-	0.01	0.49	-	-	-	0.00	0.39	-	1.40
Chemical and petrochemical	-	-	1.57	1.22	-	-	-	0.01	1.18	0.35	4.33
Non-ferrous metals	-	-	0.00	0.12	-	-	-	0.00	0.16	-	0.28
Non-metallic minerals	0.33	-	0.04	0.52	-	-	-	0.25	0.24	-	1.38
Transport equipment	-	-	0.01	0.05	-	-	-	-	0.17	-	0.23
Machinery	-	-	0.02	0.12	-	-	-	0.00	0.05	-	0.19
Mining and quarrying	-	-	-	0.01	-	-	-	-	0.04	-	0.05
Food and tobacco	0.02	-	0.01	0.87	-	-	-	0.07	0.49	0.04	1.50
Paper, pulp and printing	0.02	-	0.01	0.12	-	-	-	0.31	0.22	0.03	0.71
Wood and wood products	-	-	-	0.02	-	-	-	0.19	0.03	-	0.24
Construction	-	-	0.07	0.06	-	-	-	-	0.07	-	0.20
Textile and leather	-	-	0.00	0.09	-	-	-	0.00	0.10	0.00	0.19
Non-specified	0.02	-	0.13	0.13	-	-	-	0.00	0.12	-	0.41
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>8.46</b>	<b>0.04</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.44</b>	<b>0.14</b>	<b>-</b>	<b>9.08</b>
Domestic aviation	-	-	0.00	-	-	-	-	-	-	-	0.00
Road	-	-	8.22	0.01	-	-	-	0.44	0.00	-	8.67
Rail	-	-	0.05	-	-	-	-	-	0.14	-	0.18
Pipeline transport	-	-	-	0.03	-	-	-	-	0.00	-	0.04
Domestic navigation	-	-	0.19	-	-	-	-	-	-	-	0.19
Non-specified	-	-	0.00	-	-	-	-	-	-	-	0.00
<b>OTHER</b>	<b>0.08</b>	<b>-</b>	<b>3.53</b>	<b>5.54</b>	<b>-</b>	<b>-</b>	<b>0.02</b>	<b>0.72</b>	<b>3.63</b>	<b>0.07</b>	<b>13.61</b>
Residential	0.07	-	2.38	3.42	-	-	0.02	0.62	1.62	0.00	8.13
Comm. and public services	-	-	0.78	1.88	-	-	0.00	0.06	1.87	0.07	4.66
Agriculture/forestry	0.01	-	0.33	0.23	-	-	-	0.05	0.14	0.01	0.77
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	0.05	-	-	-	-	-	-	-	0.05
<b>NON-ENERGY USE</b>	<b>0.21</b>	<b>-</b>	<b>7.34</b>	<b>0.90</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>8.46</b>
in industry/transf./energy	0.21	-	7.32	0.90	-	-	-	-	-	-	8.43
of which: chem./petrochem.	0.21	-	6.47	0.90	-	-	-	-	-	-	7.58
in transport	-	-	0.02	-	-	-	-	-	-	-	0.02
in other	-	-	0.01	-	-	-	-	-	-	-	0.01
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>2.64</b>	<b>-</b>	<b>0.19</b>	<b>22.11</b>	<b>43.52</b>	<b>0.37</b>	<b>8.53</b>	<b>6.54</b>	<b>-</b>	<b>0.50</b>	<b>84.40</b>
Electricity plants	2.55	-	0.01	10.78	43.52	0.37	8.53	3.17	-	0.19	69.12
CHP plants	0.09	-	0.18	11.33	-	-	-	3.37	-	0.31	15.28
<b>Heat generated - PJ</b>	<b>-</b>	<b>-</b>	<b>0.50</b>	<b>22.82</b>	<b>-</b>	<b>-</b>	<b>0.07</b>	<b>3.41</b>	<b>-</b>	<b>10.55</b>	<b>37.35</b>
CHP plants	-	-	0.50	22.82	-	-	-	3.41	-	10.55	37.28
Heat plants	-	-	-	-	-	-	0.07	-	-	-	0.07

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Belgium

## Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	0.01	-	-	-	11.00	0.02	0.86	3.08	-	0.24	15.21
Imports	2.93	35.77	27.19	14.78	-	-	-	1.05	1.22	-	82.95
Exports	-0.06	-2.46	-30.88	-0.63	-	-	-	-0.25	-0.70	-	-34.98
Intl. marine bunkers	-	-	-7.47	-	-	-	-	-	-	-	-7.47
Intl. aviation bunkers	-	-	-1.68	-	-	-	-	-	-	-	-1.68
Stock changes	0.13	-0.03	1.18	0.23	-	-	-	-	-	-	1.52
<b>TPES</b>	<b>3.02</b>	<b>33.29</b>	<b>-11.65</b>	<b>14.38</b>	<b>11.00</b>	<b>0.02</b>	<b>0.86</b>	<b>3.88</b>	<b>0.52</b>	<b>0.24</b>	<b>55.56</b>
Electricity and Heat Output											
Elec. generated - TWh	2.40	-	0.10	23.07	42.23	0.28	9.71	6.83	-	0.48	85.08
Heat generated - PJ	-	-	0.45	23.81	-	-	0.07	3.49	-	10.00	37.82

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	6.5	8.1	13.1	13.7	15.6	10.7	15.3	15.2
Net imports (Mtoe)	43.1	42.3	39.8	50.6	53.9	50.8	48.9	48.0
Total primary energy supply (Mtoe)	46.0	46.8	47.9	58.1	60.1	53.3	56.5	55.6
Net oil imports (Mtoe)	31.5	26.4	22.3	29.6	32.8	31.4	30.3	29.6
Oil supply (Mtoe)	27.7	23.3	17.6	22.7	23.4	23.0	22.5	21.6
Electricity consumption (TWh) <sup>1</sup>	38.4	48.3	63.6	84.6	91.5	87.0	87.9	88.4
GDP (billion 2010 USD)	225.0	270.4	330.0	411.8	483.6	507.9	515.1	524.0
GDP PPP (billion 2010 USD)	203.4	244.5	298.4	372.4	437.2	458.8	465.3	473.4
Population (millions)	9.73	9.86	9.97	10.25	10.90	11.24	11.30	11.35
Industrial production index (2010=100)	48.5	52.2	63.1	70.9	100.0	103.0	107.7	110.9
Total self-sufficiency <sup>2</sup>	0.14	0.17	0.27	0.24	0.26	0.20	0.27	0.27
Coal self-sufficiency <sup>2</sup>	0.57	0.41	0.11	0.03	0.00	0.00	0.00	0.00
Oil self-sufficiency <sup>2</sup>	-	-	-	-	-	-	-	-
Natural gas self-sufficiency <sup>2</sup>	0.01	0.00	0.00	0.00	-	-	-	-
TPES/GDP (toe per thousand 2010 USD)	0.20	0.17	0.15	0.14	0.12	0.11	0.11	0.11
TPES/GDP PPP (toe per thousand 2010 USD)	0.23	0.19	0.16	0.16	0.14	0.12	0.12	0.12
TPES/population (toe per capita)	4.73	4.74	4.81	5.67	5.52	4.74	5.00	4.90
Net oil imports/GDP (toe per thousand 2010 USD)	0.14	0.10	0.07	0.07	0.07	0.06	0.06	0.06
Oil supply/GDP (toe per thousand 2010 USD)	0.12	0.09	0.05	0.06	0.05	0.05	0.04	0.04
Oil supply/population (toe per capita)	2.85	2.37	1.77	2.21	2.15	2.04	1.99	1.91
Share of renewables in TPES	0.00	0.00	0.01	0.01	0.05	0.07	0.07	0.07
Share of renewables in electricity generation	0.01	0.01	0.01 e	0.01	0.07	0.21	0.17	0.18
TFC/GDP (toe per thousand 2010 USD)	0.15	0.12	0.10	0.10	0.09	0.08	0.08	..
TFC/GDP PPP (toe per thousand 2010 USD)	0.17	0.13	0.11	0.11	0.10	0.09	0.09	..
TFC/population (toe per capita)	3.47	3.28	3.22	4.07	3.91	3.73	3.74	..
Elect. cons./GDP (kWh per 2010 USD)	0.17	0.18	0.19	0.21	0.19	0.17	0.17	0.17
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	0.19	0.20	0.21	0.23	0.21	0.19	0.19	0.19
Elect. cons./population (kWh per capita)	3948	4894	6380	8248	8394	7744	7778	7788
Industry cons. <sup>3</sup> /industrial production (2010=100)	188.2	143.3	116.7	151.6	100.0	102.7	99.0	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	201.7	107.2	83.2	134.1	100.0	111.0	107.2	..

1. Electricity consumption equals domestic supply less losses.

2. Production divided by TPES.

3. Includes non-energy use.

## Canada

Figure 1. Energy production

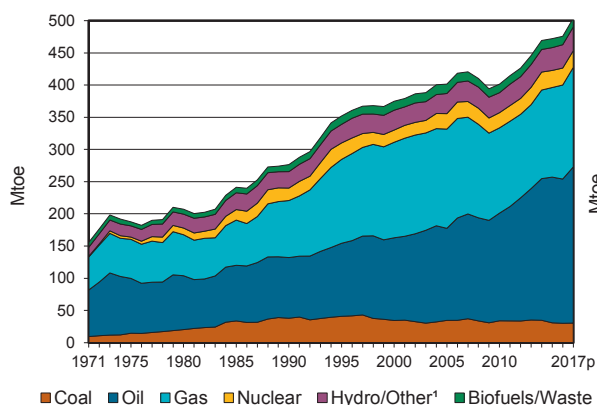


Figure 2. Total primary energy supply<sup>2</sup>

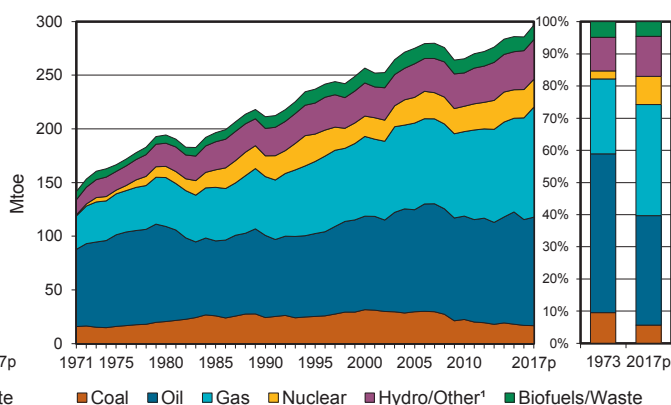


Figure 3. Energy self-sufficiency

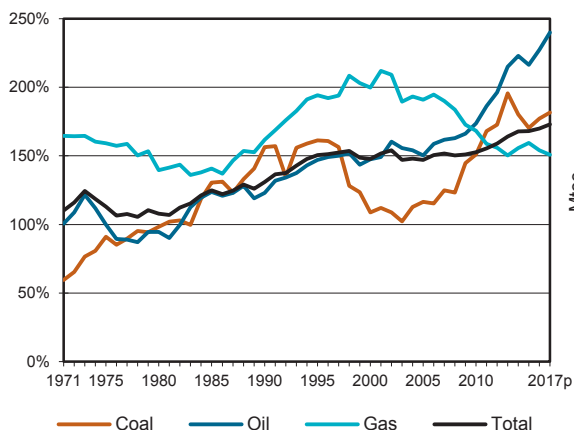


Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>

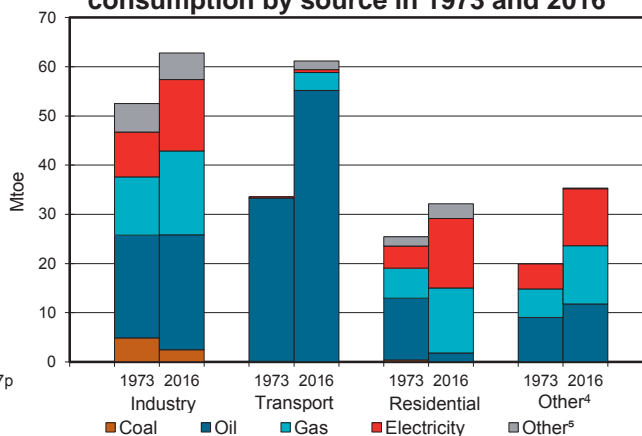


Figure 5. Electricity generation by source

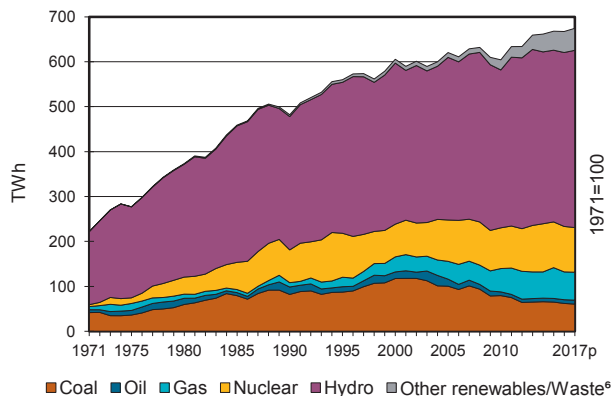
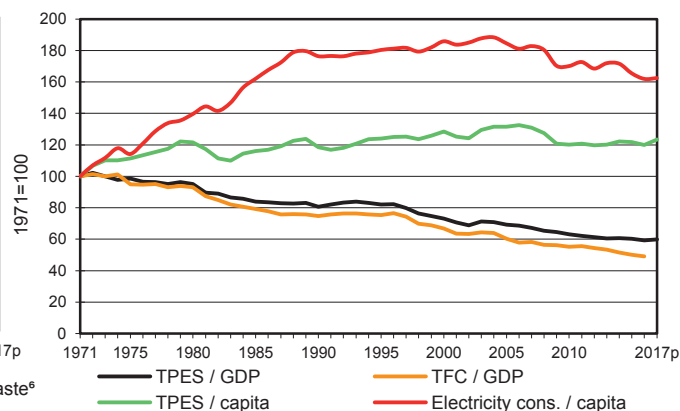


Figure 6. Selected indicators



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.

## Canada

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	30.02	224.02	-	146.03	26.35	33.28	2.95	13.05	-	-	475.71
Imports	4.56	52.04	12.72	16.99	-	-	-	0.96	0.80	-	88.08
Exports	-18.09	-168.56	-21.33	-68.77	-	-	-	-1.24	-6.32	-	-284.30
Intl. marine bunkers	-	-	-0.42	-	-	-	-	-	-	-	-0.42
Intl. aviation bunkers	-	-	-0.64	-	-	-	-	-	-	-	-0.64
Stock changes	0.46	-0.13	0.84	0.50	-	-	-	-	-	-	1.67
<b>TPES</b>	<b>16.96</b>	<b>107.37</b>	<b>-8.82</b>	<b>94.76</b>	<b>26.35</b>	<b>33.28</b>	<b>2.95</b>	<b>12.77</b>	<b>-5.52</b>	<b>-</b>	<b>280.10</b>
Transfers	-	-9.26	13.08	-	-	-	-	-	-	-	3.81
Statistical differences	0.81	-6.09	14.20	-2.53	-	-	-	0.00	-1.17	-	5.22
Electricity plants	-14.48	-	-2.14	-12.21	-26.35	-33.28	-2.91	-2.90	56.34	-	-37.94
CHP plants	-	-	-0.04	-2.62	-	-	-	-0.07	1.04	0.51	-1.18
Heat plants	-0.00	-	-	-	-	-	-	-0.19	-	0.10	-0.09
Blast furnaces	-0.77 e	-	-	-	-	-	-	-	-	-	-0.77
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat. fuel/BKB/PB plants	-0.04	-	-	-	-	-	-	-	-	-	-0.04
Oil refineries	-	-94.38	91.84	-	-	-	-	-	-	-	-2.55
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	2.36	-	-2.99	-	-	-	-	-	-	-0.63
Energy industry own use	-	-	-15.94	-28.72	-	-	-	-0.00	-4.29	-	-48.95
Losses	-	-	-	-	-	-	-	-	-5.59	-	-5.59
<b>TFC</b>	<b>2.47</b>	<b>-</b>	<b>92.17</b>	<b>45.69</b>	<b>-</b>	<b>-</b>	<b>0.04</b>	<b>9.60</b>	<b>40.81</b>	<b>0.61</b>	<b>191.40</b>
<b>INDUSTRY</b>	<b>2.42</b>	<b>-</b>	<b>5.72</b>	<b>13.87</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>4.87</b>	<b>14.51</b>	<b>0.54</b>	<b>41.94</b>
Iron and steel	1.61 e	-	-	1.49	-	-	-	0.00	0.76	0.00	3.86
Chemical and petrochemical	-	-	-	4.04	-	-	-	-	1.84	0.26	6.14
Non-ferrous metals	0.17	-	-	0.51	-	-	-	-	4.29	-	4.97
Non-metallic minerals	0.36	-	0.41	0.77	-	-	-	0.14	0.63	-	2.31
Transport equipment	-	-	-	0.28	-	-	-	-	0.31	-	0.58
Machinery	-	-	-	0.27	-	-	-	-	0.18	-	0.45
Mining and quarrying	0.03	-	1.29	0.76	-	-	-	-	0.52	-	2.60
Food and tobacco	-	-	-	1.52	-	-	-	-	0.51	0.00	2.03
Paper, pulp and printing	-	-	0.15	1.73	-	-	-	4.73	3.27	0.05	9.92
Wood and wood products	-	-	0.62	0.25	-	-	-	-	0.34	-	1.20
Construction	-	-	1.96	0.40	-	-	-	-	-	0.00	2.36
Textile and leather	-	-	-	0.09	-	-	-	-	0.07	-	0.16
Non-specified	0.25	-	1.28	1.78	-	-	-	-	1.80	0.23	5.34
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>55.18</b>	<b>3.63</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1.71</b>	<b>0.59</b>	<b>-</b>	<b>61.11</b>
Domestic aviation	-	-	5.24	-	-	-	-	-	-	-	5.24
Road	-	-	46.53	0.04	-	-	-	1.71	0.07	-	48.36
Rail	-	-	1.91	-	-	-	-	-	-	-	1.91
Pipeline transport	-	-	0.03	3.59	-	-	-	-	0.52	-	4.14
Domestic navigation	-	-	1.36	-	-	-	-	-	-	-	1.36
Non-specified	-	-	0.12	-	-	-	-	-	-	-	0.12
<b>OTHER</b>	<b>0.01</b>	<b>-</b>	<b>10.67</b>	<b>25.06</b>	<b>-</b>	<b>-</b>	<b>0.04</b>	<b>3.02</b>	<b>25.71</b>	<b>0.07</b>	<b>64.58</b>
Residential	0.01	-	1.82	13.20	-	-	-	3.00	14.12	-	32.14
Comm. and public services	-	-	3.71	11.05	-	-	-	0.02	9.95	0.05	24.76
Agriculture/forestry	-	-	5.14	0.82	-	-	-	0.00	0.86	0.00	6.82
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	0.04	-	0.79	0.02	0.85
<b>NON-ENERGY USE</b>	<b>0.05</b>	<b>-</b>	<b>20.60</b>	<b>3.13</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>23.78</b>
in industry/transf./energy	0.05	-	17.66	3.13	-	-	-	-	-	-	20.83
of which: chem./petrochem.	-	-	13.45	3.13	-	-	-	-	-	-	16.57
in transport	-	-	0.02	-	-	-	-	-	-	-	0.02
in other	-	-	2.92	-	-	-	-	-	-	-	2.92
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>62.13</b>	<b>-</b>	<b>8.24</b>	<b>61.98</b>	<b>101.14</b>	<b>387.10</b>	<b>33.95</b>	<b>12.78</b>	<b>-</b>	<b>-</b>	<b>667.33</b>
Electricity plants	62.13	-	8.23	50.15	101.14	387.10	33.95	12.53	-	-	655.23
CHP plants	-	-	0.01	11.83	-	-	-	0.25	-	-	12.09
<b>Heat generated - PJ</b>	<b>0.02</b>	<b>-</b>	<b>1.00</b>	<b>19.39</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>5.16</b>	<b>-</b>	<b>-</b>	<b>25.56</b>
CHP plants	-	-	1.00	19.39	-	-	-	0.86	-	-	21.25
Heat plants	0.02	-	-	-	-	-	-	4.30	-	-	4.31

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Canada

## Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	30.37	242.34	-	154.60	25.89	33.91	3.03	13.58	-	-	503.72
Imports	5.21	49.78	13.19	20.29	-	-	-	1.04	0.85	-	90.36
Exports	-18.48	-178.68	-23.91	-71.05	-	-	-	-1.08	-6.25	-	-299.45
Intl. marine bunkers	-	-	-0.42	-	-	-	-	-	-	-	-0.42
Intl. aviation bunkers	-	-	-0.62	-	-	-	-	-	-	-	-0.62
Stock changes	-0.37	-0.25	-0.38	-1.27	-	-	-	-	-	-	-2.26
<b>TPES</b>	<b>16.73</b>	<b>113.19</b>	<b>-12.14</b>	<b>102.57</b>	<b>25.89</b>	<b>33.91</b>	<b>3.03</b>	<b>13.54</b>	<b>-5.40</b>	<b>-</b>	<b>291.33</b>
Electricity and Heat Output											
Elec. generated - TWh	60.74	-	8.72	62.19	99.38	394.42	34.89	14.00	-	-	674.32
Heat generated - PJ	0.01	-	1.00	19.29	-	-	-	5.16	-	-	25.46

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	198.2	207.2	276.5	374.9	401.4	472.0	475.7	503.7
Net imports (Mtoe)	-35.6	-12.3	-59.3	-127.7	-143.9	-188.5	-196.2	-209.1
Total primary energy supply (Mtoe)	159.4	192.0	211.3	253.6	263.1	280.8	280.1	291.3
Net oil imports (Mtoe)	-14.5	8.4	-14.9	-39.0	-69.1	-121.2	-125.1	-139.6
Oil supply (Mtoe)	79.4	88.5	76.5	87.1	96.3	104.6	98.6	101.1
Electricity consumption (TWh) <sup>1</sup>	230.4	313.9	447.7	522.8	530.3	543.4	538.3	546.7
GDP (billion 2010 USD)	616.8	781.3	1014.1	1342.7	1613.5	1802.5	1828.0	1883.7
GDP PPP (billion 2010 USD)	520.3	659.1	855.5	1132.8	1361.1	1520.6	1542.1	1589.1
Population (millions)	22.49	24.52	27.69	30.69	34.01	35.83	36.27	36.71
Industrial production index (2010=100)	57.2	62.8	77.2	111.8	100.0	111.1	111.6	116.4
Total self-sufficiency <sup>2</sup>	1.24	1.08	1.31	1.48	1.53	1.68	1.70	1.73
Coal self-sufficiency <sup>2</sup>	0.77	0.98	1.56	1.09	1.51	1.70	1.77	1.82
Oil self-sufficiency <sup>2</sup>	1.22	0.94	1.23	1.47	1.74	2.16	2.27	2.40
Natural gas self-sufficiency <sup>2</sup>	1.65	1.40	1.62	2.00	1.68	1.59	1.54	1.51
TPES/GDP (toe per thousand 2010 USD)	0.26	0.25	0.21	0.19	0.16	0.16	0.15	0.15
TPES/GDP PPP (toe per thousand 2010 USD)	0.31	0.29	0.25	0.22	0.19	0.18	0.18	0.18
TPES/population (toe per capita)	7.08	7.83	7.63	8.26	7.74	7.84	7.72	7.94
Net oil imports/GDP (toe per thousand 2010 USD)	-0.02	0.01	-0.01	-0.03	-0.04	-0.07	-0.07	-0.07
Oil supply/GDP (toe per thousand 2010 USD)	0.13	0.11	0.08	0.06	0.06	0.06	0.05	0.05
Oil supply/population (toe per capita)	3.53	3.61	2.76	2.84	2.83	2.92	2.72	2.75
Share of renewables in TPES	0.15	0.15	0.17	0.18 e	0.17	0.18	0.17	0.17
Share of renewables in electricity generation	0.72	0.68	0.62	0.61 e	0.61	0.64	0.65	0.66
TFC/GDP (toe per thousand 2010 USD)	0.21	0.20	0.16	0.14	0.12	0.11	0.11	..
TFC/GDP PPP (toe per thousand 2010 USD)	0.25	0.24	0.19	0.17	0.14	0.13	0.12	..
TFC/population (toe per capita)	5.84	6.33	5.84	6.24	5.60	5.38	5.28	..
Elect. cons./GDP (kWh per 2010 USD)	0.37	0.40	0.44	0.39	0.33	0.30	0.29	0.29
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	0.44	0.48	0.52	0.46	0.39	0.36	0.35	0.34
Elect. cons./population (kWh per capita)	10242	12804	16168	17037	15594	15166	14844	14893
Industry cons. <sup>3</sup> /industrial production (2010=100)	149.5	158.9	129.3	107.3	100.0	91.4	91.6	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	173.3	153.7	105.6	87.2	100.0	91.4	99.7	..

1. Electricity consumption equals domestic supply less losses.

2. Production divided by TPES.

3. Includes non-energy use.

## Chile

Figure 1. Energy production

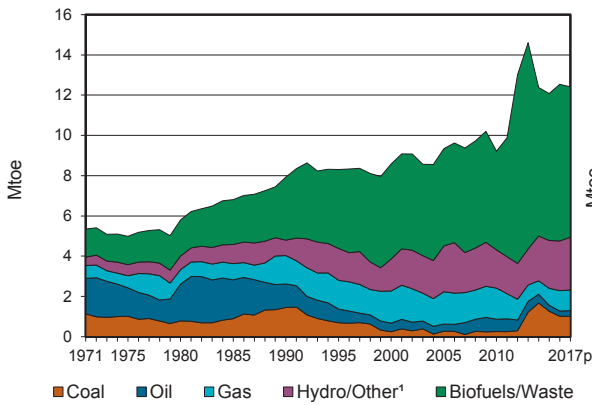


Figure 2. Total primary energy supply<sup>2</sup>

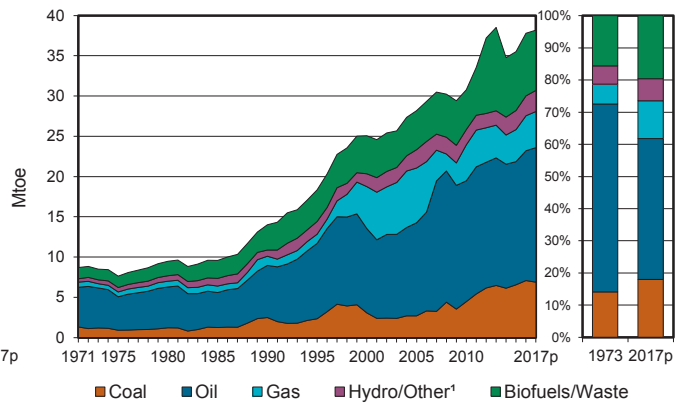


Figure 3. Energy self-sufficiency

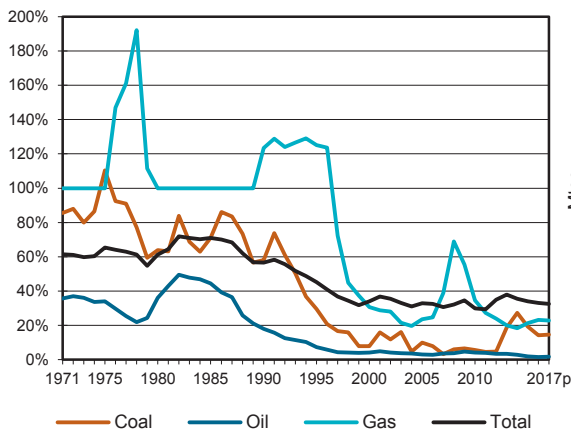


Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>

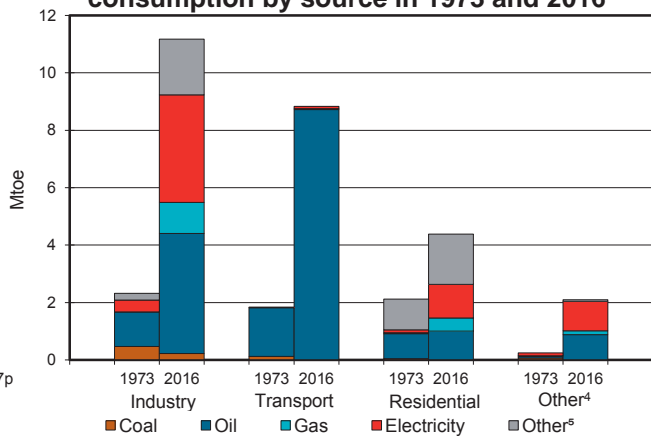


Figure 5. Electricity generation by source

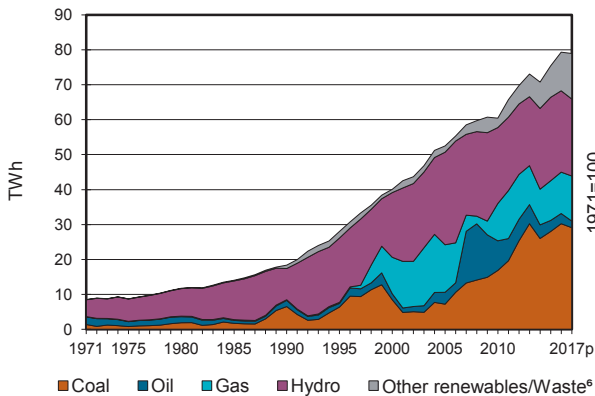
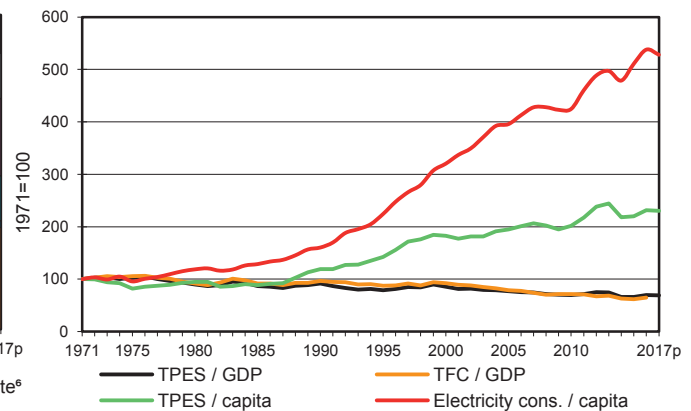


Figure 6. Selected indicators



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.

## Chile

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	1.01	0.26	-	1.01	-	2.00	0.47 e	7.78	-	-	12.54
Imports	6.62	8.61	8.46	3.66	-	-	-	0.00	-	-	27.34
Exports	-0.45	-	-0.44	-0.30	-	-	-	-	-0.00	-	-1.20
Intl. marine bunkers	-	-	-0.13	-	-	-	-	-	-	-	-0.13
Intl. aviation bunkers	-	-	-0.58	-	-	-	-	-	-	-	-0.58
Stock changes	-0.10	0.05	-0.09	-0.02	-	-	-	-0.01	-	-	-0.17
<b>TPES</b>	<b>7.09</b>	<b>8.91</b>	<b>7.21</b>	<b>4.35</b>	<b>-</b>	<b>2.00</b>	<b>0.47</b>	<b>7.77</b>	<b>-0.00</b>	<b>-</b>	<b>37.80</b>
Transfers	-	0.92	-0.87	-	-	-	-	-	-	-	0.05
Statistical differences	0.32	0.30	-0.13	-0.32	-	-	-	0.23	-0.24	-	0.16
Electricity plants	-6.96	-	-0.76	-2.13	-	-2.00	-0.44	-	6.31	-	-5.98
CHP plants	-	-	-	-	-	-	-	-4.19	0.51	-	-3.68
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-0.11 e	-	-	-	-	-	-	-	-	-	-0.11
Gas works	0.00	-	-0.00	-0.00	-	-	-	-	-	-	0.00
Coke/pat. fuel/BKB/PB plants	0.02	-	-	-	-	-	-	-	-	-	0.02
Oil refineries	-	-10.12	9.68	-	-	-	-	-	-	-	-0.44
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-0.07 e	-	-	-0.07
Energy industry own use	-0.14	-	-0.33	-0.15	-	-	-	-	-0.30	-	-0.91
Losses	-0.01	-	-	-0.06	-	-	-	-0.03	-0.25	-	-0.34
<b>TFC</b>	<b>0.22</b>	<b>-</b>	<b>14.80</b>	<b>1.69</b>	<b>-</b>	<b>-</b>	<b>0.03</b>	<b>3.71</b>	<b>6.03</b>	<b>-</b>	<b>26.49</b>
<b>INDUSTRY</b>	<b>0.22</b>	<b>-</b>	<b>3.89</b>	<b>0.82</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1.94</b>	<b>3.75</b>	<b>-</b>	<b>10.61</b>
Iron and steel	0.07 e	-	0.01	0.00	-	-	-	-	0.05	-	0.14
Chemical and petrochemical	-	-	-	0.12	-	-	-	-	0.00	-	0.13
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	0.00	-	0.24	0.01	-	-	-	0.01	0.03	-	0.29
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	0.05	-	2.27	0.17	-	-	-	-	2.09	-	4.58
Food and tobacco	0.05	-	-	0.00	-	-	-	0.00	-	-	0.05
Paper, pulp and printing	0.01	-	0.19	0.16	-	-	-	1.50	0.48	-	2.33
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	0.04	-	1.17	0.35	-	-	-	0.43	1.10	-	3.10
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>8.73</b>	<b>0.02</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.08</b>	<b>-</b>	<b>8.84</b>
Domestic aviation	-	-	0.48	-	-	-	-	-	-	-	0.48
Road	-	-	7.88	0.02	-	-	-	-	0.04	-	7.94
Rail	-	-	0.04	-	-	-	-	-	0.04	-	0.09
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	0.33	-	-	-	-	-	-	-	0.33
Non-specified	-	-	-	-	-	-	-	-	0.00	-	0.00
<b>OTHER</b>	<b>0.01</b>	<b>-</b>	<b>1.88</b>	<b>0.59</b>	<b>-</b>	<b>-</b>	<b>0.03</b>	<b>1.77</b>	<b>2.20</b>	<b>-</b>	<b>6.48</b>
Residential	0.00	-	1.00	0.46	-	-	-	1.75	1.17	-	4.38
Comm. and public services	0.00	-	0.62	0.13	-	-	-	0.02	1.02	-	1.80
Agriculture/forestry	-	-	-	-	-	-	-	-	-	-	-
Fishing	0.00	-	0.26	0.00	-	-	-	-	0.01	-	0.27
Non-specified	-	-	-	-	-	-	0.03 e	-	-	-	0.03
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>0.30</b>	<b>0.26</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.56</b>
in industry/transf./energy	-	-	0.30	0.26	-	-	-	-	-	-	0.56
of which: chem./petrochem.	-	-	-	0.26	-	-	-	-	-	-	0.26
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>30.23</b>	<b>-</b>	<b>2.91</b>	<b>11.85</b>	<b>-</b>	<b>23.27</b>	<b>5.09</b>	<b>5.96</b>	<b>-</b>	<b>-</b>	<b>79.31</b>
Electricity plants	30.23	-	2.91	11.85	-	23.27	5.09	-	-	-	73.35
CHP plants	-	-	-	-	-	-	-	5.96	-	-	5.96
<b>Heat generated - PJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>..</b>	<b>-</b>	<b>-</b>	<b>-</b>
CHP plants	-	-	-	-	-	-	-	..	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.



## Chile

## Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	1.00	0.29	-	1.03	-	1.89	0.73	7.48	-	-	12.42
Imports	6.37	9.22	8.27	3.74	-	-	-	-	0.00	-	27.60
Exports	-0.40	-	-0.42	-0.23	-	-	-	-	-0.00	-	-1.06
Intl. marine bunkers	-	-	-0.13	-	-	-	-	-	-	-	-0.13
Intl. aviation bunkers	-	-	-0.48	-	-	-	-	-	-	-	-0.48
Stock changes	-0.09	-0.03	0.00	-0.05	-	-	-	-	-	-	-0.16
<b>TPES</b>	<b>6.88</b>	<b>9.47</b>	<b>7.24</b>	<b>4.49</b>	<b>-</b>	<b>1.89</b>	<b>0.73</b>	<b>7.48</b>	<b>-0.00</b>	<b>-</b>	<b>38.18</b>
Electricity and Heat Output											
Elec. generated - TWh	29.11	-	1.89	12.90	-	22.03	7.48	5.54	-	-	78.95
Heat generated - PJ	-	-	-	-	-	-	-	-	-	-	-

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	5.1	5.8	7.9	8.6	9.2	12.1	12.5	12.4
Net imports (Mtoe)	3.7	4.0	7.0	17.7	22.3	24.2	26.1	26.5
Total primary energy supply (Mtoe)	8.5	9.5	14.0	25.2	30.9	35.5	37.8	38.2
Net oil imports (Mtoe)	3.5	3.4	5.9	11.1	15.4	15.8	16.6	17.1
Oil supply (Mtoe)	5.0	5.1	6.5	10.5	15.0	15.3	16.1	16.7
Electricity consumption (TWh) <sup>1</sup>	7.8	10.3	16.4	38.4	56.4	71.7	76.4	76.0
GDP (billion 2010 USD)	40.4	52.1	75.5	144.5	218.5	264.6	267.9	271.9
GDP PPP (billion 2010 USD)	57.4	74.1	107.2	205.3	310.4	375.8	380.5	386.2
Population (millions)	10.07	11.17	13.18	15.40	17.09	18.05	18.28	18.52
Industrial production index (2010=100)	..	..	..	79.2	100.0	113.1	113.4	112.2
Total self-sufficiency <sup>2</sup>	0.60	0.61	0.57	0.34	0.30	0.34	0.33	0.33
Coal self-sufficiency <sup>2</sup>	0.80	0.64	0.58	0.08	0.06	0.19	0.14	0.15
Oil self-sufficiency <sup>2</sup>	0.36	0.36	0.18	0.04	0.04	0.02	0.02	0.02
Natural gas self-sufficiency <sup>2</sup>	1.00	1.00	1.23	0.31	0.35	0.21	0.23	0.23
TPES/GDP (toe per thousand 2010 USD)	0.21	0.18	0.19	0.17	0.14	0.13	0.14	0.14
TPES/GDP PPP (toe per thousand 2010 USD)	0.15	0.13	0.13	0.12	0.10	0.09	0.10	0.10
TPES/population (toe per capita)	0.84	0.85	1.06	1.63	1.81	1.97	2.07	2.06
Net oil imports/GDP (toe per thousand 2010 USD)	0.09	0.07	0.08	0.08	0.07	0.06	0.06	0.06
Oil supply/GDP (toe per thousand 2010 USD)	0.12	0.10	0.09	0.07	0.07	0.06	0.06	0.06
Oil supply/population (toe per capita)	0.49	0.45	0.49	0.68	0.88	0.85	0.88	0.90
Share of renewables in TPES	0.21	0.26	0.28	0.25	0.22	0.27	0.27	0.26
Share of renewables in electricity generation	0.64	0.68	0.54	0.49	0.40	0.44	0.43	0.44
TFC/GDP (toe per thousand 2010 USD)	0.16	0.14	0.15	0.14	0.11	0.10	0.10	..
TFC/GDP PPP (toe per thousand 2010 USD)	0.11	0.10	0.10	0.10	0.08	0.07	0.07	..
TFC/population (toe per capita)	0.65	0.65	0.84	1.32	1.40	1.39	1.45	..
Elect. cons./GDP (kWh per 2010 USD)	0.19	0.20	0.22	0.27	0.26	0.27	0.29	0.28
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	0.14	0.14	0.15	0.19	0.18	0.19	0.20	0.20
Elect. cons./population (kWh per capita)	772	923	1247	2490	3301	3972	4182	4105
Industry cons. <sup>3</sup> /industrial production (2010=100)	..	..	..	117.3	100.0	97.4	101.3	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	..	..	..	80.7	100.0	106.8	110.8	..

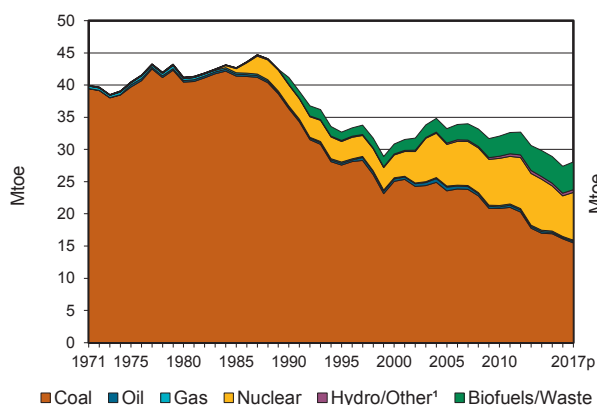
1. Electricity consumption equals domestic supply less losses.

2. Production divided by TPES.

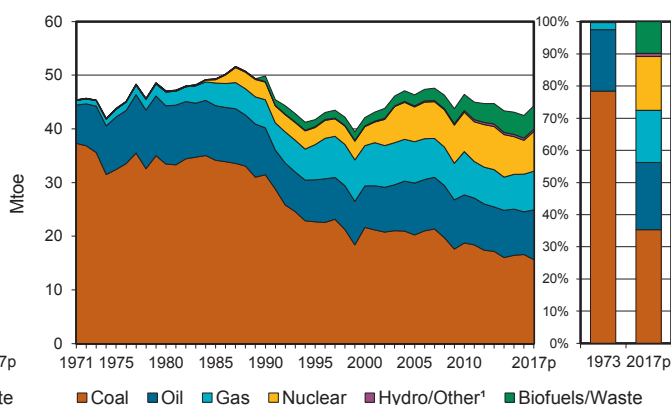
3. Includes non-energy use.

## Czech Republic

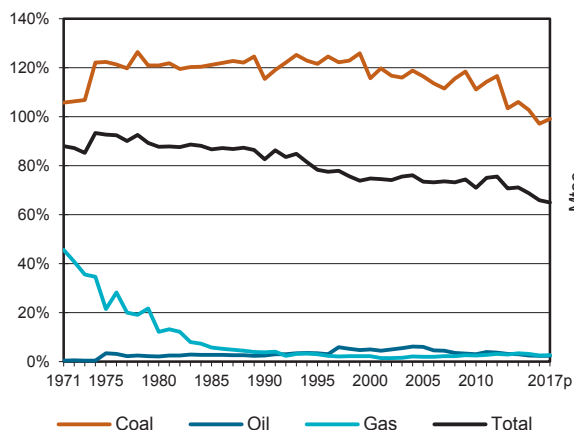
**Figure 1. Energy production**



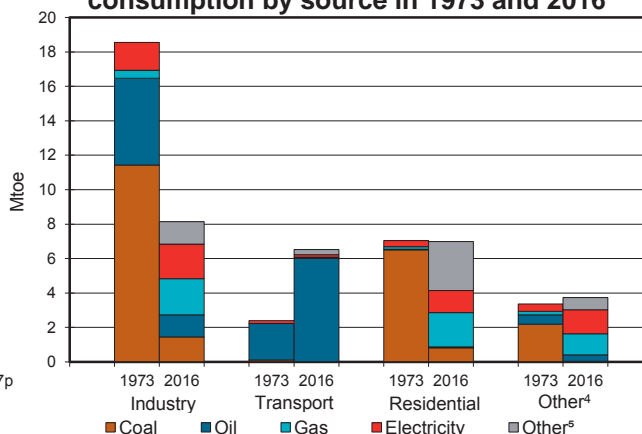
**Figure 2. Total primary energy supply<sup>2</sup>**



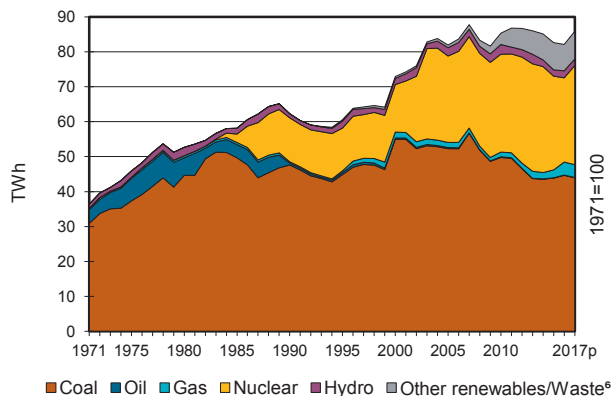
**Figure 3. Energy self-sufficiency**



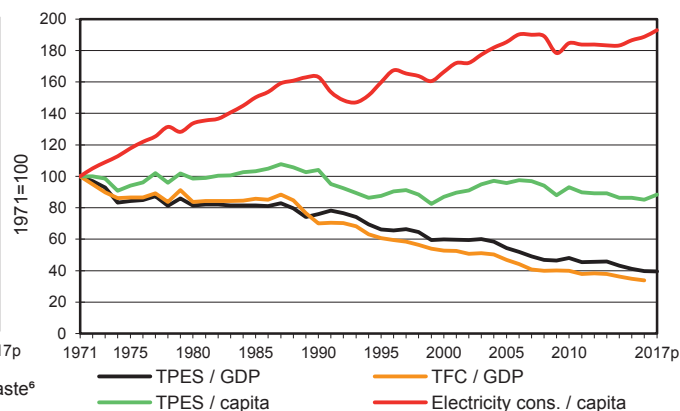
**Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.

## Czech Republic

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./ Solar/ etc.	Biofuels/ Waste	Electricity	Heat	Total
Production	16.12	0.19	-	0.18	6.30	0.17	0.24	4.17	-	0.01	27.38
Imports	2.97	5.43	4.85	6.72	-	-	-	0.43	1.19	0.00	21.58
Exports	-3.14	-0.03	-2.19	-	-	-	-	-0.40	-2.13	-0.00	-7.89
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-0.31	-	-	-	-	-	-	-	-0.31
Stock changes	0.65	0.00	0.02	0.12	-	-	-	-0.00	-	-	0.79
<b>TPES</b>	<b>16.59</b>	<b>5.59</b>	<b>2.37</b>	<b>7.02</b>	<b>6.30</b>	<b>0.17</b>	<b>0.24</b>	<b>4.20</b>	<b>-0.94</b>	<b>0.01</b>	<b>41.55</b>
Transfers	-	0.13	-0.11	-	-	-	-	-	-	-	0.02
Statistical differences	-0.23	-0.00	0.01	-	-	-	-	-0.00	-0.17	-0.09	-0.48
Electricity plants	-2.06	-	-0.01	-0.29	-6.28	-0.17	-0.23	-0.02	3.37	-0.02	-5.71
CHP plants	-10.07	-	-0.03	-0.54	-0.02	-	-	-1.13	3.69	2.40	-5.70
Heat plants	-0.06	-	-0.01	-0.62	-	-	-	-0.04	-0.00	0.66	-0.07
Blast furnaces	-0.85	-	-	-	-	-	-	-	-	-	-0.85
Gas works	-0.24	-	-	-	-	-	-	-	-	-	-0.24
Coke/pat. fuel/BKB/PB plants	-0.02	-	-	-	-	-	-	-	-	-	-0.02
Oil refineries	-	-5.77	5.71	-	-	-	-	-	-	-	-0.06
Petrochemical plants	-	0.05	-0.05	-	-	-	-	-	-	-	0.00
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-	-	-	-
Energy industry own use	-0.66	-	-0.17	-0.08	-	-	-	-	-0.78	-0.65	-2.34
Losses	-0.07	-	-	-0.11	-	-	-	-	-0.35	-0.17	-0.70
<b>TFC</b>	<b>2.32</b>	<b>-</b>	<b>7.71</b>	<b>5.38</b>	<b>-</b>	<b>-</b>	<b>0.02</b>	<b>3.01</b>	<b>4.82</b>	<b>2.13</b>	<b>25.40</b>
<b>INDUSTRY</b>	<b>1.05</b>	<b>-</b>	<b>0.15</b>	<b>2.02</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.70</b>	<b>2.00</b>	<b>0.61</b>	<b>6.52</b>
Iron and steel	0.51	-	-	0.20	-	-	-	0.00	0.20	0.07	0.97
Chemical and petrochemical	0.23	-	0.01	0.16	-	-	-	0.00	0.30	0.25	0.96
Non-ferrous metals	0.00	-	-	0.05	-	-	-	0.00	0.03	0.00	0.09
Non-metallic minerals	0.20	-	0.01	0.49	-	-	-	0.22	0.20	0.01	1.13
Transport equipment	0.01	-	0.00	0.16	-	-	-	0.00	0.25	0.04	0.46
Machinery	0.01	-	0.01	0.24	-	-	-	0.00	0.35	0.06	0.68
Mining and quarrying	-	-	0.00	0.05	-	-	-	0.00	0.03	0.00	0.08
Food and tobacco	0.05	-	0.01	0.30	-	-	-	0.01	0.14	0.07	0.58
Paper, pulp and printing	0.03	-	0.00	0.09	-	-	-	0.29	0.15	0.02	0.59
Wood and wood products	0.00	-	0.00	0.01	-	-	-	0.17	0.04	0.00	0.23
Construction	0.00	-	0.06	0.09	-	-	-	0.00	0.04	0.01	0.20
Textile and leather	0.00	-	0.00	0.09	-	-	-	0.00	0.07	0.01	0.18
Non-specified	0.00	-	0.04	0.09	-	-	-	0.01	0.19	0.06	0.38
<b>TRANSPORT</b>	<b>0.00</b>	<b>-</b>	<b>5.88</b>	<b>0.05</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.30</b>	<b>0.14</b>	<b>-</b>	<b>6.38</b>
Domestic aviation	-	-	0.04	-	-	-	-	-	-	-	0.04
Road	-	-	5.76	0.05	-	-	-	0.29	0.01	-	6.11
Rail	0.00	-	0.08	-	-	-	-	0.01	0.13	-	0.22
Pipeline transport	-	-	-	0.01	-	-	-	-	0.00	-	0.01
Domestic navigation	-	-	0.00	-	-	-	-	-	-	-	0.00
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>0.86</b>	<b>-</b>	<b>0.42</b>	<b>3.21</b>	<b>-</b>	<b>-</b>	<b>0.02</b>	<b>2.01</b>	<b>2.68</b>	<b>1.52</b>	<b>10.73</b>
Residential	0.82	-	0.05	1.99	-	-	0.01	1.78	1.28	1.06	6.99
Comm. and public services	0.03	-	0.03	1.13	-	-	0.00	0.09	1.32	0.46	3.05
Agriculture/forestry	0.01	-	0.33	0.06	-	-	-	0.15	0.08	0.01	0.64
Fishing	-	-	-	0.00	-	-	-	-	0.00	-	0.00
Non-specified	-	-	0.01	0.03	-	-	-	-	-	-	0.04
<b>NON-ENERGY USE</b>	<b>0.41</b>	<b>-</b>	<b>1.26</b>	<b>0.10</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1.77</b>
in industry/transf./energy	0.41	-	1.12	0.10	-	-	-	-	-	-	1.62
of which: chem./petrochem.	0.41	-	0.60	0.10	-	-	-	-	-	-	1.11
in transport	-	-	0.15	-	-	-	-	-	-	-	0.15
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>44.64</b>	<b>-</b>	<b>0.09</b>	<b>3.71</b>	<b>24.10</b>	<b>2.00</b>	<b>2.71</b>	<b>4.84</b>	<b>-</b>	<b>0.02</b>	<b>82.11</b>
Electricity plants	8.52	-	0.03	1.86	24.10	2.00	2.63	0.06	-	-	39.20
CHP plants	36.12	-	0.07	1.85	-	-	0.08	4.77	-	0.02	42.90
<b>Heat generated - PJ</b>	<b>78.17</b>	<b>-</b>	<b>1.09</b>	<b>35.28</b>	<b>0.88</b>	<b>-</b>	<b>2.36</b>	<b>10.23</b>	<b>0.01</b>	<b>0.42</b>	<b>128.44</b>
CHP plants	76.14	-	0.80	12.52	0.88	-	1.24	9.01	-	0.18	100.76
Heat plants	2.03	-	0.30	22.77	-	-	1.12	1.23	0.01	0.23	27.68

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Czech Republic

## Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	15.50	0.23	-	0.19	7.41	0.16	0.26	4.31	-	0.01	28.06
Imports	2.86	7.95	3.81	7.33	-	-	-	0.42	1.30	0.00	23.67
Exports	-2.49	-0.02	-2.37	-	-	-	-	-0.37	-2.42	-0.00	-7.67
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-0.36	-	-	-	-	-	-	-	-0.36
Stock changes	-0.24	-0.03	0.08	-0.32	-	-	-	-0.00	-	-	-0.51
<b>TPES</b>	<b>15.63</b>	<b>8.12</b>	<b>1.16</b>	<b>7.20</b>	<b>7.41</b>	<b>0.16</b>	<b>0.26</b>	<b>4.36</b>	<b>-1.12</b>	<b>0.01</b>	<b>43.19</b>
Electricity and Heat Output											
Elec. generated - TWh	43.92	-	0.12	3.67	28.34	1.87	2.86	5.06	-	0.02	85.86
Heat generated - PJ	75.05	-	1.25	36.34	0.91	-	2.45	10.81	0.01	0.30	127.11

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	38.5	41.2	41.2	30.8	32.1	28.9	27.4	28.1
Net imports (Mtoe)	7.0	6.4	7.6	9.4	11.6	13.5	13.7	16.0
Total primary energy supply (Mtoe)	45.2	47.0	49.8	41.2	45.2	42.0	41.6	43.2
Net oil imports (Mtoe)	8.9	10.9	8.6	7.5	9.0	8.7	8.1	9.4
Oil supply (Mtoe)	8.7	10.8	8.7	7.7	9.0	8.6	8.0	9.3
Electricity consumption (TWh) <sup>1</sup>	37.0	47.3	57.9	58.5	66.5	67.3	68.3	69.9
GDP (billion 2010 USD)	107.3	127.2	144.6	151.8	207.5	225.5	231.3	241.3
GDP PPP (billion 2010 USD)	150.1	178.0	202.3	212.5	290.4	315.6	323.8	337.3
Population (millions)	9.92	10.33	10.36	10.27	10.52	10.54	10.57	10.59
Industrial production index (2010=100)	..	..	83.9	70.0	100.0	114.9	118.8	126.5
Total self-sufficiency <sup>2</sup>	0.85	0.88	0.83	0.75	0.71	0.69	0.66	0.65
Coal self-sufficiency <sup>2</sup>	1.07 e	1.21	1.15	1.16	1.11	1.03	0.97	0.99
Oil self-sufficiency <sup>2</sup>	0.01	0.02	0.03	0.05	0.03	0.02	0.02	0.02
Natural gas self-sufficiency <sup>2</sup>	0.36	0.12	0.04	0.02	0.03	0.03	0.03	0.03
TPES/GDP (toe per thousand 2010 USD)	0.42	0.37	0.34	0.27	0.22	0.19	0.18	0.18
TPES/GDP PPP (toe per thousand 2010 USD)	0.30	0.26	0.25	0.19	0.16	0.13	0.13	0.13
TPES/population (toe per capita)	4.55	4.55	4.81	4.01	4.29	3.99	3.93	4.08
Net oil imports/GDP (toe per thousand 2010 USD)	0.08	0.09	0.06	0.05	0.04	0.04	0.03	0.04
Oil supply/GDP (toe per thousand 2010 USD)	0.08	0.09	0.06	0.05	0.04	0.04	0.03	0.04
Oil supply/population (toe per capita)	0.87	1.05	0.84	0.75	0.85	0.82	0.75	0.88
Share of renewables in TPES	0.00	0.00	0.02	0.04	0.07	0.10	0.10	0.10
Share of renewables in electricity generation	0.03	0.05	0.02	0.03	0.07	0.11	0.11	0.11
TFC/GDP (toe per thousand 2010 USD)	0.29	0.27	0.23	0.17	0.13	0.11	0.11	..
TFC/GDP PPP (toe per thousand 2010 USD)	0.21	0.20	0.16	0.12	0.09	0.08	0.08	..
TFC/population (toe per capita)	3.16	3.36	3.18	2.54	2.56	2.42	2.40	..
Elect. cons./GDP (kWh per 2010 USD)	0.35	0.37	0.40	0.39	0.32	0.30	0.30	0.29
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	0.25	0.27	0.29	0.28	0.23	0.21	0.21	0.21
Elect. cons./population (kWh per capita)	3730	4575	5584	5694	6322	6384	6461	6603
Industry cons. <sup>3</sup> /industrial production (2010=100)	..	..	216.0	164.0	100.0	80.0	70.9	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	..	..	204.0	140.8	100.0	69.9	40.5	..

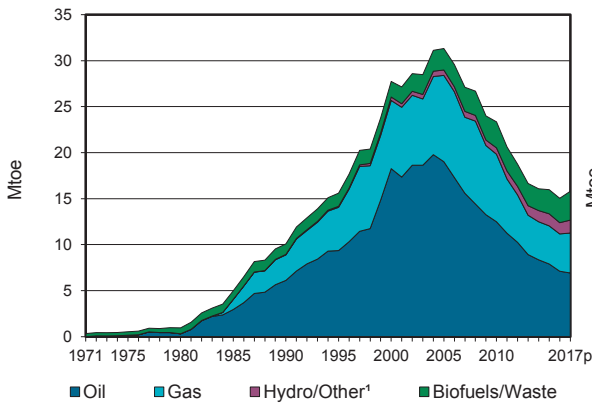
1. Electricity consumption equals domestic supply less losses.

2. Production divided by TPES. Coal self-sufficiency also includes peat, when applicable.

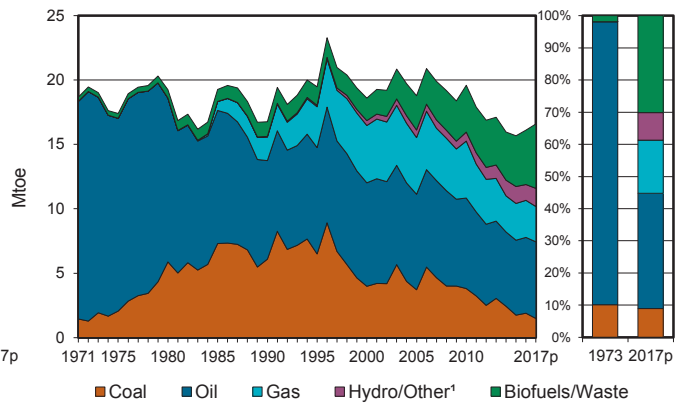
3. Includes non-energy use.

## Denmark

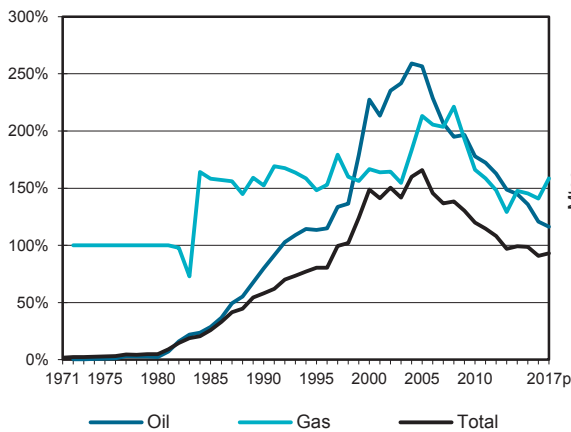
**Figure 1. Energy production**



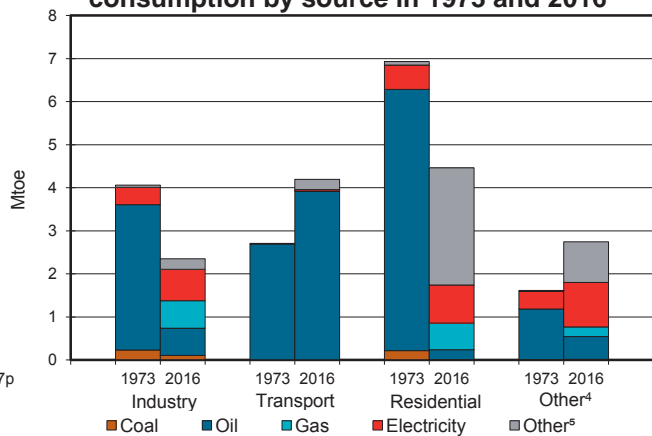
**Figure 2. Total primary energy supply<sup>2</sup>**



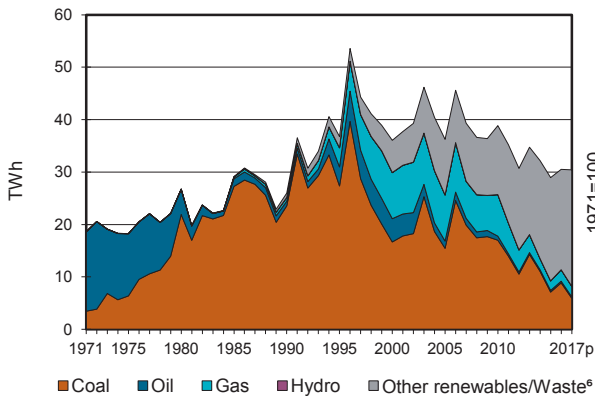
**Figure 3. Energy self-sufficiency**



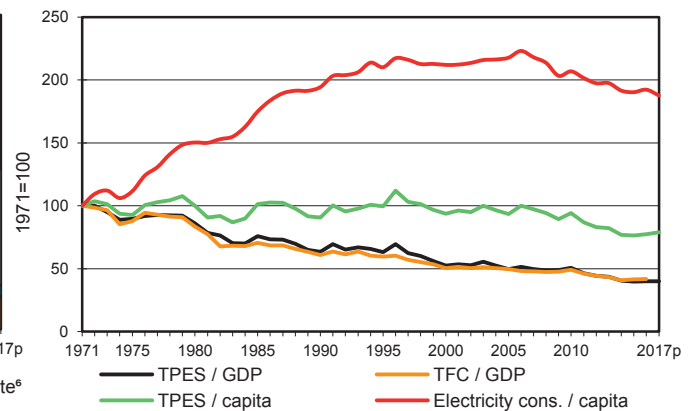
**Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.

## Denmark

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./ Solar/ etc.	Biofuels/ Waste	Electricity	Heat	Total
Production	-	7.11	-	4.05	-	0.00	1.22	2.65	-	0.00	15.04
Imports	1.62	3.94	9.16	0.61	-	-	-	1.59	1.29	0.00	18.21
Exports	-0.01	-4.40	-8.51	-1.90	-	-	-	-0.03	-0.85	-	-15.70
Intl. marine bunkers	-	-	-0.67	-	-	-	-	-	-	-	-0.67
Intl. aviation bunkers	-	-	-0.94	-	-	-	-	-	-	-	-0.94
Stock changes	0.29	0.08	0.11	0.11	-	-	-	0.01	-	-	0.60
<b>TPES</b>	<b>1.89</b>	<b>6.73</b>	<b>-0.85</b>	<b>2.88</b>	<b>-</b>	<b>0.00</b>	<b>1.22</b>	<b>4.22</b>	<b>0.43</b>	<b>0.01</b>	<b>16.54</b>
Transfers	-	2.54	-2.51	-	-	-	-	-	-	-	0.03
Statistical differences	0.21	0.10	-0.19	0.03	-	-	0.00	-0.00	0.00	-0.00	0.14
Electricity plants	-	-	-0.00	-	-	-0.00	-1.16	-0.00	1.17	-	-0.00
CHP plants	-1.99	-	-0.08	-0.52	-	-	-	-2.04	1.46	2.17	-0.99
Heat plants	-0.00	-	-0.02	-0.36	-	-	-0.04	-0.61	-0.02	1.09	0.04
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	0.02	-	-	-0.01	-	-	-	-	-	-	0.00
Coke/pat. fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-9.37	9.27	-	-	-	-	-	-	-	-0.11
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-	-	-	-
Energy industry own use	-	-	-0.31	-0.52	-	-	-	-0.00	-0.20	-0.05	-1.09
Losses	-0.00	-	-	-0.00	-	-	-	-	-0.16	-0.64	-0.81
<b>TFC</b>	<b>0.13</b>	<b>-</b>	<b>5.31</b>	<b>1.48</b>	<b>-</b>	<b>-</b>	<b>0.01</b>	<b>1.57</b>	<b>2.68</b>	<b>2.57</b>	<b>13.75</b>
<b>INDUSTRY</b>	<b>0.10</b>	<b>-</b>	<b>0.43</b>	<b>0.64</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.18</b>	<b>0.72</b>	<b>0.07</b>	<b>2.15</b>
Iron and steel	-	-	0.00	0.04	-	-	-	0.00	0.04	0.00	0.08
Chemical and petrochemical	0.02	-	0.01	0.11	-	-	-	-	0.12	0.01	0.26
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	0.06	-	0.20	0.10	-	-	-	0.04	0.06	0.01	0.46
Transport equipment	-	-	0.00	0.01	-	-	-	0.00	0.01	0.00	0.02
Machinery	-	-	0.02	0.05	-	-	-	0.02	0.12	0.01	0.22
Mining and quarrying	0.00	-	0.02	0.02	-	-	-	0.03	0.01	0.00	0.08
Food and tobacco	0.03	-	0.05	0.26	-	-	-	0.04	0.21	0.02	0.60
Paper, pulp and printing	-	-	0.00	0.03	-	-	-	0.00	0.03	0.00	0.07
Wood and wood products	-	-	0.00	0.00	-	-	-	0.05	0.02	0.00	0.07
Construction	-	-	0.12	0.01	-	-	-	0.00	0.03	-	0.16
Textile and leather	-	-	-	0.01	-	-	-	0.00	0.01	0.00	0.02
Non-specified	0.00	-	0.00	0.01	-	-	-	0.01	0.07	0.01	0.11
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>3.89</b>	<b>0.00</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.24</b>	<b>0.04</b>	<b>-</b>	<b>4.16</b>
Domestic aviation	-	-	0.03	-	-	-	-	-	-	-	0.03
Road	-	-	3.58	0.00	-	-	-	0.24	-	-	3.82
Rail	-	-	0.08	-	-	-	-	-	0.04	-	0.12
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	0.15	-	-	-	-	-	-	-	0.15
Non-specified	-	-	0.04	-	-	-	-	-	-	-	0.04
<b>OTHER</b>	<b>0.03</b>	<b>-</b>	<b>0.75</b>	<b>0.84</b>	<b>-</b>	<b>-</b>	<b>0.01</b>	<b>1.15</b>	<b>1.92</b>	<b>2.50</b>	<b>7.19</b>
Residential	0.01	-	0.23	0.61	-	-	0.01	1.03	0.89	1.68	4.46
Comm. and public services	0.00	-	0.06	0.18	-	-	0.00	0.06	0.88	0.78	1.97
Agriculture/forestry	0.01	-	0.33	0.04	-	-	-	0.06	0.15	0.04	0.63
Fishing	-	-	0.12	-	-	-	-	-	-	-	0.12
Non-specified	-	-	-	0.00	-	-	-	-	-	-	0.00
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>0.25</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.25</b>
in industry/transf./energy	-	-	0.20	-	-	-	-	-	-	-	0.20
of which: chem./petrochem.	-	-	0.00	-	-	-	-	-	-	-	0.00
in transport	-	-	0.03	-	-	-	-	-	-	-	0.03
in other	-	-	0.01	-	-	-	-	-	-	-	0.01
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>8.87</b>	<b>-</b>	<b>0.32</b>	<b>2.17</b>	<b>-</b>	<b>0.02</b>	<b>13.53</b>	<b>5.62</b>	<b>-</b>	<b>-</b>	<b>30.52</b>
Electricity plants	-	-	0.01	-	-	0.02	13.53	0.00	-	-	13.56
CHP plants	8.87	-	0.31	2.17	-	-	-	5.62	-	-	16.96
<b>Heat generated - PJ</b>	<b>24.92</b>	<b>-</b>	<b>1.38</b>	<b>25.29</b>	<b>-</b>	<b>-</b>	<b>4.99</b>	<b>79.22</b>	<b>0.69</b>	<b>0.18</b>	<b>136.68</b>
CHP plants	24.87	-	0.76	10.31	-	-	-	55.11	-	-	91.05
Heat plants	0.04	-	0.63	14.98	-	-	4.99	24.11	0.69	0.18	45.62

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Denmark

## Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	6.92	-	4.34	-	0.00	1.40	3.13	-	0.00	15.79
Imports	1.72	5.02	5.40	0.46	-	-	-	1.89	1.31	0.00	15.81
Exports	-	-4.67	-6.27	-2.01	-	-	-	-0.03	-0.92	-	-13.89
Intl. marine bunkers	-	-	-0.50	-	-	-	-	-	-	-	-0.50
Intl. aviation bunkers	-	-	-0.97	-	-	-	-	-	-	-	-0.97
Stock changes	-0.24	0.03	0.98	-0.06	-	-	-	0.01	-	-	0.73
<b>TPES</b>	<b>1.49</b>	<b>7.30</b>	<b>-1.35</b>	<b>2.74</b>	<b>-</b>	<b>0.00</b>	<b>1.40</b>	<b>5.00</b>	<b>0.39</b>	<b>0.01</b>	<b>16.98</b>
Electricity and Heat Output											
Elec. generated - TWh	5.95	-	0.27	2.00	-	0.02	15.57	6.63	-	-	30.43
Heat generated - PJ	19.22	-	1.22	21.51	-	-	5.59	86.14	0.96	0.18	134.82

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	0.4	1.0	10.1	27.7	23.4	16.0	15.0	15.8
Net imports (Mtoe)	20.4	19.2	8.7	-7.5	-3.5	2.3	2.5	1.9
Total primary energy supply (Mtoe)	19.0	19.1	17.4	18.7	19.5	16.2	16.5	17.0
Net oil imports (Mtoe)	18.6	13.2	2.8	-8.5	-3.8	0.4	0.2	-0.5
Oil supply (Mtoe)	16.7	12.7	7.7	8.0	7.0	5.8	5.9	6.0
Electricity consumption (TWh) <sup>1</sup>	17.2	23.6	30.6	34.6	35.1	33.1	33.7	33.1
GDP (billion 2010 USD)	167.8	186.4	229.1	298.2	322.0	340.8	347.5	355.3
GDP PPP (billion 2010 USD)	124.5	138.3	170.1	221.4	239.0	253.0	258.0	263.5
Population (millions)	5.02	5.12	5.14	5.34	5.55	5.68	5.73	5.77
Industrial production index (2010=100)	..	62.8	82.8	111.4	100.0	101.4	105.6	107.8
Total self-sufficiency <sup>2</sup>	0.02	0.05	0.58	1.49	1.20	0.99	0.91	0.93
Coal self-sufficiency <sup>2</sup>	-	-	-	-	-	-	-	-
Oil self-sufficiency <sup>2</sup>	0.00	0.02	0.80	2.28	1.78	1.36	1.21	1.16
Natural gas self-sufficiency <sup>2</sup>	1.00	1.00	1.52	1.67	1.66	1.45	1.41	1.59
TPES/GDP (toe per thousand 2010 USD)	0.11	0.10	0.08	0.06	0.06	0.05	0.05	0.05
TPES/GDP PPP (toe per thousand 2010 USD)	0.15	0.14	0.10	0.08	0.08	0.06	0.06	0.06
TPES/population (toe per capita)	3.78	3.73	3.38	3.49	3.51	2.85	2.89	2.94
Net oil imports/GDP (toe per thousand 2010 USD)	0.11	0.07	0.01	-0.03	-0.01	0.00	0.00	-0.00
Oil supply/GDP (toe per thousand 2010 USD)	0.10	0.07	0.03	0.03	0.02	0.02	0.02	0.02
Oil supply/population (toe per capita)	3.33	2.48	1.49	1.50	1.27	1.02	1.03	1.03
Share of renewables in TPES	0.02	0.03	0.06	0.10	0.20	0.30	0.30	0.35
Share of renewables in electricity generation	0.00	0.00	0.03	0.16	0.32	0.66	0.61	0.71
TFC/GDP (toe per thousand 2010 USD)	0.09	0.08	0.06	0.05	0.05	0.04	0.04	..
TFC/GDP PPP (toe per thousand 2010 USD)	0.12	0.11	0.08	0.06	0.06	0.05	0.05	..
TFC/population (toe per capita)	3.05	2.88	2.56	2.67	2.70	2.35	2.40	..
Elect. cons./GDP (kWh per 2010 USD)	0.10	0.13	0.13	0.12	0.11	0.10	0.10	0.09
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	0.14	0.17	0.18	0.16	0.15	0.13	0.13	0.13
Elect. cons./population (kWh per capita)	3428	4598	5946	6485	6328	5822	5882	5741
Industry cons. <sup>3</sup> /industrial production (2010=100)	..	215.5	134.7	108.1	100.0	86.2	84.6	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	..	522.2	183.6	116.6	100.0	77.1	77.9	..

1. Electricity consumption equals domestic supply less losses.

2. Production divided by TPES.

3. Includes non-energy use.



## Estonia

Figure 1. Energy production

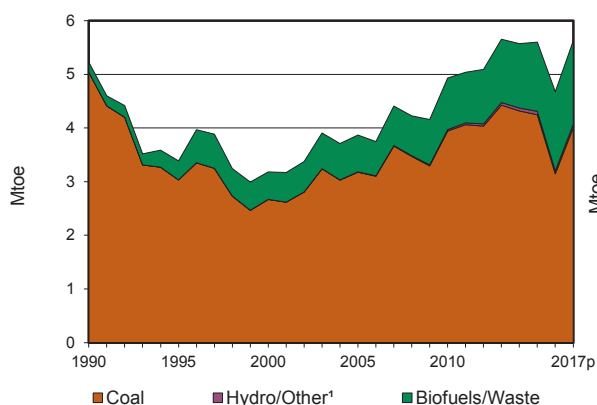


Figure 2. Total primary energy supply<sup>2</sup>

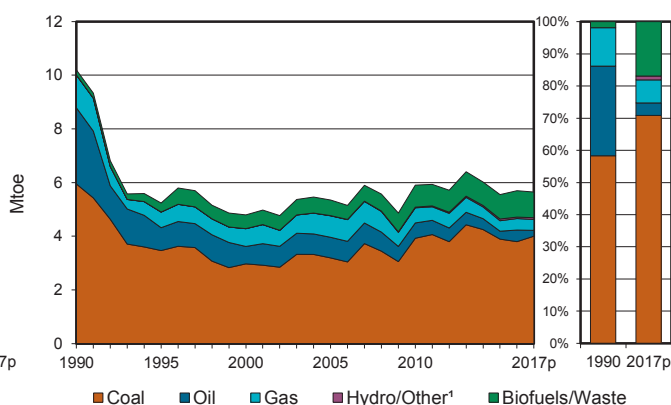


Figure 3. Energy self-sufficiency

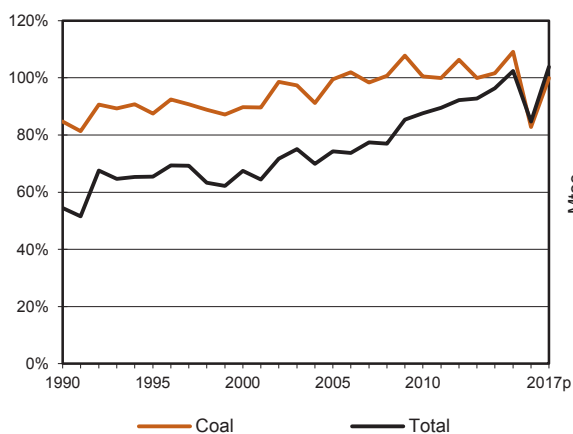


Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>

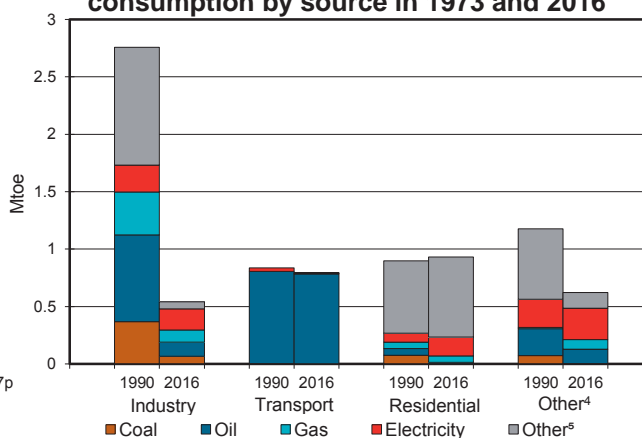


Figure 5. Electricity generation by source

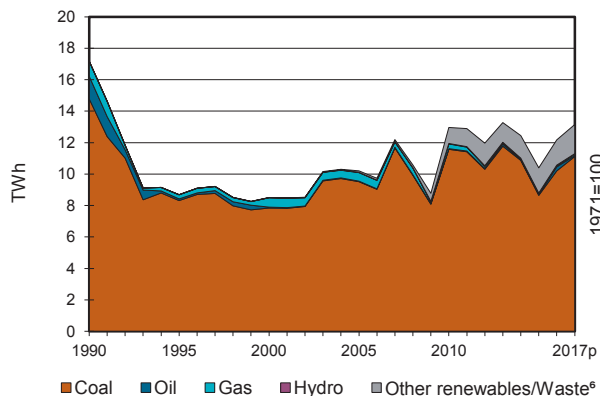
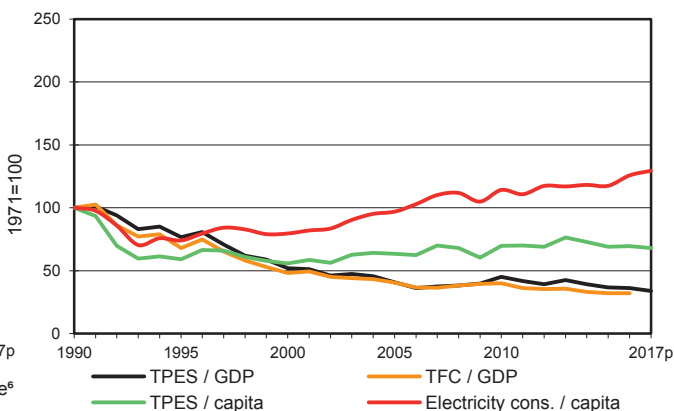


Figure 6. Selected indicators



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.

## Estonia

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal <sup>1</sup>	Crude oil <sup>2</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	3.15	-	-	-	-	0.00	0.05	1.48	-	-	4.68
Imports	0.01	-	1.85	0.43	-	-	-	0.01	0.31	-	2.61
Exports	-0.01	-0.60	-0.51	-	-	-	-	-0.51	-0.48	-	-2.12
Intl. marine bunkers	-	-	-0.27	-	-	-	-	-	-	-	-0.27
Intl. aviation bunkers	-	-	-0.02	-	-	-	-	-	-	-	-0.02
Stock changes	0.65	-	-0.01	-	-	-	-	0.00	-	-	0.64
<b>TPES</b>	<b>3.80</b>	<b>-0.60</b>	<b>1.03</b>	<b>0.43</b>	<b>-</b>	<b>0.00</b>	<b>0.05</b>	<b>0.98</b>	<b>-0.18</b>	<b>-</b>	<b>5.52</b>
Transfers	-	-0.08	0.09	-	-	-	-	-	-	-	0.00
Statistical differences	0.20	-	-	-	-	-	-	-	0.01	-0.01	0.20
Electricity plants	-2.51	-	-0.04	-	-	-0.00	-0.05	-0.02	0.94	-	-1.69
CHP plants	-0.18	-	-0.00	-0.01	-	-	-	-0.30	0.11	0.29	-0.10
Heat plants	-0.00	-	-0.02	-0.14	-	-	-	-0.22	-	0.29	-0.10
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-0.06	-	-	-	-	-	-	-	-	-	-0.06
Coke/pat. fuel/BKB/PB plants	-0.01	-	-	-	-	-	-	-	-	-	-0.01
Oil refineries	-	-	-	-	-	-	-	-	-	-	-
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-1.15	0.68	-	-	-	-	-	-	-	-	-0.47
Other transformation	-	-	-	-	-	-	-	-	-	-	-
Energy industry own use	-0.01	-	-0.02	-0.03	-	-	-	-0.01	-0.20	-0.01	-0.27
Losses	-	-	-	-	-	-	-	-	-0.06	-0.08	-0.14
<b>TFC</b>	<b>0.07</b>	<b>-</b>	<b>1.04</b>	<b>0.25</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.42</b>	<b>0.63</b>	<b>0.47</b>	<b>2.89</b>
<b>INDUSTRY</b>	<b>0.02</b>	<b>-</b>	<b>0.08</b>	<b>0.11</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.02</b>	<b>0.19</b>	<b>0.04</b>	<b>0.45</b>
Iron and steel	-	-	-	0.00	-	-	-	-	0.00	-	0.00
Chemical and petrochemical	-	-	0.01	0.00	-	-	-	-	0.01	0.02	0.04
Non-ferrous metals	-	-	-	0.00	-	-	-	-	0.00	-	0.00
Non-metallic minerals	0.02	-	0.00	0.02	-	-	-	0.01	0.01	0.00	0.07
Transport equipment	-	-	0.00	0.00	-	-	-	0.00	0.01	0.00	0.01
Machinery	-	-	0.00	0.01	-	-	-	0.00	0.03	0.01	0.04
Mining and quarrying	-	-	0.01	0.01	-	-	-	-	0.00	0.00	0.01
Food and tobacco	-	-	0.01	0.02	-	-	-	0.00	0.03	0.00	0.07
Paper, pulp and printing	-	-	-	0.02	-	-	-	0.00	0.03	0.00	0.06
Wood and wood products	-	-	0.01	0.01	-	-	-	0.01	0.04	0.00	0.06
Construction	-	-	0.04	0.01	-	-	-	0.00	0.01	0.00	0.06
Textile and leather	-	-	0.00	0.00	-	-	-	0.00	0.01	0.00	0.01
Non-specified	-	-	0.00	0.00	-	-	-	0.00	0.02	0.00	0.03
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>0.78</b>	<b>0.00</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.00</b>	<b>0.00</b>	<b>-</b>	<b>0.79</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	0.75	0.00	-	-	-	0.00	0.00	-	0.76
Rail	-	-	0.02	-	-	-	-	-	0.00	-	0.02
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	0.02	-	-	-	-	-	-	-	0.02
Non-specified	-	-	-	-	-	-	-	0.00	-	-	0.00
<b>OTHER</b>	<b>0.01</b>	<b>-</b>	<b>0.13</b>	<b>0.14</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.40</b>	<b>0.44</b>	<b>0.43</b>	<b>1.55</b>
Residential	0.00	-	0.01	0.06	-	-	-	0.38	0.16	0.31	0.93
Comm. and public services	0.00	-	0.03	0.08	-	-	-	0.01	0.26	0.12	0.49
Agriculture/forestry	0.00	-	0.10	0.00	-	-	-	0.00	0.02	0.00	0.13
Fishing	-	-	-	-	-	-	-	-	0.00	-	0.00
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>NON-ENERGY USE</b>	<b>0.04</b>	<b>-</b>	<b>0.05</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.09</b>
in industry/transf./energy	0.04	-	0.04	-	-	-	-	-	-	-	0.09
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	0.00	-	-	-	-	-	-	-	0.00
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>10.20</b>	<b>-</b>	<b>0.26</b>	<b>0.07</b>	<b>-</b>	<b>0.04</b>	<b>0.59</b>	<b>1.01</b>	<b>-</b>	<b>-</b>	<b>12.18</b>
Electricity plants	9.85	-	0.25	-	-	0.04	0.59	0.20	-	-	10.93
CHP plants	0.36	-	0.00	0.07	-	-	-	0.82	-	-	1.25
<b>Heat generated - PJ</b>	<b>4.48</b>	<b>-</b>	<b>0.64</b>	<b>4.85</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>13.98</b>	<b>-</b>	<b>-</b>	<b>23.94</b>
CHP plants	4.36	-	0.03	0.19	-	-	-	7.39	-	-	11.97
Heat plants	0.12	-	0.61	4.66	-	-	-	6.58	-	-	11.97

1. Includes peat and oil shale.

2. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Estonia

## Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal <sup>1</sup>	Crude oil <sup>2</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	4.00	-	-	-	-	0.00	0.06	1.56	-	-	5.62
Imports	0.03	-	1.87	0.41	-	-	-	0.02	0.20	-	2.52
Exports	-0.01	-0.83	-0.52	-	-	-	-	-0.62	-0.43	-	-2.41
Intl. marine bunkers	-	-	-0.26	-	-	-	-	-	-	-	-0.26
Intl. aviation bunkers	-	-	-0.03	-	-	-	-	-	-	-	-0.03
Stock changes	-0.01	-	-0.02	-	-	-	-	-	-	-	-0.03
<b>TPES</b>	<b>4.00</b>	<b>-0.83</b>	<b>1.04</b>	<b>0.41</b>	<b>-</b>	<b>0.00</b>	<b>0.06</b>	<b>0.96</b>	<b>-0.24</b>	<b>-</b>	<b>5.41</b>
Electricity and Heat Output											
Elec. generated - TWh	11.12	-	0.06	0.09	-	0.03	0.74	1.12	-	-	13.15
Heat generated - PJ	4.48	-	0.64	4.85	-	-	-	13.98	-	-	23.94

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes peat and oil shale.

2. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	..	..	5.2	3.2	4.9	5.6	4.7	5.6
Net imports (Mtoe)	..	..	4.5	1.6	0.9	0.6	0.5	0.1
Total primary energy supply (Mtoe)	..	..	9.6	4.7	5.6	5.5	5.5	5.4
Net oil imports (Mtoe)	..	..	3.2	0.8	0.8	0.6	0.7	0.5
Oil supply (Mtoe)	..	..	2.8	0.7	0.6	0.3	0.4	0.2
Electricity consumption (TWh) <sup>1</sup>	..	..	9.0	6.3	8.7	8.8	9.4	9.7
GDP (billion 2010 USD)	..	..	15.0	14.1	19.5	23.3	23.8	25.0
GDP PPP (billion 2010 USD)	..	..	22.1	20.9	28.8	34.5	35.2	36.8
Population (millions)	..	..	1.59	1.40	1.33	1.31	1.32	1.32
Industrial production index (2010=100)	..	..	..	59.9	100.0	131.5	136.0	146.5
Total self-sufficiency <sup>2</sup>	..	..	0.54	0.67	0.88	1.02	0.85	1.04
Coal self-sufficiency <sup>2</sup>	..	..	0.85	0.90	1.00	1.09	0.83	1.00
Oil self-sufficiency <sup>2</sup>	..	..	-	-	-	-	-	-
Natural gas self-sufficiency <sup>2</sup>	..	..	-	-	-	-	-	-
TPES/GDP (toe per thousand 2010 USD)	..	..	0.64	0.33	0.29	0.23	0.23	0.22
TPES/GDP PPP (toe per thousand 2010 USD)	..	..	0.43	0.23	0.20	0.16	0.16	0.15
TPES/population (toe per capita)	..	..	6.04	3.37	4.22	4.17	4.19	4.11
Net oil imports/GDP (toe per thousand 2010 USD)	..	..	0.21	0.06	0.04	0.03	0.03	0.02
Oil supply/GDP (toe per thousand 2010 USD)	..	..	0.19	0.05	0.03	0.01	0.02	0.01
Oil supply/population (toe per capita)	..	..	1.79	0.46	0.43	0.22	0.33	0.16
Share of renewables in TPES	..	..	0.02	0.11	0.15	0.17	0.18	0.17
Share of renewables in electricity generation	..	..	-	0.00	0.08	0.14	0.12	0.13
TFC/GDP (toe per thousand 2010 USD)	..	..	0.38	0.18	0.15	0.12	0.12	..
TFC/GDP PPP (toe per thousand 2010 USD)	..	..	0.26	0.12	0.10	0.08	0.08	..
TFC/population (toe per capita)	..	..	3.57	1.84	2.22	2.17	2.20	..
Elect. cons./GDP (kWh per 2010 USD)	..	..	0.60	0.45	0.44	0.38	0.40	0.39
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	..	..	0.41	0.30	0.30	0.26	0.27	0.26
Elect. cons./population (kWh per capita)	..	..	5691	4528	6499	6684	7155	7366
Industry cons. <sup>3</sup> /industrial production (2010=100)	..	..	..	188.1	100.0	71.4	60.2	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	..	..	..	163.7	100.0	78.8	67.9	..

1. Electricity consumption equals domestic supply less losses.

2. Production divided by TPES. Coal self-sufficiency also includes peat, when applicable.

3. Includes non-energy use.

## Finland

Figure 1. Energy production

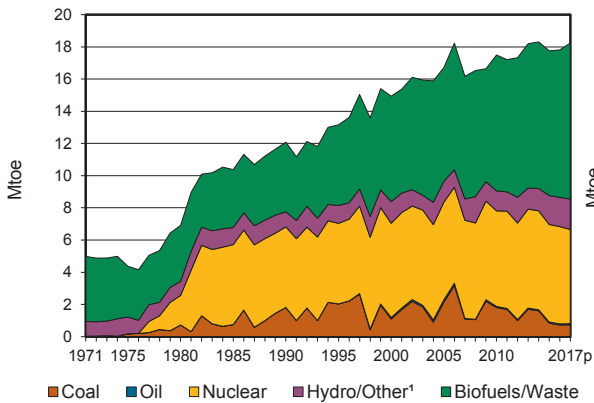


Figure 2. Total primary energy supply<sup>2</sup>

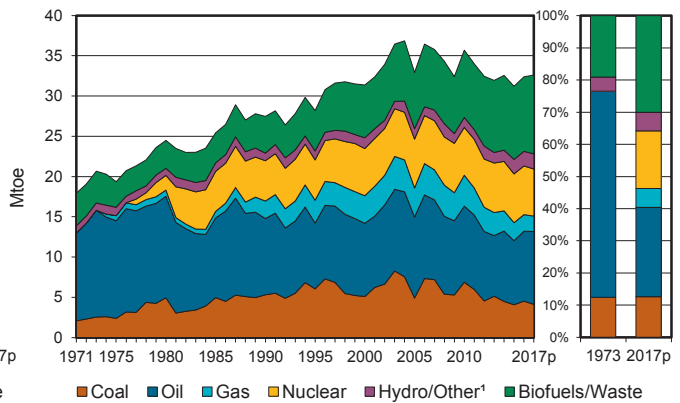


Figure 3. Energy self-sufficiency

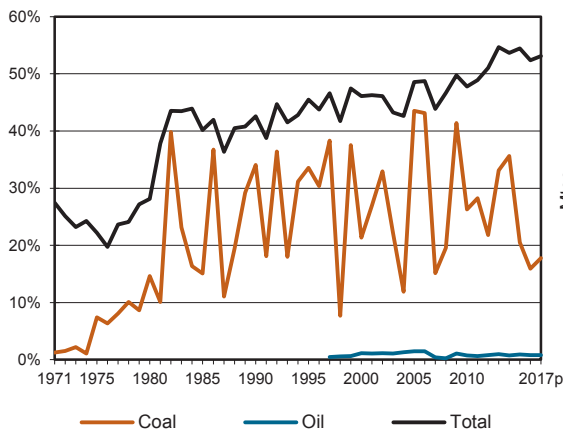


Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>

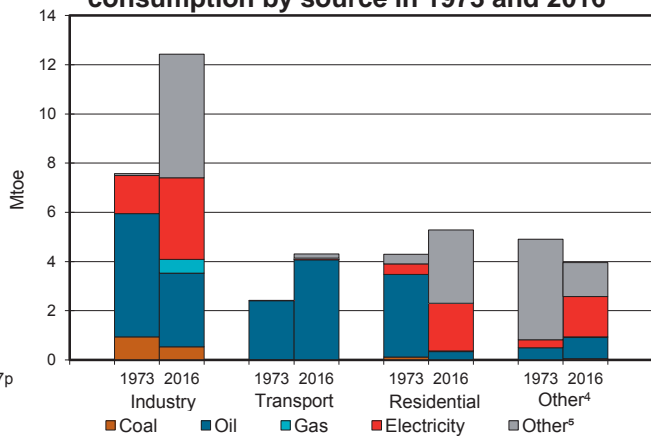


Figure 5. Electricity generation by source

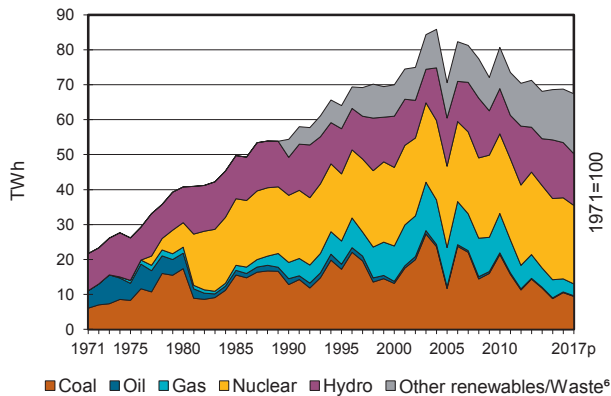
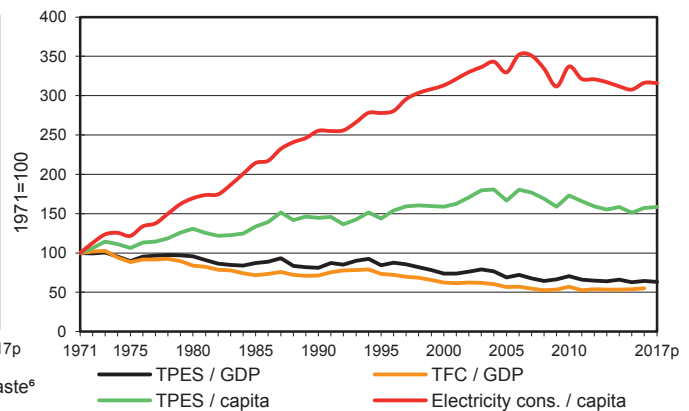


Figure 6. Selected indicators



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.

## Finland

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal <sup>1</sup>	Crude oil <sup>2</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	0.72	0.07	-	-	6.05	1.36	0.27	9.16	-	0.19	17.81
Imports	2.80	12.41	6.02	2.06	-	-	-	0.13	1.90	-	25.31
Exports	-0.07	-	-9.10	-0.00	-	-	-	-0.03	-0.27	-	-9.47
Intl. marine bunkers	-	-	-0.28	-	-	-	-	-	-	-	-0.28
Intl. aviation bunkers	-	-	-0.64	-	-	-	-	-	-	-	-0.64
Stock changes	1.08	-0.03	0.23	-	-	-	-	c	-	-	1.29
<b>TPES</b>	<b>4.53</b>	<b>12.45</b>	<b>-3.77</b>	<b>2.06</b>	<b>6.05</b>	<b>1.36</b>	<b>0.27</b>	<b>9.26</b>	<b>1.63</b>	<b>0.19</b>	<b>34.02</b>
Transfers	-	1.84	-1.78	-	-	-	-	-	-	-	0.06
Statistical differences	-0.07	0.10	0.05	-0.01	-	-	-	-0.00	0.00	-0.00	0.07
Electricity plants	-0.72	-	-0.02	-0.01	-6.05	-1.36	-0.27	-0.30	4.05	-0.04	-4.71
CHP plants	-2.11	-	-0.03	-0.72	-	-	-	-2.65	1.86	2.95	-0.70
Heat plants	-0.33	-	-0.25	-0.33	-	-	-	-0.82	-0.03	1.55	-0.20
Blast furnaces	-0.41 e	-	-0.00	-	-	-	-	-	-	-	-0.41
Gas works	-	-	-	0.01	-	-	-	-0.01	-	-	0.00
Coke/pat. fuel/BKB/PB plants	-0.02	-	-	-	-	-	-	-	-	-	-0.02
Oil refineries	-	-14.87	14.69	-	-	-	-	-	-	-	-0.17
Petrochemical plants	-	0.24	-	-	-	-	-	-	-	-	0.24
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-0.06	0.23	-	-0.28	-	-	-	-	-	-	-0.10
Energy industry own use	-0.20	-	-0.59	-0.09	-	-	-	-0.05	-0.33	-0.13	-1.38
Losses	-0.03	-	-0.05	-0.00	-	-	-	-	-0.23	-0.39	-0.70
<b>TFC</b>	<b>0.58</b>	<b>-</b>	<b>8.26</b>	<b>0.63</b>	<b>-</b>	<b>-</b>	<b>0.00</b>	<b>5.44</b>	<b>6.95</b>	<b>4.13</b>	<b>25.99</b>
<b>INDUSTRY</b>	<b>0.53</b>	<b>-</b>	<b>1.25</b>	<b>0.53</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>3.72</b>	<b>3.31</b>	<b>1.31</b>	<b>10.66</b>
Iron and steel	0.23 e	-	0.11	0.06	-	-	-	0.00	0.38	0.10	0.87
Chemical and petrochemical	-	-	0.30	0.02	-	-	-	0.02	0.43	0.26	1.04
Non-ferrous metals	0.01	-	0.03	0.00	-	-	-	0.00	0.16	0.05	0.25
Non-metallic minerals	0.07	-	0.09	0.03	-	-	-	0.04	0.06	0.01	0.30
Transport equipment	-	-	0.01	0.00	-	-	-	-	0.03	0.03	0.07
Machinery	-	-	0.03	0.01	-	-	-	0.00	0.17	0.09	0.31
Mining and quarrying	-	-	0.04	-	-	-	-	0.00	0.16	0.00	0.20
Food and tobacco	0.01	-	0.04	0.02	-	-	-	0.00	0.15	0.19	0.41
Paper, pulp and printing	0.20	-	0.15	0.39	-	-	-	3.42	1.54	0.36	6.06
Wood and wood products	0.00	-	0.01	0.00	-	-	-	0.23	0.11	0.16	0.52
Construction	-	-	0.35	-	-	-	-	-	0.04	-	0.38
Textile and leather	-	-	0.00	0.00	-	-	-	0.00	0.01	0.01	0.02
Non-specified	-	-	0.10	0.01	-	-	-	0.01	0.07	0.05	0.23
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>4.07</b>	<b>0.01</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.18</b>	<b>0.06</b>	<b>-</b>	<b>4.31</b>
Domestic aviation	-	-	0.06	-	-	-	-	-	-	-	0.06
Road	-	-	3.86	0.00	-	-	-	0.18	0.00	-	4.04
Rail	-	-	0.02	-	-	-	-	-	0.06	-	0.08
Pipeline transport	-	-	-	0.00	-	-	-	-	-	-	0.00
Domestic navigation	-	-	0.12	-	-	-	-	0.00	-	-	0.12
Non-specified	-	-	-	0.00	-	-	-	-	-	-	0.00
<b>OTHER</b>	<b>0.05</b>	<b>-</b>	<b>1.20</b>	<b>0.06</b>	<b>-</b>	<b>-</b>	<b>0.00</b>	<b>1.54</b>	<b>3.58</b>	<b>2.82</b>	<b>9.24</b>
Residential	0.00	-	0.33	0.03	-	-	0.00	1.30	1.94	1.68	5.29
Comm. and public services	0.00	-	0.25	0.03	-	-	-	0.09	1.51	0.99	2.86
Agriculture/forestry	0.05	-	0.34	0.00	-	-	-	0.15	0.14	0.01	0.68
Fishing	-	-	0.03	-	-	-	-	-	-	-	0.03
Non-specified	-	-	0.24	-	-	-	-	0.00	-	0.13	0.38
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>1.74</b>	<b>0.03</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1.77</b>
in industry/transf./energy	-	-	1.74	0.03	-	-	-	-	-	-	1.77
of which: chem./petrochem.	-	-	1.16	0.03	-	-	-	-	-	-	1.19
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>10.51</b>	<b>-</b>	<b>0.20</b>	<b>3.74</b>	<b>23.20</b>	<b>15.80</b>	<b>3.10</b>	<b>11.95</b>	<b>-</b>	<b>0.25</b>	<b>68.75</b>
Electricity plants	3.35	-	0.09	0.03	23.20	15.80	3.09	1.31	-	0.05	46.92
CHP plants	7.16	-	0.11	3.71	-	-	0.01	10.64	-	0.20	21.83
<b>Heat generated - PJ</b>	<b>62.77</b>	<b>-</b>	<b>9.52</b>	<b>26.56</b>	<b>-</b>	<b>-</b>	<b>1.02</b>	<b>87.28</b>	<b>0.08</b>	<b>9.11</b>	<b>196.33</b>
CHP plants	51.10	-	0.67	14.08	-	-	0.26	57.37	-	1.36	124.84
Heat plants	11.67	-	8.85	12.48	-	-	0.76	29.91	0.08	7.75	71.49

1. Includes peat.

2. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Finland

## Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal <sup>1</sup>	Crude oil <sup>2</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./ Solar/ etc.	Biofuels/ Waste	Electricity	Heat	Total
Production	0.73	0.07	-	-	5.85	1.27	0.42	9.69	-	0.19	18.23
Imports	2.88	12.63	5.88	1.92	-	-	-	0.09	1.91	-	25.30
Exports	-0.12	-	-8.75	-0.00	-	-	-	c	-0.15	-	-9.03
Intl. marine bunkers	-	-	-0.33	-	-	-	-	-	-	-	-0.33
Intl. aviation bunkers	-	-	-0.66	-	-	-	-	-	-	-	-0.66
Stock changes	0.63	0.20	0.01	-	-	-	-	c	-	-	0.85
<b>TPES</b>	<b>4.12</b>	<b>12.90</b>	<b>-3.85</b>	<b>1.91</b>	<b>5.85</b>	<b>1.27</b>	<b>0.42</b>	<b>9.78</b>	<b>1.76</b>	<b>0.19</b>	<b>34.36</b>
Electricity and Heat Output											
Elec. generated - TWh	9.44	-	0.19	3.40	22.47	14.80	4.84	12.04	-	0.26	67.43
Heat generated - PJ	59.08	-	9.21	24.90	-	-	1.02	91.08	0.09	9.51	194.89

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes peat.
2. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	4.9	6.9	12.1	14.9	17.5	17.8	17.8	18.2
Net imports (Mtoe)	16.4	18.3	17.8	18.5	18.0	15.9	15.8	16.3
Total primary energy supply (Mtoe)	21.0	24.6	28.4	32.4	36.6	32.6	34.0	34.4
Net oil imports (Mtoe)	13.6	13.7	10.3	10.5	9.4	9.7	9.3	9.8
Oil supply (Mtoe)	13.3	12.6	9.5	9.1	9.5	8.0	8.7	9.1
Electricity consumption (TWh) <sup>1</sup>	28.2	39.7	62.3	79.2	88.4	82.5	85.0	85.2
GDP (billion 2010 USD)	99.9	122.7	167.1	209.4	247.8	247.4	252.7	259.4
GDP PPP (billion 2010 USD)	83.9	103.0	140.4	175.9	208.2	207.6	212.1	217.7
Population (millions)	4.67	4.78	4.99	5.18	5.36	5.48	5.50	5.51
Industrial production index (2010=100)	34.3	43.9	58.1	91.2	100.0	93.8	97.7	101.5
Total self-sufficiency <sup>2</sup>	0.23	0.28	0.43	0.46	0.48	0.54	0.52	0.53
Coal self-sufficiency <sup>2</sup>	0.02	0.15	0.34	0.21	0.26	0.21	0.16	0.18
Oil self-sufficiency <sup>2</sup>	-	-	-	0.01	0.01	0.01	0.01	0.01
Natural gas self-sufficiency <sup>2</sup>	-	-	-	-	-	-	-	-
TPES/GDP (toe per thousand 2010 USD)	0.21	0.20	0.17	0.15	0.15	0.13	0.13	0.13
TPES/GDP PPP (toe per thousand 2010 USD)	0.25	0.24	0.20	0.18	0.18	0.16	0.16	0.16
TPES/population (toe per capita)	4.51	5.15	5.69	6.26	6.82	5.95	6.19	6.24
Net oil imports/GDP (toe per thousand 2010 USD)	0.14	0.11	0.06	0.05	0.04	0.04	0.04	0.04
Oil supply/GDP (toe per thousand 2010 USD)	0.13	0.10	0.06	0.04	0.04	0.03	0.03	0.03
Oil supply/population (toe per capita)	2.84	2.64	1.90	1.76	1.76	1.45	1.58	1.64
Share of renewables in TPES	0.23	0.18	0.19	0.24	0.26	0.32	0.31	0.33
Share of renewables in electricity generation	0.40	0.25	0.30	0.33	0.30	0.45	0.44	0.46
TFC/GDP (toe per thousand 2010 USD)	0.19	0.16	0.13	0.12	0.11	0.10	0.10	..
TFC/GDP PPP (toe per thousand 2010 USD)	0.23	0.19	0.16	0.14	0.13	0.12	0.12	..
TFC/population (toe per capita)	4.11	4.05	4.49	4.73	4.94	4.54	4.73	..
Elect. cons./GDP (kWh per 2010 USD)	0.28	0.32	0.37	0.38	0.36	0.33	0.34	0.33
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	0.34	0.39	0.44	0.45	0.43	0.40	0.40	0.39
Elect. cons./population (kWh per capita)	6047	8295	12487	15306	16485	15050	15468	15453
Industry cons. <sup>3</sup> /industrial production (2010=100)	182.3	135.8	150.8	115.0	100.0	105.7	105.1	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	565.9	330.0	182.5	110.3	100.0	120.6	119.0	..

1. Electricity consumption equals domestic supply less losses.
2. Production divided by TPES. Coal self-sufficiency also includes peat, when applicable.
3. Includes non-energy use.

## France

Figure 1. Energy production

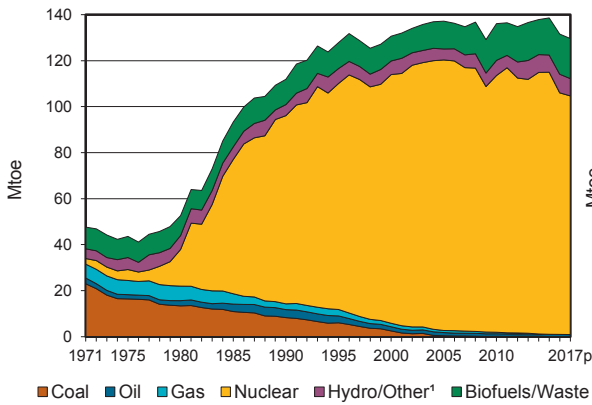


Figure 2. Total primary energy supply<sup>2</sup>

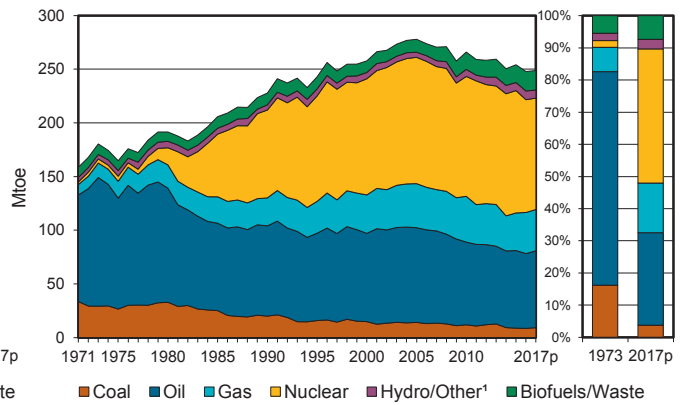


Figure 3. Energy self-sufficiency

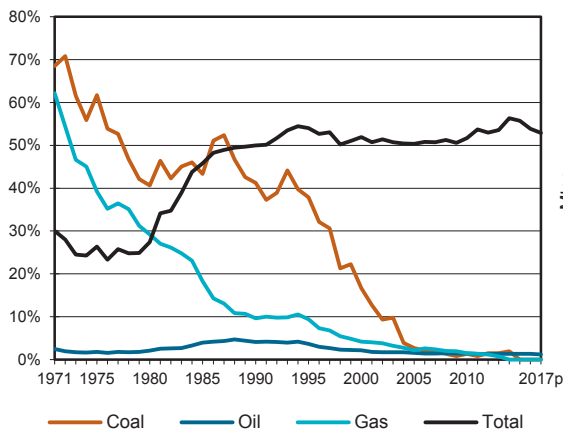


Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>

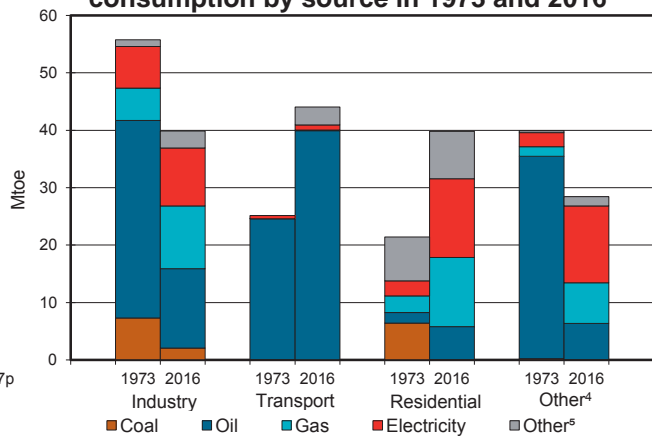


Figure 5. Electricity generation by source

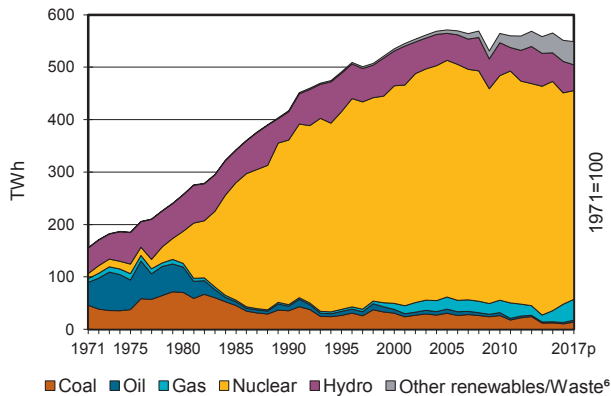
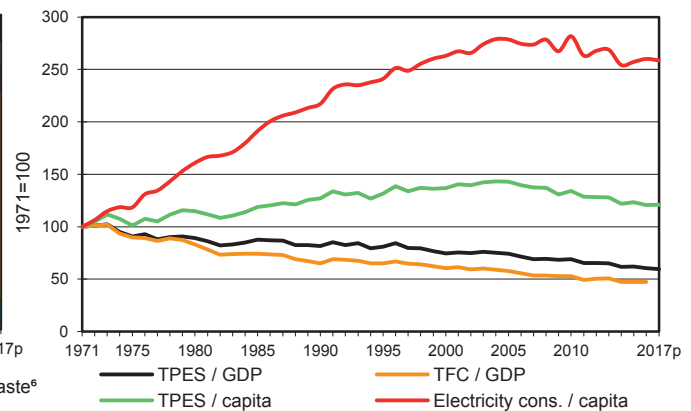


Figure 6. Selected indicators



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.



## France

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	0.94	-	0.02	105.06	5.16	2.93	17.46	-	-	131.56
Imports	8.07	56.52	39.37	41.23	-	-	-	0.91	1.71	-	147.82
Exports	-0.06	-0.03	-20.67	-3.34	-	-	-	-0.20	-5.28	-	-29.57
Intl. marine bunkers	-	-	-1.46	-	-	-	-	-	-	-	-1.46
Intl. aviation bunkers	-	-	-5.86	-	-	-	-	-	-	-	-5.86
Stock changes	0.56	1.06	-0.20	0.37	-	-	-	-0.02	-	-	1.77
<b>TPES</b>	<b>8.57</b>	<b>58.49</b>	<b>11.19</b>	<b>38.29</b>	<b>105.06</b>	<b>5.16</b>	<b>2.93</b>	<b>18.14</b>	<b>-3.57</b>	-	<b>244.26</b>
Transfers	-	0.77	-0.54	-	-	-	-	-	-	-	0.23
Statistical differences	-0.78	0.03	-1.02	-	-	-	-	0.01	0.12	-0.00	-1.63
Electricity plants	-2.40	-	-0.49	-3.58	-105.06	-5.16	-2.59	-1.56	45.79	-	-75.04
CHP plants	-0.07	-	-0.27	-2.25	-	-	-	-2.75	1.61	2.22	-1.51
Heat plants	-0.15	-	-0.03	-0.72	-	-	-0.21	-1.31	-0.01	2.08	-0.35
Blast furnaces	-1.73 e	-	-	-	-	-	-	-	-	-	-1.73
Gas works	-	-	-	0.02	-	-	-	-0.02	-	-	-0.00
Coke/pat. fuel/BKB/PB plants	-0.30	-	-	-	-	-	-	-	-	-	-0.30
Oil refineries	-	-60.46	59.90	-	-	-	-	-	-	-	-0.56
Petrochemical plants	-	1.17	-1.22	-	-	-	-	-	-	-	-0.05
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-	-	-	-
Energy industry own use	-1.00	-	-1.67	-1.13	-	-	-	-0.07	-2.75	-0.05	-6.67
Losses	-	-	-	-0.44	-	-	-	-	-3.16	-0.87	-4.47
<b>TFC</b>	<b>2.14</b>	-	<b>65.85</b>	<b>30.19</b>	-	-	<b>0.13</b>	<b>12.44</b>	<b>38.04</b>	<b>3.37</b>	<b>152.16</b>
<b>INDUSTRY</b>	<b>1.74</b>	-	<b>2.24</b>	<b>9.83</b>	-	-	<b>0.00</b>	<b>1.57</b>	<b>10.06</b>	<b>1.37</b>	<b>26.81</b>
Iron and steel	0.90 e	-	0.04	0.72	-	-	-	0.00	1.03	-	2.70
Chemical and petrochemical	0.34	-	0.19	2.05	-	-	-	0.16	1.66	-	4.40
Non-ferrous metals	-	-	0.01	0.33	-	-	-	-	0.76	-	1.10
Non-metallic minerals	0.25	-	0.70	1.55	-	-	-	0.15	0.70	-	3.34
Transport equipment	0.01	-	0.02	0.41	-	-	-	0.01	0.61	-	1.06
Machinery	0.02	-	0.11	0.65	-	-	-	0.00	1.10	-	1.89
Mining and quarrying	-	-	0.19	0.04	-	-	-	0.01	0.13	-	0.38
Food and tobacco	0.21	-	0.24	2.38	-	-	-	0.15	1.76	-	4.74
Paper, pulp and printing	0.02	-	0.05	0.88	-	-	-	0.75	0.67	-	2.37
Wood and wood products	-	-	0.02	0.05	-	-	-	0.31	0.19	-	0.57
Construction	-	-	0.60	0.33	-	-	-	0.00	0.59	-	1.53
Textile and leather	-	-	0.02	0.14	-	-	-	0.00	0.13	-	0.29
Non-specified	-	-	0.05	0.29	-	-	0.00	0.03	0.72	1.37	2.46
<b>TRANSPORT</b>	-	-	<b>39.73</b>	<b>0.07</b>	-	-	-	<b>3.11</b>	<b>0.93</b>	-	<b>43.83</b>
Domestic aviation	-	-	0.81	-	-	-	-	-	-	-	0.81
Road	-	-	38.33	0.05	-	-	-	3.11	0.01	-	41.50
Rail	-	-	0.13	-	-	-	-	-	0.83	-	0.97
Pipeline transport	-	-	-	0.02	-	-	-	-	0.06	-	0.08
Domestic navigation	-	-	0.46	-	-	-	-	-	-	-	0.46
Non-specified	-	-	-	-	-	-	-	-	0.02	-	0.02
<b>OTHER</b>	<b>0.08</b>	-	<b>11.96</b>	<b>19.19</b>	-	-	<b>0.13</b>	<b>7.76</b>	<b>27.05</b>	<b>2.00</b>	<b>68.17</b>
Residential	0.04	-	5.75	12.06	-	-	0.09	6.95	13.71	1.24	39.83
Comm. and public services	0.04	-	2.27	6.91	-	-	0.03	0.66	12.54	0.75	23.20
Agriculture/forestry	0.00	-	3.10	0.21	-	-	0.01	0.14	0.74	0.01	4.22
Fishing	-	-	0.26	0.00	-	-	0.01	-	0.02	-	0.29
Non-specified	-	-	0.58	-	-	-	-	-	0.05	-	0.63
<b>NON-ENERGY USE</b>	<b>0.31</b>	-	<b>11.93</b>	<b>1.11</b>	-	-	-	-	-	-	<b>13.35</b>
in industry/transf./energy	0.31	-	11.62	1.11	-	-	-	-	-	-	13.04
of which: chem./petrochem.	-	-	8.63	1.11	-	-	-	-	-	-	9.73
in transport	-	-	0.23	-	-	-	-	-	-	-	0.23
in other	0.00	-	0.08	-	-	-	-	-	-	-	0.08
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>10.52</b>	-	<b>2.54</b>	<b>34.86</b>	<b>403.20</b>	<b>60.04</b>	<b>30.63</b>	<b>9.55</b>	-	-	<b>551.34</b>
Electricity plants	10.12	-	2.00	23.32	403.20	60.04	30.37	3.54	-	-	532.58
CHP plants	0.40	-	0.54	11.55	-	-	0.26	6.01	-	-	18.76
<b>Heat generated - PJ</b>	<b>6.21</b>	-	<b>8.68</b>	<b>64.52</b>	-	-	<b>8.90</b>	<b>90.94</b>	<b>0.01</b>	<b>0.51</b>	<b>179.77</b>
CHP plants	0.71	-	7.64	37.38	-	-	3.00	44.08	-	-	92.81
Heat plants	5.51	-	1.03	27.15	-	-	5.90	46.86	0.01	0.51	86.96

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## France

## Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	0.89	-	0.01	103.80	4.23	3.30	17.41	-	-0.00	129.64
Imports	9.54	58.51	40.76	43.16	-	-	-	1.05	1.82	-	154.83
Exports	-0.00	-0.03	-20.29	-5.42	-	-	-	-0.33	-5.26	-	-31.34
Intl. marine bunkers	-	-	-1.64	-	-	-	-	-	-	-	-1.64
Intl. aviation bunkers	-	-	-6.30	-	-	-	-	-	-	-	-6.30
Stock changes	-0.26	-0.35	-0.00	0.72	-	-	-	-0.01	-	-	0.09
<b>TPES</b>	<b>9.27</b>	<b>59.02</b>	<b>12.53</b>	<b>38.46</b>	<b>103.80</b>	<b>4.23</b>	<b>3.30</b>	<b>18.12</b>	<b>-3.45</b>	<b>-0.00</b>	<b>245.28</b>
Electricity and Heat Output											
Elec. generated - TWh	13.80	-	3.63	39.66	398.36	49.23	34.46	9.80	-	-	548.94
Heat generated - PJ	5.44	-	7.78	63.93	-	-	8.57	93.73	0.01	0.41	179.88

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	44.2	52.6	111.9	130.6	136.1	138.6	131.6	129.6
Net imports (Mtoe)	145.5	149.0	119.2	132.5	132.3	116.9	118.3	123.5
Total primary energy supply (Mtoe)	180.1	191.8	223.8	251.7	263.3	248.6	244.3	245.3
Net oil imports (Mtoe)	128.7	112.3	85.9	89.8	83.2	78.8	75.2	79.0
Oil supply (Mtoe)	119.8	106.3	84.0	82.2	77.0	72.3	69.7	71.6
Electricity consumption (TWh) <sup>1</sup>	168.3	243.9	347.6	440.1	503.2	470.9	477.9	477.2
GDP (billion 2010 USD)	1224.0	1492.1	1907.3	2346.5	2646.8	2777.5	2810.5	2861.7
GDP PPP (billion 2010 USD)	1083.4	1320.7	1688.2	2076.9	2342.8	2458.4	2487.6	2530.5
Population (millions)	53.33	55.15	58.23	60.87	64.97	66.59	66.86	67.13
Industrial production index (2010=100)	81.6	89.6	110.6	114.4	100.0	99.7	100.2	102.2
Total self-sufficiency <sup>2</sup>	0.25	0.27	0.50	0.52	0.52	0.56	0.54	0.53
Coal self-sufficiency <sup>2</sup>	0.62	0.41	0.41	0.17	0.01	-	-	-
Oil self-sufficiency <sup>2</sup>	0.02	0.02	0.04	0.02	0.01	0.01	0.01	0.01
Natural gas self-sufficiency <sup>2</sup>	0.47	0.29	0.10	0.04	0.02	0.00	0.00	0.00
TPES/GDP (toe per thousand 2010 USD)	0.15	0.13	0.12	0.11	0.10	0.09	0.09	0.09
TPES/GDP PPP (toe per thousand 2010 USD)	0.17	0.15	0.13	0.12	0.11	0.10	0.10	0.10
TPES/population (toe per capita)	3.38	3.48	3.84	4.14	4.05	3.73	3.65	3.65
Net oil imports/GDP (toe per thousand 2010 USD)	0.11	0.08	0.05	0.04	0.03	0.03	0.03	0.03
Oil supply/GDP (toe per thousand 2010 USD)	0.10	0.07	0.04	0.04	0.03	0.03	0.02	0.03
Oil supply/population (toe per capita)	2.25	1.93	1.44	1.35	1.19	1.09	1.04	1.07
Share of renewables in TPES	0.08	0.08	0.07	0.06	0.08	0.09	0.10	0.10
Share of renewables in electricity generation	0.27 e	0.27 e	0.13	0.13	0.14	0.16	0.18	0.17
TFC/GDP (toe per thousand 2010 USD)	0.12	0.10	0.07	0.07	0.06	0.05	0.05	..
TFC/GDP PPP (toe per thousand 2010 USD)	0.13	0.11	0.08	0.08	0.07	0.06	0.06	..
TFC/population (toe per capita)	2.67	2.56	2.43	2.66	2.46	2.26	2.28	..
Elect. cons./GDP (kWh per 2010 USD)	0.14	0.16	0.18	0.19	0.19	0.17	0.17	0.17
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	0.16	0.19	0.21	0.21	0.22	0.19	0.19	0.19
Elect. cons./population (kWh per capita)	3156	4423	5970	7229	7744	7071	7148	7109
Industry cons. <sup>3</sup> /industrial production (2010=100)	160.9	142.2	93.7	101.3	100.0	95.2	93.7	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	273.1	216.4	100.8	106.6	100.0	93.9	89.6	..

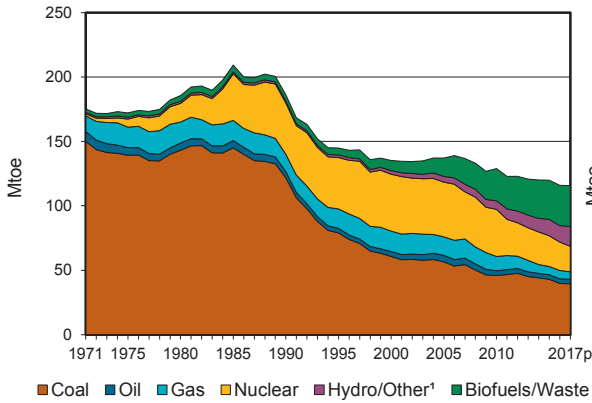
1. Electricity consumption equals domestic supply less losses.

2. Production divided by TPES.

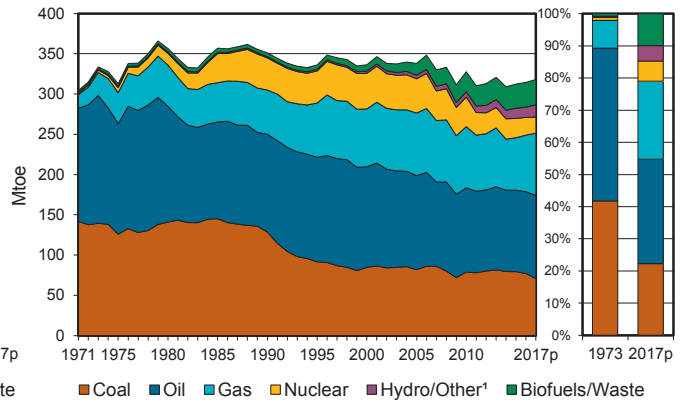
3. Includes non-energy use.

## Germany

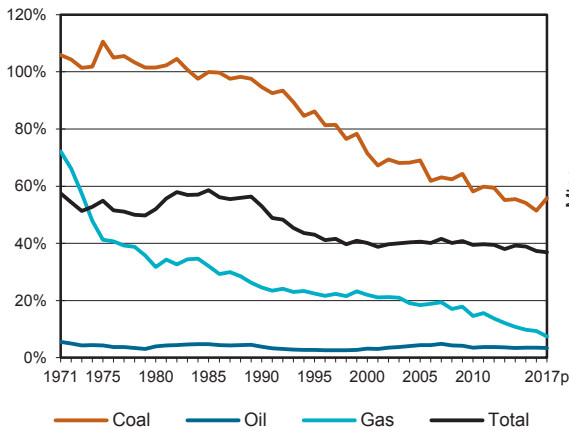
**Figure 1. Energy production**



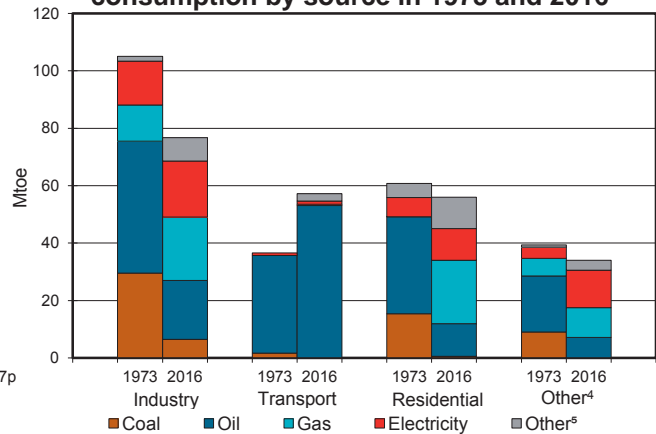
**Figure 2. Total primary energy supply<sup>2</sup>**



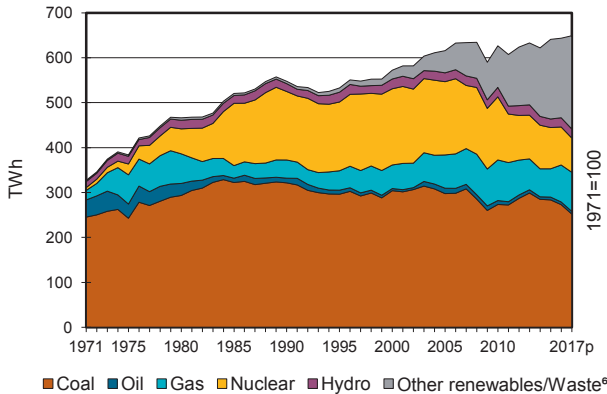
**Figure 3. Energy self-sufficiency**



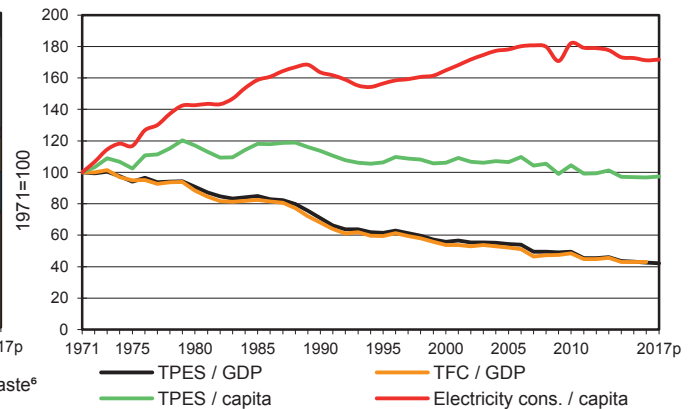
**Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.

## Germany

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./ Solar/ etc.	Biofuels/ Waste	Electricity	Heat	Total
Production	39.72	3.60	-	6.55	22.05	1.77	10.97	31.25	-	-	115.92
Imports	39.66	92.63	39.41	81.61	-	-	-	0.89	2.44	-	256.64
Exports	-1.40	-0.10	-22.70	-19.33	-	-	-	-1.45	-6.78	-0.00	-51.77
Intl. marine bunkers	-	-	-2.79	-	-	-	-	-	-	-	-2.79
Intl. aviation bunkers	-	-	-8.66	-	-	-	-	-	-	-	-8.66
Stock changes	-0.76	0.77	-0.74	1.49	-	-	-	-	-	-	0.77
<b>TPES</b>	<b>77.23</b>	<b>96.90</b>	<b>4.53</b>	<b>70.33</b>	<b>22.05</b>	<b>1.77</b>	<b>10.97</b>	<b>30.69</b>	<b>-4.34</b>	<b>-0.00</b>	<b>310.12</b>
Transfers	-	1.40	-0.66	-	-	-	-	-	-	-	0.74
Statistical differences	-1.04	0.01	-0.86	3.37	-	-	-	0.00	-	-	1.48
Electricity plants	-54.26	-	-0.78	-3.11	-22.05	-1.77	-10.18	-5.70	44.63	-	-53.22
CHP plants	-6.49	-	-0.44	-12.10	-	-	-	-8.43	10.70	8.13	-8.64
Heat plants	-0.33	-	-0.14	-2.20	-	-	-0.04	-1.35	-	3.08	-0.97
Blast furnaces	-5.53	-	-0.03	-	-	-	-	-	-	-	-5.56
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat. fuel/BKB/PB plants	-0.94	-	-0.36	-	-	-	-	-	-	-	-1.30
Oil refineries	-	-104.17	102.58	-	-	-	-	-	-	-	-1.60
Petrochemical plants	-	5.86	-6.01	-	-	-	-	-	-	-	-0.15
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-	-	-	-
Energy industry own use	-0.82	-	-5.62	-1.26	-	-	-	-0.53	-4.29	-0.30	-12.82
Losses	-0.81	-	-	-	-	-	-	-0.02	-2.21	-1.12	-4.17
<b>TFC</b>	<b>7.01</b>	<b>-</b>	<b>92.21</b>	<b>55.04</b>	<b>-</b>	<b>-</b>	<b>0.75</b>	<b>14.65</b>	<b>44.49</b>	<b>9.78</b>	<b>223.93</b>
<b>INDUSTRY</b>	<b>6.05</b>	<b>-</b>	<b>2.35</b>	<b>19.49</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>3.91</b>	<b>19.48</b>	<b>4.27</b>	<b>55.56</b>
Iron and steel	2.87	-	0.02	2.16	-	-	-	0.00	2.33	0.03	7.41
Chemical and petrochemical	0.95	-	1.15	5.32	-	-	-	0.43	4.61	2.49	14.95
Non-ferrous metals	0.03	-	0.07	0.83	-	-	-	0.01	1.37	0.03	2.35
Non-metallic minerals	1.34	-	0.44	2.51	-	-	-	1.16	1.06	0.02	6.53
Transport equipment	0.22	-	0.04	0.88	-	-	-	0.01	1.55	0.34	3.03
Machinery	0.02	-	0.24	1.76	-	-	-	0.10	2.88	0.25	5.24
Mining and quarrying	0.07	-	0.03	0.11	-	-	-	0.02	0.15	0.00	0.38
Food and tobacco	0.21	-	0.17	2.78	-	-	-	0.06	1.59	0.26	5.07
Paper, pulp and printing	0.35	-	0.04	2.03	-	-	-	0.68	1.84	0.62	5.55
Wood and wood products	-	-	0.01	0.13	-	-	-	1.33	0.40	0.05	1.92
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	0.01	-	0.02	0.24	-	-	-	0.00	0.19	0.02	0.47
Non-specified	0.00	-	0.11	0.74	-	-	-	0.11	1.52	0.17	2.65
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>52.82</b>	<b>0.45</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2.57</b>	<b>1.01</b>	<b>-</b>	<b>56.85</b>
Domestic aviation	-	-	0.78	-	-	-	-	-	-	-	0.78
Road	-	-	51.30	0.16	-	-	-	2.55	0.01	-	54.03
Rail	-	-	0.33	-	-	-	-	0.02	1.00	-	1.35
Pipeline transport	-	-	-	0.28	-	-	-	-	-	-	0.28
Domestic navigation	-	-	0.27	-	-	-	-	-	-	-	0.27
Non-specified	-	-	0.14	-	-	-	-	-	-	-	0.14
<b>OTHER</b>	<b>0.55</b>	<b>-</b>	<b>18.56</b>	<b>32.48</b>	<b>-</b>	<b>-</b>	<b>0.75</b>	<b>8.17</b>	<b>23.99</b>	<b>5.51</b>	<b>90.02</b>
Residential	0.52	-	11.45	22.09	-	-	0.66	5.85	10.97	4.42	55.96
Comm. and public services	0.03	-	7.01	10.39	-	-	0.09	2.33	13.02	1.09	33.95
Agriculture/forestry	-	-	-	-	-	-	-	-	-	-	-
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	0.11	-	-	-	-	-	-	-	0.11
<b>NON-ENERGY USE</b>	<b>0.40</b>	<b>-</b>	<b>18.48</b>	<b>2.62</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>21.50</b>
in industry/transf./energy	0.40	-	18.14	2.62	-	-	-	-	-	-	21.17
of which: chem./petrochem.	0.02	-	14.70	2.62	-	-	-	-	-	-	17.34
in transport	-	-	0.33	-	-	-	-	-	-	-	0.33
in other	-	-	0.01	-	-	-	-	-	-	-	0.01
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>273.20</b>	<b>-</b>	<b>5.85</b>	<b>82.29</b>	<b>84.63</b>	<b>20.55</b>	<b>118.76</b>	<b>58.26</b>	<b>-</b>	<b>-</b>	<b>643.53</b>
Electricity plants	251.39	-	3.24	19.22	84.63	20.55	117.87	22.16	-	-	519.06
CHP plants	21.81	-	2.61	63.07	-	-	0.89	36.09	-	-	124.47
<b>Heat generated - PJ</b>	<b>140.76</b>	<b>-</b>	<b>5.17</b>	<b>211.59</b>	<b>-</b>	<b>-</b>	<b>8.19</b>	<b>103.55</b>	<b>-</b>	<b>-</b>	<b>469.26</b>
CHP plants	130.29	-	1.08	136.98	-	-	5.08	66.82	-	-	340.26
Heat plants	10.47	-	4.09	74.61	-	-	3.11	36.73	-	-	129.00

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Germany

## Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	39.50	3.52	-	5.72	19.89	1.73	13.56	31.80	-	-	115.71
Imports	33.25	92.11	41.70	100.16	-	-	-	1.23	2.39	-	270.85
Exports	-1.50	-	-23.30	-29.02	-	-	-	-1.62	-6.90	-0.00	-62.35
Intl. marine bunkers	-	-	-2.27	-	-	-	-	-	-	-	-2.27
Intl. aviation bunkers	-	-	-9.24	-	-	-	-	-	-	-	-9.24
Stock changes	-0.49	0.25	0.56	0.50	-	-	-	-	-	-	0.83
<b>TPES</b>	<b>70.76</b>	<b>95.89</b>	<b>7.45</b>	<b>77.37</b>	<b>19.89</b>	<b>1.73</b>	<b>13.56</b>	<b>31.41</b>	<b>-4.51</b>	<b>-0.00</b>	<b>313.54</b>
Electricity and Heat Output											
Elec. generated - TWh	252.41	-	5.84	86.96	76.32	20.15	148.61	58.70	-	-	648.99
Heat generated - PJ	130.41	-	4.97	219.49	-	-	8.14	106.67	-	-	469.68

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	171.7	185.6	186.2	135.2	128.9	119.9	115.9	115.7
Net imports (Mtoe)	171.1	183.4	167.3	205.7	204.0	198.3	204.9	208.5
Total primary energy supply (Mtoe)	334.7	357.2	351.2	336.6	326.4	308.2	310.1	313.5
Net oil imports (Mtoe)	160.8	148.9	122.1	126.9	112.1	108.3	109.2	110.5
Oil supply (Mtoe)	158.7	143.9	121.4	124.8	104.7	101.2	101.4	103.3
Electricity consumption (TWh) <sup>1</sup>	367.5	453.9	527.4	545.5	594.1	573.0	572.8	576.8
GDP (billion 2010 USD)	1729.0	2040.5	2568.6	3123.9	3417.1	3709.6	3781.7	3865.8
GDP PPP (billion 2010 USD)	1624.6	1917.4	2413.6	2935.3	3210.8	3485.7	3553.4	3628.9
Population (millions)	78.96	78.30	79.36	81.46	80.28	81.69	82.35	82.68
Industrial production index (2010=100)	61.1	65.9	79.5	88.9	100.0	110.6	112.2	115.5
Total self-sufficiency <sup>2</sup>	0.51	0.52	0.53	0.40	0.40	0.39	0.37	0.37
Coal self-sufficiency <sup>2</sup>	1.01	1.02	0.95	0.71	0.58	0.54	0.51	0.56
Oil self-sufficiency <sup>2</sup>	0.04	0.04	0.04	0.03	0.04	0.04	0.04	0.03
Natural gas self-sufficiency <sup>2</sup>	0.57	0.32	0.25	0.22	0.15	0.10	0.09	0.07
TPES/GDP (toe per thousand 2010 USD)	0.19	0.18	0.14	0.11	0.10	0.08	0.08	0.08
TPES/GDP PPP (toe per thousand 2010 USD)	0.21	0.19	0.15	0.11	0.10	0.09	0.09	0.09
TPES/population (toe per capita)	4.24	4.56	4.43	4.13	4.07	3.77	3.77	3.79
Net oil imports/GDP (toe per thousand 2010 USD)	0.09	0.07	0.05	0.04	0.03	0.03	0.03	0.03
Oil supply/GDP (toe per thousand 2010 USD)	0.09	0.07	0.05	0.04	0.03	0.03	0.03	0.03
Oil supply/population (toe per capita)	2.01	1.84	1.53	1.53	1.30	1.24	1.23	1.25
Share of renewables in TPES	0.01	0.02	0.02	0.03	0.08	0.12	0.13	0.14
Share of renewables in electricity generation	0.05	0.05	0.04	0.06	0.17	0.29	0.29	0.34
TFC/GDP (toe per thousand 2010 USD)	0.14	0.12	0.09	0.07	0.07	0.06	0.06	..
TFC/GDP PPP (toe per thousand 2010 USD)	0.15	0.13	0.10	0.08	0.07	0.06	0.06	..
TFC/population (toe per capita)	3.06	3.18	3.03	2.84	2.85	2.70	2.72	..
Elect. cons./GDP (kWh per 2010 USD)	0.21	0.22	0.21	0.17	0.17	0.15	0.15	0.15
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	0.23	0.24	0.22	0.19	0.19	0.16	0.16	0.16
Elect. cons./population (kWh per capita)	4654	5796	6646	6697	7399	7015	6956	6976
Industry cons. <sup>3</sup> /industrial production (2010=100)	221.6	198.0	143.6	110.2	100.0	88.9	88.1	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	319.9	232.3	140.9	130.8	100.0	81.4	77.5	..

1. Electricity consumption equals domestic supply less losses.

2. Production divided by TPES.

3. Includes non-energy use.

Greece

Figure 1. Energy production

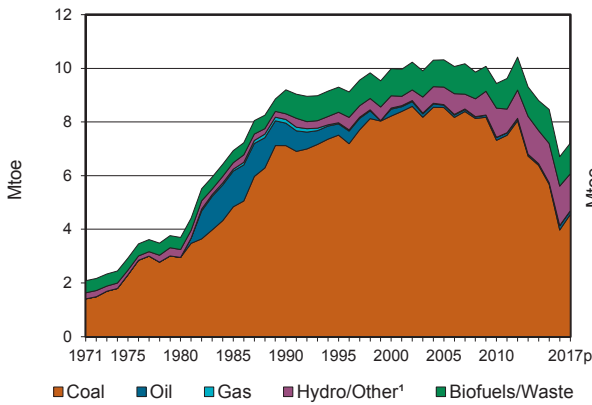


Figure 2. Total primary energy supply<sup>2</sup>

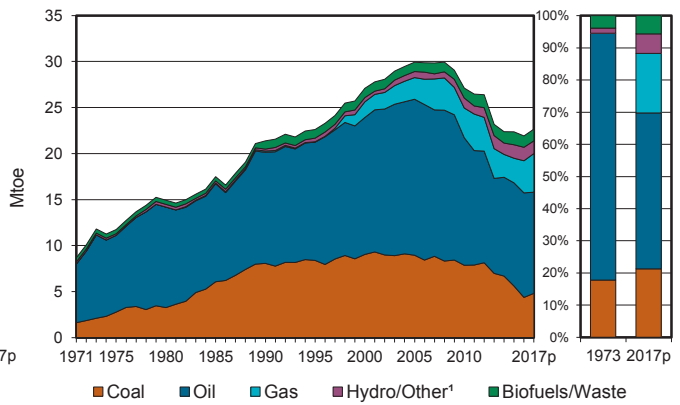


Figure 3. Energy self-sufficiency

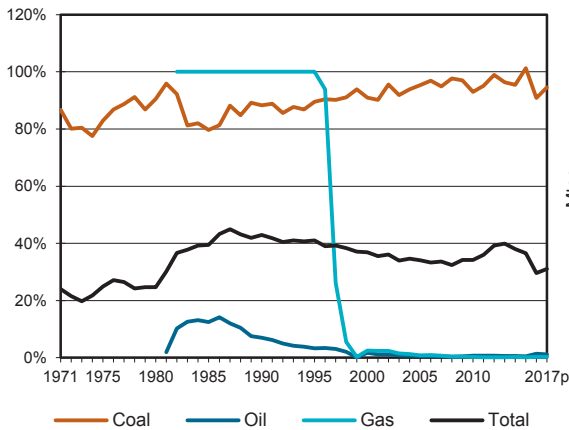


Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>

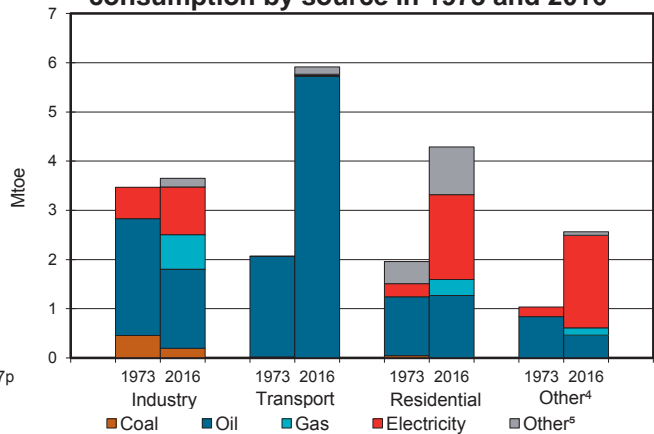


Figure 5. Electricity generation by source

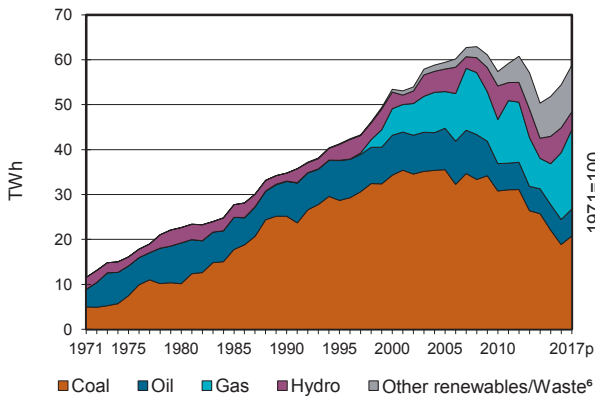
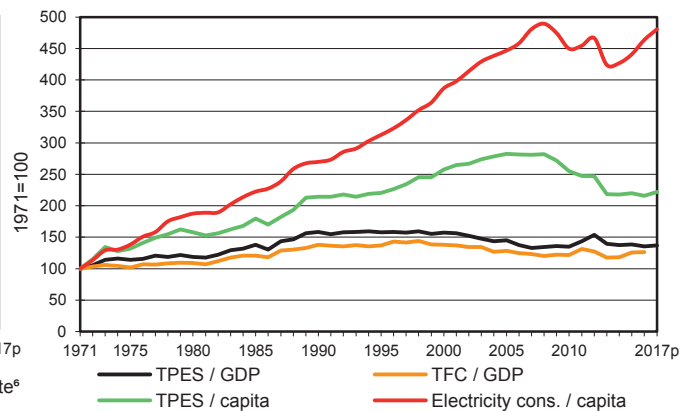


Figure 6. Selected indicators



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.

## Greece

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	3.97	0.16	-	0.01	-	0.48	0.99	1.10 e	-	-	6.71
Imports	0.19	28.13	4.18	3.46	-	-	-	0.15	0.85	-	36.95
Exports	-	-0.16	-18.20	-	-	-	-	-0.01	-0.09	-	-18.45
Intl. marine bunkers	-	-	-1.72	-	-	-	-	-	-	-	-1.72
Intl. aviation bunkers	-	-	-0.88	-	-	-	-	-	-	-	-0.88
Stock changes	0.21	-0.34	0.19	0.02	-	-	-	-0.00	-	-	0.06
<b>TPES</b>	<b>4.37</b>	<b>27.79</b>	<b>-16.43</b>	<b>3.49</b>	<b>-</b>	<b>0.48</b>	<b>0.99</b>	<b>1.23</b>	<b>0.76</b>	<b>-</b>	<b>22.67</b>
Transfers	-	2.17	-2.12	-	-	-	-	-	-	-	0.05
Statistical differences	0.39	-0.17	-0.19	-0.04	-	-	-	0.00	-	-	-0.01
Electricity plants	-2.73	-	-0.88	-2.06	-	-0.48	-0.78	-0.01	3.86 e	-	-3.08
CHP plants	-1.83	-	-0.41	-0.17	-	-	-	-0.11	0.81 e	0.05	-1.66
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat. fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-29.79	30.50	-	-	-	-	-	-	-	0.71
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-0.00	-	-	-	-	-0.00	-	-	-0.00
Energy industry own use	-	-	-1.40	-0.01	-	-	-	-0.00	-0.51 e	-	-1.92
Losses	-	-	-	-0.01	-	-	-	-	-0.34	-	-0.35
<b>TFC</b>	<b>0.20</b>	<b>-</b>	<b>9.06</b>	<b>1.19</b>	<b>-</b>	<b>-</b>	<b>0.21</b>	<b>1.11</b>	<b>4.59</b>	<b>0.05</b>	<b>16.41</b>
<b>INDUSTRY</b>	<b>0.19</b>	<b>-</b>	<b>1.18</b>	<b>0.55</b>	<b>-</b>	<b>-</b>	<b>0.00</b>	<b>0.17</b>	<b>0.97</b>	<b>-</b>	<b>3.07</b>
Iron and steel	-	-	0.02	0.04	-	-	-	-	0.07	-	0.13
Chemical and petrochemical	-	-	0.05	0.07	-	-	-	0.03	0.02	-	0.15
Non-ferrous metals	0.16	-	0.00	0.24	-	-	-	-	0.38	-	0.78
Non-metallic minerals	0.03	-	0.64	0.02	-	-	-	0.01	0.08	-	0.78
Transport equipment	-	-	0.01	-	-	-	-	0.00	0.00	-	0.02
Machinery	-	-	0.01	0.00	-	-	-	-	0.01	-	0.03
Mining and quarrying	-	-	0.08	-	-	-	-	0.00	0.00	-	0.08
Food and tobacco	-	-	0.16	0.06	-	-	-	0.10	0.12	-	0.45
Paper, pulp and printing	-	-	0.02	0.01	-	-	-	0.00	0.02	-	0.05
Wood and wood products	-	-	0.00	0.00	-	-	-	0.02	0.00	-	0.02
Construction	-	-	0.12	-	-	-	-	0.01	0.00	-	0.13
Textile and leather	-	-	0.01	0.01	-	-	-	-	0.03	-	0.04
Non-specified	-	-	0.07	0.11	-	-	0.00	0.00	0.24	-	0.42
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>5.71</b>	<b>0.02</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.15</b>	<b>0.02</b>	<b>-</b>	<b>5.90</b>
Domestic aviation	-	-	0.19	-	-	-	-	-	-	-	0.19
Road	-	-	4.92	0.02	-	-	-	0.15	0.00	-	5.10
Rail	-	-	0.04	-	-	-	-	0.00	0.01	-	0.06
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	0.56	-	-	-	-	0.00	-	-	0.56
Non-specified	-	-	0.00	-	-	-	-	-	-	-	0.00
<b>OTHER</b>	<b>0.00</b>	<b>-</b>	<b>1.72</b>	<b>0.48</b>	<b>-</b>	<b>-</b>	<b>0.21</b>	<b>0.78</b>	<b>3.60</b>	<b>0.05</b>	<b>6.85</b>
Residential	0.00	-	1.27	0.33	-	-	0.19	0.73	1.72	0.05	4.29
Comm. and public services	-	-	0.18	0.15	-	-	0.01	0.03	1.67	-	2.04
Agriculture/forestry	0.00	-	0.03	0.00	-	-	0.00	0.03	0.21	-	0.27
Fishing	-	-	0.01	-	-	-	0.00	-	-	-	0.01
Non-specified	0.00	-	0.23	-	-	-	-	0.00	0.00	-	0.24
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>0.45</b>	<b>0.15</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.59</b>
in industry/transf./energy	-	-	0.43	0.15	-	-	-	-	-	-	0.57
of which: chem./petrochem.	-	-	0.19	0.15	-	-	-	-	-	-	0.34
in transport	-	-	0.01	-	-	-	-	-	-	-	0.01
in other	-	-	0.01	-	-	-	-	-	-	-	0.01
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>18.88</b>	<b>-</b>	<b>5.57</b>	<b>14.87</b>	<b>-</b>	<b>5.54</b>	<b>9.08</b>	<b>0.48</b>	<b>-</b>	<b>-</b>	<b>54.42</b>
Electricity plants	11.57 e	-	4.85	13.86 e	-	5.54	9.08	0.04	-	-	44.95
CHP plants	7.31	-	0.71	1.01 e	-	-	-	0.44	-	-	9.47
<b>Heat generated - PJ</b>	<b>2.12</b>	<b>-</b>	<b>0.01</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2.13</b>
CHP plants	2.12	-	0.01	-	-	-	-	-	-	-	2.13
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.



## Greece

## Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	4.55	0.13	-	0.01	-	0.34	1.04	1.14	-	-	7.21
Imports	0.26	28.86	4.14	4.23	-	-	-	0.14	0.75	-	38.38
Exports	-0.00	-0.17	-19.04	-	-	-	-	-0.01	-0.21	-	-19.44
Intl. marine bunkers	-	-	-2.11	-	-	-	-	-	-	-	-2.11
Intl. aviation bunkers	-	-	-0.95	-	-	-	-	-	-	-	-0.95
Stock changes	0.01	0.40	-0.27	-0.03	-	-	-	-	-	-	0.11
<b>TPES</b>	<b>4.81</b>	<b>29.21</b>	<b>-18.22</b>	<b>4.20</b>	<b>-</b>	<b>0.34</b>	<b>1.04</b>	<b>1.27</b>	<b>0.54</b>	<b>-</b>	<b>23.19</b>
Electricity and Heat Output											
Elec. generated - TWh	20.77	-	6.00	17.63	-	3.97	9.54	0.83	-	-	58.74
Heat generated - PJ	2.06	-	0.01	-	-	-	-	-	-	-	2.07

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	2.3	3.7	9.2	10.0	9.4	8.5	6.7	7.2
Net imports (Mtoe)	12.0	13.7	15.3	21.8	21.3	18.4	18.5	18.9
Total primary energy supply (Mtoe)	11.8	15.0	21.4	27.1	27.6	23.2	22.7	23.2
Net oil imports (Mtoe)	11.6	13.2	14.3	19.3	17.0	14.6	14.0	13.8
Oil supply (Mtoe)	9.1	10.9	12.1	14.9	13.9	11.2	11.4	11.0
Electricity consumption (TWh) <sup>1</sup>	13.8	21.7	32.9	49.6	59.3	56.6	59.3	61.1
GDP (billion 2010 USD)	151.2	184.6	197.7	251.5	299.4	245.1	244.5	247.8
GDP PPP (billion 2010 USD)	158.4	193.4	207.1	263.5	313.7	256.8	256.2	259.4
Population (millions)	9.02	9.74	10.27	10.81	11.12	10.82	10.78	10.72
Industrial production index (2010=100)	70.2	93.8	103.2	123.9	100.0	88.3	90.6	95.0
Total self-sufficiency <sup>2</sup>	0.20	0.25	0.43	0.37	0.34	0.37	0.30	0.31
Coal self-sufficiency <sup>2</sup>	0.80	0.90	0.88	0.91	0.93	1.01	0.91	0.95
Oil self-sufficiency <sup>2</sup>	-	-	0.07	0.02	0.01	0.01	0.01	0.01
Natural gas self-sufficiency <sup>2</sup>	-	-	1.00	0.02	0.00	0.00	0.00	0.00
TPES/GDP (toe per thousand 2010 USD)	0.08	0.08	0.11	0.11	0.09	0.09	0.09	0.09
TPES/GDP PPP (toe per thousand 2010 USD)	0.07	0.08	0.10	0.10	0.09	0.09	0.09	0.09
TPES/population (toe per capita)	1.31	1.54	2.09	2.51	2.48	2.14	2.10	2.16
Net oil imports/GDP (toe per thousand 2010 USD)	0.08	0.07	0.07	0.08	0.06	0.06	0.06	0.06
Oil supply/GDP (toe per thousand 2010 USD)	0.06	0.06	0.06	0.06	0.05	0.05	0.05	0.04
Oil supply/population (toe per capita)	1.00	1.12	1.18	1.38	1.25	1.04	1.05	1.02
Share of renewables in TPES	0.05	0.05	0.05	0.05	0.08	0.12	0.12	0.11
Share of renewables in electricity generation	0.15	0.15	0.05	0.08	0.18	0.29	0.27	0.24
TFC/GDP (toe per thousand 2010 USD)	0.06	0.06	0.07	0.07	0.07	0.07	0.07	..
TFC/GDP PPP (toe per thousand 2010 USD)	0.05	0.06	0.07	0.07	0.06	0.06	0.06	..
TFC/population (toe per capita)	0.95	1.10	1.41	1.71	1.75	1.51	1.52	..
Elect. cons./GDP (kWh per 2010 USD)	0.09	0.12	0.17	0.20	0.20	0.23	0.24	0.25
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	0.09	0.11	0.16	0.19	0.19	0.22	0.23	0.24
Elect. cons./population (kWh per capita)	1532	2224	3200	4586	5334	5229	5501	5699
Industry cons. <sup>3</sup> /industrial production (2010=100)	108.6	102.3	97.3	90.8	100.0	94.9	88.6	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	164.3	157.4	96.6	97.9	100.0	80.5	86.4	..

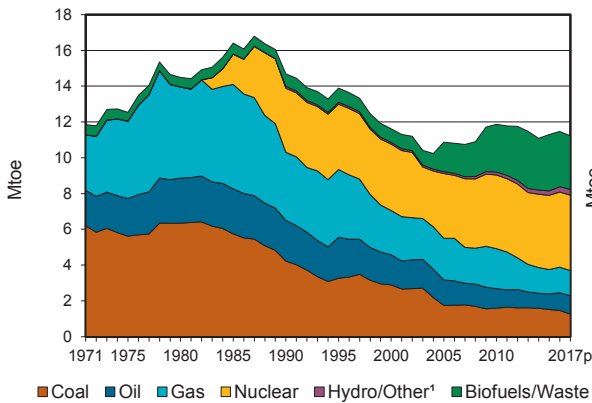
1. Electricity consumption equals domestic supply less losses.

2. Production divided by TPES.

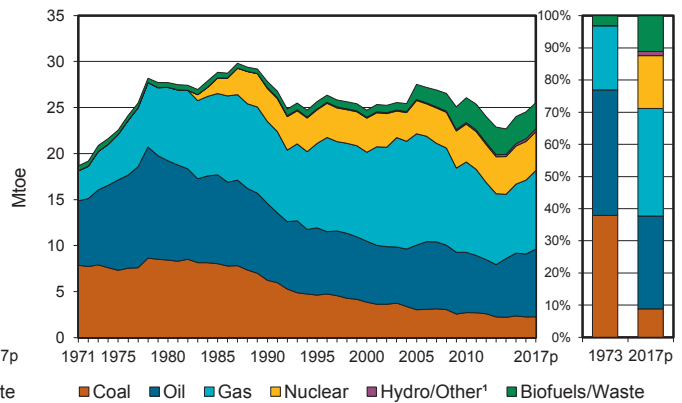
3. Includes non-energy use.

## Hungary

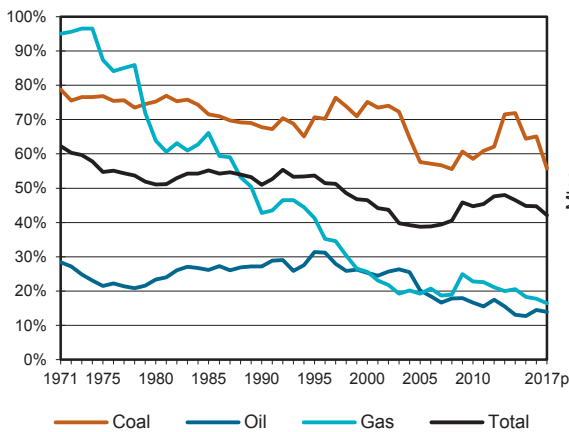
**Figure 1. Energy production**



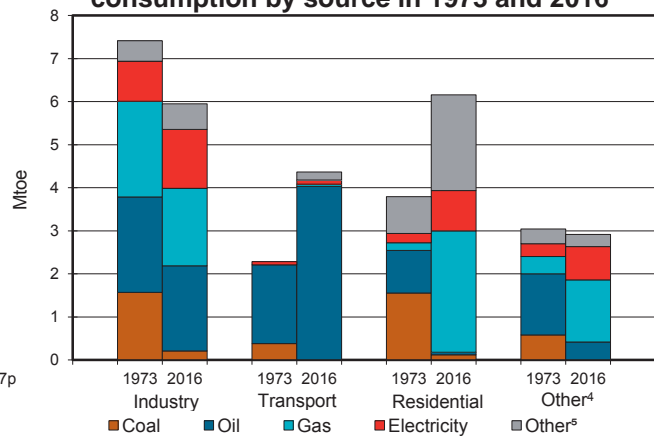
**Figure 2. Total primary energy supply<sup>2</sup>**



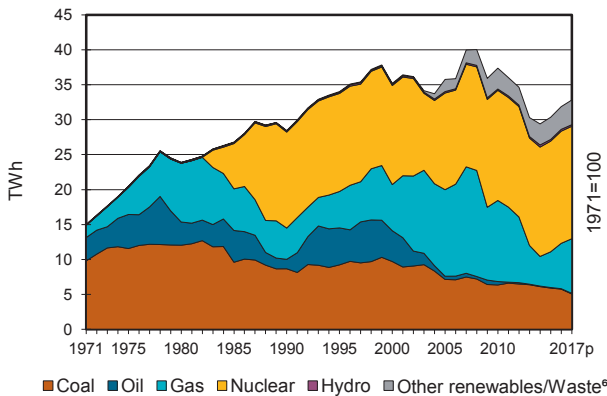
**Figure 3. Energy self-sufficiency**



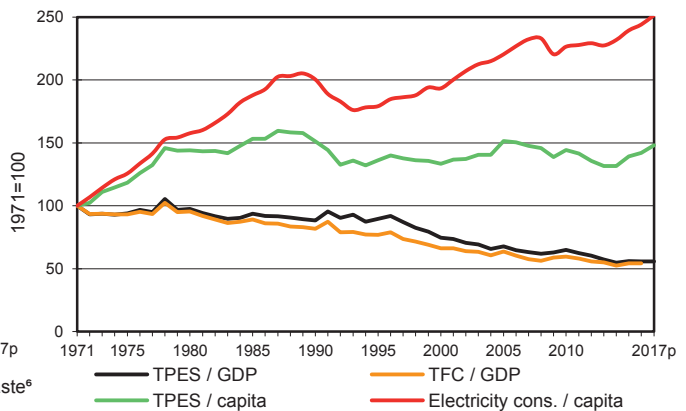
**Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.

## Hungary

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	1.46	0.99	-	1.43	4.20	0.02	0.27	3.09	-	-	11.47
Imports	1.14	6.28	2.95	7.23	-	-	-	0.26	1.54	-	19.40
Exports	-0.37	-0.11	-2.81	-0.89	-	-	-	-0.44	-0.45	-	-5.08
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-0.19	-	-	-	-	-	-	-	-0.19
Stock changes	0.02	-0.01	-0.26	0.27	-	-	-	0.01	-	-	0.02
<b>TPES</b>	<b>2.25</b>	<b>7.15</b>	<b>-0.31</b>	<b>8.03</b>	<b>4.20</b>	<b>0.02</b>	<b>0.27</b>	<b>2.93</b>	<b>1.09</b>	-	<b>25.62</b>
Transfers	-	-0.06	0.06	-	-	-	-	-	-	-	0.01
Statistical differences	0.00	0.00	0.01	0.32	-	-	-	-0.00	-0.04	-0.00	0.29
Electricity plants	-1.40	-	-0.01	-0.43	-	-0.02	-0.08	-0.33	0.92	-	-1.35
CHP plants	-0.14	-	-0.00	-0.85	-4.20	-	-0.00	-0.35	1.82	0.56	-3.18
Heat plants	-0.05	-	-0.00	-0.55	-	-	-0.12	-0.07	-	0.73	-0.06
Blast furnaces	-0.17 e	-	-	-0.01 e	-	-	-	-	-	-	-0.18
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat. fuel/BKB/PB plants	-0.08	-	-	-	-	-	-	-	-	-	-0.08
Oil refineries	-	-7.39	7.39	-	-	-	-	-	-	-	-0.01
Petrochemical plants	-	0.27	-0.29	-	-	-	-	-	-	-	-0.02
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	0.03	-	-0.14	-	-	-	-	-	-	-0.11
Energy industry own use	-0.07	-	-0.35	-0.18	-	-	-	-0.01	-0.30	-0.12	-1.04
Losses	-0.01	-	-	-0.09	-	-	-	-	-0.31	-0.10	-0.50
<b>TFC</b>	<b>0.33</b>	<b>0.00</b>	<b>6.49</b>	<b>6.09</b>	-	-	<b>0.06</b>	<b>2.16</b>	<b>3.19</b>	<b>1.06</b>	<b>19.39</b>
<b>INDUSTRY</b>	<b>0.20</b>	-	<b>0.62</b>	<b>1.31</b>	-	-	<b>0.00</b>	<b>0.20</b>	<b>1.37</b>	<b>0.39</b>	<b>4.09</b>
Iron and steel	0.15 e	-	0.00	0.05 e	-	-	-	0.00	0.05	0.02	0.28
Chemical and petrochemical	-	-	0.33	0.26	-	-	-	0.00	0.28	0.24	1.11
Non-ferrous metals	-	-	0.00	0.07	-	-	-	-	0.03	0.01	0.12
Non-metallic minerals	0.03	-	0.10	0.20	-	-	-	0.07	0.12	0.00	0.53
Transport equipment	-	-	0.00	0.07	-	-	-	0.00	0.14	0.01	0.23
Machinery	0.00	-	0.01	0.16	-	-	0.00	0.00	0.22	0.01	0.40
Mining and quarrying	-	-	0.01	0.00	-	-	-	0.00	0.01	-	0.02
Food and tobacco	0.00	-	0.01	0.27	-	-	0.00	0.06	0.21	0.03	0.58
Paper, pulp and printing	0.01	-	0.00	0.04	-	-	-	0.02	0.07	0.06	0.20
Wood and wood products	-	-	0.00	0.01	-	-	-	0.03	0.02	-	0.07
Construction	0.00	-	0.15	0.04	-	-	0.00	0.00	0.03	0.00	0.23
Textile and leather	-	-	-	0.02	-	-	-	0.00	0.02	0.00	0.04
Non-specified	0.00	-	0.00	0.08	-	-	0.00	0.01	0.16	0.01	0.27
<b>TRANSPORT</b>	-	-	<b>3.99</b>	<b>0.05</b>	-	-	-	<b>0.19</b>	<b>0.10</b>	-	<b>4.33</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	3.94	0.01	-	-	-	0.19	0.00	-	4.14
Rail	-	-	0.04	-	-	-	-	-	0.10	-	0.14
Pipeline transport	-	-	-	0.04	-	-	-	-	0.00	-	0.04
Domestic navigation	-	-	0.00	-	-	-	-	-	-	-	0.00
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>0.12</b>	-	<b>0.47</b>	<b>4.25</b>	-	-	<b>0.06</b>	<b>1.77</b>	<b>1.72</b>	<b>0.67</b>	<b>9.07</b>
Residential	0.12	-	0.06	2.81	-	-	0.01	1.72	0.94	0.49	6.16
Comm. and public services	0.00	-	0.04	1.27	-	-	0.02	0.03	0.69	0.18	2.23
Agriculture/forestry	0.00	-	0.37	0.15	-	-	0.03	0.02	0.08	0.00	0.64
Fishing	-	-	0.00	0.00	-	-	-	-	0.00	-	0.00
Non-specified	0.00	-	0.01	0.02	-	-	-	-	0.01	0.00	0.04
<b>NON-ENERGY USE</b>	<b>0.01</b>	<b>0.00</b>	<b>1.40</b>	<b>0.49</b>	-	-	-	-	-	-	<b>1.90</b>
in industry/transf./energy	0.01	0.00	1.36	0.49	-	-	-	-	-	-	1.86
of which: chem./petrochem.	0.01	0.00	1.23	0.49	-	-	-	-	-	-	1.73
in transport	-	-	0.04	-	-	-	-	-	-	-	0.04
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>5.76</b>	-	<b>0.06</b>	<b>6.48</b>	<b>16.05</b>	<b>0.26</b>	<b>0.96</b>	<b>2.28</b>	-	-	<b>31.86</b>
Electricity plants	5.50	-	0.05	2.77	16.05	0.26	0.95	1.20	-	-	10.74
CHP plants	0.26	-	0.02	3.71	-	-	0.01	1.08	-	-	21.12
<b>Heat generated - PJ</b>	<b>5.35</b>	-	<b>0.12</b>	<b>35.59</b>	<b>0.85</b>	-	<b>5.02</b>	<b>7.04</b>	-	-	<b>53.97</b>
CHP plants	3.41	-	0.03	14.38	0.85	-	0.10	4.55	-	-	23.32
Heat plants	1.95	-	0.09	21.21	-	-	4.92	2.49	-	-	30.65

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Hungary

## Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	1.26	1.03	-	1.41	4.21	0.02	0.31	2.99	-	-	11.23
Imports	1.30	6.16	3.77	11.16	-	-	-	0.30	1.70	-	24.40
Exports	-0.27	-0.18	-3.12	-2.94	-	-	-	-0.46	-0.60	-	-7.58
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-0.22	-	-	-	-	-	-	-	-0.22
Stock changes	-0.02	0.00	-0.07	-1.09	-	-	-	-0.01	-	-	-1.19
<b>TPES</b>	<b>2.26</b>	<b>7.01</b>	<b>0.35</b>	<b>8.54</b>	<b>4.21</b>	<b>0.02</b>	<b>0.31</b>	<b>2.83</b>	<b>1.11</b>	<b>-</b>	<b>26.64</b>
Electricity and Heat Output											
Elec. generated - TWh	5.07	-	0.09	7.80	16.10	0.22	1.20	2.32	-	-	32.80
Heat generated - PJ	4.38	-	0.18	34.85	0.83	-	5.51	6.20	-	-	51.94

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	12.7	14.5	14.7	11.6	11.9	11.3	11.5	11.2
Net imports (Mtoe)	8.7	14.3	14.2	13.9	15.1	13.6	14.3	16.8
Total primary energy supply (Mtoe)	21.3	28.4	28.8	25.0	26.5	25.2	25.6	26.6
Net oil imports (Mtoe)	6.5	8.3	6.4	5.2	5.8	6.6	6.3	6.6
Oil supply (Mtoe)	8.2	10.8	8.4	6.6	6.6	6.8	6.8	7.4
Electricity consumption (TWh) <sup>1</sup>	20.4	28.9	35.6	33.8	38.8	40.3	41.0	42.1
GDP (billion 2010 USD)	72.7	93.1	104.2	107.1	130.9	144.0	147.2	153.1
GDP PPP (billion 2010 USD)	119.7	153.4	171.8	176.5	215.8	237.3	242.6	252.0
Population (millions)	10.43	10.71	10.37	10.21	10.00	9.84	9.81	9.78
Industrial production index (2010=100)	..	49.3	48.1	70.5	100.0	121.3	122.4	128.3
Total self-sufficiency <sup>2</sup>	0.60	0.51	0.51	0.46	0.45	0.45	0.45	0.42
Coal self-sufficiency <sup>2</sup>	0.77	0.75	0.68	0.75	0.59	0.64	0.65	0.56
Oil self-sufficiency <sup>2</sup>	0.25	0.23	0.27	0.25	0.17	0.13	0.15	0.14
Natural gas self-sufficiency <sup>2</sup>	0.97	0.64	0.43	0.26	0.23	0.18	0.18	0.17
TPES/GDP (toe per thousand 2010 USD)	0.29	0.30	0.28	0.23	0.20	0.18	0.17	0.17
TPES/GDP PPP (toe per thousand 2010 USD)	0.18	0.18	0.17	0.14	0.12	0.11	0.11	0.11
TPES/population (toe per capita)	2.04	2.65	2.78	2.45	2.65	2.56	2.61	2.72
Net oil imports/GDP (toe per thousand 2010 USD)	0.09	0.09	0.06	0.05	0.04	0.05	0.04	0.04
Oil supply/GDP (toe per thousand 2010 USD)	0.11	0.12	0.08	0.06	0.05	0.05	0.05	0.05
Oil supply/population (toe per capita)	0.78	1.01	0.81	0.65	0.65	0.69	0.70	0.75
Share of renewables in TPES	0.03	0.02	0.03	0.03	0.11	0.12	0.12	0.11
Share of renewables in electricity generation	0.01	0.01	0.01 e	0.01 e	0.08	0.11	0.10	0.11
TFC/GDP (toe per thousand 2010 USD)	0.23	0.23	0.20	0.16	0.15	0.13	0.13	..
TFC/GDP PPP (toe per thousand 2010 USD)	0.14	0.14	0.12	0.10	0.09	0.08	0.08	..
TFC/population (toe per capita)	1.59	2.01	2.00	1.69	1.90	1.92	1.98	..
Elect. cons./GDP (kWh per 2010 USD)	0.28	0.31	0.34	0.32	0.30	0.28	0.28	0.28
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	0.17	0.19	0.21	0.19	0.18	0.17	0.17	0.17
Elect. cons./population (kWh per capita)	1957	2699	3430	3309	3877	4098	4178	4304
Industry cons. <sup>3</sup> /industrial production (2010=100)	..	434.5	353.0	150.5	100.0	105.4	105.5	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	..	375.0	247.0	123.5	100.0	97.8	92.3	..

1. Electricity consumption equals domestic supply less losses.

2. Production divided by TPES.

3. Includes non-energy use.

## Iceland

Figure 1. Energy production

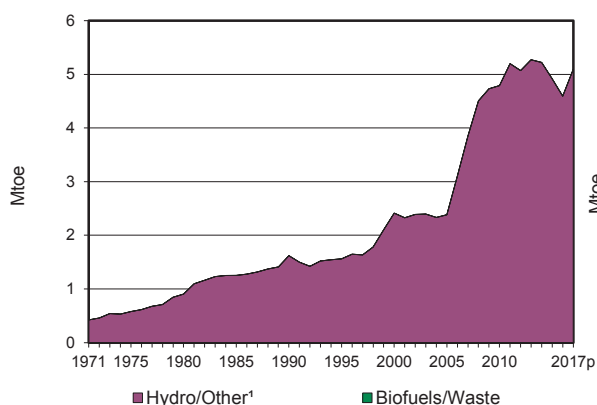


Figure 2. Total primary energy supply<sup>2</sup>

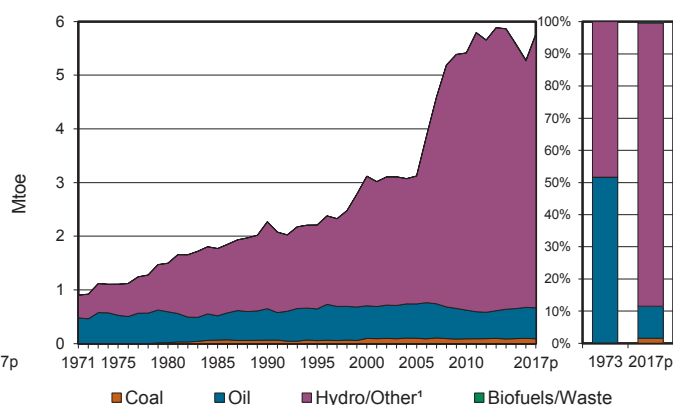


Figure 3. Energy self-sufficiency

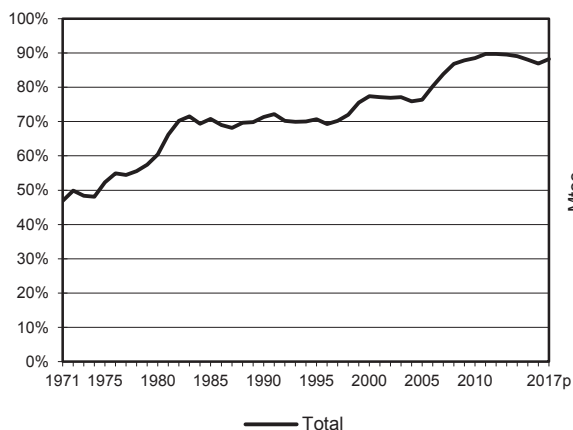


Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>

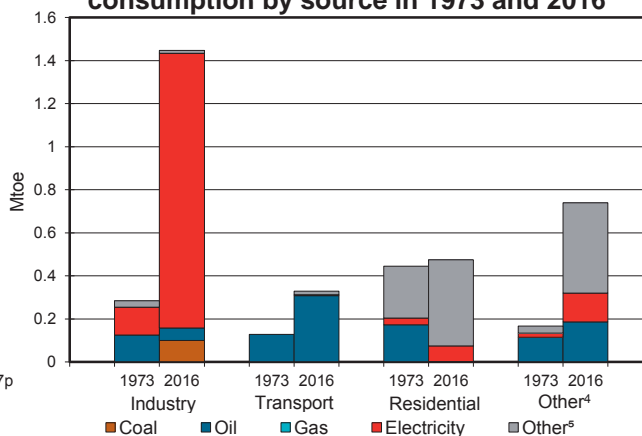


Figure 5. Electricity generation by source

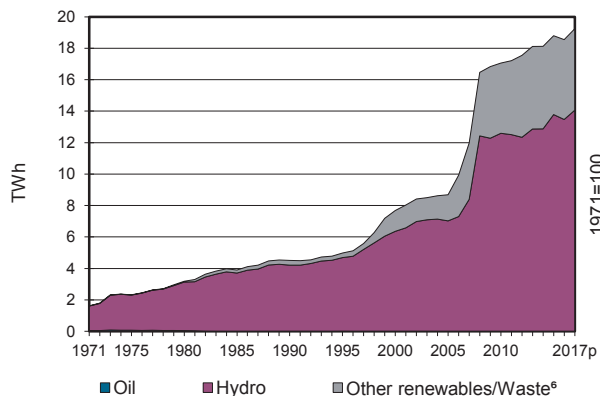
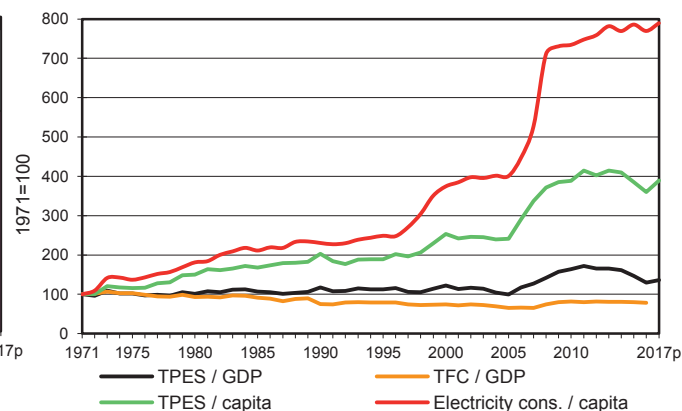


Figure 6. Selected indicators



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.

## Iceland

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./ Solar/ etc.	Biofuels/ Waste	Electricity	Heat	Total
Production	-	-	-	-	-	1.16	3.43	0.00	-	-	4.59
Imports	0.10	-	0.94	-	-	-	-	0.02	-	-	1.06
Exports	-	-	-	-	-	-	-	-	-	-	-
Intl. marine bunkers	-	-	-0.06	-	-	-	-	-	-	-	-0.06
Intl. aviation bunkers	-	-	-0.30	-	-	-	-	-	-	-	-0.30
Stock changes	-	-	-0.01	-	-	-	-	-	-	-	-0.01
<b>TPES</b>	<b>0.10</b>	-	<b>0.58</b>	-	-	<b>1.16</b>	<b>3.43</b>	<b>0.02</b>	-	-	<b>5.29</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-	-	-0.02	-	-	-	0.09	-0.00	-	0.01	0.08
Electricity plants	-	-	-0.00	-	-	-1.16	-0.24	-	1.20	-	-0.20
CHP plants	-	-	-	-	-	-	-2.48	-	0.39	0.36	-1.73
Heat plants	-	-	-	-	-	-	-0.71	-	-0.02	0.46	-0.26
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat. fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-	-	-	-	-	-	-	-	-	-
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-	-	-	-
Energy industry own use	-	-	-	-	-	-	-	-	-0.05	-	-0.05
Losses	-	-	-	-	-	-	-0.01	-	-0.04	-0.08	-0.13
<b>TFC</b>	<b>0.10</b>	-	<b>0.55</b>	-	-	-	<b>0.08</b>	<b>0.02</b>	<b>1.49</b>	<b>0.75</b>	<b>2.99</b>
<b>INDUSTRY</b>	<b>0.10</b>	-	<b>0.04</b>	-	-	-	<b>0.01</b>	<b>0.00</b>	<b>1.28</b>	-	<b>1.43</b>
Iron and steel	0.10	-	0.01	-	-	-	-	0.00	0.09	-	0.20
Chemical and petrochemical	-	-	-	-	-	-	-	-	0.01	-	0.01
Non-ferrous metals	-	-	0.00	-	-	-	-	-	1.12	-	1.13
Non-metallic minerals	-	-	-	-	-	-	-	-	0.00	-	0.00
Transport equipment	-	-	-	-	-	-	-	-	0.00	-	0.00
Machinery	-	-	-	-	-	-	-	-	0.00	-	0.00
Mining and quarrying	-	-	-	-	-	-	-	-	0.00	-	0.00
Food and tobacco	-	-	0.01	-	-	-	-	-	0.04	-	0.05
Paper, pulp and printing	-	-	-	-	-	-	-	-	0.00	-	0.00
Wood and wood products	-	-	-	-	-	-	-	-	0.00	-	0.00
Construction	-	-	0.03	-	-	-	-	-	0.00	-	0.03
Textile and leather	-	-	-	-	-	-	-	-	0.00	-	0.00
Non-specified	-	-	0.00	-	-	-	0.01	-	0.00	-	0.02
<b>TRANSPORT</b>	-	-	<b>0.31</b>	-	-	-	-	<b>0.02</b>	<b>0.01</b>	-	<b>0.33</b>
Domestic aviation	-	-	0.01	-	-	-	-	-	-	-	0.01
Road	-	-	0.29	-	-	-	-	0.02	-	-	0.31
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	0.01	-	-	-	-	-	-	-	0.01
Non-specified	-	-	-	-	-	-	-	-	0.01	-	0.01
<b>OTHER</b>	-	-	<b>0.18</b>	-	-	-	<b>0.07</b>	-	<b>0.21</b>	<b>0.75</b>	<b>1.21</b>
Residential	-	-	0.00	-	-	-	0.01	-	0.07	0.39	0.47
Comm. and public services	-	-	-	-	-	-	0.04	-	0.11	0.31	0.45
Agriculture/forestry	-	-	0.01	-	-	-	0.01	-	0.02	0.01	0.04
Fishing	-	-	0.17	-	-	-	0.01	-	0.00	0.04	0.23
Non-specified	-	-	0.01	-	-	-	-	-	-	0.01	0.02
<b>NON-ENERGY USE</b>	-	-	<b>0.02</b>	-	-	-	-	-	-	-	<b>0.02</b>
in industry/transf./energy	-	-	0.01	-	-	-	-	-	-	-	0.01
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	0.00	-	-	-	-	-	-	-	0.00
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	-	-	<b>0.00</b>	-	-	<b>13.47</b>	<b>5.08</b>	-	-	-	<b>18.55</b>
Electricity plants	-	-	0.00	-	-	13.47	0.51	-	-	-	13.98
CHP plants	-	-	-	-	-	-	4.57	-	-	-	4.57
<b>Heat generated - PJ</b>	-	-	<b>0.01</b>	-	-	-	<b>33.60</b>	-	<b>0.71</b>	-	<b>34.33</b>
CHP plants	-	-	-	-	-	-	14.95	-	-	-	14.95
Heat plants	-	-	0.01	-	-	-	18.66	-	0.71	-	19.38

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Iceland

## Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./ Solar/ etc.	Biofuels/ Waste	Electricity	Heat	Total
Production	-	-	-	-	-	1.21	3.88	0.00	-	-	5.09
Imports	0.09	-	0.97	-	-	-	-	0.02	-	-	1.07
Exports	-	-	-	-	-	-	-	-	-	-	-
Intl. marine bunkers	-	-	-0.06	-	-	-	-	-	-	-	-0.06
Intl. aviation bunkers	-	-	-0.32	-	-	-	-	-	-	-	-0.32
Stock changes	-	-	-0.01	-	-	-	-	-	-	-	-0.01
<b>TPES</b>	<b>0.09</b>	<b>-</b>	<b>0.58</b>	<b>-</b>	<b>-</b>	<b>1.21</b>	<b>3.88</b>	<b>0.02</b>	<b>-</b>	<b>-</b>	<b>5.78</b>
Electricity and Heat Output											
Elec. generated - TWh	-	-	0.00	-	-	14.06	5.18	-	-	-	19.24
Heat generated - PJ	-	-	0.01	-	-	-	34.30	-	0.73	-	35.04

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	0.5	0.9	1.6	2.4	4.8	4.9	4.6	5.1
Net imports (Mtoe)	0.7	0.6	0.8	1.0	0.8	1.0	1.1	1.1
Total primary energy supply (Mtoe)	1.1	1.5	2.3	3.1	5.4	5.6	5.3	5.8
Net oil imports (Mtoe)	0.7	0.6	0.7	0.9	0.7	0.9	0.9	1.0
Oil supply (Mtoe)	0.6	0.6	0.6	0.6	0.5	0.6	0.6	0.6
Electricity consumption (TWh) <sup>1</sup>	2.1	2.9	4.1	7.4	16.4	18.2	18.1	18.8
GDP (billion 2010 USD)	4.1	5.9	7.8	10.3	13.3	15.3	16.4	17.0
GDP PPP (billion 2010 USD)	3.8	5.5	7.2	9.5	12.3	14.1	15.1	15.7
Population (millions)	0.21	0.23	0.26	0.28	0.32	0.33	0.34	0.34
Industrial production index (2010=100)	..	..	..	36.6	100.0	124.4	113.2	114.2
Total self-sufficiency <sup>2</sup>	0.48	0.60	0.71	0.77	0.88	0.88	0.87	0.88
Coal self-sufficiency <sup>2</sup>	-	-	-	-	-	-	-	-
Oil self-sufficiency <sup>2</sup>	-	-	-	-	-	-	-	-
Natural gas self-sufficiency <sup>2</sup>	-	-	-	-	-	-	-	-
TPES/GDP (toe per thousand 2010 USD)	0.27	0.25	0.29	0.30	0.41	0.37	0.32	0.34
TPES/GDP PPP (toe per thousand 2010 USD)	0.30	0.27	0.32	0.33	0.44	0.40	0.35	0.37
TPES/population (toe per capita)	5.28	6.57	8.90	11.10	17.03	16.87	15.78	17.04
Net oil imports/GDP (toe per thousand 2010 USD)	0.17	0.10	0.09	0.08	0.05	0.06	0.06	0.06
Oil supply/GDP (toe per thousand 2010 USD)	0.14	0.10	0.08	0.06	0.04	0.04	0.04	0.03
Oil supply/population (toe per capita)	2.72	2.52	2.30	2.16	1.68	1.69	1.72	1.70
Share of renewables in TPES	0.48	0.60	0.71	0.77	0.89	0.88	0.87	0.89
Share of renewables in electricity generation	0.96	0.99	1.00	1.00	1.00	1.00	1.00	1.00
TFC/GDP (toe per thousand 2010 USD)	0.25	0.22	0.17	0.17	0.19	0.19	0.18	..
TFC/GDP PPP (toe per thousand 2010 USD)	0.27	0.23	0.19	0.19	0.21	0.20	0.20	..
TFC/population (toe per capita)	4.83	5.62	5.32	6.29	7.96	8.62	8.93	..
Elect. cons./GDP (kWh per 2010 USD)	0.51	0.49	0.53	0.72	1.23	1.19	1.10	1.10
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	0.55	0.53	0.57	0.78	1.34	1.29	1.19	1.20
Elect. cons./population (kWh per capita)	9910	12689	16137	26221	51447	55054	53913	55310
Industry cons. <sup>3</sup> /industrial production (2010=100)	..	..	..	145.7	100.0	89.7	97.4	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	..	..	..	751.6	100.0	88.0	100.8	..

1. Electricity consumption equals domestic supply less losses.

2. Production divided by TPES.

3. Includes non-energy use.



Ireland

Figure 1. Energy production

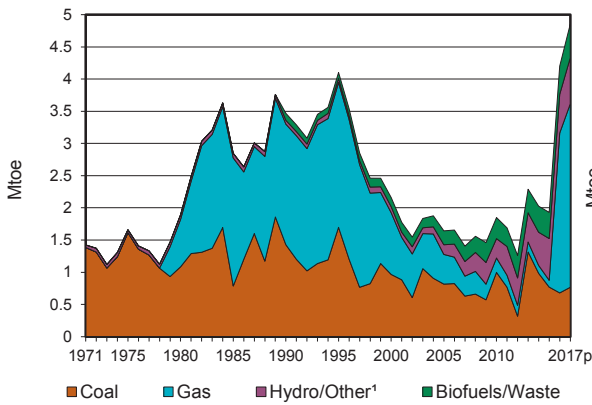


Figure 2. Total primary energy supply<sup>2</sup>

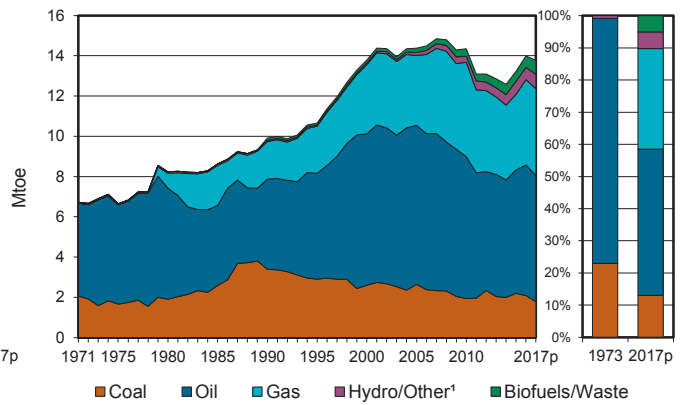


Figure 3. Energy self-sufficiency

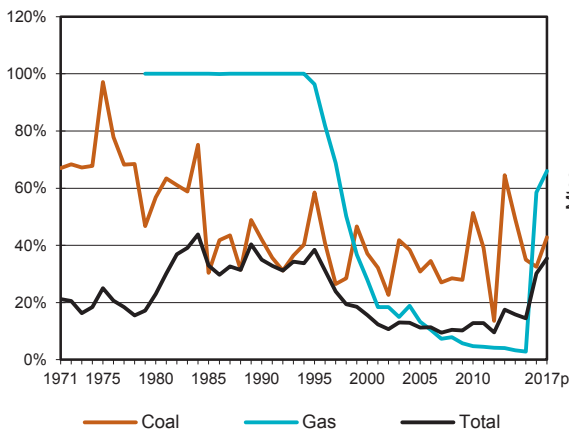


Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>

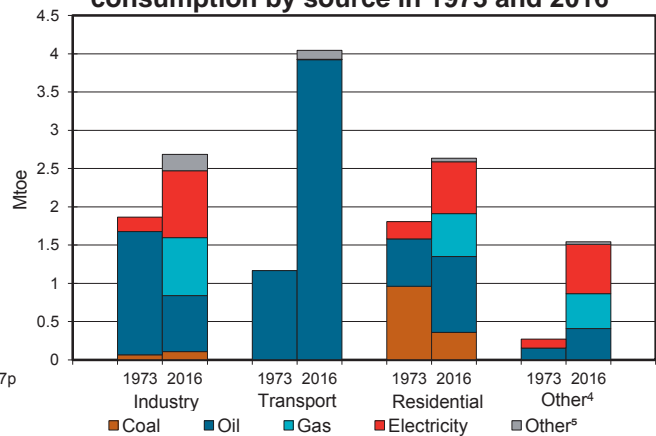


Figure 5. Electricity generation by source

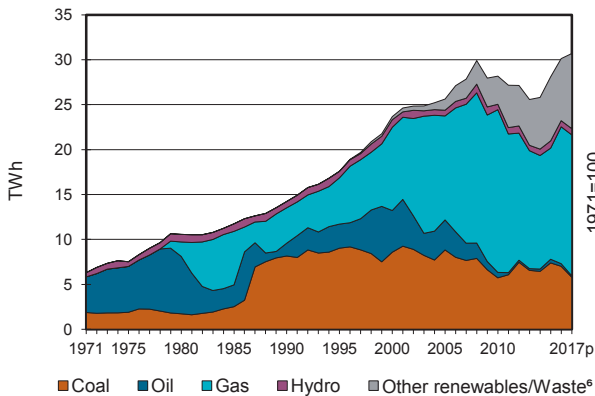
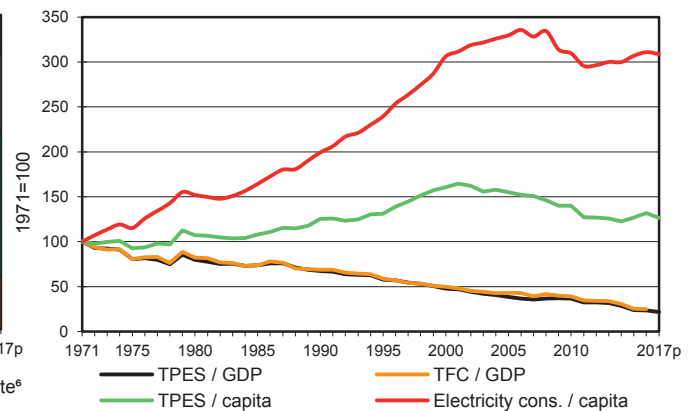


Figure 6. Selected indicators



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.

## Ireland

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal <sup>1</sup>	Crude oil <sup>2</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	0.68	-	-	2.48	-	0.06	0.54	0.44	-	-	4.20
Imports	1.15	3.27	5.76	1.70	-	-	-	0.14	0.07	-	12.10
Exports	-0.01	-	-1.61	-	-	-	-	-0.00	-0.14	-	-1.76
Intl. marine bunkers	-	-	-0.15	-	-	-	-	-	-	-	-0.15
Intl. aviation bunkers	-	-	-0.84	-	-	-	-	-	-	-	-0.84
Stock changes	0.27	0.00	0.07	0.06	-	-	-	-0.01	-	-	0.39
<b>TPES</b>	<b>2.09</b>	<b>3.27</b>	<b>3.22</b>	<b>4.24</b>	<b>-</b>	<b>0.06</b>	<b>0.54</b>	<b>0.57</b>	<b>-0.06</b>	<b>-</b>	<b>13.93</b>
Transfers	-	-0.02	0.02	-	-	-	-	-	-	-	-0.01
Statistical differences	0.02	0.01	-0.19	-0.02	-	-	-	0.01	-0.05	-	-0.22
Electricity plants	-1.61	-	-0.06	-2.06	-	-0.06	-0.53	-0.18	2.41	-	-2.09
CHP plants	-0.01	-	-0.01	-0.26	-	-	-	-0.01	0.18	-	-0.11
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat. fuel/BKB/PB plants	-0.00	-	-	-	-	-	-	-	-	-	-0.00
Oil refineries	-	-3.31	3.21	-	-	-	-	-	-	-	-0.10
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	0.05	-	-0.05	-	-	-	-	-	-	0.00
Energy industry own use	-0.01	-	-0.13	-	-	-	-	-	-0.10	-	-0.24
Losses	-	-	-	-0.06	-	-	-	-	-0.18	-	-0.24
<b>TFC</b>	<b>0.47</b>	<b>-</b>	<b>6.05</b>	<b>1.77</b>	<b>-</b>	<b>-</b>	<b>0.01</b>	<b>0.40</b>	<b>2.20</b>	<b>-</b>	<b>10.91</b>
<b>INDUSTRY</b>	<b>0.11</b>	<b>-</b>	<b>0.48</b>	<b>0.76</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.22</b>	<b>0.87</b>	<b>-</b>	<b>2.44</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	0.03	0.06	-	-	-	-	0.16	-	0.25
Non-ferrous metals	-	-	0.01	0.42	-	-	-	-	0.07	-	0.49
Non-metallic minerals	0.09	-	0.18	0.02	-	-	-	0.08	0.06	-	0.42
Transport equipment	-	-	0.00	0.00	-	-	-	-	0.02	-	0.02
Machinery	-	-	0.05	0.13	-	-	-	-	0.13	-	0.30
Mining and quarrying	-	-	0.03	0.01	-	-	-	-	0.06	-	0.10
Food and tobacco	0.02	-	0.13	0.10	-	-	-	0.02	0.19	-	0.46
Paper, pulp and printing	-	-	0.00	0.00	-	-	-	-	0.02	-	0.03
Wood and wood products	-	-	0.00	0.00	-	-	-	0.11	0.04	-	0.15
Construction	-	-	-	-	-	-	-	-	0.01	-	0.01
Textile and leather	-	-	0.00	0.00	-	-	-	-	0.01	-	0.01
Non-specified	-	-	0.05	0.01	-	-	-	-	0.12	-	0.18
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>3.90</b>	<b>0.00</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.12</b>	<b>0.00</b>	<b>-</b>	<b>4.02</b>
Domestic aviation	-	-	0.00	-	-	-	-	-	-	-	0.00
Road	-	-	3.77	0.00	-	-	-	0.12	0.00	-	3.89
Rail	-	-	0.04	-	-	-	-	-	0.00	-	0.04
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	0.08	-	-	-	-	-	-	-	0.08
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>0.36</b>	<b>-</b>	<b>1.40</b>	<b>1.02</b>	<b>-</b>	<b>-</b>	<b>0.01</b>	<b>0.07</b>	<b>1.32</b>	<b>-</b>	<b>4.18</b>
Residential	0.36	-	0.99	0.56	-	-	0.01	0.03	0.68	-	2.64
Comm. and public services	-	-	0.23	0.45	-	-	0.00	0.03	0.60	-	1.32
Agriculture/forestry	-	-	0.16	-	-	-	-	-	0.05	-	0.20
Fishing	-	-	0.02	-	-	-	-	-	-	-	0.02
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>0.27</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.27</b>
in industry/transf./energy	-	-	0.25	-	-	-	-	-	-	-	0.25
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	0.03	-	-	-	-	-	-	-	0.03
in other	-	-	0.00	-	-	-	-	-	-	-	0.00
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>7.02</b>	<b>-</b>	<b>0.29</b>	<b>15.23</b>	<b>-</b>	<b>0.68</b>	<b>6.15</b>	<b>0.75</b>	<b>-</b>	<b>-</b>	<b>30.13</b>
Electricity plants	6.99	-	0.27	13.24	-	0.68	6.15	0.69	-	-	28.03
CHP plants	0.03	-	0.02	1.99	-	-	-	0.06	-	-	2.10
<b>Heat generated - PJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes peat.

2. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Ireland

## Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal <sup>1</sup>	Crude oil <sup>2</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	0.77	-	-	2.85	-	0.06	0.65	0.52	-	-	4.85
Imports	1.19	3.29	6.12	1.41	-	-	-	0.16	0.10	-	12.26
Exports	-0.01	-0.30	-1.85	-	-	-	-	-0.00	-0.15	-	-2.32
Intl. marine bunkers	-	-	-0.15	-	-	-	-	-	-	-	-0.15
Intl. aviation bunkers	-	-	-0.97	-	-	-	-	-	-	-	-0.97
Stock changes	-0.15	0.27	-0.14	0.05	-	-	-	0.01	-	-	0.04
<b>TPES</b>	<b>1.79</b>	<b>3.25</b>	<b>3.01</b>	<b>4.31</b>	<b>-</b>	<b>0.06</b>	<b>0.65</b>	<b>0.69</b>	<b>-0.06</b>	<b>-</b>	<b>13.71</b>
Electricity and Heat Output											
Elec. generated - TWh	5.81	-	0.16	15.68	-	0.69	7.45	0.90	-	-	30.69
Heat generated - PJ	-	-	-	-	-	-	-	-	-	-	-

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes peat.
2. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

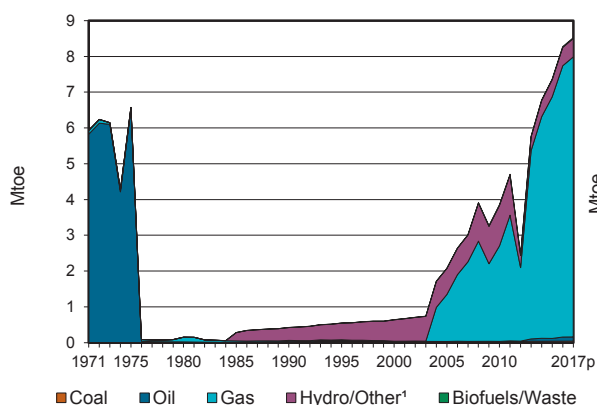
## Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	1.1	1.9	3.5	2.2	1.9	1.9	4.2	4.9
Net imports (Mtoe)	6.0	6.6	7.1	12.3	13.2	12.7	10.3	9.9
Total primary energy supply (Mtoe)	6.9	8.2	9.9	13.8	14.4	13.3	13.9	13.7
Net oil imports (Mtoe)	5.5	5.8	5.1	8.2	7.7	7.4	7.4	7.3
Oil supply (Mtoe)	5.3	5.5	4.5	7.5	7.0	6.1	6.5	6.3
Electricity consumption (TWh) <sup>1</sup>	6.6	9.8	13.2	22.1	26.7	27.0	27.6	28.1
GDP (billion 2010 USD)	42.4	58.4	83.3	163.4	222.0	316.1	332.4	358.3
GDP PPP (billion 2010 USD)	37.7	51.9	74.1	145.4	197.5	281.2	295.7	318.7
Population (millions)	3.07	3.40	3.51	3.80	4.56	4.64	4.68	4.80
Industrial production index (2010=100)	..	11.6	21.5	68.1	100.0	158.8	161.7	158.1
Total self-sufficiency <sup>2</sup>	0.16	0.23	0.35	0.16	0.13	0.15	0.30	0.35
Coal self-sufficiency <sup>2</sup>	0.67	0.57	0.42	0.37	0.51	0.35	0.33	0.43
Oil self-sufficiency <sup>2</sup>	-	-	-	-	-	-	-	-
Natural gas self-sufficiency <sup>2</sup>	-	1.00	1.00	0.28	0.05	0.03	0.59	0.66
TPES/GDP (toe per thousand 2010 USD)	0.16	0.14	0.12	0.08	0.06	0.04	0.04	0.04
TPES/GDP PPP (toe per thousand 2010 USD)	0.18	0.16	0.13	0.09	0.07	0.05	0.05	0.04
TPES/population (toe per capita)	2.25	2.42	2.83	3.63	3.16	2.86	2.97	2.86
Net oil imports/GDP (toe per thousand 2010 USD)	0.13	0.10	0.06	0.05	0.03	0.02	0.02	0.02
Oil supply/GDP (toe per thousand 2010 USD)	0.12	0.09	0.05	0.05	0.03	0.02	0.02	0.02
Oil supply/population (toe per capita)	1.71	1.62	1.28	1.98	1.54	1.32	1.39	1.30
Share of renewables in TPES	0.01	0.01	0.02	0.02	0.05	0.08	0.08	0.09
Share of renewables in electricity generation	0.09	0.08	0.05	0.05	0.13	0.28	0.25	0.29
TFC/GDP (toe per thousand 2010 USD)	0.12	0.11	0.09	0.07	0.05	0.03	0.03	..
TFC/GDP PPP (toe per thousand 2010 USD)	0.14	0.12	0.10	0.07	0.06	0.04	0.04	..
TFC/population (toe per capita)	1.66	1.87	2.15	2.83	2.52	2.26	2.33	..
Elect. cons./GDP (kWh per 2010 USD)	0.16	0.17	0.16	0.14	0.12	0.09	0.08	0.08
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	0.18	0.19	0.18	0.15	0.14	0.10	0.09	0.09
Elect. cons./population (kWh per capita)	2152	2878	3776	5798	5861	5811	5887	5847
Industry cons. <sup>3</sup> /industrial production (2010=100)	..	815.3	436.2	182.2	100.0	65.7	67.3	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	..	1419.7	402.9	203.7	100.0	43.6	46.7	..

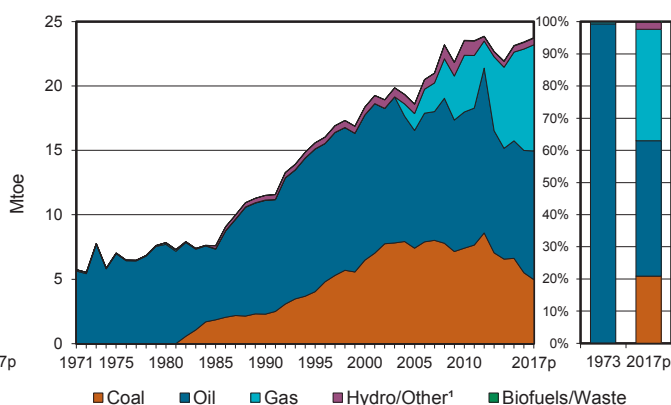
1. Electricity consumption equals domestic supply less losses.
2. Production divided by TPES. Coal self-sufficiency also includes peat, when applicable.
3. Includes non-energy use.

### Israel

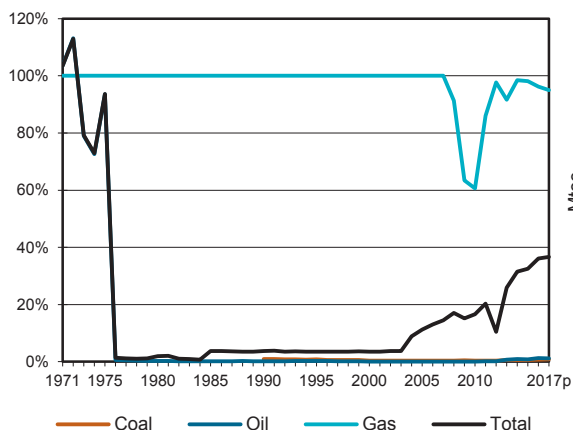
**Figure 1. Energy production**



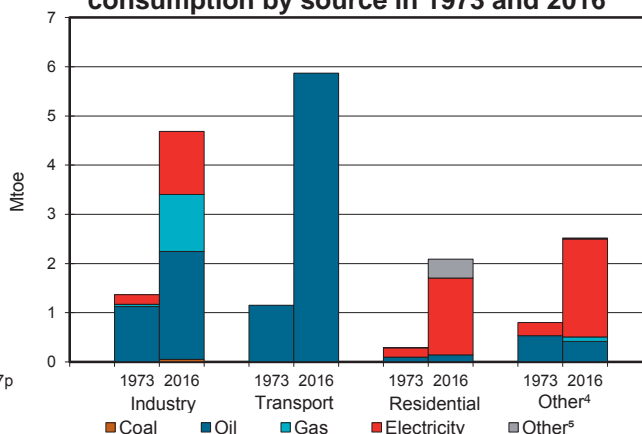
**Figure 2. Total primary energy supply<sup>2</sup>**



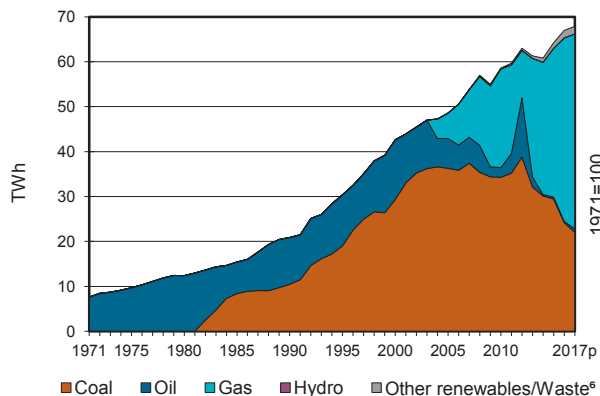
**Figure 3. Energy self-sufficiency**



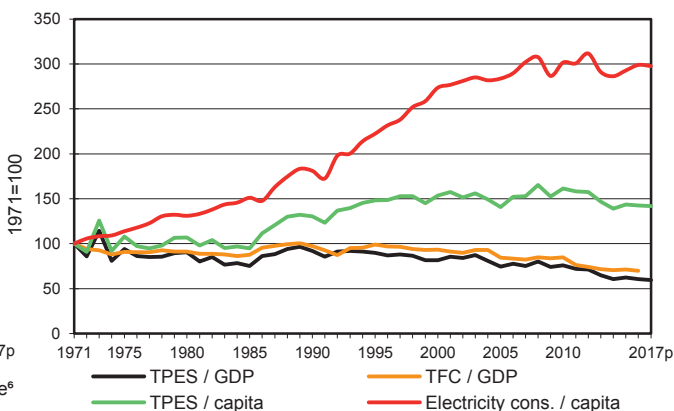
**Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.

## Israel

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal <sup>1</sup>	Crude oil <sup>2</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./ Solar/ etc.	Biofuels/ Waste	Electricity	Heat	Total
Production	0.04	0.12	-	7.58 e	-	c	0.51	0.02 e	-	-	8.27
Imports	5.23	13.84	1.94	0.29 e	-	-	-	0.02 e	-	-	21.32
Exports	-	-0.03	-5.72	-	-	-	-	-	-0.48	-	-6.23
Intl. marine bunkers	-	-	-0.15	-	-	-	-	-	-	-	-0.15
Intl. aviation bunkers	-	-	-0.97	-	-	-	-	-	-	-	-0.97
Stock changes	0.23	0.27	0.19	-	-	-	-	-	-	-	0.70
<b>TPES</b>	<b>5.50</b>	<b>14.20</b>	<b>-4.71</b>	<b>7.88</b>	-	<b>c</b>	<b>0.51</b>	<b>0.04</b>	<b>-0.48</b>	-	<b>22.94</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	0.02	0.07	-0.36	0.36 e	-	-	-	-	0.01	-	0.09
Electricity plants	-5.46	-	-0.07	-6.83 e	-	c	-0.13	-0.02	5.76	-	-6.76
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat. fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-14.27	14.52	-	-	-	-	-	-	-	0.25
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-	-	-	-
Energy industry own use	-	-	-0.75	-0.17 e	-	-	-	-	-0.24	-	-1.15
Losses	-	-	-	-	-	-	-	-	-0.22	-	-0.22
<b>TFC</b>	<b>0.05</b>	-	<b>8.63</b>	<b>1.24</b>	-	-	<b>0.38</b>	<b>0.03</b>	<b>4.83</b>	-	<b>15.16</b>
<b>INDUSTRY</b>	<b>0.05</b>	-	<b>0.45</b>	<b>1.16</b>	-	-	-	-	<b>1.28</b>	-	<b>2.94</b>
Iron and steel	-	-	-	-	-	-	-	-	0.05 e	-	0.05
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	0.05 e	-	0.05
Machinery	-	-	-	-	-	-	-	-	0.25 e	-	0.25
Mining and quarrying	-	-	-	-	-	-	-	-	0.22 e	-	0.22
Food and tobacco	-	-	-	-	-	-	-	-	0.16 e	-	0.16
Paper, pulp and printing	-	-	-	-	-	-	-	-	0.01 e	-	0.01
Wood and wood products	-	-	-	-	-	-	-	-	0.06 e	-	0.06
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	0.02 e	-	0.02
Non-specified	0.05	-	0.45	1.16 e	-	-	-	-	0.46 e	-	2.12
<b>TRANSPORT</b>	-	-	<b>5.87</b>	-	-	-	-	-	-	-	<b>5.87</b>
Domestic aviation	-	-	0.02	-	-	-	-	-	-	-	0.02
Road	-	-	5.84	-	-	-	-	-	-	-	5.84
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>0.00</b>	-	<b>0.56</b>	<b>0.09</b>	-	-	<b>0.38</b>	<b>0.03</b>	<b>3.55</b>	-	<b>4.61</b>
Residential	-	-	0.14	-	-	-	0.38 e	0.00 e	1.56	-	2.09
Comm. and public services	-	-	0.14	-	-	-	-	-	1.49	-	1.63
Agriculture/forestry	-	-	0.01	-	-	-	-	-	0.22 e	-	0.24
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	0.00	-	0.26	0.09 e	-	-	-	0.02 e	0.27	-	0.64
<b>NON-ENERGY USE</b>	-	-	<b>1.75</b>	-	-	-	-	-	-	-	<b>1.75</b>
in industry/transf./energy	-	-	1.75	-	-	-	-	-	-	-	1.75
of which: chem./petrochem.	-	-	1.27	-	-	-	-	-	-	-	1.27
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>24.21</b>	-	<b>0.29</b>	<b>40.82</b>	-	<b>c</b>	<b>1.54</b>	<b>0.11</b>	-	-	<b>66.98</b>
Electricity plants	24.21	-	0.29	40.82	-	c	1.54	0.11	-	-	66.98
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - PJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes oil shale.

2. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Israel

## Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal <sup>1</sup>	Crude oil <sup>2</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./ Solar/ etc.	Biofuels/ Waste	Electricity	Heat	Total
Production	0.04	0.12	-	7.83	-	c	0.51	0.02	-	-	8.52
Imports	5.06	14.66	1.91	0.42	-	-	-	0.02	-	-	22.06
Exports	-	-0.03	-5.53	-	-	-	-	-	-0.48	-	-6.04
Intl. marine bunkers	-	-	-0.24	-	-	-	-	-	-	-	-0.24
Intl. aviation bunkers	-	-	-0.89	-	-	-	-	-	-	-	-0.89
Stock changes	-0.14	-	-	-	-	-	-	-	-	-	-0.14
<b>TPES</b>	<b>4.96</b>	<b>14.74</b>	<b>-4.75</b>	<b>8.24</b>	<b>-</b>	<b>c</b>	<b>0.51</b>	<b>0.04</b>	<b>-0.48</b>	<b>-</b>	<b>23.28</b>
Electricity and Heat Output											
Elec. generated - TWh	22.06	-	0.75	43.38	-	c	1.56	0.12	-	-	67.86
Heat generated - PJ	-	-	-	-	-	-	-	-	-	-	-

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes oil shale.
2. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	6.2	0.2	0.4	0.6	3.9	7.4	8.3	8.5
Net imports (Mtoe)	2.4	8.5	11.4	18.2	20.5	16.8	15.1	16.0
Total primary energy supply (Mtoe)	7.8	7.8	11.5	18.2	23.2	22.7	22.9	23.3
Net oil imports (Mtoe)	2.4	8.5	9.0	12.3	11.7	10.5	10.0	11.0
Oil supply (Mtoe)	7.7	7.7	8.8	11.3	10.6	9.1	9.5	10.0
Electricity consumption (TWh) <sup>1</sup>	8.2	11.7	19.5	39.8	53.0 e	56.6	58.9	59.8
GDP (billion 2010 USD)	51.9	66.0	95.5	171.0	233.6	278.0	289.0	298.6
GDP PPP (billion 2010 USD)	48.9	62.1	89.8	160.9	219.9	261.6	272.0	280.9
Population (millions)	3.28	3.88	4.66	6.30	7.62	8.38	8.54	8.71
Industrial production index (2010=100)	..	..	43.3	76.5	100.0	109.1	108.8	110.7
Total self-sufficiency <sup>2</sup>	0.79	0.02	0.04	0.04	0.17	0.32	0.36	0.37
Coal self-sufficiency <sup>2</sup>	-	-	0.01	0.00	0.00	0.01	0.01	0.01
Oil self-sufficiency <sup>2</sup>	0.79	0.00	0.00	0.00	0.00	0.01	0.01	0.01
Natural gas self-sufficiency <sup>2</sup>	1.00	1.00	1.00	1.00	0.61	0.98 e	0.96 e	0.95
TPES/GDP (toe per thousand 2010 USD)	0.15	0.12	0.12	0.11	0.10	0.08	0.08	0.08
TPES/GDP PPP (toe per thousand 2010 USD)	0.16	0.13	0.13	0.11	0.11	0.09	0.08	0.08
TPES/population (toe per capita)	2.37	2.02	2.46	2.89	3.04	2.71	2.69	2.67
Net oil imports/GDP (toe per thousand 2010 USD)	0.05	0.13	0.09	0.07	0.05	0.04	0.03	0.04
Oil supply/GDP (toe per thousand 2010 USD)	0.15	0.12	0.09	0.07	0.05	0.03	0.03	0.03
Oil supply/population (toe per capita)	2.35	1.99	1.89	1.79	1.39	1.09	1.11	1.15
Share of renewables in TPES	-	-	0.03	0.03	0.05	0.02	0.02	0.02
Share of renewables in electricity generation	-	-	-	0.00	0.00	0.02	0.03	0.03
TFC/GDP (toe per thousand 2010 USD)	0.07	0.07	0.07	0.07	0.06	0.05	0.05	..
TFC/GDP PPP (toe per thousand 2010 USD)	0.07	0.07	0.08	0.07	0.07	0.06	0.06	..
TFC/population (toe per capita)	1.10	1.16	1.50	1.90	1.95	1.78	1.78	..
Elect. cons./GDP (kWh per 2010 USD)	0.16	0.18	0.20	0.23	0.23 e	0.20	0.20	0.20
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	0.17	0.19	0.22	0.25	0.24 e	0.22	0.22	0.21
Elect. cons./population (kWh per capita)	2498	3022	4175	6308	6956 e	6752	6893	6864
Industry cons. <sup>3</sup> /industrial production (2010=100)	..	..	145.2	119.9	100.0	123.9	124.6	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	..	..	167.2	126.7	100.0	87.0	87.0	..

1. Electricity consumption equals domestic supply less losses.
2. Production divided by TPES. Coal self-sufficiency also includes peat, when applicable.
3. Includes non-energy use.

Italy

Figure 1. Energy production

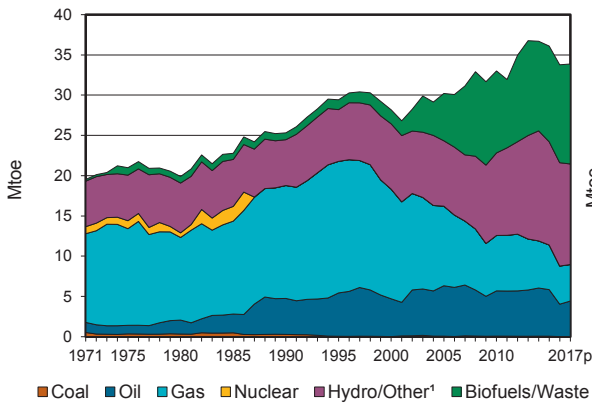


Figure 2. Total primary energy supply<sup>2</sup>

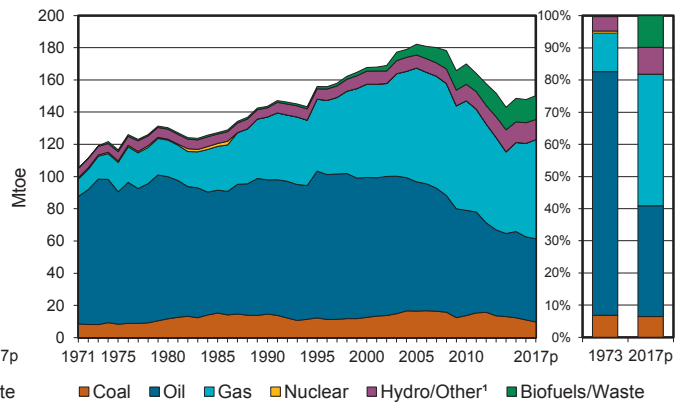


Figure 3. Energy self-sufficiency

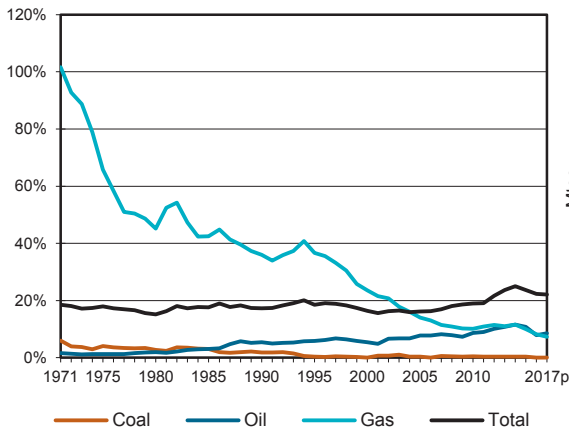


Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>

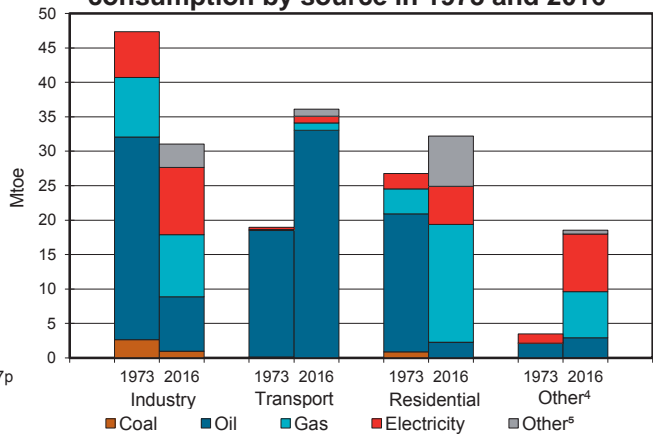


Figure 5. Electricity generation by source

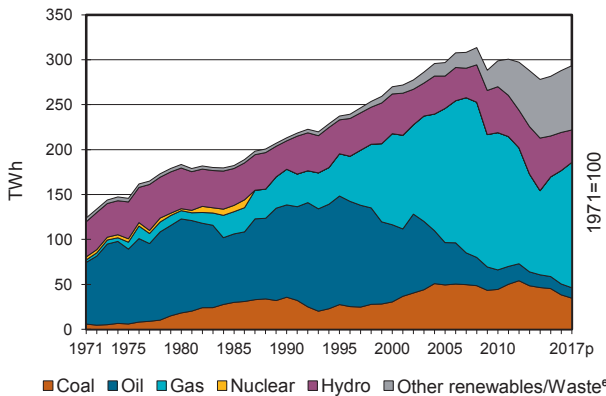
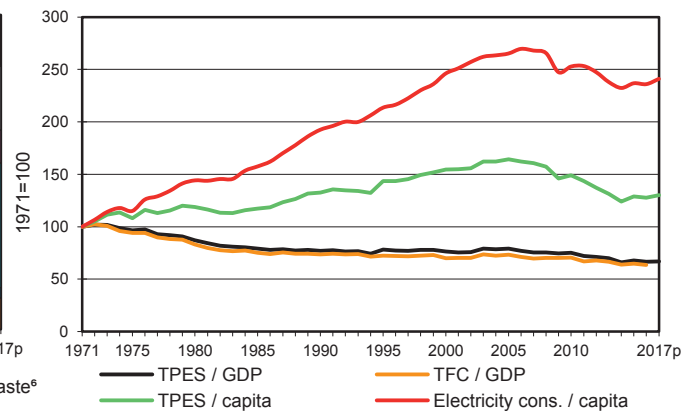


Figure 6. Selected indicators



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.



## Italy

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	4.03	-	4.74	-	3.65	9.19	12.16	-	-	33.77
Imports	10.96	67.28	14.49	53.47	-	-	-	2.43	3.71	-	152.34
Exports	-0.26	-1.80	-28.09	-0.17	-	-	-	-0.23	-0.53	-	-31.08
Intl. marine bunkers	-	-	-2.21	-	-	-	-	-	-	-	-2.21
Intl. aviation bunkers	-	-	-3.30	-	-	-	-	-	-	-	-3.30
Stock changes	0.27	0.72	0.42	0.05	-	-	-	-0.00	-	-	1.45
<b>TPES</b>	<b>10.98</b>	<b>70.22</b>	<b>-18.69</b>	<b>58.08</b>	<b>-</b>	<b>3.65</b>	<b>9.19</b>	<b>14.36</b>	<b>3.18</b>	<b>-</b>	<b>150.98</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	0.08	0.44	0.67	-	-	-	-	-0.00	-	-	1.19
Electricity plants	-7.99	-	-0.50	-7.28	-	-3.65	-8.83	-2.90	15.72	-	-15.43
CHP plants	-0.82	-	-3.81	-15.46	-	-	-	-3.36	9.04	5.25	-9.17
Heat plants	-	-	-	-	-	-	-0.04	-0.10	-	0.10	-0.04
Blast furnaces	-1.04 e	-	-	-	-	-	-	-	-	-	-1.04
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat. fuel/BKB/PB plants	-0.17	-	-	-	-	-	-	-	-	-	-0.17
Oil refineries	-	-72.09	72.54	-	-	-	-	-	-	-	0.45
Petrochemical plants	-	1.43	-1.48	-	-	-	-	-	-	-	-0.06
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-0.01	-	-	-0.01
Energy industry own use	-0.00	-	-2.60	-1.18	-	-	-	-	-1.74	-1.37	-6.89
Losses	-	-	-	-0.28	-	-	-	-	-1.61	-0.02	-1.91
<b>TFC</b>	<b>1.02</b>	<b>-</b>	<b>46.12</b>	<b>33.89</b>	<b>-</b>	<b>-</b>	<b>0.32</b>	<b>7.99</b>	<b>24.59</b>	<b>3.95</b>	<b>117.90</b>
<b>INDUSTRY</b>	<b>0.96</b>	<b>-</b>	<b>2.66</b>	<b>8.36</b>	<b>-</b>	<b>-</b>	<b>0.01</b>	<b>0.66</b>	<b>9.74</b>	<b>2.74</b>	<b>25.13</b>
Iron and steel	0.68 e	-	0.09	1.19	-	-	-	-	1.57	0.19	3.72
Chemical and petrochemical	-	-	0.39	0.96	-	-	-	0.09	1.20	0.87	3.51
Non-ferrous metals	-	-	0.05	0.39	-	-	-	-	0.21	0.00	0.66
Non-metallic minerals	0.23	-	1.32	1.90	-	-	-	0.28	0.76	0.13	4.62
Transport equipment	-	-	-	-	-	-	-	-	0.31	0.11	0.42
Machinery	-	-	0.30	1.35	-	-	-	0.01	1.73	0.03	3.41
Mining and quarrying	-	-	0.03	0.03	-	-	-	-	0.05	0.00	0.12
Food and tobacco	-	-	0.26	1.11	-	-	-	0.05	1.05	0.35	2.82
Paper, pulp and printing	-	-	0.07	0.62	-	-	-	0.00	0.74	0.87	2.31
Wood and wood products	-	-	-	0.03	-	-	-	0.14	0.25	0.03	0.46
Construction	-	-	0.02	0.22	-	-	-	0.00	0.12	0.00	0.35
Textile and leather	-	-	0.09	0.53	-	-	-	0.00	0.44	0.04	1.10
Non-specified	0.06	-	0.04	0.02	-	-	0.01	0.09	1.30	0.11	1.62
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>32.71</b>	<b>1.11</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1.04</b>	<b>0.96</b>	<b>-</b>	<b>35.81</b>
Domestic aviation	-	-	0.71	-	-	-	-	-	-	-	0.71
Road	-	-	31.02	0.89	-	-	-	1.04	0.01	-	32.96
Rail	-	-	0.02	-	-	-	-	-	0.47	-	0.48
Pipeline transport	-	-	-	0.21	-	-	-	-	0.03	-	0.25
Domestic navigation	-	-	0.96	-	-	-	-	-	-	-	0.96
Non-specified	-	-	-	-	-	-	-	-	0.45	-	0.45
<b>OTHER</b>	<b>-</b>	<b>-</b>	<b>5.16</b>	<b>23.77</b>	<b>-</b>	<b>-</b>	<b>0.31</b>	<b>6.30</b>	<b>13.90</b>	<b>1.21</b>	<b>50.65</b>
Residential	-	-	2.29	17.10	-	-	0.15	6.17	5.53	0.95	32.19
Comm. and public services	-	-	0.56	6.54	-	-	0.12	0.09	7.89	0.25	15.44
Agriculture/forestry	-	-	2.00	0.13	-	-	0.02	0.03	0.46	0.01	2.65
Fishing	-	-	0.17	-	-	-	0.03	-	0.02	-	0.22
Non-specified	-	-	0.14	-	-	-	-	-	-	0.01	0.16
<b>NON-ENERGY USE</b>	<b>0.07</b>	<b>-</b>	<b>5.59</b>	<b>0.65</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>6.31</b>
in industry/transf./energy	-	-	5.28	0.65	-	-	-	-	-	-	5.93
of which: chem./petrochem.	-	-	3.40	0.65	-	-	-	-	-	-	4.05
in transport	-	-	0.31	-	-	-	-	-	-	-	0.31
in other	0.07	-	-	-	-	-	-	-	-	-	0.07
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>38.40</b>	<b>-</b>	<b>12.13</b>	<b>126.15</b>	<b>-</b>	<b>42.43</b>	<b>46.82</b>	<b>22.01</b>	<b>-</b>	<b>-</b>	<b>287.94</b>
Electricity plants	35.47	-	2.02	44.99	-	42.43	46.82	11.09	-	-	182.82
CHP plants	2.93	-	10.11	81.16	-	-	-	10.92	-	-	105.13
<b>Heat generated - PJ</b>	<b>7.29</b>	<b>-</b>	<b>33.79</b>	<b>138.65</b>	<b>-</b>	<b>-</b>	<b>0.81</b>	<b>43.31</b>	<b>-</b>	<b>-</b>	<b>223.85</b>
CHP plants	7.29	-	33.79	138.65	-	-	-	40.04	-	-	219.77
Heat plants	-	-	-	-	-	-	0.81	3.27	-	-	4.08

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Italy

## Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./ Solar/ etc.	Biofuels/ Waste	Electricity	Heat	Total
Production	-	4.42	-	4.54	-	3.11	9.39	12.42	-	-	33.87
Imports	9.96	70.24	15.77	57.04	-	-	-	2.67	3.69	-	159.37
Exports	-0.27	-1.67	-30.82	-0.22	-	-	-	-0.30	-0.44	-	-33.72
Intl. marine bunkers	-	-	-2.35	-	-	-	-	-	-	-	-2.35
Intl. aviation bunkers	-	-	-3.70	-	-	-	-	-	-	-	-3.70
Stock changes	0.00	0.19	-0.38	0.19	-	-	-	0.04	-	-	0.04
<b>TPES</b>	<b>9.70</b>	<b>73.17</b>	<b>-21.48</b>	<b>61.55</b>	<b>-</b>	<b>3.11</b>	<b>9.39</b>	<b>14.82</b>	<b>3.25</b>	<b>-</b>	<b>153.50</b>
Electricity and Heat Output											
Elec. generated - TWh	34.75	-	11.57	139.39	-	36.15	49.73	21.75	-	-	293.33
Heat generated - PJ	6.26	-	33.57	153.21	-	-	0.84	43.74	-	-	237.62

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	20.4	19.9	25.3	28.2	33.0	36.1	33.8	33.9
Net imports (Mtoe)	107.8	116.8	127.3	152.4	148.5	121.4	121.3	125.6
Total primary energy supply (Mtoe)	119.1	130.8	146.6	171.5	173.7	152.6	151.0	153.5
Net oil imports (Mtoe)	98.3	92.8	85.1	88.0	66.8	52.4	51.9	53.5
Oil supply (Mtoe)	90.3	88.2	83.3	86.9	65.3	53.6	51.5	51.7
Electricity consumption (TWh) <sup>1</sup>	134.6	175.2	235.1	301.8	325.7	309.7	308.0	314.1
GDP (billion 2010 USD)	1074.6	1379.8	1749.2	2060.2	2125.1	2062.9	2080.7	2111.9
GDP PPP (billion 2010 USD)	1051.4	1350.0	1711.4	2015.8	2079.2	2016.5	2033.8	2064.4
Population (millions)	54.75	56.43	56.72	56.94	59.83	60.73	60.63	60.54
Industrial production index (2010=100)	72.8	90.0	101.6	117.0	100.0	92.1	93.4	96.3
Total self-sufficiency <sup>2</sup>	0.17	0.15	0.17	0.16	0.19	0.24	0.22	0.22
Coal self-sufficiency <sup>2</sup>	0.04	0.03	0.02	0.00	0.00	0.00	-	-
Oil self-sufficiency <sup>2</sup>	0.01	0.02	0.05	0.05	0.09	0.11	0.08	0.09
Natural gas self-sufficiency <sup>2</sup>	0.89	0.45	0.36	0.24	0.10	0.10	0.08	0.07
TPES/GDP (toe per thousand 2010 USD)	0.11	0.09	0.08	0.08	0.08	0.07	0.07	0.07
TPES/GDP PPP (toe per thousand 2010 USD)	0.11	0.10	0.09	0.09	0.08	0.08	0.07	0.07
TPES/population (toe per capita)	2.18	2.32	2.58	3.01	2.90	2.51	2.49	2.54
Net oil imports/GDP (toe per thousand 2010 USD)	0.09	0.07	0.05	0.04	0.03	0.03	0.02	0.03
Oil supply/GDP (toe per thousand 2010 USD)	0.08	0.06	0.05	0.04	0.03	0.03	0.02	0.02
Oil supply/population (toe per capita)	1.65	1.56	1.47	1.53	1.09	0.88	0.85	0.85
Share of renewables in TPES	0.05	0.05	0.04	0.06 e	0.13	0.17	0.17	0.17
Share of renewables in electricity generation	0.29	0.27	0.16 e	0.19 e	0.26	0.39	0.38	0.36
TFC/GDP (toe per thousand 2010 USD)	0.09	0.07	0.07	0.06	0.06	0.06	0.06	..
TFC/GDP PPP (toe per thousand 2010 USD)	0.09	0.08	0.07	0.06	0.06	0.06	0.06	..
TFC/population (toe per capita)	1.76	1.81	2.03	2.26	2.24	1.96	1.95	..
Elect. cons./GDP (kWh per 2010 USD)	0.13	0.13	0.13	0.15	0.15	0.15	0.15	0.15
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	0.13	0.13	0.14	0.15	0.16	0.15	0.15	0.15
Elect. cons./population (kWh per capita)	2458	3105	4145	5300	5443	5099	5081	5189
Industry cons. <sup>3</sup> /industrial production (2010=100)	165.2	125.7	110.5	99.9	100.0	86.1	84.5	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	332.8	203.7	133.8	94.9	100.0	75.3	70.0	..

1. Electricity consumption equals domestic supply less losses.

2. Production divided by TPES.

3. Includes non-energy use.

## Japan

Figure 1. Energy production

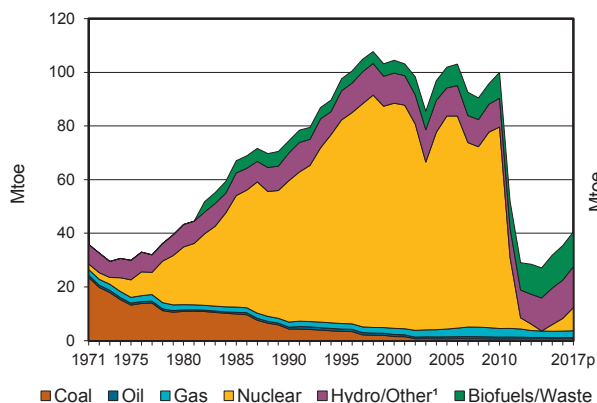


Figure 2. Total primary energy supply<sup>2</sup>

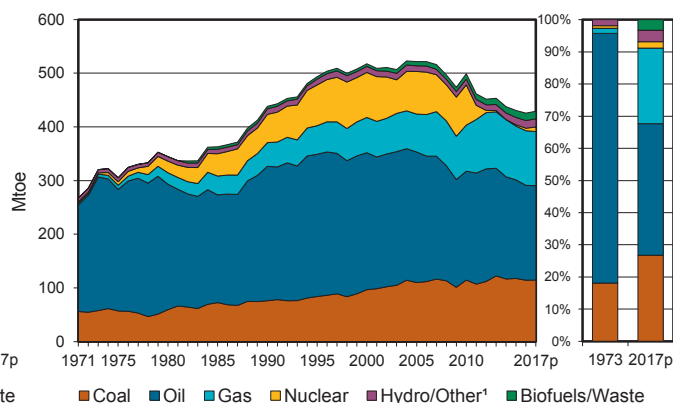


Figure 3. Energy self-sufficiency

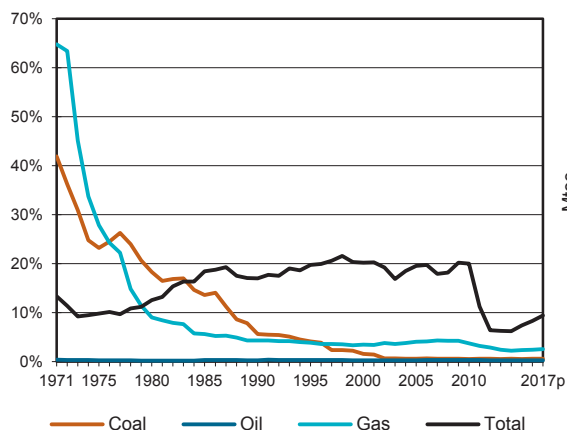


Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>

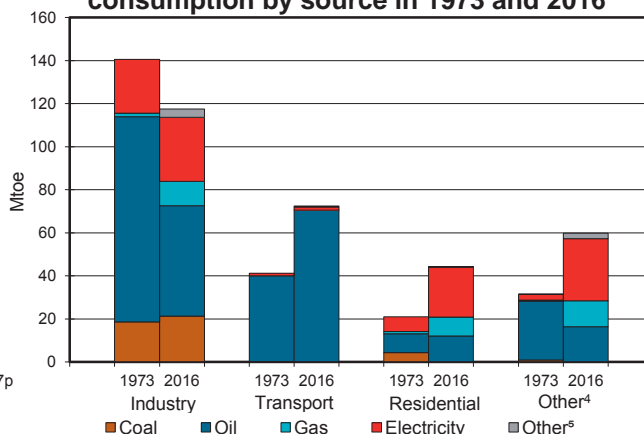


Figure 5. Electricity generation by source

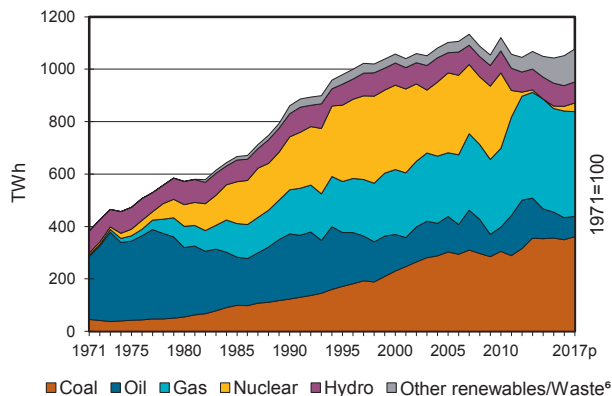
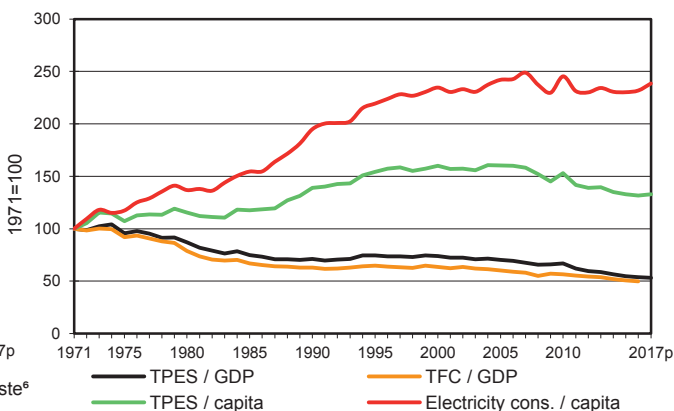


Figure 6. Selected indicators



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.

## Japan

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	0.66	0.44	-	2.45	4.71	6.78	7.48	12.89	-	-	35.42
Imports	114.49	163.59	40.67	99.22	-	-	-	0.92	-	-	418.89
Exports	-0.72	-	-18.49	-	-	-	-	-	-	-	-19.21
Intl. marine bunkers	-	-	-4.54	-	-	-	-	-	-	-	-4.54
Intl. aviation bunkers	-	-	-6.71	-	-	-	-	-	-	-	-6.71
Stock changes	-0.05	1.48	0.30	0.03	-	-	-	-	-	-	1.77
<b>TPES</b>	<b>114.38</b>	<b>165.51</b>	<b>11.24</b>	<b>101.70</b>	<b>4.71</b>	<b>6.78</b>	<b>7.48</b>	<b>13.82</b>	-	-	<b>425.61</b>
Transfers	-	-0.99	0.87	-	-	-	-	-	-	-	-0.13
Statistical differences	1.31	0.14	-3.69	8.11	-	-	-	0.18	0.83	-0.00	6.87
Electricity plants	-71.56	-2.40	-14.81	-74.35	-4.71	-6.78	-7.05	-7.49	90.44	-	-98.72
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-0.01	-0.31	-	-	-	-	-0.09	0.52	0.12
Blast furnaces	-18.10 e	-	-	-	-	-	-	-	-	-	-18.10
Gas works	-	-	-1.24	1.51	-	-	-	-0.00	-	-	0.27
Coke/pat. fuel/BKB/PB plants	-1.56	-	-0.51	-	-	-	-	-0.12	-	-	-2.18
Oil refineries	-	-166.92	169.79	-	-	-	-	-	-	-	2.87
Petrochemical plants	-	4.83	-5.01	-	-	-	-	-	-	-	-0.19
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-0.02 e	-	-	-0.02
Energy industry own use	-3.09	-0.06	-6.63	-4.49	-	-	-	-0.10	-4.07	-0.01	-18.45
Losses	-	-	-	-	-	-	-	-	-3.93	-	-3.93
<b>TFC</b>	<b>21.38</b>	<b>0.12</b>	<b>150.00</b>	<b>32.16</b>	-	-	<b>0.43</b>	<b>6.27</b>	<b>83.18</b>	<b>0.51</b>	<b>294.05</b>
<b>INDUSTRY</b>	<b>20.87</b>	<b>0.02</b>	<b>16.05</b>	<b>11.05</b>	-	-	-	<b>3.94</b>	<b>29.64</b>	-	<b>81.57</b>
Iron and steel	11.57 e	-	1.46	2.39	-	-	-	0.03	6.00	-	21.46
Chemical and petrochemical	3.90	0.02	6.48	2.12	-	-	-	0.13	4.87	-	17.51
Non-ferrous metals	0.22	-	0.39	0.37	-	-	-	0.03	1.12	-	2.15
Non-metallic minerals	3.34	-	2.08	0.81	-	-	-	0.64	1.56	-	8.43
Transport equipment	0.07	-	0.22	0.62	-	-	-	-	2.35	-	3.27
Machinery	0.00	-	0.65	1.32	-	-	-	0.00	4.71	-	6.68
Mining and quarrying	0.01	-	0.19	0.11	-	-	-	-	0.10	-	0.42
Food and tobacco	0.01	-	1.38	1.69	-	-	-	0.08	2.32	-	5.47
Paper, pulp and printing	1.74	-	0.72	0.54	-	-	-	2.79	2.68	-	8.47
Wood and wood products	-	-	0.09	0.12	-	-	-	0.23	0.33	-	0.77
Construction	-	-	1.38	0.06	-	-	-	-	0.57	-	2.01
Textile and leather	0.01	-	0.30	0.19	-	-	-	-	0.42	-	0.92
Non-specified	0.00	-	0.70	0.70	-	-	-	-	2.63	-	4.02
<b>TRANSPORT</b>	<b>0.00</b>	-	<b>69.60</b>	<b>0.06</b>	-	-	-	<b>0.39</b>	<b>1.51</b>	-	<b>71.57</b>
Domestic aviation	-	-	3.39	-	-	-	-	-	-	-	3.39
Road	-	-	62.82	0.06	-	-	-	0.39	-	-	63.27
Rail	0.00	-	0.17	-	-	-	-	-	1.51	-	1.68
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	3.23	-	-	-	-	-	-	-	3.23
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>0.08</b>	-	<b>27.94</b>	<b>20.81</b>	-	-	<b>0.43</b>	<b>1.94</b>	<b>52.02</b>	<b>0.51</b>	<b>103.73</b>
Residential	-	-	12.06	8.78	-	-	0.23	0.01	23.15	0.03	44.26
Comm. and public services	0.08	-	11.38	12.03	-	-	0.12	0.87	28.60	0.48	53.57
Agriculture/forestry	-	-	3.08	0.00	-	-	0.08	-	0.24	-	3.40
Fishing	-	-	1.41	0.00	-	-	-	-	0.03	-	1.44
Non-specified	-	-	-	-	-	-	-	1.06	-	-	1.06
<b>NON-ENERGY USE</b>	<b>0.43</b>	<b>0.10</b>	<b>36.41</b>	<b>0.24</b>	-	-	-	-	-	-	<b>37.18</b>
in industry/transf./energy	0.43	0.10	35.18	0.24	-	-	-	-	-	-	35.95
of which: chem./petrochem.	0.42	0.10	32.00	0.24	-	-	-	-	-	-	32.76
in transport	-	-	0.84	-	-	-	-	-	-	-	0.84
in other	-	-	0.39	-	-	-	-	-	-	-	0.39
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>349.42</b>	<b>11.72</b>	<b>72.78</b>	<b>406.50</b>	<b>18.06</b>	<b>78.90</b>	<b>80.86</b>	<b>33.57</b>	-	-	<b>1051.80</b>
Electricity plants	349.42	11.72	72.78	406.50	18.06	78.90	80.86	33.57	-	-	1051.80
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - PJ</b>	-	-	<b>0.20</b>	<b>12.93</b>	-	-	<b>5.01</b>	-	<b>3.61</b>	-	<b>21.75</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	0.20	12.93	-	-	5.01	-	3.61	-	21.75

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Japan

## Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	0.68	0.44	-	2.56	8.58	6.91	8.34	12.94	-	-	40.44
Imports	114.78	158.45	44.30	98.21	-	-	-	1.12	-	-	416.87
Exports	-0.86	-	-17.56	-	-	-	-	-	-	-	-18.42
Intl. marine bunkers	-	-	-4.25	-	-	-	-	-	-	-	-4.25
Intl. aviation bunkers	-	-	-6.77	-	-	-	-	-	-	-	-6.77
Stock changes	0.05	1.41	-0.34	0.12	-	-	-	-	-	-	1.25
<b>TPES</b>	<b>114.65</b>	<b>160.31</b>	<b>15.39</b>	<b>100.89</b>	<b>8.58</b>	<b>6.91</b>	<b>8.34</b>	<b>14.06</b>	-	-	<b>429.12</b>
Electricity and Heat Output											
Elec. generated - TWh	361.37	7.66	69.50	399.81	32.91	80.33	91.42	34.23	-	-	1077.23
Heat generated - PJ	-	-	0.20	12.93	-	-	5.01	-	3.61	-	21.75

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	29.5	43.3	74.5	104.5	100.0	31.8	35.4	40.4
Net imports (Mtoe)	316.8	318.8	377.3	428.9	409.1	408.1	399.7	398.5
Total primary energy supply (Mtoe)	320.4	344.5	438.2	517.5	499.1	430.5	425.6	429.1
Net oil imports (Mtoe)	273.1	251.7	263.3	270.0	212.1	192.5	185.8	185.2
Oil supply (Mtoe)	248.9	233.7	250.4	255.2	202.7	183.6	176.8	175.7
Electricity consumption (TWh) <sup>1</sup>	442.2	550.9	828.8	1023.3	1080.3	1006.4	1012.3	1039.6
GDP (billion 2010 USD)	2392.7	3019.4	4703.6	5348.9	5700.1	5996.4	6052.7	6156.3
GDP PPP (billion 2010 USD)	1881.6	2374.4	3698.9	4206.3	4482.5	4715.5	4759.8	4841.3
Population (millions)	108.90	117.06	123.61	126.83	128.04	127.11	126.96	126.73
Industrial production index (2010=100)	59.0	69.7	102.8	104.3	100.0	97.4	97.1	101.2
Total self-sufficiency <sup>2</sup>	0.09	0.13	0.17	0.20	0.20	0.07	0.08	0.09
Coal self-sufficiency <sup>2</sup>	0.31	0.18	0.06	0.02	0.01	0.01	0.01	0.01
Oil self-sufficiency <sup>2</sup>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural gas self-sufficiency <sup>2</sup>	0.45	0.09	0.04	0.03	0.04	0.02	0.02	0.03
TPES/GDP (toe per thousand 2010 USD)	0.13	0.11	0.09	0.10	0.09	0.07	0.07	0.07
TPES/GDP PPP (toe per thousand 2010 USD)	0.17	0.15	0.12	0.12	0.11	0.09	0.09	0.09
TPES/population (toe per capita)	2.94	2.94	3.55	4.08	3.90	3.39	3.35	3.39
Net oil imports/GDP (toe per thousand 2010 USD)	0.11	0.08	0.06	0.05	0.04	0.03	0.03	0.03
Oil supply/GDP (toe per thousand 2010 USD)	0.10	0.08	0.05	0.05	0.04	0.03	0.03	0.03
Oil supply/population (toe per capita)	2.29	2.00	2.03	2.01	1.58	1.44	1.39	1.39
Share of renewables in TPES	0.02	0.02	0.03	0.03	0.04	0.05	0.05	0.06
Share of renewables in electricity generation	0.14	0.16	0.12	0.09	0.10 e	0.14 e	0.15 e	0.16
TFC/GDP (toe per thousand 2010 USD)	0.10	0.08	0.06	0.06	0.06	0.05	0.05	..
TFC/GDP PPP (toe per thousand 2010 USD)	0.12	0.10	0.08	0.08	0.07	0.06	0.06	..
TFC/population (toe per capita)	2.15	1.98	2.33	2.61	2.45	2.34	2.32	..
Elect. cons./GDP (kWh per 2010 USD)	0.18	0.18	0.18	0.19	0.19	0.17	0.17	0.17
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	0.24	0.23	0.22	0.24	0.24	0.21	0.21	0.22
Elect. cons./population (kWh per capita)	4060	4707	6705	8068	8437	7917	7974	8203
Industry cons. <sup>3</sup> /industrial production (2010=100)	190.3	136.1	108.6	104.7	100.0	98.7	96.7	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	284.8	169.6	118.2	119.7	100.0	98.4	93.3	..

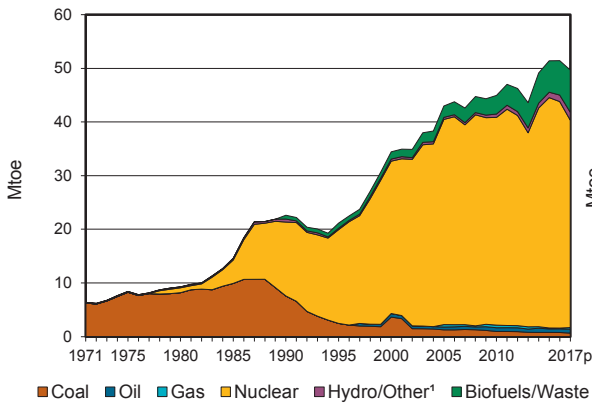
1. Electricity consumption equals domestic supply less losses.

2. Production divided by TPES.

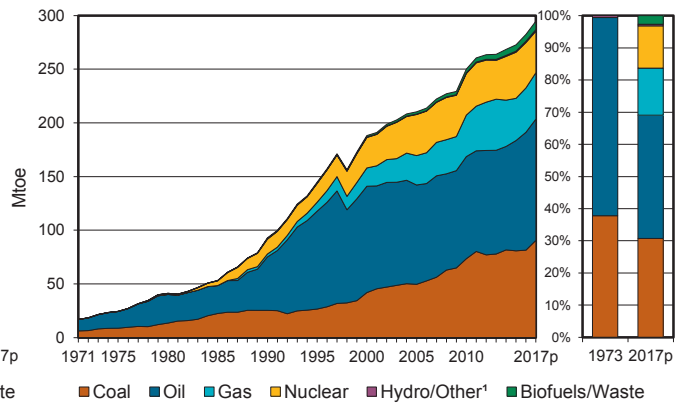
3. Includes non-energy use.

## Korea

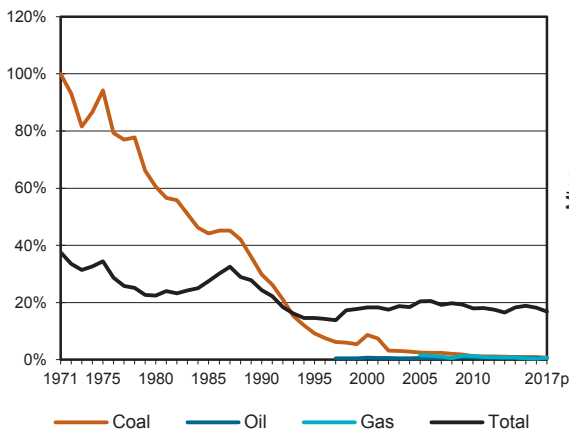
**Figure 1. Energy production**



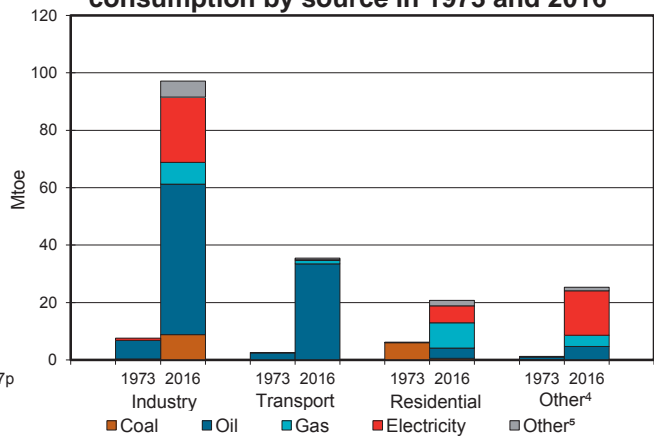
**Figure 2. Total primary energy supply<sup>2</sup>**



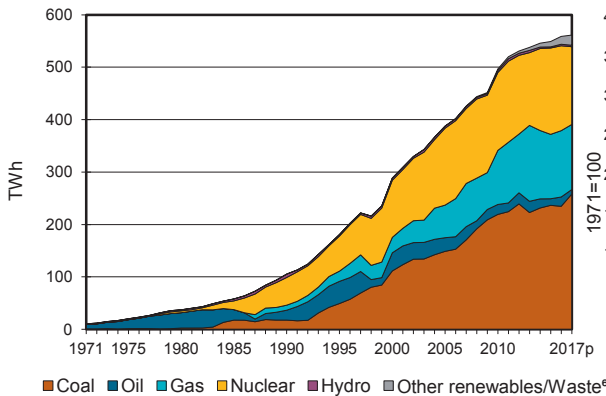
**Figure 3. Energy self-sufficiency**



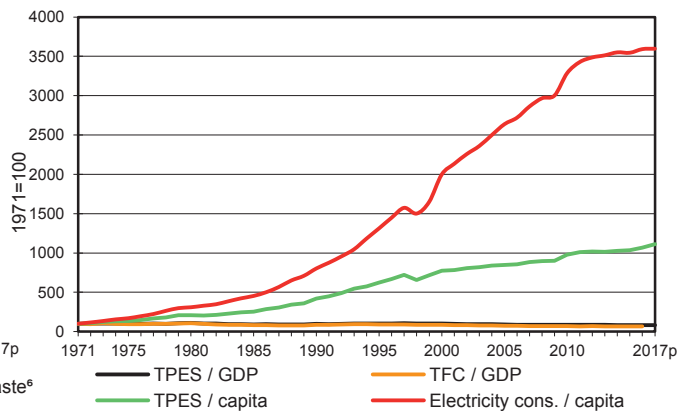
**Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.

## Korea

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	0.77	0.69	-	0.14	42.21	0.24	0.92	6.41	-	0.05	51.43
Imports	81.37	149.28	40.54	39.61	-	-	-	-	-	-	310.78
Exports	-	-0.52	-63.75	-	-	-	-	-	-	-	-64.27
Intl. marine bunkers	-	-	-10.56	-	-	-	-	-	-	-	-10.56
Intl. aviation bunkers	-	-	-4.92	-	-	-	-	-	-	-	-4.92
Stock changes	-0.67	-0.93	-0.02	1.57	-	-	-	-	-	-	-0.05
<b>TPES</b>	<b>81.47</b>	<b>148.52</b>	<b>-38.72</b>	<b>41.31</b>	<b>42.21</b>	<b>0.24</b>	<b>0.92</b>	<b>6.41</b>	-	<b>0.05</b>	<b>282.41</b>
Transfers	-	-3.50	3.53	-	-	-	-	-	-	-	0.04
Statistical differences	-0.22	0.26	1.01	0.85	-	-	0.00	-0.00	1.14	-0.35	2.70
Electricity plants	-48.65	-	-2.96	-14.35	-42.21	-0.24	-0.73	-1.36	43.02	-0.04	-67.51
CHP plants	-7.58	-	-1.65	-6.14	-	-	-	-0.27	5.03	4.71	-5.90
Heat plants	-	-	-0.18	-0.07	-	-	-	-0.54	-	0.53	-0.25
Blast furnaces	-8.84 e	-	-	-	-	-	-	-	-	-	-8.84
Gas works	-	-	-0.11	-	-	-	-	-	-	-	-0.11
Coke/pat. fuel/BKB/PB plants	-3.68	-	-	-	-	-	-	-	-	-	-3.68
Oil refineries	-	-155.88	150.98	-	-	-	-	-	-	-	-4.90
Petrochemical plants	-	10.60	-10.30	-	-	-	-	-	-	-	0.30
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-	-	-	-
Energy industry own use	-3.08	-	-7.53	-0.09	-	-	-	-	-3.12	-0.09	-13.91
Losses	-	-	-	-	-	-	-	-	-1.59	-0.06	-1.65
<b>TFC</b>	<b>9.43</b>	-	<b>94.08</b>	<b>21.53</b>	-	-	<b>0.19</b>	<b>4.24</b>	<b>44.48</b>	<b>4.76</b>	<b>178.71</b>
<b>INDUSTRY</b>	<b>8.30</b>	-	<b>3.58</b>	<b>7.51</b>	-	-	<b>0.00</b>	<b>2.81</b>	<b>22.82</b>	<b>2.80</b>	<b>47.82</b>
Iron and steel	4.31 e	-	0.08	1.49	-	-	-	0.01	4.44	0.00	10.33
Chemical and petrochemical	0.08	-	0.52	1.09	-	-	-	0.34	4.12	1.80	7.96
Non-ferrous metals	-	-	0.03	0.28	-	-	-	-	0.78	0.00	1.09
Non-metallic minerals	2.68	-	0.56	0.53	-	-	-	0.68	1.11	0.00	5.56
Transport equipment	-	-	0.23	0.62	-	-	-	0.00	2.12	0.01	2.98
Machinery	-	-	0.09	0.96	-	-	-	0.00	6.76	0.00	7.80
Mining and quarrying	-	-	0.05	-	-	-	-	0.00	0.16	-	0.20
Food and tobacco	0.02	-	0.08	0.68	-	-	-	0.07	0.98	0.11	1.94
Paper, pulp and printing	0.02	-	0.03	0.24	-	-	-	0.68	0.89	0.24	2.12
Wood and wood products	-	-	0.00	0.03	-	-	-	0.15	0.17	0.01	0.37
Construction	-	-	0.86	0.01	-	-	-	0.03	-	-	0.89
Textile and leather	0.05	-	0.08	0.30	-	-	-	0.09	1.02	0.40	1.94
Non-specified	1.13	-	0.97	1.28	-	-	0.00	0.76	0.28	0.22	4.64
<b>TRANSPORT</b>	-	-	<b>32.98</b>	<b>1.20</b>	-	-	-	<b>0.50</b>	<b>0.23</b>	-	<b>34.91</b>
Domestic aviation	-	-	1.24	-	-	-	-	-	-	-	1.24
Road	-	-	31.19	1.20	-	-	-	0.50	-	-	32.88
Rail	-	-	0.10	-	-	-	-	-	0.23	-	0.33
Pipeline transport	-	-	0.00	-	-	-	-	-	-	-	0.00
Domestic navigation	-	-	0.46	-	-	-	-	-	-	-	0.46
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>0.56</b>	-	<b>8.14</b>	<b>12.82</b>	-	-	<b>0.19</b>	<b>0.94</b>	<b>21.43</b>	<b>1.96</b>	<b>46.02</b>
Residential	0.56	-	3.54	8.86	-	-	0.04	0.14	5.91	1.69	20.74
Comm. and public services	-	-	2.36	3.96	-	-	0.12	0.73	14.14	0.27	21.58
Agriculture/forestry	-	-	0.34	0.00	-	-	0.02	0.06	1.19	-	1.62
Fishing	-	-	0.88	-	-	-	-	-	0.19	-	1.07
Non-specified	-	-	1.02	-	-	-	-	-	-	-	1.02
<b>NON-ENERGY USE</b>	<b>0.57</b>	-	<b>49.38</b>	-	-	-	-	-	-	-	<b>49.96</b>
in industry/transf./energy	0.57	-	48.81	-	-	-	-	-	-	-	49.38
of which: chem./petrochem.	0.57	-	47.34	-	-	-	-	-	-	-	47.91
in transport	-	-	0.51	-	-	-	-	-	-	-	0.51
in other	-	-	0.06	-	-	-	-	-	-	-	0.06
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>234.70</b>	-	<b>17.76</b>	<b>126.56</b>	<b>162.00</b>	<b>2.85</b>	<b>8.45</b>	<b>6.37</b>	-	<b>0.14</b>	<b>558.82</b>
Electricity plants	213.67	-	13.50	93.91	162.00	2.85	8.45	5.81	-	0.14	500.32
CHP plants	21.03	-	4.25	32.65	-	-	-	0.57	-	-	58.50
<b>Heat generated - PJ</b>	<b>90.07</b>	-	<b>37.67</b>	<b>67.61</b>	-	-	-	<b>24.28</b>	-	<b>2.16</b>	<b>221.78</b>
CHP plants	90.07	-	36.61	65.04	-	-	-	5.61	-	2.16	199.48
Heat plants	-	-	1.06	2.58	-	-	-	18.67	-	-	22.31

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.



## Korea

## Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	0.66	0.72	-	0.31	38.67	0.24	1.18	7.85	-	0.05	49.69
Imports	89.51	154.85	39.17	43.63	-	-	-	-	-	-	327.15
Exports	-	-0.35	-66.39	-	-	-	-	-	-	-	-66.74
Intl. marine bunkers	-	-	-10.32	-	-	-	-	-	-	-	-10.32
Intl. aviation bunkers	-	-	-5.39	-	-	-	-	-	-	-	-5.39
Stock changes	0.44	0.99	-0.32	-0.72	-	-	-	-	-	-	0.40
<b>TPES</b>	<b>90.61</b>	<b>156.21</b>	<b>-43.25</b>	<b>43.21</b>	<b>38.67</b>	<b>0.24</b>	<b>1.18</b>	<b>7.85</b>	<b>-</b>	<b>0.05</b>	<b>294.79</b>
Electricity and Heat Output											
Elec. generated - TWh	257.98	-	8.65	124.17	148.43	2.79	11.07	8.12	-	0.14	561.34
Heat generated - PJ	85.09	-	35.70	68.51	-	-	-	24.22	-	2.06	215.58

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	6.8	9.3	22.6	34.4	45.0	51.4	51.4	49.7
Net imports (Mtoe)	13.6	30.8	70.2	165.7	221.1	237.0	246.5	260.4
Total primary energy supply (Mtoe)	21.6	41.3	92.9	188.2	250.0	272.7	282.4	294.8
Net oil imports (Mtoe)	13.2	27.3	51.7	109.5	108.8	116.9	125.5	127.3
Oil supply (Mtoe)	13.3	26.7	49.7	99.0	95.1	102.7	109.8	113.0
Electricity consumption (TWh) <sup>1</sup>	13.5 e	34.8 e	101.7	277.7	481.5	534.7	544.1	547.1
GDP (billion 2010 USD)	79.5	141.1	362.9	710.0	1094.5	1268.8	1306.0	1346.0
GDP PPP (billion 2010 USD)	109.4	194.0	499.1	976.5	1505.3	1745.0	1796.1	1851.1
Population (millions)	34.10	38.12	42.87	47.01	49.55	51.02	51.25	51.45
Industrial production index (2010=100)	..	7.5	22.8	53.4	100.0	108.1	110.6	112.6
Total self-sufficiency <sup>2</sup>	0.31	0.22	0.24	0.18	0.18	0.19	0.18	0.17
Coal self-sufficiency <sup>2</sup>	0.82 e	0.61	0.30	0.09	0.01	0.01	0.01	0.01
Oil self-sufficiency <sup>2</sup>	-	-	-	0.01	0.01	0.01	0.01	0.01
Natural gas self-sufficiency <sup>2</sup>	-	-	-	-	0.01	0.00	0.00	0.01
TPES/GDP (toe per thousand 2010 USD)	0.27	0.29	0.26	0.27	0.23	0.21	0.22	0.22
TPES/GDP PPP (toe per thousand 2010 USD)	0.20	0.21	0.19	0.19	0.17	0.16	0.16	0.16
TPES/population (toe per capita)	0.63	1.08	2.17	4.00	5.05	5.35	5.51	5.73
Net oil imports/GDP (toe per thousand 2010 USD)	0.17	0.19	0.14	0.15	0.10	0.09	0.10	0.09
Oil supply/GDP (toe per thousand 2010 USD)	0.17	0.19	0.14	0.14	0.09	0.08	0.08	0.08
Oil supply/population (toe per capita)	0.39	0.70	1.16	2.11	1.92	2.01	2.14	2.20
Share of renewables in TPES	0.01	0.00	0.01	0.00 e	0.01	0.02	0.02	0.02
Share of renewables in electricity generation	0.09	0.05	0.06	0.01 e	0.01	0.02	0.03	0.04
TFC/GDP (toe per thousand 2010 USD)	0.22	0.22	0.18	0.18	0.14	0.14	0.14	..
TFC/GDP PPP (toe per thousand 2010 USD)	0.16	0.16	0.13	0.13	0.11	0.10	0.10	..
TFC/population (toe per capita)	0.51	0.82	1.51	2.70	3.18	3.40	3.49	..
Elect. cons./GDP (kWh per 2010 USD)	0.17 e	0.25 e	0.28	0.39	0.44	0.42	0.42	0.41
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	0.12 e	0.18 e	0.20	0.28	0.32	0.31	0.30	0.30
Elect. cons./population (kWh per capita)	397 e	914 e	2373	5907	9716	10482	10618	10634
Industry cons. <sup>3</sup> /industrial production (2010=100)	..	215.7	137.9	142.7	100.0	106.2	106.4	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	..	311.1	179.0	154.0	100.0	106.4	109.8	..

1. Electricity consumption equals domestic supply less losses.

2. Production divided by TPES.

3. Includes non-energy use.

## Latvia

Figure 1. Energy production

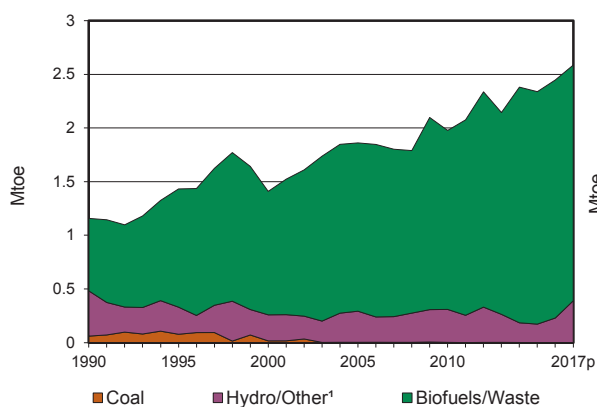


Figure 2. Total primary energy supply<sup>2</sup>

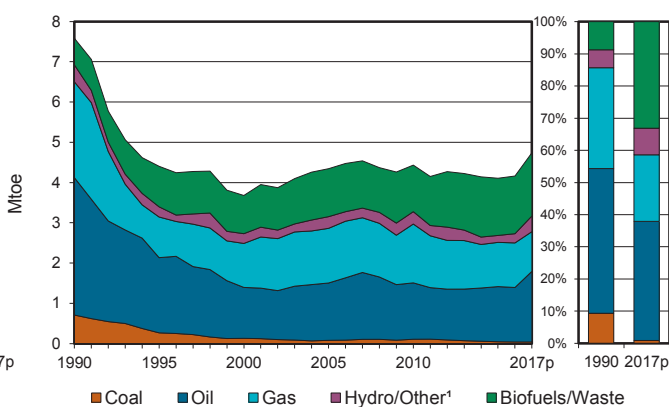


Figure 3. Energy self-sufficiency

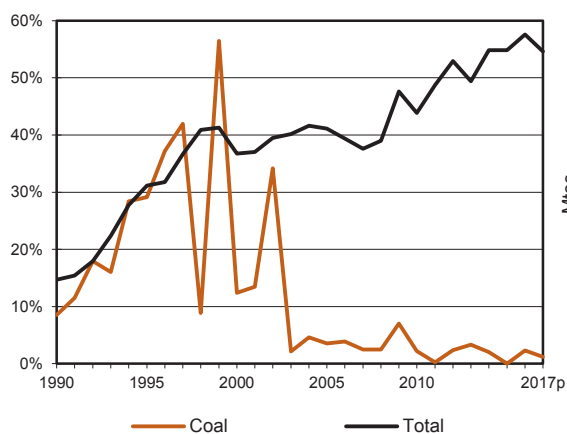


Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>

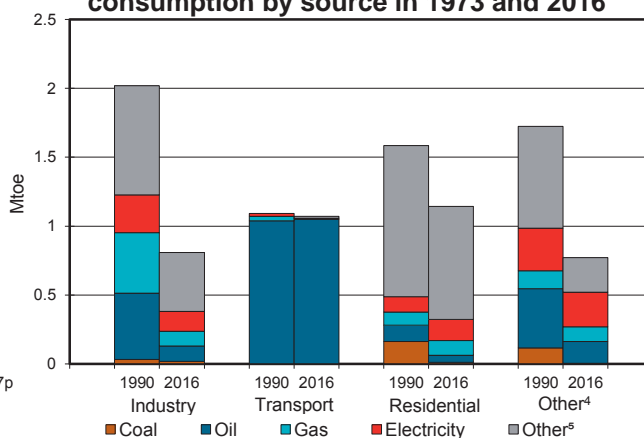


Figure 5. Electricity generation by source

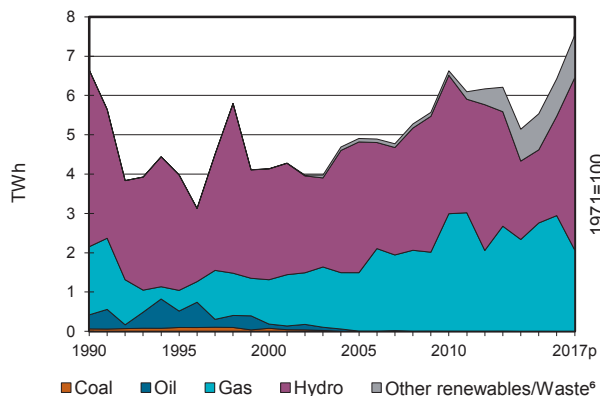
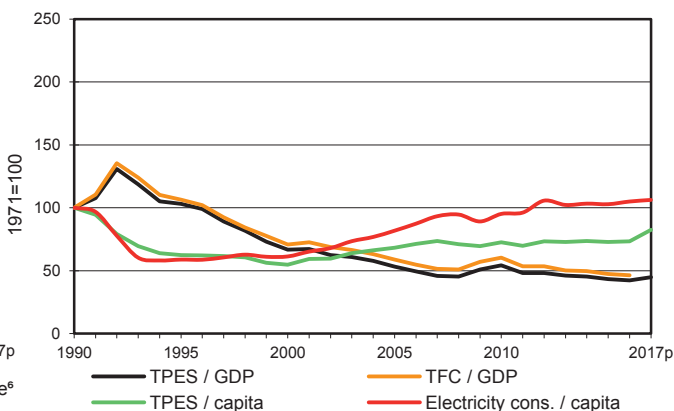


Figure 6. Selected indicators



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.

## Latvia

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal <sup>1</sup>	Crude oil <sup>2</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	0.00	-	-	-	-	0.22	0.01	2.22	-	-	2.45
Imports	0.04	0.00	2.80	0.92	-	-	-	0.17	0.42	-	4.34
Exports	-0.00	-0.00	-0.83	-	-	-	-	-0.96	-0.33	-	-2.13
Intl. marine bunkers	-	-	-0.31	-	-	-	-	-	-	-	-0.31
Intl. aviation bunkers	-	-	-0.12	-	-	-	-	-	-	-	-0.12
Stock changes	0.01	-	-0.18	0.18	-	-	-	0.01	-	-	0.02
<b>TPES</b>	<b>0.04</b>	-	<b>1.35</b>	<b>1.11</b>	-	<b>0.22</b>	<b>0.01</b>	<b>1.43</b>	<b>0.09</b>	-	<b>4.25</b>
Transfers	-	-	0.01	-	-	-	-	-	-	-	0.01
Statistical differences	0.00	-	0.01	-	-	-	-	-	-	-	0.01
Electricity plants	-	-	-	-	-	-0.22	-0.01	-	0.23	-	-
CHP plants	-0.00	-	-	-0.71	-	-	-	-0.33	0.32	0.52	-0.20
Heat plants	-0.00	-	-	-0.06	-	-	-	-0.17	-0.00	0.17	-0.05
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat. fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-	-	-	-	-	-	-	-	-	-
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-0.01	-	-	-0.01
Energy industry own use	-	-	-0.01	-0.01	-	-	-	-	-0.04	-0.03	-0.09
Losses	-	-	-	-0.00	-	-	-	-	-0.04	-0.08	-0.13
<b>TFC</b>	<b>0.04</b>	-	<b>1.37</b>	<b>0.32</b>	-	-	-	<b>0.93</b>	<b>0.56</b>	<b>0.58</b>	<b>3.79</b>
<b>INDUSTRY</b>	<b>0.02</b>	-	<b>0.05</b>	<b>0.11</b>	-	-	-	<b>0.37</b>	<b>0.14</b>	<b>0.06</b>	<b>0.75</b>
Iron and steel	-	-	-	0.00	-	-	-	-	0.00	0.00	0.00
Chemical and petrochemical	-	-	0.00	0.01	-	-	-	0.00	0.01	0.00	0.02
Non-ferrous metals	-	-	-	0.00	-	-	-	-	-	-	0.00
Non-metallic minerals	0.02	-	0.01	0.03	-	-	-	0.04	0.02	0.00	0.11
Transport equipment	-	-	-	0.00	-	-	-	0.00	0.00	0.00	0.01
Machinery	0.00	-	-	0.00	-	-	-	0.00	0.01	0.00	0.02
Mining and quarrying	0.00	-	0.00	0.00	-	-	-	0.00	0.00	0.00	0.01
Food and tobacco	0.00	-	0.01	0.03	-	-	-	0.01	0.02	0.00	0.08
Paper, pulp and printing	-	-	-	0.00	-	-	-	0.00	0.00	0.00	0.00
Wood and wood products	-	-	0.01	0.01	-	-	-	0.31	0.06	0.05	0.44
Construction	-	-	0.02	0.01	-	-	-	0.00	0.01	0.00	0.04
Textile and leather	-	-	-	0.00	-	-	-	0.00	0.00	0.00	0.01
Non-specified	-	-	-	0.00	-	-	-	0.00	0.01	0.00	0.01
<b>TRANSPORT</b>	-	-	<b>1.02</b>	-	-	-	-	<b>0.01</b>	<b>0.01</b>	-	<b>1.04</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	0.96	-	-	-	-	0.01	0.00	-	0.97
Rail	-	-	0.06	-	-	-	-	0.00	0.00	-	0.06
Pipeline transport	-	-	-	-	-	-	-	-	0.00	-	0.00
Domestic navigation	-	-	0.00	-	-	-	-	-	-	-	0.00
Non-specified	-	-	-	-	-	-	-	0.00	-	-	0.00
<b>OTHER</b>	<b>0.02</b>	-	<b>0.21</b>	<b>0.21</b>	-	-	-	<b>0.55</b>	<b>0.40</b>	<b>0.52</b>	<b>1.91</b>
Residential	0.01	-	0.05	0.11	-	-	-	0.45	0.15	0.37	1.14
Comm. and public services	0.01	-	0.04	0.09	-	-	-	0.08	0.23	0.14	0.59
Agriculture/forestry	-	-	0.11	0.01	-	-	-	0.02	0.01	0.01	0.17
Fishing	-	-	0.01	0.00	-	-	-	0.00	0.00	-	0.01
Non-specified	-	-	0.00	-	-	-	-	-	0.00	0.00	0.00
<b>NON-ENERGY USE</b>	-	-	<b>0.09</b>	-	-	-	-	-	-	-	<b>0.09</b>
in industry/transf./energy	-	-	0.06	-	-	-	-	-	-	-	0.06
of which: chem./petrochem.	-	-	0.00	-	-	-	-	-	-	-	0.00
in transport	-	-	0.03	-	-	-	-	-	-	-	0.03
in other	-	-	0.00	-	-	-	-	-	-	-	0.00
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	-	-	-	<b>2.94</b>	-	<b>2.53</b>	<b>0.13</b>	<b>0.82</b>	-	-	<b>6.43</b>
Electricity plants	-	-	-	-	-	2.53	0.13	-	-	-	2.66
CHP plants	-	-	-	2.94	-	-	-	0.82	-	-	3.77
<b>Heat generated - PJ</b>	<b>0.15</b>	-	<b>0.04</b>	<b>17.30</b>	-	-	-	<b>11.48</b>	<b>0.01</b>	-	<b>28.97</b>
CHP plants	0.10	-	0.01	14.89	-	-	-	6.69	-	-	21.68
Heat plants	0.04	-	0.04	2.41	-	-	-	4.79	0.01	-	7.28

1. Includes peat.

2. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Latvia

## Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal <sup>1</sup>	Crude oil <sup>2</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	0.00	-	-	-	-	0.38	0.01	2.20	-	-	2.59
Imports	0.04	0.00	2.78	1.01	-	-	-	0.18	0.35	-	4.37
Exports	-0.00	-0.00	-0.61	-	-	-	-	-0.93	-0.36	-	-1.90
Intl. marine bunkers	-	-	-0.26	-	-	-	-	-	-	-	-0.26
Intl. aviation bunkers	-	-	-0.14	-	-	-	-	-	-	-	-0.14
Stock changes	0.01	-	-0.02	-0.03	-	-	-	0.12	-	-	0.08
<b>TPES</b>	<b>0.04</b>	<b>-</b>	<b>1.75</b>	<b>0.99</b>	<b>-</b>	<b>0.38</b>	<b>0.01</b>	<b>1.57</b>	<b>-0.01</b>	<b>-</b>	<b>4.73</b>
Electricity and Heat Output											
Elec. generated - TWh	-	-	0.00	2.07	-	4.38	0.15	0.93	-	-	7.53
Heat generated - PJ	0.10	-	0.04	16.61	-	-	-	13.23	0.01	-	29.98

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes peat.

2. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	..	..	1.2	1.4	2.0	2.3	2.5	2.6
Net imports (Mtoe)	..	..	7.5	2.4	2.2	2.4	2.2	2.5
Total primary energy supply (Mtoe)	..	..	7.9	3.8	4.5	4.3	4.3	4.7
Net oil imports (Mtoe)	..	..	4.0	1.2	1.7	1.8	2.0	2.2
Oil supply (Mtoe)	..	..	3.4	1.3	1.4	1.4	1.4	1.8
Electricity consumption (TWh) <sup>1</sup>	..	..	9.1	4.9	6.8	6.9	7.0	7.0
GDP (billion 2010 USD)	..	..	..	16.4	23.8	28.3	28.9	30.2
GDP PPP (billion 2010 USD)	..	..	35.1	25.5	36.9	43.8	44.8	46.8
Population (millions)	..	..	2.66	2.37	2.10	1.98	1.96	1.94
Industrial production index (2010=100)	..	..	..	69.8	100.0	117.6	123.9	134.3
Total self-sufficiency <sup>2</sup>	..	..	0.15	0.37	0.44	0.55	0.58	0.55
Coal self-sufficiency <sup>2</sup>	..	..	0.09	0.12	0.02	-	0.02	0.01
Oil self-sufficiency <sup>2</sup>	..	..	-	-	-	-	-	-
Natural gas self-sufficiency <sup>2</sup>	..	..	-	-	-	-	-	-
TPES/GDP (toe per thousand 2010 USD)	..	..	..	0.23	0.19	0.15	0.15	0.16
TPES/GDP PPP (toe per thousand 2010 USD)	..	..	0.22	0.15	0.12	0.10	0.09	0.10
TPES/population (toe per capita)	..	..	2.96	1.62	2.15	2.16	2.17	2.44
Net oil imports/GDP (toe per thousand 2010 USD)	..	..	..	0.08	0.07	0.06	0.07	0.07
Oil supply/GDP (toe per thousand 2010 USD)	..	..	..	0.08	0.06	0.05	0.05	0.06
Oil supply/population (toe per capita)	..	..	1.28	0.53	0.67	0.69	0.69	0.91
Share of renewables in TPES	..	..	0.13	0.31	0.32	0.36	0.38	0.40
Share of renewables in electricity generation	..	..	0.68	0.68	0.55	0.50	0.54	0.73
TFC/GDP (toe per thousand 2010 USD)	..	..	..	0.20	0.17	0.13	0.13	..
TFC/GDP PPP (toe per thousand 2010 USD)	..	..	0.18	0.13	0.11	0.09	0.09	..
TFC/population (toe per capita)	..	..	2.41	1.39	1.94	1.92	1.94	..
Elect. cons./GDP (kWh per 2010 USD)	..	..	..	0.30	0.29	0.24	0.24	0.23
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	..	..	0.26	0.19	0.18	0.16	0.16	0.15
Elect. cons./population (kWh per capita)	..	..	3396	2082	3231	3492	3564	3607
Industry cons. <sup>3</sup> /industrial production (2010=100)	..	..	..	108.2	100.0	89.5	78.7	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	..	..	..	214.2	100.0	80.5	64.8	..

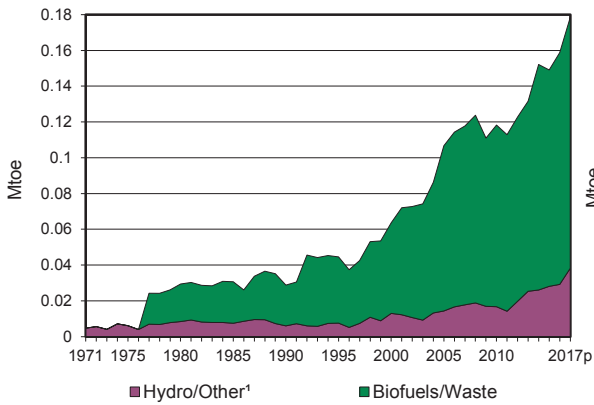
1. Electricity consumption equals domestic supply less losses.

2. Production divided by TPES. Coal self-sufficiency also includes peat, when applicable.

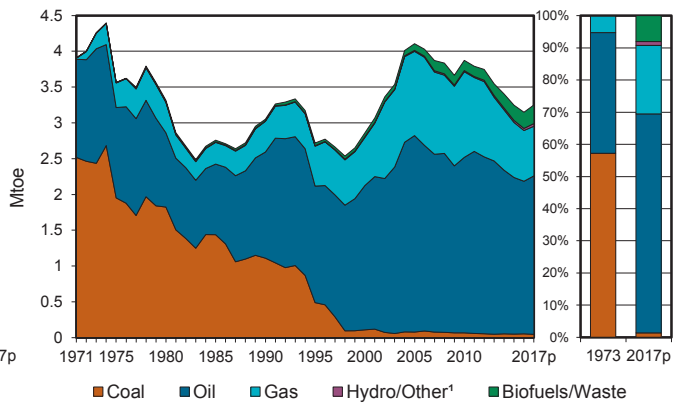
3. Includes non-energy use.

## Luxembourg

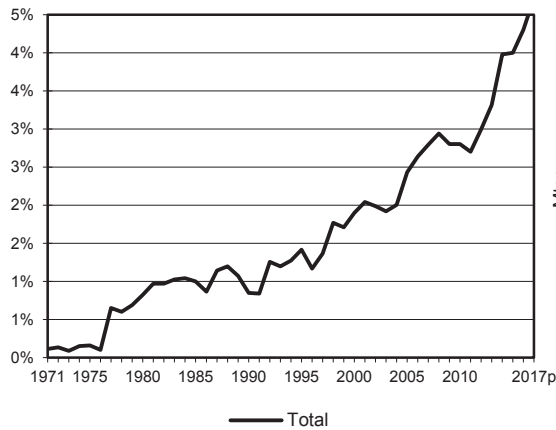
**Figure 1. Energy production**



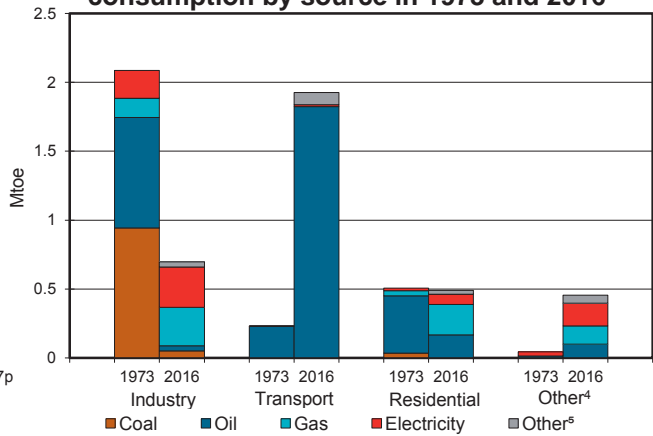
**Figure 2. Total primary energy supply²**



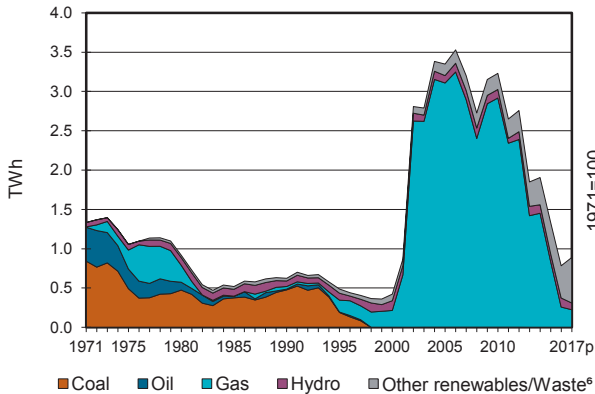
**Figure 3. Energy self-sufficiency**



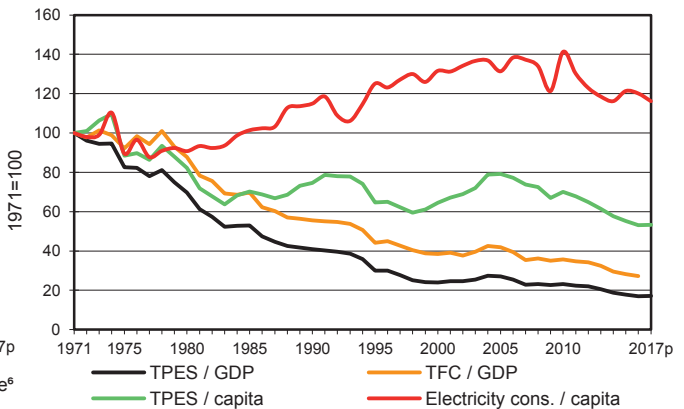
**Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016³**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.

## Luxembourg

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	-	-	-	-	0.01	0.02	0.13	-	-	0.16
Imports	0.05	-	2.65	0.71	-	-	-	0.12	0.66	-	4.20
Exports	-	-	-0.01	-	-	-	-	-0.03	-0.12	-	-0.15
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-0.51	-	-	-	-	-	-	-	-0.51
Stock changes	-	-	-0.00	-	-	-	-	-	-	-	-0.00
<b>TPES</b>	<b>0.05</b>	<b>-</b>	<b>2.13</b>	<b>0.71</b>	<b>-</b>	<b>0.01</b>	<b>0.02</b>	<b>0.23</b>	<b>0.54</b>	<b>-</b>	<b>3.69</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-	-	-0.00	-	-	-	-	0.00	-0.00	-0.00	-0.00
Electricity plants	-	-	-	-0.00	-	-0.01	-0.02	-0.03	0.04	-	-0.03
CHP plants	-	-	-0.00	-0.08	-	-	-	-0.03	0.03	0.05	-0.02
Heat plants	-	-	-	-0.00	-	-	-	-0.00	-	0.01	-0.00
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	0.00	-	-	-	-0.00	-	-	0.00
Coke/pat. fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-	-	-	-	-	-	-	-	-	-
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-	-	-	-
Energy industry own use	-	-	-	-	-	-	-	-	-0.05	-	-0.05
Losses	-	-	-	-	-	-	-	-	-0.01	-0.01	-0.02
<b>TFC</b>	<b>0.05</b>	<b>-</b>	<b>2.13</b>	<b>0.63</b>	<b>-</b>	<b>-</b>	<b>0.00</b>	<b>0.16</b>	<b>0.55</b>	<b>0.05</b>	<b>3.57</b>
<b>INDUSTRY</b>	<b>0.05</b>	<b>-</b>	<b>0.01</b>	<b>0.28</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.04</b>	<b>0.29</b>	<b>0.00</b>	<b>0.67</b>
Iron and steel	0.01	-	-	0.13	-	-	-	-	0.15	-	0.29
Chemical and petrochemical	-	-	0.01	0.02	-	-	-	-	0.03	-	0.06
Non-ferrous metals	-	-	-	c	-	-	-	-	-	-	-
Non-metallic minerals	0.04	-	0.00	0.07	-	-	-	0.02	0.02	-	0.15
Transport equipment	-	-	-	0.00	-	-	-	-	0.00	-	0.00
Machinery	-	-	-	0.00	-	-	-	-	0.01	-	0.01
Mining and quarrying	-	-	-	0.00	-	-	-	-	0.00	-	0.00
Food and tobacco	-	-	0.00	0.01	-	-	-	-	0.01	-	0.02
Paper, pulp and printing	-	-	-	0.00	-	-	-	-	0.00	-	0.01
Wood and wood products	-	-	-	0.00	-	-	-	0.02	0.00	-	0.02
Construction	0.00	-	0.00	0.01	-	-	-	-	0.01	-	0.02
Textile and leather	-	-	-	0.03	-	-	-	-	0.01	0.00	0.04
Non-specified	-	-	0.00	0.01	-	-	-	-	0.03	0.00	0.04
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>1.82</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.09</b>	<b>0.01</b>	<b>-</b>	<b>1.92</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	1.81	-	-	-	-	0.09	0.00	-	1.90
Rail	-	-	0.00	-	-	-	-	-	0.01	-	0.02
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>0.00</b>	<b>-</b>	<b>0.27</b>	<b>0.35</b>	<b>-</b>	<b>-</b>	<b>0.00</b>	<b>0.03</b>	<b>0.24</b>	<b>0.05</b>	<b>0.95</b>
Residential	0.00	-	0.17	0.22	-	-	0.00	0.03	0.08	-	0.49
Comm. and public services	-	-	0.08	0.13	-	-	-	0.00	0.16	0.05	0.43
Agriculture/forestry	-	-	0.02	-	-	-	-	0.00	0.00	-	0.02
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>0.03</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.03</b>
in industry/transf./energy	-	-	0.03	c	-	-	-	-	-	-	0.03
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	0.01	-	-	-	-	-	-	-	0.01
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.26</b>	<b>-</b>	<b>0.12</b>	<b>0.20</b>	<b>0.21</b>	<b>-</b>	<b>-</b>	<b>0.78</b>
Electricity plants	-	-	-	0.00	-	0.12	0.20	0.11	-	-	0.43
CHP plants	-	-	-	0.26	-	-	-	0.10	-	-	0.36
<b>Heat generated - PJ</b>	<b>-</b>	<b>-</b>	<b>0.02</b>	<b>1.77</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.65</b>	<b>-</b>	<b>-</b>	<b>2.43</b>
CHP plants	-	-	0.01	1.68	-	-	-	0.47	-	-	2.16
Heat plants	-	-	0.01	0.10	-	-	-	0.17	-	-	0.27

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Luxembourg

## Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	-	-	-	-	0.01	0.03	0.14	-	-	0.18
Imports	0.05	-	2.79	0.69	-	-	-	0.14	0.65	-	4.32
Exports	-	-	-0.01	-	-	-	-	-0.02	-0.12	-	-0.15
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-0.58	-	-	-	-	-	-	-	-0.58
Stock changes	-	-	0.01	-	-	-	-	-	-	-	0.01
<b>TPES</b>	<b>0.05</b>	<b>-</b>	<b>2.21</b>	<b>0.69</b>	<b>-</b>	<b>0.01</b>	<b>0.03</b>	<b>0.26</b>	<b>0.53</b>	<b>-</b>	<b>3.78</b>
Electricity and Heat Output											
Elec. generated - TWh	-	-	-	0.22	-	0.09	0.33	0.25	-	-	0.89
Heat generated - PJ	-	-	0.02	1.61	-	-	-	0.99	-	-	2.62

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	-	0.0	0.0	0.1	0.1	0.2	0.2	0.2
Net imports (Mtoe)	4.5	3.6	3.5	3.7	4.5	4.0	4.0	4.2
Total primary energy supply (Mtoe)	4.4	3.6	3.4	3.4	4.2	3.7	3.7	3.8
Net oil imports (Mtoe)	1.7	1.1	1.6	2.4	2.9	2.6	2.7	2.8
Oil supply (Mtoe)	1.6	1.0	1.5	2.0	2.5	2.2	2.1	2.2
Electricity consumption (TWh) <sup>1</sup>	4.1	3.9	5.2	6.8	8.5	8.2	8.3	8.2
GDP (billion 2010 USD)	13.7	14.9	24.1	40.8	53.2	61.3	63.2	64.7
GDP PPP (billion 2010 USD)	11.2	12.2	19.7	33.3	43.5	50.1	51.7	52.8
Population (millions)	0.35	0.36	0.38	0.44	0.51	0.57	0.58	0.60
Industrial production index (2010=100)	58.1	50.5	72.4	91.1	100.0	99.2	99.6	102.1
Total self-sufficiency <sup>2</sup>	0.00	0.01	0.01	0.02	0.03	0.04	0.04	0.05
Coal self-sufficiency <sup>2</sup>	-	-	-	-	-	-	-	-
Oil self-sufficiency <sup>2</sup>	-	-	-	-	-	-	-	-
Natural gas self-sufficiency <sup>2</sup>	-	-	-	-	-	-	-	-
TPES/GDP (toe per thousand 2010 USD)	0.32	0.24	0.14	0.08	0.08	0.06	0.06	0.06
TPES/GDP PPP (toe per thousand 2010 USD)	0.40	0.29	0.17	0.10	0.10	0.07	0.07	0.07
TPES/population (toe per capita)	12.63	9.78	8.87	7.66	8.31	6.55	6.32	6.33
Net oil imports/GDP (toe per thousand 2010 USD)	0.12	0.07	0.07	0.06	0.05	0.04	0.04	0.04
Oil supply/GDP (toe per thousand 2010 USD)	0.12	0.07	0.06	0.05	0.05	0.04	0.03	0.03
Oil supply/population (toe per capita)	4.56	2.85	3.88	4.61	4.82	3.85	3.65	3.71
Share of renewables in TPES	0.00	0.01	0.01	0.01	0.03	0.06	0.06	0.07
Share of renewables in electricity generation	0.03	0.12 e	0.13 e	0.41	0.08	0.32	0.58	0.66
TFC/GDP (toe per thousand 2010 USD)	0.21	0.18	0.12	0.08	0.07	0.06	0.06	..
TFC/GDP PPP (toe per thousand 2010 USD)	0.26	0.22	0.14	0.10	0.09	0.07	0.07	..
TFC/population (toe per capita)	8.19	7.45	7.27	7.45	7.75	6.29	6.12	..
Elect. cons./GDP (kWh per 2010 USD)	0.30	0.26	0.22	0.17	0.16	0.13	0.13	0.13
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	0.37	0.32	0.27	0.21	0.20	0.16	0.16	0.16
Elect. cons./population (kWh per capita)	11778	10789	13662	15643	16795	14425	14274	13809
Industry cons. <sup>3</sup> /industrial production (2010=100)	459.8	424.8	235.1	110.3	100.0	85.6	89.7	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	3503.5	1022.1	1020.0	259.0	100.0	92.3	91.6	..

1. Electricity consumption equals domestic supply less losses.

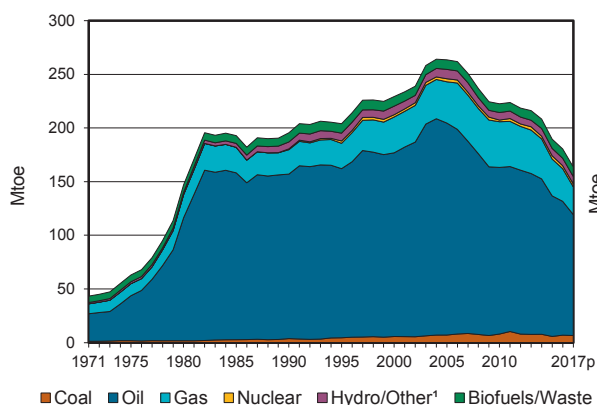
2. Production divided by TPES.

3. Includes non-energy use.

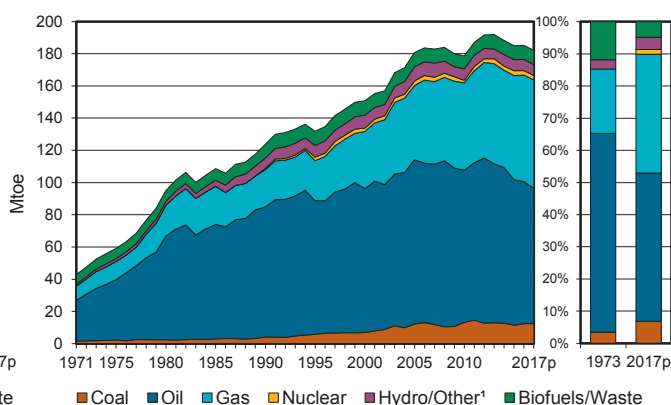


## Mexico

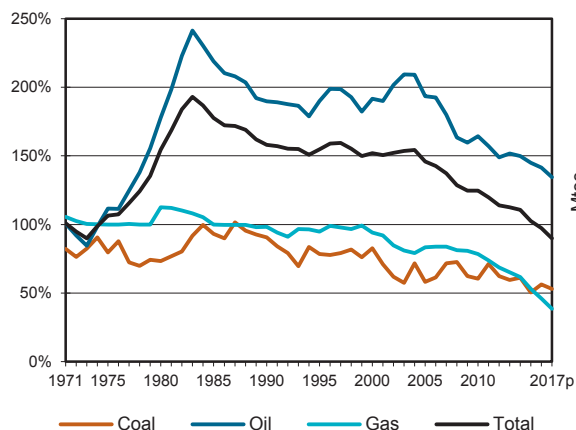
**Figure 1. Energy production**



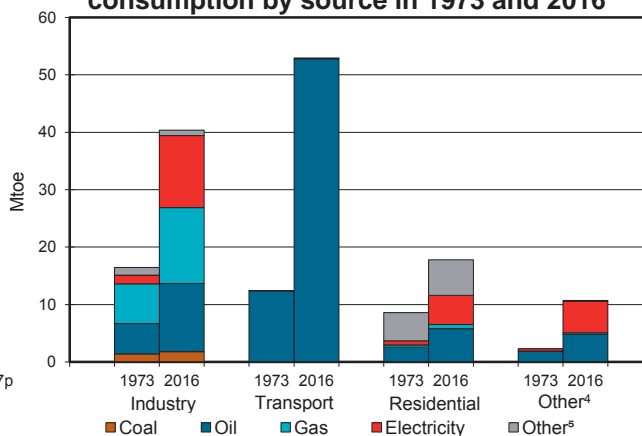
**Figure 2. Total primary energy supply<sup>2</sup>**



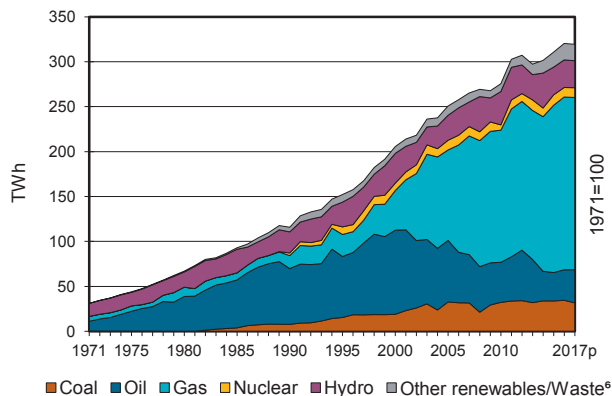
**Figure 3. Energy self-sufficiency**



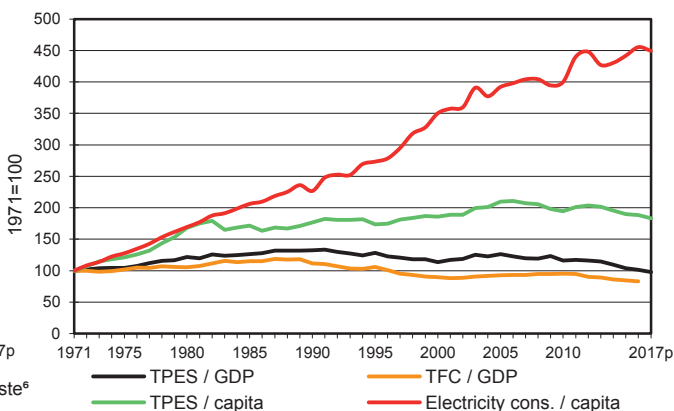
**Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.

## Mexico

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./ Solar/ etc.	Biofuels/ Waste	Electricity	Heat	Total
Production	6.96	124.69	-	30.43	2.75	2.64	4.32	8.67	-	-	180.46
Imports	5.64 e	0.51	42.81	35.55	-	-	-	-	0.19	-	84.70
Exports	-0.00	-65.73	-9.33	-0.02	-	-	-	-	-0.17	-	-75.25
Intl. marine bunkers	-	-	-0.90	-	-	-	-	-	-	-	-0.90
Intl. aviation bunkers	-	-	-3.71	-	-	-	-	-	-	-	-3.71
Stock changes	-0.21 e	-0.13	-0.02	0.22	-	-	-	-	-	-	-0.15
<b>TPES</b>	<b>12.38</b>	<b>59.34</b>	<b>28.85</b>	<b>66.18</b>	<b>2.75</b>	<b>2.64</b>	<b>4.32</b>	<b>8.67</b>	<b>0.02</b>	-	<b>185.16</b>
Transfers	-	-6.07	7.08	-	-	-	-	-	-	-	1.01
Statistical differences	-0.40	0.05	1.83	-3.67	-	-	-0.00	0.00	0.97	-	-1.22
Electricity plants	-9.01 e	-	-7.50	-31.67	-2.75	-2.64	-4.08	-1.40	26.09	-	-32.96
CHP plants	-	-	-0.65	-4.54	-	-	-	-0.34	1.45	-	-4.08
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-0.73 e	-	-	-	-	-	-	-	-	-	-0.73
Gas works	-	-	-0.33	0.23	-	-	-	-	-	-	-0.09
Coke/pat. fuel/BKB/PB plants	-0.01 e	-	-	-	-	-	-	-	-	-	-0.01
Oil refineries	-	-53.41	51.52	-	-	-	-	-	-	-	-1.89
Petrochemical plants	-	0.06	-0.07	-	-	-	-	-	-	-	-0.00
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	0.04	-	-	-	-	-	-	-	-	0.04
Energy industry own use	-0.38 e	-	-5.50	-12.28	-	-	-	-	-1.85	-	-20.01
Losses	-	-	-	-	-	-	-	-	-3.44	-	-3.44
<b>TFC</b>	<b>1.85</b>	-	<b>75.24</b>	<b>14.26</b>	-	-	<b>0.24</b>	<b>6.92</b>	<b>23.25</b>	-	<b>121.76</b>
<b>INDUSTRY</b>	<b>1.77</b>	-	<b>7.07</b>	<b>12.75</b>	-	-	<b>0.01</b>	<b>0.91</b>	<b>12.55</b>	-	<b>35.06</b>
Iron and steel	0.72 e	-	0.11	3.01	-	-	-	-	0.46	-	4.30
Chemical and petrochemical	-	-	0.44	2.85	-	-	-	-	0.51	-	3.80
Non-ferrous metals	-	-	-	-	-	-	-	-	0.07	-	0.07
Non-metallic minerals	0.17	-	3.05	1.34	-	-	-	-	1.00	-	5.57
Transport equipment	-	-	0.02	0.12	-	-	-	-	0.23	-	0.37
Machinery	-	-	0.05	-	-	-	-	-	-	-	0.05
Mining and quarrying	-	-	0.35	0.21	-	-	-	-	0.97	-	1.53
Food and tobacco	-	-	0.22	0.37	-	-	-	0.79	0.20	-	1.57
Paper, pulp and printing	-	-	0.27	0.70	-	-	-	-	0.29	-	1.25
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	0.27	-	-	-	-	-	0.05	-	0.32
Textile and leather	-	-	-	-	-	-	-	-	0.01	-	0.01
Non-specified	0.88	-	2.29	4.16	-	-	0.01	0.12	8.77	-	16.23
<b>TRANSPORT</b>	-	-	<b>52.82</b>	<b>0.02</b>	-	-	-	-	<b>0.10</b>	-	<b>52.94</b>
Domestic aviation	-	-	0.01	-	-	-	-	-	-	-	0.01
Road	-	-	51.26	0.02	-	-	-	-	-	-	51.28
Rail	-	-	0.67	-	-	-	-	-	0.10	-	0.77
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	0.88	-	-	-	-	-	-	-	0.88
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	-	-	<b>10.55</b>	<b>0.98</b>	-	-	<b>0.23</b>	<b>6.01</b>	<b>10.60</b>	-	<b>28.37</b>
Residential	-	-	5.81	0.73	-	-	0.14	6.01	5.07	-	17.76
Comm. and public services	-	-	1.56	0.25	-	-	0.09	-	2.06	-	3.97
Agriculture/forestry	-	-	3.17	-	-	-	-	-	0.97	-	4.14
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	2.49	-	2.49
<b>NON-ENERGY USE</b>	<b>0.09</b>	-	<b>4.80</b>	<b>0.50</b>	-	-	-	-	-	-	<b>5.39</b>
in industry/transf./energy	-	-	4.80	0.50	-	-	-	-	-	-	5.30
of which: chem./petrochem.	-	-	3.66	0.50	-	-	-	-	-	-	4.16
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	0.09	-	-	-	-	-	-	-	-	-	0.09
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>34.59</b>	-	<b>33.93</b>	<b>192.26</b>	<b>10.57</b>	<b>30.70</b>	<b>16.78</b>	<b>1.53</b>	-	-	<b>320.35</b>
Electricity plants	34.59	-	32.60	177.16	10.57	30.70	16.78	1.09	-	-	303.48
CHP plants	-	-	1.33	15.10	-	-	-	0.45	-	-	16.87
<b>Heat generated - PJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Mexico

## Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	6.62	112.77	-	25.89	2.84	2.59	4.19	8.84	-	-	163.74
Imports	6.64	0.71	47.90	41.45	-	-	-	-	0.18	-	96.88
Exports	-0.07	-65.06	-7.98	-0.02	-	-	-	-	-0.16	-	-73.28
Intl. marine bunkers	-	-	-0.79	-	-	-	-	-	-	-	-0.79
Intl. aviation bunkers	-	-	-4.15	-	-	-	-	-	-	-	-4.15
Stock changes	-0.73	0.58	-0.05	-0.06	-	-	-	-	-	-	-0.25
<b>TPES</b>	<b>12.46</b>	<b>49.00</b>	<b>34.92</b>	<b>67.26</b>	<b>2.84</b>	<b>2.59</b>	<b>4.19</b>	<b>8.84</b>	<b>0.03</b>	<b>-</b>	<b>182.14</b>
Electricity and Heat Output											
Elec. generated - TWh	31.69	-	36.85	191.70	10.88	30.08	16.64	1.61	-	-	319.45
Heat generated - PJ	-	-	-	-	-	-	-	-	-	-	-

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	47.3	147.0	195.5	229.3	222.5	189.6	180.5	163.7
Net imports (Mtoe)	6.0	-49.4	-69.9	-72.3	-40.4	-1.6	9.5	23.6
Total primary energy supply (Mtoe)	52.6	95.1	123.7	150.8	178.5	184.9	185.2	182.1
Net oil imports (Mtoe)	5.7	-47.6	-70.4	-76.6	-57.2	-36.9	-31.7	-24.4
Oil supply (Mtoe)	32.5	64.5	80.8	89.3	94.4	90.4	88.2	83.9
Electricity consumption (TWh) <sup>1</sup>	32.8	60.1	99.5	178.1	230.3	269.4	280.6	279.8
GDP (billion 2010 USD)	347.7	537.8	643.2	915.2	1057.8	1223.4	1259.0	1284.7
GDP PPP (billion 2010 USD)	573.0	886.2	1060.0	1508.2	1743.2	2016.1	2074.8	2117.1
Population (millions)	57.09	70.40	87.07	100.90	114.26	121.01	122.27	123.52
Industrial production index (2010=100)	..	54.7	65.2	90.9	100.0	109.6	110.0	109.3
Total self-sufficiency <sup>2</sup>	0.90	1.55	1.58	1.52	1.25	1.03	0.97	0.90
Coal self-sufficiency <sup>2</sup>	0.82	0.73	0.91	0.83	0.60	0.50	0.56	0.53
Oil self-sufficiency <sup>2</sup>	0.85	1.78	1.90	1.92	1.64	1.45	1.41	1.34
Natural gas self-sufficiency <sup>2</sup>	1.00	1.13	0.98	0.94	0.79	0.53	0.46	0.38
TPES/GDP (toe per thousand 2010 USD)	0.15	0.18	0.19	0.16	0.17	0.15	0.15	0.14
TPES/GDP PPP (toe per thousand 2010 USD)	0.09	0.11	0.12	0.10	0.10	0.09	0.09	0.09
TPES/population (toe per capita)	0.92	1.35	1.42	1.49	1.56	1.53	1.51	1.47
Net oil imports/GDP (toe per thousand 2010 USD)	0.02	-0.09	-0.11	-0.08	-0.05	-0.03	-0.03	-0.02
Oil supply/GDP (toe per thousand 2010 USD)	0.09	0.12	0.13	0.10	0.09	0.07	0.07	0.07
Oil supply/population (toe per capita)	0.57	0.92	0.93	0.89	0.83	0.75	0.72	0.68
Share of renewables in TPES	0.15	0.10	0.12	0.11	0.09	0.08	0.08	0.09
Share of renewables in electricity generation	0.44	0.27	0.25	0.20	0.17	0.15	0.15	0.15
TFC/GDP (toe per thousand 2010 USD)	0.11	0.12	0.13	0.10	0.11	0.10	0.10	..
TFC/GDP PPP (toe per thousand 2010 USD)	0.07	0.07	0.08	0.06	0.07	0.06	0.06	..
TFC/population (toe per capita)	0.70	0.94	0.96	0.94	1.03	0.99	1.00	..
Elect. cons./GDP (kWh per 2010 USD)	0.09	0.11	0.15	0.19	0.22	0.22	0.22	0.22
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	0.06	0.07	0.09	0.12	0.13	0.13	0.14	0.13
Elect. cons./population (kWh per capita)	575	854	1143	1765	2016	2226	2295	2265
Industry cons. <sup>3</sup> /industrial production (2010=100)	..	124.5	133.3	96.5	100.0	92.6	91.8	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	..	131.4	171.2	120.1	100.0	79.2	85.3	..

1. Electricity consumption equals domestic supply less losses.

2. Production divided by TPES.

3. Includes non-energy use.

## Netherlands

Figure 1. Energy production

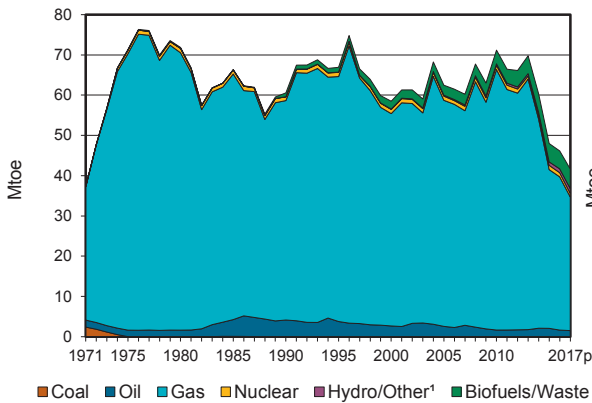


Figure 2. Total primary energy supply<sup>2</sup>

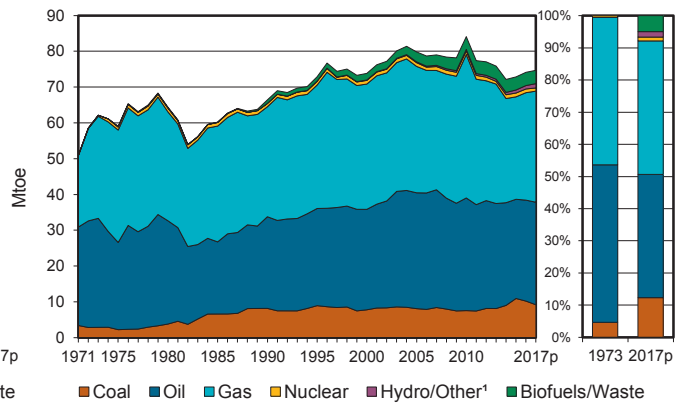


Figure 3. Energy self-sufficiency

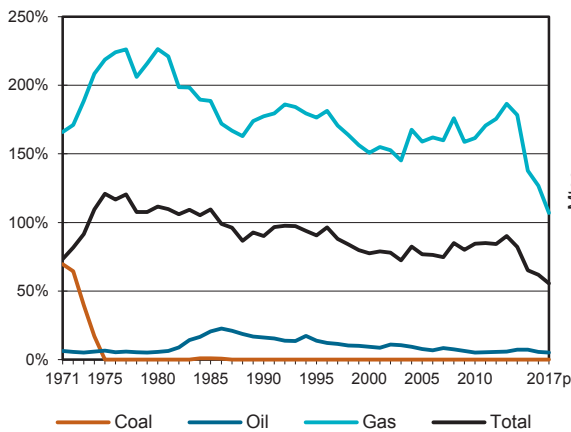


Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>

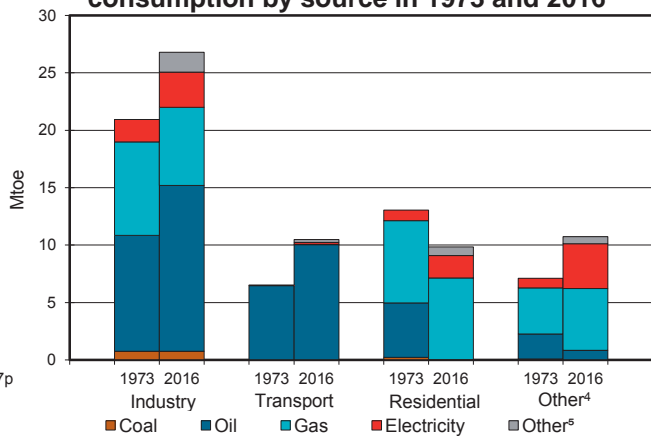


Figure 5. Electricity generation by source

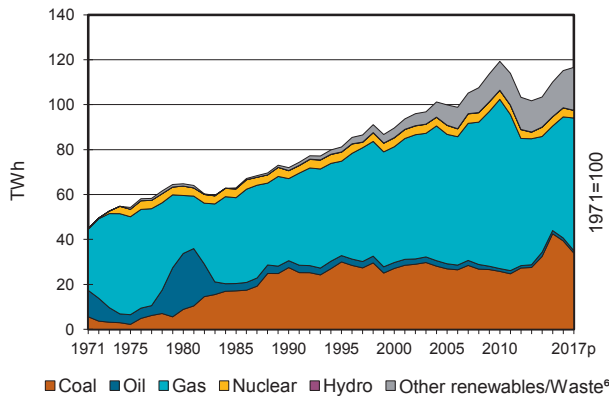
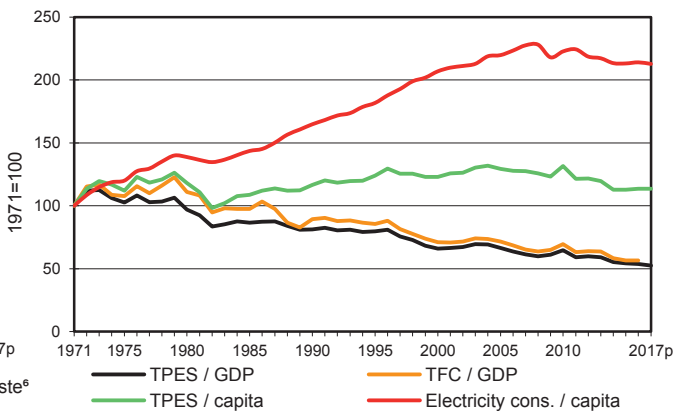


Figure 6. Selected indicators



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.

## Netherlands

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	1.62	-	38.08	1.03	0.01	0.95	4.45	-	-	46.14
Imports	30.48	62.81	93.61	32.89	-	-	-	0.71	2.09	-	222.59
Exports	-21.19	-0.82	-112.95	-42.74	-	-	-	-1.44	-1.66	-	-180.81
Intl. marine bunkers	-	-	-12.21	-0.00	-	-	-	-	-	-	-12.21
Intl. aviation bunkers	-	-	-3.85	-	-	-	-	-	-	-	-3.85
Stock changes	0.91	-0.62	0.61	1.80	-	-	-	-0.02	-	-	2.69
<b>TPES</b>	<b>10.20</b>	<b>62.99</b>	<b>-34.78</b>	<b>30.03</b>	<b>1.03</b>	<b>0.01</b>	<b>0.95</b>	<b>3.69</b>	<b>0.42</b>	-	<b>74.54</b>
Transfers	-	-0.96	1.94	-	-	-	-	-	-	-	0.97
Statistical differences	0.00	-0.10	0.21	-0.38	-	-	-	-0.03	0.03	0.03	-0.24
Electricity plants	-6.74	-	-	-3.72	-1.03	-0.01	-0.85	-0.31	6.31	-	-6.36
CHP plants	-1.11	-	-0.34	-5.22	-	-	-	-2.15	3.59	2.49	-2.74
Heat plants	-	-	-0.27	-0.13	-	-	-	-0.03	-	0.35	-0.08
Blast furnaces	-1.28 e	-	-	-	-	-	-	-	-	-	-1.28
Gas works	-	-	-0.18	0.15	-	-	-	-0.06	-	-	-0.09
Coke/pat. fuel/BKB/PB plants	-0.15	-	-	-	-	-	-	-	-	-	-0.15
Oil refineries	-	-61.96	61.27	-	-	-	-	-	-	-	-0.69
Petrochemical plants	-	2.72	-2.75	-	-	-	-	-	-	-	-0.03
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-	-	-0.35	-0.35
Energy industry own use	-0.19	-	-2.45	-1.37	-	-	-	-	-0.80	-0.29	-5.10
Losses	-	-	-	-	-	-	-	-	-0.47	-0.09	-0.56
<b>TFC</b>	<b>0.74</b>	<b>2.68</b>	<b>22.65</b>	<b>19.35</b>	-	-	<b>0.10</b>	<b>1.11</b>	<b>9.08</b>	<b>2.14</b>	<b>57.86</b>
<b>INDUSTRY</b>	<b>0.74</b>	-	<b>3.21</b>	<b>4.87</b>	-	-	-	<b>0.14</b>	<b>3.07</b>	<b>1.58</b>	<b>13.61</b>
Iron and steel	0.65 e	-	0.00	0.25	-	-	-	-	0.22	0.00	1.13
Chemical and petrochemical	-	-	2.77	1.77	-	-	-	-	1.12	1.39	7.05
Non-ferrous metals	-	-	-	0.07	-	-	-	-	0.19	0.00	0.26
Non-metallic minerals	0.04	-	0.01	0.44	-	-	-	-	0.11	0.00	0.60
Transport equipment	-	-	0.01	0.05	-	-	-	-	0.05	0.00	0.11
Machinery	-	-	0.00	0.26	-	-	-	-	0.26	0.00	0.52
Mining and quarrying	0.00	-	0.01	0.04	-	-	-	-	0.02	0.04	0.12
Food and tobacco	0.03	-	0.01	1.37	-	-	-	0.01	0.59	0.10	2.10
Paper, pulp and printing	-	-	0.00	0.31	-	-	-	0.00	0.21	0.04	0.57
Wood and wood products	-	-	-	0.02	-	-	-	0.03	0.02	0.00	0.07
Construction	0.00	-	0.40	0.11	-	-	-	0.01	0.08	-	0.60
Textile and leather	-	-	-	0.06	-	-	-	-	0.03	0.01	0.10
Non-specified	0.02	-	0.00	0.13	-	-	-	0.08	0.17	0.00	0.39
<b>TRANSPORT</b>	-	-	<b>9.96</b>	<b>0.04</b>	-	-	-	<b>0.24</b>	<b>0.16</b>	-	<b>10.41</b>
Domestic aviation	-	-	0.01	-	-	-	-	-	-	-	0.01
Road	-	-	9.62	0.04	-	-	-	0.24	0.02	-	9.92
Rail	-	-	0.03	-	-	-	-	0.00	0.14	-	0.17
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	0.31	-	-	-	-	-	-	-	0.31
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>0.00</b>	-	<b>0.83</b>	<b>12.49</b>	-	-	<b>0.10</b>	<b>0.73</b>	<b>5.85</b>	<b>0.56</b>	<b>20.56</b>
Residential	0.00	-	0.04	7.10	-	-	0.02	0.45	1.95	0.29	9.86
Comm. and public services	0.00	-	0.16	3.17	-	-	0.01	0.14	3.14	0.18	6.81
Agriculture/forestry	-	-	0.42	2.21	-	-	0.07	0.14	0.76	0.08	3.68
Fishing	-	-	0.18	-	-	-	-	-	-	-	0.18
Non-specified	-	-	0.03	0.00	-	-	-	-	-	-	0.03
<b>NON-ENERGY USE</b>	<b>0.00</b>	<b>2.68</b>	<b>8.65</b>	<b>1.95</b>	-	-	-	-	-	-	<b>13.28</b>
in industry/transf./energy	0.00	2.68	8.55	1.95	-	-	-	-	-	-	13.18
of which: chem./petrochem.	-	2.68	8.33	1.95	-	-	-	-	-	-	12.96
in transport	-	-	0.06	-	-	-	-	-	-	-	0.06
in other	-	-	0.04	-	-	-	-	-	-	-	0.04
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>39.42</b>	-	<b>1.28</b>	<b>53.88</b>	<b>3.96</b>	<b>0.10</b>	<b>9.92</b>	<b>6.61</b>	-	-	<b>115.17</b>
Electricity plants	33.84	-	-	24.45	3.96	0.10	9.92	1.15	-	-	73.43
CHP plants	5.57	-	1.28	29.43	-	-	-	5.46	-	-	41.74
<b>Heat generated - PJ</b>	<b>3.86</b>	-	<b>12.72</b>	<b>79.20</b>	-	-	-	<b>22.92</b>	-	-	<b>118.71</b>
CHP plants	3.86	-	4.26	74.25	-	-	-	21.77	-	-	104.14
Heat plants	-	-	8.46	4.95	-	-	-	1.15	-	-	14.56

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Netherlands

## Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	1.50	-	33.21	0.89	0.01	1.20	4.85	-	-	41.65
Imports	25.17	63.17	92.53	38.55	-	-	-	0.72	1.93	-	222.06
Exports	-15.42	-0.91	-113.06	-39.85	-	-	-	-1.75	-1.63	-	-172.62
Intl. marine bunkers	-	-	-10.96	-	-	-	-	-	-	-	-10.96
Intl. aviation bunkers	-	-	-4.00	-	-	-	-	-	-	-	-4.00
Stock changes	-0.58	-0.67	1.05	-0.86	-	-	-	-0.10	-	-	-1.15
<b>TPES</b>	<b>9.18</b>	<b>63.08</b>	<b>-34.44</b>	<b>31.05</b>	<b>0.89</b>	<b>0.01</b>	<b>1.20</b>	<b>3.72</b>	<b>0.30</b>	<b>-</b>	<b>74.98</b>
Electricity and Heat Output											
Elec. generated - TWh	34.02	-	1.06	58.99	3.40	0.06	12.80	6.26	-	-	116.59
Heat generated - PJ	1.75	-	9.64	75.28	-	-	-	25.69	-	-	112.36

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	56.8	71.8	60.6	58.5	71.2	48.0	46.1	41.7
Net imports (Mtoe)	17.9	3.4	19.2	35.6	31.3	46.5	41.8	49.4
Total primary energy supply (Mtoe)	62.0	64.4	67.2	75.5	84.3	73.6	74.5	75.0
Net oil imports (Mtoe)	41.7	38.2	33.5	43.4	46.0	44.9	42.7	41.7
Oil supply (Mtoe)	30.5	28.9	25.6	28.1	31.5	27.7	28.2	28.6
Electricity consumption (TWh) <sup>1</sup>	48.6	61.8	77.5	103.6	116.4	113.6	114.7	114.7
GDP (billion 2010 USD)	354.1	425.6	530.5	734.7	836.4	870.9	890.1	918.3
GDP PPP (billion 2010 USD)	313.7	376.9	469.9	650.7	740.8	771.4	788.4	812.6
Population (millions)	13.44	14.15	14.95	15.92	16.61	16.93	17.03	17.13
Industrial production index (2010=100)	57.1	63.7	73.4	89.6	100.0	93.5	95.4	97.6
Total self-sufficiency <sup>2</sup>	0.92	1.12	0.90	0.78	0.84	0.65	0.62	0.56
Coal self-sufficiency <sup>2</sup>	0.40	-	-	-	-	-	-	-
Oil self-sufficiency <sup>2</sup>	0.05	0.06	0.16	0.09	0.05	0.07	0.06	0.05
Natural gas self-sufficiency <sup>2</sup>	1.89	2.26	1.77	1.51	1.62	1.38	1.27	1.07
TPES/GDP (toe per thousand 2010 USD)	0.18	0.15	0.13	0.10	0.10	0.08	0.08	0.08
TPES/GDP PPP (toe per thousand 2010 USD)	0.20	0.17	0.14	0.12	0.11	0.10	0.09	0.09
TPES/population (toe per capita)	4.61	4.55	4.50	4.74	5.08	4.35	4.38	4.38
Net oil imports/GDP (toe per thousand 2010 USD)	0.12	0.09	0.06	0.06	0.06	0.05	0.05	0.05
Oil supply/GDP (toe per thousand 2010 USD)	0.09	0.07	0.05	0.04	0.04	0.03	0.03	0.03
Oil supply/population (toe per capita)	2.27	2.04	1.71	1.76	1.90	1.64	1.66	1.67
Share of renewables in TPES	-	0.00	0.01	0.02	0.04	0.05	0.05	0.05
Share of renewables in electricity generation	-	0.02	0.01	0.03	0.09	0.12	0.13	0.15
TFC/GDP (toe per thousand 2010 USD)	0.14	0.13	0.10	0.08	0.08	0.07	0.07	..
TFC/GDP PPP (toe per thousand 2010 USD)	0.15	0.14	0.12	0.09	0.09	0.07	0.07	..
TFC/population (toe per capita)	3.55	3.84	3.65	3.77	4.03	3.34	3.40	..
Elect. cons./GDP (kWh per 2010 USD)	0.14	0.15	0.15	0.14	0.14	0.13	0.13	0.12
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	0.16	0.16	0.17	0.16	0.16	0.15	0.15	0.14
Elect. cons./population (kWh per capita)	3613	4365	5185	6509	7008	6707	6734	6695
Industry cons. <sup>3</sup> /industrial production (2010=100)	124.0	134.0	117.3	103.3	100.0	94.2	94.9	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	110.9	135.4	95.2	82.1	100.0	91.3	95.1	..

1. Electricity consumption equals domestic supply less losses.

2. Production divided by TPES.

3. Includes non-energy use.

## New Zealand

Figure 1. Energy production

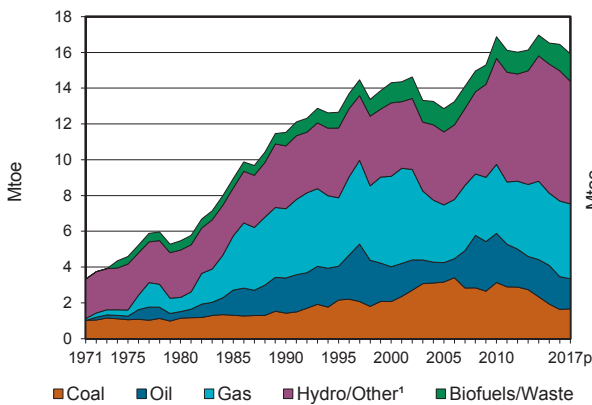


Figure 2. Total primary energy supply<sup>2</sup>

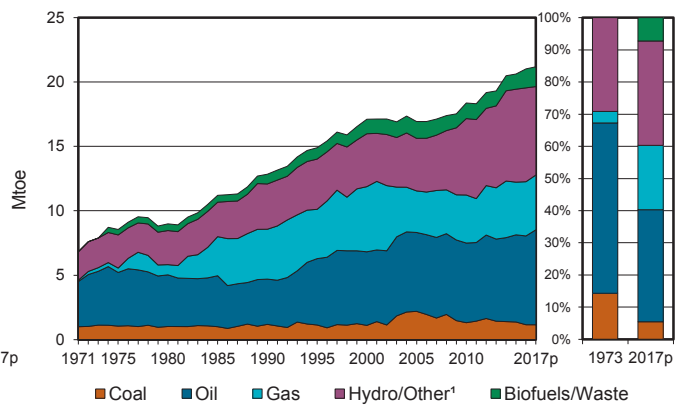


Figure 3. Energy self-sufficiency

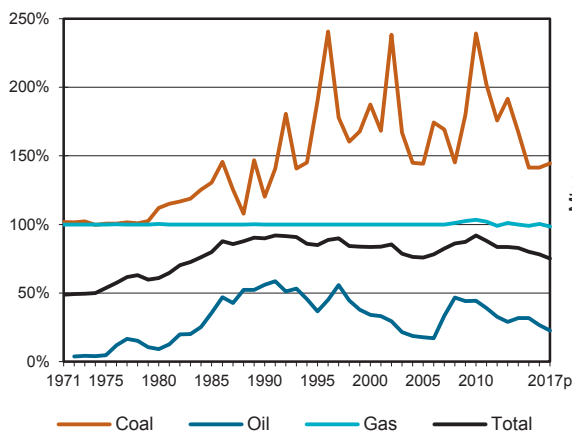


Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>

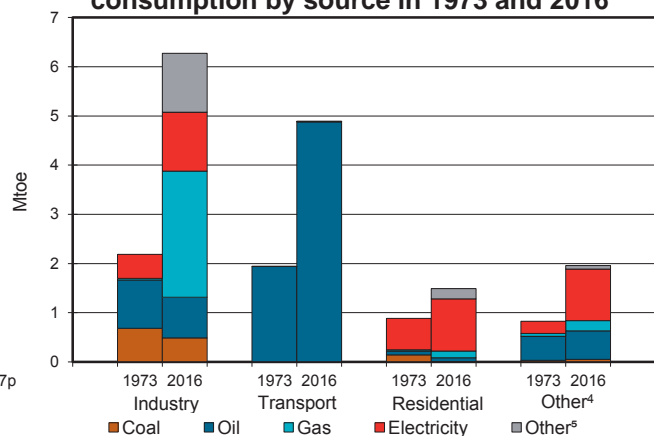


Figure 5. Electricity generation by source

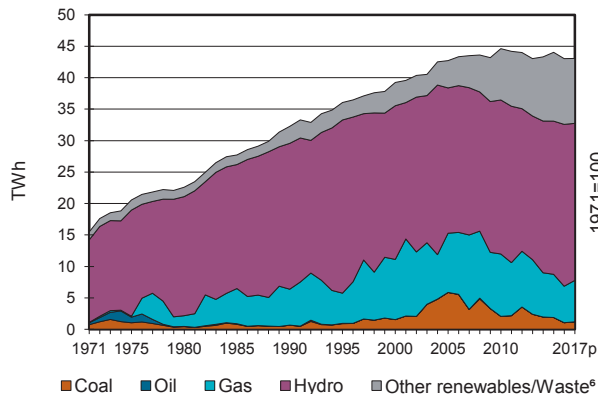
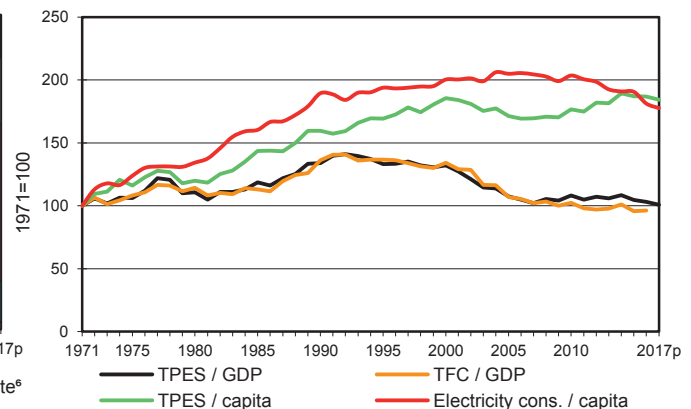


Figure 6. Selected indicators



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.



## New Zealand

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./ Solar/ etc.	Biofuels/ Waste	Electricity	Heat	Total
Production	1.63	1.83	-	4.23	-	2.21	5.07	1.47	-	-	16.45
Imports	0.23	5.57	2.66	-	-	-	-	-	-	-	8.46
Exports	-0.86	-1.57	-0.19	-	-	-	-	-	-	-	-2.63
Intl. marine bunkers	-	-	-0.30	-	-	-	-	-	-	-	-0.30
Intl. aviation bunkers	-	-	-0.87	-	-	-	-	-	-	-	-0.87
Stock changes	0.15	-0.06	-0.18	-0.02	-	-	-	-	-	-	-0.11
<b>TPES</b>	<b>1.15</b>	<b>5.77</b>	<b>1.12</b>	<b>4.21</b>	<b>-</b>	<b>2.21</b>	<b>5.07</b>	<b>1.47</b>	<b>-</b>	<b>-</b>	<b>21.01</b>
Transfers	-	-0.19	0.20	-	-	-	-	-	-	-	0.01
Statistical differences	-0.04	0.10	-0.37	0.02	-	-	-	0.00	-0.02	-	-0.31
Electricity plants	-0.11	-	-0.00	-0.81	-	-2.21	-4.80	-0.02	3.51	-0.03	-4.48
CHP plants	-0.17	-	-	-0.28	-	-	-0.08	-0.16	0.19	0.03	-0.47
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-0.19	-	-	-	-	-	-	-	-	-	-0.19
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat. fuel/BKB/PB plants	0.01	-	-	-	-	-	-	-	-	-	0.01
Oil refineries	-	-5.68	5.76	-	-	-	-	-	-	-	0.07
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-	-	-	-
Energy industry own use	-0.10	-	-0.33	-0.21	-	-	-	-	-0.11	-	-0.75
Losses	-0.01	-	-	-0.01	-	-	-	-	-0.26	-	-0.28
<b>TFC</b>	<b>0.55</b>	<b>-</b>	<b>6.37</b>	<b>2.91</b>	<b>-</b>	<b>-</b>	<b>0.19</b>	<b>1.29</b>	<b>3.31</b>	<b>-</b>	<b>14.62</b>
<b>INDUSTRY</b>	<b>0.49</b>	<b>-</b>	<b>0.45</b>	<b>1.32</b>	<b>-</b>	<b>-</b>	<b>0.11</b>	<b>1.09</b>	<b>1.20</b>	<b>-</b>	<b>4.65</b>
Iron and steel	0.04	-	-	0.05	-	-	-	-	0.12	-	0.21
Chemical and petrochemical	-	-	-	0.74	-	-	-	-	0.03	-	0.78
Non-ferrous metals	0.00	-	-	-	-	-	-	-	0.43	-	0.43
Non-metallic minerals	0.05	-	-	0.03	-	-	-	-	0.02	-	0.11
Transport equipment	-	-	-	-	-	-	-	-	0.00	-	0.00
Machinery	-	-	-	0.01	-	-	-	-	0.01	-	0.02
Mining and quarrying	-	-	0.06	0.00	-	-	-	-	0.02	-	0.09
Food and tobacco	0.36	-	-	0.33	-	-	-	0.00	0.22	-	0.91
Paper, pulp and printing	-	-	-	0.08	-	-	0.11	-	0.11	-	0.30
Wood and wood products	0.01	-	-	0.03	-	-	-	1.09	0.12	-	1.26
Construction	-	-	0.10	0.01	-	-	-	-	0.03	-	0.15
Textile and leather	0.00	-	-	0.01	-	-	-	-	0.01	-	0.02
Non-specified	0.02	-	0.29	0.00	-	-	-	-	0.05	-	0.36
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>4.88</b>	<b>0.00</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.00</b>	<b>0.01</b>	<b>-</b>	<b>4.89</b>
Domestic aviation	-	-	0.28	-	-	-	-	-	-	-	0.28
Road	-	-	4.45	0.00	-	-	-	0.00	-	-	4.46
Rail	-	-	0.05	-	-	-	-	-	-	-	0.05
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	0.10	-	-	-	-	-	-	-	0.10
Non-specified	-	-	-	-	-	-	-	-	0.01	-	0.01
<b>OTHER</b>	<b>0.06</b>	<b>-</b>	<b>0.66</b>	<b>0.35</b>	<b>-</b>	<b>-</b>	<b>0.08</b>	<b>0.20</b>	<b>2.10</b>	<b>-</b>	<b>3.45</b>
Residential	0.01	-	0.08	0.14	-	-	0.02	0.19	1.06	-	1.49
Comm. and public services	0.02	-	0.15	0.17	-	-	0.05	0.01	0.82	-	1.23
Agriculture/forestry	0.03	-	0.36	0.03	-	-	0.01	-	0.22	-	0.66
Fishing	-	-	0.07	-	-	-	-	-	0.00	-	0.07
Non-specified	-	-	-	-	-	-	-	-	0.01	-	0.01
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>0.37</b>	<b>1.25</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1.62</b>
in industry/transf./energy	-	-	0.37	1.25	-	-	-	-	-	-	1.62
of which: chem./petrochem.	-	-	-	1.25	-	-	-	-	-	-	1.25
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>1.06</b>	<b>-</b>	<b>0.00</b>	<b>5.80</b>	<b>-</b>	<b>25.73</b>	<b>9.84</b>	<b>0.61</b>	<b>-</b>	<b>-</b>	<b>43.03</b>
Electricity plants	0.43	-	0.00	4.81	-	25.73	9.71	0.10	-	-	40.78
CHP plants	0.62	-	-	0.99	-	-	0.13	0.51	-	-	2.25
<b>Heat generated - PJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.00</b>	<b>-</b>	<b>-</b>	<b>1.41</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1.42</b>
CHP plants	-	-	-	0.00	-	-	1.41	-	-	-	1.42
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## New Zealand

## Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	1.67	1.68	-	4.19	-	2.15	4.72	1.54	-	-	15.93
Imports	0.23	5.54	2.68	-	-	-	-	-	-	-	8.46
Exports	-0.85	-1.38	-0.12	-	-	-	-	-	-	-	-2.34
Intl. marine bunkers	-	-	-0.29	-	-	-	-	-	-	-	-0.29
Intl. aviation bunkers	-	-	-0.94	-	-	-	-	-	-	-	-0.94
Stock changes	0.10	-0.00	0.19	0.07	-	-	-	-	-	-	0.36
<b>TPES</b>	<b>1.15</b>	<b>5.84</b>	<b>1.53</b>	<b>4.25</b>	<b>-</b>	<b>2.15</b>	<b>4.72</b>	<b>1.54</b>	<b>-</b>	<b>-</b>	<b>21.18</b>
Electricity and Heat Output											
Elec. generated - TWh	1.19	-	0.00	6.58	-	24.97	9.70	0.62	-	-	43.07
Heat generated - PJ	-	-	-	0.00	-	-	1.43	-	-	-	1.43

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	3.9	5.5	11.5	14.3	16.9	16.5	16.5	15.9
Net imports (Mtoe)	4.5	4.2	2.1	3.4	2.9	4.9	5.8	6.1
Total primary energy supply (Mtoe)	7.9	9.0	12.8	17.1	18.4	20.6	21.0	21.2
Net oil imports (Mtoe)	4.6	4.3	2.4	4.5	4.5	5.6	6.5	6.7
Oil supply (Mtoe)	4.2	4.0	3.5	5.7	6.2	6.8	6.9	7.4
Electricity consumption (TWh) <sup>1</sup>	16.4	19.8	29.9	36.2	41.5	41.2	40.0	40.0
GDP (billion 2010 USD)	66.8	70.0	82.7	111.8	146.6	170.2	176.1	181.5
GDP PPP (billion 2010 USD)	62.0	65.0	76.7	103.7	136.0	158.0	163.5	168.4
Population (millions)	2.97	3.14	3.37	3.87	4.36	4.62	4.72	4.82
Industrial production index (2010=100)	..	64.8	74.6	90.4	100.0	102.6	104.6	106.5
Total self-sufficiency <sup>2</sup>	0.50	0.61	0.90	0.84	0.92	0.80	0.78	0.75
Coal self-sufficiency <sup>2</sup>	1.02 <sup>e</sup>	1.12	1.20	1.87	2.39	1.41	1.41	1.44
Oil self-sufficiency <sup>2</sup>	0.04	0.09	0.56	0.34	0.44	0.32	0.27	0.23
Natural gas self-sufficiency <sup>2</sup>	1.00	1.00	1.00	1.00	1.03	0.99	1.00	0.98
TPES/GDP (toe per thousand 2010 USD)	0.12	0.13	0.16	0.15	0.13	0.12	0.12	0.12
TPES/GDP PPP (toe per thousand 2010 USD)	0.13	0.14	0.17	0.16	0.14	0.13	0.13	0.13
TPES/population (toe per capita)	2.65	2.86	3.81	4.43	4.21	4.46	4.45	4.39
Net oil imports/GDP (toe per thousand 2010 USD)	0.07	0.06	0.03	0.04	0.03	0.03	0.04	0.04
Oil supply/GDP (toe per thousand 2010 USD)	0.06	0.06	0.04	0.05	0.04	0.04	0.04	0.04
Oil supply/population (toe per capita)	1.40	1.27	1.04	1.48	1.42	1.46	1.46	1.53
Share of renewables in TPES	0.29	0.35	0.33	0.30	0.39	0.41	0.42	0.40
Share of renewables in electricity generation	0.84	0.90	0.80	0.72	0.73	0.80	0.84	0.82
TFC/GDP (toe per thousand 2010 USD)	0.09	0.10	0.12	0.12	0.09	0.08	0.08	..
TFC/GDP PPP (toe per thousand 2010 USD)	0.09	0.11	0.13	0.13	0.10	0.09	0.09	..
TFC/population (toe per capita)	1.96	2.20	2.88	3.35	2.96	3.04	3.10	..
Elect. cons./GDP (kWh per 2010 USD)	0.25	0.28	0.36	0.32	0.28	0.24	0.23	0.22
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	0.26	0.30	0.39	0.35	0.31	0.26	0.25	0.24
Elect. cons./population (kWh per capita)	5508	6281	8857	9367	9517	8911	8474	8305
Industry cons. <sup>3</sup> /industrial production (2010=100)	..	80.4	112.2	129.6	100.0	111.1	119.0	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	..	166.7	105.3	92.9	100.0	96.3	103.0	..

1. Electricity consumption equals domestic supply less losses.

2. Production divided by TPES.

3. Includes non-energy use.

## Norway

Figure 1. Energy production

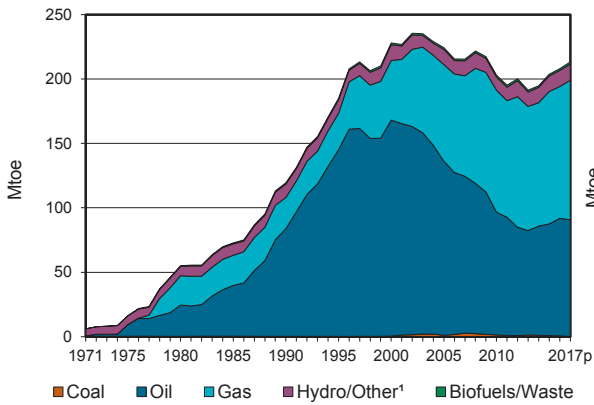


Figure 2. Total primary energy supply<sup>2</sup>

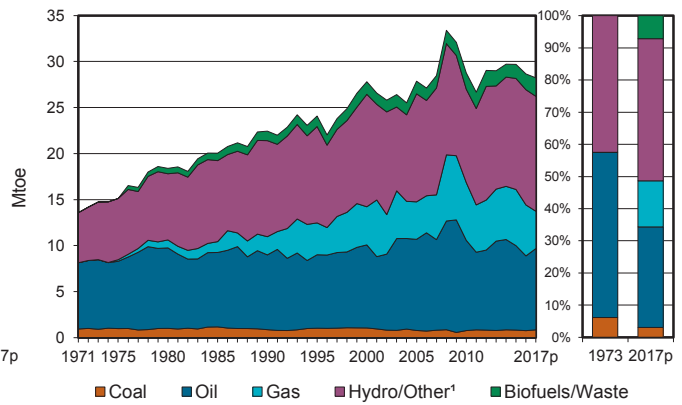


Figure 3. Energy self-sufficiency

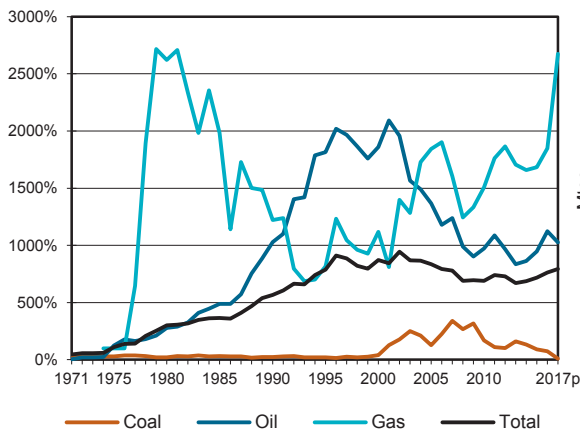


Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>

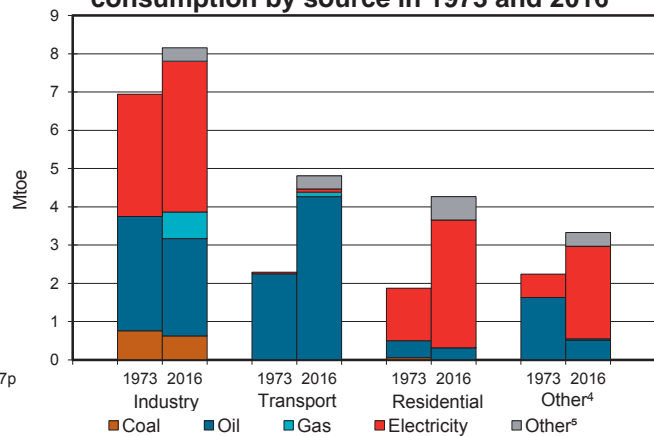


Figure 5. Electricity generation by source

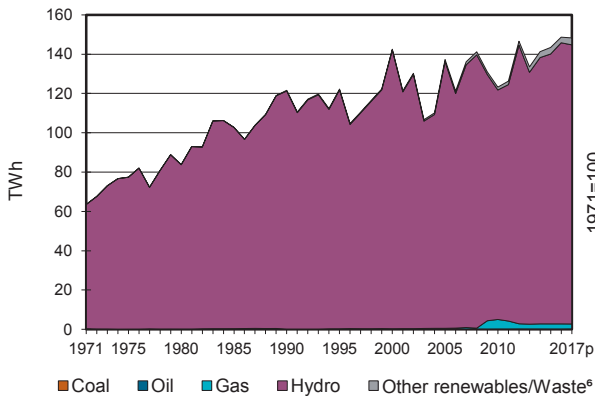
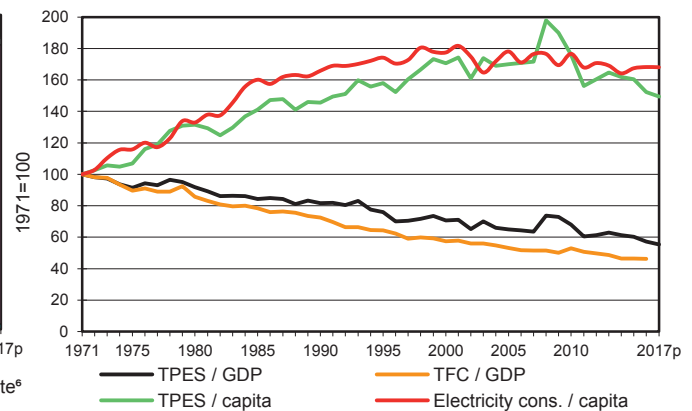


Figure 6. Selected indicators



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.

## Norway

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	0.55	91.28	-	102.34	-	12.30	0.18	1.31	-	0.04	208.00
Imports	0.73	0.50	6.21	0.00	-	-	-	0.45	0.49	-	8.39
Exports	-0.61	-69.80	-19.11	-96.77	-	-	-	-0.05	-1.90	-	-188.24
Intl. marine bunkers	-	-	-0.05	-0.05	-	-	-	-	-	-	-0.10
Intl. aviation bunkers	-	-	-0.52	-	-	-	-	-	-	-	-0.52
Stock changes	0.09	-0.74	0.35	0.01	-	-	-	-	-	-	-0.29
<b>TPES</b>	<b>0.76</b>	<b>21.24</b>	<b>-13.12</b>	<b>5.54</b>	<b>-</b>	<b>12.30</b>	<b>0.18</b>	<b>1.71</b>	<b>-1.41</b>	<b>0.04</b>	<b>27.24</b>
Transfers	-	-7.94	8.52	-	-	-	-	-	-	-	0.58
Statistical differences	0.02	0.05	-0.54	0.21	-	-	-	0.00	-0.03	-0.01	-0.28
Electricity plants	-0.02	-	-0.00	-0.00	-	-12.30	-0.18	-0.00	12.52	-	0.01
CHP plants	-0.02	-	-0.00	-0.33	-	-	-	-0.21	0.26	0.15	-0.15
Heat plants	-0.00	-	-0.02	-0.01	-	-	-	-0.30	-0.09	0.34	-0.08
Blast furnaces	-0.12	-	-	-	-	-	-	-	-	-	-0.12
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat. fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-13.39	13.31	-	-	-	-	-	-	-	-0.07
Petrochemical plants	-	0.04	-0.04	-	-	-	-	-	-	-	-0.01
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-	-	-	-
Energy industry own use	-	-	-0.47	-4.55	-	-	-	-	-0.69	-	-5.71
Losses	-0.00	-	-	-	-	-	-	-	-0.79	-0.06	-0.85
<b>TFC</b>	<b>0.62</b>	<b>-</b>	<b>7.64</b>	<b>0.86</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1.20</b>	<b>9.77</b>	<b>0.47</b>	<b>20.56</b>
<b>INDUSTRY</b>	<b>0.57</b>	<b>-</b>	<b>0.80</b>	<b>0.25</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.32</b>	<b>3.93</b>	<b>0.04</b>	<b>5.90</b>
Iron and steel	0.25	-	0.01	0.00	-	-	-	0.00	0.44	0.00	0.71
Chemical and petrochemical	0.24	-	0.32	0.10	-	-	-	0.07	0.67	0.00	1.41
Non-ferrous metals	-	-	0.02	0.03	-	-	-	-	1.79	0.00	1.84
Non-metallic minerals	0.07	-	0.05	0.05	-	-	-	0.07	0.07	0.00	0.32
Transport equipment	-	-	0.00	0.00	-	-	-	-	0.04	0.00	0.04
Machinery	-	-	0.01	0.00	-	-	-	0.00	0.10	0.00	0.12
Mining and quarrying	-	-	0.06	0.00	-	-	-	0.00	0.04	0.00	0.10
Food and tobacco	-	-	0.07	0.04	-	-	-	0.00	0.25	0.01	0.37
Paper, pulp and printing	-	-	0.01	0.01	-	-	-	0.08	0.33	0.00	0.43
Wood and wood products	-	-	0.01	0.00	-	-	-	0.08	0.06	0.01	0.16
Construction	-	-	0.23	0.00	-	-	-	-	0.12	0.01	0.36
Textile and leather	-	-	0.00	0.00	-	-	-	0.00	0.01	0.00	0.01
Non-specified	-	-	0.01	0.00	-	-	-	0.00	0.03	0.00	0.05
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>4.26</b>	<b>0.12</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.35</b>	<b>0.08</b>	<b>-</b>	<b>4.81</b>
Domestic aviation	-	-	0.39	-	-	-	-	-	-	-	0.39
Road	-	-	3.04	0.02	-	-	-	0.35	0.03	-	3.43
Rail	-	-	0.01	-	-	-	-	-	0.05	-	0.07
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	0.63	0.10	-	-	-	-	-	-	0.72
Non-specified	-	-	0.19	-	-	-	-	-	-	-	0.19
<b>OTHER</b>	<b>-</b>	<b>-</b>	<b>0.79</b>	<b>0.04</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.54</b>	<b>5.75</b>	<b>0.43</b>	<b>7.56</b>
Residential	-	-	0.32	0.00	-	-	-	0.50	3.33	0.11	4.27
Comm. and public services	-	-	0.24	0.03	-	-	-	0.04	2.24	0.32	2.87
Agriculture/forestry	-	-	0.11	0.01	-	-	-	-	0.16	0.00	0.29
Fishing	-	-	0.05	-	-	-	-	-	0.02	-	0.07
Non-specified	-	-	0.07	-	-	-	-	-	-	-	0.07
<b>NON-ENERGY USE</b>	<b>0.05</b>	<b>-</b>	<b>1.79</b>	<b>0.45</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2.29</b>
in industry/transf./energy	0.05	-	1.75	0.45	-	-	-	-	-	-	2.25
of which: chem./petrochem.	-	-	0.97	0.45	-	-	-	-	-	-	1.42
in transport	-	-	0.00	-	-	-	-	-	-	-	0.00
in other	-	-	0.04	-	-	-	-	-	-	-	0.04
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>0.15</b>	<b>-</b>	<b>0.03</b>	<b>2.60</b>	<b>-</b>	<b>143.01</b>	<b>2.12</b>	<b>0.44</b>	<b>-</b>	<b>0.30</b>	<b>148.63</b>
Electricity plants	0.10	-	0.03	0.00	-	143.01	2.12	0.04	-	0.30	145.60
CHP plants	0.04	-	-	2.60	-	-	-	0.39	-	-	3.03
<b>Heat generated - PJ</b>	<b>0.24</b>	<b>-</b>	<b>0.57</b>	<b>0.50</b>	<b>-</b>	<b>-</b>	<b>0.79</b>	<b>14.64</b>	<b>2.82</b>	<b>2.63</b>	<b>22.20</b>
CHP plants	0.23	-	0.02	0.05	-	-	0.02	6.03	0.12	0.01	6.48
Heat plants	0.01	-	0.54	0.45	-	-	0.78	8.61	2.71	2.63	15.72

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Norway

## Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./ Solar/ etc.	Biofuels/ Waste	Electricity	Heat	Total
Production	0.09	90.68	-	108.24	-	12.21	0.25	1.75	-	0.03	213.24
Imports	0.80	1.81	6.10	0.03	-	-	-	0.35	0.53	-	9.62
Exports	-0.05	-67.95	-21.33	-104.17	-	-	-	-0.09	-1.83	-	-195.43
Intl. marine bunkers	-	-	-0.05	-	-	-	-	-	-	-	-0.05
Intl. aviation bunkers	-	-	-0.51	-	-	-	-	-	-	-	-0.51
Stock changes	0.01	-0.09	0.17	-0.05	-	-	-	-	-	-	0.04
<b>TPES</b>	<b>0.85</b>	<b>24.46</b>	<b>-15.63</b>	<b>4.05</b>	<b>-</b>	<b>12.21</b>	<b>0.25</b>	<b>2.01</b>	<b>-1.30</b>	<b>0.03</b>	<b>26.92</b>
Electricity and Heat Output											
Elec. generated - TWh	0.19	-	0.03	2.52	-	141.99	2.85	0.39	-	0.28	148.25
Heat generated - PJ	0.27	-	0.45	0.48	-	-	0.56	14.54	2.69	2.13	21.10

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	8.1	55.1	119.5	228.0	203.0	203.7	208.0	213.2
Net imports (Mtoe)	6.7	-35.9	-95.7	-200.3	-172.8	-174.3	-179.9	-185.8
Total primary energy supply (Mtoe)	14.3	18.4	21.1	26.2	29.4	28.4	27.2	26.9
Net oil imports (Mtoe)	6.6	-14.7	-72.8	-157.1	-84.9	-76.5	-82.2	-81.4
Oil supply (Mtoe)	7.6	8.7	8.1	9.0	9.8	9.2	8.1	8.8
Electricity consumption (TWh) <sup>1</sup>	61.6	76.5	99.1	112.3	121.6	122.4	124.1	124.9
GDP (billion 2010 USD)	145.5	198.3	255.6	367.0	429.1	467.7	472.8	481.8
GDP PPP (billion 2010 USD)	96.3	131.2	169.2	242.8	284.0	309.5	312.8	318.5
Population (millions)	3.96	4.09	4.24	4.49	4.89	5.19	5.24	5.28
Industrial production index (2010=100)	39.0	55.8	84.2	118.6	100.0	97.5	96.4	96.1
Total self-sufficiency <sup>2</sup>	0.56	3.00	5.67	8.72	6.90	7.17	7.64	7.92
Coal self-sufficiency <sup>2</sup>	0.32	0.20	0.24	0.40	1.70	0.90	0.72	0.10
Oil self-sufficiency <sup>2</sup>	0.20	2.78	10.29	18.59	9.72	9.46	11.24	10.26
Natural gas self-sufficiency <sup>2</sup>	-	26.21	12.22	11.17	15.08	16.84	18.49	26.76
TPES/GDP (toe per thousand 2010 USD)	0.10	0.09	0.08	0.07	0.07	0.06	0.06	0.06
TPES/GDP PPP (toe per thousand 2010 USD)	0.15	0.14	0.12	0.11	0.10	0.09	0.09	0.08
TPES/population (toe per capita)	3.61	4.49	4.97	5.83	6.02	5.48	5.20	5.10
Net oil imports/GDP (toe per thousand 2010 USD)	0.05	-0.07	-0.28	-0.43	-0.20	-0.16	-0.17	-0.17
Oil supply/GDP (toe per thousand 2010 USD)	0.05	0.04	0.03	0.02	0.02	0.02	0.02	0.02
Oil supply/population (toe per capita)	1.91	2.14	1.92	2.01	2.01	1.77	1.55	1.67
Share of renewables in TPES	0.44	0.42	0.54	0.52	0.40	0.47	0.51	0.53
Share of renewables in electricity generation	1.00	1.00	1.00 e	1.00 e	0.96	0.98	0.98	0.98
TFC/GDP (toe per thousand 2010 USD)	0.09	0.08	0.07	0.05	0.05	0.04	0.04	..
TFC/GDP PPP (toe per thousand 2010 USD)	0.14	0.12	0.10	0.08	0.08	0.07	0.07	..
TFC/population (toe per capita)	3.37	3.91	4.11	4.41	4.36	3.93	3.93	..
Elect. cons./GDP (kWh per 2010 USD)	0.42	0.39	0.39	0.31	0.28	0.26	0.26	0.26
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	0.64	0.58	0.59	0.46	0.43	0.40	0.40	0.39
Elect. cons./population (kWh per capita)	15544	18724	23357	24994	24877	23585	23692	23672
Industry cons. <sup>3</sup> /industrial production (2010=100)	213.6	172.0	112.1	91.3	100.0	102.4	101.5	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	287.2	238.1	123.2	76.8	100.0	103.0	98.9	..

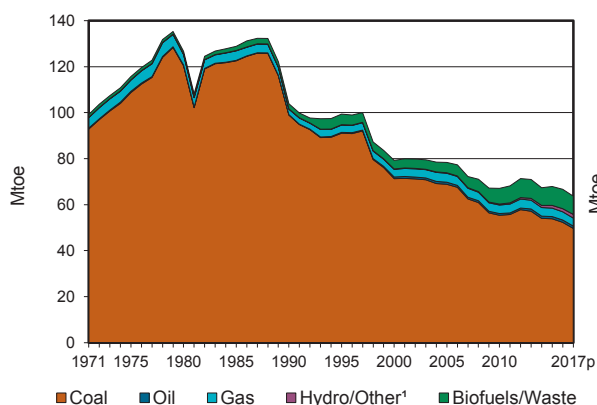
1. Electricity consumption equals domestic supply less losses.

2. Production divided by TPES.

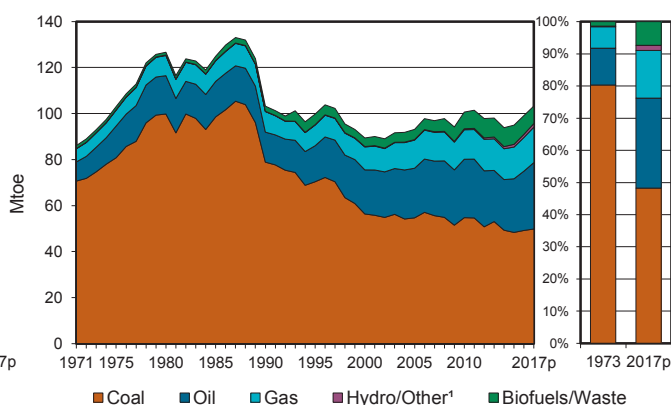
3. Includes non-energy use.

## Poland

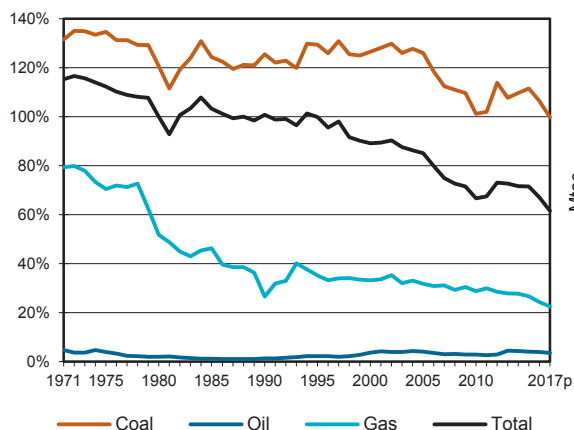
**Figure 1. Energy production**



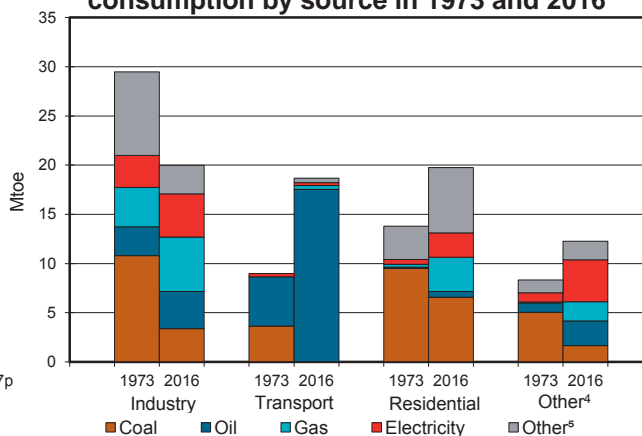
**Figure 2. Total primary energy supply<sup>2</sup>**



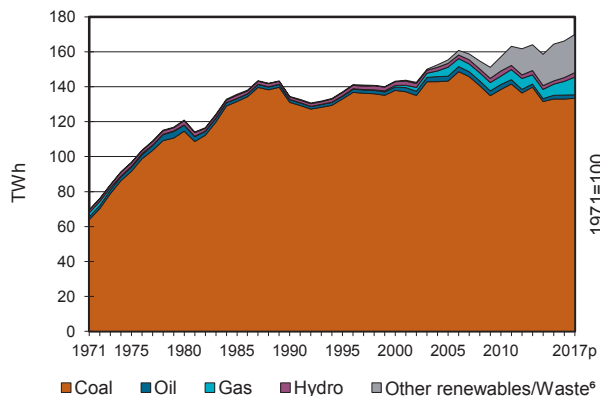
**Figure 3. Energy self-sufficiency**



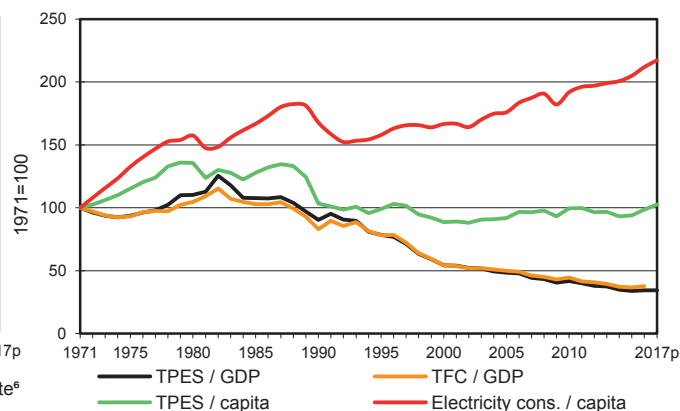
**Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.

## Poland

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	52.31	1.03	-	3.55	-	0.18	1.17	8.42	-	0.01	66.67
Imports	5.04	25.13	7.52	12.19	-	-	-	0.83	1.21	-	51.91
Exports	-10.84	-0.23	-7.08	-0.72	-	-	-	-1.08	-1.03	-	-20.97
Intl. marine bunkers	-	-	-0.18	-	-	-	-	-	-	-	-0.18
Intl. aviation bunkers	-	-	-0.68	-	-	-	-	-	-	-	-0.68
Stock changes	2.68	0.43	-0.15	-0.39	-	-	-	-0.01	-	-	2.57
<b>TPES</b>	<b>49.19</b>	<b>26.36</b>	<b>-0.57</b>	<b>14.63</b>	<b>-</b>	<b>0.18</b>	<b>1.17</b>	<b>8.16</b>	<b>0.17</b>	<b>0.01</b>	<b>99.31</b>
Transfers	-	0.21	-0.17	-	-	-	-	-	-	-	0.04
Statistical differences	0.36	0.02	0.01	0.05	-	-	-	-	-	-	0.44
Electricity plants	-0.42	-	-0.00	-	-	-0.18	-1.09	-0.46	1.64	-0.01	-0.53
CHP plants	-32.11	-	-0.43	-1.48	-	-	-	-1.53	12.65	4.51	-18.40
Heat plants	-2.69	-	-0.02	-0.20	-	-	-	-0.07	-	2.47	-0.51
Blast furnaces	-0.94	-	-	-	-	-	-	-	-	-	-0.94
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat. fuel/BKB/PB plants	-0.56	-	-	-	-	-	-	-	-	-	-0.56
Oil refineries	-	-27.90	27.42	-	-	-	-	-	-	-	-0.48
Petrochemical plants	-	0.71	-0.71	-	-	-	-	-	-	-	-0.00
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-0.13	0.60	-	-0.60	-	-	-	-	-	-	-0.13
Energy industry own use	-1.08	-	-1.09	-1.04	-	-	-	-0.00	-2.22	-0.65	-6.08
Losses	-	-	-	-0.03	-	-	-	-	-0.82	-0.66	-1.51
<b>TFC</b>	<b>11.62</b>	<b>-</b>	<b>24.43</b>	<b>11.33</b>	<b>-</b>	<b>-</b>	<b>0.07</b>	<b>6.10</b>	<b>11.42</b>	<b>5.67</b>	<b>70.66</b>
<b>INDUSTRY</b>	<b>3.32</b>	<b>-</b>	<b>0.65</b>	<b>3.41</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2.19</b>	<b>4.40</b>	<b>0.68</b>	<b>14.65</b>
Iron and steel	0.59	-	0.00	0.46	-	-	-	0.00	0.53	0.08	1.67
Chemical and petrochemical	1.15	-	0.24	0.29	-	-	-	0.02	0.71	0.10	2.52
Non-ferrous metals	0.04	-	0.01	0.17	-	-	-	0.00	0.18	0.03	0.44
Non-metallic minerals	0.59	-	0.07	1.05	-	-	-	0.67	0.44	0.03	2.84
Transport equipment	0.01	-	0.02	0.10	-	-	-	0.00	0.23	0.05	0.41
Machinery	0.03	-	0.03	0.21	-	-	-	0.00	0.39	0.06	0.74
Mining and quarrying	0.01	-	0.07	0.03	-	-	-	0.00	0.23	0.07	0.41
Food and tobacco	0.55	-	0.08	0.66	-	-	-	0.04	0.56	0.06	1.96
Paper, pulp and printing	0.23	-	0.04	0.19	-	-	-	0.73	0.37	0.07	1.64
Wood and wood products	0.04	-	0.01	0.04	-	-	-	0.59	0.21	0.08	0.97
Construction	0.02	-	0.04	0.03	-	-	-	0.00	0.07	0.01	0.17
Textile and leather	0.01	-	0.01	0.04	-	-	-	0.00	0.05	0.02	0.12
Non-specified	0.05	-	0.02	0.13	-	-	-	0.12	0.41	0.03	0.76
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>17.42</b>	<b>0.38</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.46</b>	<b>0.28</b>	<b>-</b>	<b>18.54</b>
Domestic aviation	-	-	0.02	-	-	-	-	-	-	-	0.02
Road	-	-	17.30	0.01	-	-	-	0.46	0.00	-	17.78
Rail	-	-	0.08	-	-	-	-	-	0.25	-	0.34
Pipeline transport	-	-	0.00	0.37	-	-	-	-	0.03	-	0.40
Domestic navigation	-	-	0.00	-	-	-	-	-	-	-	0.00
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>8.22</b>	<b>-</b>	<b>2.84</b>	<b>5.43</b>	<b>-</b>	<b>-</b>	<b>0.07</b>	<b>3.46</b>	<b>6.74</b>	<b>4.98</b>	<b>31.74</b>
Residential	6.59	-	0.59	3.47	-	-	0.06	2.66	2.49	3.89	19.74
Comm. and public services	0.66	-	0.42	1.93	-	-	0.01	0.28	4.11	1.07	8.48
Agriculture/forestry	0.98	-	1.83	0.03	-	-	-	0.52	0.14	0.02	3.52
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>NON-ENERGY USE</b>	<b>0.09</b>	<b>-</b>	<b>3.53</b>	<b>2.11</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>5.73</b>
in industry/transf./energy	0.06	-	3.15	2.11	-	-	-	-	-	-	5.32
of which: chem./petrochem.	-	-	2.00	2.11	-	-	-	-	-	-	4.11
in transport	-	-	0.13	-	-	-	-	-	-	-	0.13
in other	0.03	-	0.25	-	-	-	-	-	-	-	0.28
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>132.93</b>	<b>-</b>	<b>2.30</b>	<b>7.83</b>	<b>-</b>	<b>2.14</b>	<b>12.72</b>	<b>8.17</b>	<b>-</b>	<b>0.06</b>	<b>166.15</b>
Electricity plants	2.11	-	0.01	-	-	2.14	12.71	2.05	-	-	19.02
CHP plants	130.82	-	2.30	7.83	-	-	0.01	6.12	-	0.06	147.13
<b>Heat generated - PJ</b>	<b>252.13</b>	<b>-</b>	<b>3.63</b>	<b>21.09</b>	<b>-</b>	<b>-</b>	<b>0.05</b>	<b>15.40</b>	<b>-</b>	<b>0.50</b>	<b>292.80</b>
CHP plants	158.94	-	2.89	14.06	-	-	0.05	13.08	-	0.50	189.52
Heat plants	93.19	-	0.74	7.03	-	-	-	2.32	-	0.00	103.28

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.



## Poland

## Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	49.69	1.01	-	3.47	-	0.22	1.37	7.92	-	0.01	63.70
Imports	8.08	25.66	9.17	13.03	-	-	-	0.75	1.14	-	57.82
Exports	-9.29	-0.22	-5.04	-1.02	-	-	-	-1.09	-0.94	-	-17.60
Intl. marine bunkers	-	-	-0.24	-	-	-	-	-	-	-	-0.24
Intl. aviation bunkers	-	-	-0.85	-	-	-	-	-	-	-	-0.85
Stock changes	1.36	-0.28	-0.33	-0.08	-	-	-	-0.00	-	-	0.66
<b>TPES</b>	<b>49.83</b>	<b>26.17</b>	<b>2.71</b>	<b>15.41</b>	<b>-</b>	<b>0.22</b>	<b>1.37</b>	<b>7.57</b>	<b>0.20</b>	<b>0.01</b>	<b>103.48</b>
Electricity and Heat Output											
Elec. generated - TWh	133.41	-	1.96	10.10	-	2.56	15.08	6.70	-	0.06	169.87
Heat generated - PJ	252.49	-	4.01	24.74	-	-	0.05	12.99	-	0.47	294.76

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	107.4	126.6	103.9	79.2	67.1	67.9	66.7	63.7
Net imports (Mtoe)	-13.2	1.5	0.9	9.6	32.1	28.6	30.9	40.2
Total primary energy supply (Mtoe)	92.9	126.6	103.1	88.8	100.5	94.9	99.3	103.5
Net oil imports (Mtoe)	11.8	17.7	14.3	19.8	25.7	24.1	25.4	29.6
Oil supply (Mtoe)	10.7	16.7	13.0	19.2	25.4	23.3	25.8	28.9
Electricity consumption (TWh) <sup>1</sup>	75.6	109.4	124.7	124.6	144.5	154.1	159.1	163.1
GDP (billion 2010 USD)	197.2	228.2	226.7	326.2	479.3	556.2	572.7	599.4
GDP PPP (billion 2010 USD)	330.1	382.0	379.4	545.5	802.3	930.1	957.7	1002.2
Population (millions)	33.37	35.58	38.03	38.26	38.52	38.46	38.43	38.42
Industrial production index (2010=100)	..	..	34.9	56.9	100.0	119.9	123.3	131.5
Total self-sufficiency <sup>2</sup>	1.16	1.00	1.01	0.89	0.67	0.72	0.67	0.62
Coal self-sufficiency <sup>2</sup>	1.35	1.21	1.25	1.27	1.01	1.11	1.06	1.00
Oil self-sufficiency <sup>2</sup>	0.04	0.02	0.01	0.04	0.03	0.04	0.04	0.04
Natural gas self-sufficiency <sup>2</sup>	0.78	0.52	0.27	0.33	0.29	0.27	0.24	0.23
TPES/GDP (toe per thousand 2010 USD)	0.47	0.55	0.45	0.27	0.21	0.17	0.17	0.17
TPES/GDP PPP (toe per thousand 2010 USD)	0.28	0.33	0.27	0.16	0.13	0.10	0.10	0.10
TPES/population (toe per capita)	2.78	3.56	2.71	2.32	2.61	2.47	2.58	2.69
Net oil imports/GDP (toe per thousand 2010 USD)	0.06	0.08	0.06	0.06	0.05	0.04	0.04	0.05
Oil supply/GDP (toe per thousand 2010 USD)	0.05	0.07	0.06	0.06	0.05	0.04	0.05	0.05
Oil supply/population (toe per capita)	0.32	0.47	0.34	0.50	0.66	0.61	0.67	0.75
Share of renewables in TPES	0.01	0.01	0.02	0.04	0.07	0.10	0.09	0.08
Share of renewables in electricity generation	0.02	0.02	0.01	0.02	0.07	0.14	0.14	0.14
TFC/GDP (toe per thousand 2010 USD)	0.31	0.34	0.27	0.18	0.15	0.12	0.12	..
TFC/GDP PPP (toe per thousand 2010 USD)	0.18	0.20	0.16	0.11	0.09	0.07	0.07	..
TFC/population (toe per capita)	1.82	2.19	1.62	1.51	1.82	1.73	1.84	..
Elect. cons./GDP (kWh per 2010 USD)	0.38	0.48	0.55	0.38	0.30	0.28	0.28	0.27
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	0.23	0.29	0.33	0.23	0.18	0.17	0.17	0.16
Elect. cons./population (kWh per capita)	2264	3076	3279	3256	3750	4007	4141	4246
Industry cons. <sup>3</sup> /industrial production (2010=100)	..	..	426.3	202.5	100.0	89.1	88.7	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	..	..	206.0	163.5	100.0	77.4	74.3	..

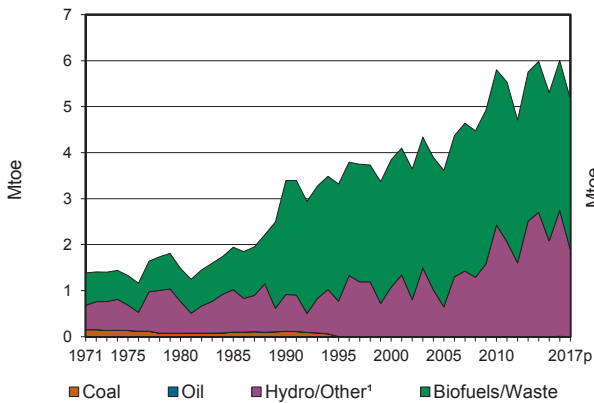
1. Electricity consumption equals domestic supply less losses.

2. Production divided by TPES.

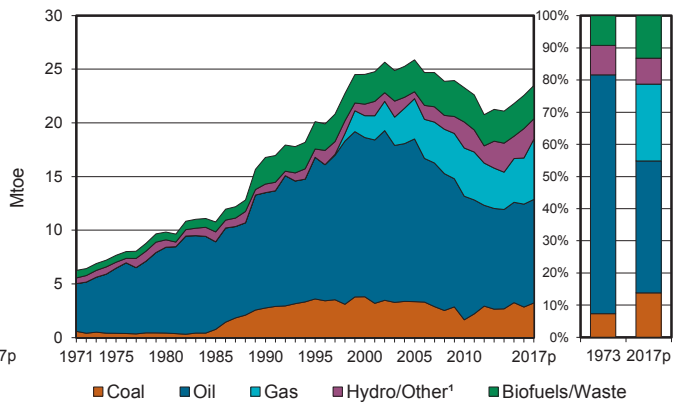
3. Includes non-energy use.

## Portugal

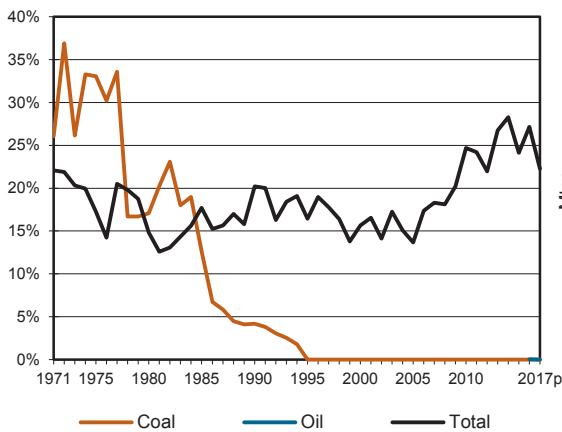
**Figure 1. Energy production**



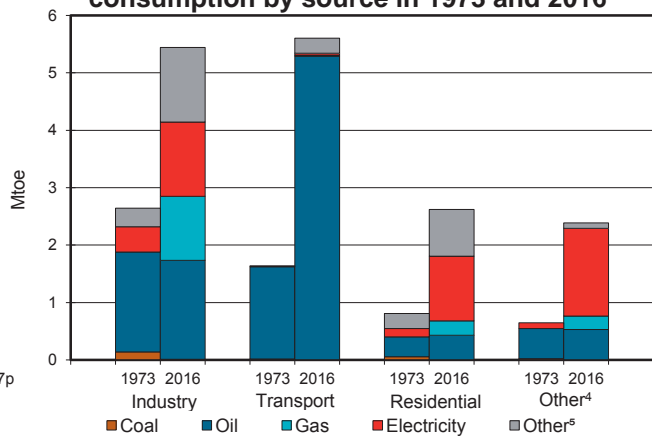
**Figure 2. Total primary energy supply<sup>2</sup>**



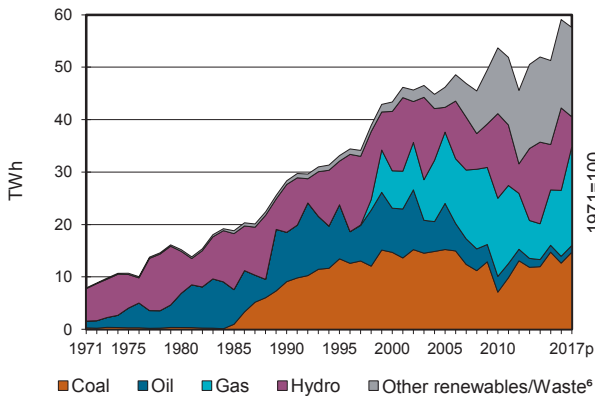
**Figure 3. Energy self-sufficiency**



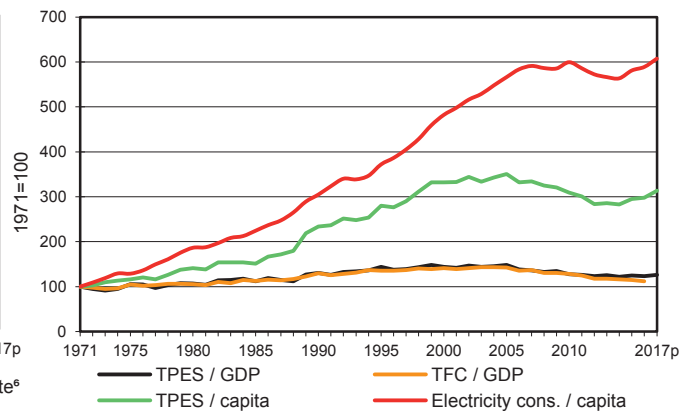
**Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.

## Portugal

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	0.01	-	-	-	1.35	1.38	3.26	-	-	6.00
Imports	2.91	15.29	2.68	4.26	-	-	-	0.16	0.40	-	25.69
Exports	-	-0.18	-6.59	-	-	-	-	-0.34	-0.83	-	-7.94
Intl. marine bunkers	-	-	-0.63	-	-	-	-	-	-	-	-0.63
Intl. aviation bunkers	-	-	-1.15	-	-	-	-	-	-	-	-1.15
Stock changes	-0.07	0.05	0.11	0.04	-	-	-	0.01	-	-	0.14
<b>TPES</b>	<b>2.85</b>	<b>15.17</b>	<b>-5.58</b>	<b>4.30</b>	<b>-</b>	<b>1.35</b>	<b>1.38</b>	<b>3.09</b>	<b>-0.44</b>	<b>-</b>	<b>22.12</b>
Transfers	-	0.07	-0.06	-	-	-	-	-	-	-	0.00
Statistical differences	-0.00	-	0.01	0.03	-	-	-	-0.00	-	-	0.03
Electricity plants	-2.83	-	-0.18	-1.23	-	-1.35	-1.30	-0.56	4.48	-	-2.97
CHP plants	-	-	-0.08	-1.15	-	-	-	-0.35	0.60	0.45	-0.53
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat. fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-15.62	15.26	-	-	-	-	-	-	-	-0.36
Petrochemical plants	-	0.20	-0.21	-	-	-	-	-	-	-	-0.01
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	0.18	-	-0.22	-	-	-	-0.01	-	-	-0.05
Energy industry own use	-	-	-1.19	-0.10	-	-	-	-	-0.24	-0.24	-1.76
Losses	-	-	-	-0.01	-	-	-	-	-0.42	-	-0.43
<b>TFC</b>	<b>0.01</b>	<b>-</b>	<b>7.97</b>	<b>1.62</b>	<b>-</b>	<b>-</b>	<b>0.09</b>	<b>2.17</b>	<b>3.99</b>	<b>0.21</b>	<b>16.06</b>
<b>INDUSTRY</b>	<b>0.01</b>	<b>-</b>	<b>0.61</b>	<b>1.11</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1.11</b>	<b>1.30</b>	<b>0.19</b>	<b>4.33</b>
Iron and steel	0.01	-	0.00	0.05	-	-	-	-	0.13	-	0.19
Chemical and petrochemical	-	-	0.01	0.15	-	-	-	0.00	0.18	0.02	0.37
Non-ferrous metals	-	-	0.00	0.02	-	-	-	-	0.01	-	0.03
Non-metallic minerals	0.01	-	0.28	0.42	-	-	-	0.16	0.15	0.01	1.02
Transport equipment	-	-	0.01	0.02	-	-	-	-	0.04	-	0.06
Machinery	-	-	0.02	0.04	-	-	-	0.00	0.09	0.00	0.15
Mining and quarrying	-	-	0.03	0.00	-	-	-	0.00	0.03	0.00	0.06
Food and tobacco	-	-	0.08	0.15	-	-	-	0.03	0.17	0.03	0.46
Paper, pulp and printing	-	-	0.07	0.11	-	-	-	0.86	0.24	0.08	1.37
Wood and wood products	-	-	0.01	0.01	-	-	-	0.04	0.06	0.00	0.12
Construction	-	-	0.09	0.02	-	-	-	0.00	0.05	-	0.16
Textile and leather	-	-	0.01	0.13	-	-	-	0.00	0.11	0.03	0.29
Non-specified	-	-	0.00	0.01	-	-	-	0.00	0.04	0.01	0.06
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>5.26</b>	<b>0.02</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.26</b>	<b>0.03</b>	<b>-</b>	<b>5.58</b>
Domestic aviation	-	-	0.14	-	-	-	-	-	-	-	0.14
Road	-	-	5.00	0.02	-	-	-	0.26	0.00	-	5.29
Rail	-	-	0.01	-	-	-	-	-	0.03	-	0.04
Pipeline transport	-	-	-	-	-	-	-	-	0.00	-	0.00
Domestic navigation	-	-	0.11	-	-	-	-	0.00	-	-	0.11
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>-</b>	<b>-</b>	<b>0.95</b>	<b>0.49</b>	<b>-</b>	<b>-</b>	<b>0.09</b>	<b>0.80</b>	<b>2.66</b>	<b>0.02</b>	<b>5.00</b>
Residential	-	-	0.43	0.25	-	-	0.05	0.76	1.13	0.00	2.62
Comm. and public services	-	-	0.16	0.23	-	-	0.03	0.03	1.46	0.02	1.94
Agriculture/forestry	-	-	0.26	0.00	-	-	-	0.00	0.07	-	0.34
Fishing	-	-	0.07	0.00	-	-	-	0.00	0.00	-	0.08
Non-specified	-	-	0.03	-	-	-	-	0.00	-	-	0.03
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>1.15</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1.15</b>
in industry/transf./energy	-	-	1.11	-	-	-	-	-	-	-	1.11
of which: chem./petrochem.	-	-	0.90	-	-	-	-	-	-	-	0.90
in transport	-	-	0.03	-	-	-	-	-	-	-	0.03
in other	-	-	0.00	-	-	-	-	-	-	-	0.00
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>12.63</b>	<b>-</b>	<b>1.30</b>	<b>12.58</b>	<b>-</b>	<b>15.72</b>	<b>13.47</b>	<b>3.39</b>	<b>-</b>	<b>-</b>	<b>59.09</b>
Electricity plants	12.63	-	0.88	7.76	-	15.72	13.47	1.64	-	-	52.09
CHP plants	-	-	0.42	4.83	-	-	-	1.75	-	-	7.00
<b>Heat generated - PJ</b>	<b>-</b>	<b>-</b>	<b>0.20</b>	<b>18.65</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>18.85</b>
CHP plants	-	-	0.20	18.65	-	-	-	-	-	-	18.85
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Portugal

## Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	-	-	-	-	0.50	1.40	3.28	-	-	5.18
Imports	3.36	16.04	2.72	5.64	-	-	-	0.13	0.47	-	28.35
Exports	-	-0.18	-6.82	-	-	-	-	-0.32	-0.70	-	-8.03
Intl. marine bunkers	-	-	-0.80	-	-	-	-	-	-	-	-0.80
Intl. aviation bunkers	-	-	-1.28	-	-	-	-	-	-	-	-1.28
Stock changes	-0.13	-0.08	0.06	-0.02	-	-	-	0.01	-	-	-0.16
<b>TPES</b>	<b>3.23</b>	<b>15.77</b>	<b>-6.13</b>	<b>5.61</b>	<b>-</b>	<b>0.50</b>	<b>1.40</b>	<b>3.10</b>	<b>-0.23</b>	<b>-</b>	<b>23.25</b>
Electricity and Heat Output											
Elec. generated - TWh	14.70	-	1.29	18.81	-	5.77	13.42	3.62	-	-	57.60
Heat generated - PJ	-	-	0.09	18.72	-	-	-	-	-	-	18.81

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	1.4	1.5	3.4	3.9	5.8	5.3	6.0	5.2
Net imports (Mtoe)	6.5	9.9	14.9	22.1	18.7	18.5	17.8	20.3
Total primary energy supply (Mtoe)	6.9	10.0	16.8	24.6	23.5	22.0	22.1	23.3
Net oil imports (Mtoe)	6.2	9.4	11.9	16.0	12.5	11.2	11.2	11.8
Oil supply (Mtoe)	5.1	8.0	10.7	14.8	11.5	9.3	9.6	9.6
Electricity consumption (TWh) <sup>1</sup>	8.6	15.2	25.2	41.1	52.4	49.8	50.3	51.8
GDP (billion 2010 USD)	97.5	121.0	166.6	221.4	238.3	228.1	231.8	238.0
GDP PPP (billion 2010 USD)	118.3	146.7	202.0	268.5	289.0	276.6	281.1	288.6
Population (millions)	8.72	9.86	10.00	10.29	10.57	10.36	10.33	10.30
Industrial production index (2010=100)	50.9	70.2	111.8	128.3	100.0	96.5	98.8	102.3
Total self-sufficiency <sup>2</sup>	0.20	0.15	0.20	0.16	0.25	0.24	0.27	0.22
Coal self-sufficiency <sup>2</sup>	0.26	0.17	0.04	-	-	-	-	-
Oil self-sufficiency <sup>2</sup>	-	-	-	-	-	-	0.00	-
Natural gas self-sufficiency <sup>2</sup>	-	-	-	-	-	-	-	-
TPES/GDP (toe per thousand 2010 USD)	0.07	0.08	0.10	0.11	0.10	0.10	0.10	0.10
TPES/GDP PPP (toe per thousand 2010 USD)	0.06	0.07	0.08	0.09	0.08	0.08	0.08	0.08
TPES/population (toe per capita)	0.79	1.01	1.68	2.39	2.22	2.12	2.14	2.26
Net oil imports/GDP (toe per thousand 2010 USD)	0.06	0.08	0.07	0.07	0.05	0.05	0.05	0.05
Oil supply/GDP (toe per thousand 2010 USD)	0.05	0.07	0.06	0.07	0.05	0.04	0.04	0.04
Oil supply/population (toe per capita)	0.59	0.81	1.07	1.44	1.09	0.90	0.93	0.94
Share of renewables in TPES	0.18	0.14	0.20	0.15	0.23	0.23	0.25	0.21
Share of renewables in electricity generation	0.77	0.55	0.35	0.30 e	0.53	0.48	0.55	0.39
TFC/GDP (toe per thousand 2010 USD)	0.06	0.07	0.08	0.09	0.08	0.07	0.07	..
TFC/GDP PPP (toe per thousand 2010 USD)	0.05	0.05	0.07	0.07	0.07	0.06	0.06	..
TFC/population (toe per capita)	0.66	0.80	1.34	1.88	1.79	1.57	1.56	..
Elect. cons./GDP (kWh per 2010 USD)	0.09	0.13	0.15	0.19	0.22	0.22	0.22	0.22
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	0.07	0.10	0.13	0.15	0.18	0.18	0.18	0.18
Elect. cons./population (kWh per capita)	985	1543	2522	3989	4959	4807	4873	5025
Industry cons. <sup>3</sup> /industrial production (2010=100)	72.8	75.2	83.4	91.9	100.0	83.5	77.3	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	126.8	133.8	125.9	131.2	100.0	77.6	64.5	..

1. Electricity consumption equals domestic supply less losses.

2. Production divided by TPES.

3. Includes non-energy use.

## Slovak Republic

Figure 1. Energy production

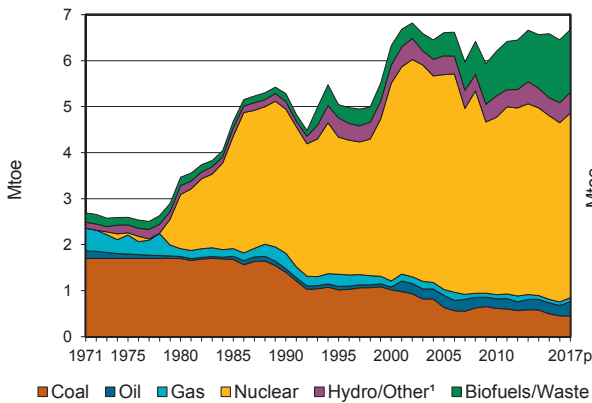


Figure 2. Total primary energy supply<sup>2</sup>

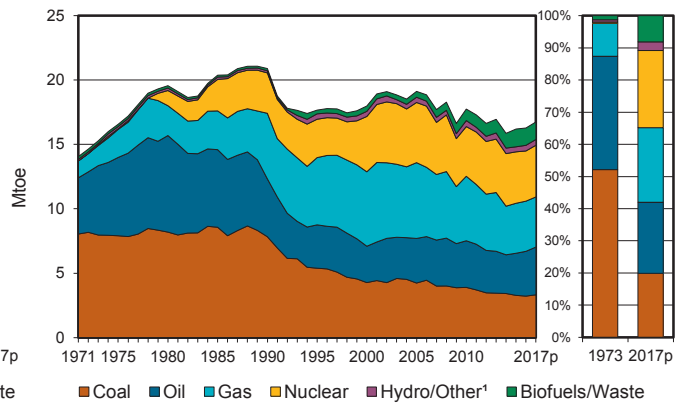


Figure 3. Energy self-sufficiency

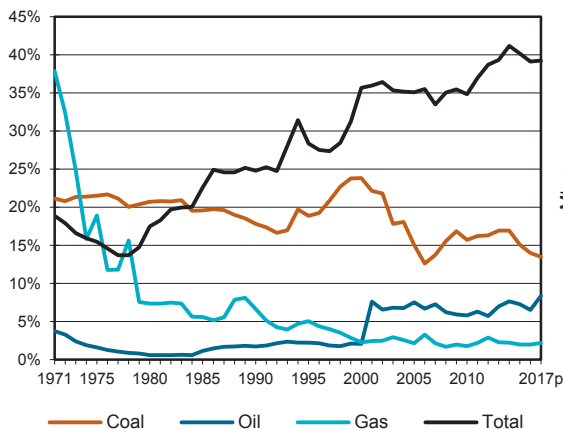


Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>

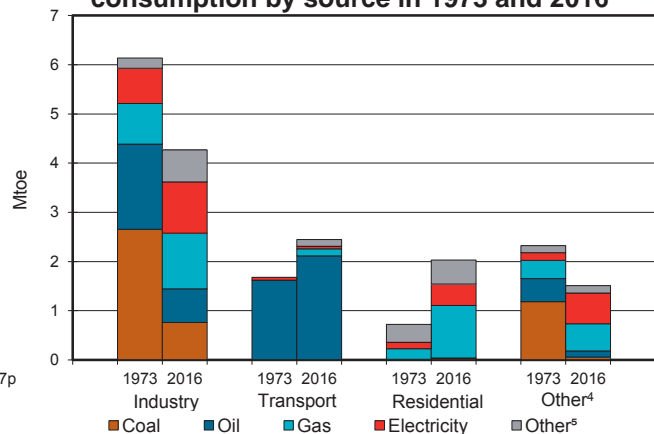


Figure 5. Electricity generation by source

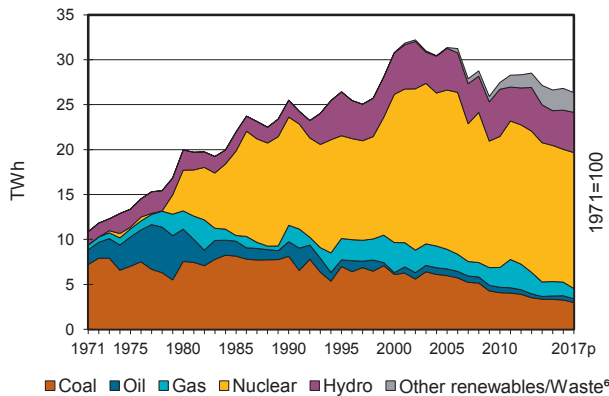
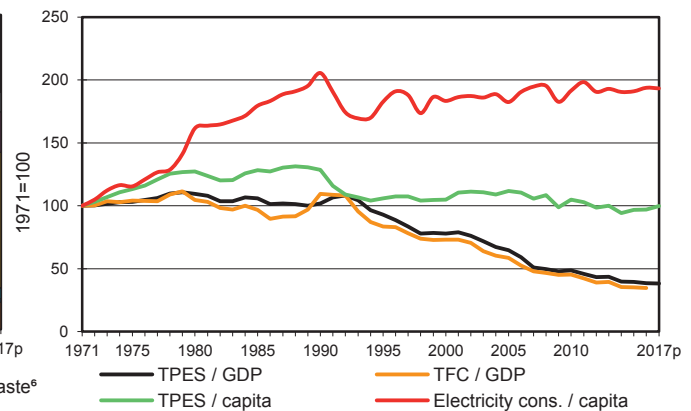


Figure 6. Selected indicators



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.

## Slovak Republic

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	0.45	0.23	-	0.08	3.90	0.37	0.06	1.37	-	0.00	6.45
Imports	2.74	5.81	1.74	3.62	-	-	-	0.10	1.14	0.00	15.15
Exports	-0.06	-0.01	-4.17	-	-	-	-	-0.13	-0.91	-	-5.28
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-0.05	-	-	-	-	-	-	-	-0.05
Stock changes	0.09	-0.05	-0.02	0.20	-	-	-	0.00	-	-	0.22
<b>TPES</b>	<b>3.22</b>	<b>5.98</b>	<b>-2.50</b>	<b>3.90</b>	<b>3.90</b>	<b>0.37</b>	<b>0.06</b>	<b>1.34</b>	<b>0.23</b>	<b>0.00</b>	<b>16.50</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-0.01	0.00	-	-	-	-	-	-	-	-	-0.01
Electricity plants	-	-	-	-0.07	-1.08	-0.37	-0.05	-0.03	0.82	-	-0.78
CHP plants	-0.97	-	-0.23	-0.34	-2.82	-	-	-0.50	1.48	0.62	-2.75
Heat plants	-0.00	-	-0.00	-0.24	-	-	-0.01	-0.07	-0.00	0.28	-0.04
Blast furnaces	-0.91	-	-	-	-	-	-	-	-	-	-0.91
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat. fuel/BKB/PB plants	-0.07	-	-	-	-	-	-	-	-	-	-0.07
Oil refineries	-	-6.29	6.44	-	-	-	-	-	-	-	0.15
Petrochemical plants	-	0.17	-0.18	-	-	-	-	-	-	-	-0.01
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	0.14	-	-0.17	-	-	-	-	-	-	-0.03
Energy industry own use	-0.39	-	-0.59	-0.10	-	-	-	-0.00	-0.27	-0.11	-1.46
Losses	-0.03	-	-	-0.08	-	-	-	-	-0.11	-0.12	-0.34
<b>TFC</b>	<b>0.85</b>	<b>-</b>	<b>2.93</b>	<b>2.90</b>	<b>-</b>	<b>-</b>	<b>0.01</b>	<b>0.75</b>	<b>2.15</b>	<b>0.67</b>	<b>10.25</b>
<b>INDUSTRY</b>	<b>0.71</b>	<b>-</b>	<b>0.15</b>	<b>0.79</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.52</b>	<b>1.04</b>	<b>0.13</b>	<b>3.34</b>
Iron and steel	0.65	-	-	0.14	-	-	-	0.00	0.20	-	0.99
Chemical and petrochemical	-	-	0.09	0.11	-	-	-	0.03	0.11	0.06	0.41
Non-ferrous metals	0.00	-	-	0.03	-	-	-	-	0.22	-	0.26
Non-metallic minerals	0.05	-	0.05	0.14	-	-	-	0.15	0.07	0.01	0.46
Transport equipment	0.00	-	0.00	0.07	-	-	-	0.00	0.09	0.00	0.17
Machinery	-	-	0.00	0.09	-	-	-	0.01	0.12	-	0.22
Mining and quarrying	0.00	-	0.00	0.00	-	-	-	0.00	0.00	-	0.01
Food and tobacco	0.01	-	-	0.08	-	-	-	0.00	0.05	0.01	0.14
Paper, pulp and printing	-	-	0.00	0.05	-	-	-	0.30	0.06	0.04	0.46
Wood and wood products	-	-	-	0.01	-	-	-	0.02	0.01	0.00	0.04
Construction	-	-	0.00	0.02	-	-	-	0.00	0.01	0.00	0.03
Textile and leather	-	-	-	0.01	-	-	-	0.00	0.01	0.00	0.03
Non-specified	-	-	-	0.05	-	-	-	0.01	0.08	-	0.14
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>2.11</b>	<b>0.14</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.14</b>	<b>0.05</b>	<b>-</b>	<b>2.45</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	2.08	-	-	-	-	0.14	0.00	-	2.22
Rail	-	-	-	-	-	-	-	-	0.04	-	0.04
Pipeline transport	-	-	-	0.13	-	-	-	-	-	-	0.13
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	0.04	0.01	-	-	-	-	0.01	-	0.05
<b>OTHER</b>	<b>0.09</b>	<b>-</b>	<b>0.08</b>	<b>1.63</b>	<b>-</b>	<b>-</b>	<b>0.01</b>	<b>0.09</b>	<b>1.06</b>	<b>0.54</b>	<b>3.49</b>
Residential	0.03	-	0.01	1.07	-	-	0.00	0.03	0.44	0.45	2.03
Comm. and public services	0.06	-	0.01	0.53	-	-	0.00	0.02	0.60	0.09	1.31
Agriculture/forestry	0.00	-	0.06	0.02	-	-	0.00	0.04	0.02	0.00	0.15
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>NON-ENERGY USE</b>	<b>0.05</b>	<b>-</b>	<b>0.58</b>	<b>0.34</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.97</b>
in industry/transf./energy	0.05	-	0.53	0.34	-	-	-	-	-	-	0.92
of which: chem./petrochem.	-	-	0.39	0.34	-	-	-	-	-	-	0.73
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	0.05	-	-	-	-	-	-	-	0.05
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>3.27</b>	<b>-</b>	<b>0.47</b>	<b>1.52</b>	<b>14.77</b>	<b>4.36</b>	<b>0.67</b>	<b>1.75</b>	<b>-</b>	<b>-</b>	<b>26.82</b>
Electricity plants	-	-	0.00	0.33	4.14	4.36	0.63	0.12	-	-	9.58
CHP plants	3.27	-	0.47	1.19	10.64	-	0.04	1.64	-	-	17.24
<b>Heat generated - PJ</b>	<b>8.11</b>	<b>-</b>	<b>4.65</b>	<b>16.72</b>	<b>1.98</b>	<b>-</b>	<b>0.15</b>	<b>5.84</b>	<b>0.06</b>	<b>0.01</b>	<b>37.52</b>
CHP plants	8.01	-	4.62	7.62	1.98	-	-	3.72	0.05	-	26.00
Heat plants	0.10	-	0.03	9.10	-	-	0.15	2.13	0.00	0.01	11.52

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Slovak Republic

## Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	0.45	0.31	-	0.09	4.01	0.38	0.06	1.36	-	0.00	6.67
Imports	2.96	5.61	1.86	4.15	-	-	-	0.10	1.34	0.00	16.02
Exports	-0.05	-0.06	-4.09	-	-	-	-	-0.10	-1.08	-	-5.37
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-0.04	-	-	-	-	-	-	-	-0.04
Stock changes	-0.04	0.02	0.08	-0.35	-	-	-	-0.00	-	-	-0.29
<b>TPES</b>	<b>3.32</b>	<b>5.88</b>	<b>-2.18</b>	<b>3.89</b>	<b>4.01</b>	<b>0.38</b>	<b>0.06</b>	<b>1.35</b>	<b>0.26</b>	<b>0.00</b>	<b>17.00</b>
Electricity and Heat Output											
Elec. generated - TWh	2.99	-	0.41	1.15	15.13	4.47	0.67	1.53	-	-	26.35
Heat generated - PJ	6.26	-	4.12	14.10	3.00	-	0.15	4.81	0.06	0.01	32.50

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	2.6	3.5	5.3	6.3	6.2	6.6	6.5	6.7
Net imports (Mtoe)	13.0	16.2	16.4	11.5	11.4	9.8	9.9	10.7
Total primary energy supply (Mtoe)	15.5	19.8	21.3	17.7	17.8	16.4	16.5	17.0
Net oil imports (Mtoe)	5.3	7.5	4.5	2.6	3.4	3.1	3.4	3.3
Oil supply (Mtoe)	5.4	7.5	4.5	2.8	3.6	3.3	3.5	3.7
Electricity consumption (TWh) <sup>1</sup>	14.1	21.7	29.4 e	26.7 e	28.0	27.9	28.4	28.4
GDP (billion 2010 USD)	37.2	44.1	51.1	55.5	89.5	101.3	104.7	108.2
GDP PPP (billion 2010 USD)	56.0	66.5	77.0	83.6	134.8	152.6	157.7	162.9
Population (millions)	4.64	4.98	5.30	5.40	5.43	5.42	5.43	5.44
Industrial production index (2010=100)	..	..	55.3	49.4	100.0	120.5	125.0	128.8
Total self-sufficiency <sup>2</sup>	0.17	0.17	0.25	0.36	0.35	0.40	0.39	0.39
Coal self-sufficiency <sup>2</sup>	0.21	0.21	0.18	0.24	0.16	0.15	0.14	0.14
Oil self-sufficiency <sup>2</sup>	0.02	0.01	0.02	0.02	0.06	0.07	0.07	0.08
Natural gas self-sufficiency <sup>2</sup>	0.25	0.07	0.07	0.02	0.02	0.02	0.02	0.02
TPES/GDP (toe per thousand 2010 USD)	0.42	0.45	0.42	0.32	0.20	0.16	0.16	0.16
TPES/GDP PPP (toe per thousand 2010 USD)	0.28	0.30	0.28	0.21	0.13	0.11	0.10	0.10
TPES/population (toe per capita)	3.34	3.98	4.03	3.29	3.28	3.02	3.04	3.13
Net oil imports/GDP (toe per thousand 2010 USD)	0.14	0.17	0.09	0.05	0.04	0.03	0.03	0.03
Oil supply/GDP (toe per thousand 2010 USD)	0.14	0.17	0.09	0.05	0.04	0.03	0.03	0.03
Oil supply/population (toe per capita)	1.16	1.51	0.85	0.52	0.67	0.60	0.64	0.68
Share of renewables in TPES	0.02	0.02	0.02	0.03	0.07	0.10	0.10	0.10
Share of renewables in electricity generation	0.11	0.11	0.07	0.15	0.22	0.23	0.25	0.25
TFC/GDP (toe per thousand 2010 USD)	0.29	0.30	0.31	0.21	0.13	0.10	0.10	..
TFC/GDP PPP (toe per thousand 2010 USD)	0.19	0.20	0.21	0.14	0.09	0.07	0.07	..
TFC/population (toe per capita)	2.34	2.62	2.97	2.12	2.11	1.85	1.89	..
Elect. cons./GDP (kWh per 2010 USD)	0.38	0.49	0.57 e	0.48 e	0.31	0.28	0.27	0.26
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	0.25	0.33	0.38 e	0.32 e	0.21	0.18	0.18	0.17
Elect. cons./population (kWh per capita)	3027	4359	5543 e	4945 e	5165	5151	5226	5213
Industry cons. <sup>3</sup> /industrial production (2010=100)	..	..	323.8	234.3	100.0	85.0	80.0	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	..	..	590.6	339.0	100.0	67.0	61.6	..

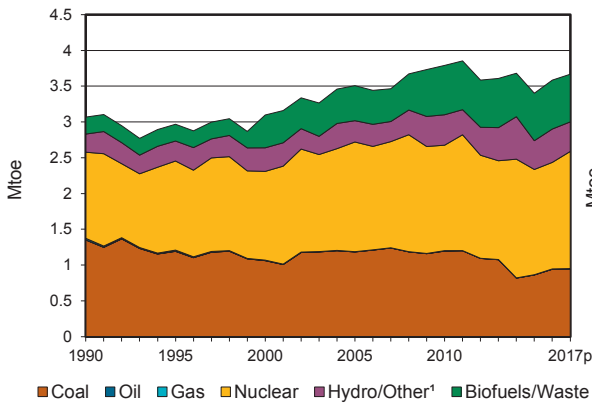
1. Electricity consumption equals domestic supply less losses.

2. Production divided by TPES.

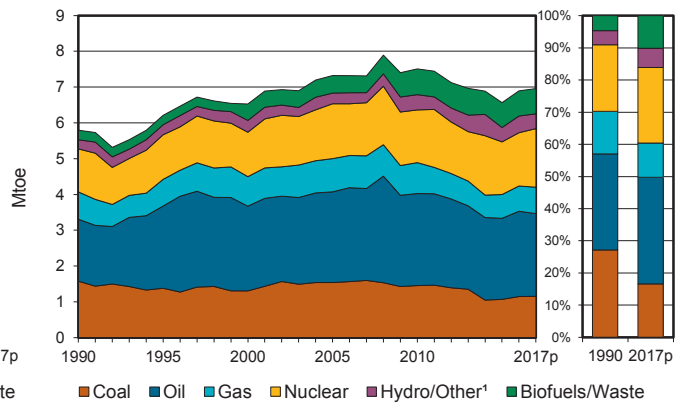
3. Includes non-energy use.

## Slovenia

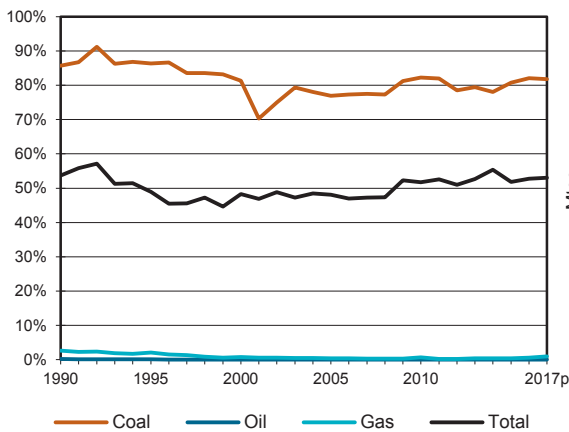
**Figure 1. Energy production**



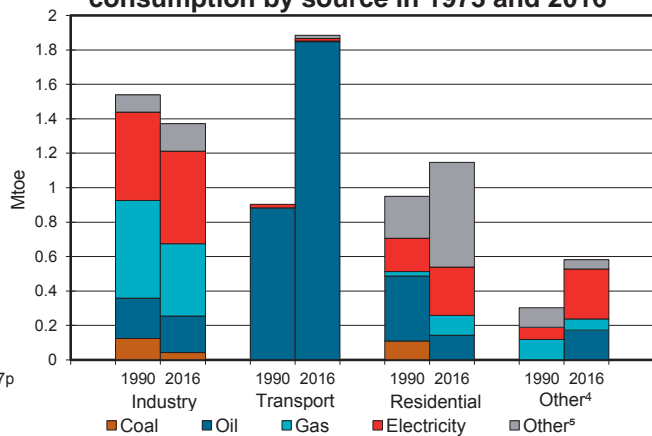
**Figure 2. Total primary energy supply<sup>2</sup>**



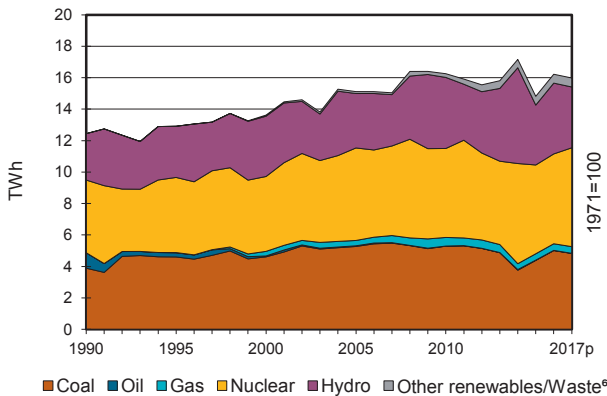
**Figure 3. Energy self-sufficiency**



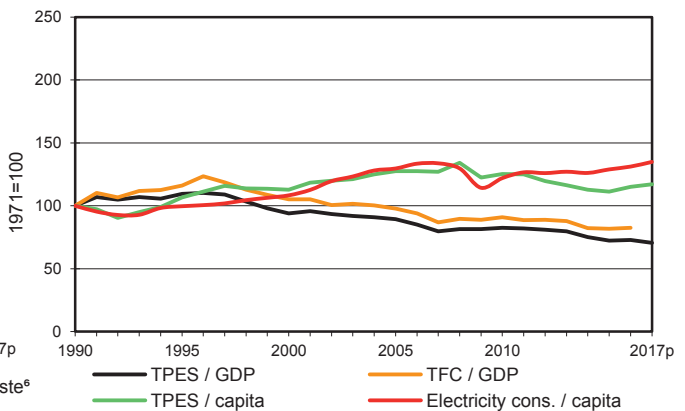
**Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.



## Slovenia

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	0.94	-	-	0.00	1.49	0.39	0.08	0.68	-	-	3.59
Imports	0.20	-	4.60	0.70	-	-	-	0.02	0.72	-	6.23
Exports	-	-	-2.06	-	-	-	-	-	-0.82	-	-2.88
Intl. marine bunkers	-	-	-0.12	-	-	-	-	-	-	-	-0.12
Intl. aviation bunkers	-	-	-0.02	-	-	-	-	-	-	-	-0.02
Stock changes	0.01	-	-0.01	-	-	-	-	-	-	-	0.00
<b>TPES</b>	<b>1.15</b>	<b>-</b>	<b>2.38</b>	<b>0.71</b>	<b>1.49</b>	<b>0.39</b>	<b>0.08</b>	<b>0.70</b>	<b>-0.10</b>	<b>-</b>	<b>6.79</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-0.01	-	-	-	-	-	-	-	-0.00	-	-0.01
Electricity plants	-	-	-0.00	-0.00	-1.49	-0.39	-0.02	-0.00	0.90	-	-1.00
CHP plants	-1.09	-	-0.00	-0.08	-	-	-	-0.08	0.49	0.18	-0.58
Heat plants	-0.00	-	-0.00	-0.02	-	-	-0.00	-0.01	-	0.04	-0.00
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat. fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-	-	-	-	-	-	-	-	-	-
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-	-	-	-
Energy industry own use	-	-	-	-0.00	-	-	-	-	-0.10	-0.01	-0.11
Losses	-	-	-	-	-	-	-	-	-0.08	-0.03	-0.11
<b>TFC</b>	<b>0.04</b>	<b>-</b>	<b>2.38</b>	<b>0.60</b>	<b>-</b>	<b>-</b>	<b>0.05</b>	<b>0.61</b>	<b>1.12</b>	<b>0.17</b>	<b>4.99</b>
<b>INDUSTRY</b>	<b>0.04</b>	<b>-</b>	<b>0.09</b>	<b>0.42</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.11</b>	<b>0.54</b>	<b>0.05</b>	<b>1.24</b>
Iron and steel	0.01	-	0.00	0.07	-	-	-	-	0.07	0.00	0.15
Chemical and petrochemical	-	-	0.01	0.05	-	-	-	0.02	0.06	0.03	0.16
Non-ferrous metals	0.00	-	0.01	0.03	-	-	-	-	0.12	0.00	0.16
Non-metallic minerals	0.01	-	0.03	0.07	-	-	-	0.04	0.03	0.00	0.18
Transport equipment	-	-	0.00	0.01	-	-	-	0.00	0.02	0.00	0.03
Machinery	-	-	0.01	0.03	-	-	-	0.00	0.08	0.01	0.14
Mining and quarrying	-	-	0.00	0.00	-	-	-	-	0.01	-	0.02
Food and tobacco	-	-	0.01	0.03	-	-	-	0.00	0.02	0.00	0.06
Paper, pulp and printing	0.02	-	0.00	0.08	-	-	-	0.01	0.06	0.00	0.17
Wood and wood products	-	-	0.00	-	-	-	-	0.03	0.01	0.00	0.05
Construction	-	-	0.02	0.00	-	-	-	0.00	0.00	0.00	0.03
Textile and leather	-	-	0.00	0.01	-	-	-	0.00	0.01	0.00	0.02
Non-specified	-	-	0.00	0.02	-	-	-	0.00	0.04	0.01	0.07
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>1.85</b>	<b>0.00</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.02</b>	<b>0.01</b>	<b>-</b>	<b>1.88</b>
Domestic aviation	-	-	0.00	-	-	-	-	-	-	-	0.00
Road	-	-	1.84	0.00	-	-	-	0.02	..	-	1.86
Rail	-	-	0.01	-	-	-	-	-	0.01	-	0.02
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	0.00	-	0.00
<b>OTHER</b>	<b>-</b>	<b>-</b>	<b>0.32</b>	<b>0.18</b>	<b>-</b>	<b>-</b>	<b>0.05</b>	<b>0.48</b>	<b>0.57</b>	<b>0.12</b>	<b>1.73</b>
Residential	-	-	0.14	0.11	-	-	0.04	0.48	0.28	0.08	1.15
Comm. and public services	-	-	0.09	0.07	-	-	0.01	0.00	0.29	0.04	0.49
Agriculture/forestry	-	-	0.07	-	-	-	0.00	-	-	-	0.07
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	0.02	-	-	-	-	-	-	-	0.02
<b>NON-ENERGY USE</b>	<b>0.01</b>	<b>-</b>	<b>0.12</b>	<b>0.01</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.13</b>
in industry/transf./energy	0.01	-	0.12	0.01	-	-	-	-	-	-	0.13
of which: chem./petrochem.	-	-	0.00	0.01	-	-	-	-	-	-	0.01
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>5.01</b>	<b>-</b>	<b>0.01</b>	<b>0.42</b>	<b>5.72</b>	<b>4.50</b>	<b>0.27</b>	<b>0.29</b>	<b>-</b>	<b>-</b>	<b>16.22</b>
Electricity plants	-	-	0.00	0.00	5.72	4.50	0.27	0.00	-	-	10.50
CHP plants	5.01	-	0.01	0.42	-	-	-	0.29	-	-	5.72
<b>Heat generated - PJ</b>	<b>5.06</b>	<b>-</b>	<b>0.16</b>	<b>2.16</b>	<b>-</b>	<b>-</b>	<b>0.02</b>	<b>1.60</b>	<b>-</b>	<b>-</b>	<b>9.00</b>
CHP plants	4.96	-	0.01	1.26	-	-	-	1.22	-	-	7.45
Heat plants	0.10	-	0.15	0.90	-	-	0.02	0.38	-	-	1.56

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Slovenia

## Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	0.94	-	-	0.01	1.64	0.33	0.08	0.67	-	-	3.67
Imports	0.20	-	4.68	0.73	-	-	-	0.04	0.79	-	6.44
Exports	-	-	-2.11	-0.00	-	-	-	-	-0.83	-	-2.94
Intl. marine bunkers	-	-	-0.15	-	-	-	-	-	-	-	-0.15
Intl. aviation bunkers	-	-	-0.02	-	-	-	-	-	-	-	-0.02
Stock changes	0.01	-	-0.08	-	-	-	-	-0.00	-	-	-0.07
<b>TPES</b>	<b>1.15</b>	<b>-</b>	<b>2.31</b>	<b>0.74</b>	<b>1.64</b>	<b>0.33</b>	<b>0.08</b>	<b>0.71</b>	<b>-0.04</b>	<b>-</b>	<b>6.91</b>
Electricity and Heat Output											
Elec. generated - TWh	4.82	-	0.01	0.43	6.29	3.87	0.29	0.28	-	-	15.98
Heat generated - PJ	5.06	-	0.17	2.25	-	-	0.02	1.47	-	-	8.97

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	..	..	3.1	3.1	3.8	3.4	3.6	3.7
Net imports (Mtoe)	..	..	2.6	3.4	3.6	3.2	3.4	3.5
Total primary energy supply (Mtoe)	..	..	5.7	6.4	7.3	6.6	6.8	6.9
Net oil imports (Mtoe)	..	..	1.8	2.4	2.6	2.3	2.5	2.6
Oil supply (Mtoe)	..	..	1.7	2.4	2.6	2.3	2.4	2.3
Electricity consumption (TWh) <sup>1</sup>	..	..	10.7	11.5	13.3	14.2	14.5	14.9
GDP (billion 2010 USD)	..	..	30.9	36.9	48.0	49.0	50.5	53.0
GDP PPP (billion 2010 USD)	..	..	36.6	43.8	56.9	58.1	59.9	62.8
Population (millions)	..	..	2.00	1.99	2.05	2.06	2.07	2.07
Industrial production index (2010=100)	..	..	..	83.9	100.0	107.1	114.7	123.8
Total self-sufficiency <sup>2</sup>	..	..	0.54	0.48	0.52	0.52	0.53	0.53
Coal self-sufficiency <sup>2</sup>	..	..	0.86	0.81	0.82	0.81	0.82	0.82
Oil self-sufficiency <sup>2</sup>	..	..	0.00	0.00	-	-	-	-
Natural gas self-sufficiency <sup>2</sup>	..	..	0.03	0.01	0.01	0.00	0.01	0.01
TPES/GDP (toe per thousand 2010 USD)	..	..	0.19	0.17	0.15	0.13	0.13	0.13
TPES/GDP PPP (toe per thousand 2010 USD)	..	..	0.16	0.15	0.13	0.11	0.11	0.11
TPES/population (toe per capita)	..	..	2.86	3.22	3.58	3.18	3.29	3.35
Net oil imports/GDP (toe per thousand 2010 USD)	..	..	0.06	0.07	0.05	0.05	0.05	0.05
Oil supply/GDP (toe per thousand 2010 USD)	..	..	0.06	0.06	0.05	0.05	0.05	0.04
Oil supply/population (toe per capita)	..	..	0.87	1.19	1.26	1.10	1.15	1.12
Share of renewables in TPES	..	..	0.09	0.12	0.15	0.16	0.17	0.16
Share of renewables in electricity generation	..	..	0.24	0.29	0.29	0.29	0.31	0.28
TFC/GDP (toe per thousand 2010 USD)	..	..	0.12	0.13	0.11	0.10	0.10	..
TFC/GDP PPP (toe per thousand 2010 USD)	..	..	0.10	0.11	0.09	0.08	0.08	..
TFC/population (toe per capita)	..	..	1.85	2.34	2.55	2.32	2.41	..
Elect. cons./GDP (kWh per 2010 USD)	..	..	0.35	0.31	0.28	0.29	0.29	0.28
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	..	..	0.29	0.26	0.23	0.24	0.24	0.24
Elect. cons./population (kWh per capita)	..	..	5335	5778	6510	6877	6997	7196
Industry cons. <sup>3</sup> /industrial production (2010=100)	..	..	..	135.0	100.0	86.2	81.5	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	..	..	..	196.2	100.0	82.4	78.0	..

1. Electricity consumption equals domestic supply less losses.

2. Production divided by TPES.

3. Includes non-energy use.

## Spain

Figure 1. Energy production

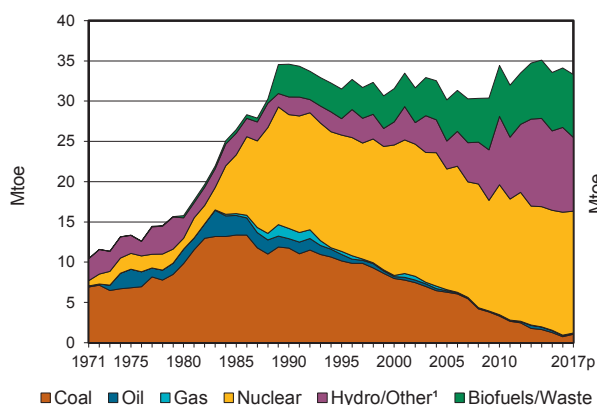


Figure 2. Total primary energy supply<sup>2</sup>

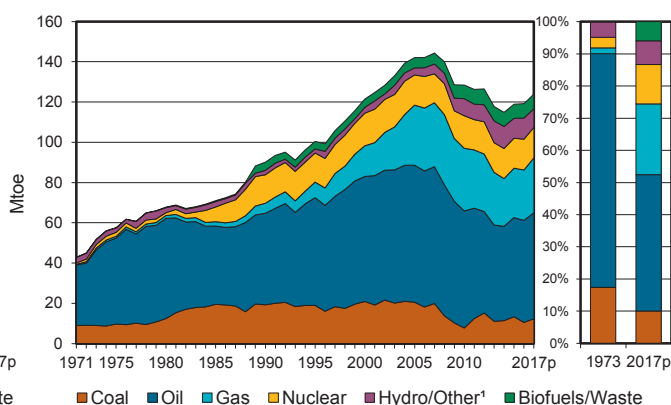


Figure 3. Energy self-sufficiency

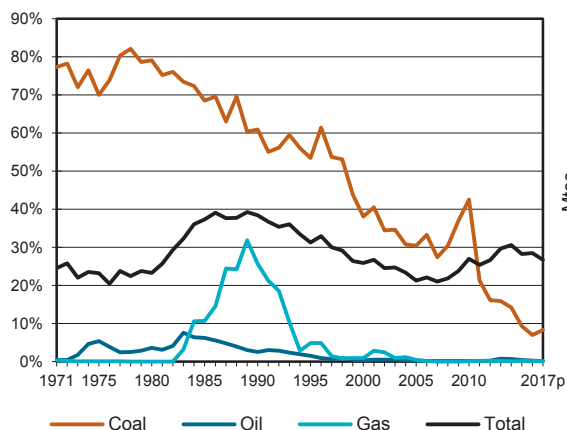


Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>

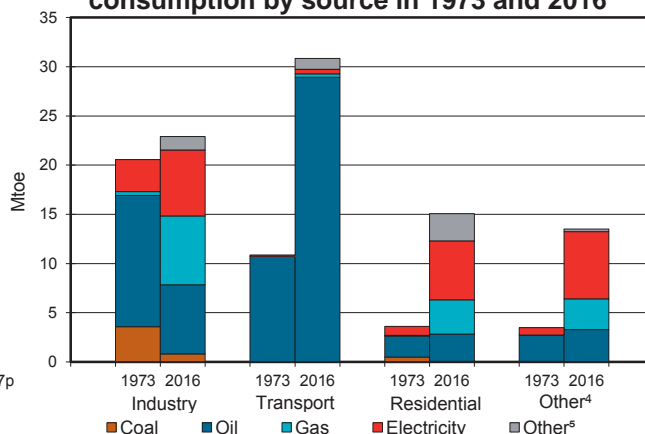


Figure 5. Electricity generation by source

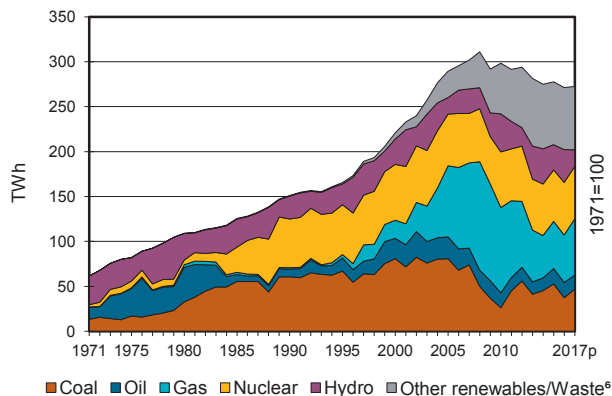
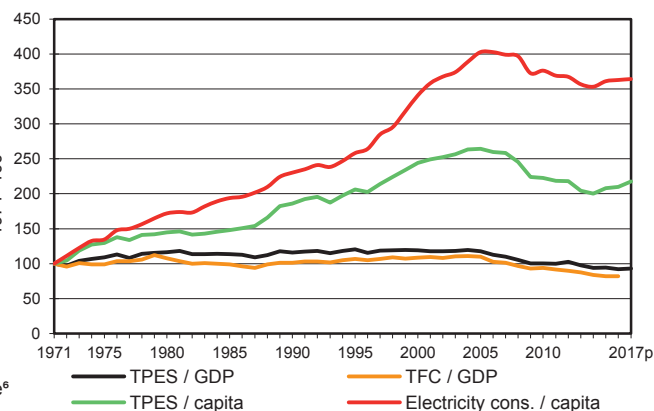


Figure 6. Selected indicators



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.

## Spain

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	0.74	0.14	-	0.05	15.28	3.13	7.40	7.39	-	-	34.13
Imports	8.09	68.44	17.86	28.19	-	-	-	0.74	1.88	-	125.20
Exports	-0.34	-3.47	-21.06	-3.47	-	-	-	-1.14	-1.22	-	-30.70
Intl. marine bunkers	-	-	-7.45	-	-	-	-	-	-	-	-7.45
Intl. aviation bunkers	-	-	-4.09	-	-	-	-	-	-	-	-4.09
Stock changes	2.02	0.49	-0.16	0.27	-	-	-	0.14	-	-	2.77
<b>TPES</b>	<b>10.50</b>	<b>65.60</b>	<b>-14.90</b>	<b>25.04</b>	<b>15.28</b>	<b>3.13</b>	<b>7.40</b>	<b>7.13</b>	<b>0.66</b>	-	<b>119.85</b>
Transfers	-	1.26	-1.12	-	-	-	-	-	-	-	0.15
Statistical differences	-0.09	-	1.21	-0.02	-	-	-	0.00	-0.06	-	1.04
Electricity plants	-8.52	-	-2.92	-5.03	-15.28	-3.13	-7.09	-1.58	20.76	-	-22.79
CHP plants	-0.03	-	-0.46	-3.06	-	-	-	-0.26	2.57	-	-1.24
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-0.75	-	-	-	-	-	-	-	-	-	-0.75
Gas works	0.00	-	-	-	-	-	-	-	-	-	0.00
Coke/pat. fuel/BKB/PB plants	0.16	-	-	-	-	-	-	-	-	-	0.16
Oil refineries	-	-66.94	65.33	-	-	-	-	-	-	-	-1.61
Petrochemical plants	-	0.08	-0.08	-	-	-	-	-	-	-	-0.00
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-0.11	-	-	-0.11
Energy industry own use	-0.15	-	-5.08	-2.95	-	-	-0.00	-0.00	-1.64	-	-9.81
Losses	-0.20	-	-	-0.10	-	-	-	-	-2.30	-	-2.60
<b>TFC</b>	<b>0.92</b>	-	<b>41.98</b>	<b>13.89</b>	-	-	<b>0.31</b>	<b>5.19</b>	<b>19.99</b>	-	<b>82.28</b>
<b>INDUSTRY</b>	<b>0.75</b>	-	<b>2.82</b>	<b>6.53</b>	-	-	<b>0.00</b>	<b>1.38</b>	<b>6.70</b>	-	<b>18.19</b>
Iron and steel	0.57	-	0.07	0.64	-	-	-	0.00	1.16	-	2.44
Chemical and petrochemical	0.13	-	0.10	1.62	-	-	0.00	0.01	0.84	-	2.69
Non-ferrous metals	0.01	-	0.06	0.27	-	-	0.00	0.00	0.80	-	1.14
Non-metallic minerals	0.01	-	1.41	1.12	-	-	0.00	0.21	0.51	-	3.26
Transport equipment	-	-	0.03	0.06	-	-	0.00	0.00	0.36	-	0.46
Machinery	-	-	0.11	0.42	-	-	0.00	0.00	0.41	-	0.95
Mining and quarrying	-	-	0.15	0.13	-	-	0.00	0.00	0.15	-	0.44
Food and tobacco	0.02	-	0.33	0.86	-	-	0.00	0.21	0.96	-	2.38
Paper, pulp and printing	-	-	0.08	0.50	-	-	0.00	0.56	0.50	-	1.64
Wood and wood products	-	-	0.02	0.11	-	-	-	0.31	0.11	-	0.55
Construction	-	-	0.38	0.39	-	-	0.00	0.02	0.17	-	0.97
Textile and leather	-	-	0.03	0.19	-	-	0.00	0.00	0.14	-	0.37
Non-specified	-	-	0.03	0.21	-	-	0.00	0.06	0.58	-	0.89
<b>TRANSPORT</b>	-	-	<b>28.73</b>	<b>0.35</b>	-	-	-	<b>1.09</b>	<b>0.46</b>	-	<b>30.63</b>
Domestic aviation	-	-	1.94	-	-	-	-	-	-	-	1.94
Road	-	-	25.99	0.32	-	-	-	1.09	0.02	-	27.42
Rail	-	-	0.08	-	-	-	-	-	0.22	-	0.30
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	0.62	-	-	-	-	0.00	-	-	0.62
Non-specified	-	-	0.09	0.03	-	-	-	0.00	0.22	-	0.34
<b>OTHER</b>	<b>0.11</b>	-	<b>6.00</b>	<b>6.57</b>	-	-	<b>0.31</b>	<b>2.71</b>	<b>12.83</b>	-	<b>28.53</b>
Residential	0.08	-	2.74	3.47	-	-	0.24	2.52	5.99	-	15.05
Comm. and public services	0.00	-	1.26	3.01	-	-	0.06	0.11	6.18	-	10.62
Agriculture/forestry	-	-	1.72	0.08	-	-	0.01	0.07	0.51	-	2.39
Fishing	-	-	0.24	-	-	-	0.00	0.00	-	-	0.24
Non-specified	0.03	-	0.04	0.01	-	-	-	0.00	0.15	-	0.22
<b>NON-ENERGY USE</b>	<b>0.06</b>	-	<b>4.44</b>	<b>0.45</b>	-	-	-	-	-	-	<b>4.94</b>
in industry/transf./energy	0.06	-	4.23	0.45	-	-	-	-	-	-	4.73
of which: chem./petrochem.	0.06	-	3.03	0.45	-	-	-	-	-	-	3.53
in transport	-	-	0.20	-	-	-	-	-	-	-	0.20
in other	-	-	0.02	-	-	-	-	-	-	-	0.02
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>37.45</b>	-	<b>16.92</b>	<b>52.82</b>	<b>58.63</b>	<b>36.40</b>	<b>62.66</b>	<b>6.42</b>	-	-	<b>271.31</b>
Electricity plants	37.18	-	13.51	27.90	58.63	36.40	62.61	5.22	-	-	241.45
CHP plants	0.27	-	3.41	24.92	-	-	0.06	1.20	-	-	29.86
<b>Heat generated - PJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Spain

## Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	1.03	0.12	-	0.03	15.14	1.61	7.58	7.81	-	-	33.32
Imports	11.12	70.44	19.30	30.13	-	-	-	0.87	2.04	-	133.90
Exports	-0.23	-4.03	-22.99	-2.51	-	-	-	-1.47	-1.25	-	-32.49
Intl. marine bunkers	-	-	-7.00	-	-	-	-	-	-	-	-7.00
Intl. aviation bunkers	-	-	-4.41	-	-	-	-	-	-	-	-4.41
Stock changes	0.46	0.13	1.10	-0.38	-	-	-	0.13	-	-	1.44
<b>TPES</b>	<b>12.37</b>	<b>66.66</b>	<b>-14.00</b>	<b>27.27</b>	<b>15.14</b>	<b>1.61</b>	<b>7.58</b>	<b>7.34</b>	<b>0.79</b>	<b>-</b>	<b>124.76</b>
Electricity and Heat Output											
Elec. generated - TWh	46.83	-	15.77	62.69	58.11	18.69	63.65	6.75	-	-	272.49
Heat generated - PJ	-	-	-	-	-	-	-	-	-	-	-

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	11.4	15.8	34.6	31.6	34.4	33.6	34.1	33.3
Net imports (Mtoe)	43.9	55.3	60.4	100.2	106.9	95.4	94.5	101.4
Total primary energy supply (Mtoe)	51.6	67.7	90.1	121.9	127.7	118.9	119.9	124.8
Net oil imports (Mtoe)	41.0	49.9	49.7	71.5	69.5	61.8	61.8	62.7
Oil supply (Mtoe)	37.6	49.8	45.5	62.1	58.2	49.3	50.7	52.7
Electricity consumption (TWh) <sup>1</sup>	65.6	99.1	137.5	209.7	265.8	254.3	255.7	257.2
GDP (billion 2010 USD)	558.7	653.9	873.1	1149.5	1431.6	1418.1	1464.5	1509.2
GDP PPP (billion 2010 USD)	581.4	680.4	908.6	1196.2	1489.8	1475.7	1524.0	1569.0
Population (millions)	35.25	37.98	39.34	40.55	46.56	46.41	46.45	46.55
Industrial production index (2010=100)	66.3	78.2	94.3	116.5	100.0	94.6	96.1	98.8
Total self-sufficiency <sup>2</sup>	0.22	0.23	0.38	0.26	0.27	0.28	0.28	0.27
Coal self-sufficiency <sup>2</sup>	0.72	0.79	0.61	0.38	0.43	0.09	0.07	0.08
Oil self-sufficiency <sup>2</sup>	0.02	0.04	0.03	0.00	0.00	0.00	0.00	0.00
Natural gas self-sufficiency <sup>2</sup>	0.00	-	0.26	0.01	0.00	0.00	0.00	0.00
TPES/GDP (toe per thousand 2010 USD)	0.09	0.10	0.10	0.11	0.09	0.08	0.08	0.08
TPES/GDP PPP (toe per thousand 2010 USD)	0.09	0.10	0.10	0.10	0.09	0.08	0.08	0.08
TPES/population (toe per capita)	1.46	1.78	2.29	3.00	2.74	2.56	2.58	2.68
Net oil imports/GDP (toe per thousand 2010 USD)	0.07	0.08	0.06	0.06	0.05	0.04	0.04	0.04
Oil supply/GDP (toe per thousand 2010 USD)	0.07	0.08	0.05	0.05	0.04	0.03	0.03	0.03
Oil supply/population (toe per capita)	1.07	1.31	1.16	1.53	1.25	1.06	1.09	1.13
Share of renewables in TPES	0.05	0.04	0.07	0.06 e	0.12	0.14	0.15	0.13
Share of renewables in electricity generation	0.38	0.27	0.17 e	0.16 e	0.33	0.35	0.39	0.32
TFC/GDP (toe per thousand 2010 USD)	0.07	0.07	0.07	0.07	0.06	0.06	0.06	..
TFC/GDP PPP (toe per thousand 2010 USD)	0.07	0.07	0.07	0.07	0.06	0.05	0.05	..
TFC/population (toe per capita)	1.09	1.27	1.54	2.11	1.98	1.72	1.77	..
Elect. cons./GDP (kWh per 2010 USD)	0.12	0.15	0.16	0.18	0.19	0.18	0.17	0.17
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	0.11	0.15	0.15	0.18	0.18	0.17	0.17	0.16
Elect. cons./population (kWh per capita)	1860	2610	3494	5170	5708	5479	5505	5526
Industry cons. <sup>3</sup> /industrial production (2010=100)	112.0	108.2	95.0	104.5	100.0	84.6	86.2	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	179.0	180.4	103.3	109.4	100.0	60.1	65.4	..

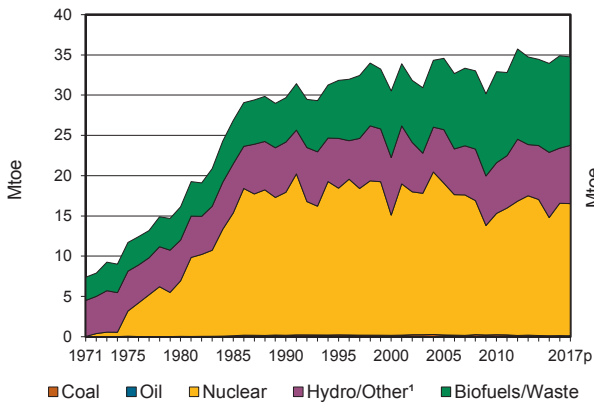
1. Electricity consumption equals domestic supply less losses.

2. Production divided by TPES.

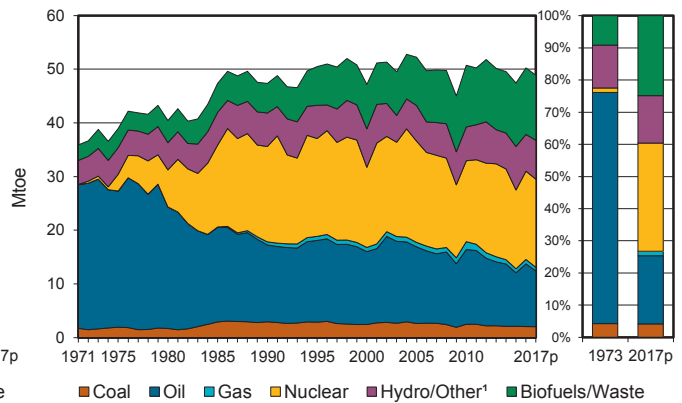
3. Includes non-energy use.

## Sweden

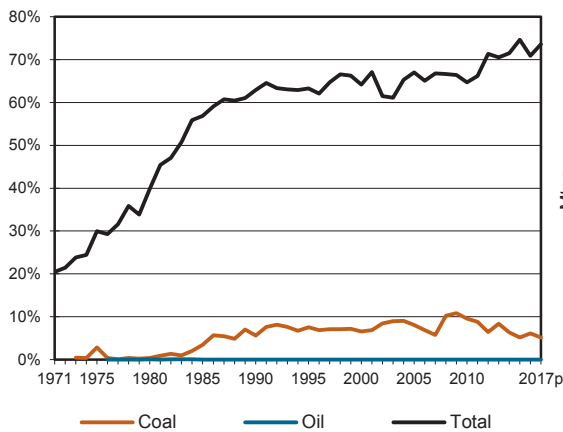
**Figure 1. Energy production**



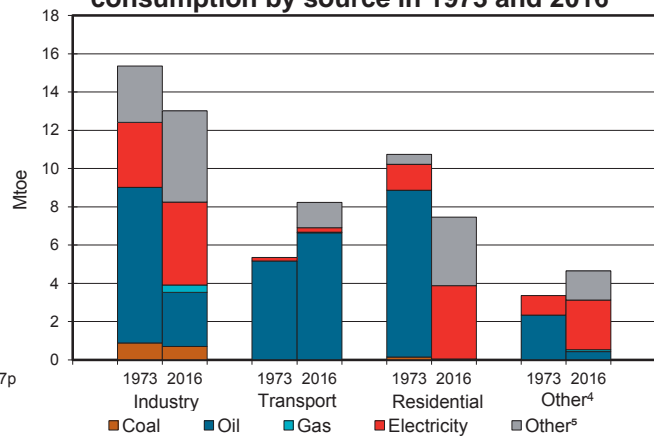
**Figure 2. Total primary energy supply<sup>2</sup>**



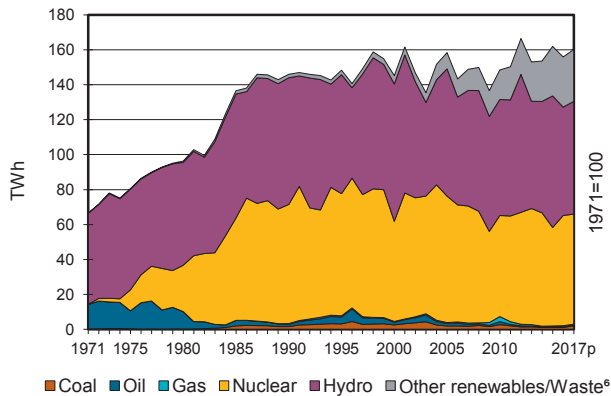
**Figure 3. Energy self-sufficiency**



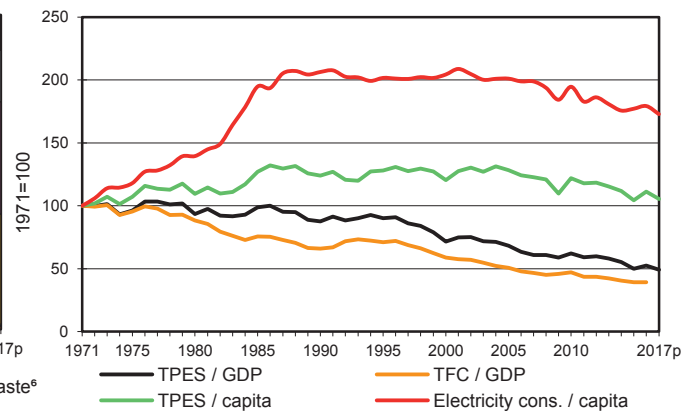
**Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.

## Sweden

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal <sup>1</sup>	Crude oil <sup>2</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	0.13	-	-	-	16.44	5.33	1.35	11.47	-	0.16	34.89
Imports	2.24	20.35	10.54	0.82	-	-	-	1.17	1.23	-	36.35
Exports	-0.02	-1.40	-15.56	-	-	-	-	-0.25	-2.24	-	-19.47
Intl. marine bunkers	-	-	-1.98	-	-	-	-	-	-	-	-1.98
Intl. aviation bunkers	-	-	-0.82	-	-	-	-	-	-	-	-0.82
Stock changes	-0.30	0.09	0.47	-	-	-	-	-0.01	-	-	0.26
<b>TPES</b>	<b>2.05</b>	<b>19.04</b>	<b>-7.35</b>	<b>0.82</b>	<b>16.44</b>	<b>5.33</b>	<b>1.35</b>	<b>12.38</b>	<b>-1.01</b>	<b>0.16</b>	<b>49.23</b>
Transfers	-	2.20	-2.00	-	-	-	-	-	-	-	0.20
Statistical differences	-0.10	0.05	-0.26	0.00	-	-	-	0.12	-	-	-0.20
Electricity plants	-	-	-0.01	-	-16.44	-5.33	-1.34	-0.00	12.10	-	-11.02
CHP plants	-0.41	-	-0.11	-0.25	-	-	-	-4.74	1.30	3.27	-0.94
Heat plants	-0.03	-	-0.05	-0.01	-	-	-	-1.00	-0.21	1.19	-0.10
Blast furnaces	-0.53 e	-	-	-	-	-	-	-	-	-	-0.53
Gas works	0.01	-	-	-0.01	-	-	-	-	-	-	0.00
Coke/pat. fuel/BKB/PB plants	-0.12	-	-	-	-	-	-	-	-	-	-0.12
Oil refineries	-	-21.29	20.66	-	-	-	-	-	-	-	-0.63
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-	-	-	-
Energy industry own use	-0.10	-	-0.95	-0.01	-	-	-	-0.02	-0.57	-	-1.64
Losses	-0.06	-	-	-	-	-	-	-	-0.66	-0.19	-0.90
<b>TFC</b>	<b>0.71</b>	<b>-</b>	<b>9.93</b>	<b>0.55</b>	<b>-</b>	<b>-</b>	<b>0.01</b>	<b>6.74</b>	<b>10.96</b>	<b>4.43</b>	<b>33.35</b>
<b>INDUSTRY</b>	<b>0.69</b>	<b>-</b>	<b>0.82</b>	<b>0.29</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>4.27</b>	<b>4.32</b>	<b>0.50</b>	<b>10.89</b>
Iron and steel	0.40 e	-	0.20	0.02	-	-	-	-	0.38	-	1.00
Chemical and petrochemical	0.00	-	0.10	0.11	-	-	-	0.01	0.40	-	0.62
Non-ferrous metals	0.03	-	0.03	0.01	-	-	-	-	0.25	-	0.32
Non-metallic minerals	0.15	-	0.06	0.04	-	-	-	-	0.08	-	0.33
Transport equipment	-	-	0.02	0.01	-	-	-	-	0.17	-	0.20
Machinery	-	-	0.04	0.01	-	-	-	-	0.28	-	0.33
Mining and quarrying	0.11	-	0.11	-	-	-	-	-	0.31	-	0.53
Food and tobacco	-	-	0.05	0.08	-	-	-	0.02	0.21	-	0.37
Paper, pulp and printing	0.01	-	0.16	0.01	-	-	-	3.83	1.73	-	5.73
Wood and wood products	-	-	0.03	0.00	-	-	-	0.38	0.16	-	0.58
Construction	-	-	-	-	-	-	-	-	0.11	-	0.11
Textile and leather	-	-	0.00	0.00	-	-	-	0.00	0.02	-	0.02
Non-specified	0.00	-	0.01	0.00	-	-	-	0.03	0.22	0.50	0.76
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>6.59</b>	<b>0.03</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1.32</b>	<b>0.23</b>	<b>-</b>	<b>8.17</b>
Domestic aviation	-	-	0.18	-	-	-	-	-	-	-	0.18
Road	-	-	6.36	0.03	-	-	-	1.32	-	-	7.71
Rail	-	-	0.00	-	-	-	-	-	0.23	-	0.23
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	0.05	-	-	-	-	-	-	-	0.05
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>0.00</b>	<b>-</b>	<b>0.46</b>	<b>0.13</b>	<b>-</b>	<b>-</b>	<b>0.01</b>	<b>1.16</b>	<b>6.41</b>	<b>3.93</b>	<b>12.11</b>
Residential	0.00	-	0.02	0.03	-	-	0.01	0.96	3.83	2.61	7.46
Comm. and public services	0.00	-	0.35	0.10	-	-	-	0.07	2.47	1.32	4.30
Agriculture/forestry	-	-	0.07	0.01	-	-	-	0.13	0.11	0.01	0.33
Fishing	-	-	0.01	-	-	-	-	-	-	-	0.01
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>NON-ENERGY USE</b>	<b>0.01</b>	<b>-</b>	<b>2.07</b>	<b>0.10</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2.18</b>
in industry/transf./energy	0.01	-	2.01	0.10	-	-	-	-	-	-	2.12
of which: chem./petrochem.	-	-	1.55	0.10	-	-	-	-	-	-	1.65
in transport	-	-	0.06	-	-	-	-	-	-	-	0.06
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>1.05</b>	<b>-</b>	<b>0.40</b>	<b>0.62</b>	<b>63.10</b>	<b>62.02</b>	<b>15.62</b>	<b>13.08</b>	<b>-</b>	<b>-</b>	<b>155.89</b>
Electricity plants	-	-	0.02	-	63.10	62.02	15.62	-	-	-	140.76
CHP plants	1.05	-	0.38	0.62	-	-	-	13.08	-	-	15.13
<b>Heat generated - PJ</b>	<b>11.83</b>	<b>-</b>	<b>4.26</b>	<b>7.77</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>152.54</b>	<b>0.86</b>	<b>16.17</b>	<b>193.43</b>
CHP plants	10.58	-	2.57	7.50	-	-	-	116.10	0.31	4.72	141.78
Heat plants	1.25	-	1.69	0.27	-	-	-	36.44	0.55	11.45	51.65

1. Includes peat.

2. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Sweden

## Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal <sup>1</sup>	Crude oil <sup>2</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	0.11	-	-	-	16.42	5.55	1.54	10.99	-	0.15	34.75
Imports	1.98	20.75	9.58	0.67	-	-	-	1.47	1.02	-	35.48
Exports	-0.02	-1.95	-16.96	-	-	-	-	-0.35	-2.66	-	-21.93
Intl. marine bunkers	-	-	-2.30	-	-	-	-	-	-	-	-2.30
Intl. aviation bunkers	-	-	-0.83	-	-	-	-	-	-	-	-0.83
Stock changes	-0.02	0.50	1.59	-	-	-	-	0.01	-	-	2.07
<b>TPES</b>	<b>2.04</b>	<b>19.30</b>	<b>-8.92</b>	<b>0.67</b>	<b>16.42</b>	<b>5.55</b>	<b>1.54</b>	<b>12.13</b>	<b>-1.63</b>	<b>0.15</b>	<b>47.23</b>
Electricity and Heat Output											
Elec. generated - TWh	2.04	-	0.51	0.38	63.01	64.51	17.74	11.96	-	-	160.14
Heat generated - PJ	9.86	-	2.86	3.06	-	-	-	143.32	0.88	10.50	170.49

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes peat.
2. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	9.3	16.1	29.7	30.5	32.9	33.9	34.9	34.8
Net imports (Mtoe)	30.3	27.6	18.3	19.3	19.9	14.6	16.9	13.6
Total primary energy supply (Mtoe)	38.8	40.5	47.2	47.6	50.9	45.5	49.2	47.2
Net oil imports (Mtoe)	28.6	25.9	15.3	15.7	15.5	13.0	13.9	11.4
Oil supply (Mtoe)	27.9	22.6	14.3	13.6	13.9	10.0	11.7	10.4
Electricity consumption (TWh) <sup>1</sup>	71.2	89.0	135.5	139.1	140.1	133.2	136.7	133.6
GDP (billion 2010 USD)	228.5	258.4	321.1	396.5	488.4	542.8	560.4	573.2
GDP PPP (billion 2010 USD)	182.8	206.8	256.9	317.3	390.8	434.3	448.4	458.2
Population (millions)	8.14	8.31	8.56	8.87	9.38	9.80	9.93	10.07
Industrial production index (2010=100)	56.7	56.4	68.4	98.6	100.0	97.5	99.3	103.5
Total self-sufficiency <sup>2</sup>	0.24	0.40	0.63	0.64	0.65	0.75	0.71	0.74
Coal self-sufficiency <sup>2</sup>	0.00	0.00	0.06	0.07	0.10	0.05	0.06	0.05
Oil self-sufficiency <sup>2</sup>	-	0.00	0.00	-	-	-	-	-
Natural gas self-sufficiency <sup>2</sup>	-	-	-	-	-	-	-	-
TPES/GDP (toe per thousand 2010 USD)	0.17	0.16	0.15	0.12	0.10	0.08	0.09	0.08
TPES/GDP PPP (toe per thousand 2010 USD)	0.21	0.20	0.18	0.15	0.13	0.10	0.11	0.10
TPES/population (toe per capita)	4.77	4.87	5.51	5.36	5.43	4.64	4.96	4.69
Net oil imports/GDP (toe per thousand 2010 USD)	0.13	0.10	0.05	0.04	0.03	0.02	0.02	0.02
Oil supply/GDP (toe per thousand 2010 USD)	0.12	0.09	0.04	0.03	0.03	0.02	0.02	0.02
Oil supply/population (toe per capita)	3.43	2.72	1.67	1.53	1.48	1.02	1.18	1.03
Share of renewables in TPES	0.22	0.23	0.24	0.31	0.33	0.42	0.37	0.39
Share of renewables in electricity generation	0.77	0.62 e	0.51	0.57	0.55	0.63	0.57	0.58
TFC/GDP (toe per thousand 2010 USD)	0.15	0.13	0.10	0.09	0.07	0.06	0.06	..
TFC/GDP PPP (toe per thousand 2010 USD)	0.19	0.17	0.13	0.11	0.09	0.07	0.07	..
TFC/population (toe per capita)	4.28	4.16	3.75	3.98	3.72	3.29	3.36	..
Elect. cons./GDP (kWh per 2010 USD)	0.31	0.34	0.42	0.35	0.29	0.25	0.24	0.23
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	0.39	0.43	0.53	0.44	0.36	0.31	0.31	0.29
Elect. cons./population (kWh per capita)	8745	10704	15836	15682	14935	13594	13756	13264
Industry cons. <sup>3</sup> /industrial production (2010=100)	197.5	173.5	146.1	112.6	100.0	95.6	95.6	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	463.4	348.5	187.7	151.1	100.0	81.3	92.1	..

1. Electricity consumption equals domestic supply less losses.
2. Production divided by TPES. Coal self-sufficiency also includes peat, when applicable.
3. Includes non-energy use.



## Switzerland

Figure 1. Energy production

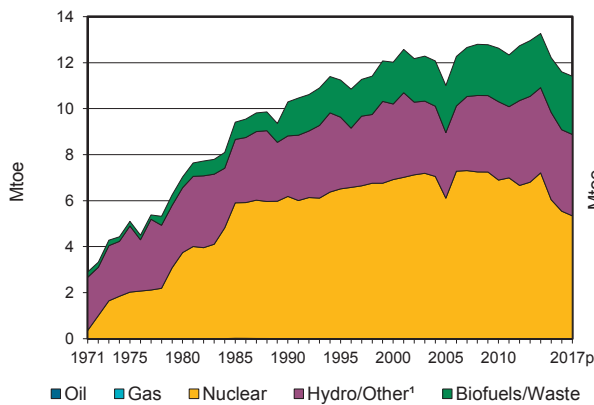


Figure 2. Total primary energy supply<sup>2</sup>

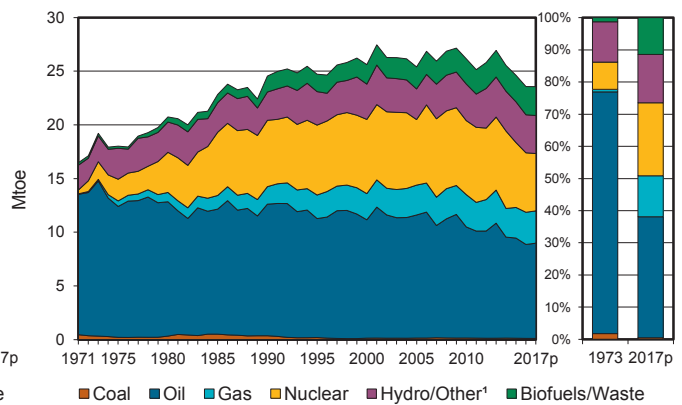


Figure 3. Energy self-sufficiency

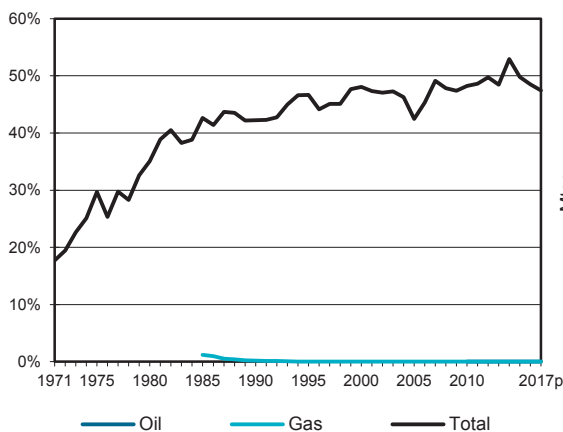


Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>

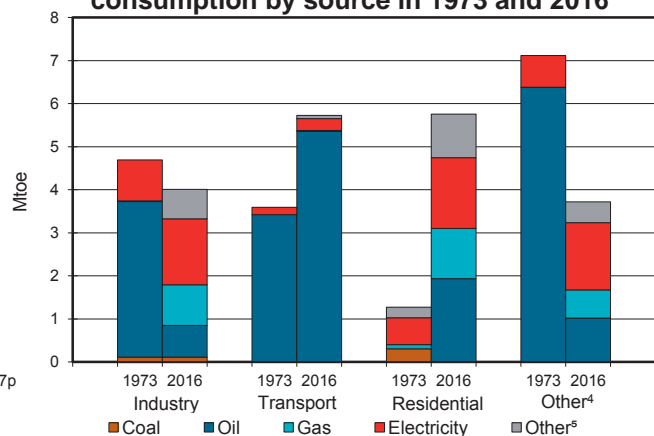


Figure 5. Electricity generation by source

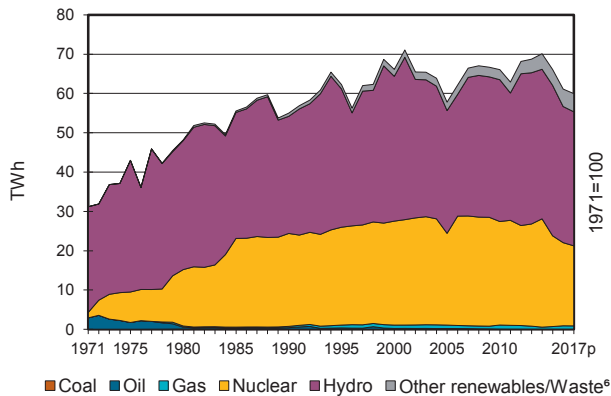
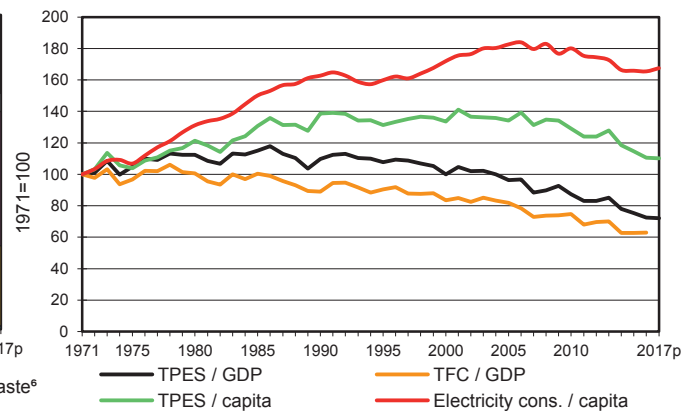


Figure 6. Selected indicators



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.

## Switzerland

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	-	-	-	5.54	2.98	0.56	2.52	-	0.00	11.60
Imports	0.11	3.10	7.88	3.00	-	-	-	0.12	2.93	-	17.14
Exports	-	-0.02	-0.46	-	-	-	-	-0.01	-2.59	-	-3.07
Intl. marine bunkers	-	-	-0.01	-	-	-	-	-	-	-	-0.01
Intl. aviation bunkers	-	-	-1.70	-	-	-	-	-	-	-	-1.70
Stock changes	0.00	0.02	-0.08	-	-	-	-	-0.00	-	-	-0.06
<b>TPES</b>	<b>0.11</b>	<b>3.10</b>	<b>5.65</b>	<b>3.00</b>	<b>5.54</b>	<b>2.98</b>	<b>0.56</b>	<b>2.62</b>	<b>0.34</b>	<b>0.00</b>	<b>23.90</b>
Transfers	-	-	0.00	-	-	-	-	-	-	-	0.00
Statistical differences	-	0.00	0.47	-	-	-	-	-	-	-	0.47
Electricity plants	-	-	-0.00	-	-5.51	-2.98	-0.12	-0.00	4.92	-	-3.69
CHP plants	-	-	-0.01	-0.14	-0.03	-	-	-1.27	0.33	0.45	-0.67
Heat plants	-	-	-0.00	-0.08	-	-	-	-	-0.00	0.07	-0.01
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	0.02	-	-	-	-0.02	-	-	-0.00
Coke/pat. fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-3.10	3.09	-	-	-	-	-	-	-	-0.02
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-0.00	-	-	-	-	-	-	-	-0.00
Energy industry own use	-	-	-0.15	-0.00	-	-	-	-	-0.20	-	-0.35
Losses	-	-	-	-0.01	-	-	-	-	-0.38	-0.04	-0.43
<b>TFC</b>	<b>0.11</b>	<b>-</b>	<b>9.04</b>	<b>2.79</b>	<b>-</b>	<b>-</b>	<b>0.44</b>	<b>1.33</b>	<b>5.01</b>	<b>0.48</b>	<b>19.20</b>
<b>INDUSTRY</b>	<b>0.11</b>	<b>-</b>	<b>0.35</b>	<b>0.95</b>	<b>-</b>	<b>-</b>	<b>0.03</b>	<b>0.48</b>	<b>1.53</b>	<b>0.17</b>	<b>3.62</b>
Iron and steel	0.01	-	0.00	0.08	-	-	-	0.00	0.12	-	0.21
Chemical and petrochemical	-	-	0.02	0.32	-	-	-	0.09	0.26	0.03	0.72
Non-ferrous metals	-	-	0.00	0.04	-	-	-	-	0.04	0.00	0.08
Non-metallic minerals	0.10	-	0.06	0.09	-	-	-	0.12	0.10	-	0.47
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	0.09	0.10	-	-	-	0.00	0.37	0.01	0.58
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	0.00	-	0.06	0.18	-	-	-	0.00	0.22	0.01	0.47
Paper, pulp and printing	-	-	0.01	0.06	-	-	-	0.05	0.15	0.06	0.33
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	0.05	0.02	-	-	-	0.07	0.05	0.00	0.19
Textile and leather	-	-	0.01	0.02	-	-	-	0.00	0.02	0.00	0.04
Non-specified	-	-	0.04	0.04	-	-	0.03	0.14	0.22	0.06	0.53
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>5.32</b>	<b>0.02</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.07</b>	<b>0.28</b>	<b>-</b>	<b>5.69</b>
Domestic aviation	-	-	0.07	-	-	-	-	-	-	-	0.07
Road	-	-	5.24	0.01	-	-	-	0.07	-	-	5.33
Rail	-	-	0.01	-	-	-	-	-	0.28	-	0.29
Pipeline transport	-	-	-	0.01	-	-	-	-	-	-	0.01
Domestic navigation	-	-	0.01	-	-	-	-	-	-	-	0.01
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>0.00</b>	<b>-</b>	<b>2.95</b>	<b>1.82</b>	<b>-</b>	<b>-</b>	<b>0.41</b>	<b>0.78</b>	<b>3.20</b>	<b>0.31</b>	<b>9.47</b>
Residential	0.00	-	1.93	1.16	-	-	0.35	0.47	1.64	0.18	5.75
Comm. and public services	-	-	0.83	0.64	-	-	0.05	0.28	1.48	0.12	3.41
Agriculture/forestry	-	-	-	0.01	-	-	0.00	0.02	0.08	-	0.11
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	0.19	-	-	-	-	-	-	-	0.19
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>0.42</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.42</b>
in industry/transf./energy	-	-	0.38	-	-	-	-	-	-	-	0.38
of which: chem./petrochem.	-	-	0.09	-	-	-	-	-	-	-	0.09
in transport	-	-	0.03	-	-	-	-	-	-	-	0.03
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>-</b>	<b>-</b>	<b>0.04</b>	<b>0.87</b>	<b>21.15</b>	<b>34.62</b>	<b>1.44</b>	<b>2.99</b>	<b>-</b>	<b>-</b>	<b>61.11</b>
Electricity plants	-	-	0.01	-	21.15	34.62	1.44	0.00	-	-	57.22
CHP plants	-	-	0.03	0.87	-	-	-	2.99	-	-	3.89
<b>Heat generated - PJ</b>	<b>-</b>	<b>-</b>	<b>0.19</b>	<b>4.16</b>	<b>1.33</b>	<b>-</b>	<b>-</b>	<b>16.17</b>	<b>-</b>	<b>0.10</b>	<b>21.95</b>
CHP plants	-	-	0.04	1.22	1.33	-	-	16.17	-	-	18.76
Heat plants	-	-	0.15	2.94	-	-	-	-	-	0.10	3.19

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Switzerland

## Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	-	-	-	5.34	2.93	0.61	2.53	-	0.00	11.41
Imports	0.11	2.98	7.85	3.01	-	-	-	0.16	3.14	-	17.25
Exports	-	-	-0.37	-	-	-	-	-0.00	-2.66	-	-3.03
Intl. marine bunkers	-	-	-0.01	-	-	-	-	-	-	-	-0.01
Intl. aviation bunkers	-	-	-1.72	-	-	-	-	-	-	-	-1.72
Stock changes	-	0.01	0.14	-	-	-	-	-0.00	-	-	0.14
<b>TPES</b>	<b>0.11</b>	<b>2.99</b>	<b>5.88</b>	<b>3.01</b>	<b>5.34</b>	<b>2.93</b>	<b>0.61</b>	<b>2.69</b>	<b>0.48</b>	<b>0.00</b>	<b>24.04</b>
Electricity and Heat Output											
Elec. generated - TWh	-	-	0.04	0.84	20.38	34.09	1.73	2.89	-	-	59.97
Heat generated - PJ	-	-	0.19	4.15	1.32	-	-	16.16	-	0.10	21.93

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	4.3	7.0	10.3	12.0	12.6	12.2	11.6	11.4
Net imports (Mtoe)	15.1	14.1	15.0	14.1	14.9	13.6	14.1	14.2
Total primary energy supply (Mtoe)	18.9	20.0	24.4	25.0	26.2	24.5	23.9	24.0
Net oil imports (Mtoe)	15.0	13.4	13.2	12.1	11.7	10.6	10.5	10.5
Oil supply (Mtoe)	14.5	12.5	12.3	11.0	10.4	9.3	8.8	8.9
Electricity consumption (TWh) <sup>1</sup>	31.6	37.9	50.0	56.4	64.0	62.1	62.6	64.0
GDP (billion 2010 USD)	339.2	346.9	432.1	487.2	583.8	633.4	642.1	648.8
GDP PPP (billion 2010 USD)	241.7	247.2	308.0	347.2	416.1	451.4	457.6	462.0
Population (millions)	6.44	6.39	6.80	7.25	7.86	8.28	8.37	8.45
Industrial production index (2010=100)	53.0	53.5	65.2	82.4	100.0	105.9	106.0	111.3
Total self-sufficiency <sup>2</sup>	0.23	0.35	0.42	0.48	0.48	0.50	0.49	0.47
Coal self-sufficiency <sup>2</sup>	-	-	-	-	-	-	-	-
Oil self-sufficiency <sup>2</sup>	-	-	-	-	0.00	-	-	-
Natural gas self-sufficiency <sup>2</sup>	-	-	0.00	-	-	-	-	-
TPES/GDP (toe per thousand 2010 USD)	0.06	0.06	0.06	0.05	0.04	0.04	0.04	0.04
TPES/GDP PPP (toe per thousand 2010 USD)	0.08	0.08	0.08	0.07	0.06	0.05	0.05	0.05
TPES/population (toe per capita)	2.94	3.14	3.58	3.45	3.33	2.96	2.86	2.84
Net oil imports/GDP (toe per thousand 2010 USD)	0.04	0.04	0.03	0.02	0.02	0.02	0.02	0.02
Oil supply/GDP (toe per thousand 2010 USD)	0.04	0.04	0.03	0.02	0.02	0.01	0.01	0.01
Oil supply/population (toe per capita)	2.24	1.96	1.80	1.52	1.32	1.13	1.05	1.05
Share of renewables in TPES	0.14	0.16	0.15	0.18	0.19	0.22	0.22	0.22
Share of renewables in electricity generation	0.76	0.69	0.55	0.57	0.57	0.62	0.62	0.63
TFC/GDP (toe per thousand 2010 USD)	0.05	0.05	0.04	0.04	0.04	0.03	0.03	..
TFC/GDP PPP (toe per thousand 2010 USD)	0.07	0.07	0.06	0.06	0.05	0.04	0.04	..
TFC/population (toe per capita)	2.59	2.60	2.70	2.67	2.65	2.29	2.29	..
Elect. cons./GDP (kWh per 2010 USD)	0.09	0.11	0.12	0.12	0.11	0.10	0.10	0.10
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	0.13	0.15	0.16	0.16	0.15	0.14	0.14	0.14
Elect. cons./population (kWh per capita)	4906	5931	7357	7776	8142	7499	7481	7573
Industry cons. <sup>3</sup> /industrial production (2010=100)	202.4	190.6	139.6	119.2	100.0	87.1	86.5	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	640.2	475.2	215.4	148.7	100.0	69.0	65.4	..

1. Electricity consumption equals domestic supply less losses.

2. Production divided by TPES.

3. Includes non-energy use.

## Turkey

Figure 1. Energy production

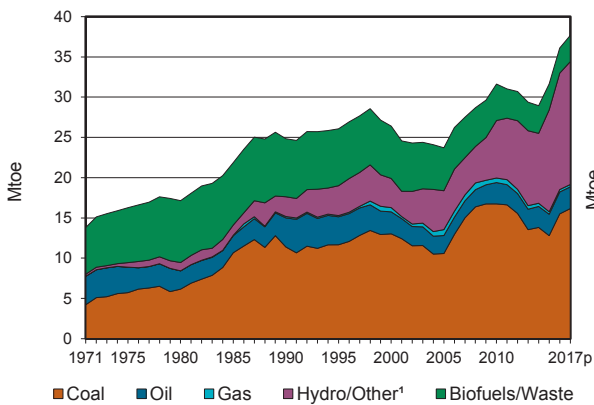


Figure 2. Total primary energy supply<sup>2</sup>

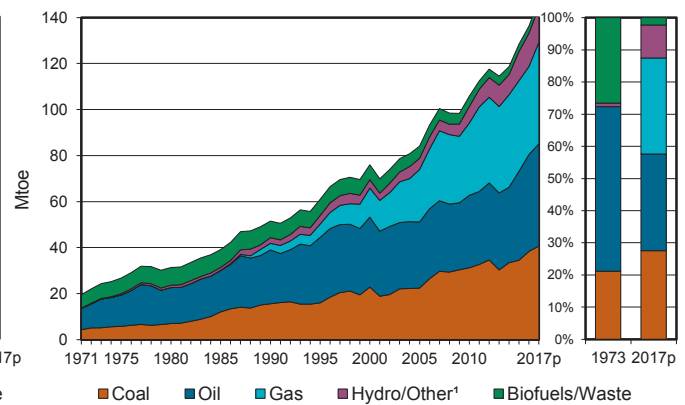


Figure 3. Energy self-sufficiency

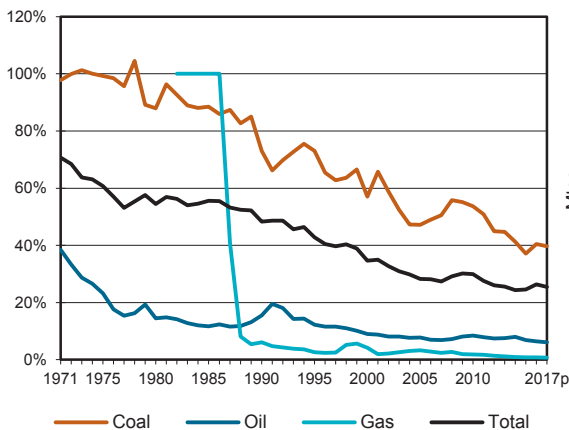


Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>

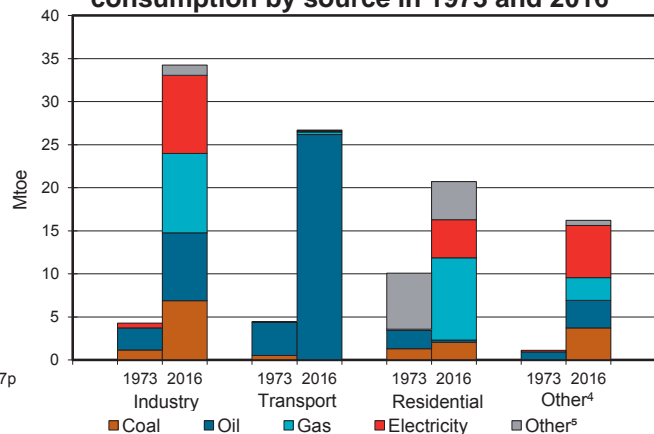


Figure 5. Electricity generation by source

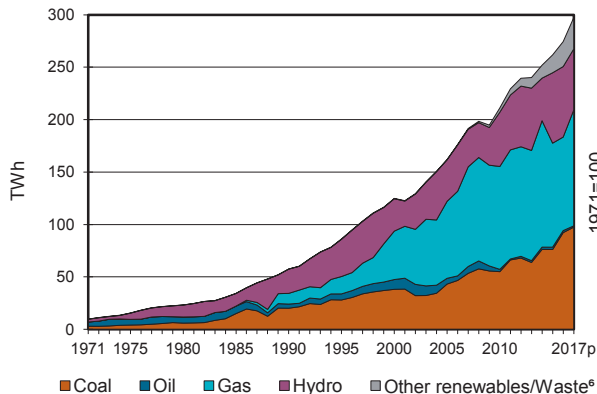
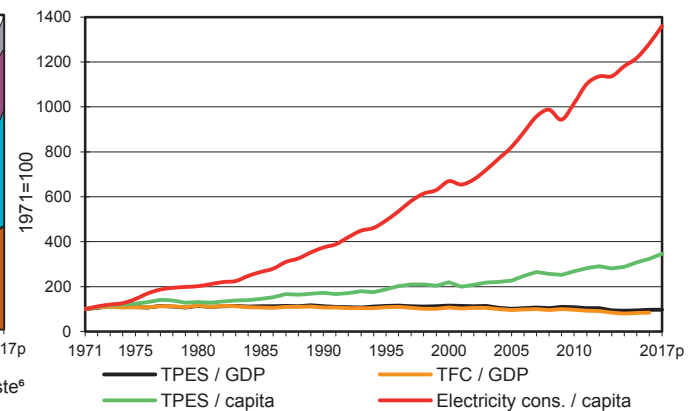


Figure 6. Selected indicators



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.

## Turkey

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	15.50	2.72	-	0.30	-	5.78	8.68	3.12	-	-	36.10
Imports	23.54	26.49	24.25	38.17	-	-	-	-	0.54	-	112.98
Exports	-0.16	-0.67	-5.80	-0.56	-	-	-	-	-0.12	-	-7.31
Intl. marine bunkers	-	-	-0.86	-	-	-	-	-	-	-	-0.86
Intl. aviation bunkers	-	-	-3.42	-	-	-	-	-	-	-	-3.42
Stock changes	-0.53	-0.24	-0.34	0.35	-	-	-	0.00	-	-	-0.77
<b>TPES</b>	<b>38.34</b>	<b>28.29</b>	<b>13.82</b>	<b>38.26</b>	-	<b>5.78</b>	<b>8.68</b>	<b>3.12</b>	<b>0.42</b>	-	<b>136.72</b>
Transfers	-	1.49	-1.42	-	-	-	-	-	-	-	0.07
Statistical differences	-0.44	-0.89	0.18	-0.06	-	-	-	-	-	-	-1.22
Electricity plants	-21.63	-	-0.29	-12.92	-	-5.78	-5.63	-0.25	22.83	-	-23.68
CHP plants	-0.24	-	-0.12	-1.78	-	-	-	-0.18	0.77	0.93	-0.62
Heat plants	-	-	-	-	-	-	-0.34	-	-	0.34	-
Blast furnaces	-1.88 e	-	-	-	-	-	-	-	-	-	-1.88
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat. fuel/BKB/PB plants	-0.55	-	-	-	-	-	-	-	-	-	-0.55
Oil refineries	-	-31.35	30.00	-	-	-	-	-	-	-	-1.35
Petrochemical plants	-	2.00	-2.02	-	-	-	-	-	-	-	-0.02
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	0.46	-	-0.38	-	-	-	-	-	-0.34	-0.25
Energy industry own use	-0.97	-	-2.66	-1.36	-	-	-	-	-1.31	-	-6.30
Losses	-	-	-	-0.00	-	-	-	-	-3.06	-	-3.07
<b>TFC</b>	<b>12.63</b>	-	<b>37.49</b>	<b>21.75</b>	-	-	<b>2.72</b>	<b>2.70</b>	<b>19.64</b>	<b>0.93</b>	<b>97.85</b>
<b>INDUSTRY</b>	<b>6.88</b>	-	<b>0.83</b>	<b>8.56</b>	-	-	<b>0.29</b>	-	<b>9.07</b>	<b>0.93</b>	<b>26.55</b>
Iron and steel	1.37 e	-	0.05	1.06	-	-	-	-	1.95	-	4.42
Chemical and petrochemical	0.58	-	0.09	1.80	-	-	-	-	0.46	-	2.93
Non-ferrous metals	0.21	-	-	0.48	-	-	-	-	0.27	-	0.96
Non-metallic minerals	2.98	-	0.08	1.54	-	-	-	-	1.22	-	5.83
Transport equipment	0.00	-	0.03	0.15	-	-	-	-	-	-	0.18
Machinery	0.03	-	0.00	0.14	-	-	-	-	0.55	-	0.73
Mining and quarrying	0.02	-	0.27	0.09	-	-	-	-	0.13	-	0.52
Food and tobacco	0.76	-	0.08	1.02	-	-	-	-	0.64	-	2.51
Paper, pulp and printing	0.20	-	0.02	0.23	-	-	-	-	0.29	-	0.75
Wood and wood products	0.02	-	0.01	0.16	-	-	-	-	0.26	-	0.45
Construction	0.00	-	0.14	0.45	-	-	-	-	0.26	-	0.85
Textile and leather	0.69	-	0.00	0.90	-	-	-	-	1.37	-	2.96
Non-specified	0.01	-	0.04	0.54	-	-	0.29	-	1.67	0.93	3.47
<b>TRANSPORT</b>	-	-	<b>25.95</b>	<b>0.33</b>	-	-	-	<b>0.11</b>	<b>0.10</b>	-	<b>26.48</b>
Domestic aviation	-	-	1.38	-	-	-	-	-	-	-	1.38
Road	-	-	24.16	0.07	-	-	-	0.11	-	-	24.33
Rail	-	-	0.11	-	-	-	-	-	0.08	-	0.18
Pipeline transport	-	-	-	0.26	-	-	-	-	0.02	-	0.28
Domestic navigation	-	-	0.31	-	-	-	-	-	-	-	0.31
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>5.76</b>	-	<b>3.44</b>	<b>12.21</b>	-	-	<b>2.43</b>	<b>2.59</b>	<b>10.47</b>	-	<b>36.90</b>
Residential	2.05	-	0.25	9.57	-	-	1.85	2.59	4.40	-	20.71
Comm. and public services	3.70	-	0.67	2.55	-	-	-	-	5.48	-	12.41
Agriculture/forestry	-	-	2.43	0.06	-	-	0.58	-	0.57	-	3.64
Fishing	-	-	0.09	0.04	-	-	-	-	0.01	-	0.14
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>NON-ENERGY USE</b>	-	-	<b>7.26</b>	<b>0.64</b>	-	-	-	-	-	-	<b>7.91</b>
in industry/transf./energy	-	-	7.05	0.64	-	-	-	-	-	-	7.70
of which: chem./petrochem.	-	-	0.50	0.64	-	-	-	-	-	-	1.15
in transport	-	-	0.21	-	-	-	-	-	-	-	0.21
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>92.27</b>	-	<b>1.93</b>	<b>89.23</b>	-	<b>67.23</b>	<b>22.09</b>	<b>1.66</b>	-	-	<b>274.41</b>
Electricity plants	91.43	-	1.47	82.14	-	67.23	22.09	1.11	-	-	265.47
CHP plants	0.85	-	0.45	7.09	-	-	-	0.55	-	-	8.94
<b>Heat generated - PJ</b>	<b>1.61</b>	-	<b>1.73</b>	<b>32.09</b>	-	-	<b>14.06</b>	<b>3.41</b>	-	-	<b>52.90</b>
CHP plants	1.61	-	1.73	32.09	-	-	-	3.41	-	-	38.84
Heat plants	-	-	-	-	-	-	14.06	-	-	-	14.06

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Turkey

## Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	16.15	2.70	-	0.29	-	5.01	10.26	3.26	-	-	37.67
Imports	24.78	27.35	26.00	45.38	-	-	-	-	0.23	-	123.74
Exports	-0.18	-0.47	-6.30	-0.52	-	-	-	-	-0.28	-	-7.75
Intl. marine bunkers	-	-	-0.83	-	-	-	-	-	-	-	-0.83
Intl. aviation bunkers	-	-	-3.40	-	-	-	-	-	-	-	-3.40
Stock changes	-0.09	-0.30	-0.26	-1.03	-	-	-	-	-	-	-1.69
<b>TPES</b>	<b>40.66</b>	<b>29.27</b>	<b>15.21</b>	<b>44.13</b>	<b>-</b>	<b>5.01</b>	<b>10.26</b>	<b>3.26</b>	<b>-0.05</b>	<b>-</b>	<b>147.74</b>
Electricity and Heat Output											
Elec. generated - TWh	97.48	-	1.20	110.49	-	58.22	27.77	2.12	-	-	297.28
Heat generated - PJ	1.45	-	1.90	31.91	-	-	16.52	4.23	-	-	56.01

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	15.5	17.1	24.8	26.4	31.6	31.7	36.1	37.7
Net imports (Mtoe)	8.9	14.4	27.8	50.7	75.9	103.6	105.7	116.0
Total primary energy supply (Mtoe)	24.4	31.5	51.4	76.3	105.7	128.8	136.7	147.7
Net oil imports (Mtoe)	8.8	13.7	21.2	29.3	30.6	42.1	44.3	46.6
Oil supply (Mtoe)	12.5	15.6	23.4	30.4	31.5	38.7	42.1	44.5
Electricity consumption (TWh) <sup>1</sup>	11.1	21.8	50.1	104.5	180.2	229.2	243.7	261.1
GDP (billion 2010 USD)	172.2	219.0	364.0	520.9	771.9	1087.8	1122.5	1205.8
GDP PPP (billion 2010 USD)	281.7	358.3	595.4	852.3	1262.8	1779.7	1836.4	1970.7
Population (millions)	38.07	44.44	55.12	64.25	73.00	77.44	78.25	79.04
Industrial production index (2010=100)	..	..	45.2	63.2	100.0	144.1	149.0	162.3
Total self-sufficiency <sup>2</sup>	0.64	0.54	0.48	0.35	0.30	0.25	0.26	0.26
Coal self-sufficiency <sup>2</sup>	1.01	0.88	0.73	0.57	0.54	0.37	0.40	0.40
Oil self-sufficiency <sup>2</sup>	0.29	0.15	0.15	0.09	0.08	0.07	0.06	0.06
Natural gas self-sufficiency <sup>2</sup>	-	-	0.06	0.04	0.02	0.01	0.01	0.01
TPES/GDP (toe per thousand 2010 USD)	0.14	0.14	0.14	0.15	0.14	0.12	0.12	0.12
TPES/GDP PPP (toe per thousand 2010 USD)	0.09	0.09	0.09	0.09	0.08	0.07	0.07	0.08
TPES/population (toe per capita)	0.64	0.71	0.93	1.19	1.45	1.66	1.75	1.87
Net oil imports/GDP (toe per thousand 2010 USD)	0.05	0.06	0.06	0.06	0.04	0.04	0.04	0.04
Oil supply/GDP (toe per thousand 2010 USD)	0.07	0.07	0.06	0.06	0.04	0.04	0.04	0.04
Oil supply/population (toe per capita)	0.33	0.35	0.42	0.47	0.43	0.50	0.54	0.56
Share of renewables in TPES	0.28	0.28	0.19	0.13	0.11	0.12	0.13	0.12
Share of renewables in electricity generation	0.23	0.49	0.40	0.25	0.26	0.32	0.33	0.29
TFC/GDP (toe per thousand 2010 USD)	0.12	0.12	0.11	0.11	0.10	0.09	0.09	..
TFC/GDP PPP (toe per thousand 2010 USD)	0.07	0.07	0.07	0.07	0.06	0.05	0.05	..
TFC/population (toe per capita)	0.52	0.59	0.73	0.90	1.08	1.21	1.25	..
Elect. cons./GDP (kWh per 2010 USD)	0.06	0.10	0.14	0.20	0.23	0.21	0.22	0.22
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	0.04	0.06	0.08	0.12	0.14	0.13	0.13	0.13
Elect. cons./population (kWh per capita)	293	490	910	1627	2469	2960	3114	3303
Industry cons. <sup>3</sup> /industrial production (2010=100)	..	..	102.7	124.5	100.0	77.4	78.4	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	..	..	179.9	169.4	100.0	66.9	71.2	..

1. Electricity consumption equals domestic supply less losses.

2. Production divided by TPES.

3. Includes non-energy use.

## United Kingdom

Figure 1. Energy production

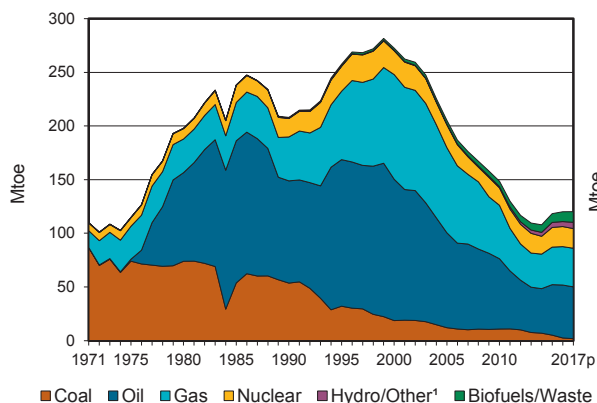


Figure 2. Total primary energy supply<sup>2</sup>

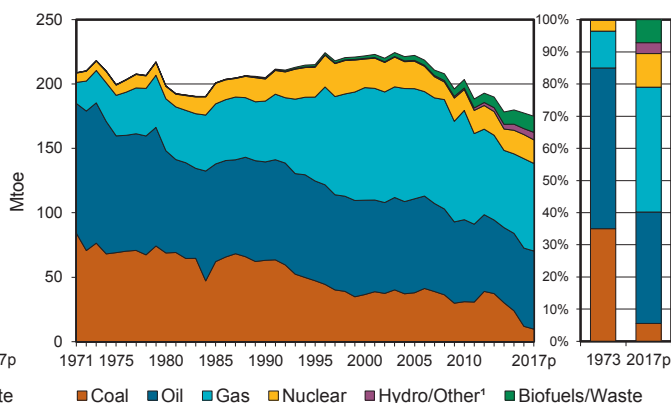


Figure 3. Energy self-sufficiency

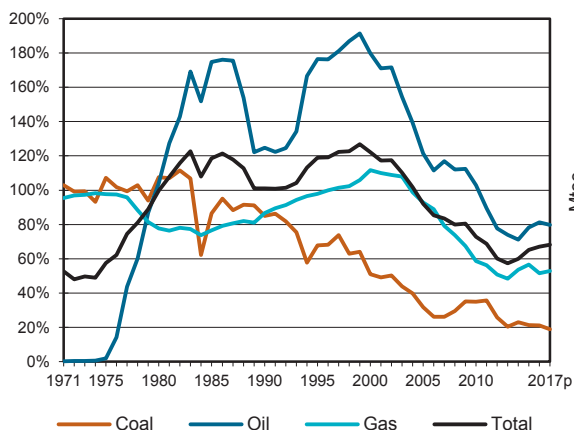


Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>

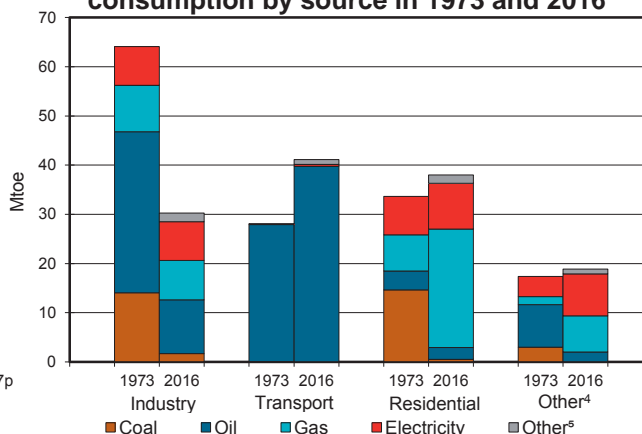


Figure 5. Electricity generation by source

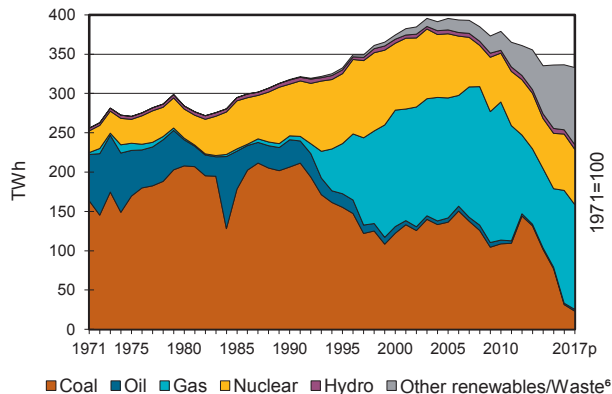
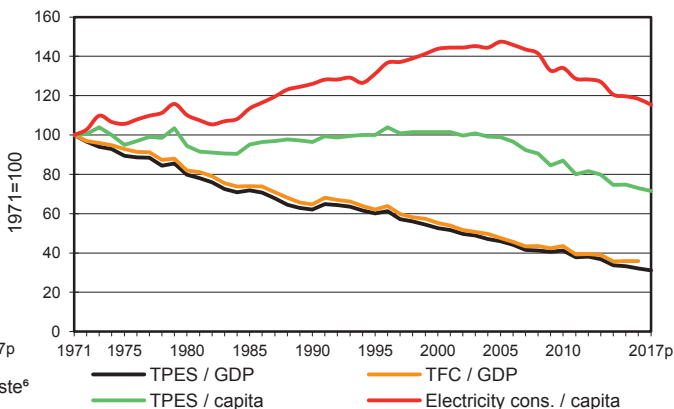


Figure 6. Selected indicators



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.

## United Kingdom

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./ Solar/ etc.	Biofuels/ Waste	Electricity	Heat	Total
Production	2.50	49.29	-	35.81	18.69	0.46	4.16	9.15	-	-	120.07
Imports	6.35	50.41	35.59	40.76	-	-	-	3.21	1.69	-	138.01
Exports	-0.33	-36.17	-24.77	-8.42	-	-	-	-0.30	-0.19	-	-70.18
Intl. marine bunkers	-	-	-2.65	-	-	-	-	-	-	-	-2.65
Intl. aviation bunkers	-	-	-10.93	-	-	-	-	-	-	-	-10.93
Stock changes	3.33	-0.10	0.06	1.26	-	-	-	0.03	-	-	4.58
<b>TPES</b>	<b>11.85</b>	<b>63.42</b>	<b>-2.69</b>	<b>69.41</b>	<b>18.69</b>	<b>0.46</b>	<b>4.16</b>	<b>12.08</b>	<b>1.51</b>	<b>-</b>	<b>178.89</b>
Transfers	-	-1.80	1.91	-	-	-	-	-	-	-	0.11
Statistical differences	-0.14	0.33	-0.36	-0.11	-	-	0.00	0.00	-	-	-0.29
Electricity plants	-7.39	-	-0.19	-20.65	-18.69	-0.46	-4.11	-7.13	27.25	-	-31.36
CHP plants	-0.03	-	-0.35	-2.42	-	-	-	-0.60	1.67	-	-1.72
Heat plants	-0.18	-	-0.06	-2.02	-	-	-	-0.05	-	1.41	-0.90
Blast furnaces	-1.30 e	-	-	-	-	-	-	-	-	-	-1.30
Gas works	-	-	-	0.15	-	-	-	-0.14	-	-	0.01
Coke/pat. fuel/BKB/PB plants	-0.04	-	-0.07	-0.03	-	-	-	-	-	-	-0.14
Oil refineries	-	-62.40	61.35	-	-	-	-	-	-	-	-1.04
Petrochemical plants	-	0.44	-0.49	-	-	-	-	-	-	-	-0.05
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	0.03	-	-	-	-	-	-	-	-	-	0.03
Energy industry own use	-0.41	-	-4.04	-4.47	-	-	-	-	-2.03	-0.27	-11.21
Losses	-0.09	-	-	-0.42	-	-	-	-	-2.28	-	-2.79
<b>TFC</b>	<b>2.30</b>	<b>-</b>	<b>55.01</b>	<b>39.44</b>	<b>-</b>	<b>-</b>	<b>0.05</b>	<b>4.17</b>	<b>26.13</b>	<b>1.14</b>	<b>128.23</b>
<b>INDUSTRY</b>	<b>1.67</b>	<b>-</b>	<b>3.80</b>	<b>7.58</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1.15</b>	<b>7.90</b>	<b>0.61</b>	<b>22.71</b>
Iron and steel	0.67 e	-	0.00	0.32	-	-	-	-	0.24	-	1.24
Chemical and petrochemical	0.04	-	0.11	1.52	-	-	-	0.02	1.33	0.20	3.22
Non-ferrous metals	0.01	-	-	0.15	-	-	-	-	0.37	-	0.53
Non-metallic minerals	0.51	-	0.18	0.91	-	-	-	0.16	0.52	-	2.27
Transport equipment	0.03	-	0.19	0.70	-	-	-	-	0.40	-	1.33
Machinery	0.01	-	-	0.73	-	-	-	0.00	1.04	-	1.78
Mining and quarrying	-	-	-	-	-	-	-	-	0.01	-	0.01
Food and tobacco	0.03	-	0.13	1.53	-	-	-	0.04	0.92	-	2.65
Paper, pulp and printing	0.08	-	0.03	0.64	-	-	-	0.41	0.91	-	2.08
Wood and wood products	-	-	0.03	0.04	-	-	-	0.10	0.05	-	0.21
Construction	0.00	-	0.18	0.25	-	-	-	-	0.11	-	0.55
Textile and leather	0.04	-	0.04	0.32	-	-	-	-	0.23	-	0.63
Non-specified	0.23	-	2.91	0.46	-	-	-	0.42	1.77	0.41	6.20
<b>TRANSPORT</b>	<b>0.01</b>	<b>-</b>	<b>39.67</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.95</b>	<b>0.40</b>	<b>-</b>	<b>41.03</b>
Domestic aviation	-	-	0.82	-	-	-	-	-	-	-	0.82
Road	-	-	37.72	-	-	-	-	0.95	0.01	-	38.67
Rail	0.01	-	0.59	-	-	-	-	-	0.39	-	0.99
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	0.54	-	-	-	-	-	-	-	0.54
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>0.57</b>	<b>-</b>	<b>4.27</b>	<b>31.46</b>	<b>-</b>	<b>-</b>	<b>0.05</b>	<b>2.08</b>	<b>17.83</b>	<b>0.53</b>	<b>56.78</b>
Residential	0.55	-	2.35	24.10	-	-	0.03	1.64	9.28	0.05	38.01
Comm. and public services	0.02	-	1.17	6.48	-	-	0.02	0.20	8.16	0.47	16.52
Agriculture/forestry	-	-	0.40	0.07	-	-	-	0.23	0.29	-	1.00
Fishing	-	-	0.07	-	-	-	-	-	0.10	-	0.17
Non-specified	0.00	-	0.28	0.81	-	-	-	-	-	-	1.09
<b>NON-ENERGY USE</b>	<b>0.04</b>	<b>-</b>	<b>7.27</b>	<b>0.40</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>7.71</b>
in industry/transf./energy	0.04	-	7.13	0.40	-	-	-	-	-	-	7.57
of which: chem./petrochem.	-	-	4.73	0.40	-	-	-	-	-	-	5.12
in transport	-	-	0.06	-	-	-	-	-	-	-	0.06
in other	-	-	0.08	-	-	-	-	-	-	-	0.08
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>31.48</b>	<b>-</b>	<b>1.84</b>	<b>143.36</b>	<b>71.73</b>	<b>5.40</b>	<b>47.79</b>	<b>34.85</b>	<b>-</b>	<b>-</b>	<b>336.44</b>
Electricity plants	31.35	-	0.57	127.58	71.73	5.40	47.79	32.56	-	-	316.97
CHP plants	0.13	-	1.27	15.78	-	-	-	2.29	-	-	19.47
<b>Heat generated - PJ</b>	<b>4.59</b>	<b>-</b>	<b>1.49</b>	<b>51.57</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1.33</b>	<b>-</b>	<b>-</b>	<b>58.99</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	4.59	-	1.49	51.57	-	-	-	1.33	-	-	58.99

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.



## United Kingdom

## Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	1.82	48.30	-	35.98	18.33	0.51	5.30	9.93	-	-	120.17
Imports	6.16	55.34	33.81	40.53	-	-	-	2.96	1.55	-	140.35
Exports	-0.37	-39.90	-23.56	-9.41	-	-	-	-0.38	-0.28	-	-73.90
Intl. marine bunkers	-	-	-2.44	-	-	-	-	-	-	-	-2.44
Intl. aviation bunkers	-	-	-11.25	-	-	-	-	-	-	-	-11.25
Stock changes	2.05	0.44	-0.11	0.87	-	-	-	0.00	-	-	3.25
<b>TPES</b>	<b>9.66</b>	<b>64.17</b>	<b>-3.56</b>	<b>67.97</b>	<b>18.33</b>	<b>0.51</b>	<b>5.30</b>	<b>12.51</b>	<b>1.27</b>	<b>-</b>	<b>176.18</b>
Electricity and Heat Output											
Elec. generated - TWh	23.17	-	2.19	133.34	70.34	5.94	61.09	36.92	-	-	332.99
Heat generated - PJ	4.59	-	1.49	51.57	-	-	-	1.33	-	-	58.99

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	108.5	197.9	208.0	272.5	148.5	118.3	120.1	120.2
Net imports (Mtoe)	115.8	12.3	4.7	-40.4	62.6	72.6	67.8	66.5
Total primary energy supply (Mtoe)	218.1	198.4	205.9	223.0	203.7	181.6	178.9	176.2
Net oil imports (Mtoe)	116.0	1.9	-11.0	-46.7	10.9	26.9	25.1	25.7
Oil supply (Mtoe)	108.9	79.3	76.4	73.2	63.7	60.1	60.7	60.6
Electricity consumption (TWh) <sup>1</sup>	262.5	263.8	306.7	360.1	357.9	331.4	330.4	324.2
GDP (billion 2010 USD)	1147.6	1231.3	1642.5	2095.2	2441.2	2705.3	2757.6	2806.9
GDP PPP (billion 2010 USD)	1059.6	1136.9	1516.5	1934.5	2253.9	2497.8	2543.7	2589.1
Population (millions)	56.22	56.33	57.24	58.89	62.76	65.11	65.65	66.05
Industrial production index (2010=100)	82.7	81.4	97.1	112.0	100.0	98.6	99.4	101.1
Total self-sufficiency <sup>2</sup>	0.50	1.00	1.01	1.22	0.73	0.65	0.67	0.68
Coal self-sufficiency <sup>2</sup>	0.99	1.08	0.85	0.51	0.35	0.21	0.21	0.19
Oil self-sufficiency <sup>2</sup>	0.01	1.04	1.25	1.80	1.03	0.78	0.81	0.80
Natural gas self-sufficiency <sup>2</sup>	0.97	0.78	0.87	1.12	0.59	0.57	0.52	0.53
TPES/GDP (toe per thousand 2010 USD)	0.19	0.16	0.13	0.11	0.08	0.07	0.06	0.06
TPES/GDP PPP (toe per thousand 2010 USD)	0.21	0.17	0.14	0.12	0.09	0.07	0.07	0.07
TPES/population (toe per capita)	3.88	3.52	3.60	3.79	3.25	2.79	2.73	2.67
Net oil imports/GDP (toe per thousand 2010 USD)	0.10	0.00	-0.01	-0.02	0.00	0.01	0.01	0.01
Oil supply/GDP (toe per thousand 2010 USD)	0.09	0.06	0.05	0.03	0.03	0.02	0.02	0.02
Oil supply/population (toe per capita)	1.94	1.41	1.33	1.24	1.01	0.92	0.93	0.92
Share of renewables in TPES	0.00	0.00	0.01	0.01	0.04	0.08	0.09	0.10
Share of renewables in electricity generation	0.01	0.01	0.02	0.03	0.07	0.25	0.25	0.30
TFC/GDP (toe per thousand 2010 USD)	0.13	0.11	0.08	0.07	0.06	0.05	0.05	..
TFC/GDP PPP (toe per thousand 2010 USD)	0.14	0.12	0.09	0.08	0.06	0.05	0.05	..
TFC/population (toe per capita)	2.55	2.33	2.41	2.56	2.20	1.94	1.95	..
Elect. cons./GDP (kWh per 2010 USD)	0.23	0.21	0.19	0.17	0.15	0.12	0.12	0.12
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	0.25	0.23	0.20	0.19	0.16	0.13	0.13	0.13
Elect. cons./population (kWh per capita)	4669	4683	5358	6115	5702	5089	5033	4908
Industry cons. <sup>3</sup> /industrial production (2010=100)	231.1	168.5	130.9	120.0	100.0	92.3	90.9	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	330.9	193.6	131.0	118.4	100.0	90.1	91.8	..

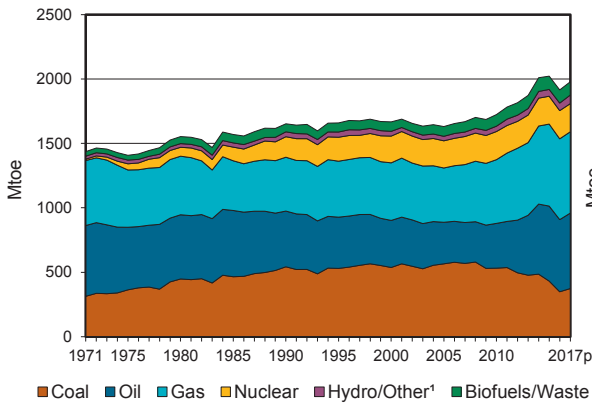
1. Electricity consumption equals domestic supply less losses.

2. Production divided by TPES.

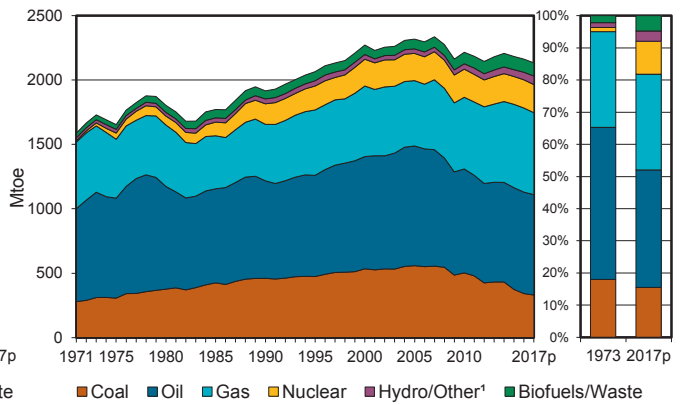
3. Includes non-energy use.

## United States

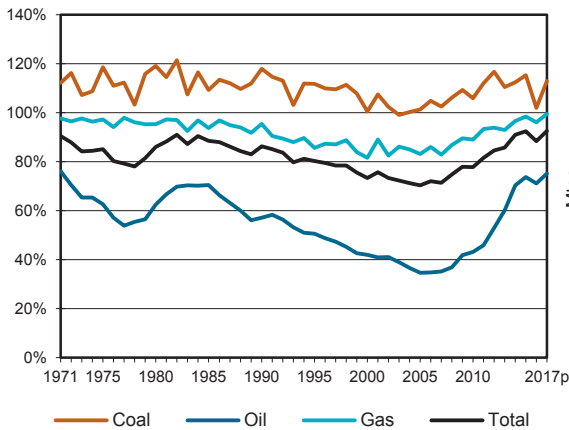
**Figure 1. Energy production**



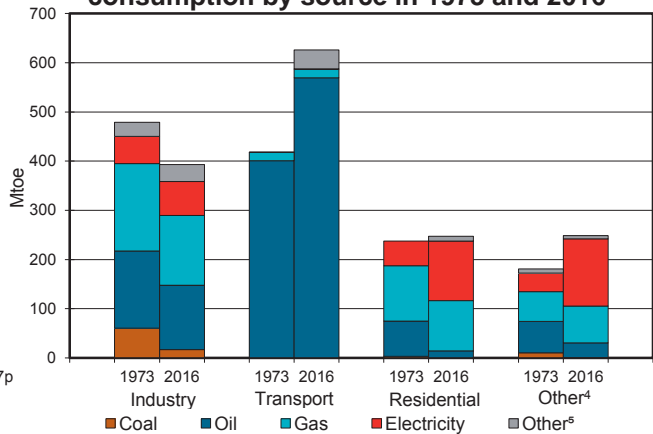
**Figure 2. Total primary energy supply<sup>2</sup>**



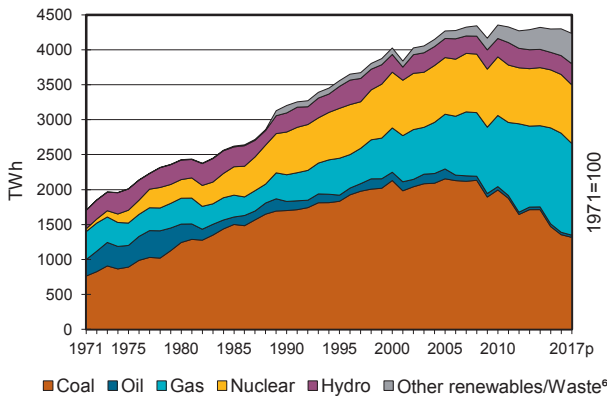
**Figure 3. Energy self-sufficiency**



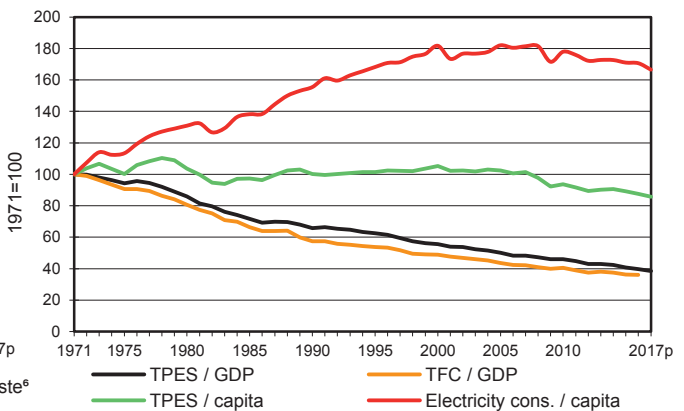
**Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.

## United States

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./ Solar/ etc.	Biofuels/ Waste	Electricity	Heat	Total
Production	348.46	560.15	-	627.32	218.85	23.19	35.62 e	102.11	-	-	1915.69
Imports	5.21	437.18	74.74	69.55	-	-	-	3.21	5.98	-	595.87
Exports	-36.21	-50.84	-187.33	-52.68	-	-	-	-2.97	-0.80	-	-330.82
Intl. marine bunkers	-	-	-16.77	-	-	-	-	-	-	-	-16.77
Intl. aviation bunkers	-	-	-24.62	-	-	-	-	-	-	-	-24.62
Stock changes	24.11	-4.33	-0.89	8.69	-	-	-	-0.30	-	-	27.28
<b>TPES</b>	<b>341.57</b>	<b>942.17</b>	<b>-154.88</b>	<b>652.88</b>	<b>218.85</b>	<b>23.19</b>	<b>35.62 e</b>	<b>102.04</b>	<b>5.18</b>	<b>-</b>	<b>2166.62</b>
Transfers	-	-81.13	83.86	-	-	-	-	-	-	-	2.73
Statistical differences	1.54	2.58	5.50	-7.43	-	-	-0.00	-0.00	-	-	2.18
Electricity plants	-309.38	-	-5.51	-207.03	-218.85	-23.19	-33.37 e	-14.21	342.41	-	-469.11
CHP plants	-6.58	-	-2.03	-40.70	-	-	-	-6.93	27.28	12.13	-16.82
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-3.74 e	-	-	-	-	-	-	-	-	-	-3.74
Gas works	-1.93	-	-	1.13	-	-	-	-	-	-	-0.80
Coke/pat. fuel/BKB/PB plants	-2.84	-	-	-	-	-	-	-	-	-	-2.84
Oil refineries	-	-865.57	848.91	-	-	-	-	-	-	-	-16.66
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	4.95	-	-4.39	-	-	-	-	-	-	0.56
Energy industry own use	-1.14	-	-34.47	-58.38	-	-	-	-0.14	-27.29	-4.05 e	-125.46
Losses	-	-	-	-	-	-	-	-	-20.19	-1.46 e	-21.65
<b>TFC</b>	<b>17.50</b>	<b>3.00</b>	<b>741.39</b>	<b>336.09</b>	<b>-</b>	<b>-</b>	<b>2.25</b>	<b>80.77</b>	<b>327.40</b>	<b>6.63</b>	<b>1515.03</b>
<b>INDUSTRY</b>	<b>16.97</b>	<b>-</b>	<b>20.21</b>	<b>123.29</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>29.73</b>	<b>68.52</b>	<b>5.24</b>	<b>263.96</b>
Iron and steel	3.69 e	-	0.18	7.67	-	-	-	0.00	3.45	0.19 e	15.18
Chemical and petrochemical	2.61	-	3.09	43.65	-	-	-	0.30	10.72	3.21 e	63.58
Non-ferrous metals	-	-	0.50	3.89	-	-	-	0.00	5.91	0.10 e	10.40
Non-metallic minerals	4.58	-	1.42	8.81	-	-	-	0.43	3.13	0.00 e	18.37
Transport equipment	0.00	-	0.18	4.14	-	-	-	0.00	3.78	0.13 e	8.23
Machinery	0.05	-	0.85	8.83	-	-	-	0.01	8.18	0.09 e	18.01
Mining and quarrying	-	-	2.67	2.52	-	-	-	0.06	3.16	-	8.41
Food and tobacco	3.02	-	0.52	18.40	-	-	-	0.55	6.93	0.58 e	29.99
Paper, pulp and printing	1.69	-	0.16	9.47	-	-	-	26.80	6.79	0.49 e	45.40
Wood and wood products	-	-	0.54	1.24	-	-	-	1.24	1.52	0.27 e	4.81
Construction	-	-	7.67	0.41	-	-	-	0.15	5.64	-	13.88
Textile and leather	0.06	-	-	1.04	-	-	-	-	1.54	0.15 e	2.79
Non-specified	1.27	-	2.42	13.24	-	-	-	0.19	7.76	0.02 e	24.89
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>564.83</b>	<b>17.39</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>38.65</b>	<b>0.91</b>	<b>-</b>	<b>621.79</b>
Domestic aviation	-	-	55.29	-	-	-	-	-	-	-	55.29
Road	-	-	489.93	0.99	-	-	-	38.30	0.33	-	529.54
Rail	-	-	11.54	-	-	-	-	0.28	0.59	-	12.41
Pipeline transport	-	-	-	16.40	-	-	-	-	-	-	16.40
Domestic navigation	-	-	8.08	-	-	-	-	0.07	-	-	8.15
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>0.54</b>	<b>-</b>	<b>41.58</b>	<b>176.73</b>	<b>-</b>	<b>-</b>	<b>2.25</b>	<b>12.38</b>	<b>257.97</b>	<b>1.39</b>	<b>492.84</b>
Residential	-	-	14.15	102.19	-	-	0.53	9.16	121.23	-	247.26
Comm. and public services	0.54	-	13.29	73.04	-	-	1.72	2.06	116.95	1.39 e	208.99
Agriculture/forestry	-	-	14.14	1.49	-	-	-	1.16	3.53	-	20.33
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	16.26 e	-	16.26
<b>NON-ENERGY USE</b>	<b>-</b>	<b>3.00</b>	<b>114.77</b>	<b>18.68</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>136.45</b>
in industry/transf./energy	-	3.00	107.53	18.68	-	-	-	-	-	-	129.21
of which: chem./petrochem.	-	3.00	71.22	18.68	-	-	-	-	-	-	92.90
in transport	-	-	4.31	-	-	-	-	-	-	-	4.31
in other	-	-	2.93	-	-	-	-	-	-	-	2.93
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>1354.03</b>	<b>-</b>	<b>34.76</b>	<b>1418.10</b>	<b>839.92</b>	<b>269.67</b>	<b>303.97 e</b>	<b>79.15</b>	<b>-</b>	<b>-</b>	<b>4299.60</b>
Electricity plants	1322.52 e	-	22.68	1186.23	839.92	269.67	300.06 e	41.21	-	-	3982.28
CHP plants	31.52 e	-	12.08	231.88	-	-	3.91	37.94	-	-	317.31
<b>Heat generated - PJ</b>	<b>30.95</b>	<b>-</b>	<b>30.62</b>	<b>388.18</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>58.26</b>	<b>-</b>	<b>-</b>	<b>508.00</b>
CHP plants	30.95 e	-	30.62	388.18	-	-	-	58.26	-	-	508.00
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## United States

## Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./ Solar/ etc.	Biofuels/ Waste	Electricity	Heat	Total
Production	373.14	585.57	-	631.61	218.57	26.00	40.80	102.64	-	-	1978.33
Imports	4.05	440.24	72.57	70.32	-	-	-	2.13	5.65	-	594.97
Exports	-57.43	-80.18	-212.15	-72.80	-	-	-	-3.44	-0.94	-	-426.94
Intl. marine bunkers	-	-	-20.28	-	-	-	-	-	-	-	-20.28
Intl. aviation bunkers	-	-	-25.54	-	-	-	-	-	-	-	-25.54
Stock changes	10.65	14.63	4.63	6.23	-	-	-	0.12	-	-	36.26
<b>TPES</b>	<b>330.41</b>	<b>960.26</b>	<b>-180.77</b>	<b>635.35</b>	<b>218.57</b>	<b>26.00</b>	<b>40.80</b>	<b>101.45</b>	<b>4.71</b>	<b>-</b>	<b>2136.79</b>
Electricity and Heat Output											
Elec. generated - TWh	1316.25	-	31.74	1312.09	838.86	302.38	354.64	78.45	-	-	4234.40
Heat generated - PJ	38.78	-	19.95	366.17	-	-	-	59.35	-	-	484.25

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	1456.4	1553.4	1652.6	1667.4	1724.5	2022.6	1915.7	1978.3
Net imports (Mtoe)	296.4	307.1	341.9	606.4	533.7	256.6	265.0	168.0
Total primary energy supply (Mtoe)	1730.1	1804.8	1915.0	2273.8	2216.9	2187.7	2166.6	2136.8
Net oil imports (Mtoe)	303.4	340.1	374.4	549.5	508.2	266.2	273.8	220.5
Oil supply (Mtoe)	817.5	796.9	756.8	871.2	806.5	789.5	787.3	779.5
Electricity consumption (TWh) <sup>1</sup>	1816.7	2241.0	2923.9	3857.5 e	4143.4	4128.5	4147.5	4077.2
GDP (billion 2010 USD)	5490.3	6529.2	9064.4	12713.1	14964.4	16672.7	16920.3	17305.0
GDP PPP (billion 2010 USD)	5490.3	6529.2	9064.4	12713.1	14964.4	16672.7	16920.3	17305.0
Population (millions)	211.94	227.73	250.18	282.40	309.80	321.17	323.39	325.70
Industrial production index (2010=100)	49.4	55.1	68.5	101.5	100.0	110.6	108.5	110.2
Total self-sufficiency <sup>2</sup>	0.84	0.86	0.86	0.73	0.78	0.92	0.88	0.93
Coal self-sufficiency <sup>2</sup>	1.07	1.19	1.18	1.01	1.06	1.15	1.02	1.13
Oil self-sufficiency <sup>2</sup>	0.65	0.63	0.57	0.42	0.43	0.74	0.71	0.75
Natural gas self-sufficiency <sup>2</sup>	0.98	0.95	0.95	0.82	0.89	0.98	0.96	0.99
TPES/GDP (toe per thousand 2010 USD)	0.32	0.28	0.21	0.18	0.15	0.13	0.13	0.12
TPES/GDP PPP (toe per thousand 2010 USD)	0.32	0.28	0.21	0.18	0.15	0.13	0.13	0.12
TPES/population (toe per capita)	8.16	7.93	7.65	8.05	7.16	6.81	6.70	6.56
Net oil imports/GDP (toe per thousand 2010 USD)	0.06	0.05	0.04	0.04	0.03	0.02	0.02	0.01
Oil supply/GDP (toe per thousand 2010 USD)	0.15	0.12	0.08	0.07	0.05	0.05	0.05	0.05
Oil supply/population (toe per capita)	3.86	3.50	3.03	3.08	2.60	2.46	2.43	2.39
Share of renewables in TPES	0.04	0.05	0.05	0.05 e	0.06 e	0.07 e	0.07 e	0.08
Share of renewables in electricity generation	0.14	0.12	0.12 e	0.08 e	0.10 e	0.13 e	0.15 e	0.17
TFC/GDP (toe per thousand 2010 USD)	0.24	0.20	0.14	0.12	0.10	0.09	0.09	..
TFC/GDP PPP (toe per thousand 2010 USD)	0.24	0.20	0.14	0.12	0.10	0.09	0.09	..
TFC/population (toe per capita)	6.21	5.76	5.17	5.48	4.88	4.70	4.69	..
Elect. cons./GDP (kWh per 2010 USD)	0.33	0.34	0.32	0.30 e	0.28	0.25	0.25	0.24
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	0.33	0.34	0.32	0.30 e	0.28	0.25	0.25	0.24
Elect. cons./population (kWh per capita)	8572	9841	11687	13660 e	13374	12855	12825	12518
Industry cons. <sup>3</sup> /industrial production (2010=100)	239.0	217.3	143.3	116.7	100.0	86.3	89.4	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	207.1	221.5	137.4	100.3	100.0	77.3	78.5	..

1. Electricity consumption equals domestic supply less losses.

2. Production divided by TPES. Coal self-sufficiency also includes peat, when applicable.

3. Includes non-energy use.

# ASSOCIATION COUNTRIES

Brazil

Figure 1. Energy production

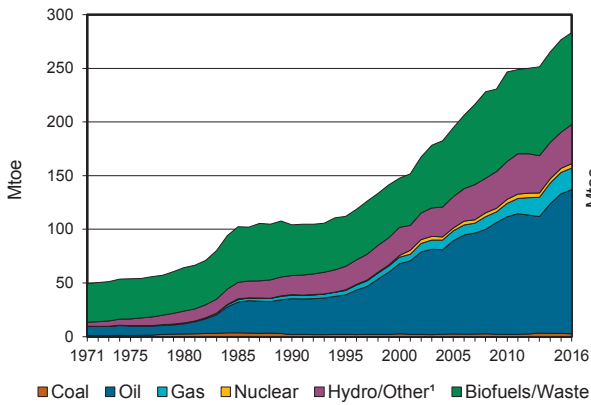


Figure 2. Total primary energy supply<sup>2</sup>

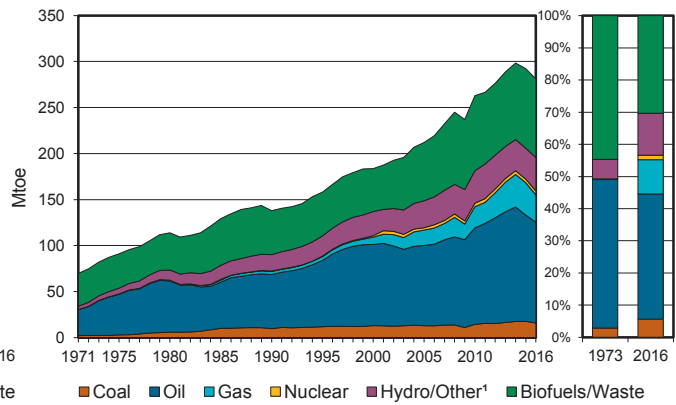


Figure 3. Energy self-sufficiency

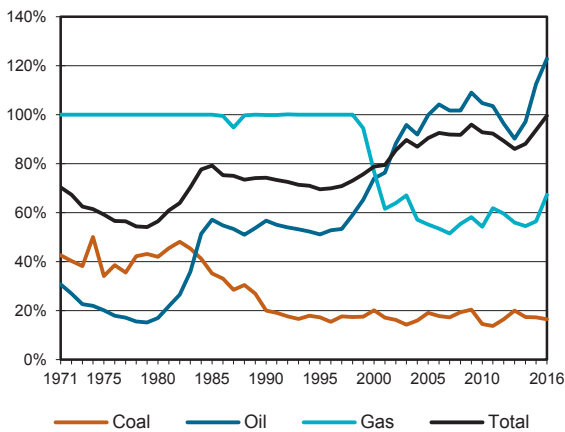


Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>

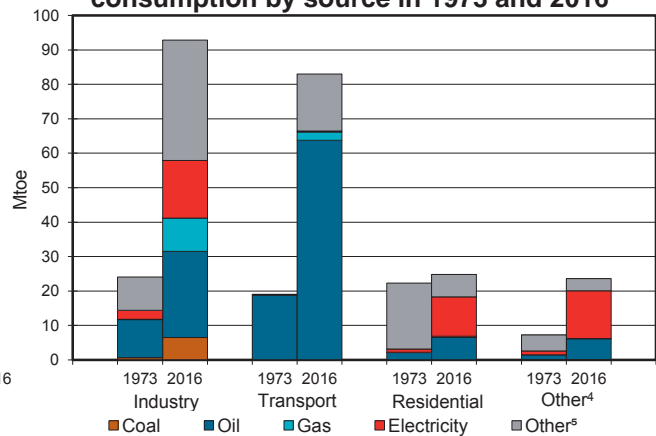


Figure 5. Electricity generation by source

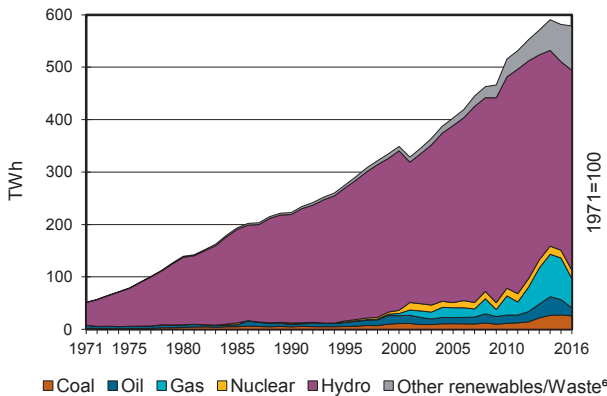
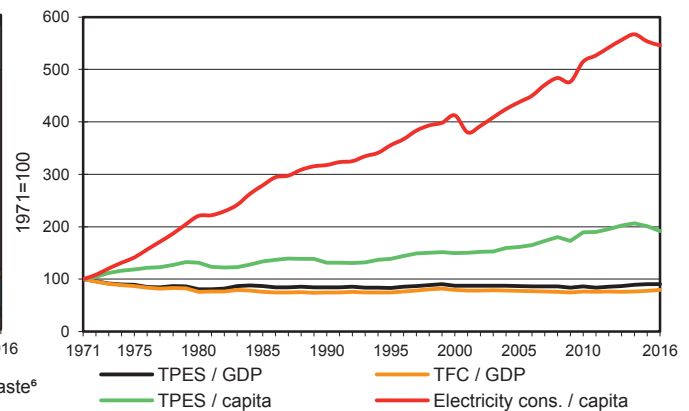


Figure 6. Selected indicators



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.

## Brazil

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	2.64	134.38	-	20.08	4.13	32.75	3.65	85.62	-	0.08	283.33
Imports	13.67	8.01	22.56	9.77	-	-	-	0.43	3.55	-	58.00
Exports	-	-43.84	-5.62	-	-	-	-	-0.94	-0.04	-	-50.43
Intl. marine bunkers	-	-	-3.39	-	-	-	-	-	-	-	-3.39
Intl. aviation bunkers	-	-	-2.26	-	-	-	-	-	-	-	-2.26
Stock changes	-0.39	-0.50	0.01	-	-	-	-	0.16	-	-	-0.72
<b>TPES</b>	<b>15.92</b>	<b>98.05</b>	<b>11.29</b>	<b>29.85</b>	<b>4.13</b>	<b>32.75</b>	<b>3.65</b>	<b>85.28</b>	<b>3.51</b>	<b>0.08</b>	<b>284.52</b>
Transfers	-	-2.56	2.61	-	-	-	-	-	-	-	0.06
Statistical differences	-0.00	-0.10	0.10	0.07	-	-	-	-0.04	0.00	-	0.03
Electricity plants	-3.94	-	-2.04	-8.27	-4.13	-32.75	-2.89	-0.23	43.19	-0.08	-11.14
CHP plants	-2.08	-	-1.13	-2.52	-	-	-	-8.82	6.59	-	-7.97
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-3.09	-	-	-	-	-	-	-0.04	-	-	-3.13
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat. fuel/BKB/PB plants	0.39	-	-0.83	-	-	-	-	-	-	-	-0.44
Oil refineries	-	-99.05	99.13	-	-	-	-	-	-	-	0.08
Petrochemical plants	-	2.94	-2.94	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	0.71	-	-0.89	-	-	-	-3.14	-	-	-3.32
Energy industry own use	-0.32	-	-4.76	-5.30	-	-	-	-12.24	-2.49	-	-25.11
Losses	-0.23	-	-0.10	-0.37	-	-	-	-0.05	-8.57	-	-9.31
<b>TFC</b>	<b>6.66</b>	<b>-</b>	<b>101.33</b>	<b>12.56</b>	<b>-</b>	<b>-</b>	<b>0.77</b>	<b>60.73</b>	<b>42.23</b>	<b>-</b>	<b>224.27</b>
<b>INDUSTRY</b>	<b>6.51</b>	<b>-</b>	<b>11.14</b>	<b>9.00</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>34.91</b>	<b>16.80</b>	<b>-</b>	<b>78.35</b>
Iron and steel	4.87	-	0.29	0.96	-	-	-	2.90	2.00	-	11.02
Chemical and petrochemical	0.12	-	2.40	2.08	-	-	-	0.06	1.90	-	6.56
Non-ferrous metals	0.94	-	1.81	0.53	-	-	-	0.01	2.33	-	5.62
Non-metallic minerals	0.15	-	3.58	1.26	-	-	-	2.42	0.89	-	8.29
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	0.29	-	1.00	0.39	-	-	-	-	1.02	-	2.70
Food and tobacco	0.05	-	0.65	0.79	-	-	-	19.68	2.31	-	23.49
Paper, pulp and printing	0.08	-	0.62	0.74	-	-	-	8.95	1.95	-	12.34
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	0.01	-	-	-	-	-	-	-	0.01
Textile and leather	-	-	0.05	0.19	-	-	-	0.06	0.54	-	0.83
Non-specified	0.01	-	0.72	2.07	-	-	-	0.83	3.85	-	7.48
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>63.80</b>	<b>2.42</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>16.53</b>	<b>0.22</b>	<b>-</b>	<b>82.96</b>
Domestic aviation	-	-	3.35	-	-	-	-	-	-	-	3.35
Road	-	-	58.76	1.51	-	-	-	16.53	-	-	76.79
Rail	-	-	0.95	-	-	-	-	-	0.18	-	1.13
Pipeline transport	-	-	-	0.91	-	-	-	-	0.05	-	0.96
Domestic navigation	-	-	0.74	-	-	-	-	-	-	-	0.74
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>-</b>	<b>-</b>	<b>12.53</b>	<b>0.51</b>	<b>-</b>	<b>-</b>	<b>0.77</b>	<b>9.29</b>	<b>25.21</b>	<b>-</b>	<b>48.31</b>
Residential	-	-	6.58	0.34	-	-	-	6.49	11.43	-	24.83
Comm. and public services	-	-	0.68	0.17	-	-	-	0.17	11.39	-	12.42
Agriculture/forestry	-	-	5.27	-	-	-	-	2.63	2.39	-	10.29
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	0.77	-	-	-	0.77
<b>NON-ENERGY USE</b>	<b>0.14</b>	<b>-</b>	<b>13.86</b>	<b>0.64</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>14.65</b>
in industry/transf./energy	-	-	13.86	0.64	-	-	-	-	-	-	14.50
of which: chem./petrochem.	-	-	6.57	0.64	-	-	-	-	-	-	7.22
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	0.14	-	-	-	-	-	-	-	-	-	0.14
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>25.75</b>	<b>-</b>	<b>15.28</b>	<b>56.48</b>	<b>15.86</b>	<b>380.91</b>	<b>33.57</b>	<b>50.64</b>	<b>-</b>	<b>0.39</b>	<b>578.89</b>
Electricity plants	15.55	-	9.81	45.21	15.86	380.91	33.57	1.00	-	0.39	502.30
CHP plants	10.20	-	5.47	11.28	-	-	-	49.64	-	-	76.59
<b>Heat generated - PJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>3.34</b>	<b>3.34</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	3.34	3.34

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Brazil

## Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	1.93	140.37	-	22.71	4.10	31.89	4.56	86.97	-	0.09	292.63
Imports	14.40	7.49	27.74	8.93	-	-	-	0.97	3.14	-	62.67
Exports	-	-53.91	-5.73	-	-	-	-	-0.73	-0.01	-	-60.39
Intl. marine bunkers	-	-	-3.34	-	-	-	-	-	-	-	-3.34
Intl. aviation bunkers	-	-	-2.21	-	-	-	-	-	-	-	-2.21
Stock changes	0.23	0.23	-0.29	-	-	-	-	-0.21	-	-	-0.04
<b>TPES</b>	<b>16.56</b>	<b>94.18</b>	<b>16.17</b>	<b>31.64</b>	<b>4.10</b>	<b>31.89</b>	<b>4.56</b>	<b>87.00</b>	<b>3.13</b>	<b>0.09</b>	<b>289.33</b>
Electricity and Heat Output											
Elec. generated - TWh	25.34	-	15.91	65.59	15.74	370.91	43.21	50.90	-	0.45	588.04
Heat generated - PJ	-	-	-	-	-	-	-	-	-	3.81	3.81

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	51.3	64.4	104.2	147.7	246.6	276.6	283.3	292.6
Net imports (Mtoe)	34.8	48.8	39.2	44.4	24.9	25.3	7.6	2.3
Total primary energy supply (Mtoe)	82.0	113.9	140.2	187.5	265.9	295.2	284.5	289.3
Net oil imports (Mtoe)	33.4	45.3	28.5	28.5	0.2	-7.2	-18.9	-24.4
Oil supply (Mtoe)	37.9	55.6	58.9	88.2	104.7	115.5	109.3	110.4
Electricity consumption (TWh) <sup>1</sup>	56.7	122.7	217.7	331.6	464.7	523.0	520.0	524.7
GDP (billion 2010 USD)	637.7	1010.4	1192.7	1538.7	2208.9	2331.9	2248.1	..
GDP PPP (billion 2010 USD)	809.3	1282.3	1513.7	1952.8	2803.4	2959.5	2853.2	..
Population (millions)	102.58	121.16	149.35	175.29	196.80	205.96	207.65	..
Industrial production index (2010=100)	..	..	..	..	..	..	..	..
Total self-sufficiency <sup>2</sup>	0.63	0.57	0.74	0.79	0.93	0.94	1.00	1.01
Coal self-sufficiency <sup>2</sup>	0.38	0.42	0.20	0.20	0.15	0.17	0.17	0.12
Oil self-sufficiency <sup>2</sup>	0.23	0.17	0.57	0.74	1.05	1.13	1.23	1.27
Natural gas self-sufficiency <sup>2</sup>	1.00	1.00	1.00	0.77	0.54	0.56	0.67	0.72
TPES/GDP (toe per thousand 2010 USD)	0.13	0.11	0.12	0.12	0.12	0.13	0.13	..
TPES/GDP PPP (toe per thousand 2010 USD)	0.10	0.09	0.09	0.10	0.09	0.10	0.10	..
TPES/population (toe per capita)	0.80	0.94	0.94	1.07	1.35	1.43	1.37	..
Net oil imports/GDP (toe per thousand 2010 USD)	0.05	0.04	0.02	0.02	0.00	-0.00	-0.01	..
Oil supply/GDP (toe per thousand 2010 USD)	0.06	0.06	0.05	0.06	0.05	0.05	0.05	..
Oil supply/population (toe per capita)	0.37	0.46	0.39	0.50	0.53	0.56	0.53	..
Share of renewables in TPES	0.51	0.45	0.47	0.39	0.44	0.41	0.43	0.43
Share of renewables in electricity generation	0.91	0.94	0.95	0.90	0.85	0.74	0.80	0.79
TFC/GDP (toe per thousand 2010 USD)	0.11	0.10	0.09	0.10	0.10	0.10	0.10	..
TFC/GDP PPP (toe per thousand 2010 USD)	0.09	0.08	0.07	0.08	0.08	0.08	0.08	..
TFC/population (toe per capita)	0.71	0.79	0.75	0.88	1.07	1.10	1.08	..
Elect. cons./GDP (kWh per 2010 USD)	0.09	0.12	0.18	0.22	0.21	0.22	0.23	..
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	0.07	0.10	0.14	0.17	0.17	0.18	0.18	..
Elect. cons./population (kWh per capita)	553	1013	1457	1892	2361	2539	2504	..
Industry cons. <sup>3</sup> /industrial production (2010=100)	..	..	..	..	..	..	..	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	..	..	..	..	..	..	..	..

1. Electricity consumption equals domestic supply less losses.

2. Production divided by TPES.

3. Includes non-energy use.



## People's Republic of China

Figure 1. Energy production

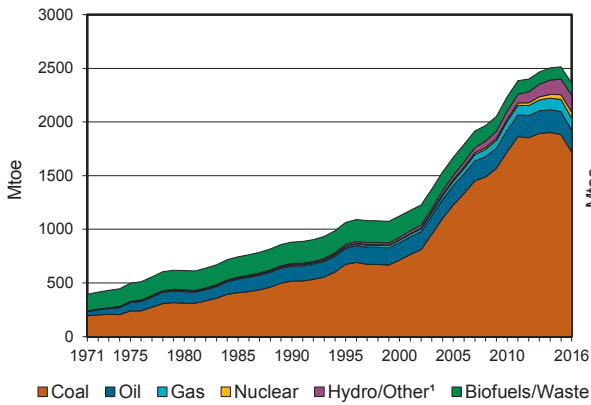


Figure 2. Total primary energy supply<sup>2</sup>

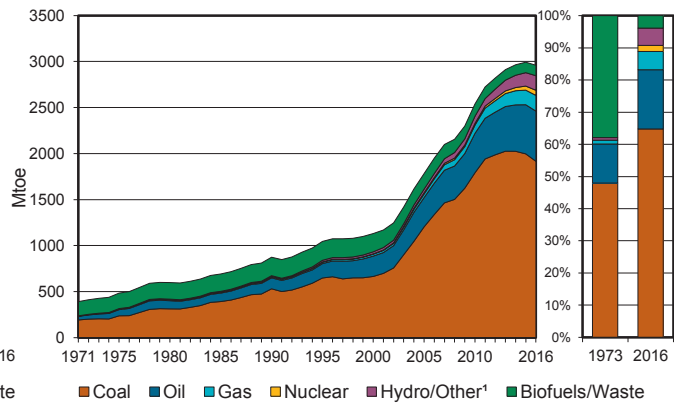


Figure 3. Energy self-sufficiency

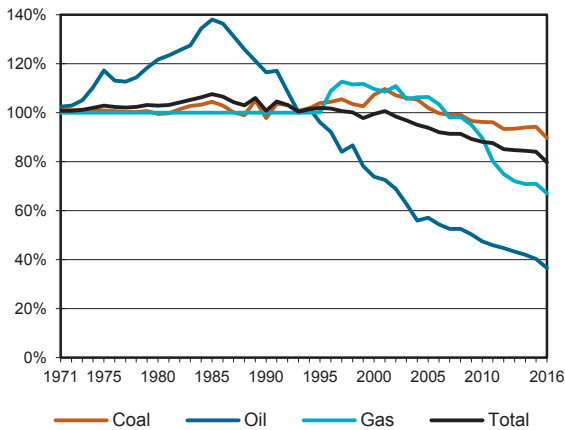


Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>

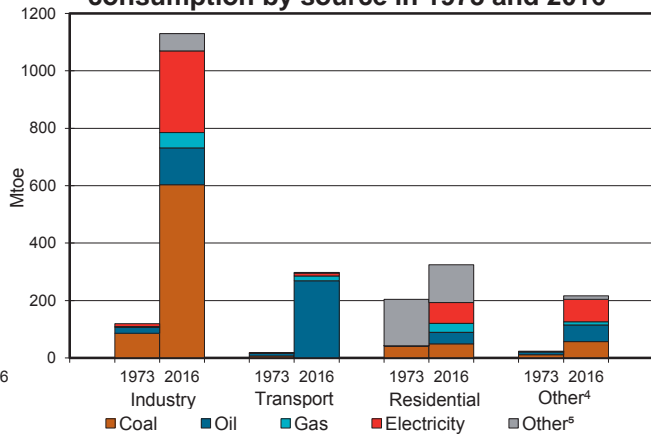


Figure 5. Electricity generation by source

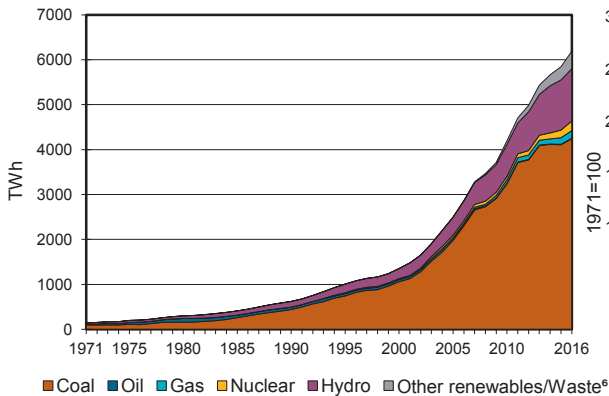
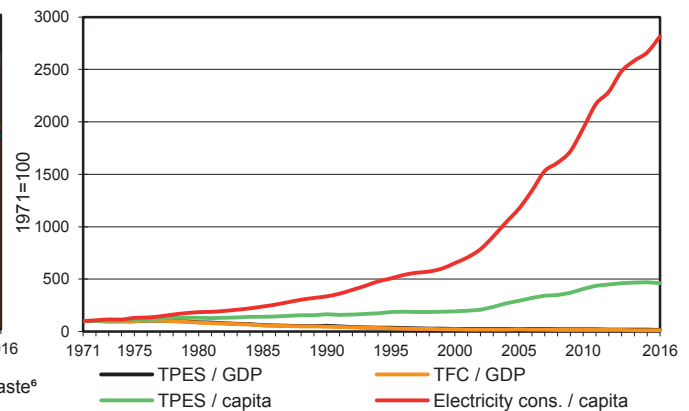


Figure 6. Selected indicators



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.

## People's Republic of China

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./ Solar/ etc.	Biofuels/ Waste	Electricity	Heat	Total
Production	1718.90	199.89	-	114.54	55.57	99.96	58.61	113.00	-	-	2360.49
Imports	136.06	381.01	55.80	59.07	-	-	-	-	0.53	-	632.47
Exports	-12.14	-2.94	-53.64	-2.83	-	-	-	-	-1.63	-	-73.18
Intl. marine bunkers	-	-	-9.67	-	-	-	-	-	-	-	-9.67
Intl. aviation bunkers	-	-	-8.61	-	-	-	-	-	-	-	-8.61
Stock changes	73.39	-17.43	0.55	-	-	-	-	-	-	-	56.52
<b>TPES</b>	<b>1916.21</b>	<b>560.53</b>	<b>-15.57</b>	<b>170.78</b>	<b>55.57</b>	<b>99.96</b>	<b>58.61</b>	<b>113.00</b>	<b>-1.09</b>	<b>-</b>	<b>2958.01</b>
Transfers	-1.36	-1.83	3.79	-	-	-	-	-	-	-	0.60
Statistical differences	39.67	-0.06	2.59	-2.68	-	-	-0.00	-0.01	-0.01	-	39.49
Electricity plants	-560.88	-0.13	-2.42	-17.26	-55.57	-99.96	-26.97	-26.18	381.37	-	-408.01
CHP plants	-457.25	-	-	-16.01	-	-	-	-	150.63	89.89	-232.75
Heat plants	-8.63	-	-4.90	-	-	-	-	-1.61	-	13.13	-2.01
Blast furnaces	-104.48	-	-	-	-	-	-	-	-	-	-104.48
Gas works	-7.11	-	-	1.93	-	-	-	-	-	-	-5.19
Coke/pat. fuel/BKB/PB plants	-58.72	-	-	-	-	-	-	-	-	-	-58.72
Oil refineries	-	-555.24	541.16	-	-	-	-	-	-	-	-14.07
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-5.73	3.44	-	-	-	-	-	-	-	-	-2.29
Other transformation	-	-	-	-	-	-	-	-	-	-	-
Energy industry own use	-42.15	-3.20	-33.07	-21.61	-	-	-	-	-59.41	-11.85	-171.29
Losses	-	-0.40	-0.01	-2.01	-	-	-	-	-26.34	-1.14	-29.90
<b>TFC</b>	<b>709.56</b>	<b>3.10</b>	<b>491.56</b>	<b>113.13</b>	<b>-</b>	<b>-</b>	<b>31.64</b>	<b>85.20</b>	<b>445.15</b>	<b>90.02</b>	<b>1969.37</b>
<b>INDUSTRY</b>	<b>553.22</b>	<b>2.83</b>	<b>50.04</b>	<b>42.55</b>	<b>-</b>	<b>-</b>	<b>0.40</b>	<b>-</b>	<b>284.47</b>	<b>60.45</b>	<b>993.95</b>
Iron and steel	184.03	-	0.88	4.22	-	-	-	-	45.41	4.85	239.40
Chemical and petrochemical	101.30	-	14.25	10.40	-	-	-	-	48.17	31.38	205.50
Non-ferrous metals	15.62	-	0.94	3.38	-	-	-	-	49.56	3.64	73.13
Non-metallic minerals	153.91	-	5.86	6.46	-	-	-	-	27.41	0.31	193.96
Transport equipment	2.15	-	0.70	2.60	-	-	-	-	8.68	1.01	15.14
Machinery	11.18	-	1.84	5.34	-	-	-	-	37.47	1.09	56.92
Mining and quarrying	6.04	-	2.40	0.92	-	-	-	-	8.43	0.87	18.66
Food and tobacco	22.84	-	0.80	2.66	-	-	-	-	9.82	3.62	39.73
Paper, pulp and printing	8.18	-	0.32	1.00	-	-	-	-	6.80	4.91	21.21
Wood and wood products	1.82	-	0.22	0.21	-	-	-	-	2.98	0.24	5.48
Construction	4.22	-	7.27	0.16	-	-	-	-	6.24	0.23	18.12
Textile and leather	8.31	-	0.43	1.78	-	-	-	-	16.97	7.65	35.14
Non-specified	33.61	2.83	14.14	3.42	-	-	0.40	-	16.51	0.66	71.57
<b>TRANSPORT</b>	<b>0.02</b>	<b>-</b>	<b>267.09</b>	<b>17.43</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2.37</b>	<b>9.74</b>	<b>-</b>	<b>296.65</b>
Domestic aviation	-	-	20.38	-	-	-	-	-	-	-	20.38
Road	-	-	219.96	17.09	-	-	-	2.37	3.76	-	243.17
Rail	0.02	-	3.16	-	-	-	-	-	5.99	-	9.16
Pipeline transport	-	-	0.00	0.34	-	-	-	-	-	-	0.34
Domestic navigation	-	-	21.67	-	-	-	-	-	-	-	21.67
Non-specified	0.00	-	1.92	-	-	-	-	-	-	-	1.92
<b>OTHER</b>	<b>106.49</b>	<b>-</b>	<b>72.52</b>	<b>42.85</b>	<b>-</b>	<b>-</b>	<b>31.24</b>	<b>82.84</b>	<b>150.94</b>	<b>29.58</b>	<b>516.45</b>
Residential	49.42	-	39.62	31.78	-	-	24.99	82.84	72.40	23.56	324.60
Comm. and public services	19.96	-	15.22	10.98	-	-	4.97	-	28.63	2.34	82.10
Agriculture/forestry	14.44	-	17.68	0.09	-	-	1.22	-	9.39	0.03	42.85
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	22.67	-	-	-	-	-	0.07	-	40.51	3.65	66.90
<b>NON-ENERGY USE</b>	<b>49.82</b>	<b>0.27</b>	<b>101.91</b>	<b>10.30</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>162.31</b>
in industry/transf./energy	49.82	0.27	75.75	10.30	-	-	-	-	-	-	136.14
of which: chem./petrochem.	-	0.27	64.49	10.30	-	-	-	-	-	-	75.06
in transport	-	-	1.54	-	-	-	-	-	-	-	1.54
in other	-	-	24.63	-	-	-	-	-	-	-	24.63
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>4241.79</b>	<b>-</b>	<b>10.37</b>	<b>170.49</b>	<b>213.29</b>	<b>1162.57</b>	<b>312.49</b>	<b>76.11</b>	<b>-</b>	<b>-</b>	<b>6187.11</b>
Electricity plants	2547.99	-	10.37	112.49	213.29	1162.57	312.49	76.11	-	-	4435.31
CHP plants	1693.80	-	-	58.00	-	-	-	-	-	-	1751.80
<b>Heat generated - PJ</b>	<b>3768.63</b>	<b>-</b>	<b>174.51</b>	<b>319.99</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>50.06</b>	<b>-</b>	<b>-</b>	<b>4313.20</b>
CHP plants	3443.37	-	-	319.99	-	-	-	-	-	-	3763.36
Heat plants	325.26	-	174.51	-	-	-	-	50.06	-	-	549.84

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## People's Republic of China

### Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	1772.82	191.71	..	118.56	64.64	102.31	..	..	-	..	..
Imports	145.25	..	..	75.01	-	-	..	..	-	..	..
Exports	-5.20	..	..	-2.82	-	-	..	..	-	..	..
Intl. marine bunkers	..	..	..	..	-	-	..	..	-	..	..
Intl. aviation bunkers	..	..	..	..	-	-	..	..	-	..	..
Stock changes	7.40	..	..	..	-	-	..	..	-	..	..
<b>TPES</b>	<b>1920.27</b>	..	..	..	<b>64.64</b>	<b>102.31</b>	..	..	-	..	..
Electricity and Heat Output											
Elec. generated - TWh	4396.41	-	10.75	176.70	248.07	1189.84	394.49	78.89	-	-	6495.14
Heat generated - PJ	..	..	..	..	..	..	..	..	..	..	..

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

### Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	431.4	615.5	880.9	1123.7	2235.4	2513.7	2360.5	..
Net imports (Mtoe)	-4.0	-20.6	-35.0	27.9	345.2	489.0	559.3	..
Total primary energy supply (Mtoe)	426.6	598.1	873.6	1129.9	2536.2	2991.4	2958.0	..
Net oil imports (Mtoe)	-1.8	-17.4	-24.2	74.7	252.9	345.0	380.2	..
Oil supply (Mtoe)	51.9	88.6	118.8	220.8	428.0	533.7	545.0	..
Electricity consumption (TWh) <sup>1</sup>	155.2	276.3	579.7	1253.7	3937.7	5548.3	5898.9	..
GDP (billion 2010 USD)	223.8	341.4	829.6	2237.1	6100.6	8908.3	9505.2	..
GDP PPP (billion 2010 USD)	457.9	698.6	1697.7	4578.2	12485.0	18230.9	19450.4	..
Population (millions)	881.94	981.24	1135.19	1262.65	1337.71	1371.22	1378.67	..
Industrial production index (2010=100)	..	..	..	..	..	..	..	..
Total self-sufficiency <sup>2</sup>	1.01	1.03	1.01	0.99	0.88	0.84	0.80	..
Coal self-sufficiency <sup>2</sup>	1.01	0.99	0.98	1.07	0.96	0.94	0.90	0.92
Oil self-sufficiency <sup>2</sup>	1.05	1.22	1.16	0.74	0.47	0.40	0.37	..
Natural gas self-sufficiency <sup>2</sup>	1.00	1.00	1.00	1.10	0.90	0.71	0.67	..
TPES/GDP (toe per thousand 2010 USD)	1.91	1.75	1.05	0.51	0.42	0.34	0.31	..
TPES/GDP PPP (toe per thousand 2010 USD)	0.93	0.86	0.51	0.25	0.20	0.16	0.15	..
TPES/population (toe per capita)	0.48	0.61	0.77	0.89	1.90	2.18	2.15	..
Net oil imports/GDP (toe per thousand 2010 USD)	-0.01	-0.05	-0.03	0.03	0.04	0.04	0.04	..
Oil supply/GDP (toe per thousand 2010 USD)	0.23	0.26	0.14	0.10	0.07	0.06	0.06	..
Oil supply/population (toe per capita)	0.06	0.09	0.10	0.17	0.32	0.39	0.40	..
Share of renewables in TPES	0.39	0.31	0.24	0.20	0.08	0.09	0.09	..
Share of renewables in electricity generation	0.23	0.19	0.20	0.17	0.19	0.24	0.25	..
TFC/GDP (toe per thousand 2010 USD)	1.63	1.43	0.79	0.35	0.27	0.22	0.21	..
TFC/GDP PPP (toe per thousand 2010 USD)	0.79	0.70	0.39	0.17	0.13	0.11	0.10	..
TFC/population (toe per capita)	0.41	0.50	0.58	0.62	1.22	1.43	1.43	..
Elect. cons./GDP (kWh per 2010 USD)	0.69	0.81	0.70	0.56	0.65	0.62	0.62	..
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	0.34	0.40	0.34	0.27	0.32	0.30	0.30	..
Elect. cons./population (kWh per capita)	176	282	511	993	2944	4046	4279	..
Industry cons. <sup>3</sup> /industrial production (2010=100)	..	..	..	..	..	..	..	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	..	..	..	..	..	..	..	..

1. Electricity consumption equals domestic supply less losses.

2. Production divided by TPES.

3. Includes non-energy use.

## India

Figure 1. Energy production

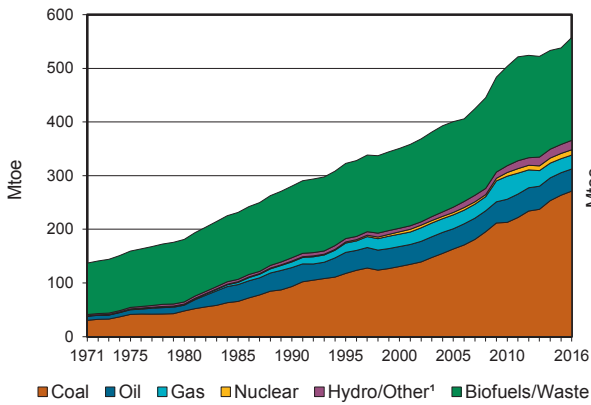


Figure 2. Total primary energy supply<sup>2</sup>

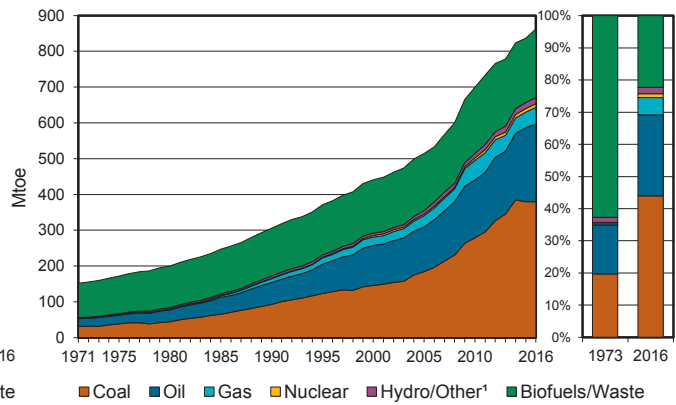


Figure 3. Energy self-sufficiency

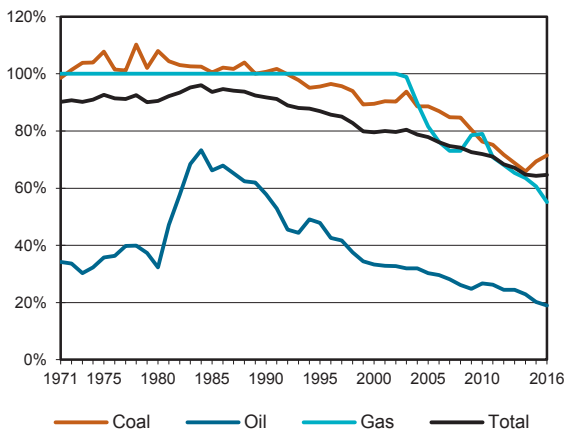


Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>

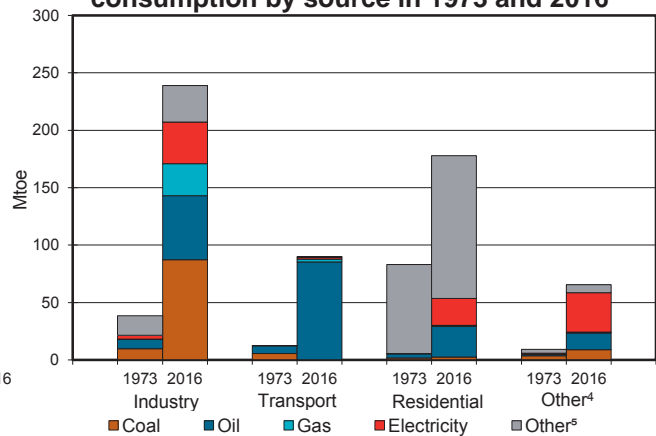


Figure 5. Electricity generation by source

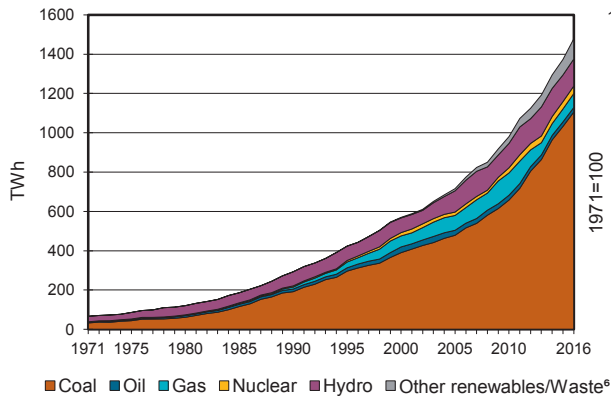
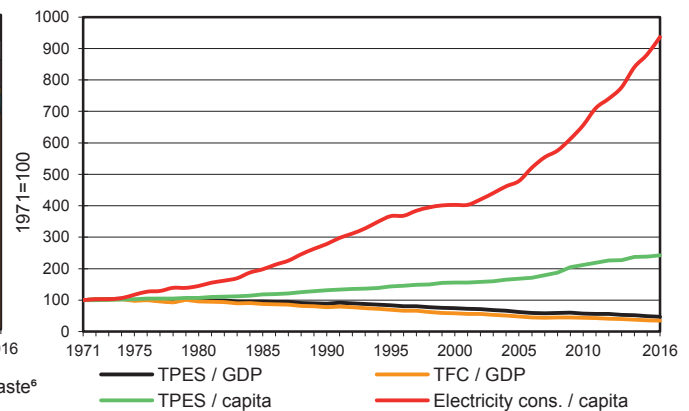


Figure 6. Selected indicators



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.

## India

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	271.21	41.21	-	25.92	9.88	11.83	5.78	191.65	-	-	557.48
Imports	110.22	218.64	33.92	21.11	-	-	-	0.00	0.48	-	384.38
Exports	-0.46	-	-68.67	-	-	-	-	-0.04	-0.58	-	-69.75
Intl. marine bunkers	-	-	-1.49	-	-	-	-	-	-	-	-1.49
Intl. aviation bunkers	-	-	-5.22	-	-	-	-	-	-	-	-5.22
Stock changes	-1.41	-0.35	-1.26	-	-	-	-	-	-	-	-3.02
<b>TPES</b>	<b>379.56</b>	<b>259.50</b>	<b>-42.71</b>	<b>47.03</b>	<b>9.88</b>	<b>11.83</b>	<b>5.78</b>	<b>191.61</b>	<b>-0.09</b>	<b>-</b>	<b>862.39</b>
Transfers	-	3.60	-3.40	-	-	-	-	-	-	-	0.20
Statistical differences	-6.32	-4.33	-8.81	-	-	-	-	-0.05	-	-	-19.51
Electricity plants	-255.05	-	-7.92	-14.25	-9.88	-11.83	-5.07	-24.62	127.05	-	-201.57
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-13.38	-	-	-	-	-	-	-	-	-	-13.38
Gas works	-0.02	-	-	-	-	-	-	-	-	-	-0.02
Coke/pat. fuel/BKB/PB plants	-4.30	-	-	-	-	-	-	-	-	-	-4.30
Oil refineries	-	-258.77	259.21	-	-	-	-	-	-	-	0.45
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-4.08	-	-	-4.08
Energy industry own use	-1.63	-	-14.09	-0.65	-	-	-	-	-9.12	-	-25.50
Losses	-	-	-	-	-	-	-	-	-22.39	-	-22.39
<b>TFC</b>	<b>98.85</b>	<b>-</b>	<b>182.28</b>	<b>32.14</b>	<b>-</b>	<b>-</b>	<b>0.71</b>	<b>162.87</b>	<b>95.44</b>	<b>-</b>	<b>572.29</b>
<b>INDUSTRY</b>	<b>87.24</b>	<b>-</b>	<b>29.75</b>	<b>7.64</b>	<b>-</b>	<b>-</b>	<b>0.04</b>	<b>31.59</b>	<b>36.35</b>	<b>-</b>	<b>192.61</b>
Iron and steel	48.14	-	0.68	-	-	-	-	-	5.69	-	54.51
Chemical and petrochemical	1.45	-	4.75	-	-	-	-	-	3.68	-	9.87
Non-ferrous metals	0.45	-	0.11	-	-	-	-	-	1.79	-	2.34
Non-metallic minerals	15.58	-	6.31	-	-	-	-	-	1.97	-	23.86
Transport equipment	-	-	-	-	-	-	-	-	1.20	-	1.20
Machinery	-	-	0.40	-	-	-	-	-	0.90	-	1.30
Mining and quarrying	-	-	1.41	-	-	-	-	-	0.01	-	1.42
Food and tobacco	-	-	0.00	-	-	-	-	-	1.80	-	1.81
Paper, pulp and printing	0.65	-	-	-	-	-	-	-	0.56	-	1.21
Wood and wood products	-	-	-	-	-	-	-	-	0.09	-	0.09
Construction	-	-	0.35	-	-	-	-	-	-	-	0.35
Textile and leather	0.54	-	0.44	-	-	-	-	-	3.34	-	4.32
Non-specified	20.43	-	15.30	7.64	-	-	0.04	31.59	15.33	-	90.34
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>85.32</b>	<b>2.55</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.60</b>	<b>1.48</b>	<b>-</b>	<b>89.95</b>
Domestic aviation	-	-	2.24	-	-	-	-	-	-	-	2.24
Road	-	-	79.60	2.15	-	-	-	0.60	-	-	82.34
Rail	-	-	2.75	-	-	-	-	-	1.48	-	4.23
Pipeline transport	-	-	-	0.41	-	-	-	-	-	-	0.41
Domestic navigation	-	-	0.70	-	-	-	-	-	-	-	0.70
Non-specified	-	-	0.04	-	-	-	-	-	-	-	0.04
<b>OTHER</b>	<b>11.61</b>	<b>-</b>	<b>41.16</b>	<b>1.72</b>	<b>-</b>	<b>-</b>	<b>0.67</b>	<b>130.68</b>	<b>57.61</b>	<b>-</b>	<b>243.45</b>
Residential	2.57	-	26.76	0.75	-	-	0.57	123.74	23.53	-	177.93
Comm. and public services	4.30	-	2.09	0.81	-	-	0.06	6.94	9.69	-	23.90
Agriculture/forestry	-	-	10.02	0.16	-	-	-	-	16.81	-	26.99
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	4.73	-	2.29	-	-	-	0.04	-	7.58	-	14.64
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>26.05</b>	<b>20.22</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>46.27</b>
in industry/transf./energy	-	-	26.05	20.22	-	-	-	-	-	-	46.27
of which: chem./petrochem.	-	-	12.81	20.22	-	-	-	-	-	-	33.04
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>1104.83</b>	<b>-</b>	<b>23.43</b>	<b>71.24</b>	<b>37.92</b>	<b>137.53</b>	<b>58.99</b>	<b>43.64</b>	<b>-</b>	<b>-</b>	<b>1477.56</b>
Electricity plants	1104.83	-	23.43	71.24	37.92	137.53	58.99	43.64	-	-	1477.56
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - PJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## India

## Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	276.57	41.51	..	26.44	..	..	..	..	..	..	..
Imports	115.93	..	..	21.75	..	..	..	..	..	..	..
Exports	-0.59	..	..	..	..	..	..	..	..	..	..
Intl. marine bunkers	..	..	..	..	..	..	..	..	..	..	..
Intl. aviation bunkers	..	..	..	..	..	..	..	..	..	..	..
Stock changes	2.11	..	..	..	..	..	..	..	..	..	..
<b>TPES</b>	<b>394.02</b>	..	..	..	..	..	..	..	..	..	..
Electricity and Heat Output											
Elec. generated - TWh	..	..	..	..	..	..	..	..	..	..	..
Heat generated - PJ	..	..	..	..	..	..	..	..	..	..	..

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	144.1	181.1	280.5	350.8	503.6	537.9	557.5	..
Net imports (Mtoe)	17.3	23.6	31.6	91.4	204.8	308.7	314.6	..
Total primary energy supply (Mtoe)	159.8	200.0	305.7	440.9	700.1	836.5	862.4	..
Net oil imports (Mtoe)	17.5	23.3	27.4	77.1	123.5	172.4	183.9	..
Oil supply (Mtoe)	24.3	33.2	61.1	112.0	161.6	207.3	216.8	..
Electricity consumption (TWh) <sup>1</sup>	59.9	99.1	237.6	415.9	791.4	1130.8	1216.1	..
GDP (billion 2010 USD)	211.0	271.7	466.5	802.8	1656.6	2301.4	2464.9	..
GDP PPP (billion 2010 USD)	676.6	871.3	1496.1	2574.3	5312.4	7380.0	7904.5	..
Population (millions)	593.06	696.78	870.13	1053.05	1230.98	1309.05	1324.17	..
Industrial production index (2010=100)	..	..	..	..	..	..	..	..
Total self-sufficiency <sup>2</sup>	0.90	0.91	0.92	0.80	0.72	0.64	0.65	..
Coal self-sufficiency <sup>2</sup>	1.04	1.08	1.01	0.90	0.76	0.69	0.71	0.70
Oil self-sufficiency <sup>2</sup>	0.30	0.32	0.58	0.33	0.27	0.20	0.19	..
Natural gas self-sufficiency <sup>2</sup>	1.00	1.00	1.00	1.00	0.79	0.61	0.55	..
TPES/GDP (toe per thousand 2010 USD)	0.76	0.74	0.66	0.55	0.42	0.36	0.35	..
TPES/GDP PPP (toe per thousand 2010 USD)	0.24	0.23	0.20	0.17	0.13	0.11	0.11	..
TPES/population (toe per capita)	0.27	0.29	0.35	0.42	0.57	0.64	0.65	..
Net oil imports/GDP (toe per thousand 2010 USD)	0.08	0.09	0.06	0.10	0.07	0.07	0.07	..
Oil supply/GDP (toe per thousand 2010 USD)	0.12	0.12	0.13	0.14	0.10	0.09	0.09	..
Oil supply/population (toe per capita)	0.04	0.05	0.07	0.11	0.13	0.16	0.16	..
Share of renewables in TPES	0.64	0.60	0.46	0.35	0.28	0.24	0.24	..
Share of renewables in electricity generation	0.40	0.39	0.25	0.14	0.16	0.16	0.16	..
TFC/GDP (toe per thousand 2010 USD)	0.68	0.64	0.52	0.39	0.29	0.24	0.23	..
TFC/GDP PPP (toe per thousand 2010 USD)	0.21	0.20	0.16	0.12	0.09	0.08	0.07	..
TFC/population (toe per capita)	0.24	0.25	0.28	0.30	0.39	0.42	0.43	..
Elect. cons./GDP (kWh per 2010 USD)	0.28	0.36	0.51	0.52	0.48	0.49	0.49	..
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	0.09	0.11	0.16	0.16	0.15	0.15	0.15	..
Elect. cons./population (kWh per capita)	101	142	273	395	643	864	918	..
Industry cons. <sup>3</sup> /industrial production (2010=100)	..	..	..	..	..	..	..	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	..	..	..	..	..	..	..	..

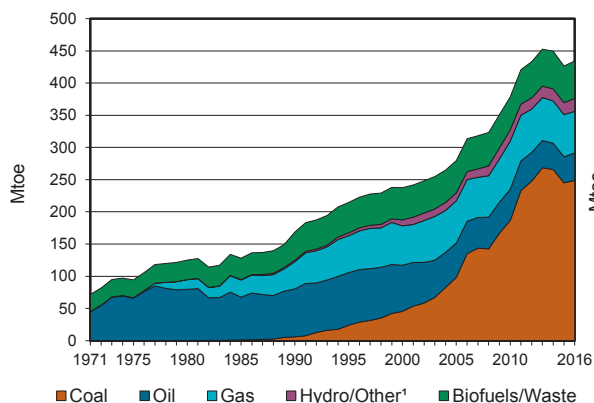
1. Electricity consumption equals domestic supply less losses.

2. Production divided by TPES.

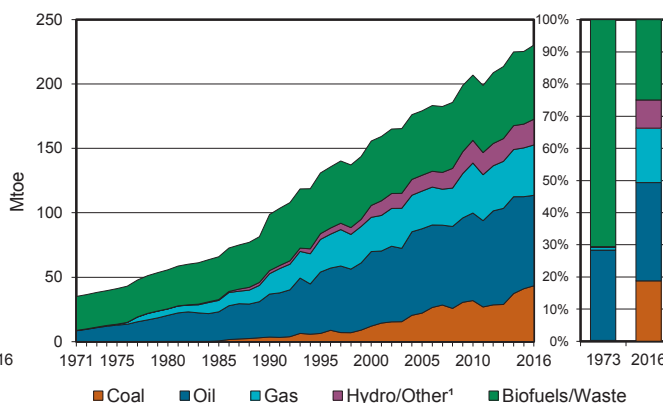
3. Includes non-energy use.

## Indonesia

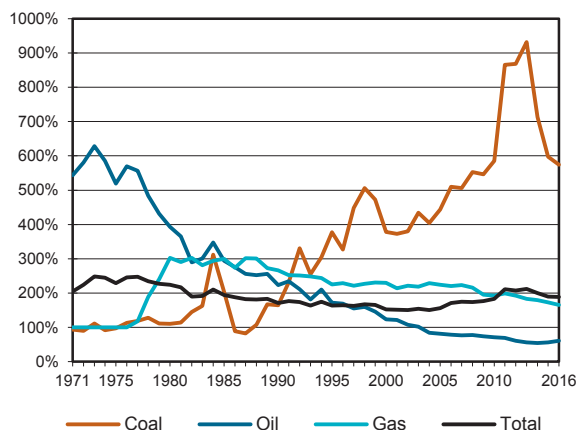
**Figure 1. Energy production**



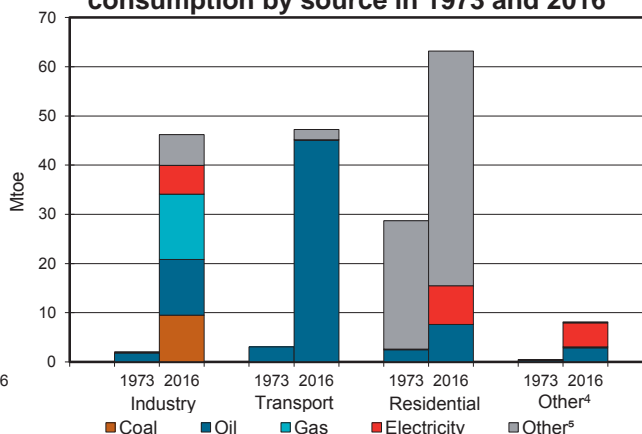
**Figure 2. Total primary energy supply<sup>2</sup>**



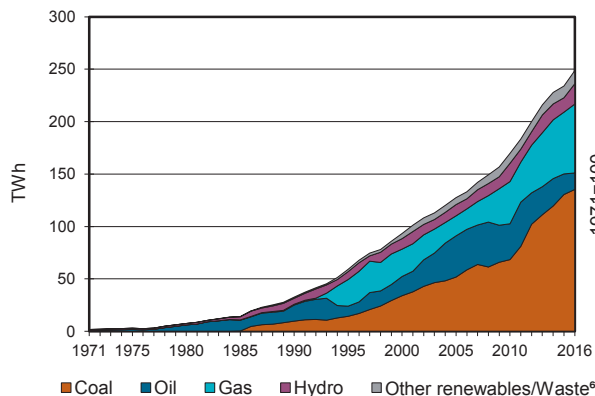
**Figure 3. Energy self-sufficiency**



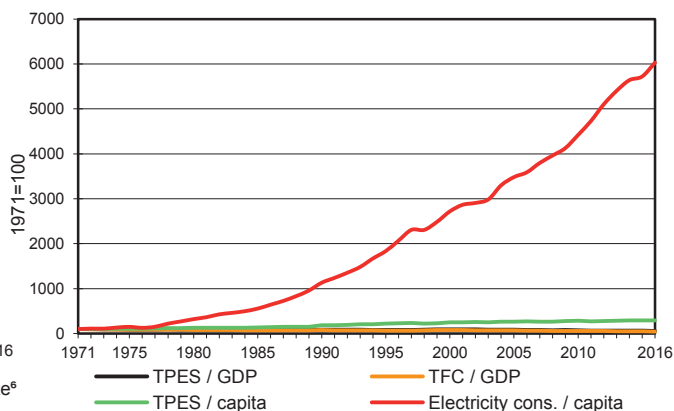
**Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.

## Indonesia

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./ Solar/ etc.	Biofuels/ Waste	Electricity	Heat	Total
Production	248.85	42.63	-	64.56	-	1.67	18.33	58.30	-	-	434.33
Imports	2.63	25.67	23.55	-	-	-	-	-	0.00	-	51.84
Exports	-208.16	-17.01	-3.89	-25.47	-	-	-	-0.65	-	-	-255.17
Intl. marine bunkers	-	-	-0.24	-	-	-	-	-	-	-	-0.24
Intl. aviation bunkers	-	-	-0.93	-	-	-	-	-	-	-	-0.93
Stock changes	-	0.54	-0.08	-	-	-	-	-0.13	-	-	0.32
<b>TPES</b>	<b>43.31</b>	<b>51.83</b>	<b>18.40</b>	<b>39.09</b>	-	<b>1.67</b>	<b>18.33</b>	<b>57.53</b>	<b>0.00</b>	-	<b>230.15</b>
Transfers	-	-1.44	1.59	-	-	-	-	-	-	-	0.15
Statistical differences	0.00	0.59	4.07	-3.27	-	-	-	-0.00	-0.00	-	1.39
Electricity plants	-33.82	-	-3.76	-14.23	-	-1.67	-18.33	-0.50	21.38	-	-50.92
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat. fuel/BKB/PB plants	-0.00	-	-	-	-	-	-	-	-	-	-0.00
Oil refineries	-	-49.68	47.65	-	-	-	-	-	-	-	-2.02
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-0.83	-	-	-0.83
Energy industry own use	-	-	-2.29	-7.89	-	-	-	-	-0.85	-	-11.02
Losses	-	-	-	-0.22	-	-	-	-	-1.95	-	-2.17
<b>TFC</b>	<b>9.49</b>	<b>1.30</b>	<b>65.68</b>	<b>13.50</b>	-	-	-	<b>56.20</b>	<b>18.57</b>	-	<b>164.73</b>
<b>INDUSTRY</b>	<b>9.49</b>	-	<b>7.48</b>	<b>9.81</b>	-	-	-	<b>6.20</b>	<b>5.86</b>	-	<b>38.83</b>
Iron and steel	0.24	-	0.43	0.09	-	-	-	-	-	-	0.76
Chemical and petrochemical	-	-	0.52	2.90	-	-	-	-	-	-	3.41
Non-ferrous metals	2.63	-	-	-	-	-	-	-	-	-	2.63
Non-metallic minerals	4.73	-	0.72	-	-	-	-	-	-	-	5.45
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	0.06	-	-	-	-	-	-	-	0.06
Mining and quarrying	-	-	0.82	-	-	-	-	-	-	-	0.82
Food and tobacco	-	-	0.51	-	-	-	-	-	-	-	0.51
Paper, pulp and printing	1.88	-	-	-	-	-	-	-	-	-	1.88
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	0.28	-	-	-	-	-	-	-	0.28
Textile and leather	-	-	0.92	-	-	-	-	-	-	-	0.92
Non-specified	0.01	-	3.23	6.82	-	-	-	6.20	5.86	-	22.13
<b>TRANSPORT</b>	-	-	<b>45.11</b>	<b>0.03</b>	-	-	-	<b>2.10</b>	-	-	<b>47.25</b>
Domestic aviation	-	-	3.01	-	-	-	-	-	-	-	3.01
Road	-	-	39.65	0.03	-	-	-	2.10	-	-	41.79
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	2.45	-	-	-	-	-	-	-	2.45
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	-	-	<b>10.50</b>	<b>0.19</b>	-	-	-	<b>47.89</b>	<b>12.71</b>	-	<b>71.30</b>
Residential	-	-	7.63	0.02	-	-	-	47.70	7.82	-	63.16
Comm. and public services	-	-	0.77	0.18	-	-	-	0.20	4.66	-	5.80
Agriculture/forestry	-	-	1.93	-	-	-	-	-	0.23	-	2.16
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	0.17	-	-	-	-	-	-	-	0.17
<b>NON-ENERGY USE</b>	-	<b>1.30</b>	<b>2.59</b>	<b>3.46</b>	-	-	-	-	-	-	<b>7.35</b>
in industry/transf./energy	-	1.30	2.59	3.46	-	-	-	-	-	-	7.35
of which: chem./petrochem.	-	1.30	2.01	3.46	-	-	-	-	-	-	6.77
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>135.36</b>	-	<b>15.70</b>	<b>65.70</b>	-	<b>19.37</b>	<b>10.68</b>	<b>1.80</b>	-	-	<b>248.61</b>
Electricity plants	135.36	-	15.70	65.70	-	19.37	10.68	1.80	-	-	248.61
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - PJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.



## Indonesia

## Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	261.97	41.14	..	64.86	..	..	..	..	..	..	..
Imports	2.52	..	..	-	..	..	..	..	..	..	..
Exports	-218.21	..	..	-24.95	..	..	..	..	..	..	..
Intl. marine bunkers	..	..	..	..	..	..	..	..	..	..	..
Intl. aviation bunkers	..	..	..	..	..	..	..	..	..	..	..
Stock changes	..	..	..	..	..	..	..	..	..	..	..
<b>TPES</b>	<b>46.29</b>	..	..	..	..	..	..	..	..	..	..
Electricity and Heat Output											
Elec. generated - TWh	..	..	..	..	..	..	..	..	..	..	..
Heat generated - PJ	..	..	..	..	..	..	..	..	..	..	..

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	94.9	125.1	168.6	237.5	378.4	426.4	434.3	..
Net imports (Mtoe)	-50.8	-68.1	-69.1	-81.3	-170.6	-200.1	-203.3	..
Total primary energy supply (Mtoe)	38.2	55.7	98.7	155.7	206.9	225.2	230.2	..
Net oil imports (Mtoe)	-50.8	-58.1	-40.4	-13.2	20.5	32.2	28.3	..
Oil supply (Mtoe)	10.7	20.2	33.4	57.9	68.0	71.5	70.2	..
Electricity consumption (TWh) <sup>1</sup>	2.0	6.8	29.5	82.6	153.8	211.9	225.9	..
GDP (billion 2010 USD)	109.8	181.5	309.8	453.4	755.1	988.1	1037.7	..
GDP PPP (billion 2010 USD)	291.3	481.8	822.2	1203.3	2004.0	2622.4	2753.9	..
Population (millions)	124.24	147.49	181.44	211.54	242.52	258.16	261.12	..
Industrial production index (2010=100)	..	..	..	..	..	..	..	..
Total self-sufficiency <sup>2</sup>	2.49	2.24	1.71	1.53	1.83	1.89	1.89	..
Coal self-sufficiency <sup>2</sup>	1.11	1.10	1.65	3.79	5.85	5.97	5.75	5.66
Oil self-sufficiency <sup>2</sup>	6.28	3.93	2.24	1.24	0.71	0.57	0.61	..
Natural gas self-sufficiency <sup>2</sup>	1.00	3.02	2.66	2.30	1.93	1.73	1.65	..
TPES/GDP (toe per thousand 2010 USD)	0.35	0.31	0.32	0.34	0.27	0.23	0.22	..
TPES/GDP PPP (toe per thousand 2010 USD)	0.13	0.12	0.12	0.13	0.10	0.09	0.08	..
TPES/population (toe per capita)	0.31	0.38	0.54	0.74	0.85	0.87	0.88	..
Net oil imports/GDP (toe per thousand 2010 USD)	-0.46	-0.32	-0.13	-0.03	0.03	0.03	0.03	..
Oil supply/GDP (toe per thousand 2010 USD)	0.10	0.11	0.11	0.13	0.09	0.07	0.07	..
Oil supply/population (toe per capita)	0.09	0.14	0.18	0.27	0.28	0.28	0.27	..
Share of renewables in TPES	0.71	0.55	0.47	0.38	0.33	0.33	0.34	..
Share of renewables in electricity generation	0.44	0.18	0.21	0.16	0.16	0.11	0.13	..
TFC/GDP (toe per thousand 2010 USD)	0.31	0.27	0.26	0.27	0.19	0.17	0.16	..
TFC/GDP PPP (toe per thousand 2010 USD)	0.12	0.10	0.10	0.10	0.07	0.06	0.06	..
TFC/population (toe per capita)	0.28	0.34	0.44	0.57	0.59	0.64	0.63	..
Elect. cons./GDP (kWh per 2010 USD)	0.02	0.04	0.10	0.18	0.20	0.21	0.22	..
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	0.01	0.01	0.04	0.07	0.08	0.08	0.08	..
Elect. cons./population (kWh per capita)	16	46	163	390	634	821	865	..
Industry cons. <sup>3</sup> /industrial production (2010=100)	..	..	..	..	..	..	..	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	..	..	..	..	..	..	..	..

1. Electricity consumption equals domestic supply less losses.

2. Production divided by TPES.

3. Includes non-energy use.

## Morocco

Figure 1. Energy production

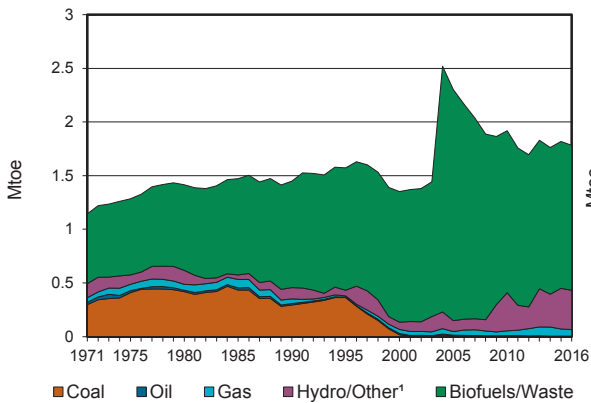


Figure 2. Total primary energy supply<sup>2</sup>

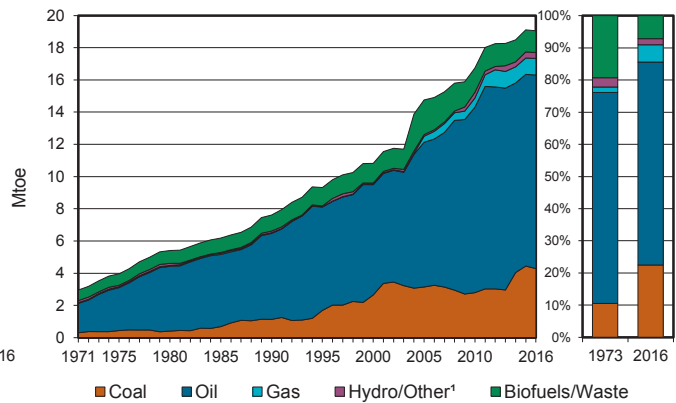


Figure 3. Energy self-sufficiency

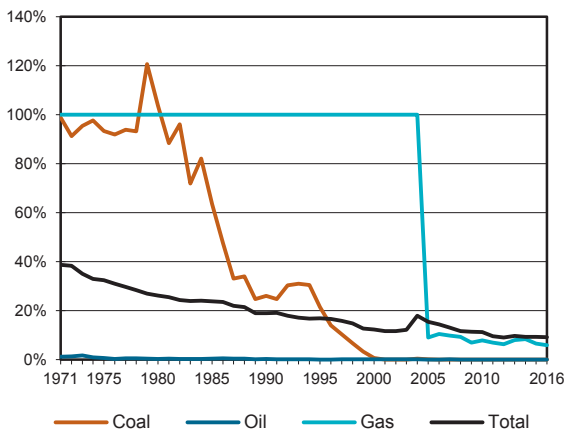


Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>

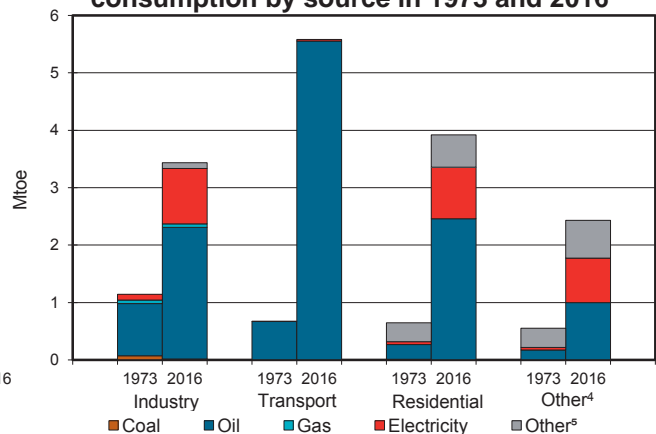


Figure 5. Electricity generation by source

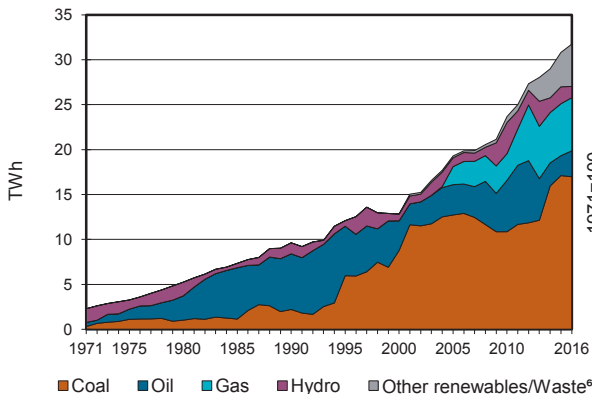
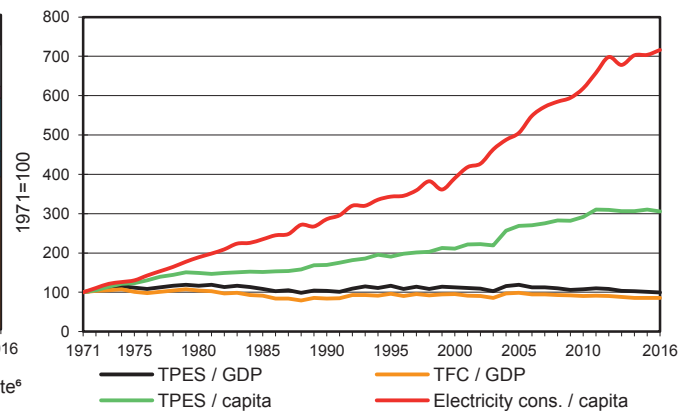


Figure 6. Selected indicators



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.

## Morocco

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	0.00	-	0.06	-	0.11	0.26	1.35	-	-	1.78
Imports	4.44	-	12.75	0.97	-	-	-	-	0.45	-	18.62
Exports	-	-	-0.01	-	-	-	-	-	-0.01	-	-0.02
Intl. marine bunkers	-	-	-0.13	-	-	-	-	-	-	-	-0.13
Intl. aviation bunkers	-	-	-0.68	-	-	-	-	-	-	-	-0.68
Stock changes	-0.15	-	0.09	-	-	-	-	-	-	-	-0.06
<b>TPES</b>	<b>4.28</b>	<b>0.00</b>	<b>12.01</b>	<b>1.03</b>	-	<b>0.11</b>	<b>0.26</b>	<b>1.35</b>	<b>0.44</b>	-	<b>19.50</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-	-0.00	0.04	-0.00	-	-	-	-	0.00	-	0.03
Electricity plants	-4.27	-	-0.75	-0.97	-	-0.11	-0.26	-	2.73	-	-3.62
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat. fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-	-	-	-	-	-	-	-	-	-
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-0.03	-	-	-0.03
Energy industry own use	-	-	-	-	-	-	-	-	-0.01	-	-0.01
Losses	-	-	-	-	-	-	-	-	-0.49	-	-0.49
<b>TFC</b>	<b>0.02</b>	-	<b>11.30</b>	<b>0.06</b>	-	-	-	<b>1.32</b>	<b>2.67</b>	-	<b>15.37</b>
<b>INDUSTRY</b>	<b>0.02</b>	-	<b>1.79</b>	<b>0.06</b>	-	-	-	<b>0.10</b>	<b>0.96</b>	-	<b>2.94</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	0.05	-	-	-	-	0.01	0.09	-	0.15
Non-ferrous metals	0.00	-	0.06	-	-	-	-	-	0.11	-	0.17
Non-metallic minerals	-	-	1.09	-	-	-	-	0.09	0.19	-	1.36
Transport equipment	-	-	0.00	-	-	-	-	-	0.02	-	0.02
Machinery	-	-	0.00	-	-	-	-	-	0.05	-	0.05
Mining and quarrying	-	-	0.31	0.02	-	-	-	-	0.23	-	0.56
Food and tobacco	0.02	-	0.15	-	-	-	-	0.00	0.14	-	0.31
Paper, pulp and printing	-	-	0.02	0.04	-	-	-	-	0.02	-	0.08
Wood and wood products	-	-	-	-	-	-	-	0.00	0.00	-	0.00
Construction	-	-	0.06	-	-	-	-	0.00	0.02	-	0.08
Textile and leather	-	-	0.04	-	-	-	-	0.00	0.06	-	0.11
Non-specified	-	-	0.02	-	-	-	-	-	0.02	-	0.04
<b>TRANSPORT</b>	-	-	<b>5.55</b>	-	-	-	-	-	<b>0.03</b>	-	<b>5.58</b>
Domestic aviation	-	-	0.03	-	-	-	-	-	-	-	0.03
Road	-	-	5.52	-	-	-	-	-	-	-	5.52
Rail	-	-	0.01	-	-	-	-	-	0.03	-	0.04
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	-	-	<b>3.46</b>	-	-	-	-	<b>1.22</b>	<b>1.68</b>	-	<b>6.35</b>
Residential	-	-	2.46	-	-	-	-	0.56	0.90	-	3.92
Comm. and public services	-	-	0.14	-	-	-	-	0.65	0.44	-	1.24
Agriculture/forestry	-	-	0.86	-	-	-	-	-	0.34	-	1.19
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>NON-ENERGY USE</b>	-	-	<b>0.50</b>	-	-	-	-	-	-	-	<b>0.50</b>
in industry/transf./energy	-	-	0.50	-	-	-	-	-	-	-	0.50
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>16.99</b>	-	<b>2.88</b>	<b>5.91</b>	-	<b>1.26</b>	<b>3.40</b>	-	-	<b>1.30</b>	<b>31.73</b>
Electricity plants	16.99	-	2.88	5.91	-	1.26	3.40	-	-	1.30	31.73
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - PJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Morocco

### Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	..	0.00	..	0.06	-	0.10	..	..	-	..	..
Imports	4.49	..	..	0.96	-	-	..	..	0.52	..	..
Exports	..	..	..	-	-	-	..	..	-0.01	..	..
Intl. marine bunkers	..	..	..	..	-	-	..	..	-	..	..
Intl. aviation bunkers	..	..	..	..	-	-	..	..	-	..	..
Stock changes	-0.04	..	..	..	-	-	..	..	-	..	..
<b>TPES</b>	<b>4.45</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>-</b>	<b>0.10</b>	<b>..</b>	<b>..</b>	<b>0.51</b>	<b>..</b>	<b>..</b>
Electricity and Heat Output											
Elec. generated - TWh	17.62	-	2.99	6.13	-	1.19	3.45	-	-	1.30	32.68
Heat generated - PJ	-	-	-	-	-	-	-	-	-	-	-

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

### Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	1.2	1.4	1.5	1.4	1.9	1.8	1.8	..
Net imports (Mtoe)	2.4	4.0	6.5	9.9	16.4	18.8	18.6	..
Total primary energy supply (Mtoe)	3.5	5.4	7.6	11.0	17.1	19.5	19.5	..
Net oil imports (Mtoe)	2.4	4.0	5.7	7.1	12.7	13.1	12.7	..
Oil supply (Mtoe)	2.3	4.0	5.3	6.9	11.5	11.9	12.0	..
Electricity consumption (TWh) <sup>1</sup>	2.6	4.7	8.9	14.1	25.1	30.7	31.6	33.3
GDP (billion 2010 USD)	18.4	27.2	43.2	57.5	93.2	113.2	114.5	..
GDP PPP (billion 2010 USD)	40.9	60.6	96.2	128.1	207.6	252.6	255.7	..
Population (millions)	17.05	20.02	24.88	28.85	32.41	34.80	35.28	..
Industrial production index (2010=100)	..	..	..	..	..	..	..	..
Total self-sufficiency <sup>2</sup>	0.35	0.26	0.19	0.12	0.11	0.09	0.09	..
Coal self-sufficiency <sup>2</sup>	0.95	1.04	0.26	0.01	-	-	-	-
Oil self-sufficiency <sup>2</sup>	0.02	0.00	0.00	0.00	0.00	0.00	0.00	..
Natural gas self-sufficiency <sup>2</sup>	1.00	1.00	1.00	1.00	0.08	0.07	0.06	..
TPES/GDP (toe per thousand 2010 USD)	0.19	0.20	0.18	0.19	0.18	0.17	0.17	..
TPES/GDP PPP (toe per thousand 2010 USD)	0.09	0.09	0.08	0.09	0.08	0.08	0.08	..
TPES/population (toe per capita)	0.21	0.27	0.31	0.38	0.53	0.56	0.55	..
Net oil imports/GDP (toe per thousand 2010 USD)	0.13	0.15	0.13	0.12	0.14	0.12	0.11	..
Oil supply/GDP (toe per thousand 2010 USD)	0.13	0.15	0.12	0.12	0.12	0.11	0.11	..
Oil supply/population (toe per capita)	0.14	0.20	0.21	0.24	0.36	0.34	0.34	..
Share of renewables in TPES	0.22	0.17	0.14	0.12	0.11	0.09	0.08	..
Share of renewables in electricity generation	0.42	0.29	0.13	0.06	0.17	0.14	0.15	..
TFC/GDP (toe per thousand 2010 USD)	0.17	0.16	0.13	0.15	0.14	0.13	0.13	..
TFC/GDP PPP (toe per thousand 2010 USD)	0.07	0.07	0.06	0.07	0.06	0.06	0.06	..
TFC/population (toe per capita)	0.18	0.22	0.23	0.30	0.41	0.43	0.44	..
Elect. cons./GDP (kWh per 2010 USD)	0.14	0.17	0.21	0.25	0.27	0.27	0.28	..
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	0.06	0.08	0.09	0.11	0.12	0.12	0.12	..
Elect. cons./population (kWh per capita)	152	237	358	489	774	881	897	..
Industry cons. <sup>3</sup> /industrial production (2010=100)	..	..	..	..	..	..	..	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	..	..	..	..	..	..	..	..

1. Electricity consumption equals domestic supply less losses.

2. Production divided by TPES.

3. Includes non-energy use.

## Singapore

Figure 1. Energy production

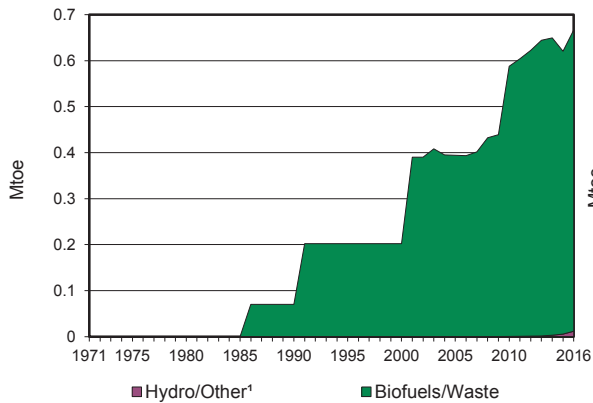


Figure 2. Total primary energy supply<sup>2</sup>

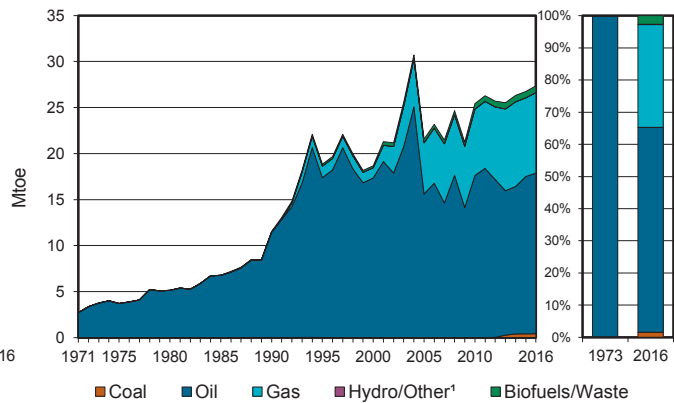


Figure 3. Energy self-sufficiency

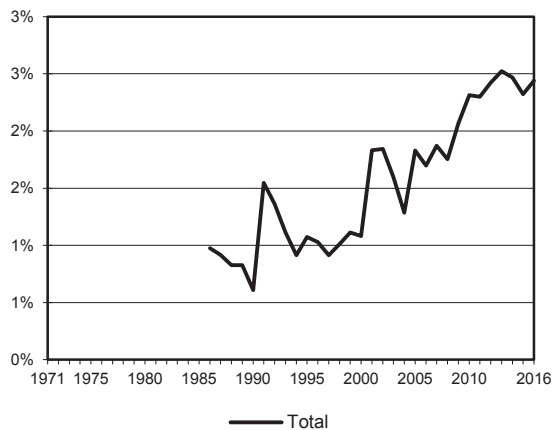


Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>

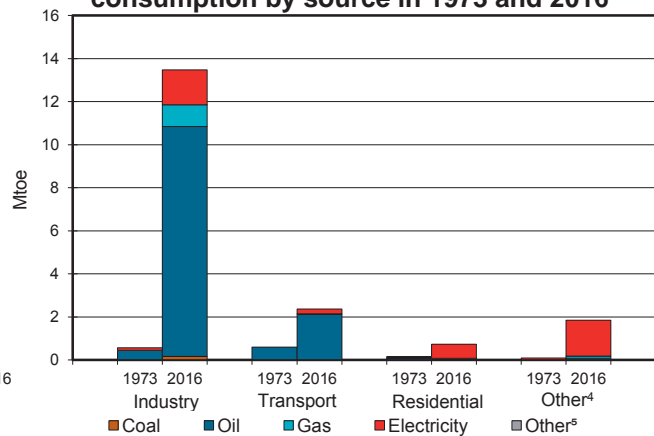


Figure 5. Electricity generation by source

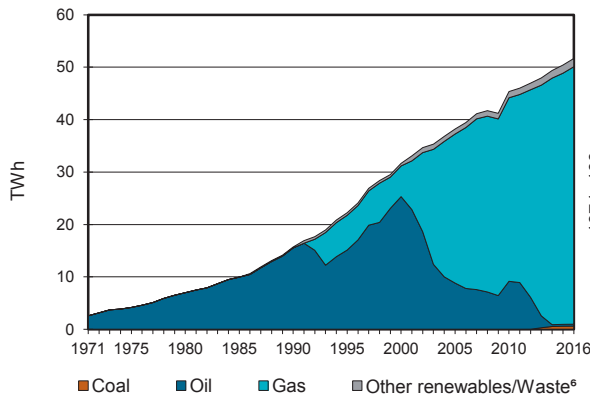
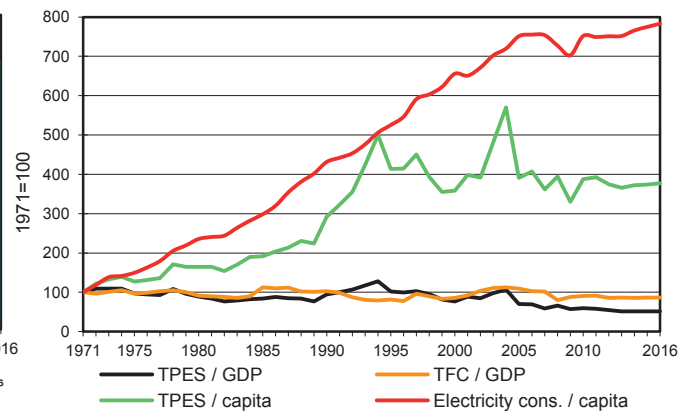


Figure 6. Selected indicators



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.

## Singapore

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	-	-	-	-	-	0.01	0.66	-	-	0.67
Imports	0.43	48.89	121.38	8.71	-	-	-	0.07	-	-	179.48
Exports	-	-0.75	-97.56	-	-	-	-	-	-	-	-98.31
Intl. marine bunkers	-	-	-46.83	-	-	-	-	-	-	-	-46.83
Intl. aviation bunkers	-	-	-7.81	-	-	-	-	-	-	-	-7.81
Stock changes	-	-0.02	0.15	0.04	-	-	-	-	-	-	0.16
<b>TPES</b>	<b>0.43</b>	<b>48.12</b>	<b>-30.68</b>	<b>8.75</b>	-	-	<b>0.01</b>	<b>0.72</b>	-	-	<b>27.35</b>
Transfers	-	7.17	-7.23	-	-	-	-	-	-	-	-0.06
Statistical differences	0.00	-	-	-0.04	-	-	-	-	-	-	-0.04
Electricity plants	-0.26	-	-0.13	-7.53	-	-	-0.01	-0.72	4.44	-	-4.21
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat. fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-55.29	53.00	-	-	-	-	-	-	-	-2.29
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-	-	-	-
Energy industry own use	-	-	-2.06	-0.01	-	-	-	-	-0.18	-	-2.25
Losses	-	-	-	-	-	-	-	-	-0.08	-	-0.08
<b>TFC</b>	<b>0.17</b>	-	<b>12.90</b>	<b>1.17</b>	-	-	-	-	<b>4.18</b>	-	<b>18.42</b>
<b>INDUSTRY</b>	<b>0.17</b>	-	<b>3.40</b>	<b>1.01</b>	-	-	-	-	<b>1.63</b>	-	<b>6.21</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	2.78	-	-	-	-	-	-	-	2.78
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper, pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	0.01	-	-	-	-	0.05	-	0.05
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	0.17	-	0.62	1.01	-	-	-	-	1.58	-	3.38
<b>TRANSPORT</b>	-	-	<b>2.13</b>	<b>0.01</b>	-	-	-	-	<b>0.23</b>	-	<b>2.37</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	2.09	0.01	-	-	-	-	-	-	2.10
Rail	-	-	-	-	-	-	-	-	0.23	-	0.23
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	0.04	-	-	-	-	-	-	-	0.04
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	-	-	<b>0.11</b>	<b>0.15</b>	-	-	-	-	<b>2.32</b>	-	<b>2.58</b>
Residential	-	-	0.03	0.05	-	-	-	-	0.65	-	0.73
Comm. and public services	-	-	0.08	0.10	-	-	-	-	1.65	-	1.82
Agriculture/forestry	-	-	-	-	-	-	-	-	-	-	-
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	0.00	-	-	-	-	0.02	-	0.03
<b>NON-ENERGY USE</b>	-	-	<b>7.27</b>	-	-	-	-	-	-	-	<b>7.27</b>
in industry/transf./energy	-	-	7.27	-	-	-	-	-	-	-	7.27
of which: chem./petrochem.	-	-	6.70	-	-	-	-	-	-	-	6.70
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>0.62</b>	-	<b>0.36</b>	<b>49.11</b>	-	-	<b>0.14</b>	<b>1.44</b>	-	-	<b>51.67</b>
Electricity plants	0.62	-	0.36	49.11	-	-	0.14	1.44	-	-	51.67
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - PJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Singapore

## Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./ Solar/ etc.	Biofuels/ Waste	Electricity	Heat	Total
Production	..	-	..	-	..	..	..	..	..	..	..
Imports	0.45	..	..	9.19	..	..	..	..	..	..	..
Exports	..	..	..	-	..	..	..	..	..	..	..
Intl. marine bunkers	..	..	..	..	..	..	..	..	..	..	..
Intl. aviation bunkers	..	..	..	..	..	..	..	..	..	..	..
Stock changes	..	..	..	..	..	..	..	..	..	..	..
<b>TPES</b>	<b>0.45</b>	..	..	..	..	..	..	..	..	..	..
Electricity and Heat Output											
Elec. generated - TWh	..	..	..	..	..	..	..	..	..	..	..
Heat generated - PJ	..	..	..	..	..	..	..	..	..	..	..

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	-	-	0.1	0.2	0.6	0.6	0.7	..
Net imports (Mtoe)	12.3	8.0	24.5	40.8	69.4	78.2	81.2	..
Total primary energy supply (Mtoe)	3.8	5.1	11.5	18.7	25.4	26.7	27.4	..
Net oil imports (Mtoe)	12.2	8.0	24.5	39.7	62.2	69.2	72.0	..
Oil supply (Mtoe)	3.8	5.1	11.4	17.4	17.6	17.1	17.4	..
Electricity consumption (TWh) <sup>1</sup>	3.5	6.6	15.2	30.5	44.1	49.5	50.7	..
GDP (billion 2010 USD)	19.1	32.1	67.6	134.5	236.4	289.2	295.0	..
GDP PPP (billion 2010 USD)	29.0	48.7	102.5	204.0	358.7	438.7	447.4	..
Population (millions)	2.19	2.41	3.05	4.03	5.08	5.54	5.61	..
Industrial production index (2010=100)	..	..	..	..	..	..	..	..
Total self-sufficiency <sup>2</sup>	-	-	0.01	0.01	0.02	0.02	0.02	..
Coal self-sufficiency <sup>2</sup>	-	-	-	-	-	-	-	..
Oil self-sufficiency <sup>2</sup>	-	-	-	-	-	-	-	..
Natural gas self-sufficiency <sup>2</sup>	-	-	-	-	-	-	-	..
TPES/GDP (toe per thousand 2010 USD)	0.20	0.16	0.17	0.14	0.11	0.09	0.09	..
TPES/GDP PPP (toe per thousand 2010 USD)	0.13	0.11	0.11	0.09	0.07	0.06	0.06	..
TPES/population (toe per capita)	1.71	2.13	3.78	4.63	5.01	4.83	4.88	..
Net oil imports/GDP (toe per thousand 2010 USD)	0.64	0.25	0.36	0.30	0.26	0.24	0.24	..
Oil supply/GDP (toe per thousand 2010 USD)	0.20	0.16	0.17	0.13	0.07	0.06	0.06	..
Oil supply/population (toe per capita)	1.71	2.13	3.75	4.31	3.47	3.09	3.11	..
Share of renewables in TPES	0.00	0.00	0.00	0.01	0.01	0.01	0.02	..
Share of renewables in electricity generation	-	-	0.01	0.01	0.01	0.02	0.02	..
TFC/GDP (toe per thousand 2010 USD)	0.07	0.07	0.07	0.06	0.07	0.06	0.06	..
TFC/GDP PPP (toe per thousand 2010 USD)	0.05	0.04	0.05	0.04	0.04	0.04	0.04	..
TFC/population (toe per capita)	0.64	0.88	1.64	2.06	3.04	3.28	3.29	..
Elect. cons./GDP (kWh per 2010 USD)	0.18	0.20	0.22	0.23	0.19	0.17	0.17	..
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	0.12	0.14	0.15	0.15	0.12	0.11	0.11	..
Elect. cons./population (kWh per capita)	1599	2718	4983	7575	8680	8949	9041	..
Industry cons. <sup>3</sup> /industrial production (2010=100)	..	..	..	..	..	..	..	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	..	..	..	..	..	..	..	..

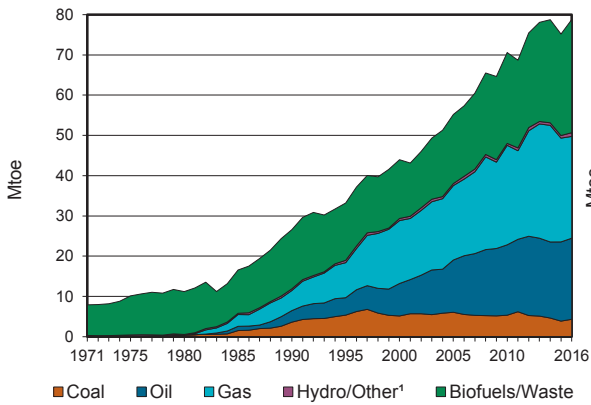
1. Electricity consumption equals domestic supply less losses.

2. Production divided by TPES.

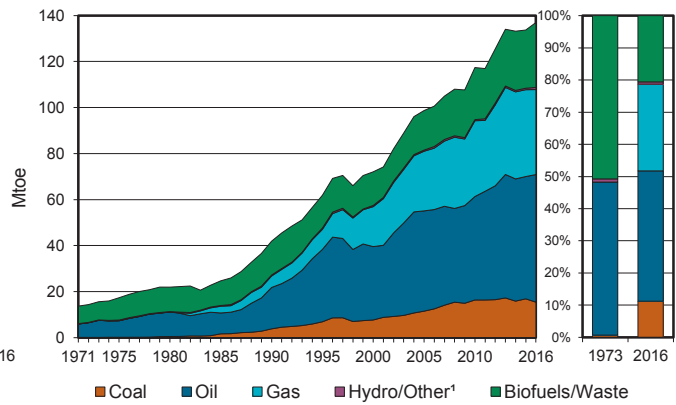
3. Includes non-energy use.

## Thailand

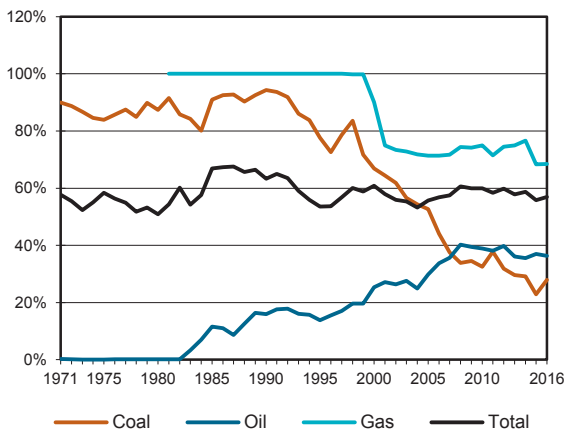
**Figure 1. Energy production**



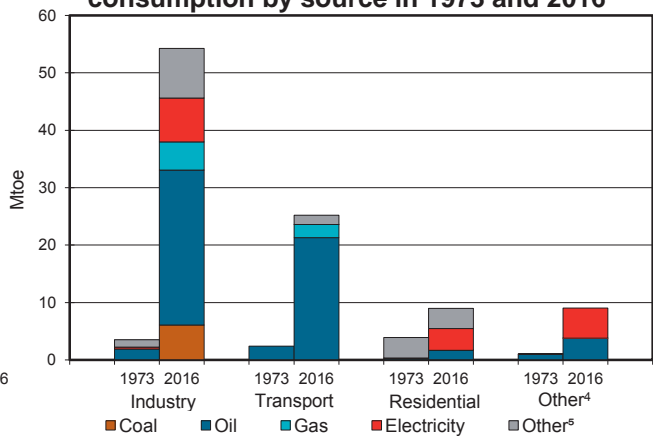
**Figure 2. Total primary energy supply<sup>2</sup>**



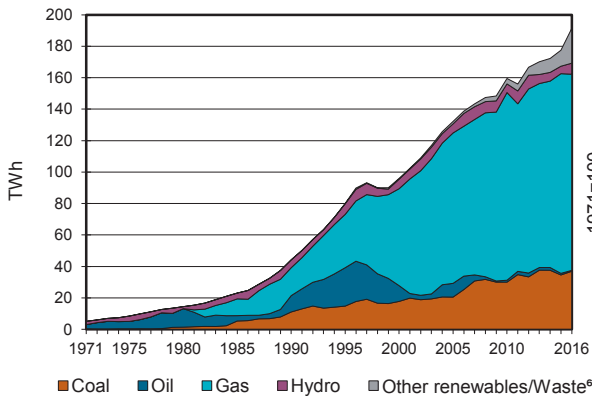
**Figure 3. Energy self-sufficiency**



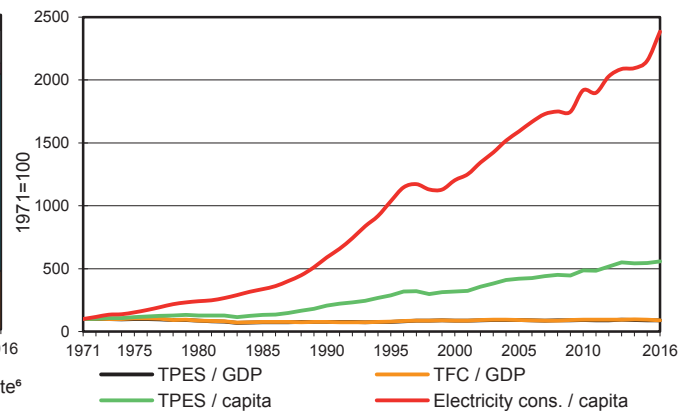
**Figure 4. Breakdown of sectoral final consumption by source in 1973 and 2016<sup>3</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Includes non-energy use.
4. Includes commercial and public services, agriculture/forestry, fishing and non-specified.
5. Includes biofuels and waste, direct use of geothermal/solar thermal and heat produced in CHP/heat plants.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.



## Thailand

2016

Million tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./ Solar/ etc.	Biofuels/ Waste	Electricity	Heat	Total
Production	4.31	20.15	-	25.30	-	0.60	0.32	28.13	-	-	78.80
Imports	14.26	44.24	6.94	11.64	-	-	-	0.05	1.70	-	78.84
Exports	-0.02	-1.62	-11.26	-	-	-	-	-0.02	-0.12	-	-13.04
Intl. marine bunkers	-	-	-1.23	-	-	-	-	-	-	-	-1.23
Intl. aviation bunkers	-	-	-4.20	-	-	-	-	-	-	-	-4.20
Stock changes	-3.13	6.32	-3.90	-	-	-	-	0.06	-	-	-0.65
<b>TPES</b>	<b>15.42</b>	<b>69.09</b>	<b>-13.65</b>	<b>36.94</b>	<b>-</b>	<b>0.60</b>	<b>0.32</b>	<b>28.22</b>	<b>1.59</b>	<b>-</b>	<b>138.53</b>
Transfers	-	-7.17	7.46	-	-	-	-	-	-	-	0.29
Statistical differences	-0.00	0.68	-0.00	-0.11	-	-	-	-0.00	0.00	-	0.56
Electricity plants	-9.33	-	-0.14	-22.48	-	-0.60	-0.32	-9.84	16.45	-	-26.26
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-0.01	-	-	-	-	-	-	-	-	-	-0.01
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat. fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-61.79	60.29	-	-	-	-	-	-	-	-1.50
Petrochemical plants	-	-0.00	-	-	-	-	-	-	-	-	-0.00
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-4.62	-	-	-4.62
Energy industry own use	-	-	-0.79	-7.16	-	-	-	-	-0.28	-	-8.23
Losses	-	-0.20	-	-	-	-	-	-	-1.05	-	-1.25
<b>TFC</b>	<b>6.07</b>	<b>0.61</b>	<b>53.17</b>	<b>7.20</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>13.76</b>	<b>16.70</b>	<b>-</b>	<b>97.50</b>
<b>INDUSTRY</b>	<b>6.07</b>	<b>-</b>	<b>5.75</b>	<b>3.29</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>8.63</b>	<b>7.64</b>	<b>-</b>	<b>31.38</b>
Iron and steel	0.03	-	0.46	0.35	-	-	-	-	0.78	-	1.62
Chemical and petrochemical	0.00	-	0.56	0.76	-	-	-	-	1.22	-	2.53
Non-ferrous metals	0.02	-	-	-	-	-	-	-	-	-	0.02
Non-metallic minerals	5.10	-	0.39	0.92	-	-	-	-	0.78	-	7.19
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	0.42	0.11	-	-	-	-	1.83	-	2.37
Mining and quarrying	-	-	0.03	-	-	-	-	-	-	-	0.03
Food and tobacco	0.31	-	1.38	0.13	-	-	-	3.53	1.53	-	6.88
Paper, pulp and printing	0.02	-	0.20	0.91	-	-	-	-	0.28	-	1.41
Wood and wood products	-	-	0.19	0.02	-	-	-	-	0.20	-	0.41
Construction	-	-	0.12	-	-	-	-	-	-	-	0.12
Textile and leather	0.00	-	0.18	0.03	-	-	-	-	0.78	-	0.99
Non-specified	0.58	-	1.82	0.05	-	-	-	5.11	0.25	-	7.81
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>21.32</b>	<b>2.25</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1.61</b>	<b>0.02</b>	<b>-</b>	<b>25.20</b>
Domestic aviation	-	-	0.97	-	-	-	-	-	-	-	0.97
Road	-	-	20.12	2.25	-	-	-	1.61	-	-	23.98
Rail	-	-	0.08	-	-	-	-	-	0.02	-	0.09
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	0.16	-	-	-	-	-	-	-	0.16
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>-</b>	<b>-</b>	<b>5.47</b>	<b>0.00</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>3.52</b>	<b>9.04</b>	<b>-</b>	<b>18.04</b>
Residential	-	-	1.68	-	-	-	-	3.52	3.78	-	8.98
Comm. and public services	-	-	0.80	0.00	-	-	-	-	4.65	-	5.45
Agriculture/forestry	-	-	2.99	-	-	-	-	-	0.02	-	3.01
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	0.60	-	0.60
<b>NON-ENERGY USE</b>	<b>-</b>	<b>0.61</b>	<b>20.63</b>	<b>1.65</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>22.89</b>
in industry/transf./energy	-	0.61	20.63	1.65	-	-	-	-	-	-	22.89
of which: chem./petrochem.	-	0.61	16.70	1.65	-	-	-	-	-	-	18.96
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - TWh</b>	<b>36.92</b>	<b>-</b>	<b>0.57</b>	<b>124.76</b>	<b>-</b>	<b>6.98</b>	<b>3.72</b>	<b>18.37</b>	<b>-</b>	<b>-</b>	<b>191.32</b>
Electricity plants	36.92	-	0.57	124.76	-	6.98	3.72	18.37	-	-	191.32
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - PJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Thailand

## Provisional energy supply for 2017

Million tonnes of oil equivalent											
SUPPLY	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	4.13	18.95	..	24.83	-	0.41	..	..	-	..	..
Imports	14.78	..	..	12.80	-	-	..	..	2.08	..	..
Exports	-0.03	..	..	-	-	-	..	..	-0.10	..	..
Intl. marine bunkers	..	..	..	..	-	-	..	..	-	..	..
Intl. aviation bunkers	..	..	..	..	-	-	..	..	-	..	..
Stock changes	-3.53	..	..	..	-	-	..	..	-	..	..
<b>TPES</b>	<b>15.35</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>-</b>	<b>0.41</b>	<b>..</b>	<b>..</b>	<b>1.98</b>	<b>..</b>	<b>..</b>
Electricity and Heat Output											
Elec. generated - TWh	35.78	-	0.34	120.26	-	4.83	5.62	10.16	-	-	176.99
Heat generated - PJ	-	-	-	-	-	-	-	-	-	-	-

For information on sources for provisional data, please refer to section 'Country notes and sources'.

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Key indicators

	1973	1980	1990	2000	2010	2015	2016	2017p
Energy production (Mtoe)	8.2	11.2	26.6	44.0	70.6	75.2	78.8	..
Net imports (Mtoe)	8.3	12.3	17.9	32.1	51.5	64.9	65.8	..
Total primary energy supply (Mtoe)	15.6	22.0	42.0	72.3	117.9	134.7	138.5	..
Net oil imports (Mtoe)	8.3	12.2	17.6	27.5	32.0	36.7	38.3	..
Oil supply (Mtoe)	7.4	10.7	18.0	31.9	45.0	53.1	55.4	..
Electricity consumption (TWh) <sup>1</sup>	6.5	13.8	40.1	91.2	155.1	177.8	197.5	187.8
GDP (billion 2010 USD)	41.3	66.5	141.6	217.7	341.1	393.7	406.4	..
GDP PPP (billion 2010 USD)	107.6	173.2	368.7	566.8	888.1	1025.0	1058.1	..
Population (millions)	40.17	47.39	56.58	62.96	67.21	68.66	68.86	..
Industrial production index (2010=100)	..	..	..	..	..	..	..	..
Total self-sufficiency <sup>2</sup>	0.52	0.51	0.63	0.61	0.60	0.56	0.57	..
Coal self-sufficiency <sup>2</sup>	0.87	0.87	0.94	0.67	0.33	0.23	0.28	0.27
Oil self-sufficiency <sup>2</sup>	0.00	0.00	0.16	0.25	0.39	0.37	0.36	..
Natural gas self-sufficiency <sup>2</sup>	-	-	1.00	0.90	0.75	0.68	0.68	..
TPES/GDP (toe per thousand 2010 USD)	0.38	0.33	0.30	0.33	0.35	0.34	0.34	..
TPES/GDP PPP (toe per thousand 2010 USD)	0.15	0.13	0.11	0.13	0.13	0.13	0.13	..
TPES/population (toe per capita)	0.39	0.46	0.74	1.15	1.75	1.96	2.01	..
Net oil imports/GDP (toe per thousand 2010 USD)	0.20	0.18	0.12	0.13	0.09	0.09	0.09	..
Oil supply/GDP (toe per thousand 2010 USD)	0.18	0.16	0.13	0.15	0.13	0.14	0.14	..
Oil supply/population (toe per capita)	0.18	0.23	0.32	0.51	0.67	0.77	0.81	..
Share of renewables in TPES	0.52	0.49	0.36	0.21	0.20	0.19	0.21	..
Share of renewables in electricity generation	0.27	0.09	0.11	0.07	0.06	0.08	0.15	..
TFC/GDP (toe per thousand 2010 USD)	0.26	0.23	0.20	0.23	0.25	0.25	0.24	..
TFC/GDP PPP (toe per thousand 2010 USD)	0.10	0.09	0.08	0.09	0.10	0.10	0.09	..
TFC/population (toe per capita)	0.27	0.32	0.51	0.80	1.26	1.44	1.42	..
Elect. cons./GDP (kWh per 2010 USD)	0.16	0.21	0.28	0.42	0.45	0.45	0.49	..
Elect. cons./GDP PPP (kWh per 2010 USD PPP)	0.06	0.08	0.11	0.16	0.18	0.17	0.19	..
Elect. cons./population (kWh per capita)	162	291	709	1448	2307	2590	2869	..
Industry cons. <sup>3</sup> /industrial production (2010=100)	..	..	..	..	..	..	..	..
Industry oil cons. <sup>3</sup> /industrial production (2010=100)	..	..	..	..	..	..	..	..

1. Electricity consumption equals domestic supply less losses.

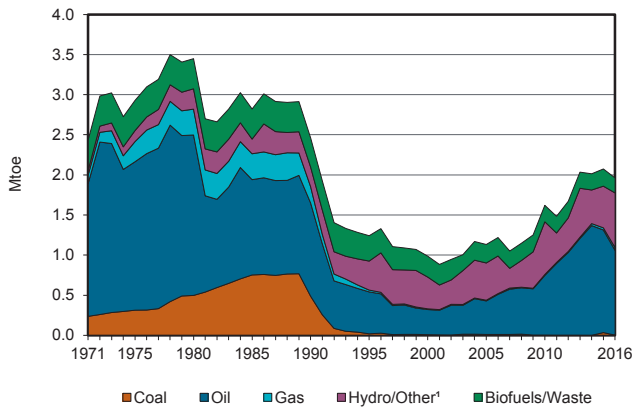
2. Production divided by TPES.

3. Includes non-energy use.

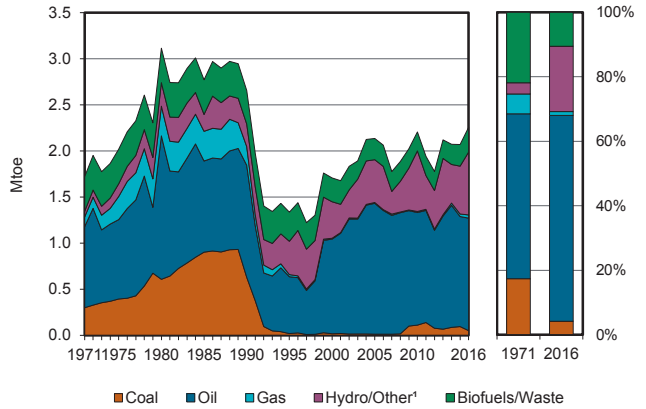
# OTHER NON-OECD COUNTRIES

## Albania

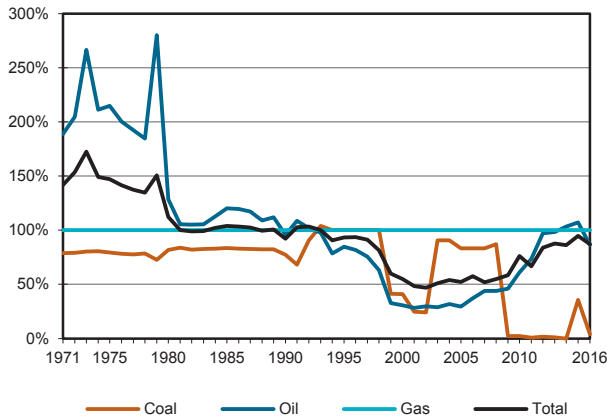
**Figure 1. Energy production**



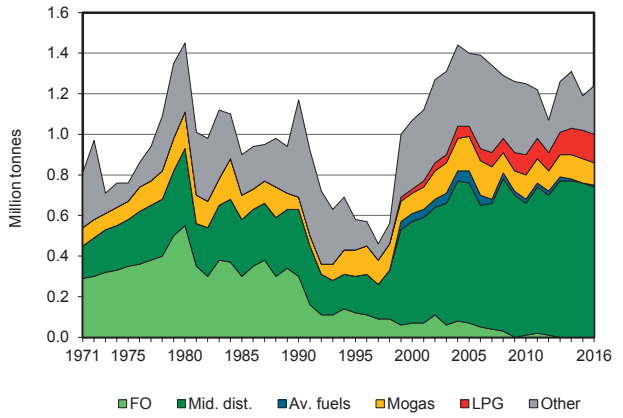
**Figure 2. Total primary energy supply<sup>2</sup>**



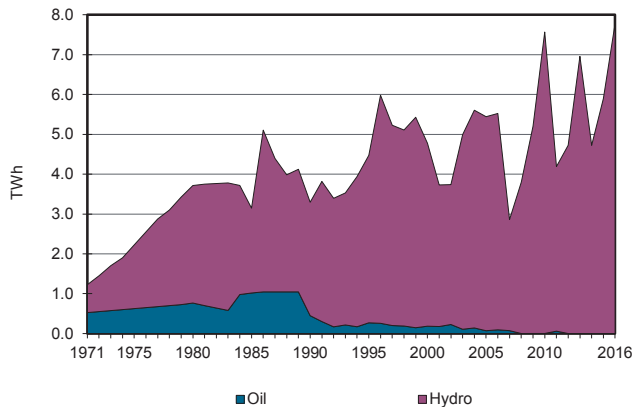
**Figure 3. Energy self-sufficiency<sup>3</sup>**



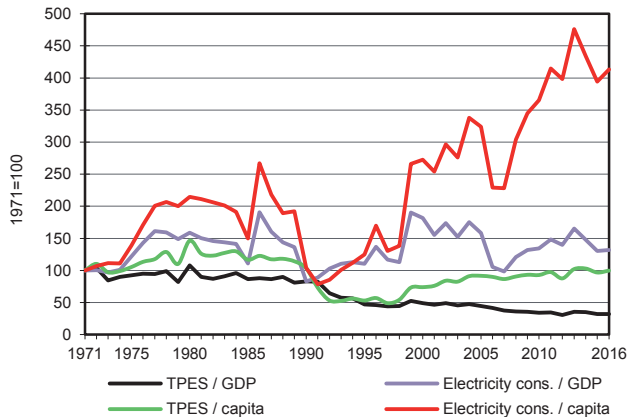
**Figure 4. Oil products demand<sup>4</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>5</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. GDP in 2010 USD.

## Albania

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	2	1056	-	35	-	669	13	186	-	-	1961
Imports	49	-	1226	-	-	-	-	84	-	-	1359
Exports	-	-888	-17	-	-	-	-	-1	-4	-	-910
Intl. marine bunkers	-	-	-35	-	-	-	-	-	-	-	-35
Intl. aviation bunkers	-	-	-6	-	-	-	-	-	-	-	-6
Stock changes	-	16	-132	-	-	-	-	-	-	-	-116
<b>TPES</b>	<b>51</b>	<b>184</b>	<b>1036</b>	<b>35</b>	<b>-</b>	<b>669</b>	<b>13</b>	<b>269</b>	<b>-4</b>	<b>-</b>	<b>2253</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-	-5	-4	-	-	-	-	-	-	-	-9
Electricity plants	-	-	-	-	-	-669	-	-	669	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-179	168	-	-	-	-	-	-	-	-11
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	5	-	-	5
Energy industry own use	-	-	-21	-25	-	-	-	-	-71	-	-116
Losses	-	-	-2	-	-	-	-	-	-122	-	-124
<b>TFC</b>	<b>51</b>	<b>-</b>	<b>1178</b>	<b>10</b>	<b>-</b>	<b>-</b>	<b>13</b>	<b>274</b>	<b>473</b>	<b>-</b>	<b>1998</b>
<b>INDUSTRY</b>	<b>47</b>	<b>-</b>	<b>108</b>	<b>10</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>10</b>	<b>109</b>	<b>-</b>	<b>285</b>
Iron and steel	-	-	4	-	-	-	-	-	15	-	20
Chemical and petrochemical	-	-	5	-	-	-	-	-	8	-	13
Non-ferrous metals	-	-	-	-	-	-	-	-	8	-	8
Non-metallic minerals	47	-	63	-	-	-	-	-	9	-	119
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	9	-	-	-	-	-	9	-	18
Food and tobacco	-	-	8	7	-	-	1	10	25	-	51
Paper pulp and printing	-	-	-	-	-	-	-	-	10	-	10
Wood and wood products	-	-	-	-	-	-	-	-	1	-	1
Construction	-	-	2	-	-	-	-	-	8	-	10
Textile and leather	-	-	2	-	-	-	-	-	12	-	14
Non-specified	-	-	15	3	-	-	-	-	3	-	21
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>747</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>81</b>	<b>-</b>	<b>-</b>	<b>827</b>
Domestic aviation	-	-	1	-	-	-	-	-	-	-	1
Road	-	-	710	-	-	-	-	81	-	-	791
Rail	-	-	2	-	-	-	-	-	-	-	2
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	34	-	-	-	-	-	-	-	34
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>4</b>	<b>-</b>	<b>226</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>12</b>	<b>183</b>	<b>363</b>	<b>-</b>	<b>788</b>
Residential	-	-	93	-	-	-	6	149	257	-	506
Comm. and public services	4	-	47	-	-	-	6	22	99	-	178
Agriculture/forestry	-	-	55	-	-	-	-	12	7	-	74
Fishing	-	-	31	-	-	-	-	-	-	-	31
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>98</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>98</b>
in industry/transf./energy	-	-	98	-	-	-	-	-	-	-	98
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>7782</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>7782</b>
Electricity plants	-	-	-	-	-	7782	-	-	-	-	7782
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Algeria

Figure 1. Energy production

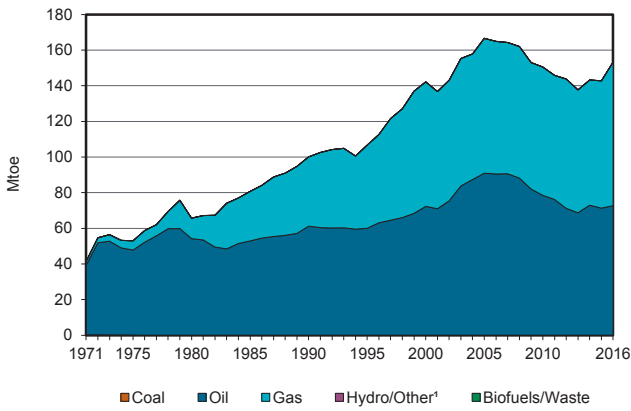


Figure 2. Total primary energy supply<sup>2</sup>

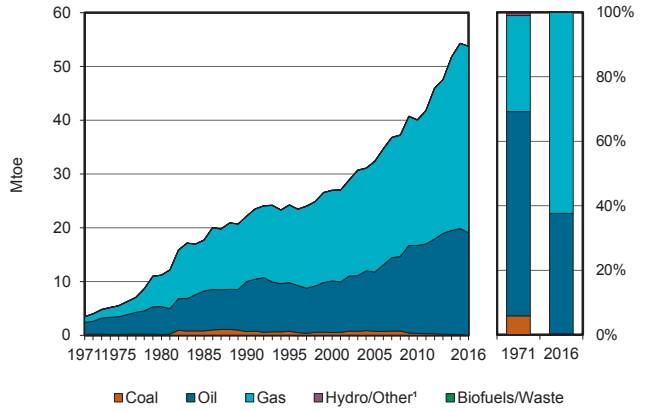


Figure 3. Energy self-sufficiency<sup>3</sup>

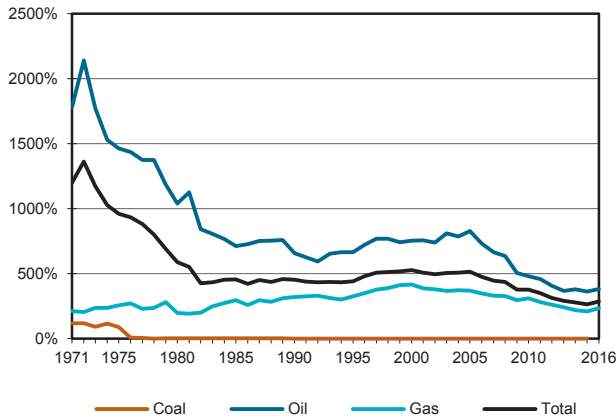


Figure 4. Oil products demand<sup>4</sup>

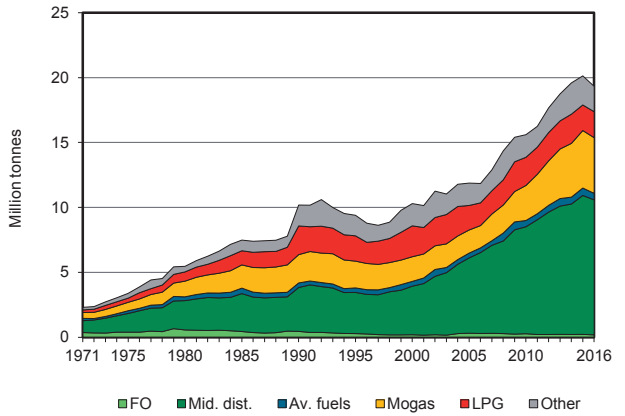


Figure 5. Electricity generation by source

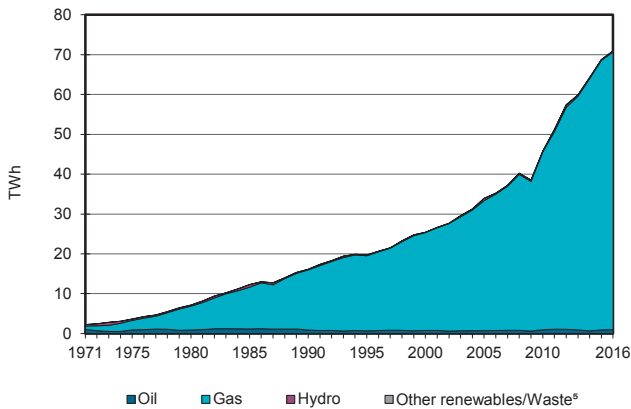
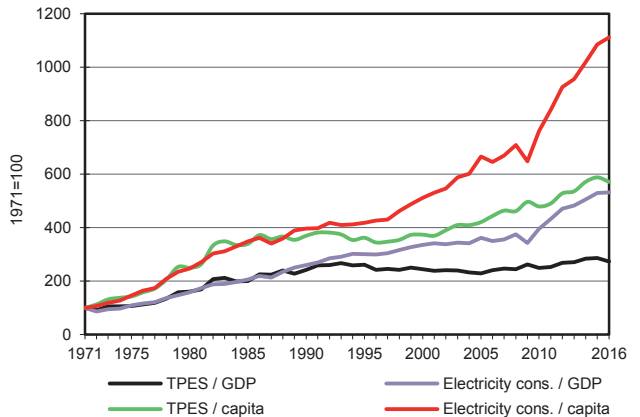


Figure 6. Selected indicators<sup>6</sup>



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Algeria

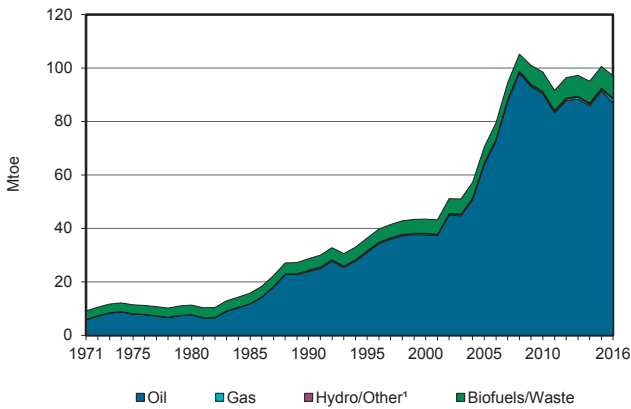
2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	72681	-	80561	-	19	10	6	-	-	153277
Imports	53	236	3706	-	-	-	-	-	22	-	4016
Exports	-	-31898	-25047	-45897	-	-	-	-	-44	-	-102886
Intl. marine bunkers	-	-	-234	-	-	-	-	-	-	-	-234
Intl. aviation bunkers	-	-	-490	-	-	-	-	-	-	-	-490
Stock changes	-53	215	-97	-	-	-	-	-	-	-	65
<b>TPES</b>	-	<b>41233</b>	<b>-22161</b>	<b>34664</b>	-	<b>19</b>	<b>10</b>	<b>6</b>	<b>-21</b>	-	<b>53749</b>
Transfers	-	-9703	10248	-	-	-	-	-	-	-	546
Statistical differences	-	735	-27	-23	-	-	-	-	-20	-	664
Electricity plants	-	-	-422	-14843	-	-19	-10	-	6105	-	-9189
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-31269	30619	-	-	-	-	-	-	-	-651
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-	-	-	-
Energy industry own use	-	-523	-421	-3814	-	-	-	-	-649	-	-5407
Losses	-	-467	-29	-511	-	-	-	-	-918	-	-1925
<b>TFC</b>	-	<b>6</b>	<b>17807</b>	<b>15472</b>	-	-	-	<b>6</b>	<b>4496</b>	-	<b>37787</b>
<b>INDUSTRY</b>	-	-	<b>811</b>	<b>3574</b>	-	-	-	<b>4</b>	<b>1597</b>	-	<b>5986</b>
Iron and steel	-	-	-	128	-	-	-	-	15	-	143
Chemical and petrochemical	-	-	3	42	-	-	-	-	92	-	137
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	7	1718	-	-	-	-	227	-	1952
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	464	-	-	-	-	158	-	621
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	391	1076	-	-	-	-	140	-	1606
Textile and leather	-	-	-	29	-	-	-	-	30	-	59
Non-specified	-	-	410	118	-	-	-	-	936	-	1467
<b>TRANSPORT</b>	-	<b>6</b>	<b>14349</b>	<b>692</b>	-	-	-	-	<b>87</b>	-	<b>15135</b>
Domestic aviation	-	-	46	-	-	-	-	-	-	-	46
Road	-	-	14165	-	-	-	-	-	-	-	14165
Rail	-	-	138	-	-	-	-	-	67	-	205
Pipeline transport	-	6	-	692	-	-	-	-	20	-	718
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	-	-	<b>2075</b>	<b>7802</b>	-	-	-	<b>2</b>	<b>2812</b>	-	<b>12691</b>
Residential	-	-	1685	6917	-	-	-	2	1738	-	10342
Comm. and public services	-	-	-	-	-	-	-	-	-	-	-
Agriculture/forestry	-	-	32	40	-	-	-	-	122	-	194
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	358	844	-	-	-	-	952	-	2154
<b>NON-ENERGY USE</b>	-	-	<b>571</b>	<b>3404</b>	-	-	-	-	-	-	<b>3975</b>
in industry/transf./energy	-	-	571	3404	-	-	-	-	-	-	3975
of which: chem./petrochem.	-	-	82	3404	-	-	-	-	-	-	3485
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	-	-	<b>970</b>	<b>69693</b>	-	<b>218</b>	<b>116</b>	-	-	-	<b>70997</b>
Electricity plants	-	-	970	69693	-	218	116	-	-	-	70997
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

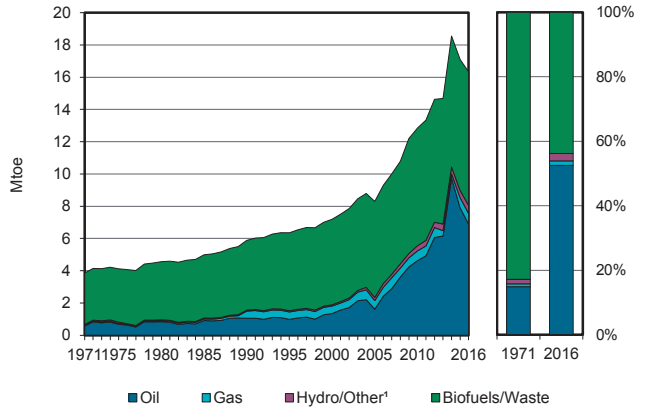
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Angola

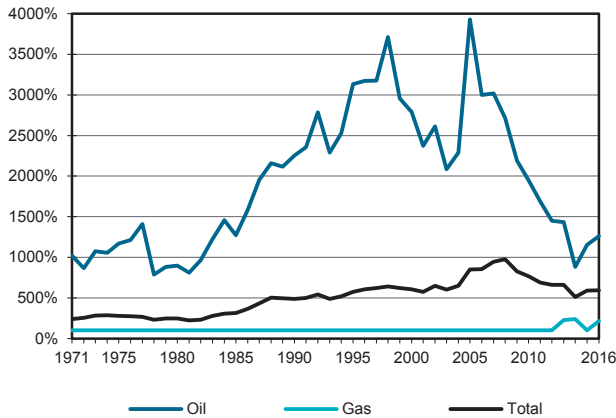
**Figure 1. Energy production**



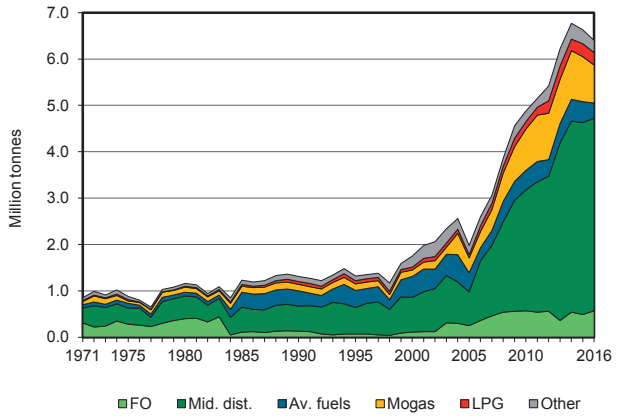
**Figure 2. Total primary energy supply<sup>2</sup>**



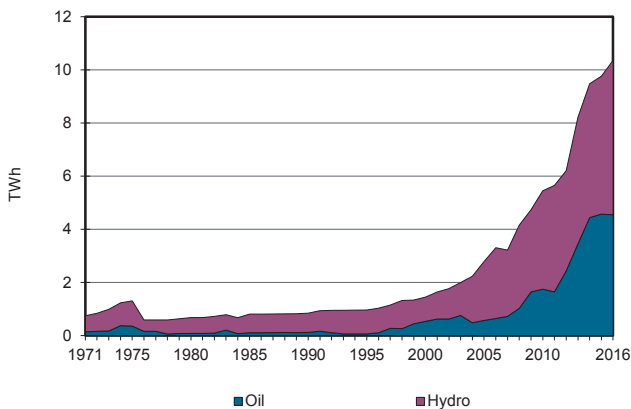
**Figure 3. Energy self-sufficiency<sup>3</sup>**



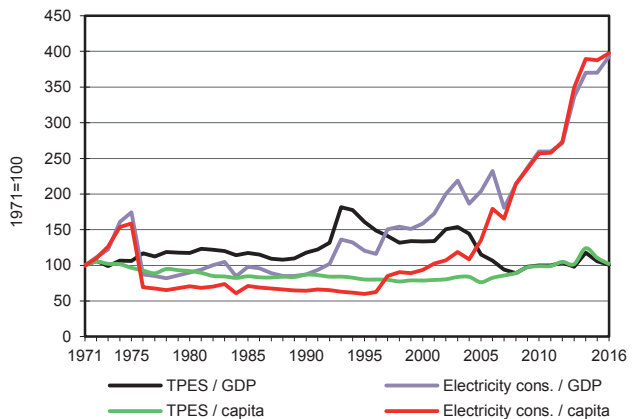
**Figure 4. Oil products demand<sup>4</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>5</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. GDP in 2010 USD.



## Angola

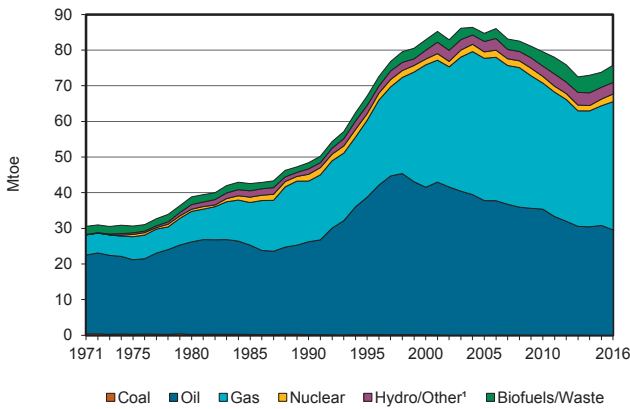
2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	86925	-	1397	-	500	-	8280	-	-	97101
Imports	-	-	5487	-	-	-	-	-	-	-	5487
Exports	-	-83635	-1594	-743	-	-	-	-	-	-	-85972
Intl. marine bunkers	-	-	-335	-	-	-	-	-	-	-	-335
Intl. aviation bunkers	-	-	-167	-	-	-	-	-	-	-	-167
Stock changes	-	195	20	-	-	-	-	-	-	-	215
<b>TPES</b>	-	<b>3485</b>	<b>3411</b>	<b>653</b>	-	<b>500</b>	-	<b>8280</b>	-	-	<b>16329</b>
Transfers	-	-705	796	-	-	-	-	-	-	-	91
Statistical differences	-	-92	-758	-	-	-	-	-	-	-	-850
Electricity plants	-	-	-1277	-	-	-500	-	-	891	-	-886
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-2688	2680	-	-	-	-	-	-	-	-8
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-2105	-	-	-2105
Energy industry own use	-	-	-91	-65	-	-	-	-	-22	-	-177
Losses	-	-	-	-	-	-	-	-	-100	-	-100
<b>TFC</b>	-	-	<b>4761</b>	<b>589</b>	-	-	-	<b>6175</b>	<b>769</b>	-	<b>12293</b>
<b>INDUSTRY</b>	-	-	<b>354</b>	<b>589</b>	-	-	-	<b>146</b>	<b>259</b>	-	<b>1348</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	164	-	-	-	-	-	-	-	164
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	190	589	-	-	-	146	259	-	1184
<b>TRANSPORT</b>	-	-	<b>2750</b>	-	-	-	-	-	-	-	<b>2750</b>
Domestic aviation	-	-	184	-	-	-	-	-	-	-	184
Road	-	-	2547	-	-	-	-	-	-	-	2547
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	19	-	-	-	-	-	-	-	19
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	-	-	<b>1451</b>	-	-	-	-	<b>6028</b>	<b>509</b>	-	<b>7989</b>
Residential	-	-	557	-	-	-	-	6028	509	-	7095
Comm. and public services	-	-	880	-	-	-	-	-	-	-	880
Agriculture/forestry	-	-	9	-	-	-	-	-	-	-	9
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	5	-	-	-	-	-	-	-	5
<b>NON-ENERGY USE</b>	-	-	<b>206</b>	-	-	-	-	-	-	-	<b>206</b>
in industry/transf./energy	-	-	206	-	-	-	-	-	-	-	206
of which: chem./petrochem.	-	-	38	-	-	-	-	-	-	-	38
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	-	-	<b>4546</b>	-	-	<b>5815</b>	-	-	-	-	<b>10361</b>
Electricity plants	-	-	4546	-	-	5815	-	-	-	-	10361
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

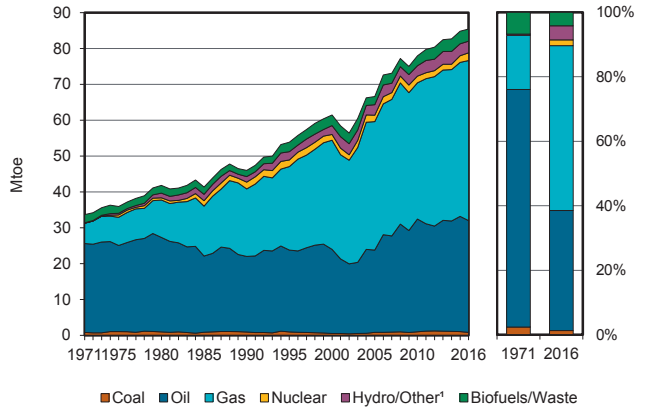
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Argentina

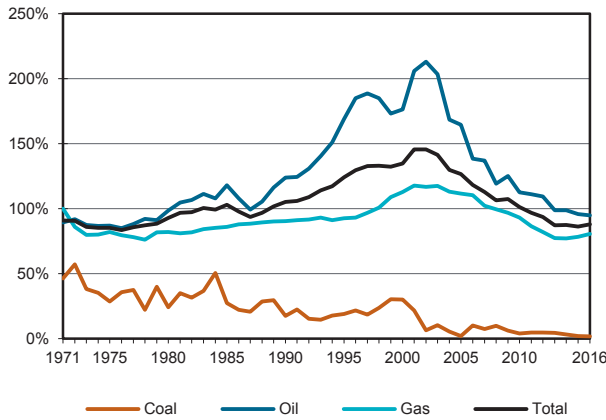
**Figure 1. Energy production**



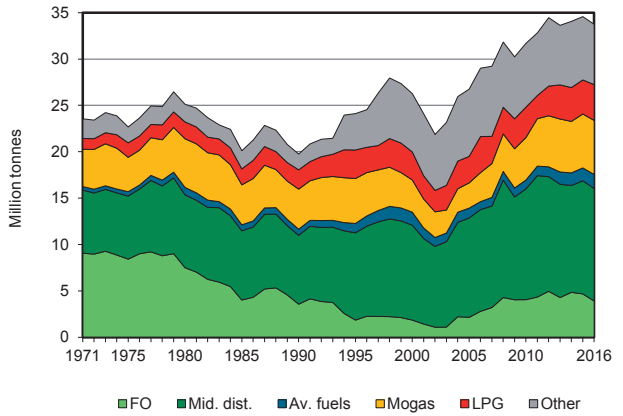
**Figure 2. Total primary energy supply<sup>2</sup>**



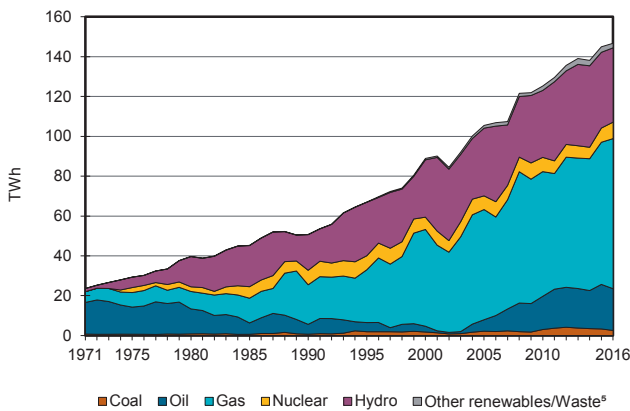
**Figure 3. Energy self-sufficiency<sup>3</sup>**



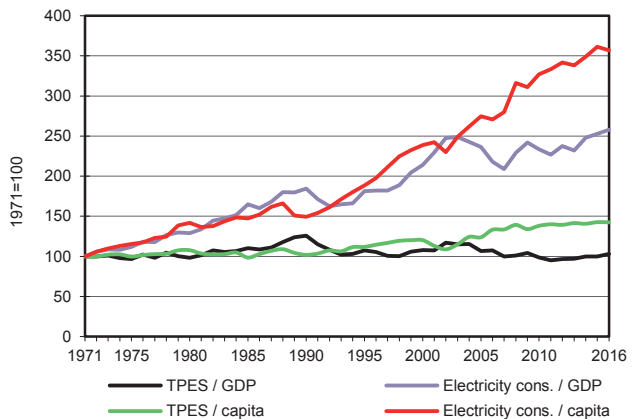
**Figure 4. Oil products demand<sup>4</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>6</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Argentina

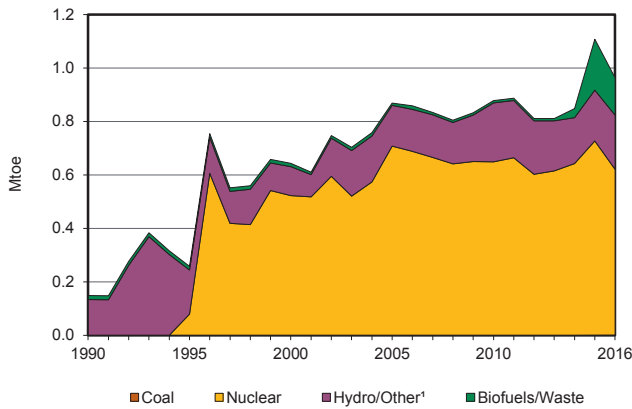
2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	14	29546	-	35963	2159	3207	49	4826	-	-	75764
Imports	819	790	6476	8740	-	-	-	-	847	-	17673
Exports	-36	-2332	-1542	-51	-	-	-	-1448	-28	-	-5436
Intl. marine bunkers	-	-	-691	-	-	-	-	-	-	-	-691
Intl. aviation bunkers	-	-	-973	-	-	-	-	-	-	-	-973
Stock changes	27	64	-174	-	-	-	-	-	-	-	-83
<b>TPES</b>	<b>823</b>	<b>28068</b>	<b>3097</b>	<b>44652</b>	<b>2159</b>	<b>3207</b>	<b>49</b>	<b>3379</b>	<b>819</b>	<b>-</b>	<b>86252</b>
Transfers	-	927	-354	-	-	-	-	-	-	-	573
Statistical differences	28	784	29	-487	-	-	-	10	0	-	365
Electricity plants	-643	-	-4886	-15579	-2159	-3207	-49	-576	12616	-	-14482
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-192	-	-	-	-	-	-	-	-	-	-192
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	204	-	-557	-	-	-	-	-	-	-	-354
Oil refineries	-	-30329	29703	-	-	-	-	-	-	-	-626
Petrochemical plants	-	640	-	-	-	-	-	-	-	-	640
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-144	-	-	-144
Energy industry own use	-	-90	-1409	-6235	-	-	-	-	-333	-	-8067
Losses	-	-	-	-213	-	-	-	-	-1757	-	-1970
<b>TFC</b>	<b>220</b>	<b>-</b>	<b>25623</b>	<b>22138</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2669</b>	<b>11346</b>	<b>-</b>	<b>61996</b>
<b>INDUSTRY</b>	<b>220</b>	<b>-</b>	<b>3986</b>	<b>6936</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>883</b>	<b>4424</b>	<b>-</b>	<b>16449</b>
Iron and steel	194	-	-	1598	-	-	-	-	525	-	2317
Chemical and petrochemical	-	-	-	-	-	-	-	-	1071	-	1071
Non-ferrous metals	-	-	-	238	-	-	-	-	438	-	676
Non-metallic minerals	-	-	-	1130	-	-	-	-	411	-	1541
Transport equipment	-	-	-	40	-	-	-	-	172	-	212
Machinery	-	-	-	-	-	-	-	-	51	-	51
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	1674	-	-	-	-	1095	-	2770
Paper pulp and printing	-	-	-	289	-	-	-	-	275	-	564
Wood and wood products	-	-	-	15	-	-	-	-	43	-	58
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	103	-	-	-	-	251	-	354
Non-specified	26	-	3986	1849	-	-	-	883	91	-	6835
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>12794</b>	<b>3406</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1258</b>	<b>47</b>	<b>-</b>	<b>17505</b>
Domestic aviation	-	-	581	-	-	-	-	-	-	-	581
Road	-	-	11847	2372	-	-	-	1258	-	-	15477
Rail	-	-	-	-	-	-	-	-	47	-	47
Pipeline transport	-	-	-	1034	-	-	-	-	-	-	1034
Domestic navigation	-	-	366	-	-	-	-	-	-	-	366
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>-</b>	<b>-</b>	<b>5512</b>	<b>10231</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>528</b>	<b>6875</b>	<b>-</b>	<b>23146</b>
Residential	-	-	1381	9080	-	-	-	264	3851	-	14576
Comm. and public services	-	-	370	1151	-	-	-	162	2944	-	4628
Agriculture/forestry	-	-	3761	-	-	-	-	101	79	-	3942
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>3331</b>	<b>1564</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>4896</b>
in industry/transf./energy	-	-	3331	1564	-	-	-	-	-	-	4896
of which: chem./petrochem.	-	-	2368	1564	-	-	-	-	-	-	3933
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>2545</b>	<b>-</b>	<b>20961</b>	<b>75356</b>	<b>8285</b>	<b>37300</b>	<b>568</b>	<b>1711</b>	<b>-</b>	<b>-</b>	<b>146726</b>
Electricity plants	2545	-	20961	75356	8285	37300	568	1711	-	-	146726
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

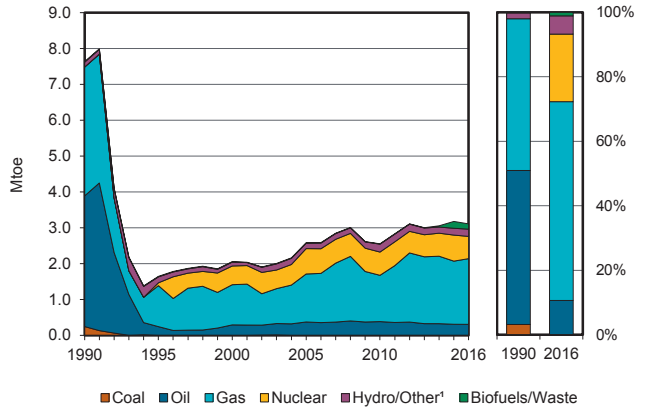
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Armenia

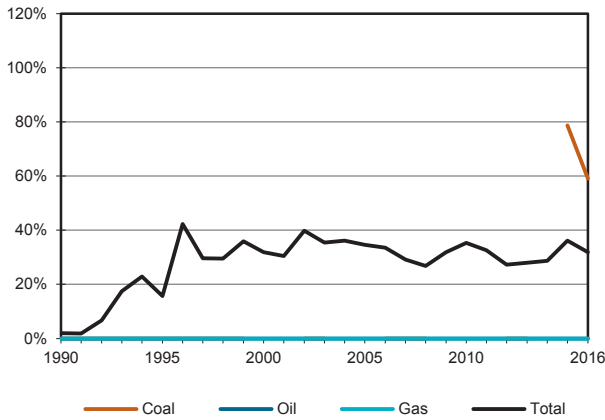
**Figure 1. Energy production**



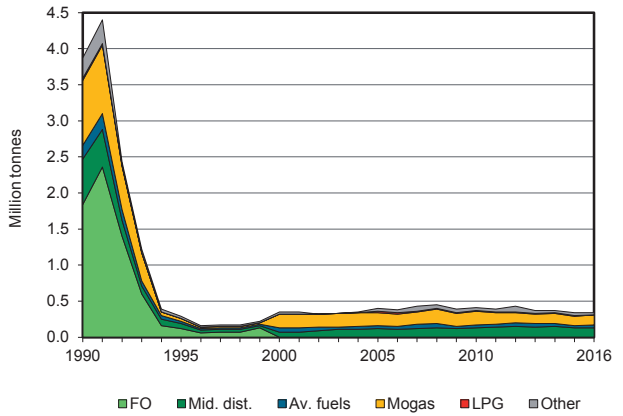
**Figure 2. Total primary energy supply<sup>2</sup>**



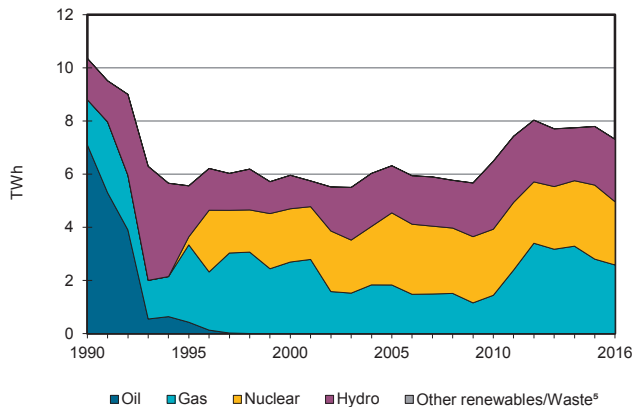
**Figure 3. Energy self-sufficiency<sup>3</sup>**



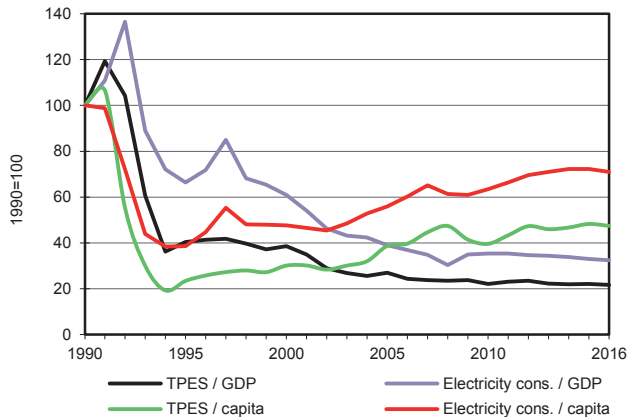
**Figure 4. Oil products demand<sup>4</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>6</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Armenia

2016

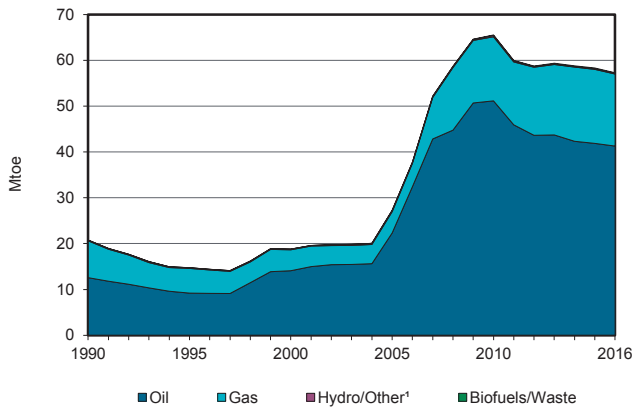
Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal <sup>1</sup>	Crude oil <sup>2</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	1	-	-	-	620	202	0	140	-	-	963
Imports	1	-	356	1848	-	-	-	6	24	-	2235
Exports	-1	-	-	-16	-	-	-	-	-106	-	-122
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-45	-	-	-	-	-	-	-	-45
Stock changes	-	-	-7	2	-	-	-	-	-	-	-5
<b>TPES</b>	<b>1</b>	<b>-</b>	<b>305</b>	<b>1833</b>	<b>620</b>	<b>202</b>	<b>0</b>	<b>146</b>	<b>-82</b>	<b>-</b>	<b>3025</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-	-	-	-	-	-	-	-	-	-	-
Electricity plants	-	-	-	-495	-620	-202	-0	-	628	-	-690
CHP plants	-	-	-	-4	-	-	-	-	1	1	-3
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-	-	-	-	-	-	-	-	-	-
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-	-	-	-
Energy industry own use	-	-	-	-5	-	-	-	-	-28	-0	-34
Losses	-	-	-	-119	-	-	-	-	-61	-1	-180
<b>TFC</b>	<b>1</b>	<b>-</b>	<b>305</b>	<b>1210</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>146</b>	<b>458</b>	<b>0</b>	<b>2120</b>
<b>INDUSTRY</b>	<b>-</b>	<b>-</b>	<b>20</b>	<b>158</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>140</b>	<b>-</b>	<b>320</b>
Iron and steel	-	-	-	12	-	-	-	-	6	-	19
Chemical and petrochemical	-	-	-	2	-	-	-	-	1	-	3
Non-ferrous metals	-	-	4	12	-	-	-	-	20	-	36
Non-metallic minerals	-	-	-	54	-	-	-	-	10	-	63
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	1	-	-	-	-	2	-	3
Mining and quarrying	-	-	14	6	-	-	-	-	69	-	89
Food and tobacco	-	-	1	63	-	-	-	-	23	-	87
Paper pulp and printing	-	-	-	3	-	-	-	-	2	-	5
Wood and wood products	-	-	-	0	-	-	-	1	0	-	1
Construction	-	-	1	4	-	-	-	-	3	-	7
Textile and leather	-	-	-	0	-	-	-	-	1	-	1
Non-specified	-	-	-	1	-	-	-	-	4	-	5
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>227</b>	<b>387</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>9</b>	<b>-</b>	<b>622</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	227	387	-	-	-	-	1	-	614
Rail	-	-	-	-	-	-	-	-	6	-	6
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	2	-	2
<b>OTHER</b>	<b>1</b>	<b>-</b>	<b>34</b>	<b>665</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>145</b>	<b>309</b>	<b>0</b>	<b>1154</b>
Residential	-	-	1	481	-	-	-	145	159	0	786
Comm. and public services	1	-	1	118	-	-	-	-	78	-	198
Agriculture/forestry	-	-	32	-	-	-	-	-	10	-	41
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	66	-	-	-	-	62	-	128
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>24</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>24</b>
in industry/transf./energy	-	-	15	-	-	-	-	-	-	-	15
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	1	-	-	-	-	-	-	-	1
in other	-	-	8	-	-	-	-	-	-	-	8
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2581</b>	<b>2380</b>	<b>2351</b>	<b>3</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>7315</b>
Electricity plants	-	-	-	2569	2380	2351	3	-	-	-	7303
CHP plants	-	-	-	12	-	-	-	-	-	-	12
<b>Heat generated - TJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>34</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>34</b>
CHP plants	-	-	-	34	-	-	-	-	-	-	34
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes peat.

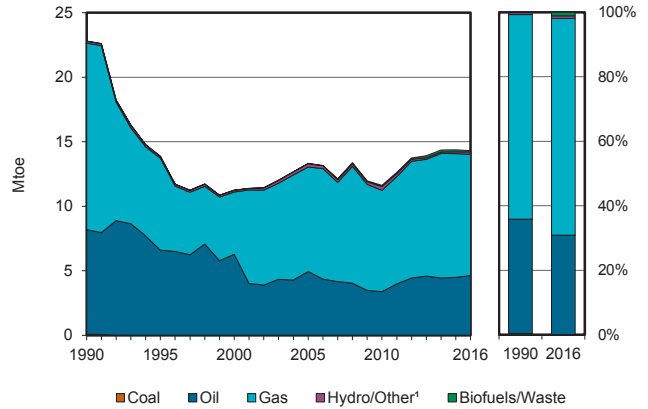
2. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Azerbaijan

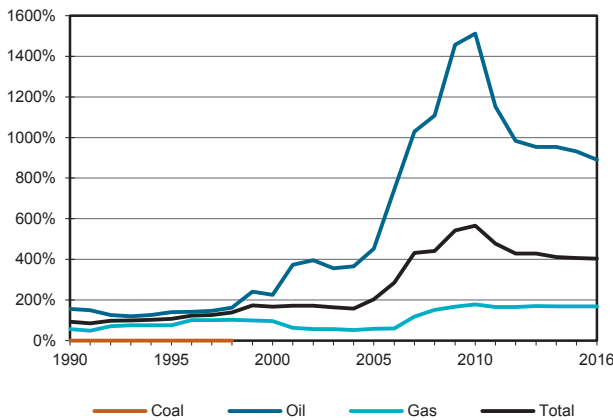
**Figure 1. Energy production**



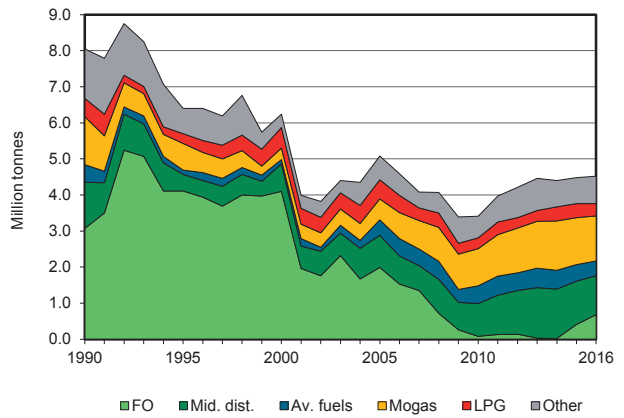
**Figure 2. Total primary energy supply<sup>2</sup>**



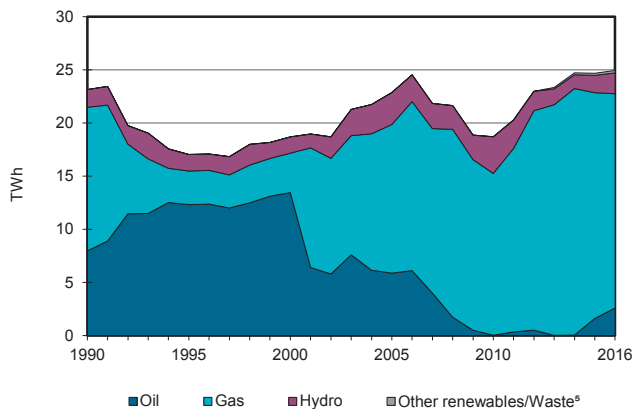
**Figure 3. Energy self-sufficiency<sup>3</sup>**



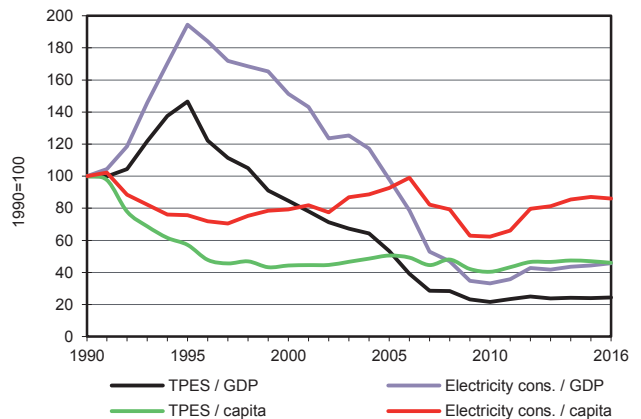
**Figure 4. Oil products demand<sup>4</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>6</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Azerbaijan

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	41281	-	15716	-	168	5	100	-	-	57270
Imports	-	-	325	251	-	-	-	-	10	-	586
Exports	-	-35138	-1726	-6758	-	-	-	-	-94	-	-43716
Intl. marine bunkers	-	-	-49	-	-	-	-	-	-	-	-49
Intl. aviation bunkers	-	-	-180	-	-	-	-	-	-	-	-180
Stock changes	-	-24	144	190	-	-	-	1	-	-	312
<b>TPES</b>	-	<b>6119</b>	<b>-1485</b>	<b>9399</b>	-	<b>168</b>	<b>5</b>	<b>101</b>	<b>-84</b>	-	<b>14222</b>
Transfers	-	-37	40	-	-	-	-	-	-	-	3
Statistical differences	-	-	-54	-28	-	-	-	-	-4	-	-85
Electricity plants	-	-	-52	-2983	-	-168	-5	-66	1496	-	-1779
CHP plants	-	-	-549	-1249	-	-	-	-	650	25	-1123
Heat plants	-	-	-	-177	-	-	-	-	-	149	-28
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-6082	5885	-	-	-	-	-	-	-	-197
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-4	-	-	-4
Energy industry own use	-	-	-393	-374	-	-	-	-	-340	-12	-1118
Losses	-	-	-	-676	-	-	-	-	-202	-20	-898
<b>TFC</b>	-	-	<b>3391</b>	<b>3913</b>	-	-	-	<b>31</b>	<b>1515</b>	<b>142</b>	<b>8992</b>
<b>INDUSTRY</b>	-	-	<b>131</b>	<b>1014</b>	-	-	-	<b>0</b>	<b>302</b>	-	<b>1448</b>
Iron and steel	-	-	-	15	-	-	-	-	26	-	41
Chemical and petrochemical	-	-	22	314	-	-	-	-	26	-	362
Non-ferrous metals	-	-	2	4	-	-	-	-	70	-	76
Non-metallic minerals	-	-	1	282	-	-	-	-	31	-	314
Transport equipment	-	-	-	1	-	-	-	-	1	-	3
Machinery	-	-	1	23	-	-	-	-	13	-	37
Mining and quarrying	-	-	5	11	-	-	-	-	7	-	23
Food and tobacco	-	-	24	294	-	-	-	0	48	-	367
Paper pulp and printing	-	-	-	1	-	-	-	-	5	-	6
Wood and wood products	-	-	-	0	-	-	-	-	3	-	3
Construction	-	-	71	35	-	-	-	0	56	-	163
Textile and leather	-	-	1	10	-	-	-	-	8	-	19
Non-specified	-	-	4	23	-	-	-	-	9	-	36
<b>TRANSPORT</b>	-	-	<b>2203</b>	<b>1</b>	-	-	-	<b>0</b>	<b>37</b>	-	<b>2241</b>
Domestic aviation	-	-	235	-	-	-	-	-	-	-	235
Road	-	-	1934	-	-	-	-	-	-	-	1934
Rail	-	-	4	-	-	-	-	0	30	-	34
Pipeline transport	-	-	-	1	-	-	-	-	7	-	8
Domestic navigation	-	-	30	-	-	-	-	-	-	-	30
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	-	-	<b>326</b>	<b>2866</b>	-	-	-	<b>30</b>	<b>1176</b>	<b>142</b>	<b>4539</b>
Residential	-	-	21	2676	-	-	-	12	694	115	3518
Comm. and public services	-	-	23	129	-	-	-	18	397	27	595
Agriculture/forestry	-	-	281	60	-	-	-	1	84	-	426
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>NON-ENERGY USE</b>	-	-	<b>731</b>	<b>33</b>	-	-	-	-	-	-	<b>764</b>
in industry/transf./energy	-	-	700	33	-	-	-	-	-	-	732
of which: chem./petrochem.	-	-	545	33	-	-	-	-	-	-	578
in transport	-	-	31	-	-	-	-	-	-	-	31
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	-	-	<b>2592</b>	<b>20170</b>	-	<b>1959</b>	<b>58</b>	<b>174</b>	-	-	<b>24953</b>
Electricity plants	-	-	161	15041	-	1959	58	174	-	-	17393
CHP plants	-	-	2431	5129	-	-	-	-	-	-	7560
<b>Heat generated - TJ</b>	-	-	<b>20</b>	<b>7262</b>	-	-	-	-	-	-	<b>7282</b>
CHP plants	-	-	7	1043	-	-	-	-	-	-	1050
Heat plants	-	-	13	6219	-	-	-	-	-	-	6232

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Bahrain

Figure 1. Energy production

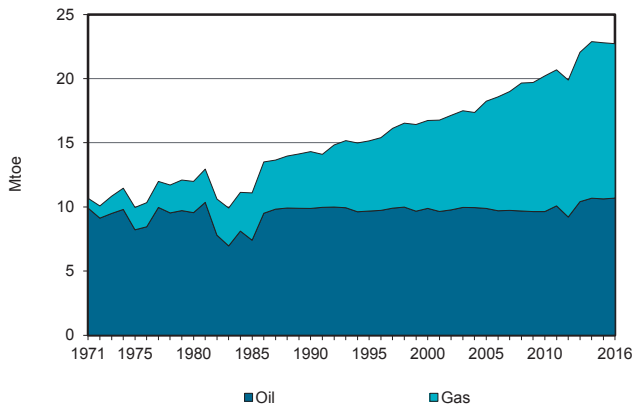


Figure 2. Total primary energy supply<sup>1</sup>

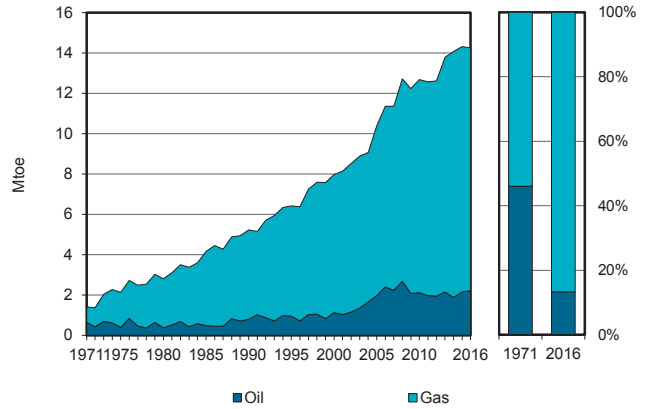


Figure 3. Energy self-sufficiency<sup>2</sup>

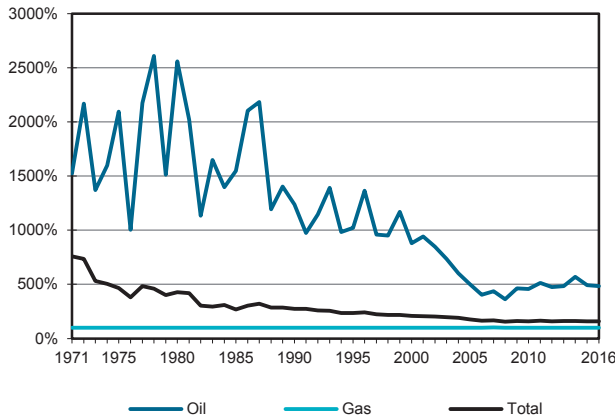


Figure 4. Oil products demand<sup>3</sup>

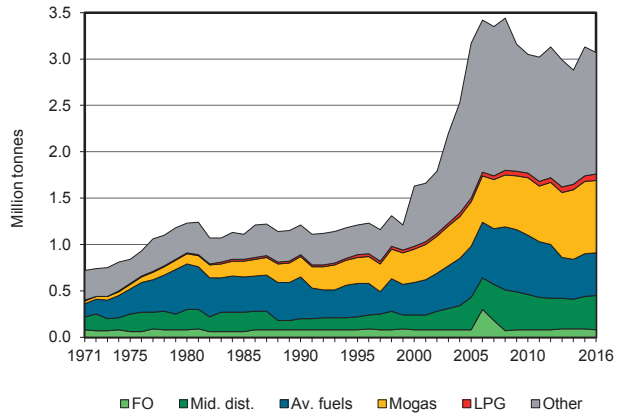


Figure 5. Electricity generation by source

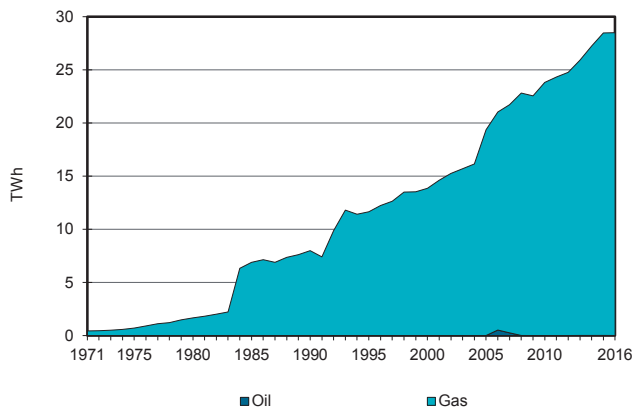
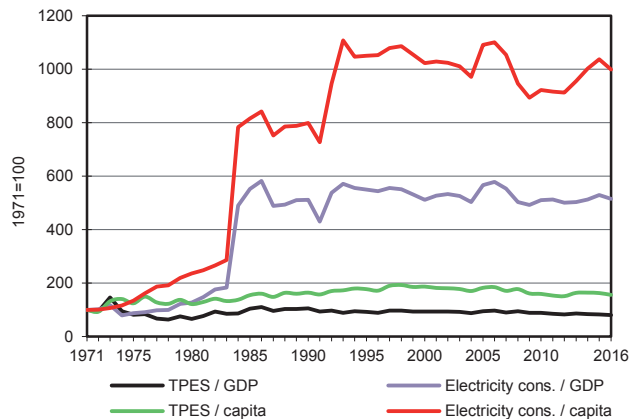


Figure 6. Selected indicators<sup>4</sup>



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Excluding electricity trade.
2. Production divided by TPES. 100% represents full self-sufficiency.
3. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
4. GDP in 2010 USD.



## Bahrain

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	10688	-	12031	-	-	-	-	-	-	22720
Imports	-	2939	597	-	-	-	-	-	24	-	3560
Exports	-	-	-11689	-	-	-	-	-	-25	-	-11714
Intl. marine bunkers	-	-	-76	-	-	-	-	-	-	-	-76
Intl. aviation bunkers	-	-	-454	-	-	-	-	-	-	-	-454
Stock changes	-	-	209	0	-	-	-	-	-	-	209
<b>TPES</b>	-	<b>13627</b>	<b>-11412</b>	<b>12031</b>	-	-	-	-	<b>-1</b>	-	<b>14245</b>
Transfers	-	-804	714	-	-	-	-	-	-	-	-90
Statistical differences	-	-1	-57	0	-	-	-	-	-10	-	-68
Electricity plants	-	-	-1	-8551	-	-	-	-	2451	-	-6101
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-13242	13286	-	-	-	-	-	-	-	44
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	419	-528	-	-	-	-	-	-	-	-109
Energy industry own use	-	-	-226	-1278	-	-	-	-	-	-	-1504
Losses	-	-	-	-	-	-	-	-	-59	-	-59
<b>TFC</b>	-	-	<b>1775</b>	<b>2202</b>	-	-	-	-	<b>2381</b>	-	<b>6359</b>
<b>INDUSTRY</b>	-	-	-	<b>902</b>	-	-	-	-	<b>1205</b>	-	<b>2107</b>
Iron and steel	-	-	-	412	-	-	-	-	-	-	412
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	982	-	982
Non-metallic minerals	-	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	490	-	-	-	-	222	-	712
<b>TRANSPORT</b>	-	-	<b>1224</b>	-	-	-	-	-	-	-	<b>1224</b>
Domestic aviation	-	-	34	-	-	-	-	-	-	-	34
Road	-	-	1190	-	-	-	-	-	-	-	1190
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	-	-	<b>94</b>	-	-	-	-	-	<b>1177</b>	-	<b>1271</b>
Residential	-	-	94	-	-	-	-	-	657	-	752
Comm. and public services	-	-	-	-	-	-	-	-	514	-	514
Agriculture/forestry	-	-	-	-	-	-	-	-	5	-	5
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>NON-ENERGY USE</b>	-	-	<b>456</b>	<b>1300</b>	-	-	-	-	-	-	<b>1756</b>
in industry/transf./energy	-	-	456	1300	-	-	-	-	-	-	1756
of which: chem./petrochem.	-	-	43	1060	-	-	-	-	-	-	1103
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	-	-	<b>2</b>	<b>28508</b>	-	-	-	-	-	-	<b>28510</b>
Electricity plants	-	-	2	28508	-	-	-	-	-	-	28510
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Bangladesh

Figure 1. Energy production

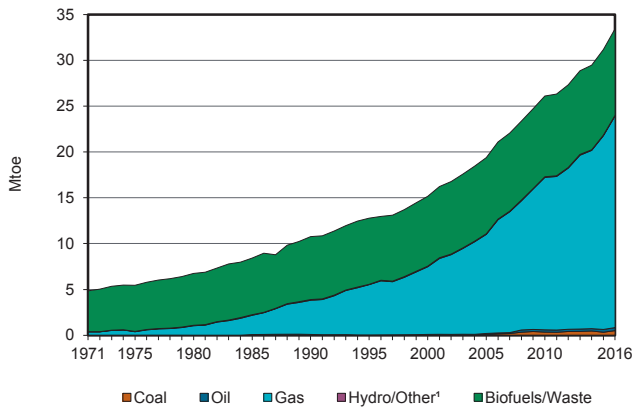


Figure 2. Total primary energy supply<sup>2</sup>

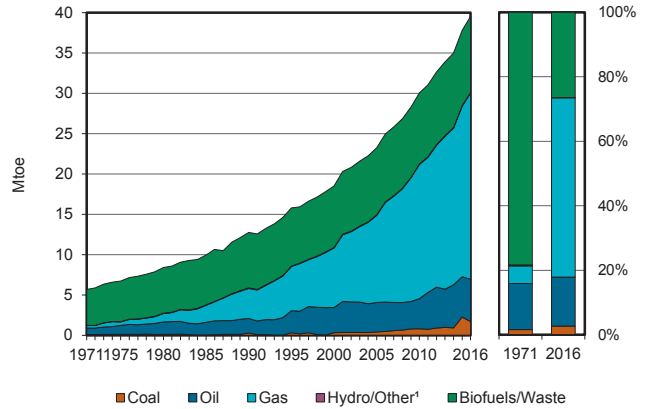


Figure 3. Energy self-sufficiency<sup>3</sup>

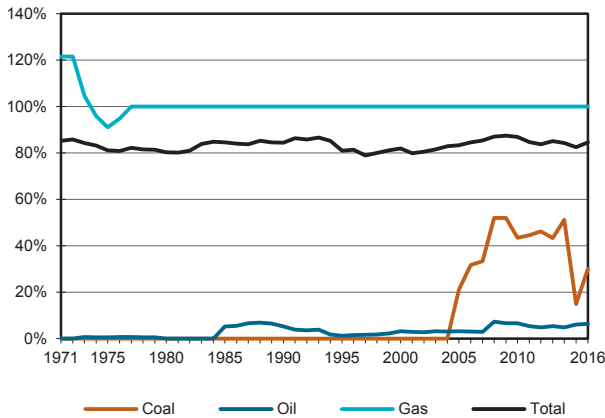


Figure 4. Oil products demand<sup>4</sup>

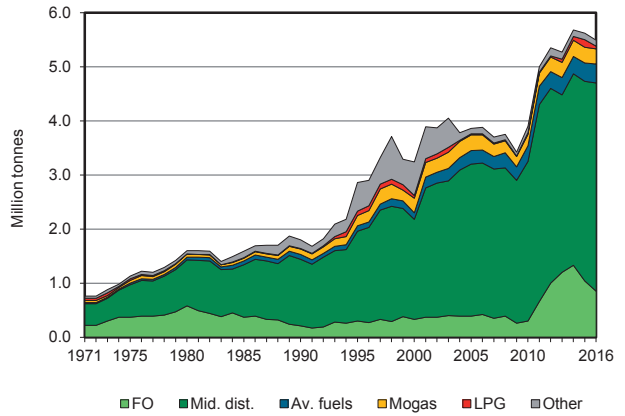


Figure 5. Electricity generation by source

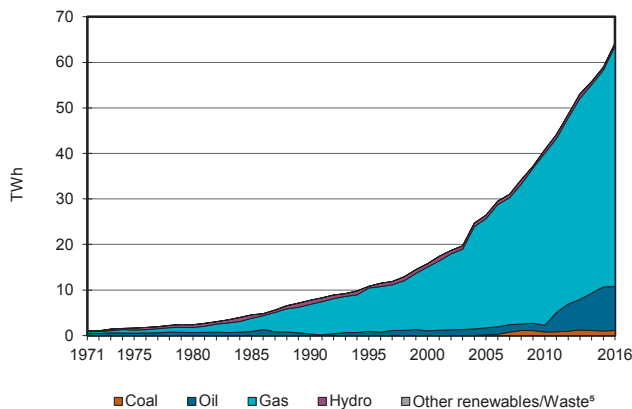
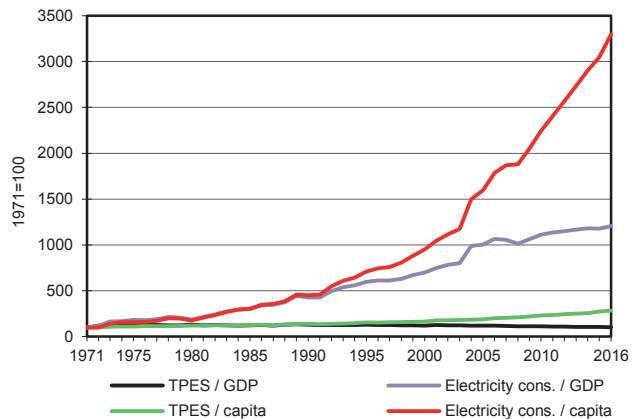


Figure 6. Selected indicators<sup>6</sup>



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Bangladesh

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	511	327	-	23102	-	49	15	9434	-	-	33438
Imports	1092	1317	4097	-	-	-	-	-	-	-	6506
Exports	-	-	-107	-	-	-	-	-	-	-	-107
Intl. marine bunkers	-	-	-110	-	-	-	-	-	-	-	-110
Intl. aviation bunkers	-	-	-370	-	-	-	-	-	-	-	-370
Stock changes	98	-	99	-	-	-	-	-	-	-	198
<b>TPES</b>	<b>1701</b>	<b>1645</b>	<b>3609</b>	<b>23102</b>	-	<b>49</b>	<b>15</b>	<b>9434</b>	-	-	<b>39555</b>
Transfers	-	-178	186	-	-	-	-	-	-	-	7
Statistical differences	-	-187	178	283	-	-	-	-0	-78	-	196
Electricity plants	-270	-	-1190	-13303	-	-49	-15	-	5531	-	-9296
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-1279	1190	-	-	-	-	-	-	-	-89
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-172	-	-	-172
Energy industry own use	-11	-	-41	-	-	-	-	-	-311	-	-363
Losses	-	-	-	-475	-	-	-	-	-590	-	-1064
<b>TFC</b>	<b>1419</b>	-	<b>3932</b>	<b>9608</b>	-	-	-	<b>9262</b>	<b>4552</b>	-	<b>28773</b>
<b>INDUSTRY</b>	<b>1419</b>	-	<b>265</b>	<b>3703</b>	-	-	-	-	<b>2534</b>	-	<b>7922</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	1419	-	-	-	-	-	-	-	-	-	1419
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	265	3703	-	-	-	-	2534	-	6503
<b>TRANSPORT</b>	-	-	<b>2344</b>	<b>1104</b>	-	-	-	-	-	-	<b>3448</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	1609	1104	-	-	-	-	-	-	2713
Rail	-	-	308	-	-	-	-	-	-	-	308
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	427	-	-	-	-	-	-	-	427
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	-	-	<b>1226</b>	<b>3552</b>	-	-	-	<b>9262</b>	<b>2018</b>	-	<b>16059</b>
Residential	-	-	250	3317	-	-	-	9262	1537	-	14366
Comm. and public services	-	-	-	214	-	-	-	-	298	-	511
Agriculture/forestry	-	-	976	21	-	-	-	-	135	-	1133
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	49	-	49
<b>NON-ENERGY USE</b>	-	-	<b>96</b>	<b>1249</b>	-	-	-	-	-	-	<b>1345</b>
in industry/transf./energy	-	-	96	1249	-	-	-	-	-	-	1345
of which: chem./petrochem.	-	-	-	1249	-	-	-	-	-	-	1249
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>1102</b>	-	<b>9666</b>	<b>52823</b>	-	<b>566</b>	<b>170</b>	-	-	-	<b>64327</b>
Electricity plants	1102	-	9666	52823	-	566	170	-	-	-	64327
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Belarus

Figure 1. Energy production

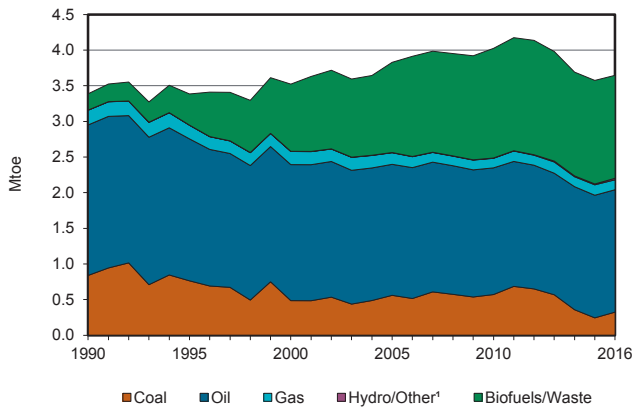


Figure 2. Total primary energy supply<sup>2</sup>

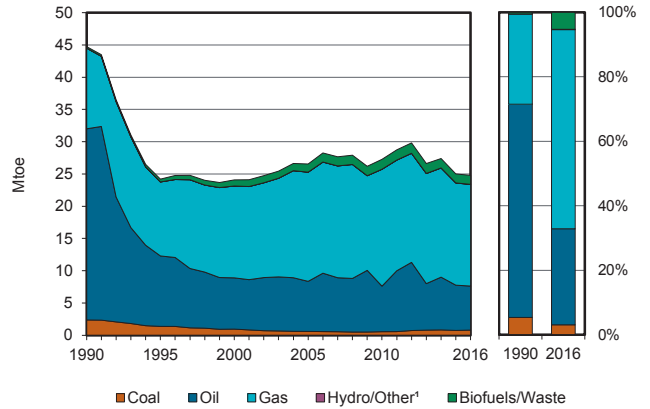


Figure 3. Energy self-sufficiency<sup>3</sup>

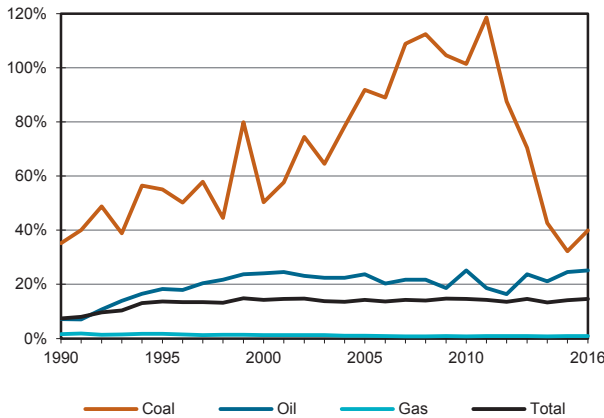


Figure 4. Oil products demand<sup>4</sup>

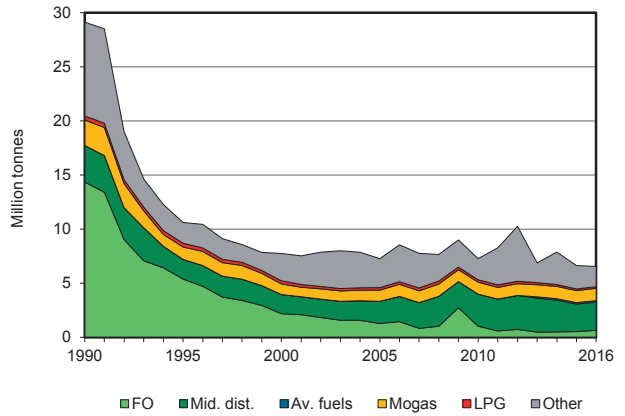


Figure 5. Electricity generation by source

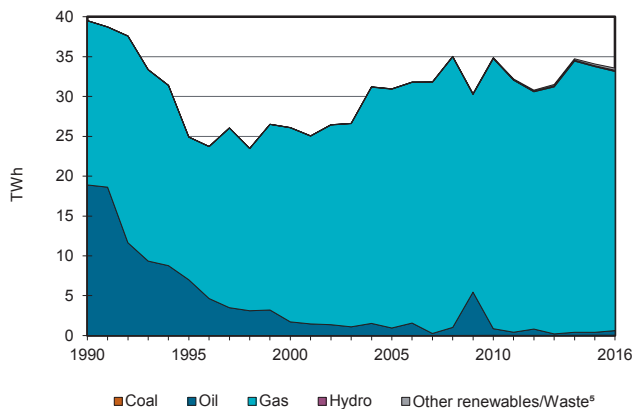
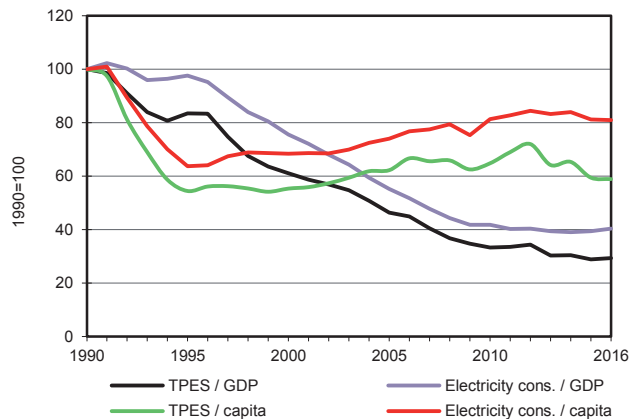


Figure 6. Selected indicators<sup>6</sup>



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Belarus

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal <sup>1</sup>	Crude oil <sup>2</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	325	1716	-	139	-	12	9	1444	-	-	3646
Imports	473	18607	1432	15475	-	-	-	0	543	-	36531
Exports	-55	-1625	-13634	-	-	-	-	-56	-284	-	-15653
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-122	-	-	-	-	-	-	-	-122
Stock changes	70	450	-4	122	-	-	-	-	-	-	638
<b>TPES</b>	<b>814</b>	<b>19148</b>	<b>-12328</b>	<b>15737</b>	<b>-</b>	<b>12</b>	<b>9</b>	<b>1388</b>	<b>260</b>	<b>-</b>	<b>25039</b>
Transfers	-	-63	69	-	-	-	-	-	-	-	6
Statistical differences	0	-2	-	-	-	-	-	-	-	-	-2
Electricity plants	-	-	-74	-2337	-	-12	-9	-1	1099	-	-1333
CHP plants	-43	-	-96	-6697	-	-	-	-142	1788	3609	-1582
Heat plants	-64	-	-144	-2017	-	-	-	-606	-	2354	-477
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-14	-	-	-	-	-	-	-1	-	-	-15
Oil refineries	-	-19083	18826	-	-	-	-	-	-	-	-257
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-5	-	-	-5
Energy industry own use	-8	-	-1030	-207	-	-	-	-15	-373	-500	-2133
Losses	-21	-	-1	-48	-	-	-	-	-247	-480	-797
<b>TFC</b>	<b>664</b>	<b>-</b>	<b>5221</b>	<b>4431</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>618</b>	<b>2526</b>	<b>4983</b>	<b>18444</b>
<b>INDUSTRY</b>	<b>491</b>	<b>-</b>	<b>149</b>	<b>867</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>50</b>	<b>1028</b>	<b>1383</b>	<b>3967</b>
Iron and steel	8	-	1	123	-	-	-	0	154	9	295
Chemical and petrochemical	-	-	12	165	-	-	-	1	295	490	962
Non-ferrous metals	-	-	-	7	-	-	-	-	3	0	10
Non-metallic minerals	463	-	5	310	-	-	-	5	96	55	935
Transport equipment	2	-	3	19	-	-	-	1	31	36	93
Machinery	9	-	9	66	-	-	-	4	115	83	286
Mining and quarrying	-	-	4	11	-	-	-	0	17	4	36
Food and tobacco	8	-	15	92	-	-	-	4	137	442	699
Paper pulp and printing	-	-	1	6	-	-	-	0	26	54	87
Wood and wood products	-	-	4	14	-	-	-	25	41	64	148
Construction	1	-	87	17	-	-	-	4	22	-	130
Textile and leather	-	-	4	33	-	-	-	1	44	65	147
Non-specified	-	-	3	5	-	-	-	5	47	80	140
<b>TRANSPORT</b>	<b>6</b>	<b>-</b>	<b>3224</b>	<b>455</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>3</b>	<b>102</b>	<b>-</b>	<b>3789</b>
Domestic aviation	-	-	23	-	-	-	-	-	-	-	23
Road	-	-	3030	7	-	-	-	3	14	-	3053
Rail	6	-	171	-	-	-	-	-	48	-	225
Pipeline transport	-	-	-	447	-	-	-	-	40	-	487
Domestic navigation	-	-	1	-	-	-	-	-	-	-	1
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>147</b>	<b>-</b>	<b>676</b>	<b>1781</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>566</b>	<b>1396</b>	<b>3600</b>	<b>8168</b>
Residential	114	-	67	1637	-	-	-	403	575	2293	5090
Comm. and public services	31	-	35	46	-	-	-	108	688	1154	2062
Agriculture/forestry	2	-	574	98	-	-	-	54	133	153	1014
Fishing	-	-	-	-	-	-	-	0	1	0	1
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>NON-ENERGY USE</b>	<b>20</b>	<b>-</b>	<b>1172</b>	<b>1328</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2520</b>
in industry/transf./energy	20	-	1172	1328	-	-	-	-	-	-	2520
of which: chem./petrochem.	-	-	-	1328	-	-	-	-	-	-	1328
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>34</b>	<b>-</b>	<b>582</b>	<b>32529</b>	<b>-</b>	<b>142</b>	<b>103</b>	<b>176</b>	<b>-</b>	<b>-</b>	<b>33566</b>
Electricity plants	-	-	380	12150	-	142	103	1	-	-	12776
CHP plants	34	-	202	20379	-	-	-	175	-	-	20790
<b>Heat generated - TJ</b>	<b>3205</b>	<b>-</b>	<b>6994</b>	<b>217533</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>21933</b>	<b>-</b>	<b>-</b>	<b>249665</b>
CHP plants	1303	-	2134	143646	-	-	-	4017	-	-	151100
Heat plants	1902	-	4860	73887	-	-	-	17916	-	-	98565

1. Includes peat.

2. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Benin

Figure 1. Energy production

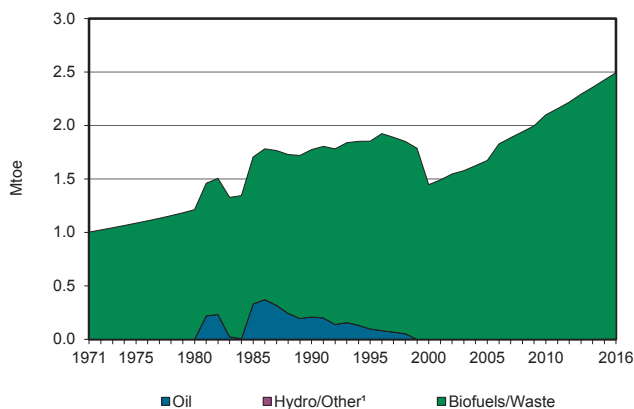


Figure 2. Total primary energy supply<sup>2</sup>

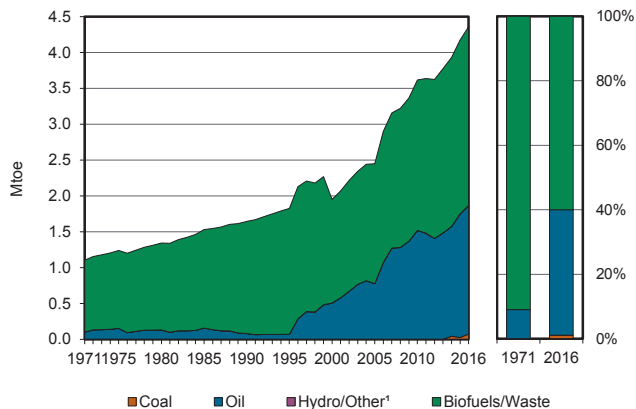


Figure 3. Energy self-sufficiency<sup>3</sup>

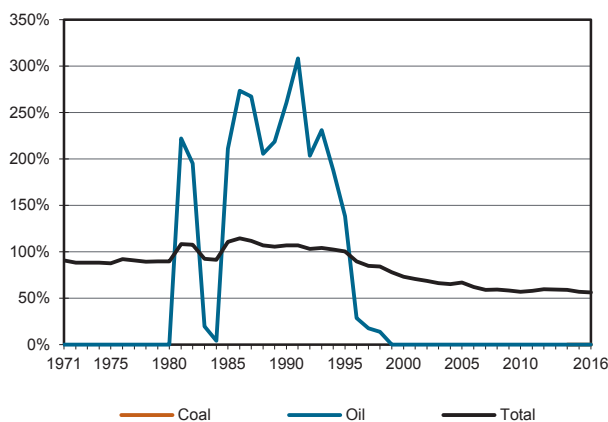


Figure 4. Oil products demand<sup>4</sup>

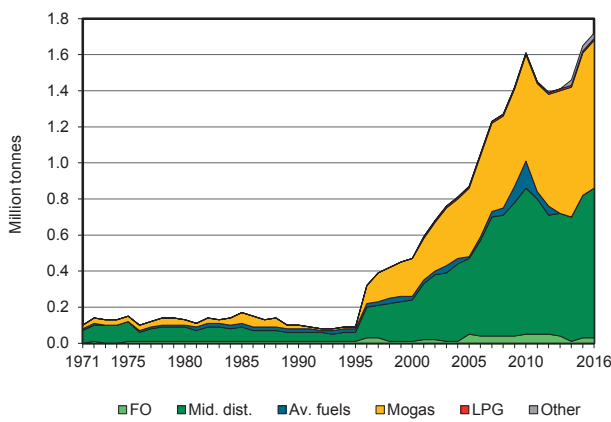


Figure 5. Electricity generation by source

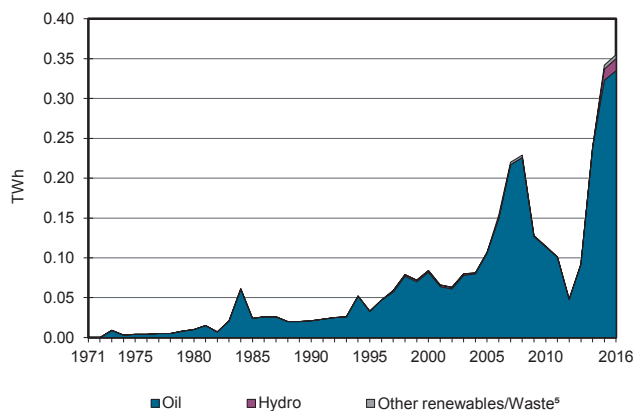
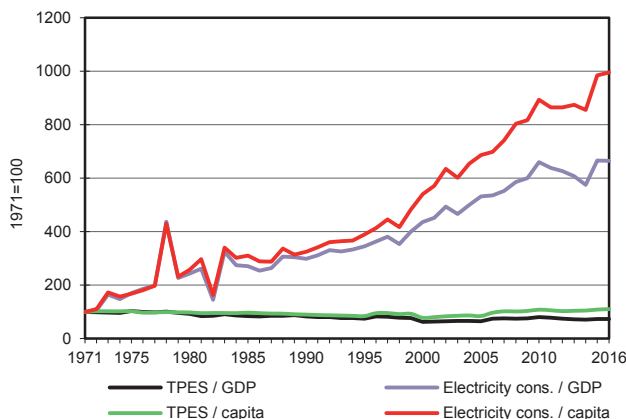


Figure 6. Selected indicators<sup>6</sup>



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Benin

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	-	-	-	-	1	0	2492	-	-	2493
Imports	74	-	1906	-	-	-	-	-	94	-	2074
Exports	-	-	-81	-	-	-	-	-	-	-	-81
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-	-	-	-	-	-	-	-	-
Stock changes	-	-	-34	-	-	-	-	-	-	-	-34
<b>TPES</b>	<b>74</b>	<b>-</b>	<b>1792</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>0</b>	<b>2492</b>	<b>94</b>	<b>-</b>	<b>4453</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-	-	-	-	-	-	-	-	-1	-	-1
Electricity plants	-	-	-78	-	-	-1	-0	-	31	-	-49
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-	-	-	-	-	-	-	-	-	-
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-620	-	-	-620
Energy industry own use	-	-	-	-	-	-	-	-	-	-	-
Losses	-	-	-	-	-	-	-	-	-24	-	-24
<b>TFC</b>	<b>74</b>	<b>-</b>	<b>1714</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1872</b>	<b>99</b>	<b>-</b>	<b>3759</b>
<b>INDUSTRY</b>	<b>74</b>	<b>-</b>	<b>96</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>9</b>	<b>25</b>	<b>-</b>	<b>205</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	23	-	-	-	-	-	15	-	38
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	2	-	-	-	-	-	2	-	4
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	3	-	3
Non-specified	74	-	71	-	-	-	-	9	5	-	160
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>1592</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1592</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	1592	-	-	-	-	-	-	-	1592
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>-</b>	<b>-</b>	<b>26</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1863</b>	<b>74</b>	<b>-</b>	<b>1963</b>
Residential	-	-	23	-	-	-	-	1553	35	-	1611
Comm. and public services	-	-	3	-	-	-	-	309	38	-	351
Agriculture/forestry	-	-	-	-	-	-	-	-	-	-	-
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
in industry/transf./energy	-	-	-	-	-	-	-	-	-	-	-
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>-</b>	<b>-</b>	<b>335</b>	<b>-</b>	<b>-</b>	<b>15</b>	<b>5</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>355</b>
Electricity plants	-	-	335	-	-	15	5	-	-	-	355
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Bolivia

Figure 1. Energy production

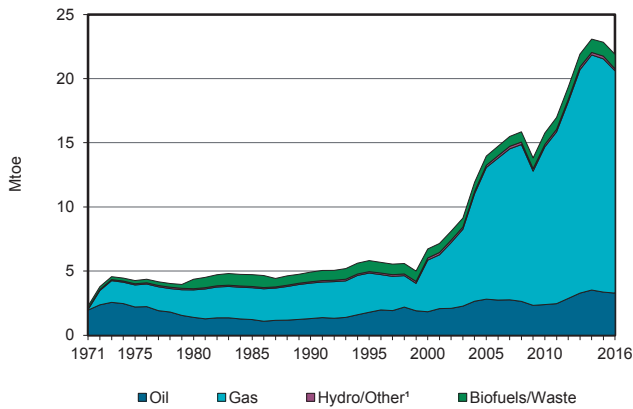


Figure 2. Total primary energy supply<sup>2</sup>

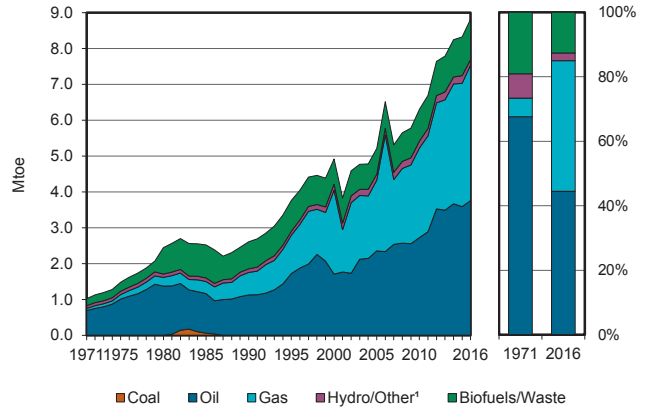


Figure 3. Energy self-sufficiency<sup>3</sup>

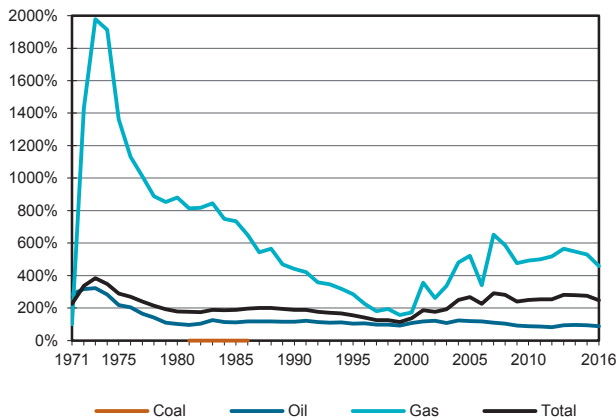


Figure 4. Oil products demand<sup>4</sup>

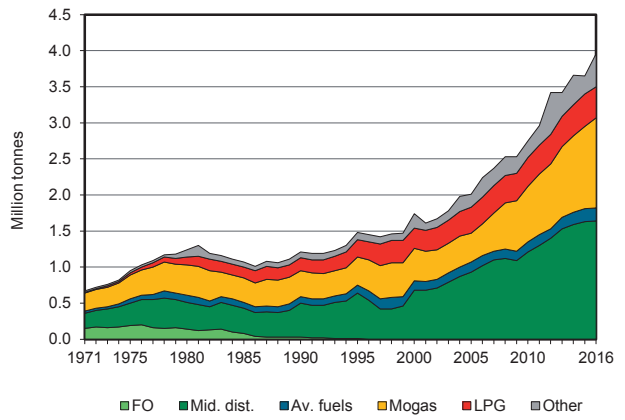


Figure 5. Electricity generation by source

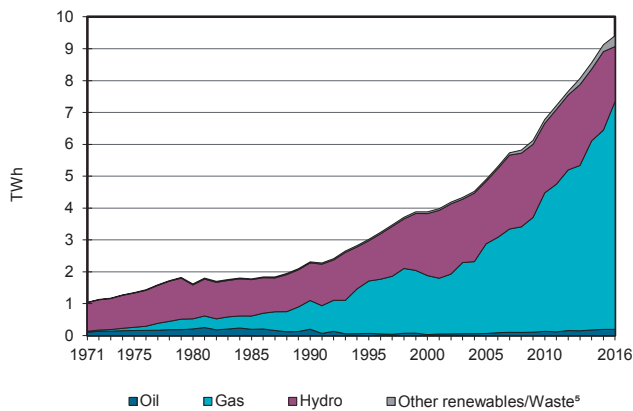
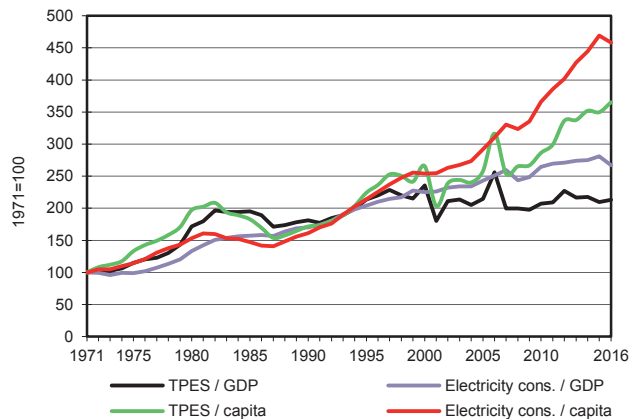


Figure 6. Selected indicators<sup>6</sup>



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.



## Bolivia

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	3288	-	17315	-	148	4	1125	-	-	21880
Imports	-	-	908	-	-	-	-	-	-	-	908
Exports	-	-	-409	-13530	-	-	-	-	-	-	-13939
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-66	-	-	-	-	-	-	-	-66
Stock changes	-	-2	41	-	-	-	-	-	-	-	38
<b>TPES</b>	-	<b>3286</b>	<b>473</b>	<b>3785</b>	-	<b>148</b>	<b>4</b>	<b>1125</b>	-	-	<b>8821</b>
Transfers	-	-414	452	-	-	-	-	-	-	-	38
Statistical differences	-	174	222	-83	-	-	-	-	7	-	320
Electricity plants	-	-	-59	-1858	-	-148	-4	-168	809	-	-1428
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-3046	2982	-	-	-	-	-	-	-	-64
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-4	-	-	-4
Energy industry own use	-	-	-154	-300	-	-	-	-34	-10	-	-498
Losses	-	-	-102	-15	-	-	-	-	-100	-	-217
<b>TFC</b>	-	-	<b>3815</b>	<b>1528</b>	-	-	-	<b>919</b>	<b>705</b>	-	<b>6967</b>
<b>INDUSTRY</b>	-	-	<b>108</b>	<b>773</b>	-	-	-	<b>600</b>	<b>183</b>	-	<b>1664</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	108	773	-	-	-	600	183	-	1664
<b>TRANSPORT</b>	-	-	<b>2270</b>	<b>589</b>	-	-	-	-	-	-	<b>2859</b>
Domestic aviation	-	-	126	-	-	-	-	-	-	-	126
Road	-	-	2145	589	-	-	-	-	-	-	2734
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	-	-	<b>1322</b>	<b>166</b>	-	-	-	<b>319</b>	<b>522</b>	-	<b>2329</b>
Residential	-	-	471	120	-	-	-	319	271	-	1182
Comm. and public services	-	-	7	46	-	-	-	-	173	-	225
Agriculture/forestry	-	-	633	-	-	-	-	-	78	-	710
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	211	-	-	-	-	-	-	-	211
<b>NON-ENERGY USE</b>	-	-	<b>115</b>	-	-	-	-	-	-	-	<b>115</b>
in industry/transf./energy	-	-	115	-	-	-	-	-	-	-	115
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	-	-	<b>192</b>	<b>7157</b>	-	<b>1720</b>	<b>46</b>	<b>294</b>	-	-	<b>9409</b>
Electricity plants	-	-	192	7157	-	1720	46	294	-	-	9409
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Bosnia and Herzegovina

Figure 1. Energy production

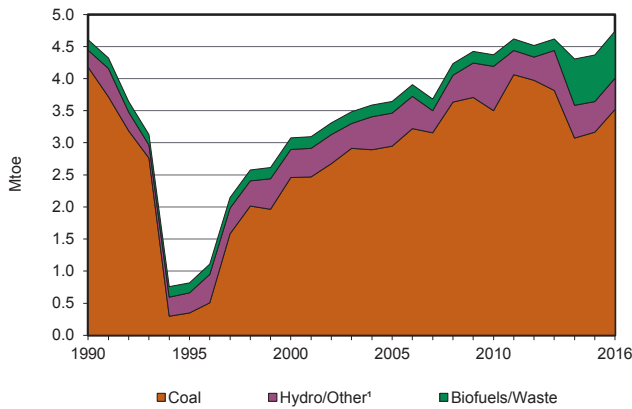


Figure 2. Total primary energy supply<sup>2</sup>

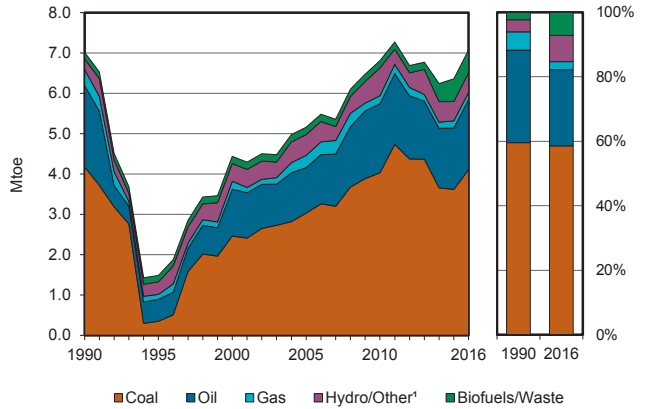


Figure 3. Energy self-sufficiency<sup>3</sup>

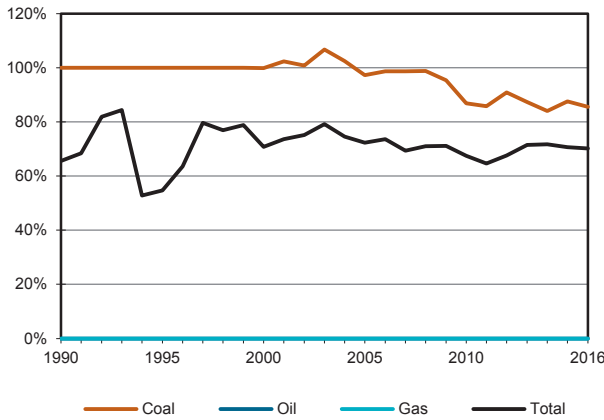


Figure 4. Oil products demand<sup>4</sup>

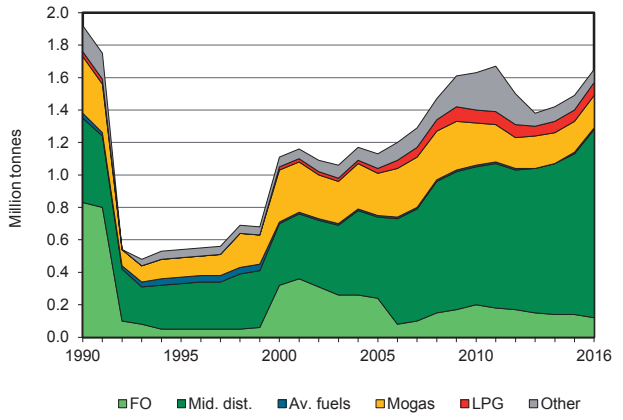


Figure 5. Electricity generation by source

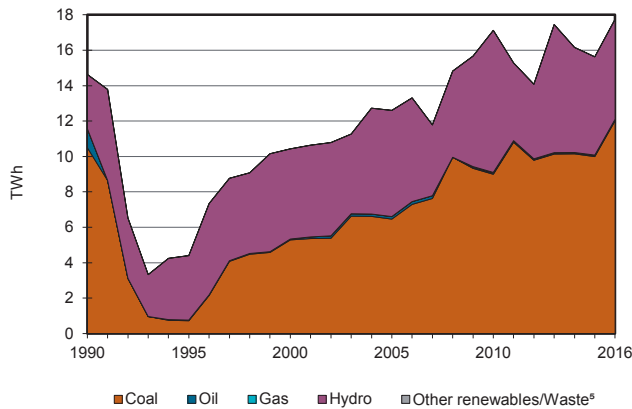
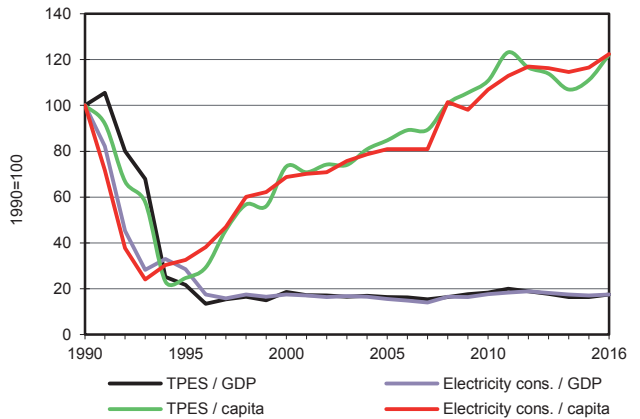


Figure 6. Selected indicators<sup>6</sup>



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Bosnia and Herzegovina

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	3520	-	-	-	-	485	2	734	-	-	4742
Imports	938	949	1093	185	-	-	-	-	265	-	3430
Exports	-324	-	-218	-	-	-	-	-169	-588	-	-1299
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-10	-	-	-	-	-	-	-	-10
Stock changes	-23	-79	-6	-	-	-	-	-	-	-	-108
<b>TPES</b>	<b>4112</b>	<b>870</b>	<b>859</b>	<b>185</b>	<b>-</b>	<b>485</b>	<b>2</b>	<b>565</b>	<b>-323</b>	<b>-</b>	<b>6754</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-15	-	-20	-	-	-	-	83	-	-	48
Electricity plants	-3197	-	-14	-7	-	-485	-2	-	1509	-	-2196
CHP plants	-66	-	-	-	-	-	-	-	18	36	-12
Heat plants	-52	-	-15	-42	-	-	-	-17	-	99	-27
Blast furnaces	-173	-	-	-	-	-	-	-	-	-	-173
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-76	-	-	-	-	-	-	-	-	-	-76
Oil refineries	-	-870	830	-	-	-	-	-	-	-	-40
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-50	-	-	-50
Energy industry own use	-150	-	-138	-	-	-	-	-	-134	-1	-424
Losses	-3	-	-	-1	-	-	-	-	-117	-9	-128
<b>TFC</b>	<b>380</b>	<b>-</b>	<b>1501</b>	<b>136</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>581</b>	<b>953</b>	<b>126</b>	<b>3677</b>
<b>INDUSTRY</b>	<b>197</b>	<b>-</b>	<b>112</b>	<b>76</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>17</b>	<b>351</b>	<b>1</b>	<b>754</b>
Iron and steel	105	-	-	19	-	-	-	-	70	-	193
Chemical and petrochemical	-	-	3	1	-	-	-	-	11	-	15
Non-ferrous metals	25	-	2	47	-	-	-	-	143	-	217
Non-metallic minerals	59	-	12	1	-	-	-	-	14	-	86
Transport equipment	-	-	1	-	-	-	-	-	4	-	5
Machinery	1	-	4	0	-	-	-	-	20	0	25
Mining and quarrying	1	-	15	-	-	-	-	-	8	0	24
Food and tobacco	6	-	25	5	-	-	-	-	22	0	59
Paper pulp and printing	-	-	8	1	-	-	-	-	16	-	24
Wood and wood products	-	-	4	1	-	-	-	-	15	0	20
Construction	-	-	32	-	-	-	-	-	6	0	37
Textile and leather	1	-	4	1	-	-	-	-	9	0	15
Non-specified	0	-	1	0	-	-	-	17	13	-	32
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>1185</b>	<b>0</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>6</b>	<b>-</b>	<b>1191</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	1185	0	-	-	-	-	-	-	1185
Rail	-	-	-	-	-	-	-	-	6	-	6
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>183</b>	<b>-</b>	<b>148</b>	<b>60</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>564</b>	<b>596</b>	<b>126</b>	<b>1676</b>
Residential	74	-	84	35	-	-	-	528	407	95	1222
Comm. and public services	109	-	51	25	-	-	-	36	184	30	435
Agriculture/forestry	-	-	12	-	-	-	-	-	6	-	18
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>57</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>57</b>
in industry/transf./energy	-	-	57	-	-	-	-	-	-	-	57
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>12021</b>	<b>-</b>	<b>59</b>	<b>22</b>	<b>-</b>	<b>5641</b>	<b>24</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>17767</b>
Electricity plants	11809	-	59	22	-	5641	24	-	-	-	17555
CHP plants	212	-	-	-	-	-	-	-	-	-	212
<b>Heat generated - TJ</b>	<b>2914</b>	<b>-</b>	<b>582</b>	<b>1591</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>570</b>	<b>-</b>	<b>-</b>	<b>5657</b>
CHP plants	1523	-	-	-	-	-	-	-	-	-	1523
Heat plants	1391	-	582	1591	-	-	-	570	-	-	4134

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Botswana

Figure 1. Energy production

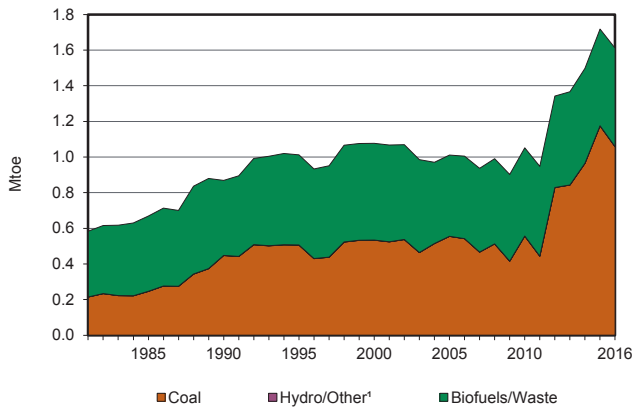


Figure 2. Total primary energy supply²

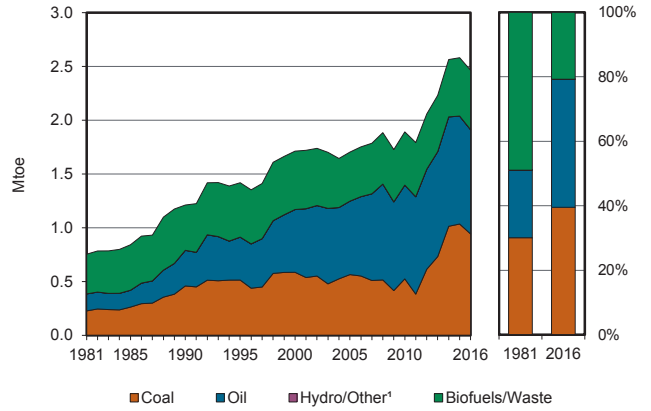


Figure 3. Energy self-sufficiency³

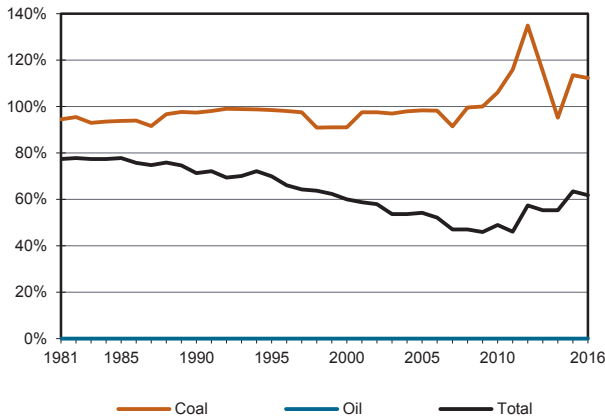


Figure 4. Oil products demand⁴

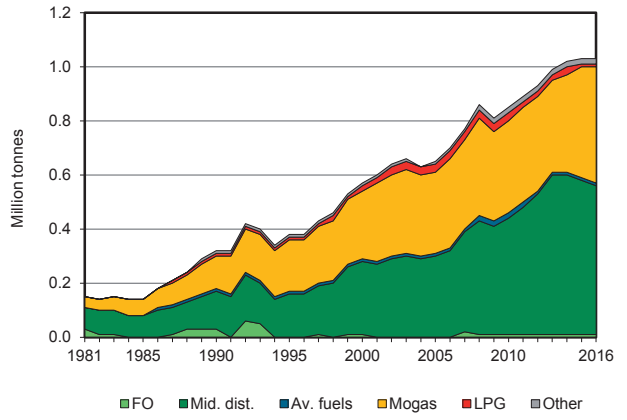


Figure 5. Electricity generation by source

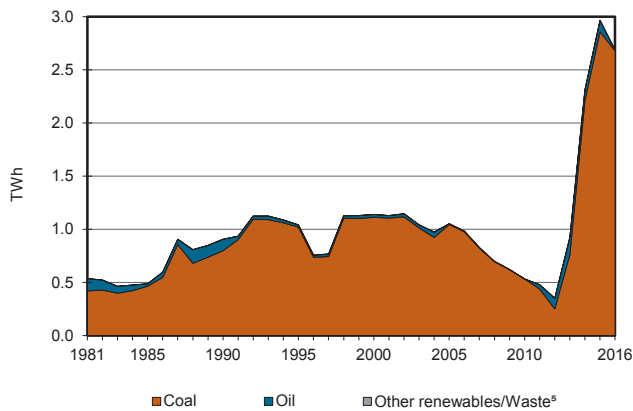
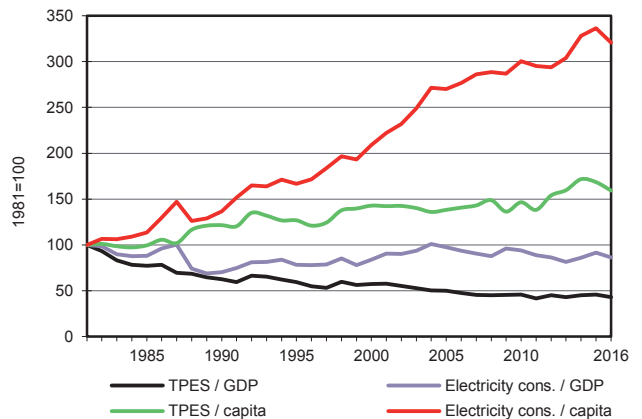


Figure 6. Selected indicators⁶



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Botswana

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	1058	-	-	-	-	-	0	553	-	-	1611
Imports	-	-	980	-	-	-	-	-	144	-	1124
Exports	-116	-	-	-	-	-	-	-	-	-	-116
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-12	-	-	-	-	-	-	-	-12
Stock changes	-	-	-	-	-	-	-	-	-	-	-
<b>TPES</b>	<b>942</b>	<b>-</b>	<b>969</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0</b>	<b>553</b>	<b>144</b>	<b>-</b>	<b>2607</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	12	-	107	-	-	-	-	-	-1	-	118
Electricity plants	-913	-	-2	-	-	-	-0	-	231	-	-684
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-	-	-	-	-	-	-	-	-	-
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-	-	-	-
Energy industry own use	-	-	-	-	-	-	-	-	-26	-	-26
Losses	-	-	-	-	-	-	-	-	-48	-	-48
<b>TFC</b>	<b>42</b>	<b>-</b>	<b>1073</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>553</b>	<b>299</b>	<b>-</b>	<b>1967</b>
<b>INDUSTRY</b>	<b>38</b>	<b>-</b>	<b>183</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>119</b>	<b>-</b>	<b>339</b>
Iron and steel	-	-	-	-	-	-	-	-	1	-	1
Chemical and petrochemical	-	-	-	-	-	-	-	-	2	-	2
Non-ferrous metals	-	-	-	-	-	-	-	-	2	-	2
Non-metallic minerals	-	-	-	-	-	-	-	-	2	-	2
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	38	-	136	-	-	-	-	-	96	-	269
Food and tobacco	-	-	4	-	-	-	-	-	8	-	12
Paper pulp and printing	-	-	1	-	-	-	-	-	1	-	2
Wood and wood products	-	-	-	-	-	-	-	-	1	-	1
Construction	-	-	22	-	-	-	-	-	1	-	22
Textile and leather	-	-	1	-	-	-	-	-	2	-	3
Non-specified	-	-	19	-	-	-	-	-	3	-	22
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>825</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>825</b>
Domestic aviation	-	-	2	-	-	-	-	-	-	-	2
Road	-	-	813	-	-	-	-	-	-	-	813
Rail	-	-	10	-	-	-	-	-	-	-	10
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>4</b>	<b>-</b>	<b>44</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>553</b>	<b>180</b>	<b>-</b>	<b>781</b>
Residential	-	-	13	-	-	-	-	553	82	-	648
Comm. and public services	1	-	20	-	-	-	-	-	70	-	91
Agriculture/forestry	3	-	10	-	-	-	-	-	17	-	30
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	1	-	-	-	-	-	11	-	12
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>21</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>21</b>
in industry/transf./energy	-	-	14	-	-	-	-	-	-	-	14
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	7	-	-	-	-	-	-	-	7
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>2680</b>	<b>-</b>	<b>6</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2688</b>
Electricity plants	2680	-	6	-	-	-	2	-	-	-	2688
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Brunei Darussalam

Figure 1. Energy production

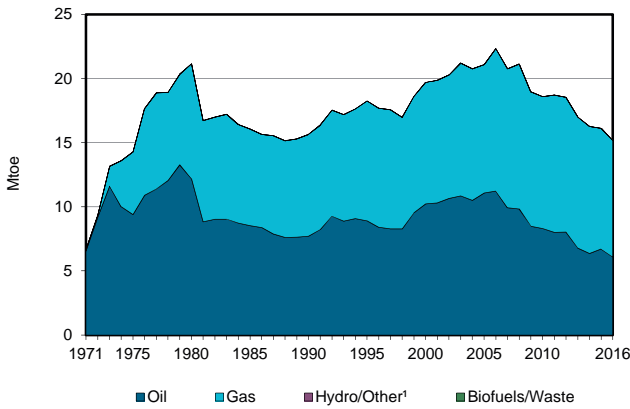


Figure 2. Total primary energy supply<sup>2</sup>

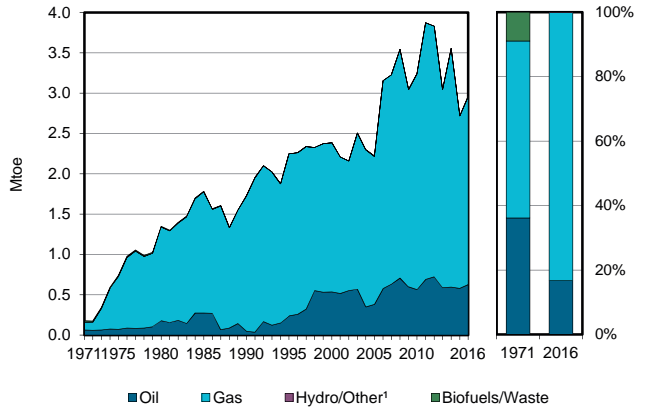


Figure 3. Energy self-sufficiency<sup>3</sup>

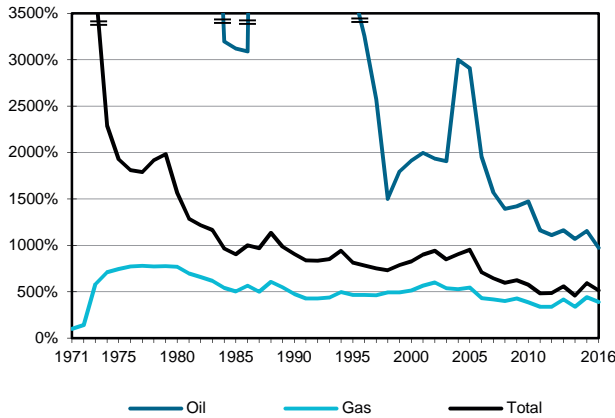


Figure 4. Oil products demand<sup>4</sup>

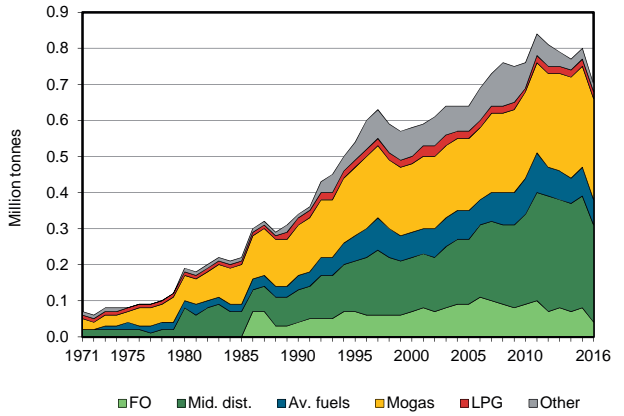


Figure 5. Electricity generation by source

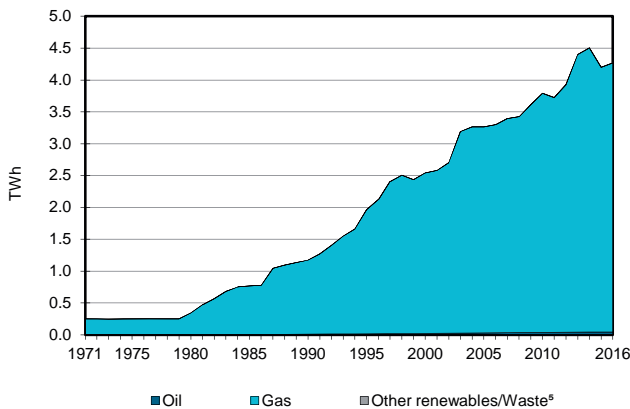
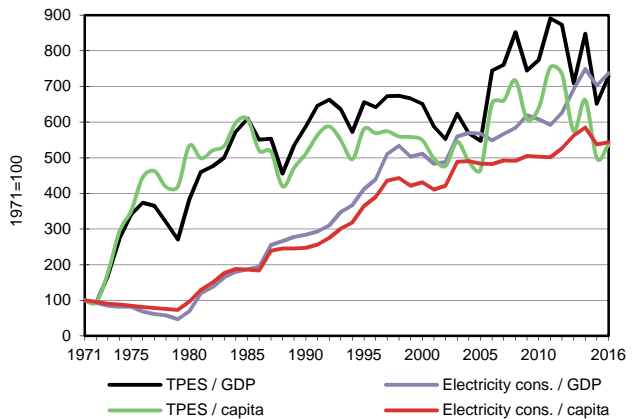


Figure 6. Selected indicators<sup>6</sup>



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency. Maximum scale refers to values greater than or equal to 3500%.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Brunei Darussalam

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	6069	-	9080	-	-	0	-	-	-	15148
Imports	-	5	392	-	-	-	-	-	-	-	397
Exports	-	-5762	-	-6773	-	-	-	-	-	-	-12536
Intl. marine bunkers	-	-	-37	-	-	-	-	-	-	-	-37
Intl. aviation bunkers	-	-	-79	-	-	-	-	-	-	-	-79
Stock changes	-	27	12	27	-	-	-	-	-	-	65
<b>TPES</b>	-	<b>338</b>	<b>288</b>	<b>2334</b>	-	-	<b>0</b>	-	-	-	<b>2959</b>
Transfers	-	-16	18	-	-	-	-	-	-	-	2
Statistical differences	-	17	-17	82	-	-	-	-	-	-	83
Electricity plants	-	-	-11	-955	-	-	-0	-	330	-	-636
CHP plants	-	-	-	-131	-	-	-	-	37	-	-94
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-339	329	-	-	-	-	-	-	-	-9
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-	-	-	-
Energy industry own use	-	-	-11	-817	-	-	-	-	-69	-	-897
Losses	-	-	-	-56	-	-	-	-	-21	-	-77
<b>TFC</b>	-	-	<b>596</b>	<b>456</b>	-	-	-	-	<b>277</b>	-	<b>1330</b>
<b>INDUSTRY</b>	-	-	<b>107</b>	-	-	-	-	-	<b>11</b>	-	<b>118</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	3	-	-	-	-	-	-	-	3
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	103	-	-	-	-	-	11	-	115
<b>TRANSPORT</b>	-	-	<b>451</b>	-	-	-	-	-	-	-	<b>451</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	451	-	-	-	-	-	-	-	451
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	-	-	<b>29</b>	<b>17</b>	-	-	-	-	<b>266</b>	-	<b>312</b>
Residential	-	-	18	17	-	-	-	-	119	-	154
Comm. and public services	-	-	-	-	-	-	-	-	147	-	147
Agriculture/forestry	-	-	-	-	-	-	-	-	-	-	-
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	11	-	-	-	-	-	-	-	11
<b>NON-ENERGY USE</b>	-	-	<b>9</b>	<b>440</b>	-	-	-	-	-	-	<b>448</b>
in industry/transf./energy	-	-	9	440	-	-	-	-	-	-	448
of which: chem./petrochem.	-	-	-	440	-	-	-	-	-	-	440
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	-	-	<b>45</b>	<b>4224</b>	-	-	<b>1</b>	-	-	-	<b>4270</b>
Electricity plants	-	-	45	3797	-	-	1	-	-	-	3843
CHP plants	-	-	-	427	-	-	-	-	-	-	427
<b>Heat generated - TJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Bulgaria

Figure 1. Energy production

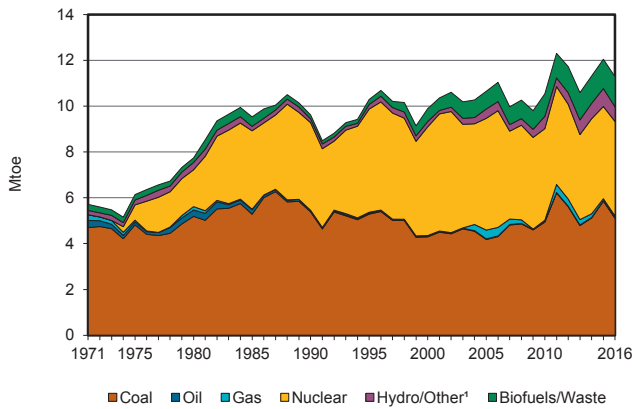


Figure 2. Total primary energy supply<sup>2</sup>

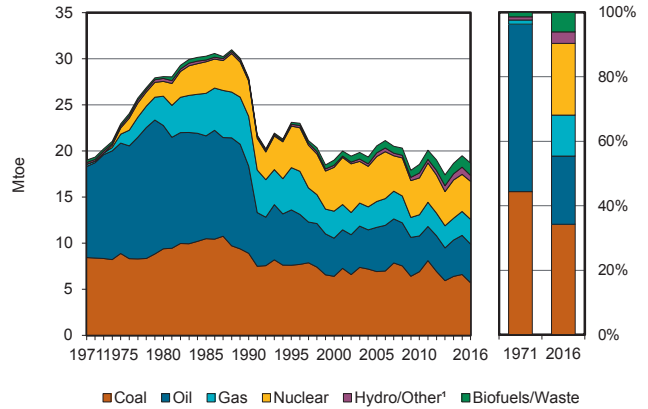


Figure 3. Energy self-sufficiency<sup>3</sup>

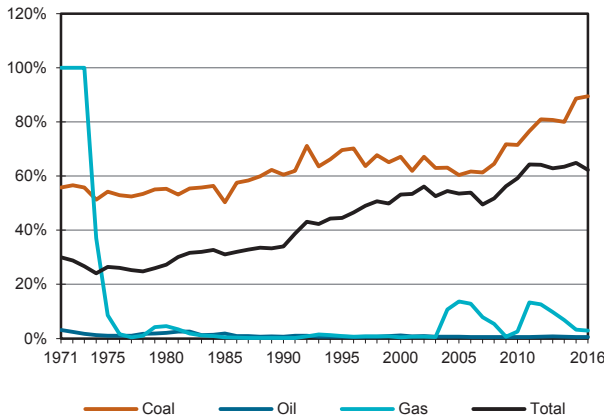


Figure 4. Oil products demand<sup>4</sup>

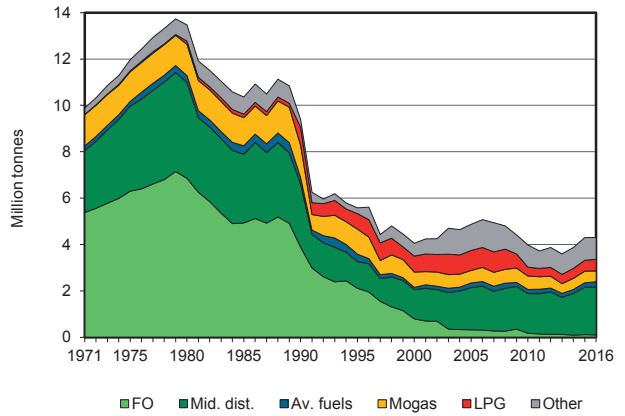


Figure 5. Electricity generation by source

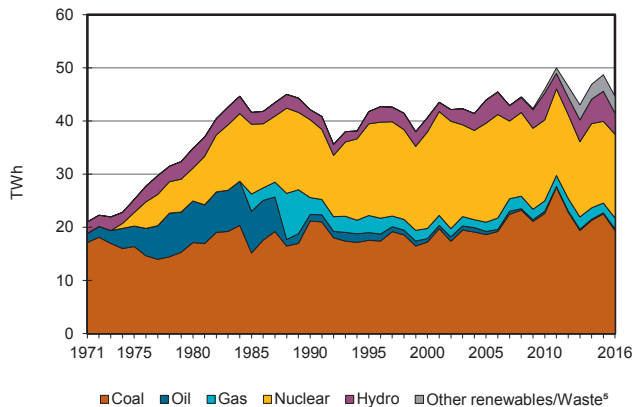
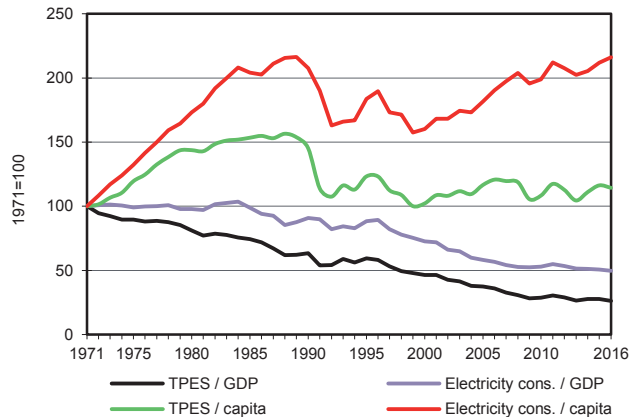


Figure 6. Selected indicators<sup>6</sup>



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.



## Bulgaria

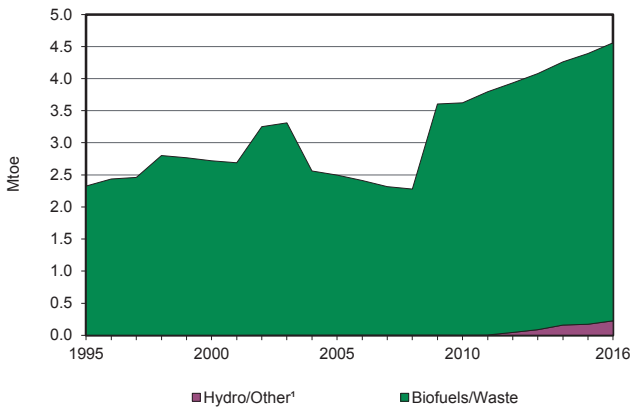
2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	5102	23	-	77	4125	339	299	1313	-	46	11323
Imports	575	6945	2206	2594	-	-	-	153	393	-	12865
Exports	-4	-	-4634	-2	-	-	-	-128	-941	-	-5709
Intl. marine bunkers	-	-	-78	-	-	-	-	-	-	-	-78
Intl. aviation bunkers	-	-	-213	-	-	-	-	-	-	-	-213
Stock changes	25	58	-118	19	-	-	-	-1	-	-	-18
<b>TPES</b>	<b>5698</b>	<b>7026</b>	<b>-2837</b>	<b>2687</b>	<b>4125</b>	<b>339</b>	<b>299</b>	<b>1337</b>	<b>-548</b>	<b>46</b>	<b>18172</b>
Transfers	-	210	-195	-	-	-	-	-	-	-	16
Statistical differences	-11	-34	-8	-21	-	-	-	-	-4	1	-76
Electricity plants	-4590	-	-30	-15	-4111	-339	-242	-14	3504	-16	-5853
CHP plants	-650	-	-196	-604	-15	-	-	-61	336	900	-290
Heat plants	-2	-	-2	-207	-	-	-	-23	-	205	-30
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-52	-	-	-	-	-	-	-	-	-	-52
Oil refineries	-	-7372	7090	-	-	-	-	-	-	-	-281
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	169	-	-198	-	-	-	-2	-	-	-31
Energy industry own use	-1	-	-414	-31	-	-	-	-	-496	-202	-1143
Losses	-	-	-1	-9	-	-	-	-	-308	-151	-469
<b>TFC</b>	<b>391</b>	<b>-</b>	<b>3408</b>	<b>1601</b>	<b>-</b>	<b>-</b>	<b>57</b>	<b>1238</b>	<b>2485</b>	<b>783</b>	<b>9962</b>
<b>INDUSTRY</b>	<b>171</b>	<b>-</b>	<b>200</b>	<b>920</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>287</b>	<b>766</b>	<b>304</b>	<b>2648</b>
Iron and steel	-	-	-	49	-	-	-	0	62	-	111
Chemical and petrochemical	103	-	41	324	-	-	-	1	109	263	840
Non-ferrous metals	1	-	13	32	-	-	-	-	66	18	130
Non-metallic minerals	63	-	96	267	-	-	-	61	77	0	563
Transport equipment	-	-	-	8	-	-	-	0	9	0	17
Machinery	-	-	6	41	-	-	-	0	85	1	133
Mining and quarrying	-	-	6	17	-	-	-	0	93	-	117
Food and tobacco	1	-	11	88	-	-	-	24	105	9	237
Paper pulp and printing	2	-	-	47	-	-	-	156	37	0	242
Wood and wood products	-	-	-	2	-	-	-	39	17	-	58
Construction	-	-	24	14	-	-	-	0	22	2	62
Textile and leather	3	-	1	18	-	-	-	2	32	11	67
Non-specified	-	-	1	13	-	-	-	5	52	0	72
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>2869</b>	<b>230</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>159</b>	<b>30</b>	<b>-</b>	<b>3288</b>
Domestic aviation	-	-	20	-	-	-	-	-	-	-	20
Road	-	-	2836	86	-	-	-	159	5	-	3086
Rail	-	-	13	-	-	-	-	-	24	-	37
Pipeline transport	-	-	-	144	-	-	-	-	2	-	146
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>162</b>	<b>-</b>	<b>186</b>	<b>163</b>	<b>-</b>	<b>-</b>	<b>57</b>	<b>791</b>	<b>1688</b>	<b>479</b>	<b>3527</b>
Residential	149	-	27	59	-	-	10	758	923	325	2250
Comm. and public services	6	-	24	90	-	-	47	16	746	147	1075
Agriculture/forestry	7	-	119	15	-	-	-	18	19	8	186
Fishing	-	-	-	-	-	-	-	-	0	-	0
Non-specified	-	-	15	-	-	-	-	-	-	-	15
<b>NON-ENERGY USE</b>	<b>58</b>	<b>-</b>	<b>153</b>	<b>288</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>499</b>
in industry/transf./energy	58	-	153	288	-	-	-	-	-	-	499
of which: chem./petrochem.	-	-	42	288	-	-	-	-	-	-	330
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>19364</b>	<b>-</b>	<b>318</b>	<b>2053</b>	<b>15776</b>	<b>3942</b>	<b>2811</b>	<b>353</b>	<b>-</b>	<b>34</b>	<b>44651</b>
Electricity plants	17959	-	92	35	15776	3942	2811	99	-	34	40748
CHP plants	1405	-	226	2018	-	-	-	254	-	-	3903
<b>Heat generated - TJ</b>	<b>16811</b>	<b>-</b>	<b>6253</b>	<b>21856</b>	<b>612</b>	<b>-</b>	<b>-</b>	<b>743</b>	<b>-</b>	<b>1927</b>	<b>48202</b>
CHP plants	16709	-	6174	13711	612	-	-	493	-	-	37699
Heat plants	102	-	79	8145	-	-	-	250	-	1927	10503

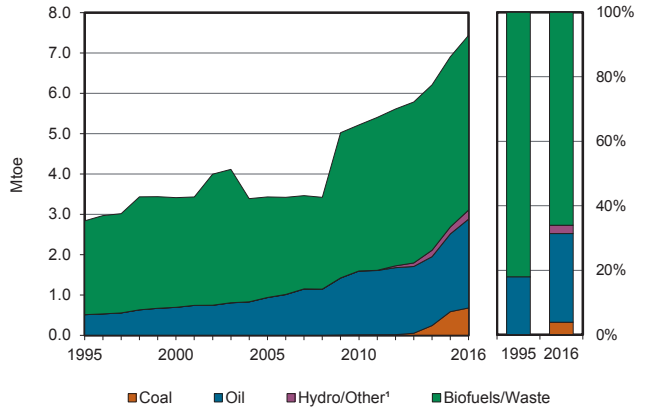
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Cambodia

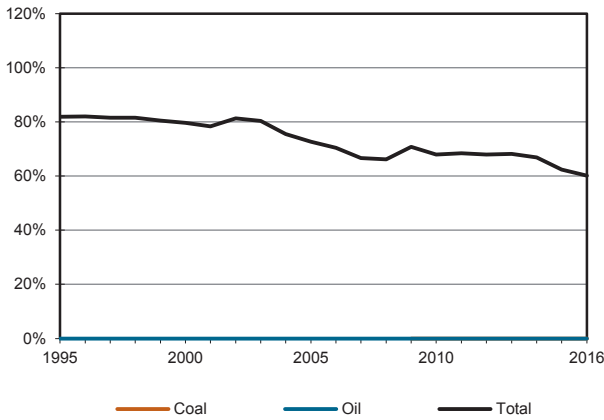
**Figure 1. Energy production**



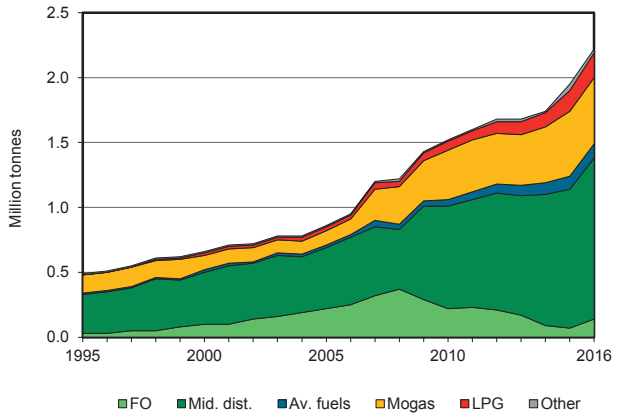
**Figure 2. Total primary energy supply<sup>2</sup>**



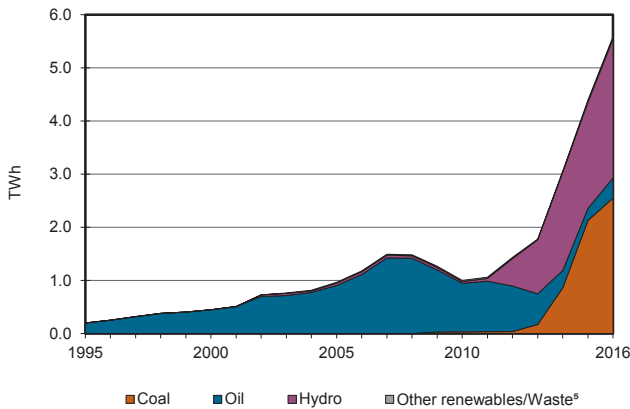
**Figure 3. Energy self-sufficiency<sup>3</sup>**



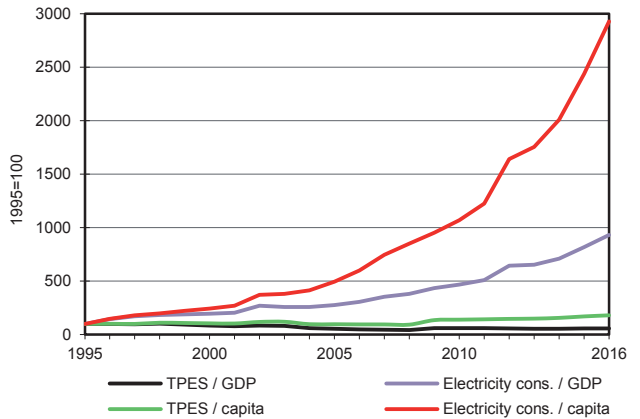
**Figure 4. Oil products demand<sup>4</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>6</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Cambodia

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	-	-	-	-	225	0	4333	-	-	4558
Imports	679	-	2291	-	-	-	-	-	136	-	3106
Exports	-	-	-	-	-	-	-	-	-	-	-
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-88	-	-	-	-	-	-	-	-88
Stock changes	-	-	-	-	-	-	-	-	-	-	-
<b>TPES</b>	<b>679</b>	<b>-</b>	<b>2202</b>	<b>-</b>	<b>-</b>	<b>225</b>	<b>0</b>	<b>4333</b>	<b>136</b>	<b>-</b>	<b>7575</b>
Transfers	-	-	-1	-	-	-	-	-	-	-	-1
Statistical differences	-1	-	-1	-	-	-	-	-	-0	-	-2
Electricity plants	-662	-	-101	-	-	-225	-0	-14	481	-	-522
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-	-	-	-	-	-	-	-	-	-
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-597	-	-	-597
Energy industry own use	-	-	-	-	-	-	-	-	-16	-	-16
Losses	-	-	-	-	-	-	-	-	-80	-	-80
<b>TFC</b>	<b>16</b>	<b>-</b>	<b>2100</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>3721</b>	<b>520</b>	<b>-</b>	<b>6357</b>
<b>INDUSTRY</b>	<b>16</b>	<b>-</b>	<b>193</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>947</b>	<b>130</b>	<b>-</b>	<b>1286</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	16	-	-	-	-	-	-	-	-	-	16
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	193	-	-	-	-	947	130	-	1270
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>1653</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1653</b>
Domestic aviation	-	-	20	-	-	-	-	-	-	-	20
Road	-	-	1377	-	-	-	-	-	-	-	1377
Rail	-	-	203	-	-	-	-	-	-	-	203
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	54	-	-	-	-	-	-	-	54
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>-</b>	<b>-</b>	<b>229</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2775</b>	<b>391</b>	<b>-</b>	<b>3394</b>
Residential	-	-	57	-	-	-	-	2775	162	-	2993
Comm. and public services	-	-	125	-	-	-	-	-	228	-	353
Agriculture/forestry	-	-	47	-	-	-	-	-	-	-	47
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	1	-	1
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>25</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>25</b>
in industry/transf./energy	-	-	2	-	-	-	-	-	-	-	2
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	23	-	-	-	-	-	-	-	23
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>2551</b>	<b>-</b>	<b>379</b>	<b>-</b>	<b>-</b>	<b>2619</b>	<b>3</b>	<b>42</b>	<b>-</b>	<b>-</b>	<b>5594</b>
Electricity plants	2551	-	379	-	-	2619	3	42	-	-	5594
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Cameroon

Figure 1. Energy production

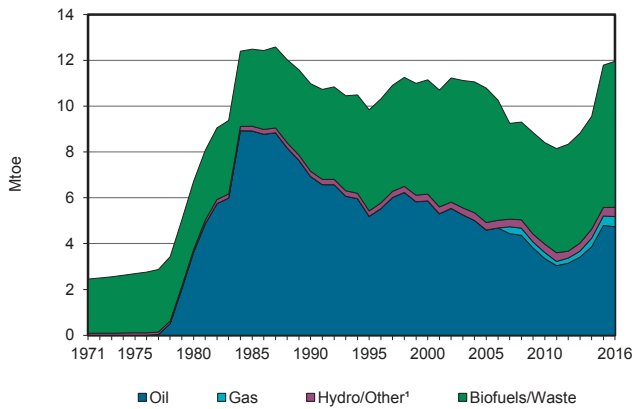


Figure 2. Total primary energy supply<sup>2</sup>

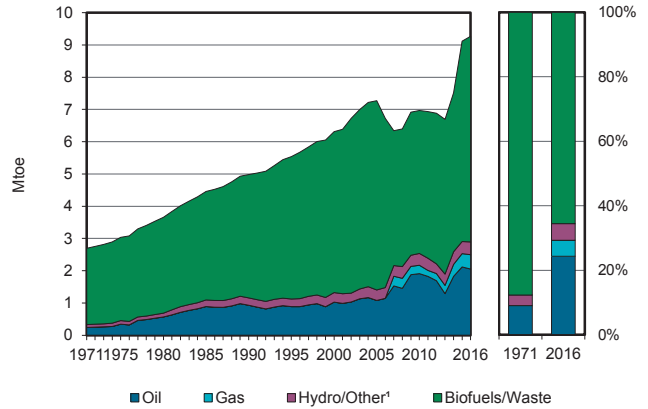


Figure 3. Energy self-sufficiency<sup>3</sup>

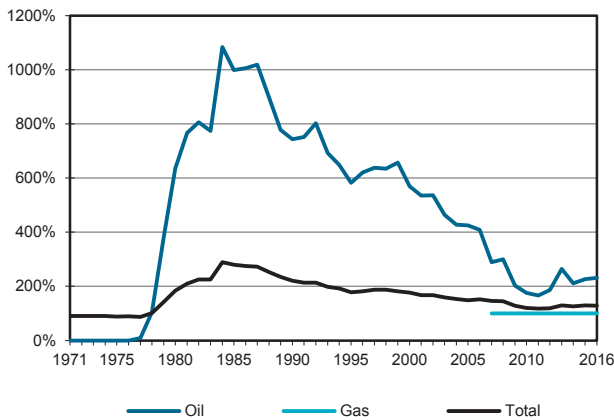


Figure 4. Oil products demand<sup>4</sup>

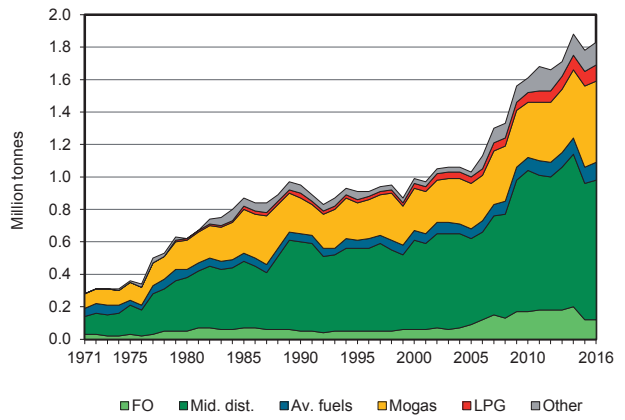


Figure 5. Electricity generation by source

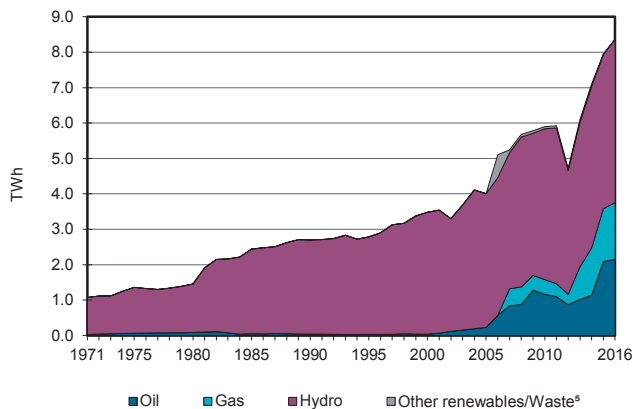
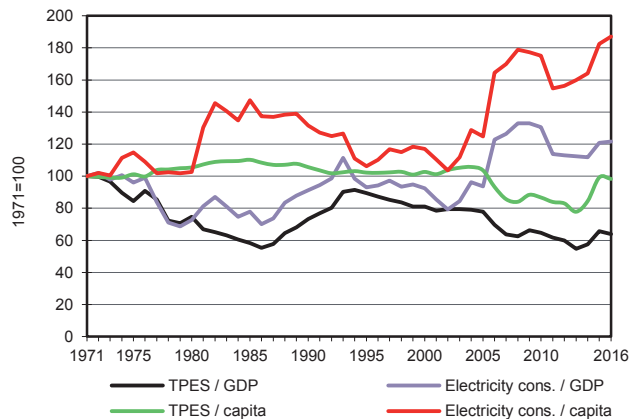


Figure 6. Selected indicators<sup>6</sup>



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Cameroon

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	4738	-	445	-	396	-	6373	-	-	11953
Imports	-	1373	723	-	-	-	-	-	5	-	2100
Exports	-	-4281	-402	-	-	-	-	-	-	-	-4683
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-108	-	-	-	-	-	-	-	-108
Stock changes	-	-	10	-	-	-	-	-	-	-	10
<b>TPES</b>	-	<b>1830</b>	<b>223</b>	<b>445</b>	-	<b>396</b>	-	<b>6373</b>	<b>5</b>	-	<b>9272</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-	-	-61	-5	-	-	-	-43	-	-	-109
Electricity plants	-	-	-327	-440	-	-396	-	-1	719	-	-445
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-1830	1643	-	-	-	-	-	-	-	-188
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-969	-	-	-969
Energy industry own use	-	-	-28	-	-	-	-	-	-21	-	-49
Losses	-	-	-49	-	-	-	-	-	-151	-	-200
<b>TFC</b>	-	-	<b>1400</b>	-	-	-	-	<b>5360</b>	<b>552</b>	-	<b>7313</b>
<b>INDUSTRY</b>	-	-	<b>72</b>	-	-	-	-	-	<b>308</b>	-	<b>380</b>
Iron and steel	-	-	-	-	-	-	-	-	8	-	8
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	135	-	135
Non-metallic minerals	-	-	4	-	-	-	-	-	13	-	17
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	55	-	55
Food and tobacco	-	-	-	-	-	-	-	-	18	-	18
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	3	-	3
Non-specified	-	-	68	-	-	-	-	-	77	-	145
<b>TRANSPORT</b>	-	-	<b>1062</b>	-	-	-	-	-	-	-	<b>1062</b>
Domestic aviation	-	-	5	-	-	-	-	-	-	-	5
Road	-	-	1056	-	-	-	-	-	-	-	1056
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	-	-	<b>204</b>	-	-	-	-	<b>5360</b>	<b>244</b>	-	<b>5809</b>
Residential	-	-	169	-	-	-	-	4322	118	-	4609
Comm. and public services	-	-	-	-	-	-	-	1037	43	-	1081
Agriculture/forestry	-	-	-	-	-	-	-	-	5	-	5
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	36	-	-	-	-	0	78	-	114
<b>NON-ENERGY USE</b>	-	-	<b>63</b>	-	-	-	-	-	-	-	<b>63</b>
in industry/transf./energy	-	-	5	-	-	-	-	-	-	-	5
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	23	-	-	-	-	-	-	-	23
in other	-	-	34	-	-	-	-	-	-	-	34
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	-	-	<b>2148</b>	<b>1605</b>	-	<b>4611</b>	-	<b>3</b>	-	-	<b>8367</b>
Electricity plants	-	-	2148	1605	-	4611	-	3	-	-	8367
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Colombia

Figure 1. Energy production

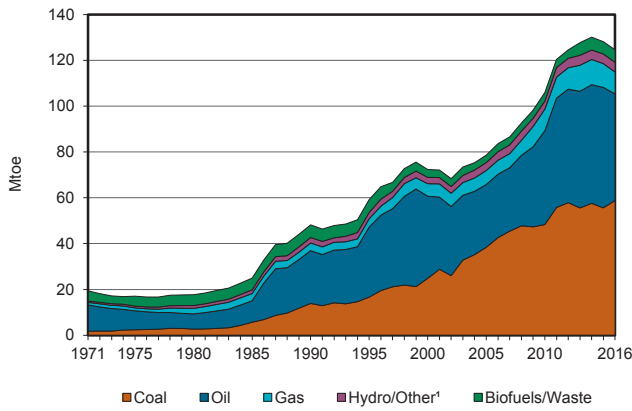


Figure 2. Total primary energy supply²

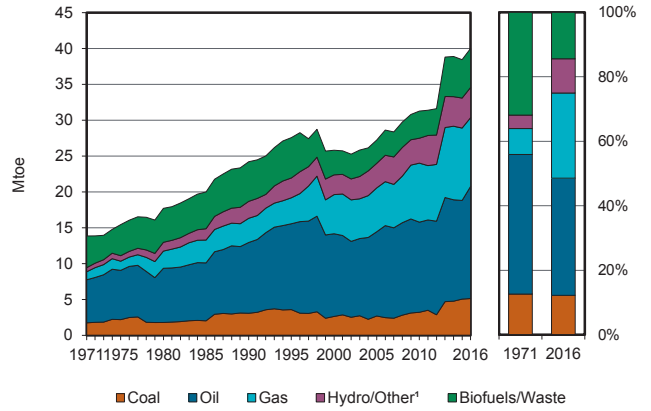


Figure 3. Energy self-sufficiency³

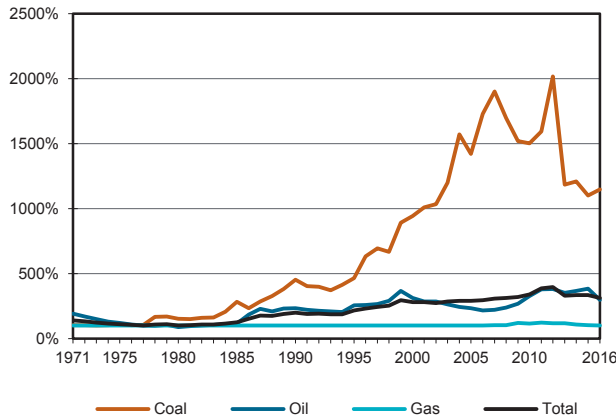


Figure 4. Oil products demand⁴

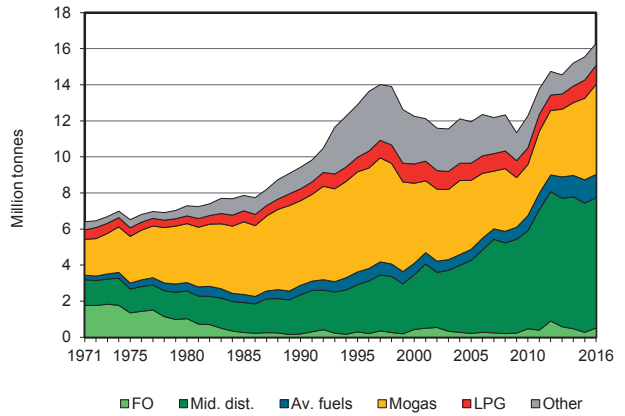


Figure 5. Electricity generation by source

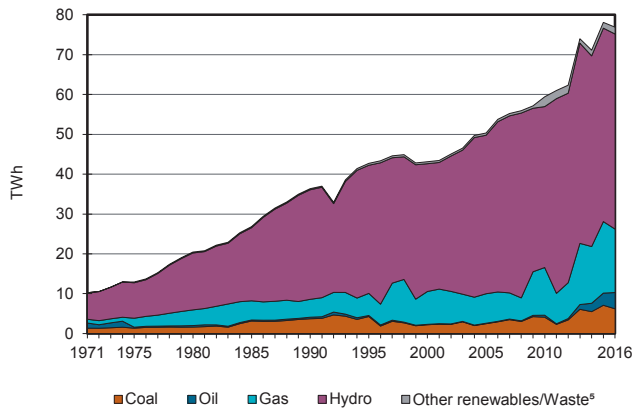
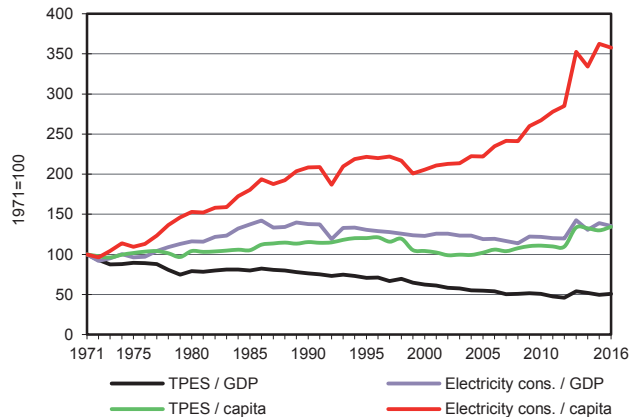


Figure 6. Selected indicators⁶



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Colombia

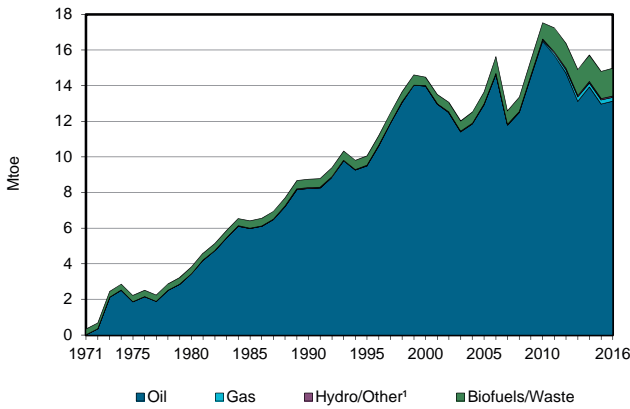
2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	58832	46470	-	9578	-	4210	4	5448	-	-	124544
Imports	-	-	4858	11	-	-	-	-	33	-	4901
Exports	-55012	-32712	-3479	-	-	-	-	-10	-4	-	-91217
Intl. marine bunkers	-	-	-329	-	-	-	-	-	-	-	-329
Intl. aviation bunkers	-	-	-1352	-	-	-	-	-	-	-	-1352
Stock changes	1312	2924	-739	-	-	-	-	-	-	-	3497
<b>TPES</b>	<b>5133</b>	<b>16683</b>	<b>-1042</b>	<b>9589</b>	<b>-</b>	<b>4210</b>	<b>4</b>	<b>5438</b>	<b>29</b>	<b>-</b>	<b>40044</b>
Transfers	-	-624	643	-	-	-	-	-	-	-	18
Statistical differences	-550	-	-379	813	-	-	-	-6	-283	-	-405
Electricity plants	-1574	-255	-908	-2986	-	-4210	-4	-422	6613	-	-3747
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-41	-	-	-	-	-	-	-	-	-	-41
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-292	-	-	-	-	-	-	-	-	-	-292
Oil refineries	-	-15578	15544	-	-	-	-	-	-	-	-34
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-49	-	-	-49
Energy industry own use	-20	-218	-614	-3717	-	-	-	-	-585	-	-5154
Losses	-3	-	-	-	-	-	-	-	-602	-	-605
<b>TFC</b>	<b>2653</b>	<b>7</b>	<b>13244</b>	<b>3699</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>4961</b>	<b>5172</b>	<b>-</b>	<b>29736</b>
<b>INDUSTRY</b>	<b>2588</b>	<b>7</b>	<b>476</b>	<b>1203</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1747</b>	<b>1628</b>	<b>-</b>	<b>7649</b>
Iron and steel	698	-	8	237	-	-	-	1	198	-	1142
Chemical and petrochemical	174	-	377	143	-	-	-	20	236	-	951
Non-ferrous metals	3	-	3	19	-	-	-	-	19	-	44
Non-metallic minerals	991	-	42	208	-	-	-	5	176	-	1422
Transport equipment	-	-	-	11	-	-	-	-	11	-	22
Machinery	0	-	1	14	-	-	-	-	23	-	39
Mining and quarrying	-	-	-	-	-	-	-	-	361	-	361
Food and tobacco	298	-	36	314	-	-	-	1555	330	-	2534
Paper pulp and printing	294	7	2	132	-	-	-	162	146	-	744
Wood and wood products	-	-	4	6	-	-	-	1	12	-	23
Construction	-	-	-	-	-	-	-	-	9	-	9
Textile and leather	129	-	1	107	-	-	-	3	86	-	325
Non-specified	-	-	1	11	-	-	-	-	21	-	34
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>10083</b>	<b>530</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>33</b>	<b>8</b>	<b>-</b>	<b>10654</b>
Domestic aviation	-	-	23	-	-	-	-	-	-	-	23
Road	-	-	10055	530	-	-	-	33	-	-	10618
Rail	-	-	-	-	-	-	-	-	8	-	8
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	5	-	-	-	-	-	-	-	5
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>64</b>	<b>-</b>	<b>2320</b>	<b>1967</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>3181</b>	<b>3536</b>	<b>-</b>	<b>11068</b>
Residential	64	-	409	995	-	-	-	2746	1951	-	6165
Comm. and public services	-	-	67	344	-	-	-	-	1136	-	1548
Agriculture/forestry	-	-	-	-	-	-	-	418	51	-	469
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	1844	628	-	-	-	17	397	-	2886
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>364</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>364</b>
in industry/transf./energy	-	-	364	-	-	-	-	-	-	-	364
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>6210</b>	<b>-</b>	<b>4076</b>	<b>15935</b>	<b>-</b>	<b>48966</b>	<b>51</b>	<b>1666</b>	<b>-</b>	<b>-</b>	<b>76904</b>
Electricity plants	6210	-	4076	15935	-	48966	51	1666	-	-	76904
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

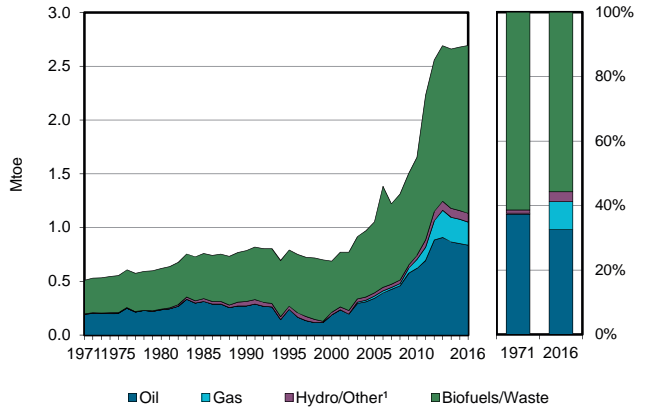
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Congo

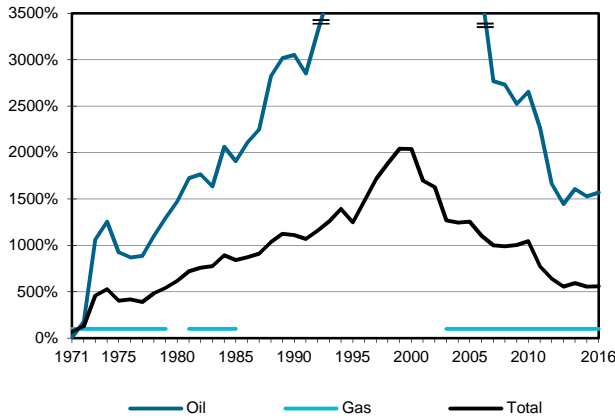
**Figure 1. Energy production**



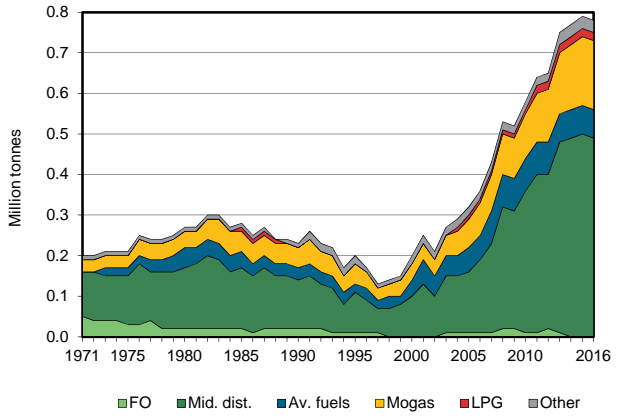
**Figure 2. Total primary energy supply<sup>2</sup>**



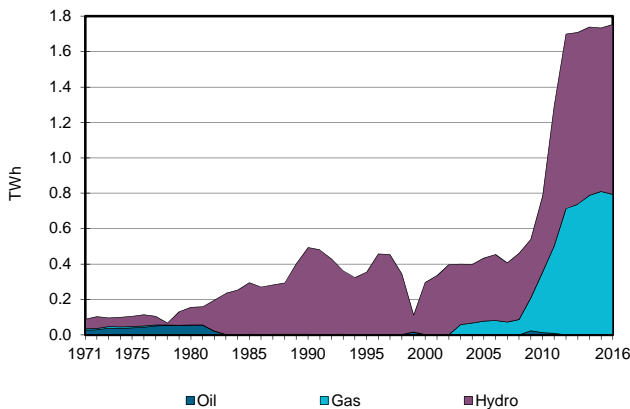
**Figure 3. Energy self-sufficiency<sup>3</sup>**



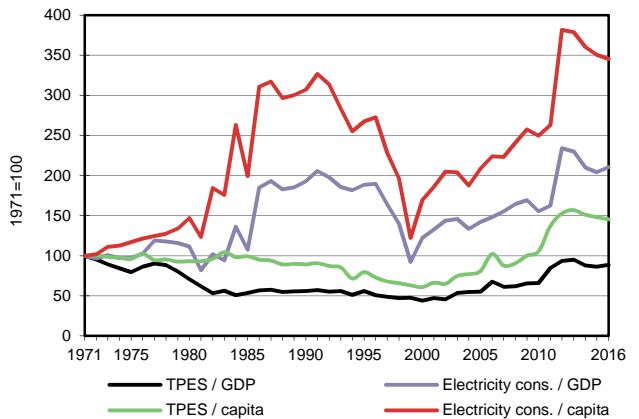
**Figure 4. Oil products demand<sup>4</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>5</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency. Maximum scale refers to values greater than or equal to 3500%.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. GDP in 2010 USD.



## Congo

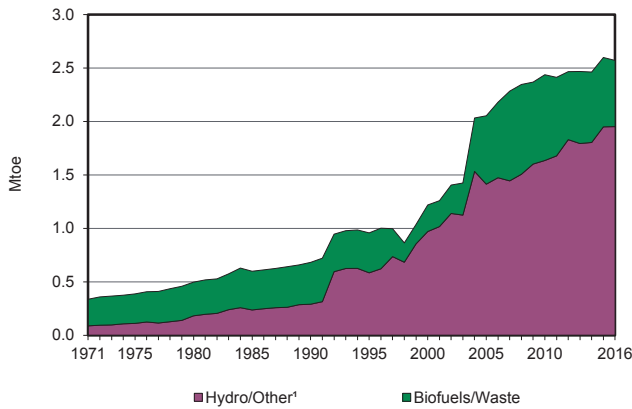
2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	13119	-	213	-	82	-	1561	-	-	14976
Imports	-	-	342	-	-	-	-	-	2	-	343
Exports	-	-12282	-300	-	-	-	-	-	-2	-	-12583
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-44	-	-	-	-	-	-	-	-44
Stock changes	-	-	-	-	-	-	-	-	-	-	-
<b>TPES</b>	-	<b>838</b>	<b>-1</b>	<b>213</b>	-	<b>82</b>	-	<b>1561</b>	<b>-0</b>	-	<b>2693</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-	-	1	-15	-	-	-	1	3	-	-10
Electricity plants	-	-	-	-199	-	-82	-	-	151	-	-130
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-838	753	-	-	-	-	-	-	-	-85
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-306	-	-	-306
Energy industry own use	-	-	-	-	-	-	-	-	-17	-	-17
Losses	-	-	-	-	-	-	-	-	-67	-	-67
<b>TFC</b>	-	-	<b>753</b>	-	-	-	-	<b>1255</b>	<b>69</b>	-	<b>2077</b>
<b>INDUSTRY</b>	-	-	<b>24</b>	-	-	-	-	-	<b>32</b>	-	<b>56</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	24	-	-	-	-	-	-	-	24
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	32	-	32
<b>TRANSPORT</b>	-	-	<b>666</b>	-	-	-	-	-	-	-	<b>666</b>
Domestic aviation	-	-	29	-	-	-	-	-	-	-	29
Road	-	-	541	-	-	-	-	-	-	-	541
Rail	-	-	96	-	-	-	-	-	-	-	96
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	-	-	<b>29</b>	-	-	-	-	<b>1255</b>	<b>37</b>	-	<b>1321</b>
Residential	-	-	29	-	-	-	-	1239	37	-	1305
Comm. and public services	-	-	-	-	-	-	-	16	-	-	16
Agriculture/forestry	-	-	-	-	-	-	-	-	-	-	-
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>NON-ENERGY USE</b>	-	-	<b>34</b>	-	-	-	-	-	-	-	<b>34</b>
in industry/transf./energy	-	-	34	-	-	-	-	-	-	-	34
of which: chem./petrochem.	-	-	10	-	-	-	-	-	-	-	10
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	-	-	-	<b>794</b>	-	<b>959</b>	-	-	-	-	<b>1753</b>
Electricity plants	-	-	-	794	-	959	-	-	-	-	1753
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

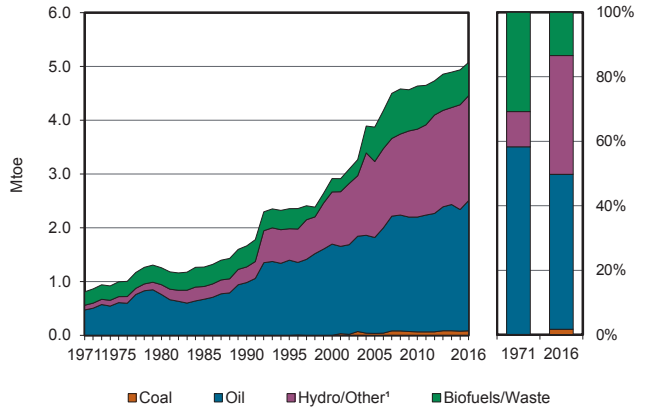
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Costa Rica

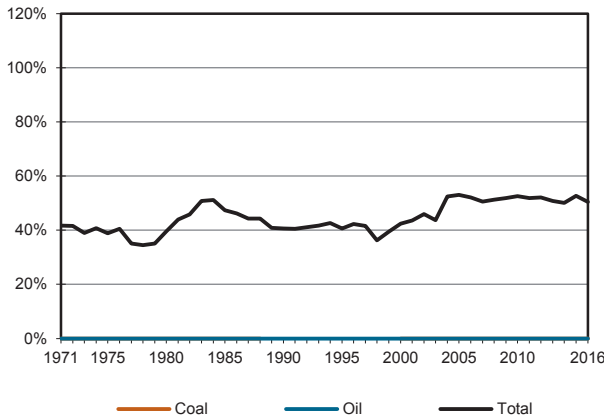
**Figure 1. Energy production**



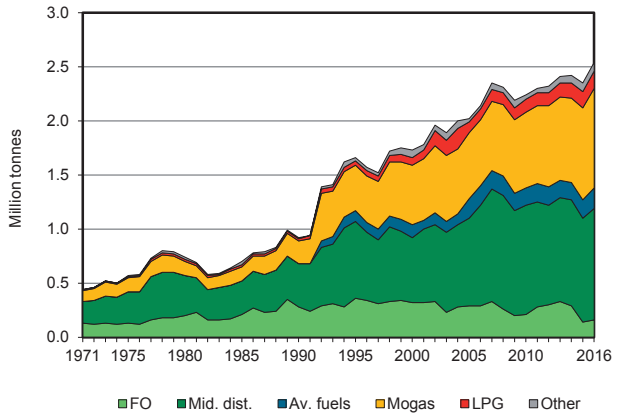
**Figure 2. Total primary energy supply²**



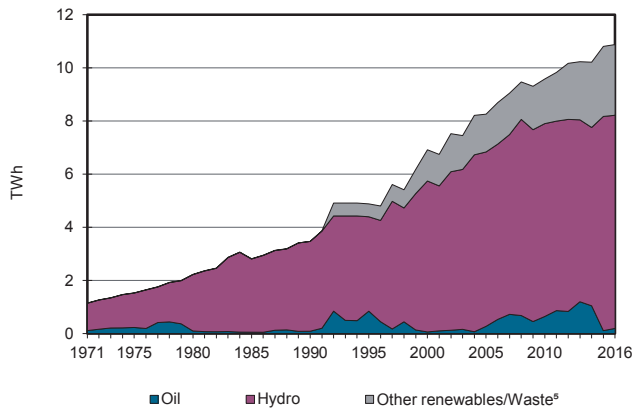
**Figure 3. Energy self-sufficiency³**



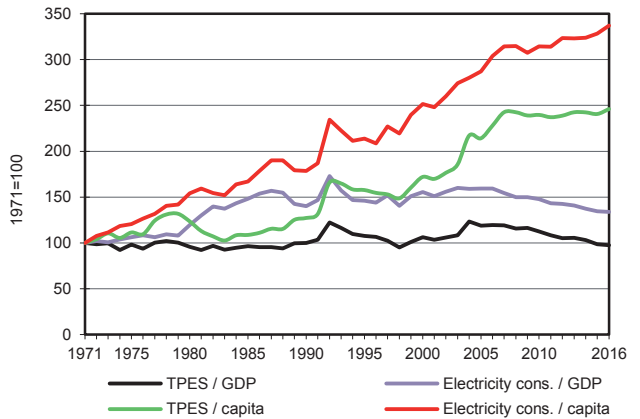
**Figure 4. Oil products demand⁴**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators⁶**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Costa Rica

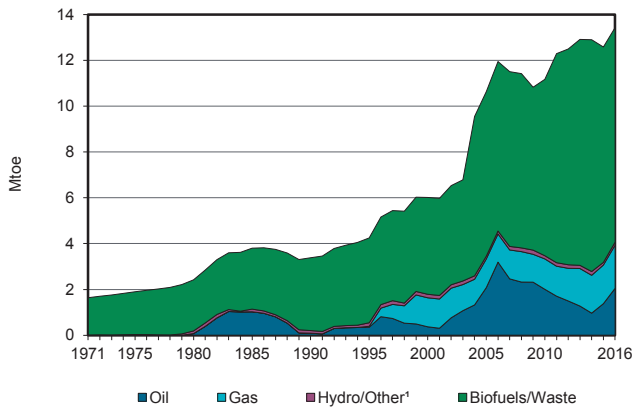
2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	-	-	-	-	690	1261	619	-	-	2570
Imports	84	-	2596	-	-	-	-	-	69	-	2750
Exports	-	-	-	-	-	-	-	-	-56	-	-56
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-199	-	-	-	-	-	-	-	-199
Stock changes	-	-	24	-	-	-	-	-	-	-	24
<b>TPES</b>	<b>84</b>	<b>-</b>	<b>2421</b>	<b>-</b>	<b>-</b>	<b>690</b>	<b>1261</b>	<b>619</b>	<b>13</b>	<b>-</b>	<b>5088</b>
Transfers	-	-	4	-	-	-	-	-	-	-	4
Statistical differences	-	-	24	-	-	-	-	-0	1	-	25
Electricity plants	-	-	-41	-	-	-690	-1261	-3	922	-	-1073
CHP plants	-	-	-	-	-	-	-	-29	14	-	-15
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-40	-	-	-	-	-	-	-	-	-	-40
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-	-	-	-	-	-	-	-	-	-
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-4	-	-	-4
Energy industry own use	-	-	-10	-	-	-	-	-	-11	-	-20
Losses	-	-	-	-	-	-	-	-	-97	-	-97
<b>TFC</b>	<b>44</b>	<b>-</b>	<b>2399</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>584</b>	<b>841</b>	<b>-</b>	<b>3869</b>
<b>INDUSTRY</b>	<b>44</b>	<b>-</b>	<b>245</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>455</b>	<b>168</b>	<b>-</b>	<b>912</b>
Iron and steel	44	-	-	-	-	-	-	-	-	-	44
Chemical and petrochemical	-	-	11	-	-	-	-	-	34	-	45
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	1	-	-	-	-	-	-	-	-	-	1
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	124	-	-	-	-	307	56	-	487
Paper pulp and printing	-	-	13	-	-	-	-	9	3	-	25
Wood and wood products	-	-	5	-	-	-	-	128	11	-	144
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	15	-	-	-	-	-	6	-	21
Non-specified	-	-	76	-	-	-	-	11	59	-	145
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>1894</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1894</b>
Domestic aviation	-	-	3	-	-	-	-	-	-	-	3
Road	-	-	1890	-	-	-	-	-	-	-	1890
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	1	-	-	-	-	-	-	-	1
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>-</b>	<b>-</b>	<b>187</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>130</b>	<b>673</b>	<b>-</b>	<b>989</b>
Residential	-	-	70	-	-	-	-	103	320	-	493
Comm. and public services	-	-	37	-	-	-	-	27	318	-	382
Agriculture/forestry	-	-	53	-	-	-	-	-	28	-	81
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	27	-	-	-	-	-	6	-	33
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>74</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>74</b>
in industry/transf./energy	-	-	74	-	-	-	-	-	-	-	74
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>-</b>	<b>-</b>	<b>193</b>	<b>-</b>	<b>-</b>	<b>8026</b>	<b>2490</b>	<b>172</b>	<b>-</b>	<b>-</b>	<b>10881</b>
Electricity plants	-	-	193	-	-	8026	2490	10	-	-	10719
CHP plants	-	-	-	-	-	-	-	162	-	-	162
<b>Heat generated - TJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

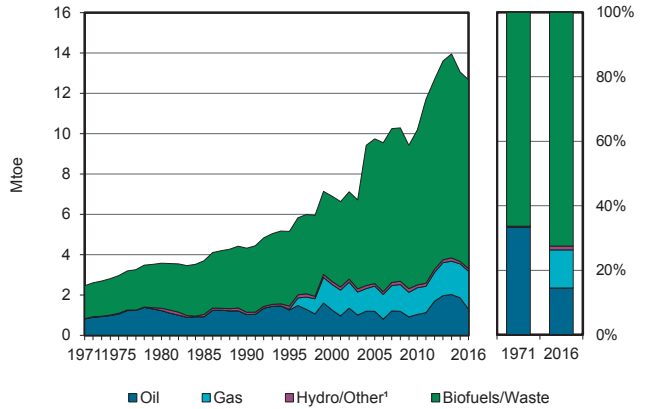
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Côte d'Ivoire

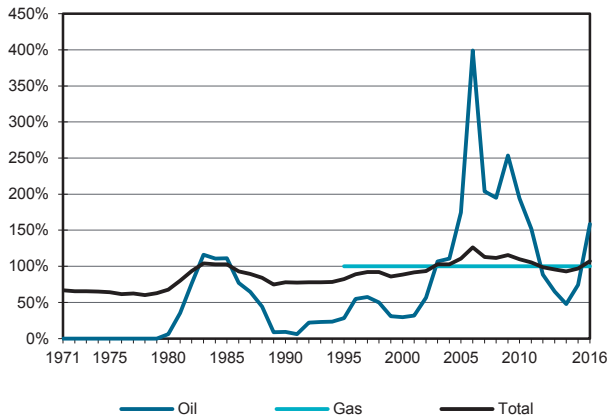
**Figure 1. Energy production**



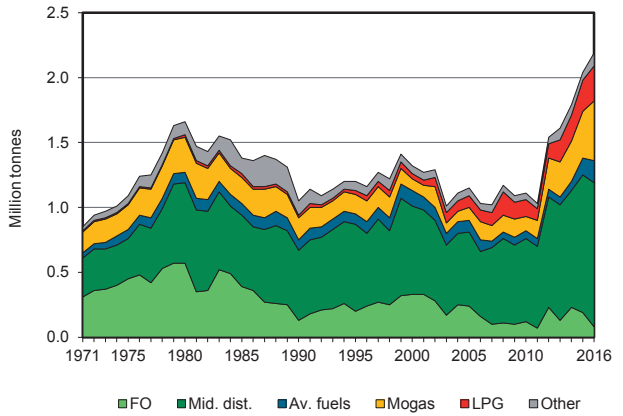
**Figure 2. Total primary energy supply<sup>2</sup>**



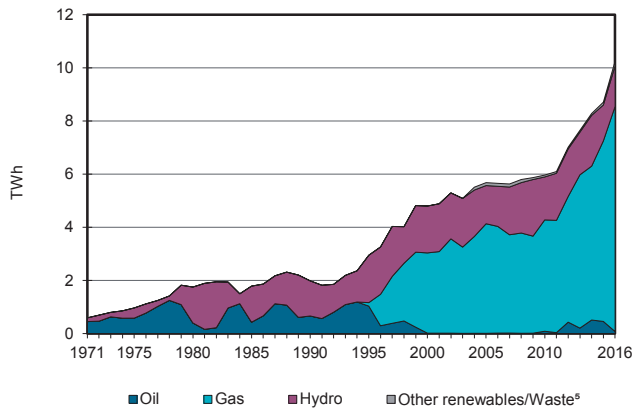
**Figure 3. Energy self-sufficiency<sup>3</sup>**



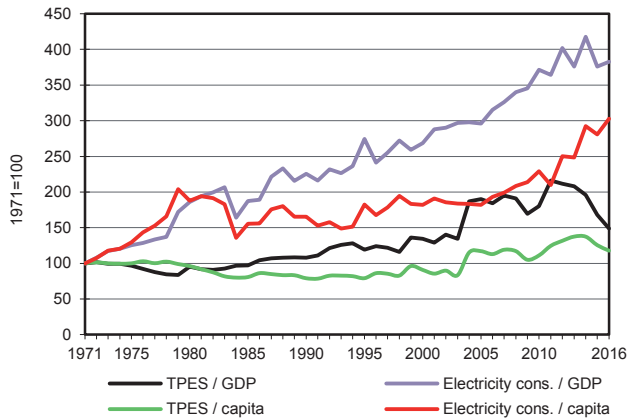
**Figure 4. Oil products demand<sup>4</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>6</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Côte d'Ivoire

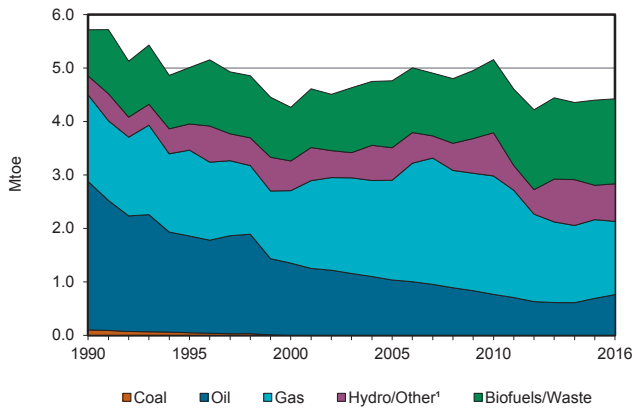
2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	2049	-	1885	-	131	-	9359	-	-	13425
Imports	-	2464	280	-	-	-	-	-	2	-	2745
Exports	-	-1904	-1396	-	-	-	-	-	-161	-	-3461
Intl. marine bunkers	-	-	-81	-	-	-	-	-	-	-	-81
Intl. aviation bunkers	-	-	-169	-	-	-	-	-	-	-	-169
Stock changes	-	49	-	-	-	-	-	-	-	-	49
<b>TPES</b>	-	<b>2658</b>	<b>-1366</b>	<b>1885</b>	-	<b>131</b>	-	<b>9359</b>	<b>-160</b>	-	<b>12507</b>
Transfers	-	-6	-7	-	-	-	-	-	-	-	-13
Statistical differences	-	708	107	-0	-	-	-	-	31	-	846
Electricity plants	-	-	-23	-1579	-	-131	-	-46	882	-	-898
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-3359	3312	-	-	-	-	-	-	-	-47
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-4888	-	-	-4888
Energy industry own use	-	-	-59	-	-	-	-	-	-44	-	-104
Losses	-	-	-	-	-	-	-	-32	-140	-	-172
<b>TFC</b>	-	-	<b>1963</b>	<b>306</b>	-	-	-	<b>4393</b>	<b>569</b>	-	<b>7231</b>
<b>INDUSTRY</b>	-	-	<b>279</b>	<b>306</b>	-	-	-	-	<b>187</b>	-	<b>772</b>
Iron and steel	-	-	-	-	-	-	-	-	9	-	9
Chemical and petrochemical	-	-	-	-	-	-	-	-	9	-	9
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	18	306	-	-	-	-	68	-	393
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	45	-	45
Construction	-	-	-	-	-	-	-	-	5	-	5
Textile and leather	-	-	-	-	-	-	-	-	13	-	13
Non-specified	-	-	260	-	-	-	-	-	37	-	298
<b>TRANSPORT</b>	-	-	<b>1198</b>	-	-	-	-	-	-	-	<b>1198</b>
Domestic aviation	-	-	7	-	-	-	-	-	-	-	7
Road	-	-	1063	-	-	-	-	-	-	-	1063
Rail	-	-	13	-	-	-	-	-	-	-	13
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	100	-	-	-	-	-	-	-	100
Non-specified	-	-	14	-	-	-	-	-	-	-	14
<b>OTHER</b>	-	-	<b>417</b>	-	-	-	-	<b>4393</b>	<b>382</b>	-	<b>5191</b>
Residential	-	-	182	-	-	-	-	3908	180	-	4270
Comm. and public services	-	-	119	-	-	-	-	485	201	-	805
Agriculture/forestry	-	-	116	-	-	-	-	-	-	-	116
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	1	-	1
<b>NON-ENERGY USE</b>	-	-	<b>70</b>	-	-	-	-	-	-	-	<b>70</b>
in industry/transf./energy	-	-	70	-	-	-	-	-	-	-	70
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	-	-	<b>74</b>	<b>8477</b>	-	<b>1529</b>	-	<b>173</b>	-	-	<b>10253</b>
Electricity plants	-	-	74	8477	-	1529	-	173	-	-	10253
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

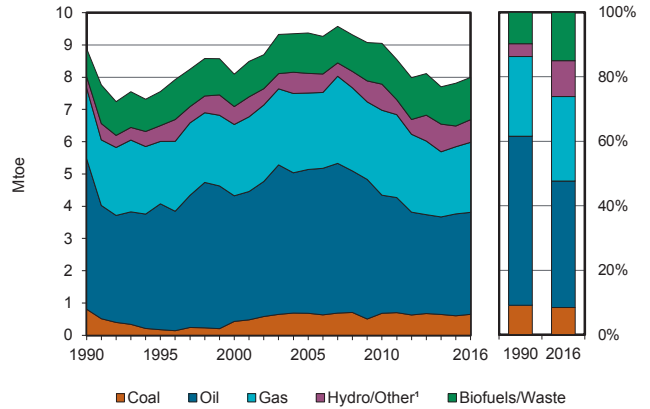
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Croatia

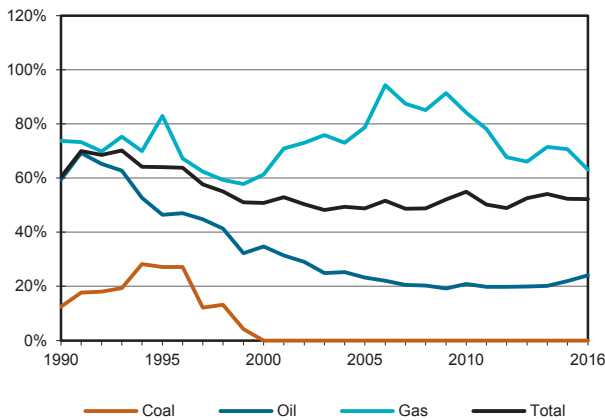
**Figure 1. Energy production**



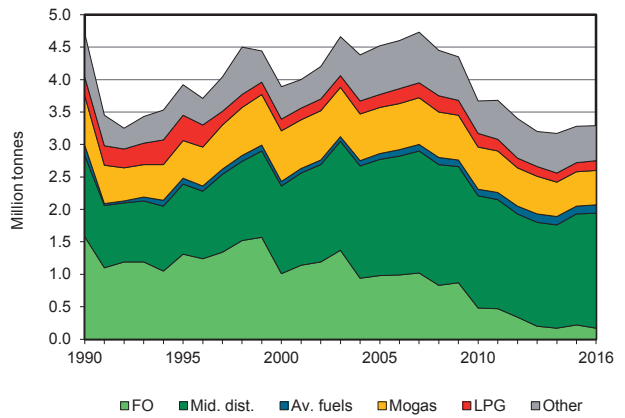
**Figure 2. Total primary energy supply<sup>2</sup>**



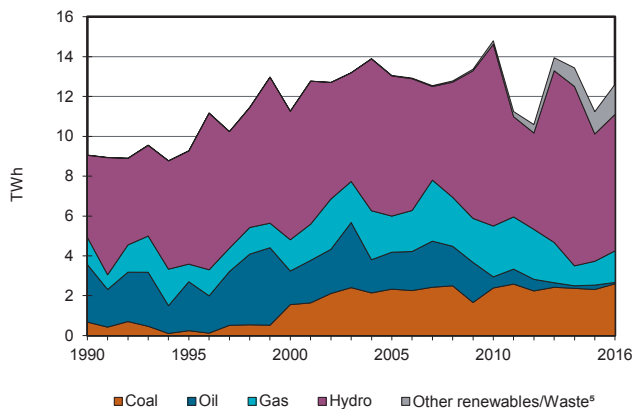
**Figure 3. Energy self-sufficiency<sup>3</sup>**



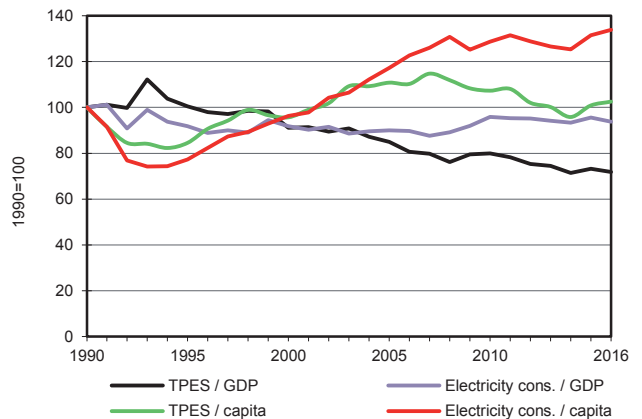
**Figure 4. Oil products demand<sup>4</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>6</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Croatia

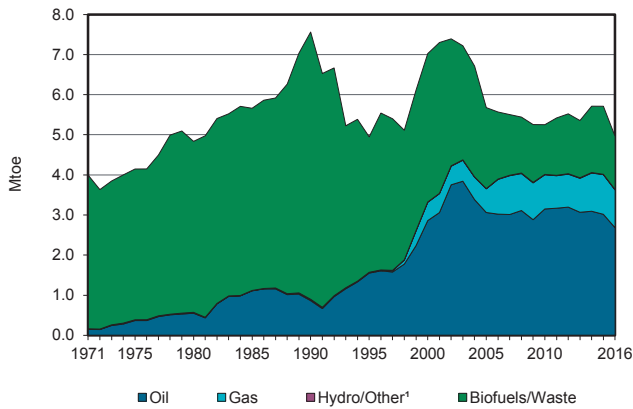
2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	761	-	1369	-	589	113	1589	-	-	4422
Imports	664	3046	1659	1051	-	-	-	29	1066	-	7516
Exports	-	-	-2103	-324	-	-	-	-313	-590	-	-3331
Intl. marine bunkers	-	-	-5	-	-	-	-	-	-	-	-5
Intl. aviation bunkers	-	-	-121	-	-	-	-	-	-	-	-121
Stock changes	-13	-3	-74	74	-	-	-	4	-	-	-13
<b>TPES</b>	<b>651</b>	<b>3804</b>	<b>-644</b>	<b>2171</b>	<b>-</b>	<b>589</b>	<b>113</b>	<b>1309</b>	<b>476</b>	<b>-</b>	<b>8469</b>
Transfers	-	-44	44	-	-	-	-	-	-	-	-0
Statistical differences	-0	9	-	-	-	-	-	1	-	-	10
Electricity plants	-580	-	-1	-55	-	-589	-93	-6	931	-	-394
CHP plants	-4	-	-13	-384	-	-	-	-128	154	217	-157
Heat plants	-	-	-8	-59	-	-	-	-0	-	55	-12
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-3852	3791	-	-	-	-	-	-	-	-61
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	83	-	-86	-	-	-	-8	-	-	-12
Energy industry own use	-	-	-324	-150	-	-	-	-1	-89	-15	-578
Losses	-	-	-	-28	-	-	-	-1	-155	-36	-220
<b>TFC</b>	<b>67</b>	<b>-</b>	<b>2845</b>	<b>1410</b>	<b>-</b>	<b>-</b>	<b>21</b>	<b>1166</b>	<b>1316</b>	<b>222</b>	<b>7045</b>
<b>INDUSTRY</b>	<b>64</b>	<b>-</b>	<b>285</b>	<b>357</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>30</b>	<b>295</b>	<b>61</b>	<b>1091</b>
Iron and steel	-	-	-	2	-	-	-	-	4	-	6
Chemical and petrochemical	-	-	4	105	-	-	-	-	26	16	151
Non-ferrous metals	-	-	2	2	-	-	-	0	3	-	7
Non-metallic minerals	48	-	141	72	-	-	-	11	49	-	321
Transport equipment	-	-	2	2	-	-	-	0	8	-	12
Machinery	-	-	5	19	-	-	-	0	40	9	74
Mining and quarrying	-	-	10	-	-	-	-	-	4	-	14
Food and tobacco	16	-	21	96	-	-	-	2	61	12	208
Paper pulp and printing	-	-	7	41	-	-	-	0	27	1	76
Wood and wood products	-	-	-	1	-	-	-	9	24	21	54
Construction	-	-	90	-	-	-	-	-	7	-	97
Textile and leather	-	-	2	10	-	-	-	0	13	1	26
Non-specified	-	-	1	7	-	-	-	7	28	1	44
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>2000</b>	<b>4</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>22</b>	<b>-</b>	<b>2026</b>
Domestic aviation	-	-	10	-	-	-	-	-	-	-	10
Road	-	-	1929	4	-	-	-	1	-	-	1934
Rail	-	-	18	-	-	-	-	-	19	-	37
Pipeline transport	-	-	-	-	-	-	-	-	3	-	3
Domestic navigation	-	-	43	-	-	-	-	-	-	-	43
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>3</b>	<b>-</b>	<b>398</b>	<b>670</b>	<b>-</b>	<b>-</b>	<b>21</b>	<b>1135</b>	<b>999</b>	<b>162</b>	<b>3387</b>
Residential	3	-	141	466	-	-	8	1128	527	119	2392
Comm. and public services	-	-	61	181	-	-	8	7	467	38	762
Agriculture/forestry	-	-	168	23	-	-	4	-	5	5	205
Fishing	-	-	27	-	-	-	-	-	-	-	27
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>162</b>	<b>379</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>541</b>
in industry/transf./energy	-	-	139	379	-	-	-	-	-	-	518
of which: chem./petrochem.	-	-	13	379	-	-	-	-	-	-	392
in transport	-	-	21	-	-	-	-	-	-	-	21
in other	-	-	1	-	-	-	-	-	-	-	1
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>2596</b>	<b>-</b>	<b>69</b>	<b>1586</b>	<b>-</b>	<b>6853</b>	<b>1080</b>	<b>431</b>	<b>-</b>	<b>-</b>	<b>12615</b>
Electricity plants	2576	-	5	287	-	6853	1080	26	-	-	10827
CHP plants	20	-	64	1299	-	-	-	405	-	-	1788
<b>Heat generated - TJ</b>	<b>-</b>	<b>-</b>	<b>247</b>	<b>9951</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1213</b>	<b>-</b>	<b>-</b>	<b>11411</b>
CHP plants	-	-	-	7884	-	-	-	1211	-	-	9095
Heat plants	-	-	247	2067	-	-	-	2	-	-	2316

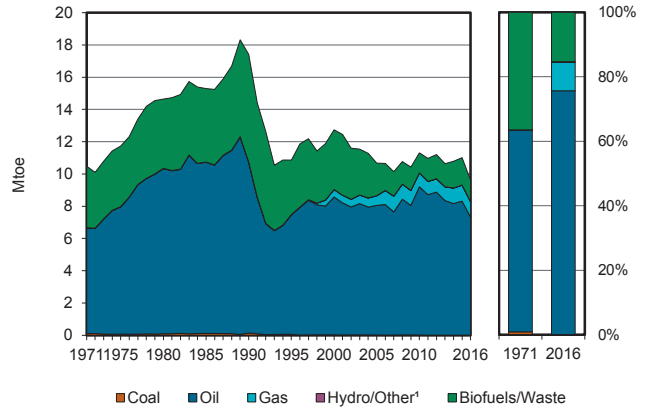
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Cuba

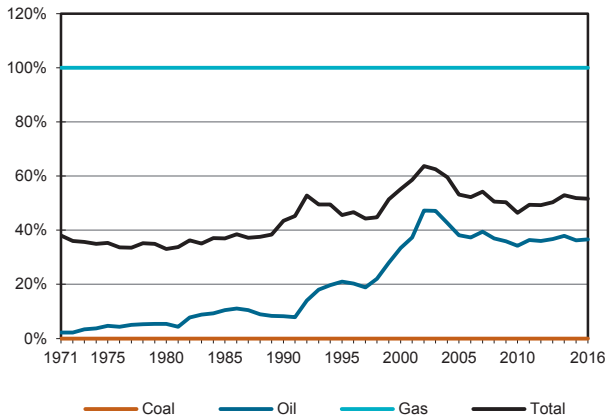
**Figure 1. Energy production**



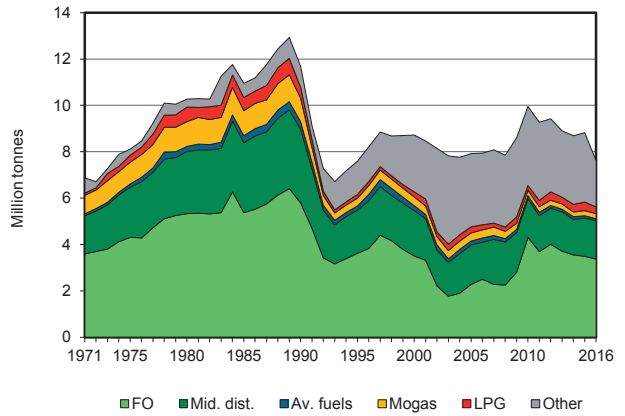
**Figure 2. Total primary energy supply<sup>2</sup>**



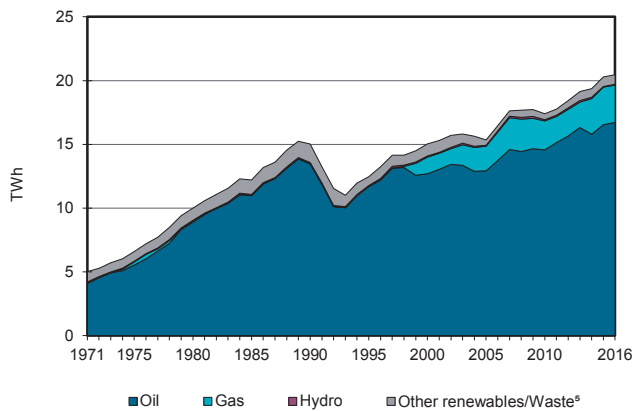
**Figure 3. Energy self-sufficiency<sup>3</sup>**



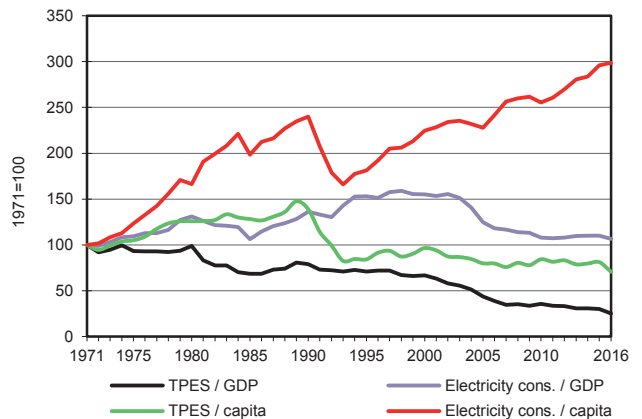
**Figure 4. Oil products demand<sup>4</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>6</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.



## Cuba

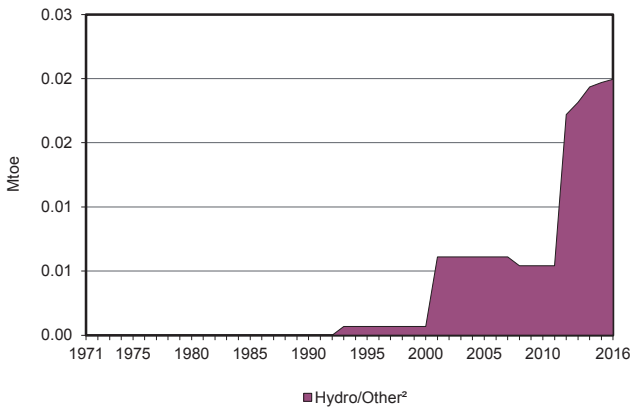
2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	2682	-	942	-	6	5	1325	-	-	4959
Imports	2	2265	3798	-	-	-	-	-	-	-	6065
Exports	-	-	-704	-	-	-	-	-	-	-	-704
Intl. marine bunkers	-	-	-623	-	-	-	-	-	-	-	-623
Intl. aviation bunkers	-	-	-96	-	-	-	-	-	-	-	-96
Stock changes	-	-	-	-	-	-	-	-	-	-	-
<b>TPES</b>	<b>2</b>	<b>4946</b>	<b>2375</b>	<b>942</b>	<b>-</b>	<b>6</b>	<b>5</b>	<b>1325</b>	<b>-</b>	<b>-</b>	<b>9600</b>
Transfers	-	-97	105	-	-	-	-	-	-	-	8
Statistical differences	-	-	-	-	-	-	-	6	0	-	6
Electricity plants	-	-1388	-1680	-629	-	-6	-5	-224	1759	-	-2172
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-0	-	-	-	-	-	-	-	-	-	-0
Gas works	-	-	-16	14	-	-	-	-	-	-	-2
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-3035	2614	-	-	-	-	-	-	-	-421
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-69	-	-	-69
Energy industry own use	-	-	-179	-	-	-	-	-	-91	-	-270
Losses	-	-	-	-	-	-	-	-	-268	-	-268
<b>TFC</b>	<b>2</b>	<b>427</b>	<b>3219</b>	<b>327</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1037</b>	<b>1400</b>	<b>-</b>	<b>6413</b>
<b>INDUSTRY</b>	<b>2</b>	<b>427</b>	<b>1428</b>	<b>274</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>723</b>	<b>324</b>	<b>-</b>	<b>3178</b>
Iron and steel	0	-	-	-	-	-	-	-	-	-	0
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	11	-	-	-	-	-	-	-	11
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	90	-	-	-	-	0	7	-	98
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	1	427	1327	274	-	-	-	723	317	-	3069
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>498</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>25</b>	<b>-</b>	<b>523</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	487	-	-	-	-	-	-	-	487
Rail	-	-	-	-	-	-	-	-	25	-	25
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	12	-	-	-	-	-	-	-	12
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>-</b>	<b>-</b>	<b>1120</b>	<b>53</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>314</b>	<b>1051</b>	<b>-</b>	<b>2539</b>
Residential	-	-	167	49	-	-	-	232	757	-	1206
Comm. and public services	-	-	8	-	-	-	-	9	266	-	283
Agriculture/forestry	-	-	141	-	-	-	-	46	28	-	215
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	804	4	-	-	-	26	-	-	835
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>173</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>173</b>
in industry/transf./energy	-	-	147	-	-	-	-	-	-	-	147
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	25	-	-	-	-	-	-	-	25
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>-</b>	<b>4034</b>	<b>12689</b>	<b>2925</b>	<b>-</b>	<b>64</b>	<b>60</b>	<b>686</b>	<b>-</b>	<b>-</b>	<b>20458</b>
Electricity plants	-	4034	12689	2925	-	64	60	686	-	-	20458
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

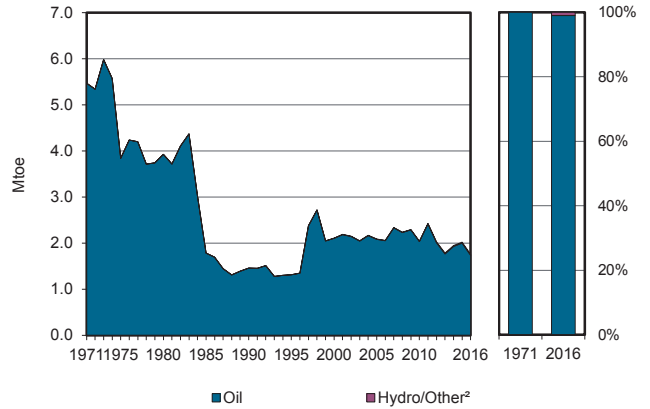
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Curaçao<sup>1</sup>

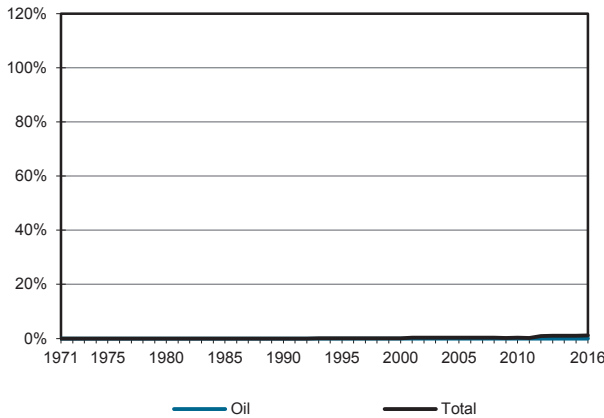
**Figure 1. Energy production**



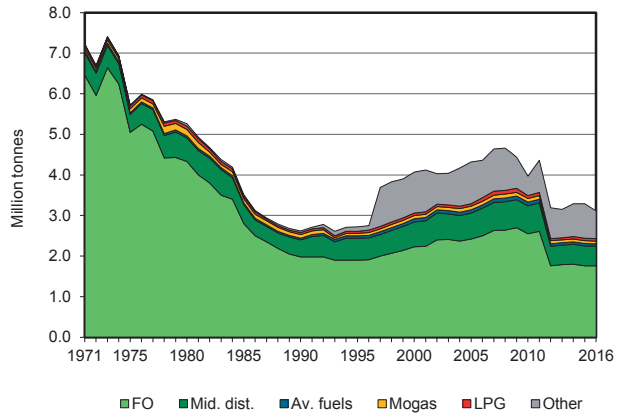
**Figure 2. Total primary energy supply<sup>3</sup>**



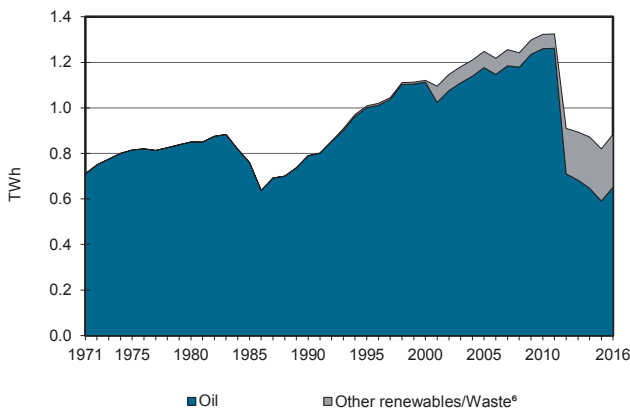
**Figure 3. Energy self-sufficiency<sup>4</sup>**



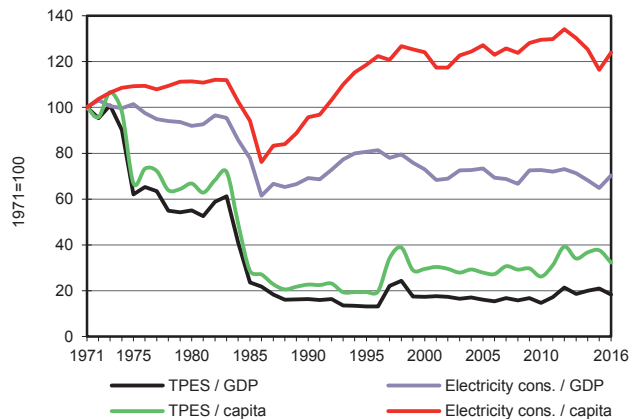
**Figure 4. Oil products demand<sup>5</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>7</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Please refer to section 'Geographical coverage'.
2. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
3. Excluding electricity trade.
4. Production divided by TPES. 100% represents full self-sufficiency.
5. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
7. GDP in 2010 USD.

Curaçao<sup>1</sup>

2016

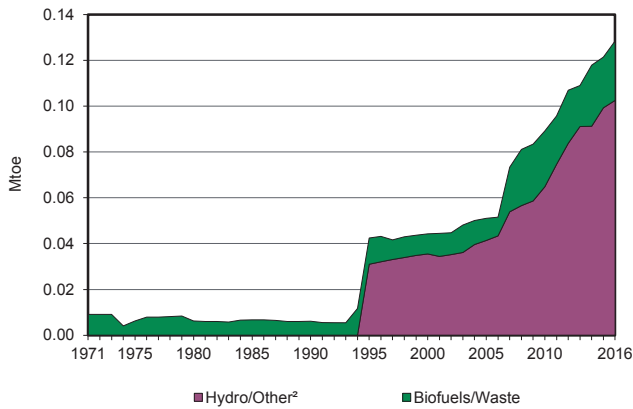
Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>2</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	-	-	-	-	-	20	-	-	-	20
Imports	-	8679	2337	-	-	-	-	-	-	-	11016
Exports	-	-	-7658	-	-	-	-	-	-	-	-7658
Intl. marine bunkers	-	-	-1559	-	-	-	-	-	-	-	-1559
Intl. aviation bunkers	-	-	-64	-	-	-	-	-	-	-	-64
Stock changes	-	-	-	-	-	-	-	-	-	-	-
<b>TPES</b>	-	<b>8679</b>	<b>-6943</b>	-	-	-	<b>20</b>	-	-	-	<b>1756</b>
Transfers	-	-52	58	-	-	-	-	-	-	-	6
Statistical differences	-	-	-2	-	-	-	-	-	-	-	-2
Electricity plants	-	-	-139	-	-	-	-20	-	76	-	-83
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-8627	8323	-	-	-	-	-	-	-	-304
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-	-	-	-
Energy industry own use	-	-	-659	-	-	-	-	-	-7	-	-666
Losses	-	-	-	-	-	-	-	-	-12	-	-12
<b>TFC</b>	-	-	<b>637</b>	-	-	-	-	-	<b>57</b>	-	<b>693</b>
<b>INDUSTRY</b>	-	-	<b>123</b>	-	-	-	-	-	<b>31</b>	-	<b>154</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	123	-	-	-	-	-	31	-	154
<b>TRANSPORT</b>	-	-	<b>358</b>	-	-	-	-	-	-	-	<b>358</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	358	-	-	-	-	-	-	-	358
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	-	-	<b>55</b>	-	-	-	-	-	<b>26</b>	-	<b>81</b>
Residential	-	-	55	-	-	-	-	-	-	-	55
Comm. and public services	-	-	-	-	-	-	-	-	-	-	-
Agriculture/forestry	-	-	-	-	-	-	-	-	-	-	-
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	26	-	26
<b>NON-ENERGY USE</b>	-	-	<b>100</b>	-	-	-	-	-	-	-	<b>100</b>
in industry/transf./energy	-	-	100	-	-	-	-	-	-	-	100
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	-	-	<b>652</b>	-	-	-	<b>232</b>	-	-	-	<b>884</b>
Electricity plants	-	-	652	-	-	-	232	-	-	-	884
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Please refer to section 'Geographical coverage'.

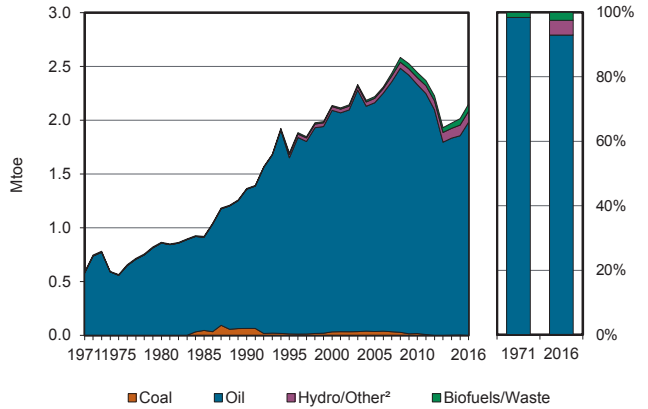
2. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Cyprus<sup>1</sup>

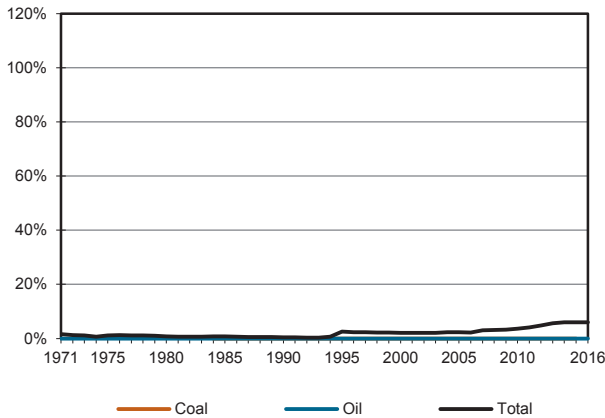
**Figure 1. Energy production**



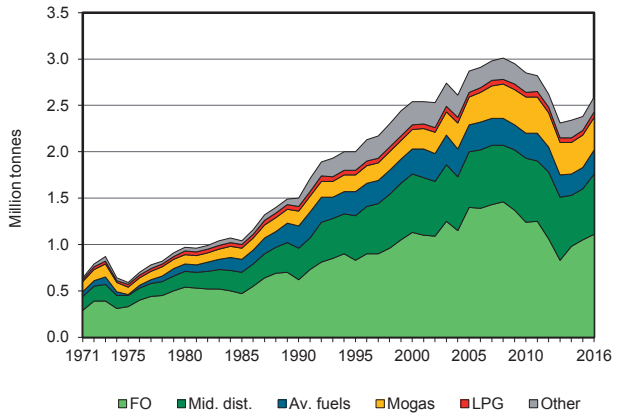
**Figure 2. Total primary energy supply<sup>3</sup>**



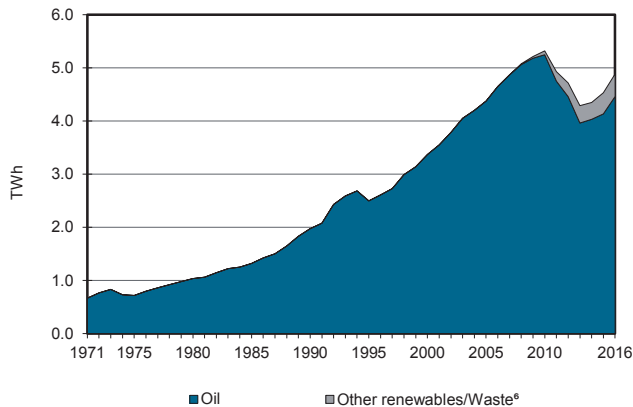
**Figure 3. Energy self-sufficiency<sup>4</sup>**



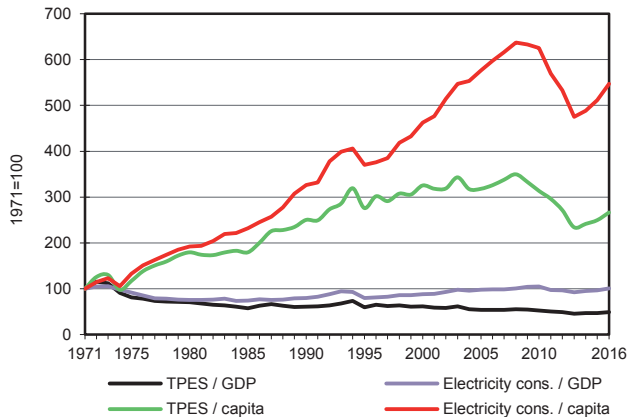
**Figure 4. Oil products demand<sup>5</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>7</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Please refer to section 'Geographical coverage'.
2. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
3. Excluding electricity trade.
4. Production divided by TPES. 100% represents full self-sufficiency.
5. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
6. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
7. GDP in 2010 USD.

Cyprus<sup>1</sup>

2016

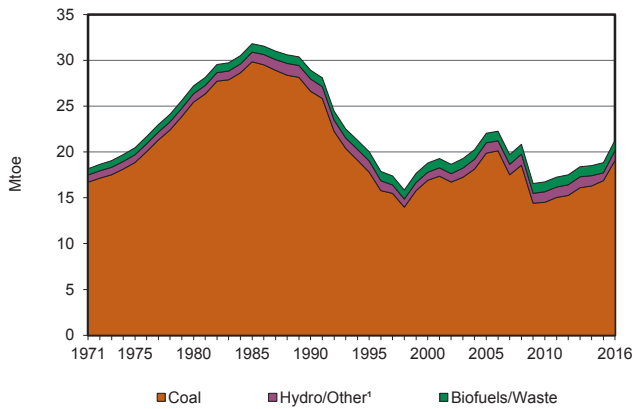
Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>2</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	-	-	-	-	-	102	26	-	-	128
Imports	-	-	2571	-	-	-	-	47	-	-	2618
Exports	-	-	-16	-	-	-	-	-	-	-	-16
Intl. marine bunkers	-	-	-281	-	-	-	-	-	-	-	-281
Intl. aviation bunkers	-	-	-270	-	-	-	-	-	-	-	-270
Stock changes	-	-	-22	-	-	-	-	-7	-	-	-29
<b>TPES</b>	-	-	<b>1982</b>	-	-	-	<b>102</b>	<b>66</b>	-	-	<b>2151</b>
Transfers	-	-	5	-	-	-	-	-	-	-	5
Statistical differences	-	-	16	-	-	-	-	-0	-	-	16
Electricity plants	-	-	-998	-	-	-	-32	-	416	-	-615
CHP plants	-	-	-	-	-	-	-	-7	4	1	-2
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-	-	-	-	-	-	-	-	-	-
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-2	-	-	-2
Energy industry own use	-	-	-	-	-	-	-	-	-19	-	-19
Losses	-	-	-	-	-	-	-	-	-23	-	-23
<b>TFC</b>	-	-	<b>1005</b>	-	-	-	<b>71</b>	<b>56</b>	<b>378</b>	<b>1</b>	<b>1511</b>
<b>INDUSTRY</b>	-	-	<b>142</b>	-	-	-	-	<b>29</b>	<b>42</b>	-	<b>212</b>
Iron and steel	-	-	-	-	-	-	-	-	0	-	0
Chemical and petrochemical	-	-	2	-	-	-	-	1	4	-	6
Non-ferrous metals	-	-	2	-	-	-	-	-	-	-	2
Non-metallic minerals	-	-	107	-	-	-	-	27	13	-	147
Transport equipment	-	-	-	-	-	-	-	-	0	-	0
Machinery	-	-	-	-	-	-	-	-	2	-	2
Mining and quarrying	-	-	2	-	-	-	-	-	2	-	5
Food and tobacco	-	-	16	-	-	-	-	1	15	-	32
Paper pulp and printing	-	-	1	-	-	-	-	-	1	-	2
Wood and wood products	-	-	-	-	-	-	-	-	1	-	1
Construction	-	-	10	-	-	-	-	-	0	-	10
Textile and leather	-	-	-	-	-	-	-	-	0	-	0
Non-specified	-	-	2	-	-	-	-	-	3	-	5
<b>TRANSPORT</b>	-	-	<b>641</b>	-	-	-	-	<b>9</b>	-	-	<b>649</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	641	-	-	-	-	9	-	-	649
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	-	-	<b>184</b>	-	-	-	<b>71</b>	<b>19</b>	<b>336</b>	<b>1</b>	<b>611</b>
Residential	-	-	119	-	-	-	60	9	136	-	324
Comm. and public services	-	-	31	-	-	-	10	6	178	-	225
Agriculture/forestry	-	-	24	-	-	-	-	4	14	1	43
Fishing	-	-	2	-	-	-	-	-	0	-	2
Non-specified	-	-	8	-	-	-	-	-	8	-	16
<b>NON-ENERGY USE</b>	-	-	<b>38</b>	-	-	-	-	-	-	-	<b>38</b>
in industry/transf./energy	-	-	37	-	-	-	-	-	-	-	37
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	1	-	-	-	-	-	-	-	1
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	-	-	<b>4463</b>	-	-	-	<b>372</b>	<b>52</b>	-	-	<b>4887</b>
Electricity plants	-	-	4463	-	-	-	372	-	-	-	4835
CHP plants	-	-	-	-	-	-	-	52	-	-	52
<b>Heat generated - TJ</b>	-	-	-	-	-	-	-	<b>50</b>	-	-	<b>50</b>
CHP plants	-	-	-	-	-	-	-	50	-	-	50
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Please refer to section 'Geographical coverage'.

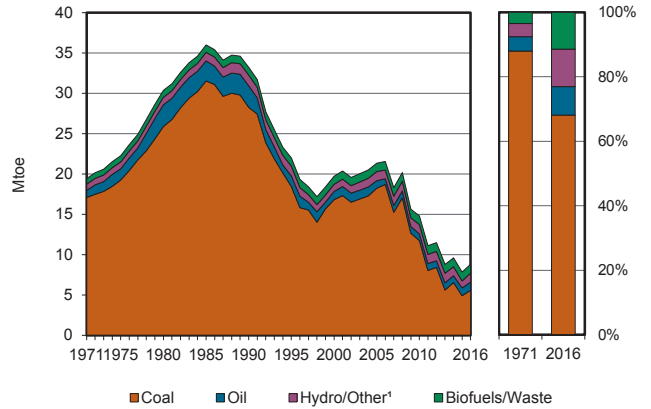
2. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Democratic People's Republic of Korea

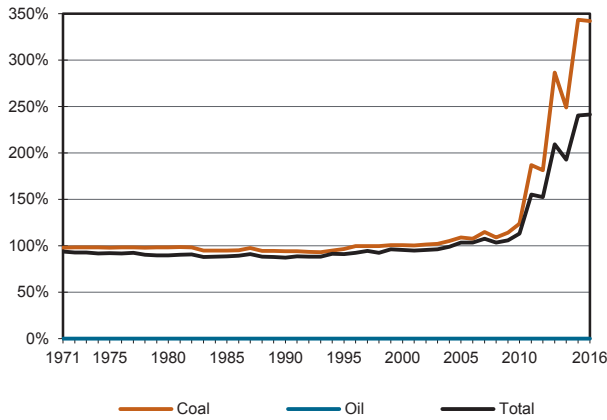
**Figure 1. Energy production**



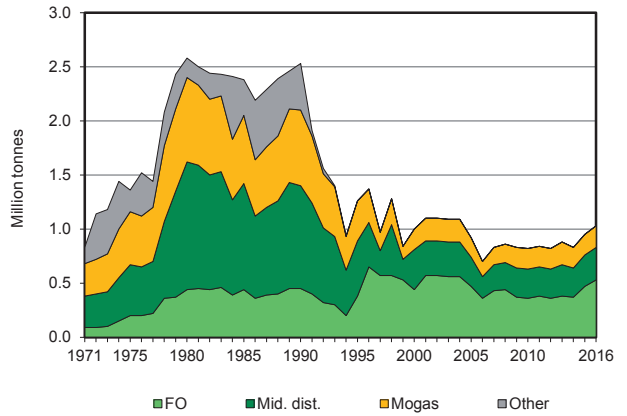
**Figure 2. Total primary energy supply<sup>2</sup>**



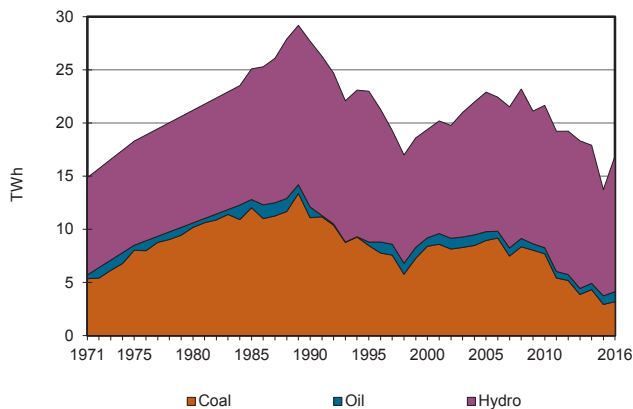
**Figure 3. Energy self-sufficiency<sup>3</sup>**



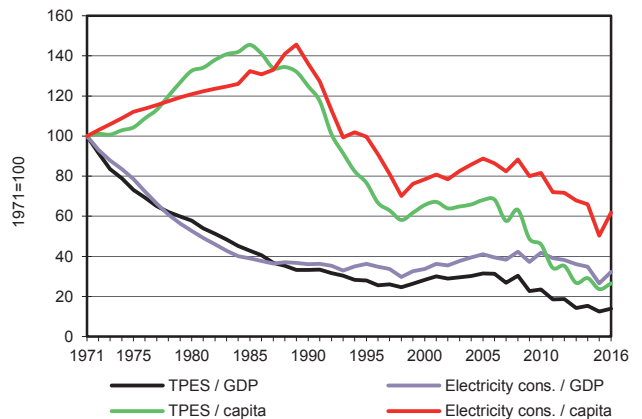
**Figure 4. Oil products demand<sup>4</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>5</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. GDP in 2010 USD.

## Democratic People's Republic of Korea

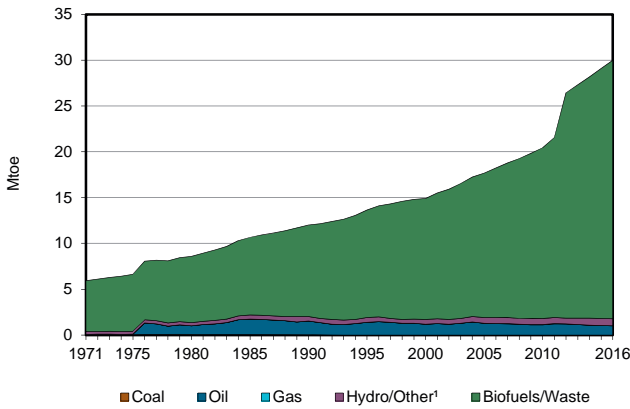
2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	19083	-	-	-	-	1101	-	1108	-	-	21291
Imports	899	536	498	-	-	-	-	-	-	-	1933
Exports	-14402	-	-	-	-	-	-	-	-	-	-14402
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-	-	-	-	-	-	-	-	-
Stock changes	-	-	-	-	-	-	-	-	-	-	-
<b>TPES</b>	<b>5580</b>	<b>536</b>	<b>498</b>	-	-	<b>1101</b>	-	<b>1108</b>	-	-	<b>8822</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-1	-	-	-	-	-	-	-	-	-	-1
Electricity plants	-704	-	-405	-	-	-1101	-	-	1455	-	-755
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-69	-	-	-	-	-	-	-	-	-	-69
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-536	531	-	-	-	-	-	-	-	-4
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-224	-	-	-224
Energy industry own use	-	-	-15	-	-	-	-	-	-138	-	-153
Losses	-	-	-	-	-	-	-	-	-230	-	-230
<b>TFC</b>	<b>4805</b>	-	<b>609</b>	-	-	-	-	<b>884</b>	<b>1087</b>	-	<b>7385</b>
<b>INDUSTRY</b>	<b>3658</b>	-	<b>89</b>	-	-	-	-	-	<b>544</b>	-	<b>4291</b>
Iron and steel	64	-	-	-	-	-	-	-	-	-	64
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	3594	-	89	-	-	-	-	-	544	-	4227
<b>TRANSPORT</b>	-	-	<b>480</b>	-	-	-	-	-	-	-	<b>480</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	480	-	-	-	-	-	-	-	480
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>1148</b>	-	<b>40</b>	-	-	-	-	<b>884</b>	<b>544</b>	-	<b>2615</b>
Residential	-	-	40	-	-	-	-	121	-	-	160
Comm. and public services	-	-	-	-	-	-	-	-	-	-	-
Agriculture/forestry	-	-	-	-	-	-	-	-	-	-	-
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	1148	-	-	-	-	-	-	763	544	-	2454
<b>NON-ENERGY USE</b>	-	-	-	-	-	-	-	-	-	-	-
in industry/transf./energy	-	-	-	-	-	-	-	-	-	-	-
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>3184</b>	-	<b>942</b>	-	-	<b>12800</b>	-	-	-	-	<b>16926</b>
Electricity plants	3184	-	942	-	-	12800	-	-	-	-	16926
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

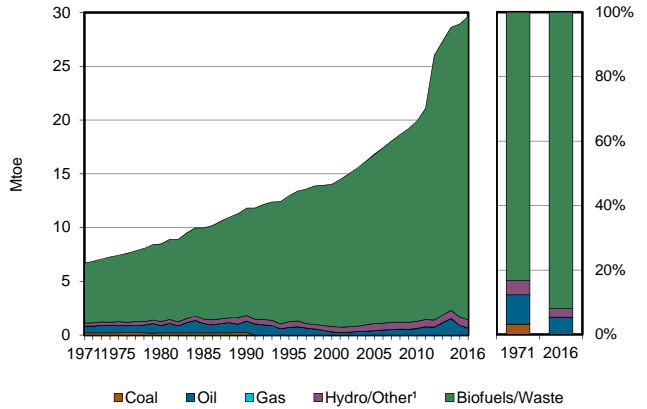
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Democratic Republic of the Congo

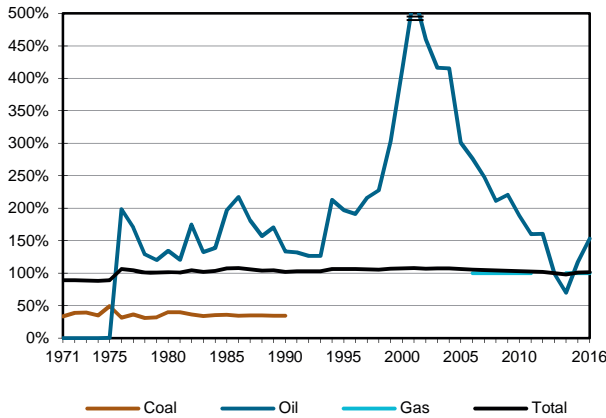
**Figure 1. Energy production**



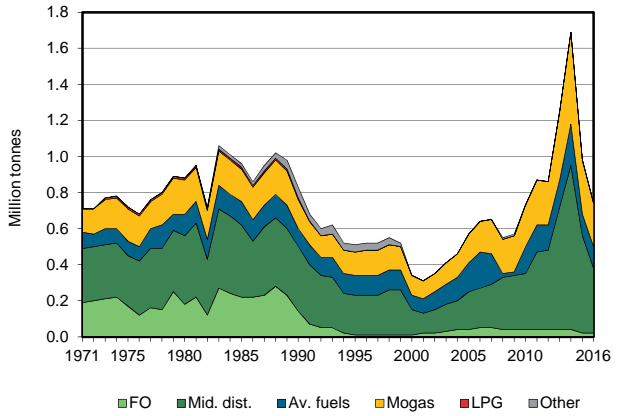
**Figure 2. Total primary energy supply<sup>2</sup>**



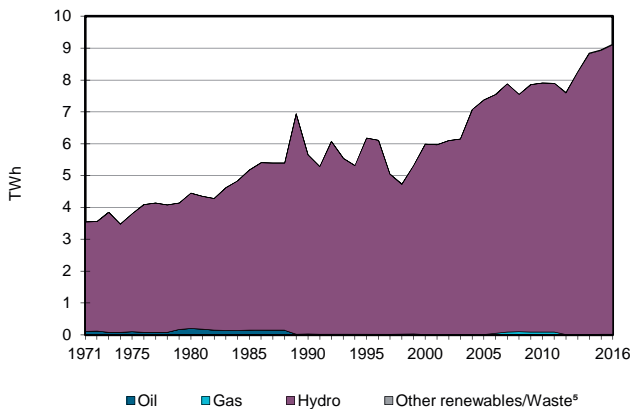
**Figure 3. Energy self-sufficiency<sup>3</sup>**



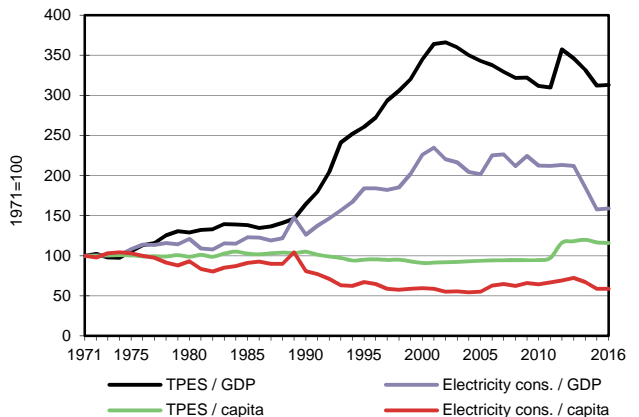
**Figure 4. Oil products demand<sup>4</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>6</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.



## Democratic Republic of the Congo

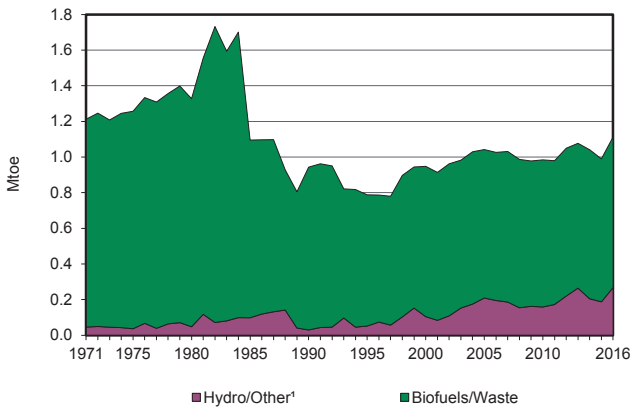
2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	1003	-	0	-	782	-	28211	-	-	29997
Imports	-	-	779	-	-	-	-	-	2	-	780
Exports	-	-1003	-	-	-	-	-	-	-36	-	-1039
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-123	-	-	-	-	-	-	-	-123
Stock changes	-	-	-	-	-	-	-	-	-	-	-
<b>TPES</b>	-	-	<b>656</b>	<b>0</b>	-	<b>782</b>	-	<b>28211</b>	<b>-34</b>	-	<b>29615</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-	-	1	-	-	-	-	-	12	-	13
Electricity plants	-	-	-3	-0	-	-782	-	-74	785	-	-75
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-	-	-	-	-	-	-	-	-	-
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-7457	-	-	-7457
Energy industry own use	-	-	-	-	-	-	-	-	-57	-	-57
Losses	-	-	-	-	-	-	-	-	-105	-	-105
<b>TFC</b>	-	-	<b>654</b>	-	-	-	-	<b>20680</b>	<b>602</b>	-	<b>21936</b>
<b>INDUSTRY</b>	-	-	<b>21</b>	-	-	-	-	<b>3169</b>	<b>331</b>	-	<b>3521</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	21	-	-	-	-	3169	331	-	3521
<b>TRANSPORT</b>	-	-	<b>628</b>	-	-	-	-	-	-	-	<b>628</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	535	-	-	-	-	-	-	-	535
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	93	-	-	-	-	-	-	-	93
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	-	-	<b>1</b>	-	-	-	-	<b>17510</b>	<b>271</b>	-	<b>17782</b>
Residential	-	-	1	-	-	-	-	17510	210	-	17721
Comm. and public services	-	-	-	-	-	-	-	-	61	-	61
Agriculture/forestry	-	-	-	-	-	-	-	-	-	-	-
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>NON-ENERGY USE</b>	-	-	<b>4</b>	-	-	-	-	-	-	-	<b>4</b>
in industry/transf./energy	-	-	4	-	-	-	-	-	-	-	4
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	-	-	<b>12</b>	<b>2</b>	-	<b>9099</b>	-	<b>22</b>	-	-	<b>9135</b>
Electricity plants	-	-	12	2	-	9099	-	22	-	-	9135
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

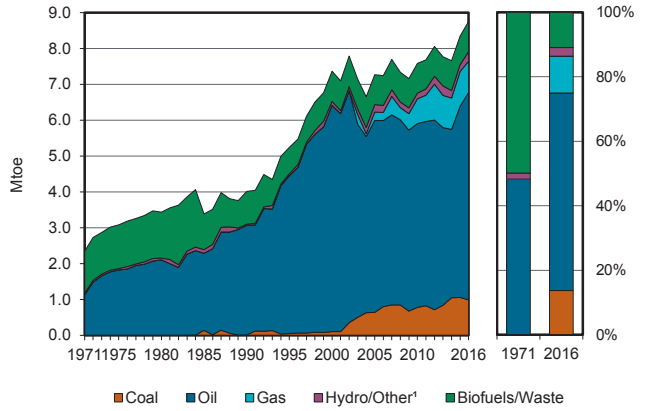
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Dominican Republic

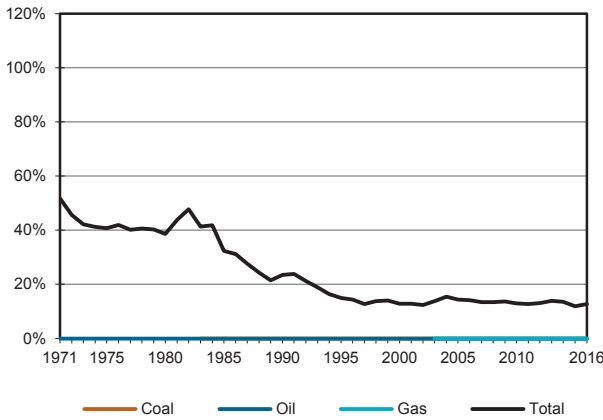
**Figure 1. Energy production**



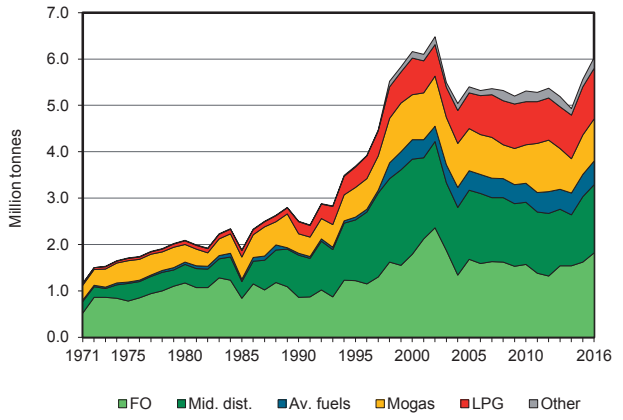
**Figure 2. Total primary energy supply²**



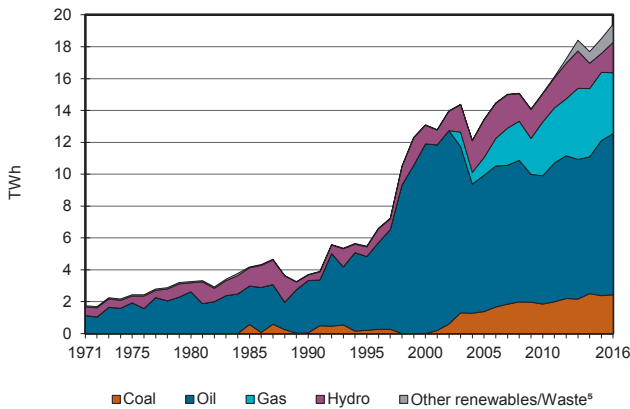
**Figure 3. Energy self-sufficiency³**



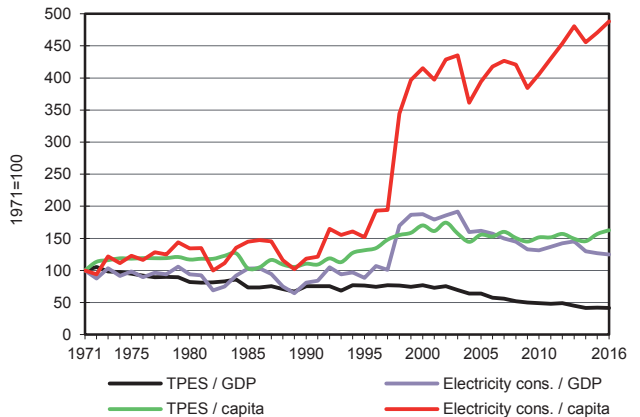
**Figure 4. Oil products demand⁴**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators⁶**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Dominican Republic

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	-	-	-	-	163	105	845	-	-	1113
Imports	1012	1215	5089	877	-	-	-	-	-	-	8193
Exports	-	-	-	-	-	-	-	-3	-	-	-3
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-529	-	-	-	-	-	-	-	-529
Stock changes	-23	-2	15	-8	-	-	-	-	-	-	-18
<b>TPES</b>	<b>989</b>	<b>1213</b>	<b>4574</b>	<b>869</b>	<b>-</b>	<b>163</b>	<b>105</b>	<b>842</b>	<b>-</b>	<b>-</b>	<b>8755</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	28	11	11	15	-	-	-	4	-	-	69
Electricity plants	-598	-	-2323	-780	-	-163	-96	-23	1669	-	-2313
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-1225	1113	-	-	-	-	-	-	-	-111
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-58	-	-	-58
Energy industry own use	-	-	-45	-	-	-	-	-	-57	-	-102
Losses	-17	-	-	-	-	-	-	-	-206	-	-223
<b>TFC</b>	<b>401</b>	<b>-</b>	<b>3331</b>	<b>105</b>	<b>-</b>	<b>-</b>	<b>9</b>	<b>765</b>	<b>1407</b>	<b>-</b>	<b>6017</b>
<b>INDUSTRY</b>	<b>401</b>	<b>-</b>	<b>354</b>	<b>86</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>258</b>	<b>526</b>	<b>-</b>	<b>1625</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	23	17	-	-	-	-	64	-	103
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	386	-	86	10	-	-	-	-	150	-	632
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	15	-	111	30	-	-	-	-	150	-	306
Paper pulp and printing	-	-	22	-	-	-	-	-	22	-	44
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	41	-	-	-	-	-	-	-	41
Textile and leather	-	-	14	1	-	-	-	-	18	-	33
Non-specified	-	-	56	29	-	-	-	258	123	-	466
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>2013</b>	<b>19</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>5</b>	<b>-</b>	<b>2036</b>
Domestic aviation	-	-	15	-	-	-	-	-	-	-	15
Road	-	-	1524	-	-	-	-	-	-	-	1524
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	473	19	-	-	-	-	5	-	497
<b>OTHER</b>	<b>-</b>	<b>-</b>	<b>628</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>9</b>	<b>507</b>	<b>876</b>	<b>-</b>	<b>2020</b>
Residential	-	-	497	-	-	-	8	505	466	-	1477
Comm. and public services	-	-	82	-	-	-	0	2	324	-	409
Agriculture/forestry	-	-	49	-	-	-	-	-	85	-	134
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>336</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>336</b>
in industry/transf./energy	-	-	336	-	-	-	-	-	-	-	336
of which: chem./petrochem.	-	-	133	-	-	-	-	-	-	-	133
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>2433</b>	<b>-</b>	<b>10109</b>	<b>3827</b>	<b>-</b>	<b>1898</b>	<b>1115</b>	<b>32</b>	<b>-</b>	<b>-</b>	<b>19414</b>
Electricity plants	2433	-	10109	3827	-	1898	1115	32	-	-	19414
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Ecuador

Figure 1. Energy production

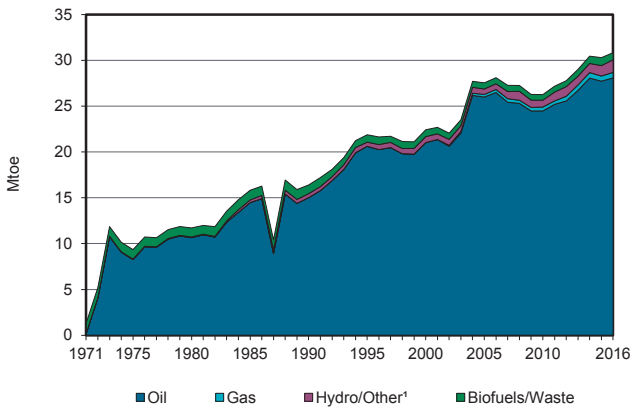


Figure 2. Total primary energy supply<sup>2</sup>

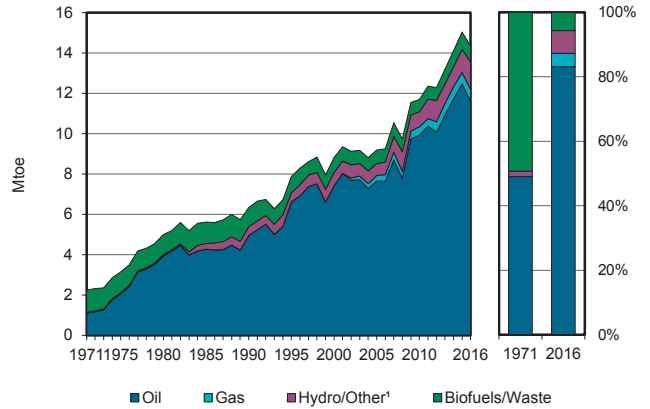


Figure 3. Energy self-sufficiency<sup>3</sup>

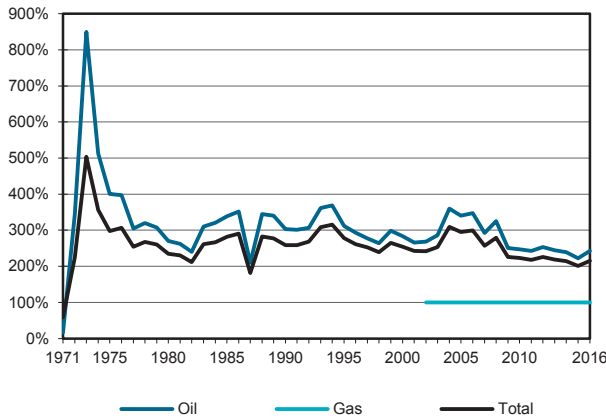


Figure 4. Oil products demand<sup>4</sup>

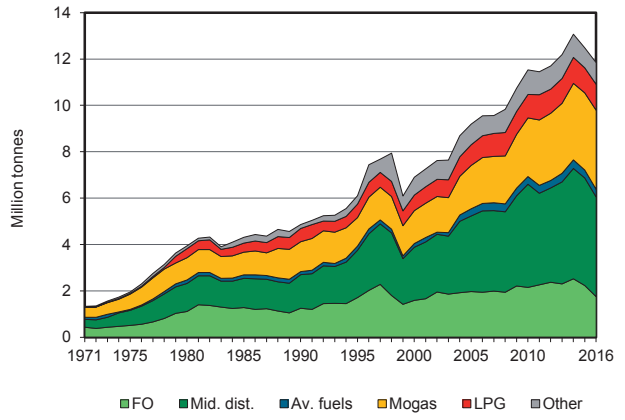


Figure 5. Electricity generation by source

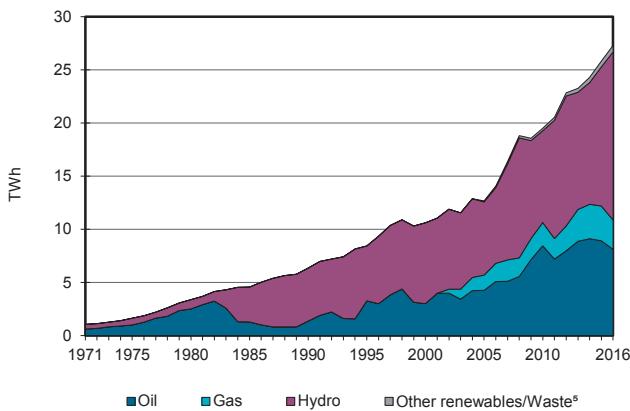
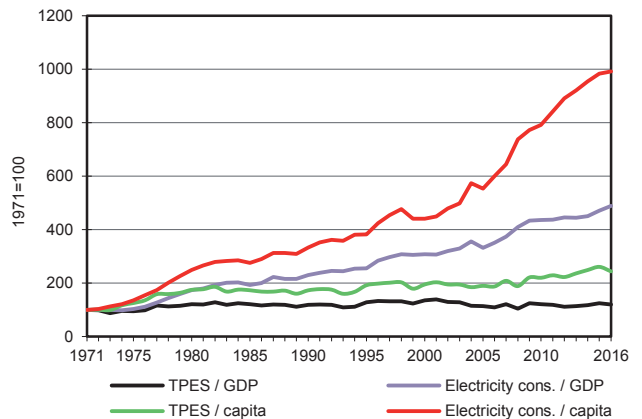


Figure 6. Selected indicators<sup>6</sup>



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Ecuador

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	28081	-	596	-	1361	13	777	-	-	30829
Imports	-	-	5938	-	-	-	-	-	7	-	5945
Exports	-	-19297	-2511	-	-	-	-	-	-35	-	-21843
Intl. marine bunkers	-	-	-281	-	-	-	-	-	-	-	-281
Intl. aviation bunkers	-	-	-342	-	-	-	-	-	-	-	-342
Stock changes	-	34	-30	-	-	-	-	-	-	-	4
<b>TPES</b>	-	<b>8818</b>	<b>2774</b>	<b>596</b>	-	<b>1361</b>	<b>13</b>	<b>777</b>	<b>-28</b>	-	<b>14312</b>
Transfers	-	-184	200	-	-	-	-	-	-	-	16
Statistical differences	-	112	-66	-2	-	-	-	-	39	-	82
Electricity plants	-	-332	-1670	-554	-	-1361	-11	-284	2349	-	-1864
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-8219	8220	-	-	-	-	-	-	-	1
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-	-	-	-
Energy industry own use	-	-103	-382	-0	-	-	-	-	-39	-	-524
Losses	-	-92	-	-	-	-	-	-	-301	-	-393
<b>TFC</b>	-	-	<b>9076</b>	<b>40</b>	-	-	<b>2</b>	<b>493</b>	<b>2020</b>	-	<b>11631</b>
<b>INDUSTRY</b>	-	-	<b>1018</b>	<b>40</b>	-	-	-	<b>268</b>	<b>806</b>	-	<b>2132</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	155	-	-	-	-	-	-	-	155
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	864	40	-	-	-	268	806	-	1977
<b>TRANSPORT</b>	-	-	<b>5556</b>	-	-	-	-	<b>19</b>	<b>1</b>	-	<b>5575</b>
Domestic aviation	-	-	4	-	-	-	-	-	-	-	4
Road	-	-	5290	-	-	-	-	19	1	-	5310
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	262	-	-	-	-	-	-	-	262
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	-	-	<b>2142</b>	<b>0</b>	-	-	<b>2</b>	<b>206</b>	<b>1213</b>	-	<b>3564</b>
Residential	-	-	899	0	-	-	-	206	611	-	1717
Comm. and public services	-	-	367	-	-	-	2	-	427	-	796
Agriculture/forestry	-	-	118	-	-	-	-	-	-	-	118
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	759	-	-	-	-	-	175	-	934
<b>NON-ENERGY USE</b>	-	-	<b>359</b>	-	-	-	-	-	-	-	<b>359</b>
in industry/transf./energy	-	-	359	-	-	-	-	-	-	-	359
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	-	-	<b>8106</b>	<b>2762</b>	-	<b>15833</b>	<b>123</b>	<b>490</b>	-	-	<b>27314</b>
Electricity plants	-	-	8106	2762	-	15833	123	490	-	-	27314
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Egypt

Figure 1. Energy production

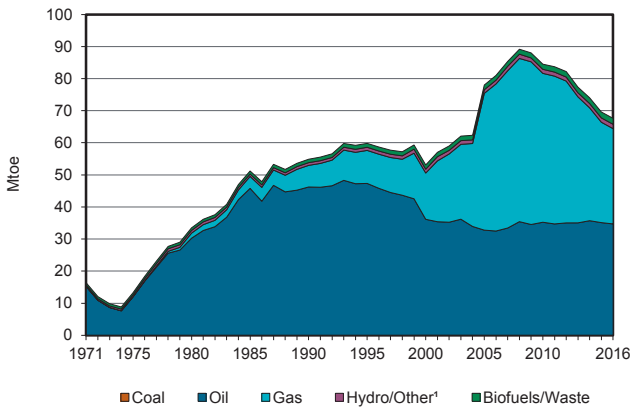


Figure 2. Total primary energy supply<sup>2</sup>

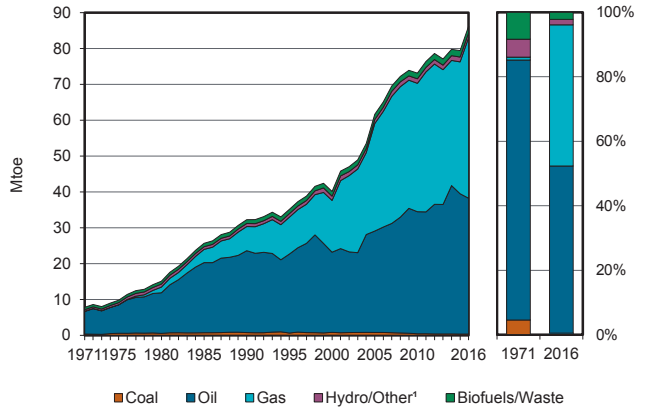


Figure 3. Energy self-sufficiency<sup>3</sup>

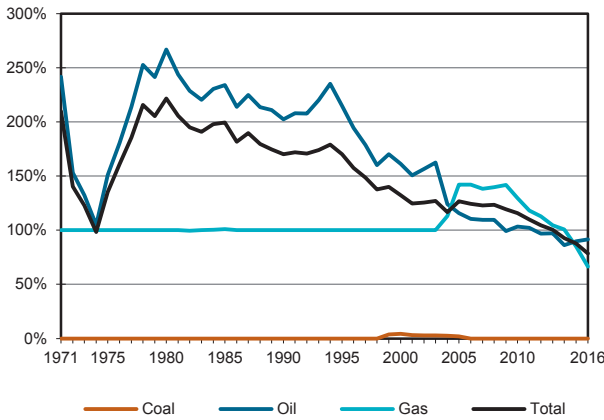


Figure 4. Oil products demand<sup>4</sup>

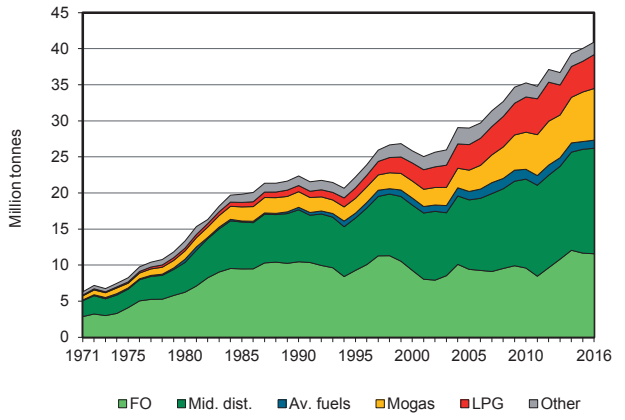


Figure 5. Electricity generation by source

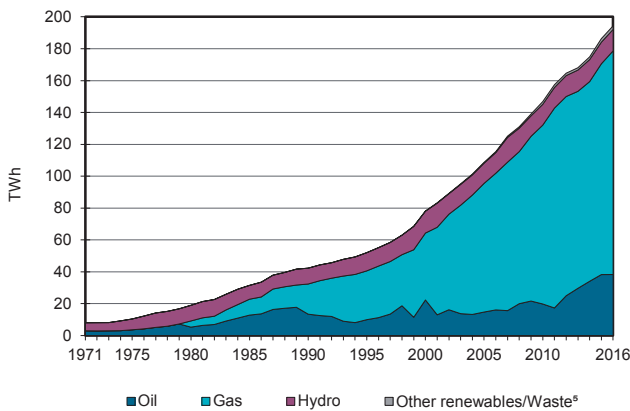
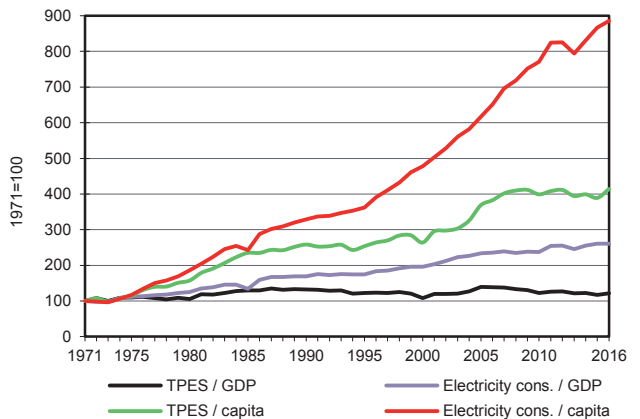


Figure 6. Selected indicators<sup>6</sup>



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Egypt

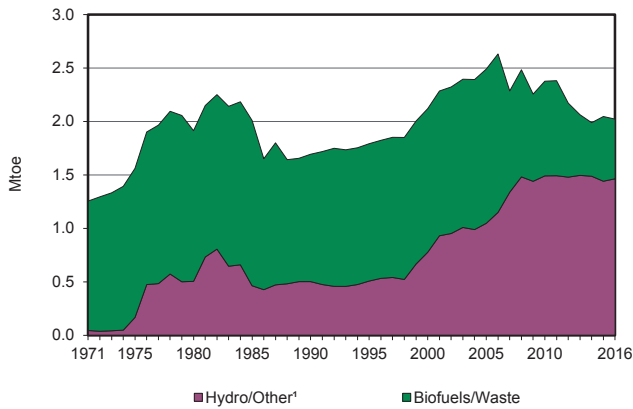
2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	34711	-	29700	-	1157	191	1856	-	-	67615
Imports	399	3004	16504	15367	-	-	-	1	5	-	35281
Exports	-49	-13403	-2169	-247	-	-	-	-27	-64	-	-15960
Intl. marine bunkers	-	-	-189	-	-	-	-	-	-	-	-189
Intl. aviation bunkers	-	-	-576	-	-	-	-	-	-	-	-576
Stock changes	-	-	-	-	-	-	-	-	-	-	-
<b>TPES</b>	<b>350</b>	<b>24312</b>	<b>13571</b>	<b>44820</b>	<b>-</b>	<b>1157</b>	<b>191</b>	<b>1830</b>	<b>-60</b>	<b>-</b>	<b>86172</b>
Transfers	-	-1280	1428	-	-	-	-	-	-	-	148
Statistical differences	-	2320	1247	-5827	-	-	-	-	-159	-	-2419
Electricity plants	-	-	-9972	-24340	-	-1157	-191	-	16709	-	-18952
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-160	-	-	-	-	-	-	-	-	-	-160
Gas works	-1	-	-	-	-	-	-	-	-	-	-1
Coke/pat.fuel/BKB/PB plants	-11	-	-	-	-	-	-	-	-	-	-11
Oil refineries	-	-25351	25648	-	-	-	-	-	-	-	296
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-	-	-	-
Energy industry own use	-	-	-884	-3603	-	-	-	-	-557	-	-5044
Losses	-	-	-	-	-	-	-	-	-1981	-	-1981
<b>TFC</b>	<b>179</b>	<b>-</b>	<b>31038</b>	<b>11050</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1830</b>	<b>13953</b>	<b>-</b>	<b>58049</b>
<b>INDUSTRY</b>	<b>177</b>	<b>-</b>	<b>4983</b>	<b>4852</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>3467</b>	<b>-</b>	<b>13479</b>
Iron and steel	177	-	-	-	-	-	-	-	-	-	177
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	4983	4852	-	-	-	-	3467	-	13301
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>18307</b>	<b>332</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>50</b>	<b>-</b>	<b>18689</b>
Domestic aviation	-	-	647	-	-	-	-	-	-	-	647
Road	-	-	17407	332	-	-	-	-	-	-	17738
Rail	-	-	-	-	-	-	-	-	50	-	50
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	253	-	-	-	-	-	-	-	253
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>1</b>	<b>-</b>	<b>5914</b>	<b>1573</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1830</b>	<b>10437</b>	<b>-</b>	<b>19754</b>
Residential	1	-	4933	1573	-	-	-	896	6436	-	13840
Comm. and public services	-	-	-	-	-	-	-	-	3368	-	3368
Agriculture/forestry	-	-	981	-	-	-	-	-	632	-	1613
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	934	-	-	934
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>1833</b>	<b>4294</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>6127</b>
in industry/transf./energy	-	-	1833	4294	-	-	-	-	-	-	6127
of which: chem./petrochem.	-	-	336	4294	-	-	-	-	-	-	4630
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>-</b>	<b>-</b>	<b>38271</b>	<b>140370</b>	<b>-</b>	<b>13460</b>	<b>2226</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>194327</b>
Electricity plants	-	-	38271	140370	-	13460	2226	-	-	-	194327
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

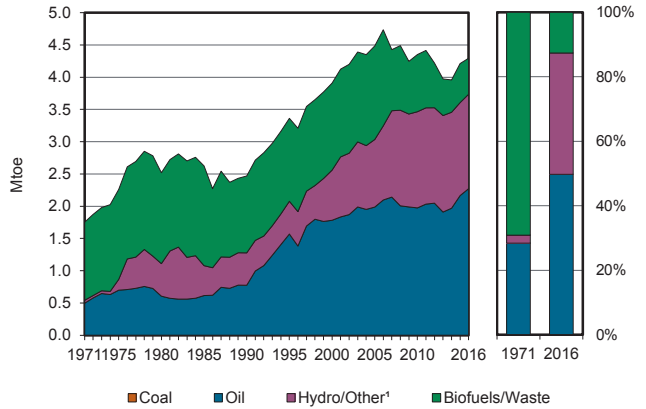
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## El Salvador

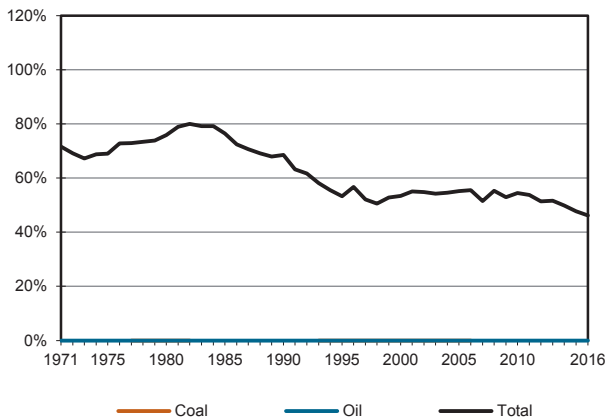
**Figure 1. Energy production**



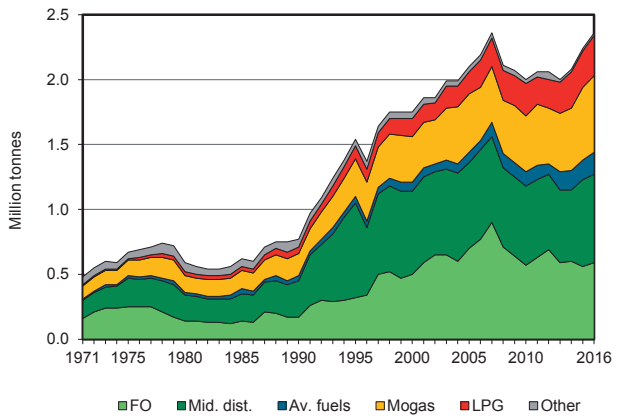
**Figure 2. Total primary energy supply<sup>2</sup>**



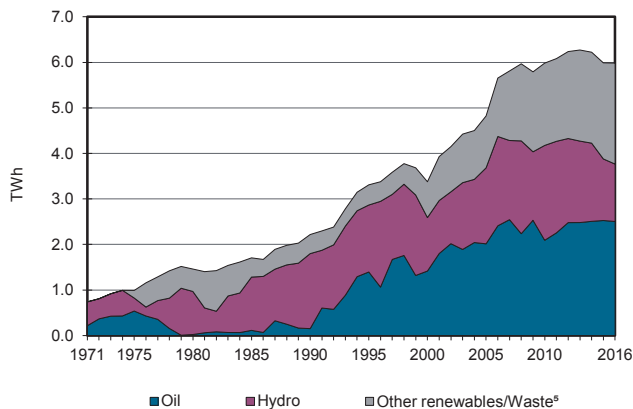
**Figure 3. Energy self-sufficiency<sup>3</sup>**



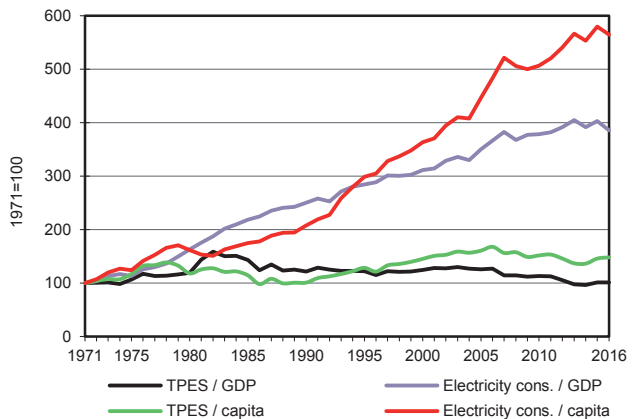
**Figure 4. Oil products demand<sup>4</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>6</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.



## El Salvador

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	-	-	-	-	108	1355	557	-	-	2021
Imports	-	-	2450	-	-	-	-	-	92	-	2542
Exports	-	-	-	-	-	-	-	-	-7	-	-7
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-178	-	-	-	-	-	-	-	-178
Stock changes	-	-	-	-	-	-	-	-	-	-	-
<b>TPES</b>	-	-	<b>2272</b>	-	-	<b>108</b>	<b>1355</b>	<b>557</b>	<b>85</b>	-	<b>4378</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-	-	-7	-	-	-	-	1	-5	-	-11
Electricity plants	-	-	-485	-	-	-108	-1355	-281	515	-	-1714
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-	-	-	-	-	-	-	-	-	-
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-29	-	-	-29
Energy industry own use	-	-	-	-	-	-	-	-	-26	-	-26
Losses	-	-	-	-	-	-	-	-1	-77	-	-77
<b>TFC</b>	-	-	<b>1781</b>	-	-	-	-	<b>248</b>	<b>492</b>	-	<b>2521</b>
<b>INDUSTRY</b>	-	-	<b>330</b>	-	-	-	-	<b>22</b>	<b>153</b>	-	<b>505</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	3	-	3
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	330	-	-	-	-	22	150	-	502
<b>TRANSPORT</b>	-	-	<b>1170</b>	-	-	-	-	-	-	-	<b>1170</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	1170	-	-	-	-	-	-	-	1170
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	-	-	<b>262</b>	-	-	-	-	<b>226</b>	<b>339</b>	-	<b>827</b>
Residential	-	-	232	-	-	-	-	193	163	-	588
Comm. and public services	-	-	30	-	-	-	-	33	140	-	203
Agriculture/forestry	-	-	-	-	-	-	-	-	-	-	-
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	36	-	36
<b>NON-ENERGY USE</b>	-	-	<b>19</b>	-	-	-	-	-	-	-	<b>19</b>
in industry/transf./energy	-	-	19	-	-	-	-	-	-	-	19
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	-	-	<b>2505</b>	-	-	<b>1261</b>	<b>1576</b>	<b>642</b>	-	-	<b>5984</b>
Electricity plants	-	-	2505	-	-	1261	1576	642	-	-	5984
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Eritrea

Figure 1. Energy production

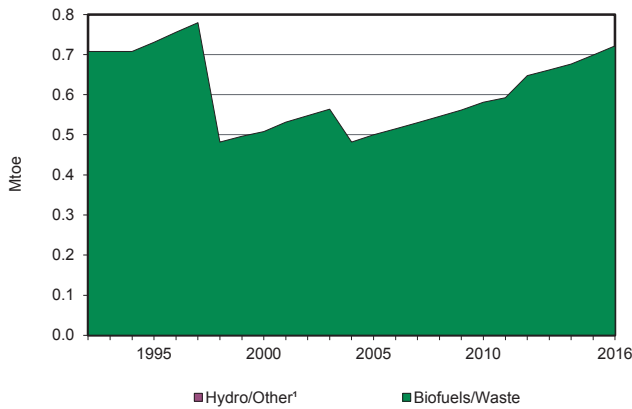


Figure 2. Total primary energy supply²

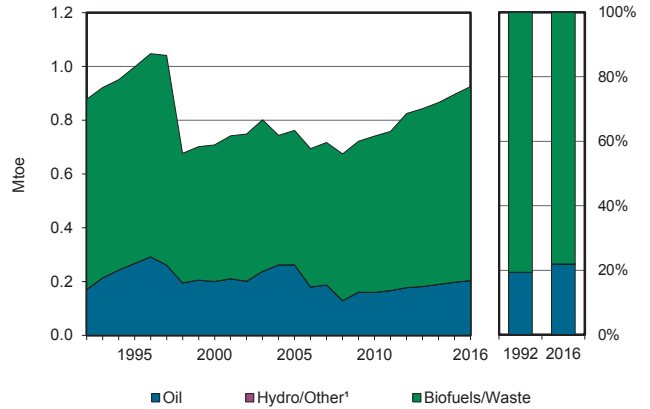


Figure 3. Energy self-sufficiency³

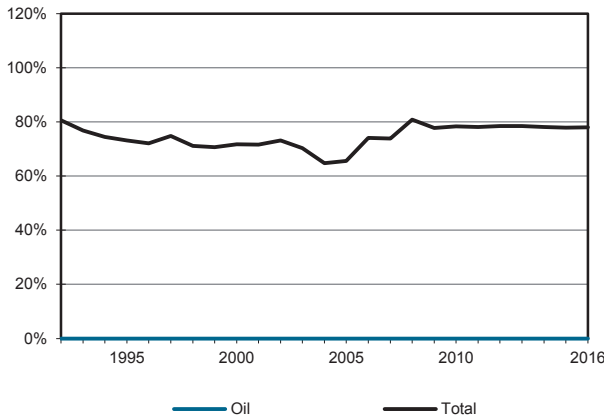


Figure 4. Oil products demand⁴

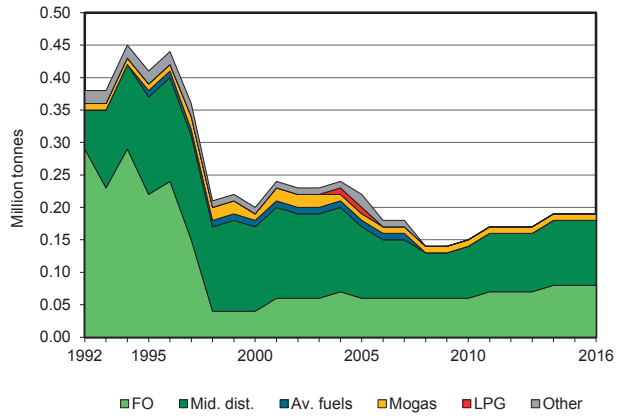


Figure 5. Electricity generation by source

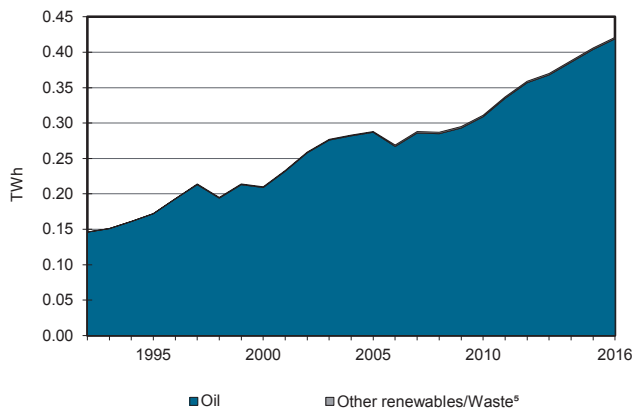
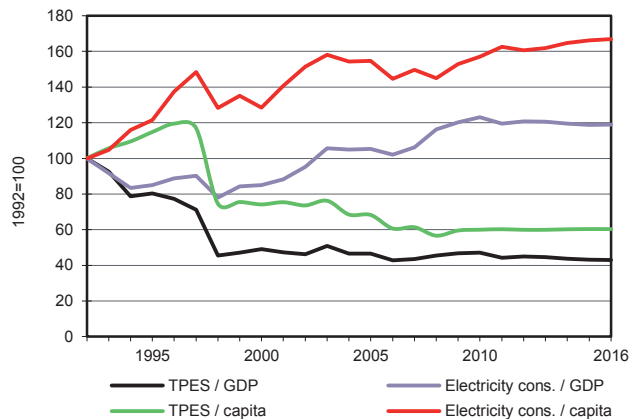


Figure 6. Selected indicators⁶



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Eritrea

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	-	-	-	-	-	0	722	-	-	722
Imports	-	-	205	-	-	-	-	-	-	-	205
Exports	-	-	-	-	-	-	-	-	-	-	-
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-1	-	-	-	-	-	-	-	-1
Stock changes	-	-	-	-	-	-	-	-	-	-	-
<b>TPES</b>	-	-	<b>204</b>	-	-	-	<b>0</b>	<b>722</b>	-	-	<b>925</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-	-	-	-	-	-	-	-	-	-	-
Electricity plants	-	-	-113	-	-	-	-0	-	36	-	-77
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-	-	-	-	-	-	-	-	-	-
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-249	-	-	-249
Energy industry own use	-	-	-	-	-	-	-	-	-2	-	-2
Losses	-	-	-	-	-	-	-	-	-5	-	-5
<b>TFC</b>	-	-	<b>90</b>	-	-	-	-	<b>473</b>	<b>29</b>	-	<b>592</b>
<b>INDUSTRY</b>	-	-	<b>6</b>	-	-	-	-	-	<b>8</b>	-	<b>13</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	6	-	-	-	-	-	8	-	13
<b>TRANSPORT</b>	-	-	<b>64</b>	-	-	-	-	-	-	-	<b>64</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	64	-	-	-	-	-	-	-	64
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	-	-	<b>19</b>	-	-	-	-	<b>473</b>	<b>21</b>	-	<b>513</b>
Residential	-	-	17	-	-	-	-	450	12	-	479
Comm. and public services	-	-	2	-	-	-	-	23	9	-	34
Agriculture/forestry	-	-	-	-	-	-	-	-	-	-	-
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>NON-ENERGY USE</b>	-	-	<b>2</b>	-	-	-	-	-	-	-	<b>2</b>
in industry/transf./energy	-	-	2	-	-	-	-	-	-	-	2
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	-	-	<b>419</b>	-	-	-	<b>2</b>	-	-	-	<b>421</b>
Electricity plants	-	-	419	-	-	-	2	-	-	-	421
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Ethiopia

Figure 1. Energy production

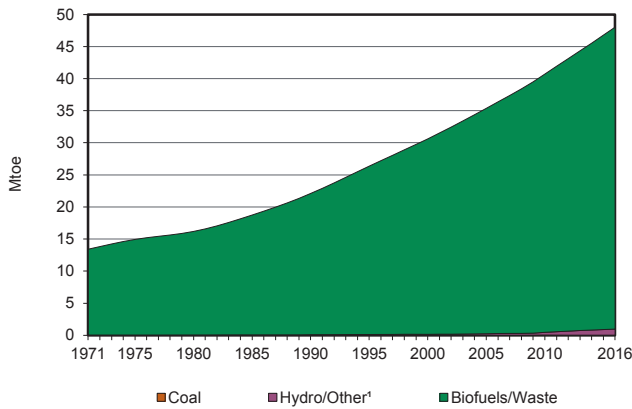


Figure 2. Total primary energy supply<sup>2</sup>

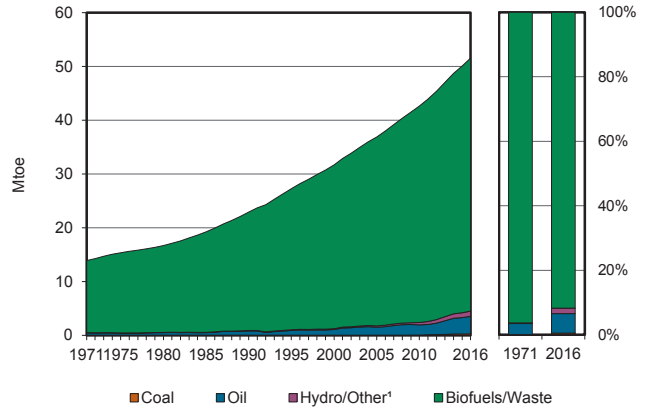


Figure 3. Energy self-sufficiency<sup>3</sup>

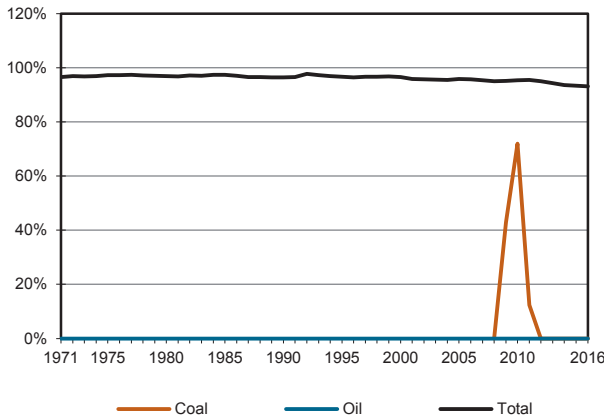


Figure 4. Oil products demand<sup>4</sup>

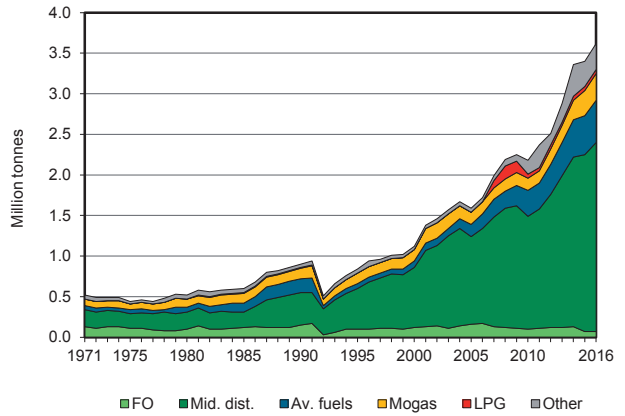


Figure 5. Electricity generation by source

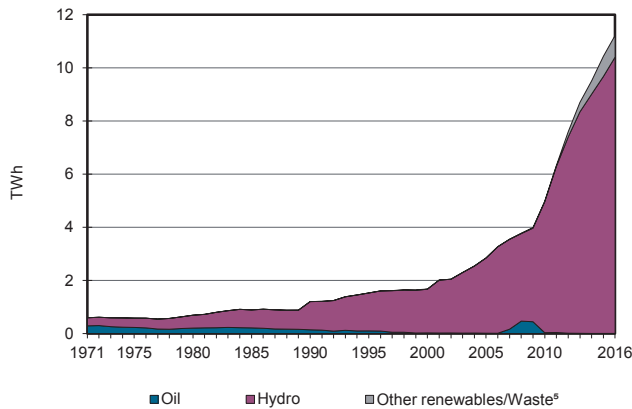
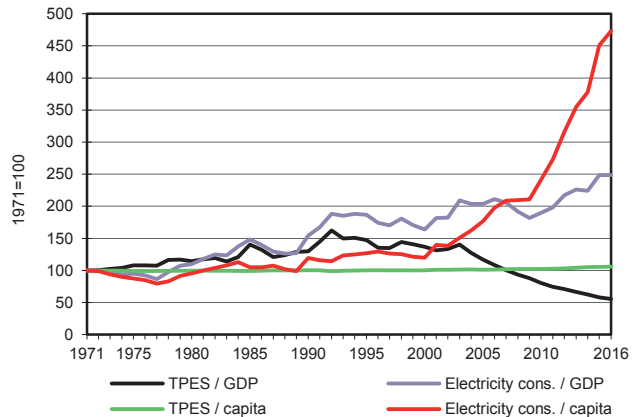


Figure 6. Selected indicators<sup>6</sup>



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Ethiopia

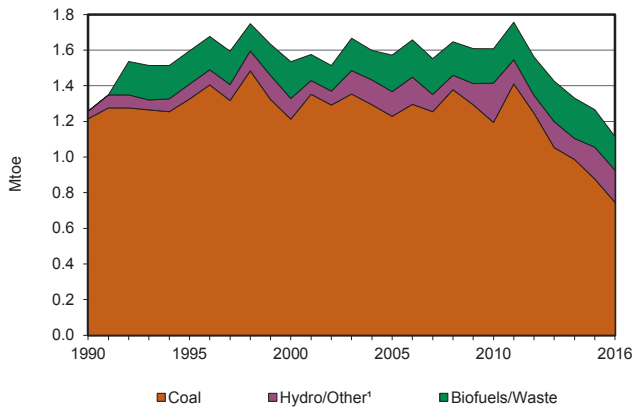
2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	-	-	-	-	895	70	47048	-	-	48013
Imports	272	-	3729	-	-	-	-	-	-	-	4001
Exports	-	-	-	-	-	-	-	-	-15	-	-15
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-471	-	-	-	-	-	-	-	-471
Stock changes	-	-	7	-	-	-	-	-	-	-	7
<b>TPES</b>	<b>272</b>	<b>-</b>	<b>3265</b>	<b>-</b>	<b>-</b>	<b>895</b>	<b>70</b>	<b>47048</b>	<b>-15</b>	<b>-</b>	<b>51535</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-	-	-19	-	-	-	-	-	-0	-	-19
Electricity plants	-	-	-1	-	-	-895	-70	-	965	-	-1
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-	-	-	-	-	-	-	-	-	-
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-9174	-	-	-9174
Energy industry own use	-	-	-	-	-	-	-	-	-29	-	-29
Losses	-	-	-	-	-	-	-	-	-164	-	-164
<b>TFC</b>	<b>272</b>	<b>-</b>	<b>3245</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>37874</b>	<b>757</b>	<b>-</b>	<b>42148</b>
<b>INDUSTRY</b>	<b>272</b>	<b>-</b>	<b>792</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>261</b>	<b>-</b>	<b>1326</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	272	-	173	-	-	-	-	-	-	-	446
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	619	-	-	-	-	-	261	-	880
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>1734</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>6</b>	<b>-</b>	<b>-</b>	<b>1741</b>
Domestic aviation	-	-	84	-	-	-	-	-	-	-	84
Road	-	-	1650	-	-	-	-	6	-	-	1657
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>-</b>	<b>-</b>	<b>626</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>37867</b>	<b>496</b>	<b>-</b>	<b>38989</b>
Residential	-	-	289	-	-	-	-	37490	284	-	38064
Comm. and public services	-	-	59	-	-	-	-	377	206	-	642
Agriculture/forestry	-	-	139	-	-	-	-	-	-	-	139
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	139	-	-	-	-	-	6	-	144
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>93</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>93</b>
in industry/transf./energy	-	-	93	-	-	-	-	-	-	-	93
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>-</b>	<b>-</b>	<b>4</b>	<b>-</b>	<b>-</b>	<b>10406</b>	<b>816</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>11226</b>
Electricity plants	-	-	4	-	-	10406	816	-	-	-	11226
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

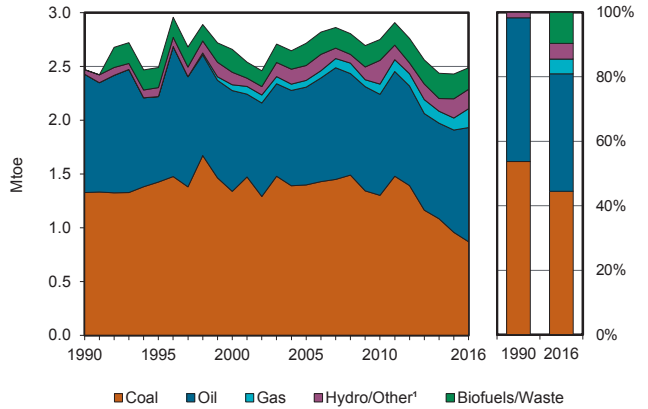
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Former Yugoslav Republic of Macedonia

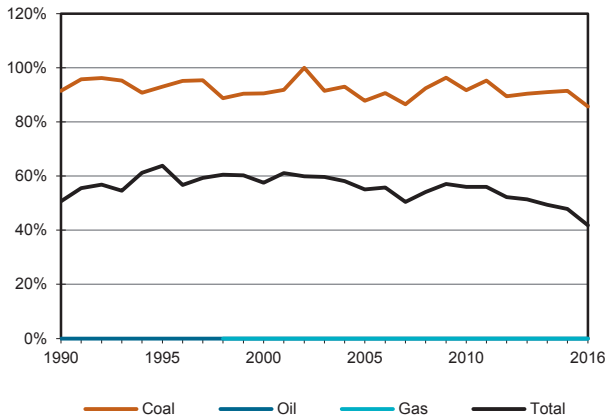
**Figure 1. Energy production**



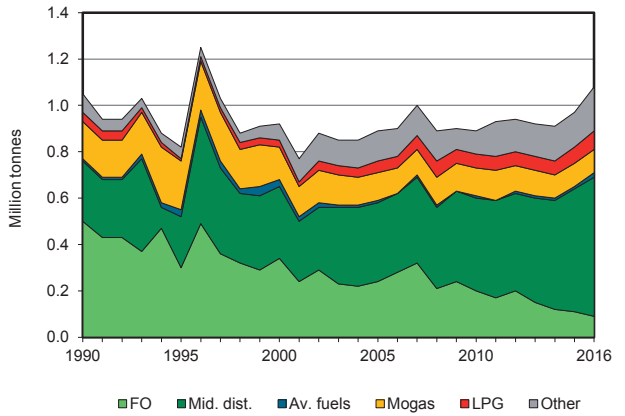
**Figure 2. Total primary energy supply<sup>2</sup>**



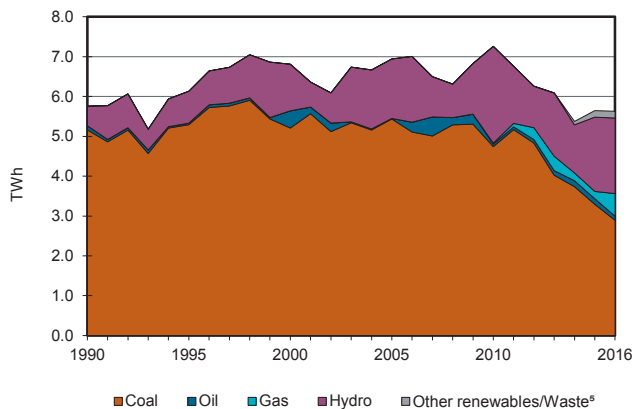
**Figure 3. Energy self-sufficiency<sup>3</sup>**



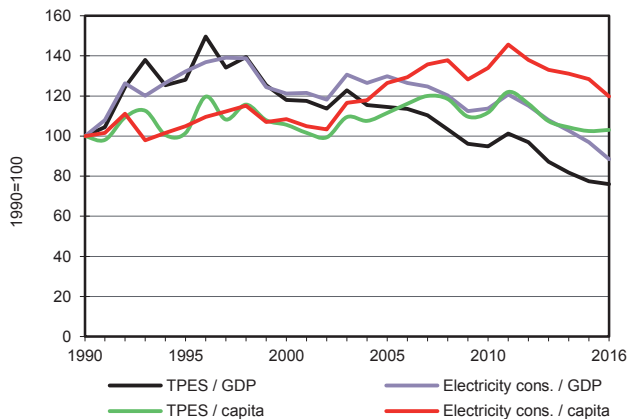
**Figure 4. Oil products demand<sup>4</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>6</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Former Yugoslav Republic of Macedonia

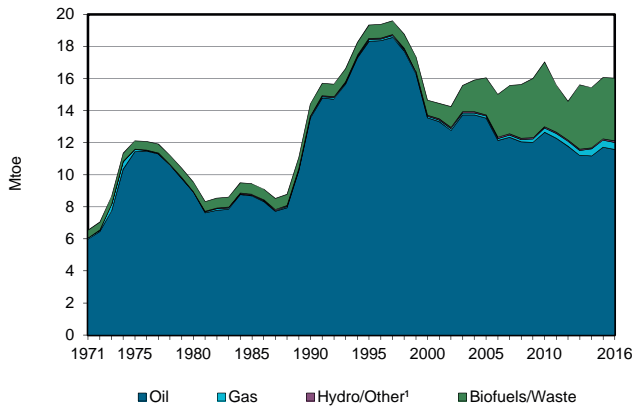
2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	745	-	-	-	-	163	17	188	-	-	1114
Imports	106	-	1267	176	-	-	-	19	188	-	1757
Exports	-1	-	-172	-	-	-	-	-1	-14	-	-187
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-15	-	-	-	-	-	-	-	-15
Stock changes	19	-	-19	-	-	-	-	-7	-	-	-6
<b>TPES</b>	<b>870</b>	<b>-</b>	<b>1062</b>	<b>176</b>	<b>-</b>	<b>163</b>	<b>17</b>	<b>200</b>	<b>175</b>	<b>-</b>	<b>2662</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	0	-	-	-	-	-	-	-	-	-	0
Electricity plants	-748	-	-27	-	-	-163	-11	-3	435	-	-517
CHP plants	-	-	-	-110	-	-	-	-	49	26	-35
Heat plants	-	-	-	-28	-	-	-	-	-	27	-0
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-	-	-	-	-	-	-	-	-	-
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-	-	-	-
Energy industry own use	-	-	-2	-	-	-	-	-0	-40	-0	-42
Losses	-	-	-	-0	-	-	-1	-	-87	-7	-95
<b>TFC</b>	<b>122</b>	<b>-</b>	<b>1033</b>	<b>38</b>	<b>-</b>	<b>-</b>	<b>5</b>	<b>197</b>	<b>533</b>	<b>46</b>	<b>1974</b>
<b>INDUSTRY</b>	<b>119</b>	<b>-</b>	<b>130</b>	<b>32</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>6</b>	<b>137</b>	<b>2</b>	<b>427</b>
Iron and steel	80	-	51	21	-	-	-	0	72	2	226
Chemical and petrochemical	-	-	2	1	-	-	-	-	6	-	8
Non-ferrous metals	-	-	1	-	-	-	-	-	1	-	2
Non-metallic minerals	39	-	23	1	-	-	-	0	11	-	74
Transport equipment	-	-	1	3	-	-	-	0	6	-	9
Machinery	-	-	2	0	-	-	-	0	4	-	6
Mining and quarrying	-	-	13	-	-	-	-	0	13	-	26
Food and tobacco	-	-	16	6	-	-	-	5	12	-	39
Paper pulp and printing	-	-	-	0	-	-	-	0	1	-	1
Wood and wood products	-	-	-	-	-	-	-	0	0	-	1
Construction	-	-	15	-	-	-	-	0	2	-	17
Textile and leather	1	-	6	0	-	-	-	0	5	-	12
Non-specified	-	-	-	0	-	-	-	0	4	-	5
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>673</b>	<b>0</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>-</b>	<b>675</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	671	0	-	-	-	-	-	-	671
Rail	-	-	2	-	-	-	-	-	1	-	3
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>3</b>	<b>-</b>	<b>90</b>	<b>6</b>	<b>-</b>	<b>-</b>	<b>5</b>	<b>190</b>	<b>394</b>	<b>45</b>	<b>733</b>
Residential	1	-	12	0	-	-	-	185	263	33	493
Comm. and public services	1	-	63	6	-	-	1	4	129	12	216
Agriculture/forestry	1	-	15	-	-	-	4	1	3	-	24
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>140</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>140</b>
in industry/transf./energy	-	-	131	-	-	-	-	-	-	-	131
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	8	-	-	-	-	-	-	-	8
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>2893</b>	<b>-</b>	<b>101</b>	<b>569</b>	<b>-</b>	<b>1897</b>	<b>133</b>	<b>36</b>	<b>-</b>	<b>-</b>	<b>5629</b>
Electricity plants	2893	-	101	-	-	1897	133	36	-	-	5060
CHP plants	-	-	-	569	-	-	-	-	-	-	569
<b>Heat generated - TJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2239</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2239</b>
CHP plants	-	-	-	1089	-	-	-	-	-	-	1089
Heat plants	-	-	-	1150	-	-	-	-	-	-	1150

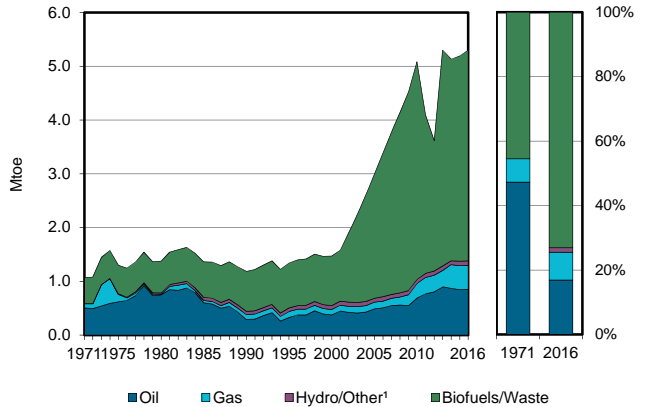
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Gabon

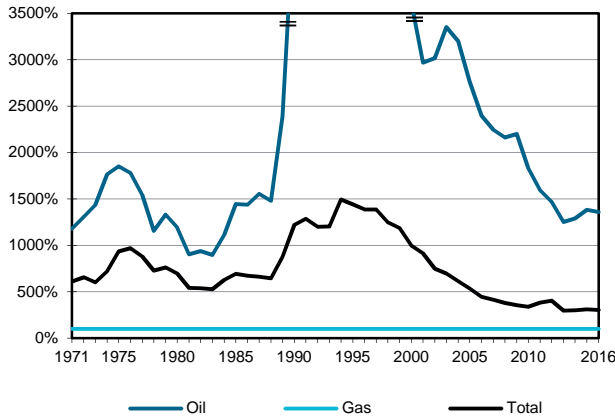
**Figure 1. Energy production**



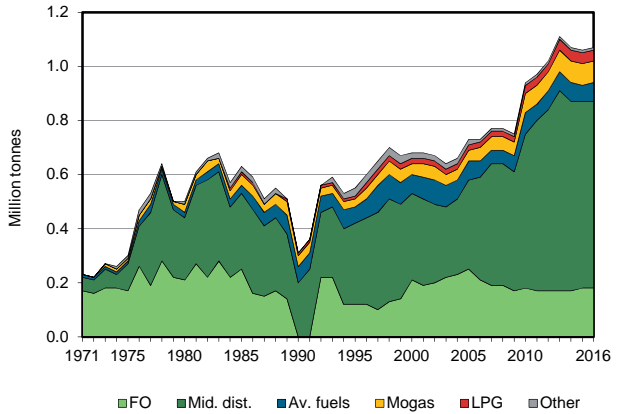
**Figure 2. Total primary energy supply<sup>2</sup>**



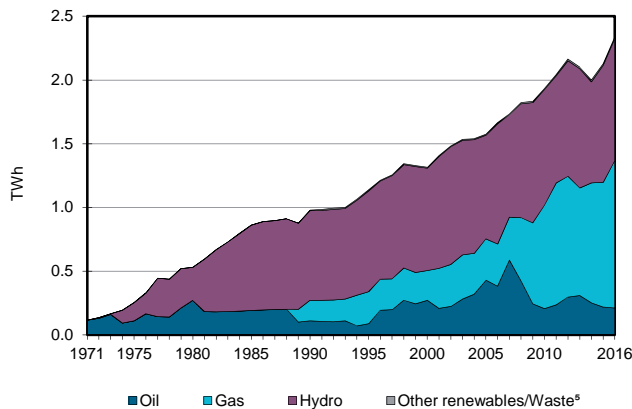
**Figure 3. Energy self-sufficiency<sup>3</sup>**



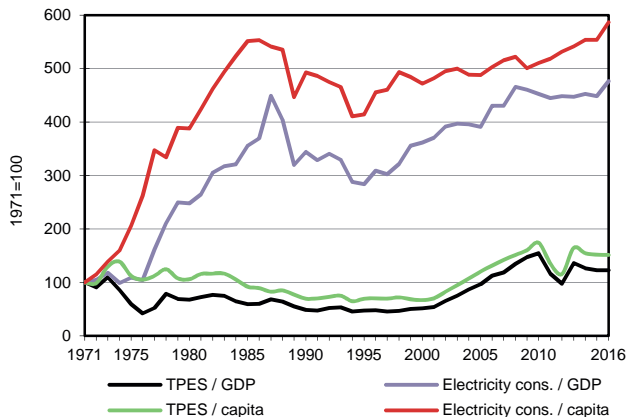
**Figure 4. Oil products demand<sup>4</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>6</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency. Maximum scale refers to values greater than or equal to 3500%.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.



## Gabon

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	11571	-	447	-	82	0	3919	-	-	16019
Imports	-	-	524	-	-	-	-	-	30	-	553
Exports	-	-10751	-241	-	-	-	-	-	-	-	-10992
Intl. marine bunkers	-	-	-180	-	-	-	-	-	-	-	-180
Intl. aviation bunkers	-	-	-69	-	-	-	-	-	-	-	-69
Stock changes	-	-	-	-	-	-	-	-	-	-	-
<b>TPES</b>	-	<b>819</b>	<b>33</b>	<b>447</b>	-	<b>82</b>	<b>0</b>	<b>3919</b>	<b>30</b>	-	<b>5331</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-	-	-	-102	-	-	-	-	-	-	-102
Electricity plants	-	-	-63	-323	-	-82	-0	-8	201	-	-276
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-819	808	-	-	-	-	-	-	-	-12
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-	-	-	-
Energy industry own use	-	-	-	-19	-	-	-	-	-13	-	-32
Losses	-	-	-	-	-	-	-	-	-44	-	-44
<b>TFC</b>	-	-	<b>778</b>	<b>2</b>	-	-	-	<b>3911</b>	<b>173</b>	-	<b>4865</b>
<b>INDUSTRY</b>	-	-	<b>376</b>	<b>2</b>	-	-	-	<b>2721</b>	<b>47</b>	-	<b>3146</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	0	-	0
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	7	-	7
Food and tobacco	-	-	-	1	-	-	-	-	13	-	15
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	1	-	-	-	-	17	-	18
Construction	-	-	-	-	-	-	-	-	8	-	8
Textile and leather	-	-	-	-	-	-	-	-	0	-	0
Non-specified	-	-	376	-	-	-	-	2721	2	-	3099
<b>TRANSPORT</b>	-	-	<b>268</b>	-	-	-	-	-	<b>1</b>	-	<b>268</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	268	-	-	-	-	-	-	-	268
Rail	-	-	-	-	-	-	-	-	1	-	1
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	-	-	<b>123</b>	-	-	-	-	<b>1190</b>	<b>126</b>	-	<b>1438</b>
Residential	-	-	66	-	-	-	-	1190	90	-	1346
Comm. and public services	-	-	40	-	-	-	-	-	26	-	66
Agriculture/forestry	-	-	17	-	-	-	-	-	-	-	17
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	9	-	9
<b>NON-ENERGY USE</b>	-	-	<b>12</b>	-	-	-	-	-	-	-	<b>12</b>
in industry/transf./energy	-	-	12	-	-	-	-	-	-	-	12
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	-	-	<b>210</b>	<b>1160</b>	-	<b>953</b>	<b>2</b>	<b>11</b>	-	-	<b>2336</b>
Electricity plants	-	-	210	1160	-	953	2	11	-	-	2336
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Georgia

Figure 1. Energy production

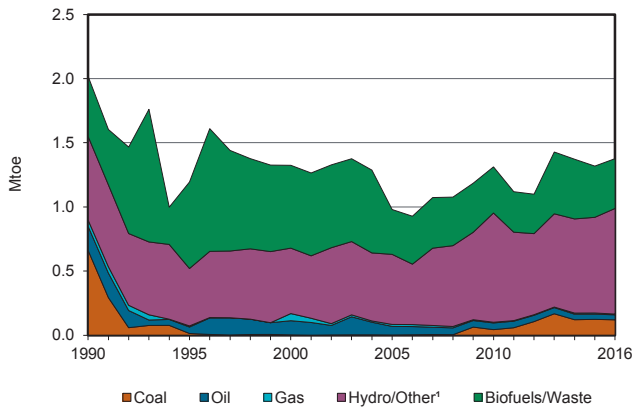


Figure 2. Total primary energy supply²

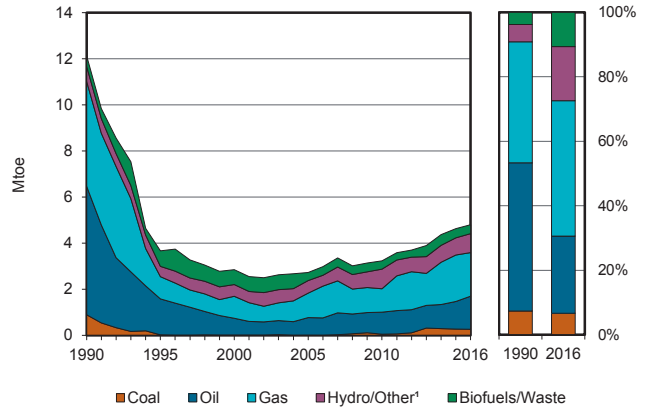


Figure 3. Energy self-sufficiency³

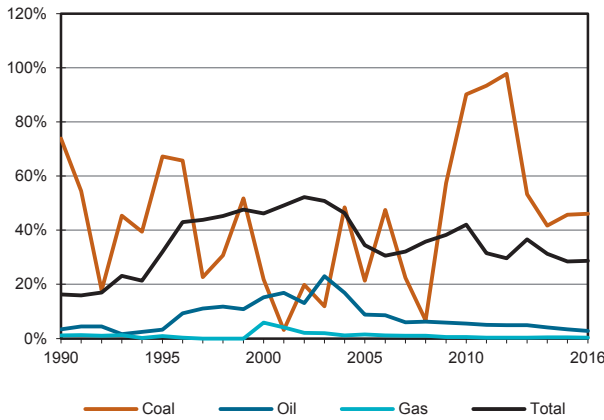


Figure 4. Oil products demand⁴

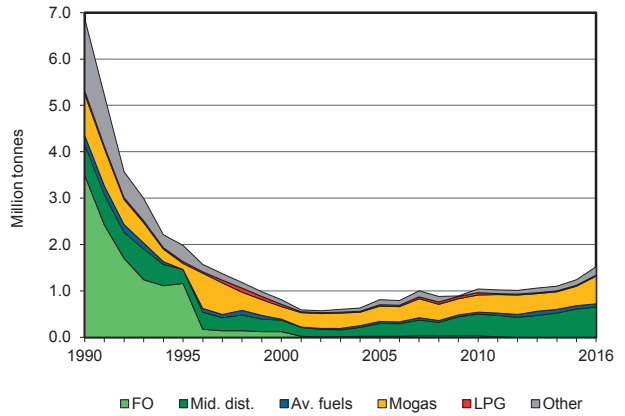


Figure 5. Electricity generation by source

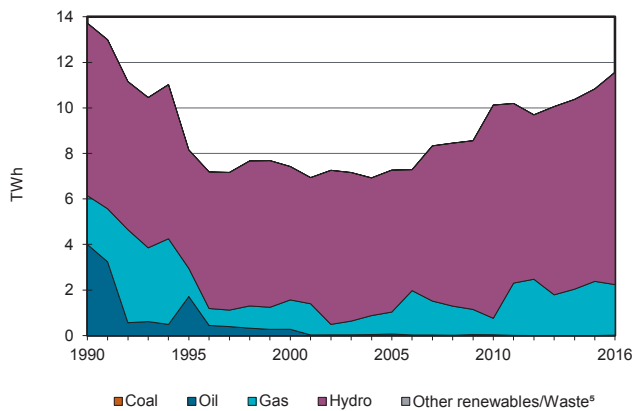
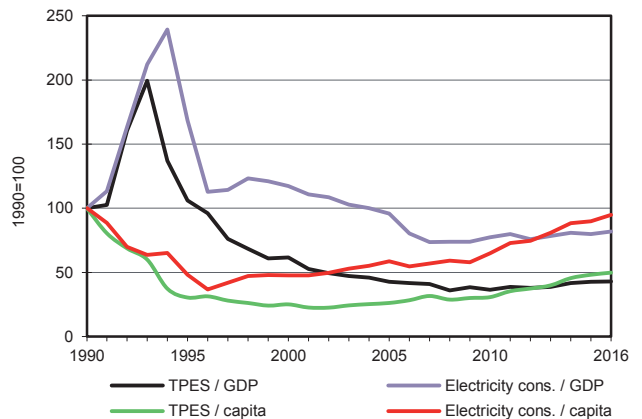


Figure 6. Selected indicators⁶



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Georgia

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	121	39	-	6	-	802	21	388	-	-	1376
Imports	165	43	1540	1885	-	-	-	-	114	-	3748
Exports	-1	-115	-20	-	-	-	-	-1	-121	-	-259
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-73	-	-	-	-	-	-	-	-73
Stock changes	-24	-	24	-	-	-	-	-	-	-	-0
<b>TPES</b>	<b>262</b>	<b>-33</b>	<b>1470</b>	<b>1891</b>	<b>-</b>	<b>802</b>	<b>21</b>	<b>386</b>	<b>-7</b>	<b>-</b>	<b>4793</b>
Transfers	-	104	-52	-	-	-	-	-	-	-	52
Statistical differences	-	-45	-10	-	-	-	-0	-	-	-	-55
Electricity plants	-11	-	-	-436	-	-802	-1	-	995	-	-255
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-26	27	-	-	-	-	-	-	-	1
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-	-	-	-
Energy industry own use	-0	-	-1	-	-	-	-	-	-19	-	-21
Losses	-	-	-	-114	-	-	-2	-	-67	-	-183
<b>TFC</b>	<b>250</b>	<b>-</b>	<b>1435</b>	<b>1341</b>	<b>-</b>	<b>-</b>	<b>18</b>	<b>386</b>	<b>902</b>	<b>-</b>	<b>4333</b>
<b>INDUSTRY</b>	<b>248</b>	<b>-</b>	<b>82</b>	<b>96</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2</b>	<b>250</b>	<b>-</b>	<b>678</b>
Iron and steel	88	-	-	11	-	-	-	-	123	-	223
Chemical and petrochemical	-	-	-	3	-	-	-	-	23	-	26
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	158	-	6	32	-	-	-	-	27	-	224
Transport equipment	-	-	-	0	-	-	-	-	0	-	1
Machinery	-	-	-	0	-	-	-	-	0	-	1
Mining and quarrying	-	-	16	2	-	-	-	-	11	-	29
Food and tobacco	1	-	-	32	-	-	-	2	18	-	53
Paper pulp and printing	-	-	-	2	-	-	-	-	1	-	3
Wood and wood products	0	-	-	0	-	-	-	-	1	-	1
Construction	-	-	60	12	-	-	-	-	11	-	84
Textile and leather	-	-	-	1	-	-	-	-	1	-	2
Non-specified	-	-	-	1	-	-	-	-	32	-	33
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>1191</b>	<b>231</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>26</b>	<b>-</b>	<b>1448</b>
Domestic aviation	-	-	1	-	-	-	-	-	-	-	1
Road	-	-	1178	231	-	-	-	-	-	-	1409
Rail	-	-	11	-	-	-	-	-	26	-	37
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	1	-	-	-	-	-	-	-	1
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>2</b>	<b>-</b>	<b>43</b>	<b>828</b>	<b>-</b>	<b>-</b>	<b>18</b>	<b>385</b>	<b>626</b>	<b>-</b>	<b>1902</b>
Residential	1	-	18	660	-	-	6	381	208	-	1273
Comm. and public services	1	-	11	160	-	-	11	4	248	-	435
Agriculture/forestry	-	-	14	9	-	-	1	-	5	-	28
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	166	-	166
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>119</b>	<b>186</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>305</b>
in industry/transf./energy	-	-	101	186	-	-	-	-	-	-	287
of which: chem./petrochem.	-	-	-	186	-	-	-	-	-	-	186
in transport	-	-	16	-	-	-	-	-	-	-	16
in other	-	-	2	-	-	-	-	-	-	-	2
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>16</b>	<b>-</b>	<b>-</b>	<b>2220</b>	<b>-</b>	<b>9329</b>	<b>9</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>11574</b>
Electricity plants	16	-	-	2220	-	9329	9	-	-	-	11574
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Ghana

Figure 1. Energy production

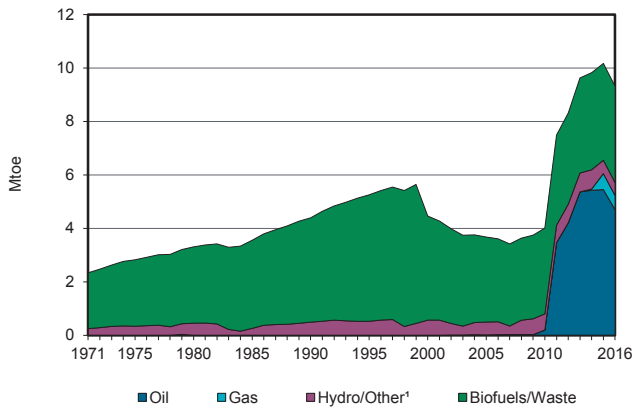


Figure 2. Total primary energy supply<sup>2</sup>

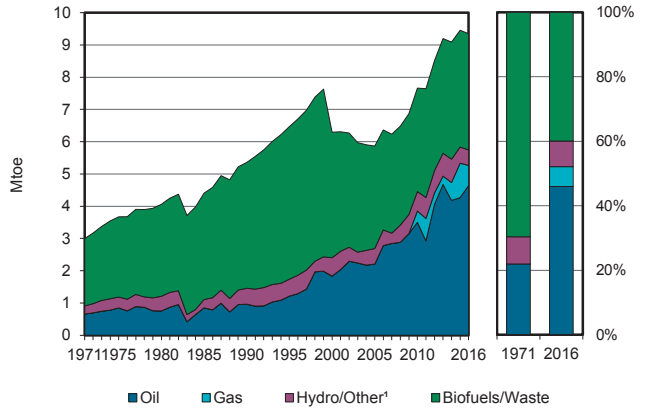


Figure 3. Energy self-sufficiency<sup>3</sup>

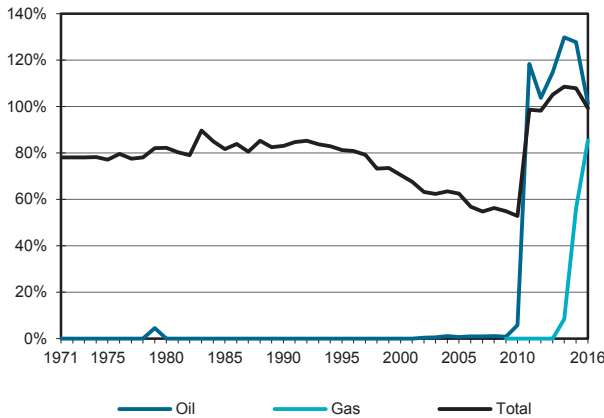


Figure 4. Oil products demand<sup>4</sup>

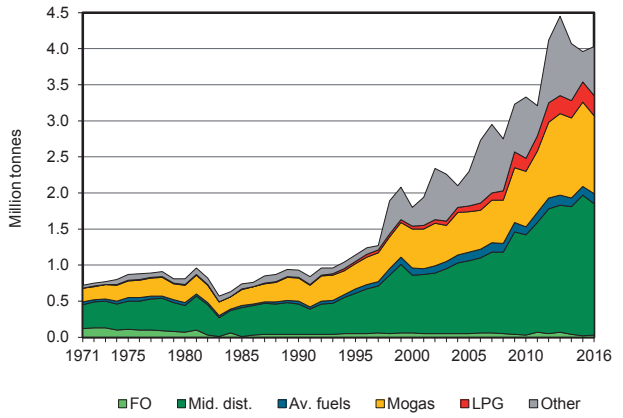


Figure 5. Electricity generation by source

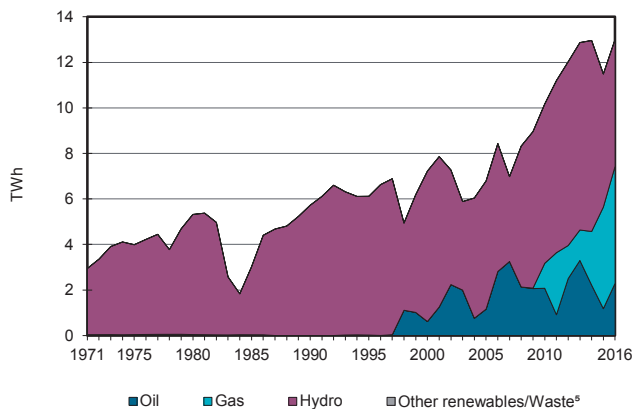
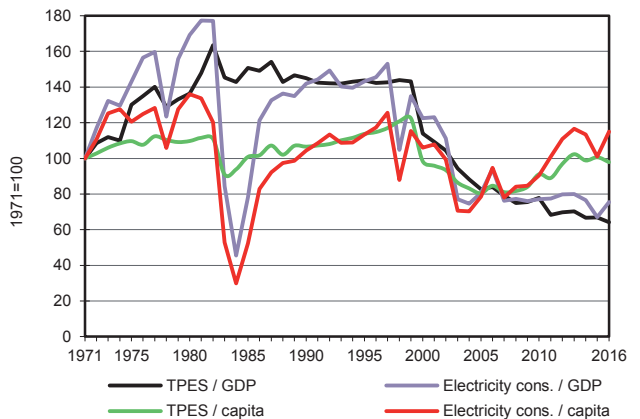


Figure 6. Selected indicators<sup>6</sup>



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Ghana

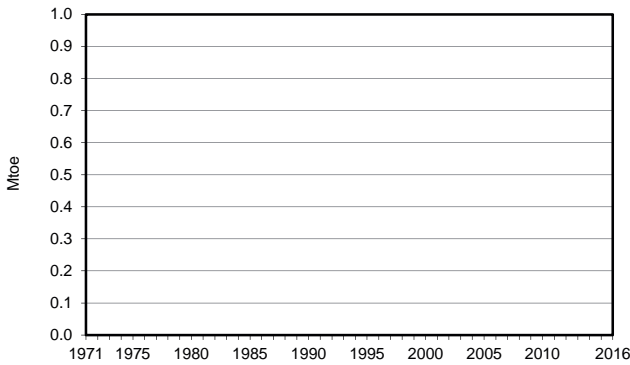
2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	4697	-	532	-	478	2	3602	-	-	9312
Imports	-	1472	3656	91	-	-	-	-	44	-	5262
Exports	-	-4349	-685	-	-	-	-	-2	-16	-	-5052
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-149	-	-	-	-	-	-	-	-149
Stock changes	-	-	-	-	-	-	-	-	-	-	-
<b>TPES</b>	-	<b>1820</b>	<b>2822</b>	<b>623</b>	-	<b>478</b>	<b>2</b>	<b>3600</b>	<b>28</b>	-	<b>9374</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-	-544	-52	-157	-	-	-	-	4	-	-749
Electricity plants	-	-493	-	-466	-	-478	-2	-	1120	-	-319
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-784	808	-	-	-	-	-	-	-	24
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-1181	-	-	-1181
Energy industry own use	-	-	-40	-	-	-	-	-	-7	-	-47
Losses	-	-	-	-	-	-	-	-	-274	-	-274
<b>TFC</b>	-	-	<b>3538</b>	-	-	-	-	<b>2419</b>	<b>871</b>	-	<b>6828</b>
<b>INDUSTRY</b>	-	-	<b>545</b>	-	-	-	-	<b>406</b>	<b>389</b>	-	<b>1340</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	545	-	-	-	-	406	389	-	1340
<b>TRANSPORT</b>	-	-	<b>2419</b>	-	-	-	-	-	-	-	<b>2419</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	2247	-	-	-	-	-	-	-	2247
Rail	-	-	78	-	-	-	-	-	-	-	78
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	94	-	-	-	-	-	-	-	94
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	-	-	<b>402</b>	-	-	-	-	<b>2014</b>	<b>482</b>	-	<b>2897</b>
Residential	-	-	292	-	-	-	-	1881	338	-	2511
Comm. and public services	-	-	36	-	-	-	-	131	144	-	311
Agriculture/forestry	-	-	65	-	-	-	-	2	-	-	67
Fishing	-	-	9	-	-	-	-	-	-	-	9
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>NON-ENERGY USE</b>	-	-	<b>172</b>	-	-	-	-	-	-	-	<b>172</b>
in industry/transf./energy	-	-	172	-	-	-	-	-	-	-	172
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	-	<b>2292</b>	-	<b>5143</b>	-	<b>5561</b>	<b>27</b>	-	-	-	<b>13023</b>
Electricity plants	-	2292	-	5143	-	5561	27	-	-	-	13023
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

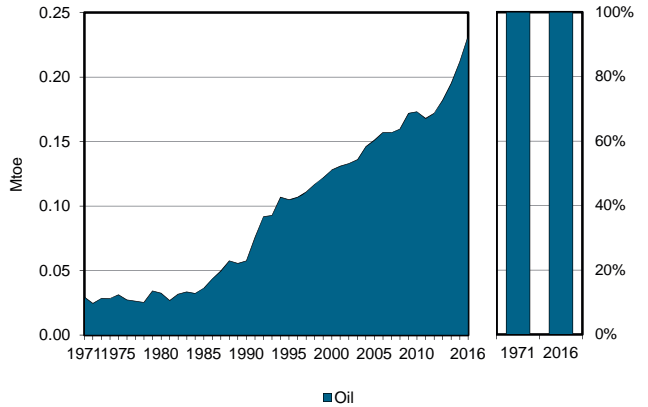
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Gibraltar

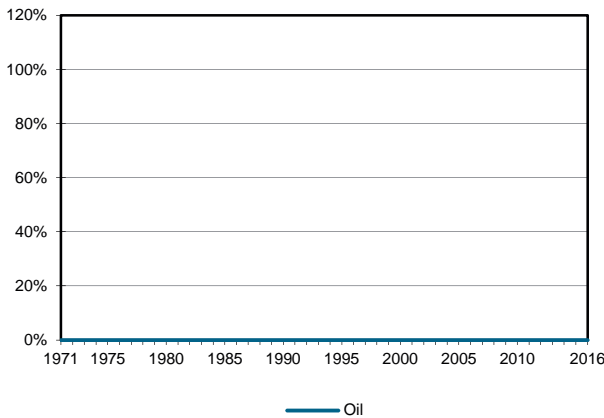
**Figure 1. Energy production**



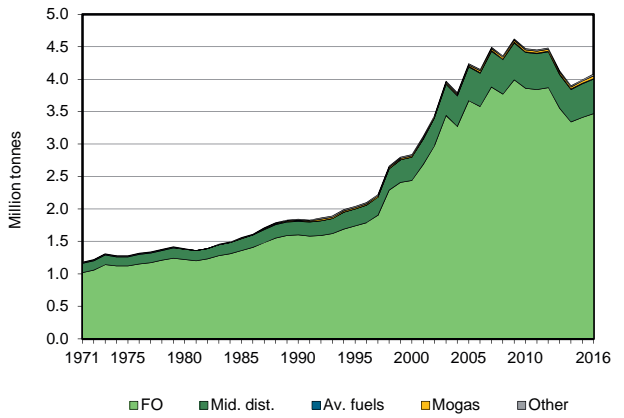
**Figure 2. Total primary energy supply<sup>1</sup>**



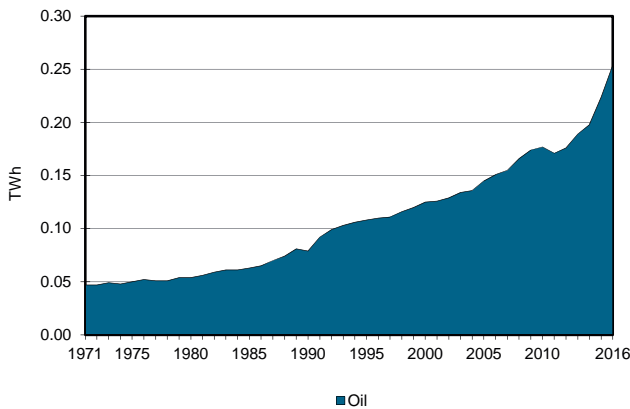
**Figure 3. Energy self-sufficiency<sup>2</sup>**



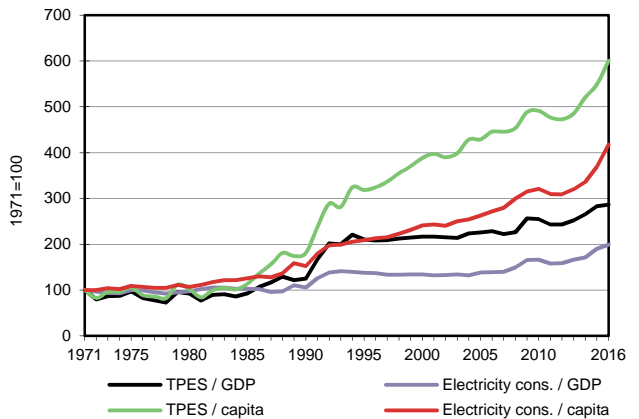
**Figure 4. Oil products demand<sup>3</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>4</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Excluding electricity trade.
2. Production divided by TPES. 100% represents full self-sufficiency.
3. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
4. GDP in 2010 USD.

## Gibraltar

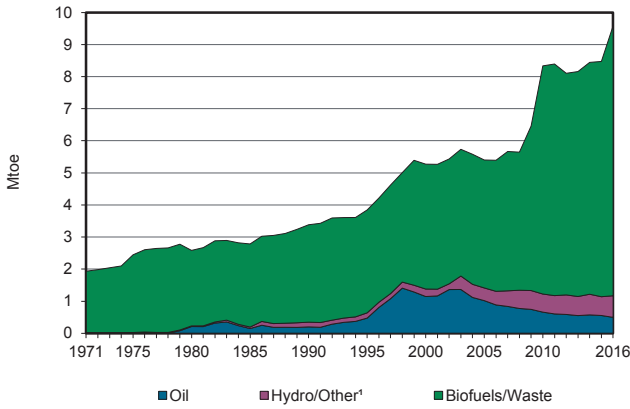
2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	-	-	-	-	-	-	-	-	-	-
Imports	-	-	3930	-	-	-	-	-	-	-	3930
Exports	-	-	-	-	-	-	-	-	-	-	-
Intl. marine bunkers	-	-	-3690	-	-	-	-	-	-	-	-3690
Intl. aviation bunkers	-	-	-8	-	-	-	-	-	-	-	-8
Stock changes	-	-	-	-	-	-	-	-	-	-	-
<b>TPES</b>	-	-	<b>232</b>	-	-	-	-	-	-	-	<b>232</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-	-	-	-	-	-	-	-	-	-	-
Electricity plants	-	-	-59	-	-	-	-	-	22	-	-37
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-	-	-	-	-	-	-	-	-	-
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-	-	-	-
Energy industry own use	-	-	-	-	-	-	-	-	-0	-	-0
Losses	-	-	-	-	-	-	-	-	-1	-	-1
<b>TFC</b>	-	-	<b>173</b>	-	-	-	-	-	<b>21</b>	-	<b>193</b>
<b>INDUSTRY</b>	-	-	-	-	-	-	-	-	-	-	-
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>TRANSPORT</b>	-	-	<b>149</b>	-	-	-	-	-	-	-	<b>149</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	149	-	-	-	-	-	-	-	149
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	-	-	-	-	-	-	-	-	<b>21</b>	-	<b>21</b>
Residential	-	-	-	-	-	-	-	-	-	-	-
Comm. and public services	-	-	-	-	-	-	-	-	1	-	1
Agriculture/forestry	-	-	-	-	-	-	-	-	-	-	-
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	19	-	19
<b>NON-ENERGY USE</b>	-	-	<b>24</b>	-	-	-	-	-	-	-	<b>24</b>
in industry/transf./energy	-	-	24	-	-	-	-	-	-	-	24
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	-	-	<b>254</b>	-	-	-	-	-	-	-	<b>254</b>
Electricity plants	-	-	254	-	-	-	-	-	-	-	254
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

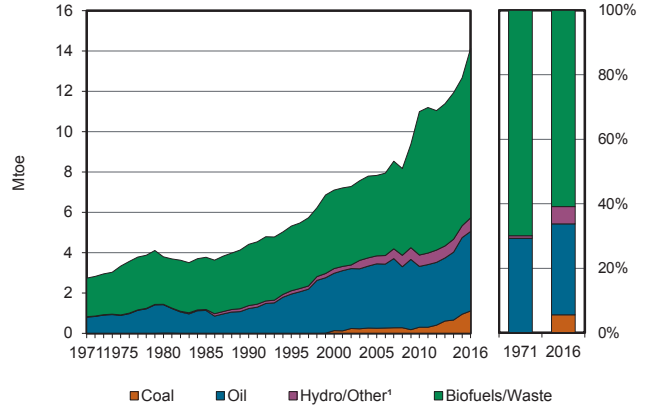
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Guatemala

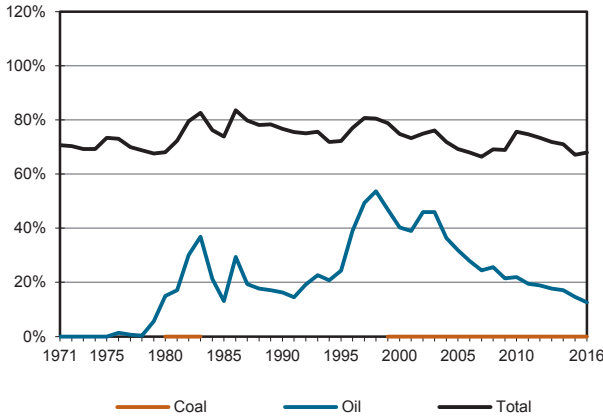
**Figure 1. Energy production**



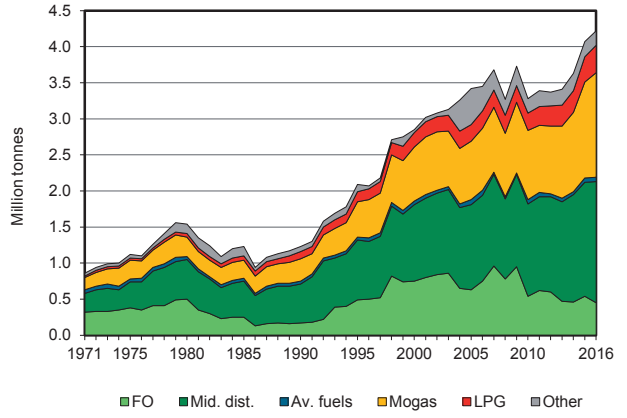
**Figure 2. Total primary energy supply<sup>2</sup>**



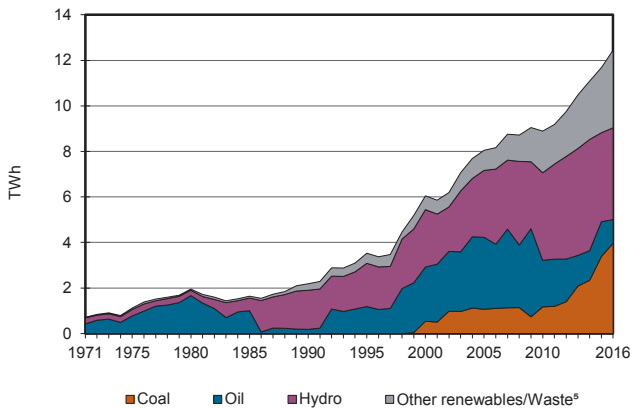
**Figure 3. Energy self-sufficiency<sup>3</sup>**



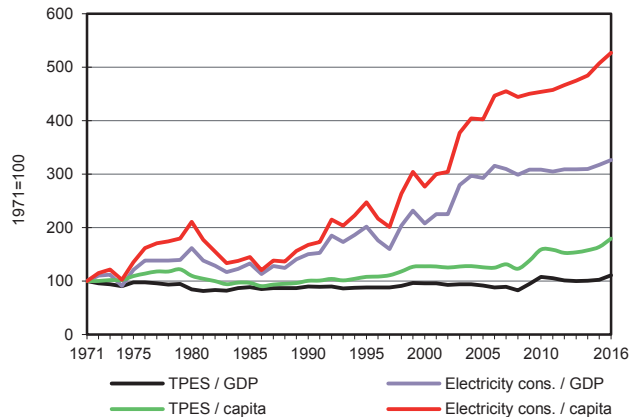
**Figure 4. Oil products demand<sup>4</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>6</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.



## Guatemala

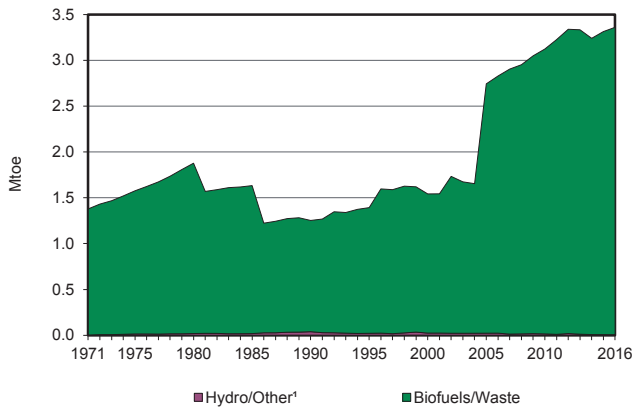
2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	497	-	-	-	347	327	8409	-	-	9580
Imports	1260	-	4846	-	-	-	-	-	64	-	6171
Exports	-	-411	-505	-	-	-	-	-	-115	-	-1030
Intl. marine bunkers	-	-	-360	-	-	-	-	-	-	-	-360
Intl. aviation bunkers	-	-	-65	-	-	-	-	-	-	-	-65
Stock changes	-149	-24	-37	-	-	-	-	0	-	-	-210
<b>TPES</b>	<b>1111</b>	<b>62</b>	<b>3879</b>	-	-	<b>347</b>	<b>327</b>	<b>8410</b>	<b>-51</b>	-	<b>14085</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-	-	-1	-	-	-	-	-1	0	-	-1
Electricity plants	-1111	-	-209	-	-	-347	-327	-2012	1071	-	-2934
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-62	55	-	-	-	-	-	-	-	-6
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-52	-	-	-52
Energy industry own use	-	-	-42	-	-	-	-	-	-72	-	-114
Losses	-	-	-	-	-	-	-	-	-123	-	-123
<b>TFC</b>	-	-	<b>3683</b>	-	-	-	-	<b>6345</b>	<b>825</b>	-	<b>10853</b>
<b>INDUSTRY</b>	-	-	<b>617</b>	-	-	-	-	-	<b>311</b>	-	<b>928</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	617	-	-	-	-	-	311	-	928
<b>TRANSPORT</b>	-	-	<b>2691</b>	-	-	-	-	-	-	-	<b>2691</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	2686	-	-	-	-	-	-	-	2686
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	5	-	-	-	-	-	-	-	5
<b>OTHER</b>	-	-	<b>363</b>	-	-	-	-	<b>6345</b>	<b>514</b>	-	<b>7222</b>
Residential	-	-	353	-	-	-	-	6167	287	-	6806
Comm. and public services	-	-	10	-	-	-	-	178	227	-	415
Agriculture/forestry	-	-	-	-	-	-	-	-	-	-	-
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>NON-ENERGY USE</b>	-	-	<b>13</b>	-	-	-	-	-	-	-	<b>13</b>
in industry/transf./energy	-	-	13	-	-	-	-	-	-	-	13
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>3961</b>	-	<b>1045</b>	-	-	<b>4032</b>	<b>747</b>	<b>2665</b>	-	-	<b>12450</b>
Electricity plants	3961	-	1045	-	-	4032	747	2665	-	-	12450
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

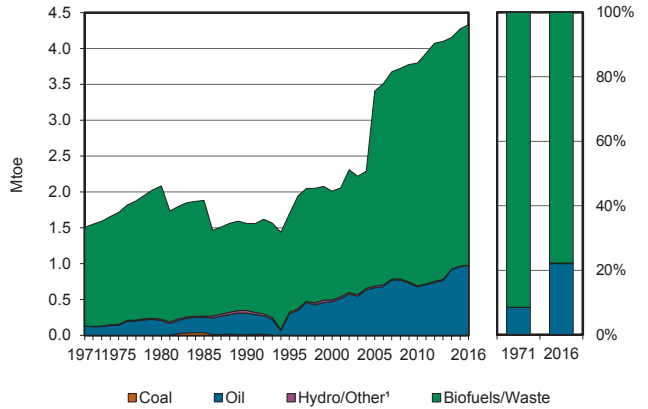
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Haiti

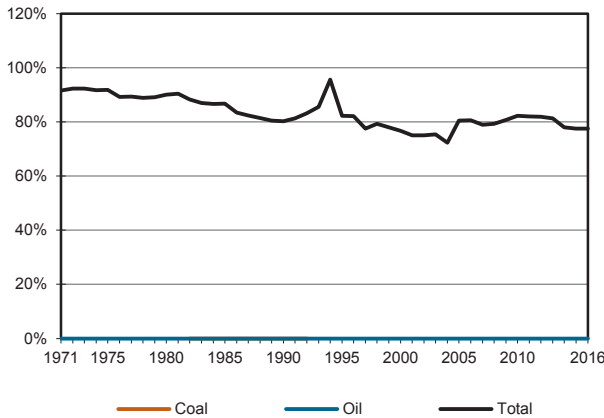
**Figure 1. Energy production**



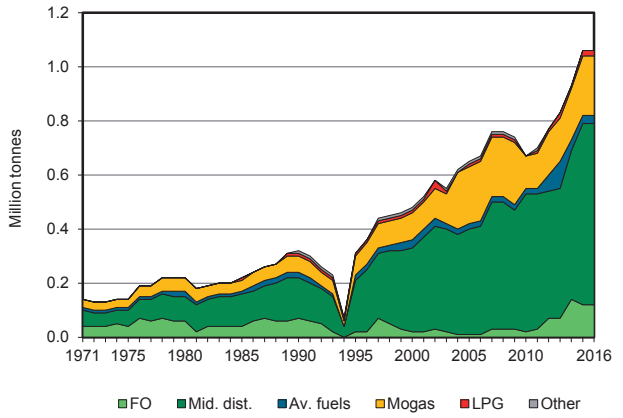
**Figure 2. Total primary energy supply<sup>2</sup>**



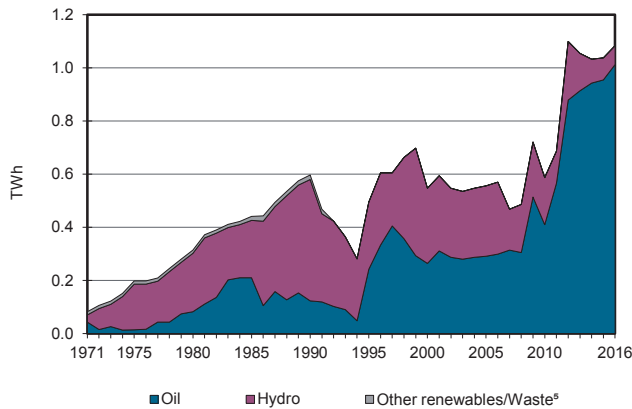
**Figure 3. Energy self-sufficiency<sup>3</sup>**



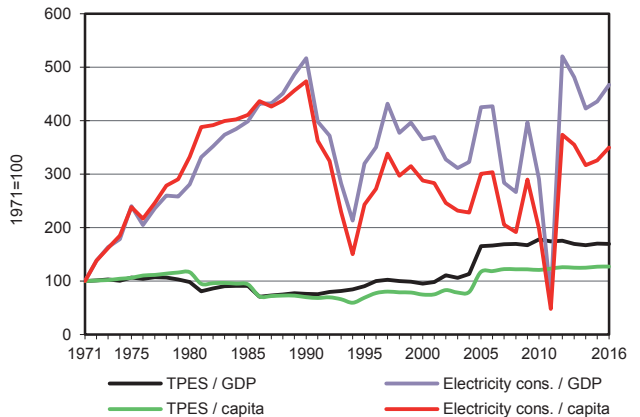
**Figure 4. Oil products demand<sup>4</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>6</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Haiti

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	-	-	-	-	6	-	3353	-	-	3359
Imports	-	-	998	-	-	-	-	-	-	-	998
Exports	-	-	-	-	-	-	-	-	-	-	-
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-23	-	-	-	-	-	-	-	-23
Stock changes	-	-	-	-	-	-	-	-	-	-	-
<b>TPES</b>	-	-	<b>974</b>	-	-	<b>6</b>	-	<b>3353</b>	-	-	<b>4333</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-	-	107	-	-	-	-	-	-3	-	104
Electricity plants	-	-	-304	-	-	-6	-	-	93	-	-217
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-	-	-	-	-	-	-	-	-	-
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-836	-	-	-836
Energy industry own use	-	-	-	-	-	-	-	-	-1	-	-1
Losses	-	-	-15	-	-	-	-	-	-53	-	-68
<b>TFC</b>	-	-	<b>762</b>	-	-	-	-	<b>2517</b>	<b>36</b>	-	<b>3315</b>
<b>INDUSTRY</b>	-	-	<b>194</b>	-	-	-	-	<b>82</b>	<b>16</b>	-	<b>292</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	194	-	-	-	-	82	16	-	292
<b>TRANSPORT</b>	-	-	<b>473</b>	-	-	-	-	-	-	-	<b>473</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	473	-	-	-	-	-	-	-	473
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	-	-	<b>91</b>	-	-	-	-	<b>2435</b>	<b>20</b>	-	<b>2546</b>
Residential	-	-	90	-	-	-	-	2387	17	-	2493
Comm. and public services	-	-	1	-	-	-	-	49	3	-	53
Agriculture/forestry	-	-	-	-	-	-	-	-	-	-	-
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>NON-ENERGY USE</b>	-	-	<b>4</b>	-	-	-	-	-	-	-	<b>4</b>
in industry/transf./energy	-	-	4	-	-	-	-	-	-	-	4
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	-	-	<b>1013</b>	-	-	<b>71</b>	-	-	-	-	<b>1084</b>
Electricity plants	-	-	1013	-	-	71	-	-	-	-	1084
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Honduras

Figure 1. Energy production

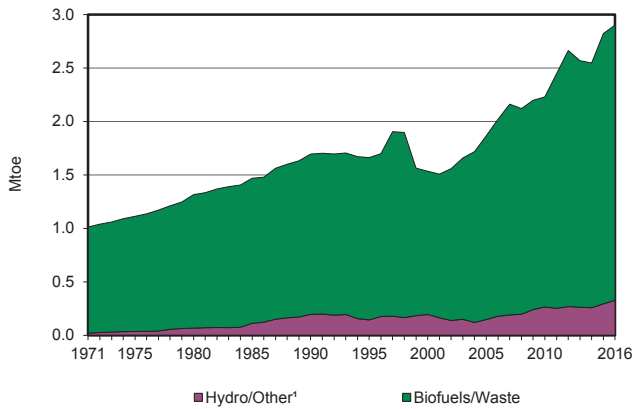


Figure 2. Total primary energy supply<sup>2</sup>

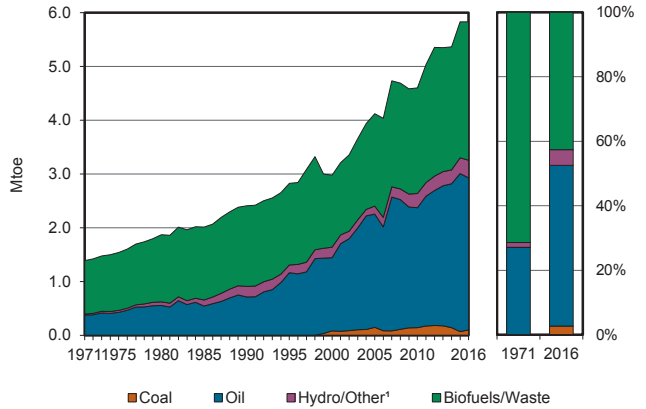


Figure 3. Energy self-sufficiency<sup>3</sup>

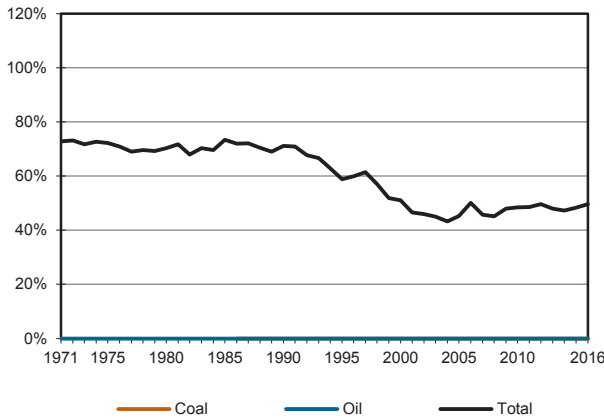


Figure 4. Oil products demand<sup>4</sup>

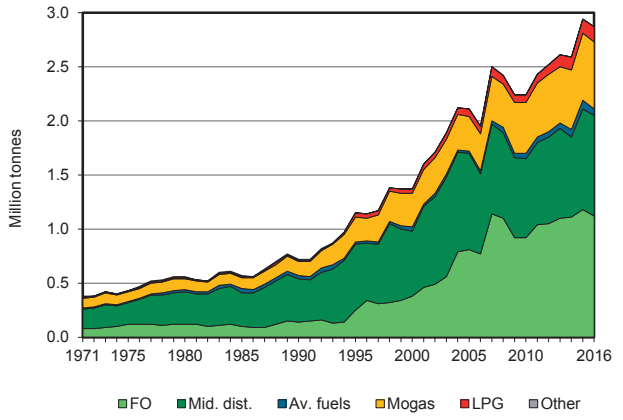


Figure 5. Electricity generation by source

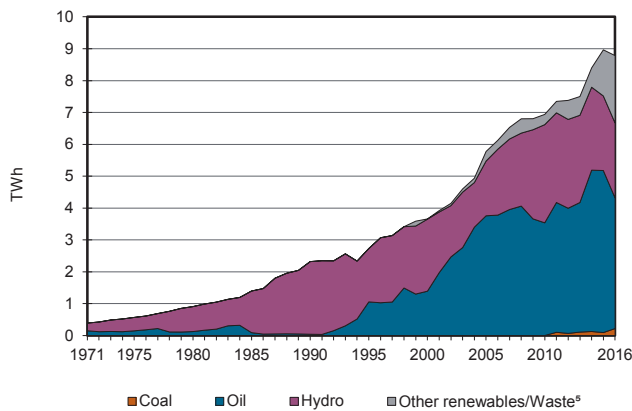
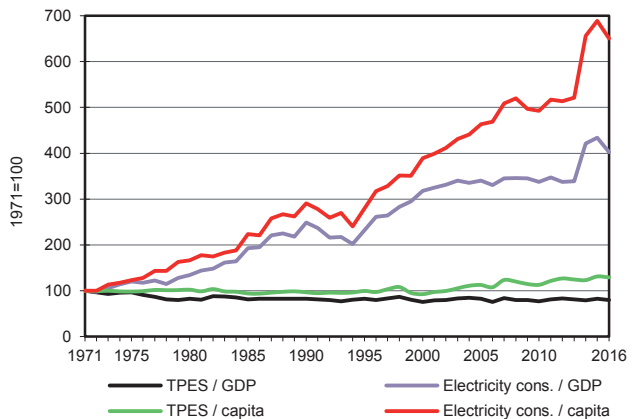


Figure 6. Selected indicators<sup>6</sup>



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Honduras

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	-	-	-	-	202	125	2573	-	-	2900
Imports	101	-	2763	-	-	-	-	-	17	-	2881
Exports	-	-	-	-	-	-	-	-	-	-	-
Intl. marine bunkers	-	-	-7	-	-	-	-	-	-	-	-7
Intl. aviation bunkers	-	-	-63	-	-	-	-	-	-	-	-63
Stock changes	-	-	133	-	-	-	-	-	-	-	133
<b>TPES</b>	<b>101</b>	<b>-</b>	<b>2827</b>	<b>-</b>	<b>-</b>	<b>202</b>	<b>125</b>	<b>2573</b>	<b>17</b>	<b>-</b>	<b>5845</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-	-	5	-	-	-	-	-	-37	-	-31
Electricity plants	-52	-	-981	-	-	-202	-125	-174	755	-	-780
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-	-	-	-	-	-	-	-	-	-
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-0	-	-	-0
Energy industry own use	-	-	-	-	-	-	-	-	-1	-	-1
Losses	-	-	-	-	-	-	-	-	-127	-	-127
<b>TFC</b>	<b>49</b>	<b>-</b>	<b>1851</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2398</b>	<b>607</b>	<b>-</b>	<b>4905</b>
<b>INDUSTRY</b>	<b>49</b>	<b>-</b>	<b>351</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>339</b>	<b>164</b>	<b>-</b>	<b>903</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	128	-	-	-	-	-	-	-	128
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	49	-	223	-	-	-	-	339	164	-	775
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>1364</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1364</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	1292	-	-	-	-	-	-	-	1292
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	72	-	-	-	-	-	-	-	72
<b>OTHER</b>	<b>-</b>	<b>-</b>	<b>136</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2060</b>	<b>443</b>	<b>-</b>	<b>2638</b>
Residential	-	-	98	-	-	-	-	1945	235	-	2278
Comm. and public services	-	-	-	-	-	-	-	115	208	-	323
Agriculture/forestry	-	-	-	-	-	-	-	-	-	-	-
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	37	-	-	-	-	-	-	-	37
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
in industry/transf./energy	-	-	-	-	-	-	-	-	-	-	-
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>219</b>	<b>-</b>	<b>4099</b>	<b>-</b>	<b>-</b>	<b>2350</b>	<b>1455</b>	<b>660</b>	<b>-</b>	<b>-</b>	<b>8783</b>
Electricity plants	219	-	4099	-	-	2350	1455	660	-	-	8783
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Hong Kong, China

Figure 1. Energy production

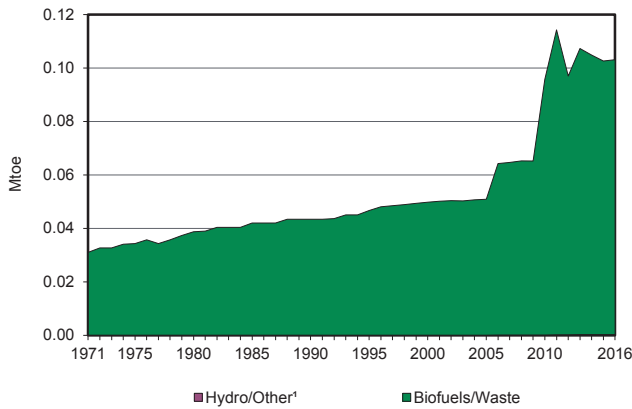


Figure 2. Total primary energy supply<sup>2</sup>

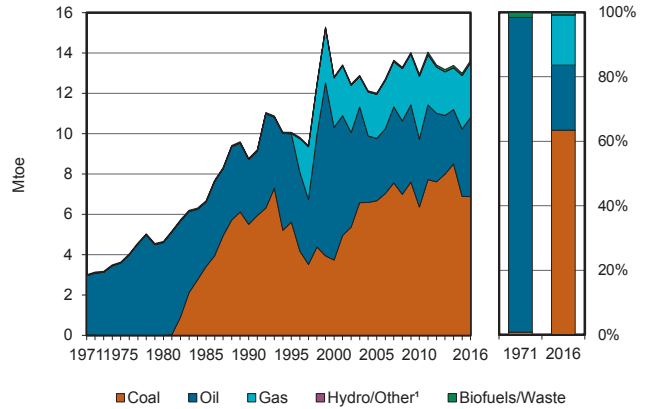


Figure 3. Energy self-sufficiency<sup>3</sup>

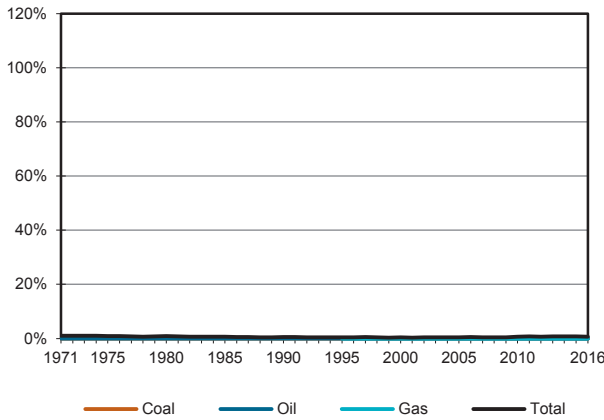


Figure 4. Oil products demand<sup>4</sup>

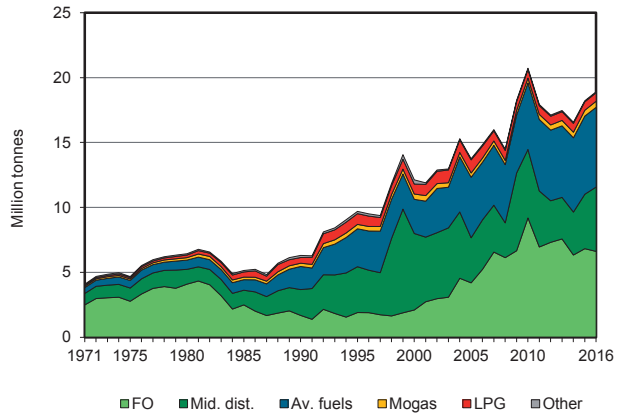


Figure 5. Electricity generation by source

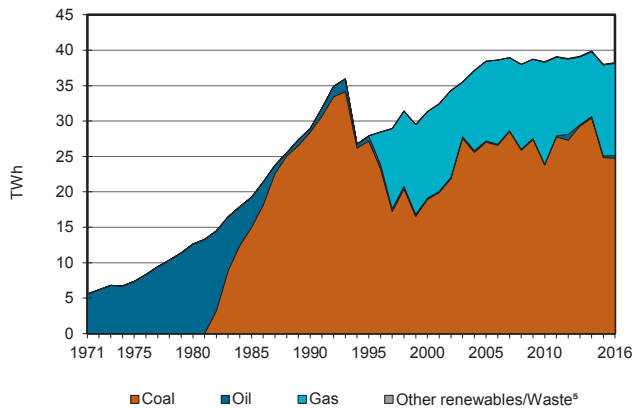
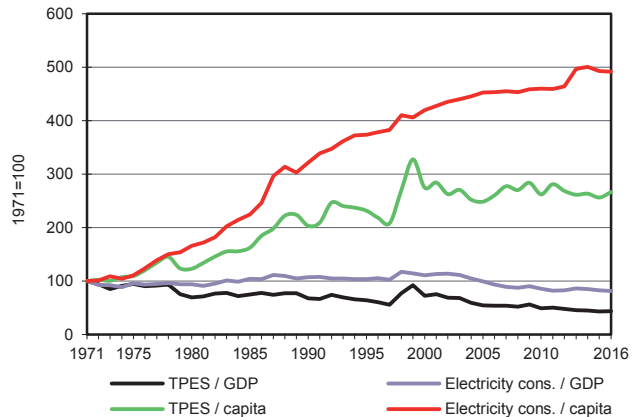


Figure 6. Selected indicators<sup>6</sup>



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Hong Kong, China

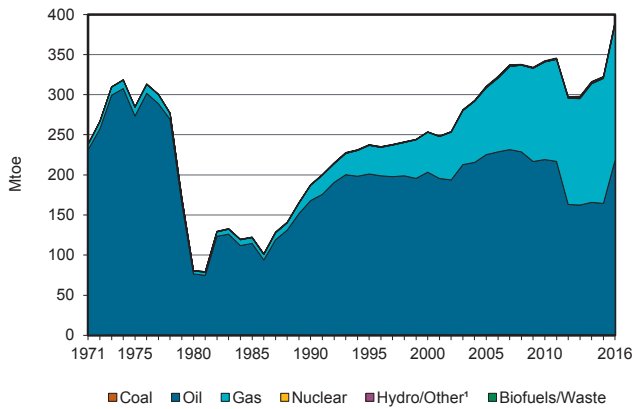
2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	-	-	-	-	-	0	103	-	-	103
Imports	6878	-	19797	2724	-	-	-	3	999	-	30401
Exports	-	-	-374	-	-	-	-	-	-104	-	-478
Intl. marine bunkers	-	-	-8949	-	-	-	-	-	-	-	-8949
Intl. aviation bunkers	-	-	-6532	-	-	-	-	-	-	-	-6532
Stock changes	-	-	-18	-	-	-	-	-	-	-	-18
<b>TPES</b>	<b>6878</b>	<b>-</b>	<b>3924</b>	<b>2724</b>	<b>-</b>	<b>-</b>	<b>0</b>	<b>106</b>	<b>896</b>	<b>-</b>	<b>14528</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-	-	-90	-	-	-	-	-	-72	-	-162
Electricity plants	-5608	-	-94	-2384	-	-	-0	-	3281	-	-4805
CHP plants	-	-	-	-	-	-	-	-29	9	-	-20
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-302	279	-	-	-	-14	-	-	-37
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-	-	-	-	-	-	-	-	-	-
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-	-	-	-
Energy industry own use	-	-	-	-	-	-	-	-	-237	-	-237
Losses	-	-	-	-	-	-	-	-	-153	-	-153
<b>TFC</b>	<b>1270</b>	<b>-</b>	<b>3438</b>	<b>619</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>63</b>	<b>3723</b>	<b>-</b>	<b>9113</b>
<b>INDUSTRY</b>	<b>1270</b>	<b>-</b>	<b>705</b>	<b>32</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>269</b>	<b>-</b>	<b>2276</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	1270	-	705	32	-	-	-	-	269	-	2276
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>2570</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>5</b>	<b>-</b>	<b>-</b>	<b>2576</b>
Domestic aviation	-	-	5	-	-	-	-	-	-	-	5
Road	-	-	2565	-	-	-	-	5	-	-	2570
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>-</b>	<b>-</b>	<b>86</b>	<b>588</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>58</b>	<b>3454</b>	<b>-</b>	<b>4185</b>
Residential	-	-	4	332	-	-	-	55	1030	-	1421
Comm. and public services	-	-	81	256	-	-	-	-	2416	-	2753
Agriculture/forestry	-	-	-	-	-	-	-	-	-	-	-
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	3	9	-	12
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>77</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>77</b>
in industry/transf./energy	-	-	77	-	-	-	-	-	-	-	77
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>24769</b>	<b>-</b>	<b>363</b>	<b>13022</b>	<b>-</b>	<b>-</b>	<b>3</b>	<b>101</b>	<b>-</b>	<b>-</b>	<b>38258</b>
Electricity plants	24769	-	363	13022	-	-	3	-	-	-	38157
CHP plants	-	-	-	-	-	-	-	101	-	-	101
<b>Heat generated - TJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

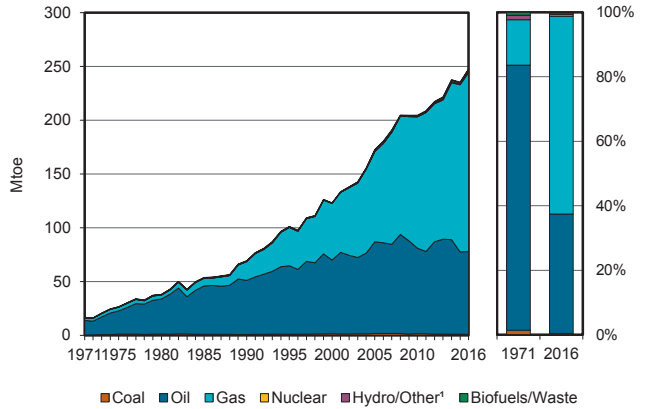
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Islamic Republic of Iran

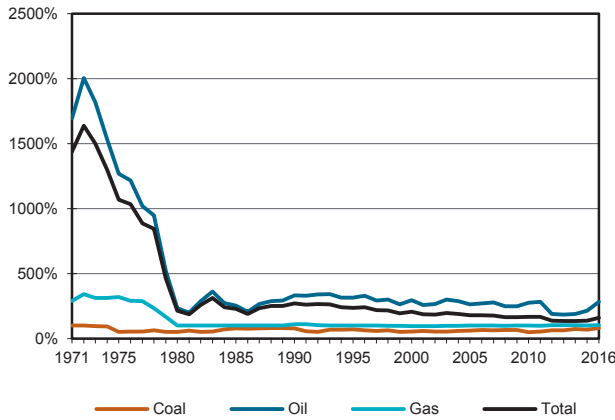
**Figure 1. Energy production**



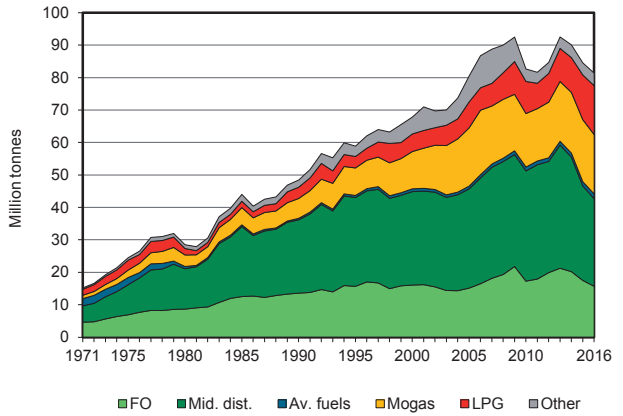
**Figure 2. Total primary energy supply<sup>2</sup>**



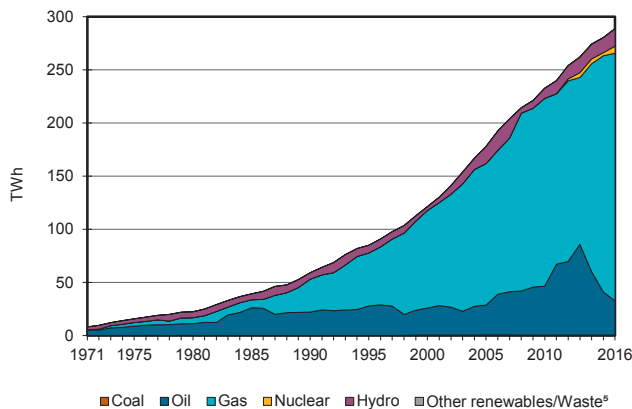
**Figure 3. Energy self-sufficiency<sup>3</sup>**



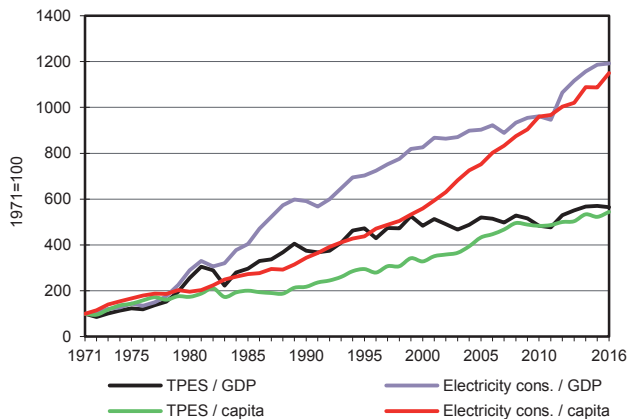
**Figure 4. Oil products demand<sup>4</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>6</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.



## Islamic Republic of Iran

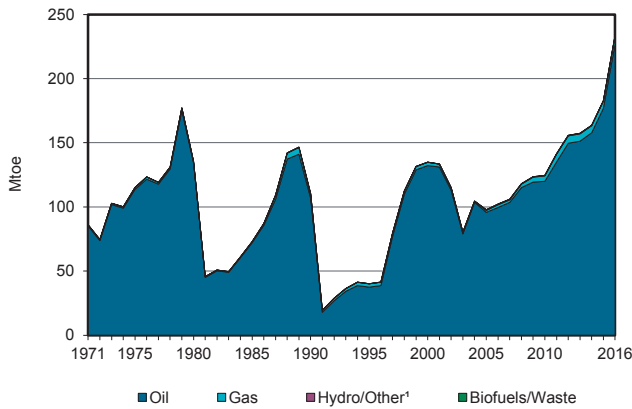
2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	739	217616	-	169066	1725	1412	22	509	-	-	391088
Imports	242	1555	4289	4964	-	-	-	4	363	-	11418
Exports	-70	-123185	-20623	-7672	-	-	-	-	-575	-	-152125
Intl. marine bunkers	-	-	-4837	-	-	-	-	-	-	-	-4837
Intl. aviation bunkers	-	-	-1556	-	-	-	-	-	-	-	-1556
Stock changes	-1	3899	-225	-	-	-	-	-	-	-	3674
<b>TPES</b>	<b>910</b>	<b>99885</b>	<b>-22951</b>	<b>166359</b>	<b>1725</b>	<b>1412</b>	<b>22</b>	<b>513</b>	<b>-212</b>	<b>-</b>	<b>247662</b>
Transfers	-	-11384	13024	-	-	-	-	-	-	-	1640
Statistical differences	613	2233	16	89	-	-	-	-	-47	-	2905
Electricity plants	-167	-	-9183	-52267	-1725	-1412	-22	-7	24858	-	-39925
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-484	-	-	-	-	-	-	-	-	-	-484
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-86	-	-	-	-	-	-	-	-	-	-86
Oil refineries	-	-89002	86629	-	-	-	-	-	-	-	-2373
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-1	-	-	-1
Energy industry own use	-168	-1732	-2688	-12268	-	-	-	-	-999	-	-17854
Losses	-32	-	-	-89	-	-	-	-	-2882	-	-3003
<b>TFC</b>	<b>586</b>	<b>-</b>	<b>64847</b>	<b>101823</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>505</b>	<b>20718</b>	<b>-</b>	<b>188480</b>
<b>INDUSTRY</b>	<b>355</b>	<b>-</b>	<b>3470</b>	<b>33583</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>6937</b>	<b>-</b>	<b>44345</b>
Iron and steel	157	-	-	-	-	-	-	-	-	-	157
Chemical and petrochemical	-	-	155	9550	-	-	-	-	-	-	9705
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	197	-	3315	24033	-	-	-	-	6937	-	34483
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>37957</b>	<b>6844</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>37</b>	<b>-</b>	<b>44838</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	33339	6471	-	-	-	-	-	-	39810
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	59	373	-	-	-	-	-	-	431
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	4560	-	-	-	-	-	37	-	4597
<b>OTHER</b>	<b>9</b>	<b>-</b>	<b>9319</b>	<b>50668</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>505</b>	<b>13744</b>	<b>-</b>	<b>74245</b>
Residential	9	-	5309	42587	-	-	-	252	6740	-	54896
Comm. and public services	-	-	1495	6415	-	-	-	248	3485	-	11644
Agriculture/forestry	-	-	2515	1666	-	-	-	-	3115	-	7296
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	5	404	-	409
<b>NON-ENERGY USE</b>	<b>223</b>	<b>-</b>	<b>14101</b>	<b>10728</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>25052</b>
in industry/transf./energy	223	-	14101	10728	-	-	-	-	-	-	25052
of which: chem./petrochem.	-	-	11800	10728	-	-	-	-	-	-	22528
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>488</b>	<b>-</b>	<b>32035</b>	<b>233252</b>	<b>6620</b>	<b>16421</b>	<b>254</b>	<b>24</b>	<b>-</b>	<b>-</b>	<b>289094</b>
Electricity plants	488	-	32035	233252	6620	16421	254	24	-	-	289094
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

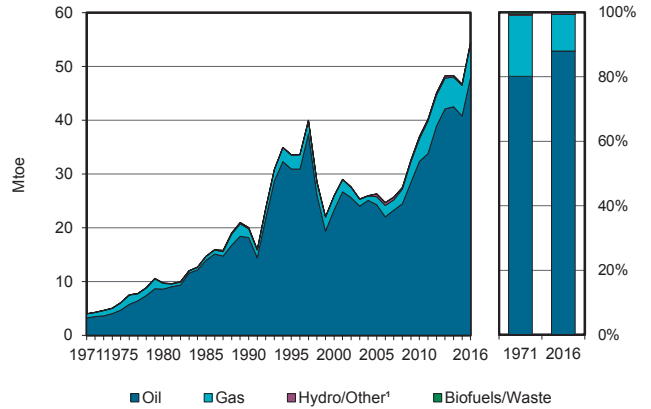
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Iraq

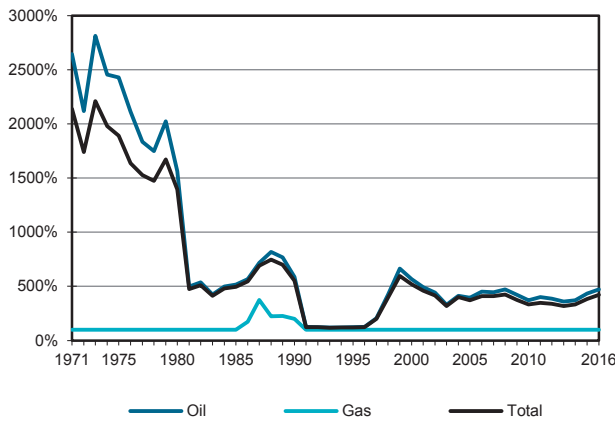
**Figure 1. Energy production**



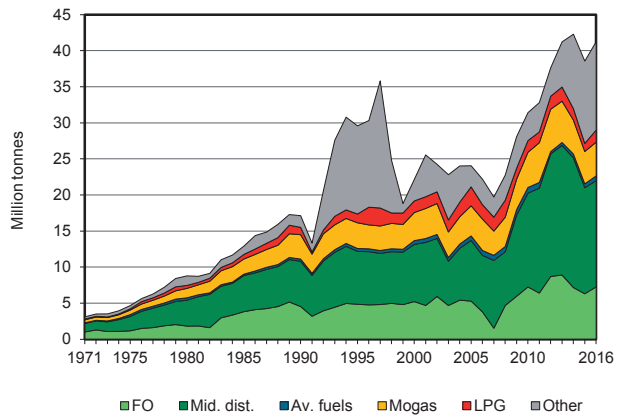
**Figure 2. Total primary energy supply<sup>2</sup>**



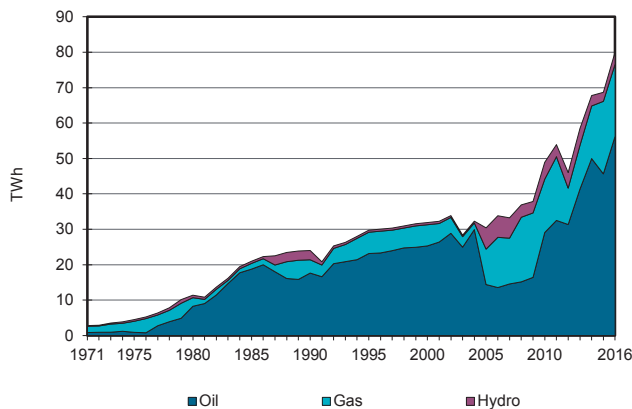
**Figure 3. Energy self-sufficiency<sup>3</sup>**



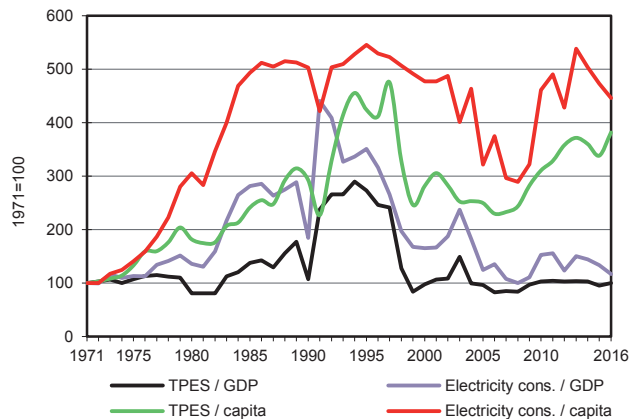
**Figure 4. Oil products demand<sup>4</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>5</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. GDP in 2010 USD.

## Iraq

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	227053	-	6242	-	290	-	51	-	-	233637
Imports	-	-	17107	-	-	-	-	-	1029	-	18136
Exports	-	-191669	-317	-	-	-	-	-	-	-	-191986
Intl. marine bunkers	-	-	-273	-	-	-	-	-	-	-	-273
Intl. aviation bunkers	-	-	-702	-	-	-	-	-	-	-	-702
Stock changes	-	-3212	-1	-	-	-	-	-	-	-	-3213
<b>TPES</b>	-	<b>32171</b>	<b>15815</b>	<b>6242</b>	-	<b>290</b>	-	<b>51</b>	<b>1029</b>	-	<b>55598</b>
Transfers	-	4021	-3565	-	-	-	-	-	-	-	456
Statistical differences	-	-1105	-3435	-	-	-	-	-	-196	-	-4736
Electricity plants	-	-9202	-14223	-4856	-	-290	-	-	6881	-	-21689
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-22838	20288	-	-	-	-	-	-	-	-2551
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-22	-	-	-22
Energy industry own use	-	-2873	-1080	-	-	-	-	-	-174	-	-4127
Losses	-	-175	-	-	-	-	-	-	-4210	-	-4385
<b>TFC</b>	-	-	<b>13799</b>	<b>1387</b>	-	-	-	<b>29</b>	<b>3330</b>	-	<b>18546</b>
<b>INDUSTRY</b>	-	-	<b>1963</b>	<b>1165</b>	-	-	-	-	<b>445</b>	-	<b>3573</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	1963	1165	-	-	-	-	445	-	3573
<b>TRANSPORT</b>	-	-	<b>8492</b>	-	-	-	-	-	-	-	<b>8492</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	8492	-	-	-	-	-	-	-	8492
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	-	-	<b>3217</b>	-	-	-	-	<b>29</b>	<b>2885</b>	-	<b>6131</b>
Residential	-	-	3217	-	-	-	-	-	1655	-	4872
Comm. and public services	-	-	-	-	-	-	-	-	201	-	201
Agriculture/forestry	-	-	-	-	-	-	-	-	-	-	-
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	29	1029	-	1058
<b>NON-ENERGY USE</b>	-	-	<b>128</b>	<b>222</b>	-	-	-	-	-	-	<b>350</b>
in industry/transf./energy	-	-	128	222	-	-	-	-	-	-	350
of which: chem./petrochem.	-	-	-	222	-	-	-	-	-	-	222
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	-	<b>32105</b>	<b>24157</b>	<b>20397</b>	-	<b>3371</b>	-	-	-	-	<b>80030</b>
Electricity plants	-	32105	24157	20397	-	3371	-	-	-	-	80030
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Jamaica

Figure 1. Energy production

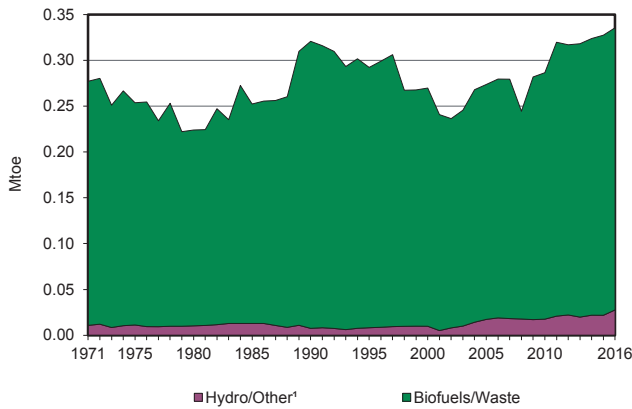


Figure 2. Total primary energy supply²

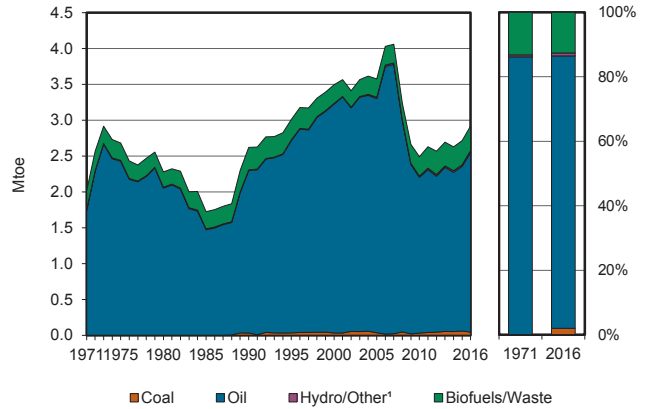


Figure 3. Energy self-sufficiency³

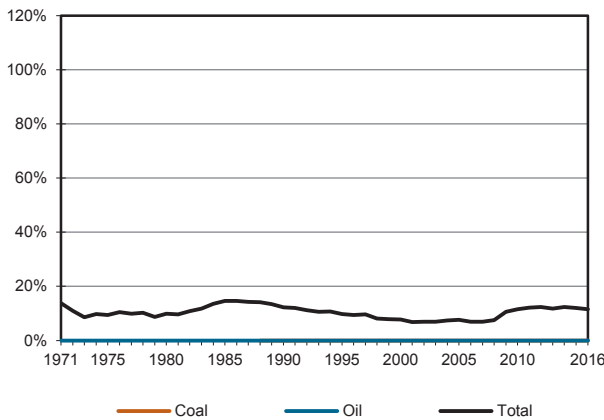


Figure 4. Oil products demand⁴

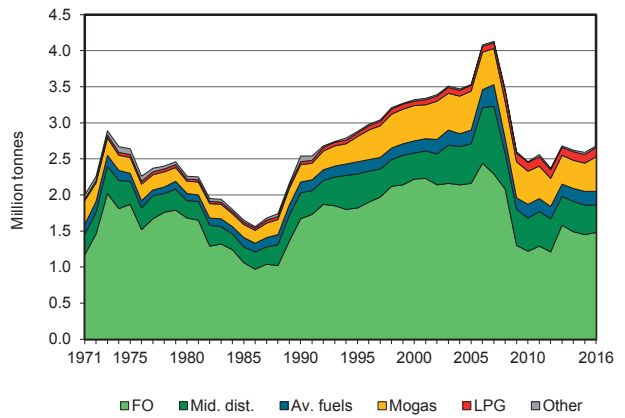


Figure 5. Electricity generation by source

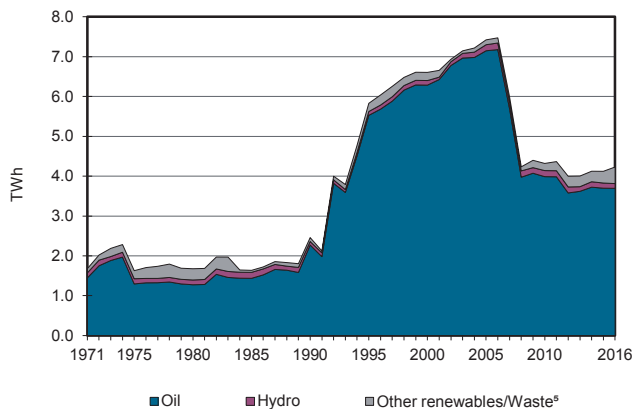
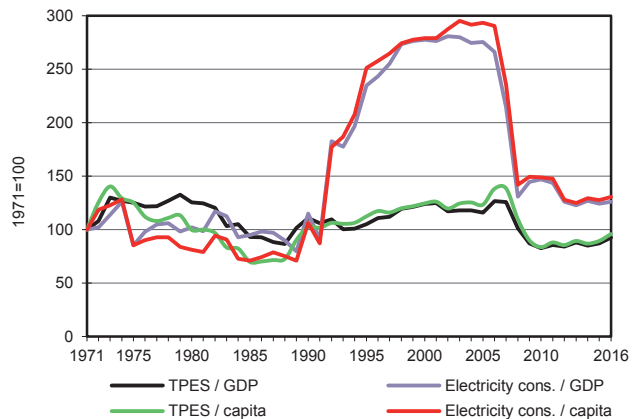


Figure 6. Selected indicators⁶



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Jamaica

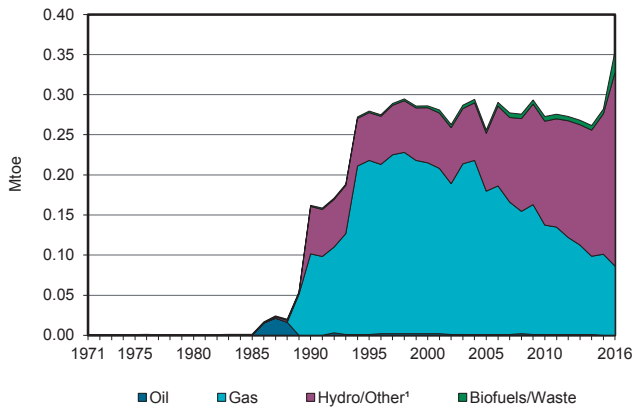
2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	-	-	-	-	10	17	308	-	-	335
Imports	58	1233	1715	-	-	-	-	33	-	-	3039
Exports	-	-	-39	-	-	-	-	-	-	-	-39
Intl. marine bunkers	-	-	-212	-	-	-	-	-	-	-	-212
Intl. aviation bunkers	-	-	-201	-	-	-	-	-	-	-	-201
Stock changes	-13	-	10	-	-	-	-	-	-	-	-3
<b>TPES</b>	<b>45</b>	<b>1233</b>	<b>1273</b>	-	-	<b>10</b>	<b>17</b>	<b>341</b>	-	-	<b>2919</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-	-	-56	-	-	-	-	1	7	-	-49
Electricity plants	-	-	-867	-	-	-10	-17	-	345	-	-549
CHP plants	-	-	-	-	-	-	-	-102	18	-	-83
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-1233	1066	-	-	-	-	-	-	-	-167
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-32	-	-	-32
Energy industry own use	-	-	-	-	-	-	-	-	-2	-	-2
Losses	-	-	-	-	-	-	-	-	-100	-	-100
<b>TFC</b>	<b>45</b>	-	<b>1416</b>	-	-	-	-	<b>209</b>	<b>269</b>	-	<b>1938</b>
<b>INDUSTRY</b>	<b>45</b>	-	<b>683</b>	-	-	-	-	<b>73</b>	<b>130</b>	-	<b>932</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	45	-	4	-	-	-	-	-	4	-	53
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	589	-	-	-	-	-	88	-	676
Food and tobacco	-	-	2	-	-	-	-	-	4	-	6
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	11	-	-	-	-	-	3	-	14
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	78	-	-	-	-	73	32	-	182
<b>TRANSPORT</b>	-	-	<b>604</b>	-	-	-	-	<b>33</b>	-	-	<b>638</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	603	-	-	-	-	33	-	-	637
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	1	-	-	-	-	-	-	-	1
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	-	-	<b>109</b>	-	-	-	-	<b>102</b>	<b>138</b>	-	<b>350</b>
Residential	-	-	41	-	-	-	-	33	88	-	162
Comm. and public services	-	-	57	-	-	-	-	70	8	-	135
Agriculture/forestry	-	-	11	-	-	-	-	-	40	-	51
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	2	-	2
<b>NON-ENERGY USE</b>	-	-	<b>19</b>	-	-	-	-	-	-	-	<b>19</b>
in industry/transf./energy	-	-	19	-	-	-	-	-	-	-	19
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	-	-	<b>3695</b>	-	-	<b>119</b>	<b>203</b>	<b>213</b>	-	-	<b>4230</b>
Electricity plants	-	-	3695	-	-	119	203	-	-	-	4017
CHP plants	-	-	-	-	-	-	-	213	-	-	213
<b>Heat generated - TJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

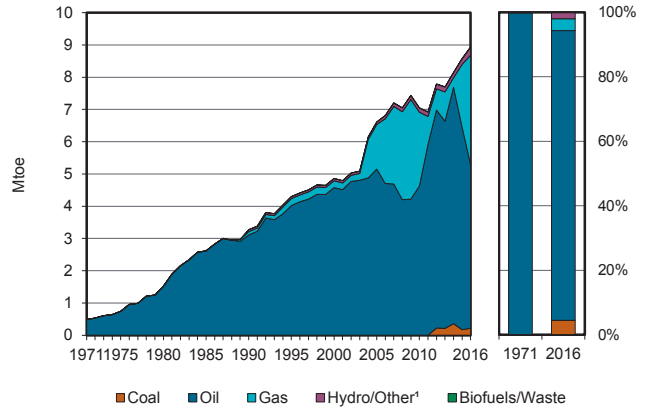
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Jordan

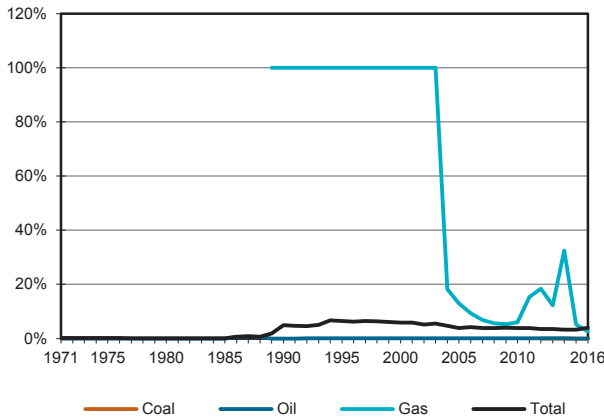
**Figure 1. Energy production**



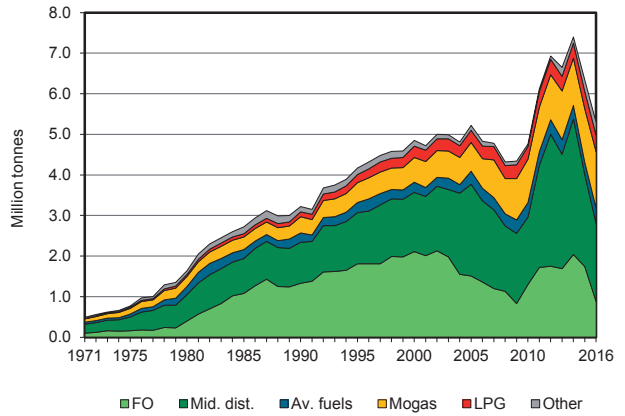
**Figure 2. Total primary energy supply<sup>2</sup>**



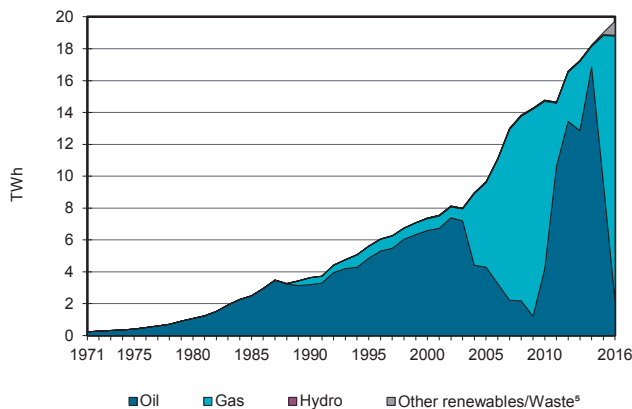
**Figure 3. Energy self-sufficiency<sup>3</sup>**



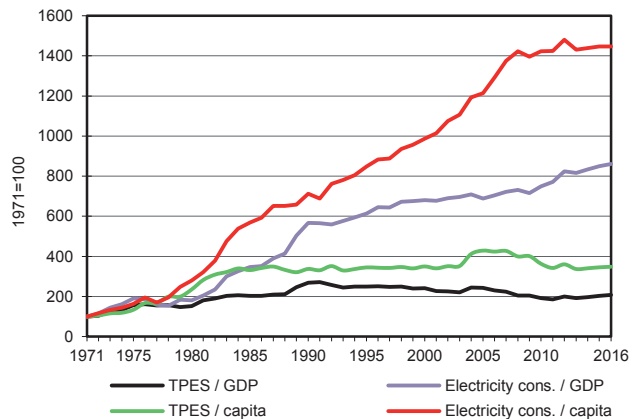
**Figure 4. Oil products demand<sup>4</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>6</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Jordan

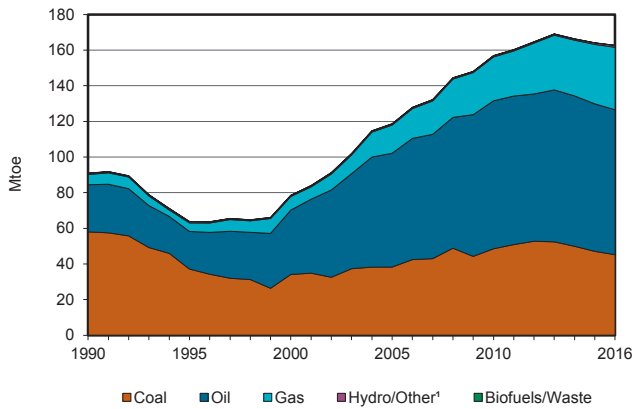
2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	-	-	86	-	4	238	27	-	-	355
Imports	220	2981	2465	3990	-	-	-	-	29	-	9685
Exports	-	-	-	-688	-	-	-	-	-4	-	-691
Intl. marine bunkers	-	-	-7	-	-	-	-	-	-	-	-7
Intl. aviation bunkers	-	-	-388	-	-	-	-	-	-	-	-388
Stock changes	-	23	-1	-	-	-	-	-	-	-	22
<b>TPES</b>	<b>220</b>	<b>3005</b>	<b>2068</b>	<b>3389</b>	<b>-</b>	<b>4</b>	<b>238</b>	<b>27</b>	<b>25</b>	<b>-</b>	<b>8975</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-	-47	224	0	-	-	-	51	-46	-	182
Electricity plants	-	-	-570	-3389	-	-4	-76	-1	1697	-	-2343
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-2958	2675	-	-	-	-	-	-	-	-283
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-32	-	-	-32
Energy industry own use	-	-	-189	-	-	-	-	-	-53	-	-241
Losses	-	-	-	-	-	-	-	-	-178	-	-178
<b>TFC</b>	<b>220</b>	<b>-</b>	<b>4209</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>162</b>	<b>45</b>	<b>1444</b>	<b>-</b>	<b>6080</b>
<b>INDUSTRY</b>	<b>220</b>	<b>-</b>	<b>512</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>332</b>	<b>-</b>	<b>1064</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	12	-	12
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	220	-	183	-	-	-	-	-	43	-	445
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	35	-	35
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	330	-	-	-	-	-	242	-	572
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>2768</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2768</b>
Domestic aviation	-	-	8	-	-	-	-	-	-	-	8
Road	-	-	2758	-	-	-	-	-	-	-	2758
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	2	-	-	-	-	-	-	-	2
<b>OTHER</b>	<b>-</b>	<b>-</b>	<b>862</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>162</b>	<b>45</b>	<b>1112</b>	<b>-</b>	<b>2182</b>
Residential	-	-	549	-	-	-	127	13	646	-	1335
Comm. and public services	-	-	137	-	-	-	35	11	247	-	430
Agriculture/forestry	-	-	-	-	-	-	-	-	219	-	219
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	176	-	-	-	-	21	-	-	198
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>66</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>66</b>
in industry/transf./energy	-	-	66	-	-	-	-	-	-	-	66
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>-</b>	<b>-</b>	<b>2164</b>	<b>16639</b>	<b>-</b>	<b>42</b>	<b>882</b>	<b>4</b>	<b>-</b>	<b>-</b>	<b>19731</b>
Electricity plants	-	-	2164	16639	-	42	882	4	-	-	19731
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

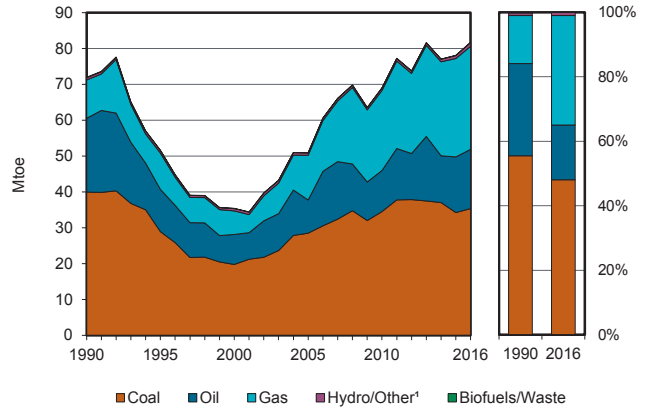
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Kazakhstan

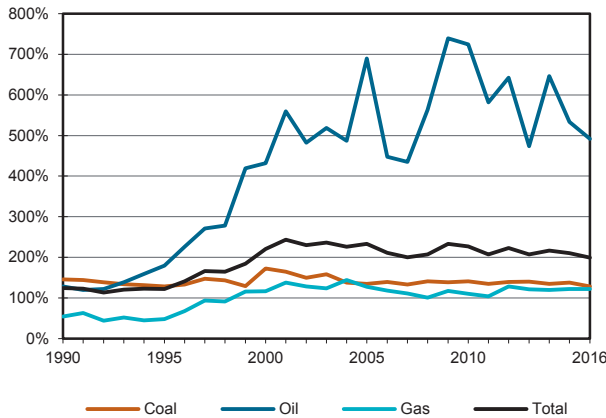
**Figure 1. Energy production**



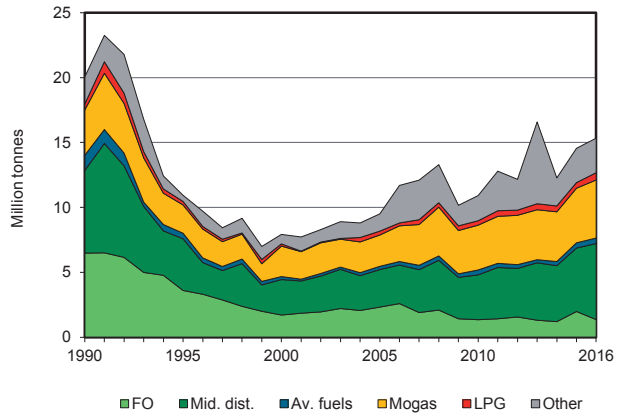
**Figure 2. Total primary energy supply<sup>2</sup>**



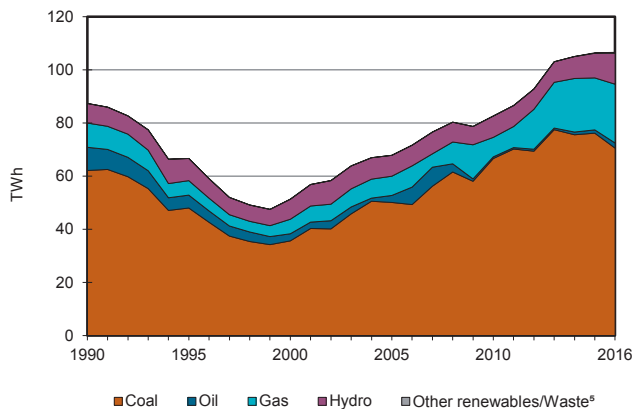
**Figure 3. Energy self-sufficiency<sup>3</sup>**



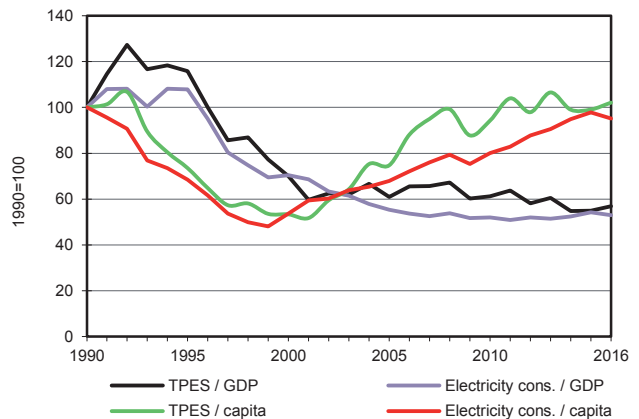
**Figure 4. Oil products demand<sup>4</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>6</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.



## Kazakhstan

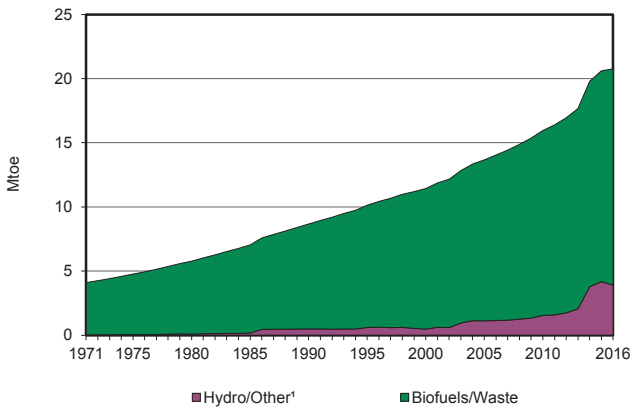
2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	45205	81303	-	35058	-	999	31	99	-	-	162695
Imports	512	23	1940	5754	-	-	-	8	113	-	8350
Exports	-11331	-62501	-4060	-12414	-	-	-	-	-221	-	-90528
Intl. marine bunkers	-	-	-147	-	-	-	-	-	-	-	-147
Intl. aviation bunkers	-	-	-315	-	-	-	-	-	-	-	-315
Stock changes	973	-201	484	331	-	-	-	-	-	-	1587
<b>TPES</b>	<b>35358</b>	<b>18624</b>	<b>-2098</b>	<b>28729</b>	<b>-</b>	<b>999</b>	<b>31</b>	<b>107</b>	<b>-108</b>	<b>-</b>	<b>81643</b>
Transfers	-	-1392	1392	-	-	-	-	-	-	-	-
Statistical differences	-301	208	1068	-1417	-	-	-	-1	0	-	-443
Electricity plants	-	-	-	-	-	-999	-31	-	1031	-	-
CHP plants	-19385	-	-544	-5539	-	-	-	-	8138	8623	-8706
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-909	-	-	-	-	-	-	-	-	-	-909
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-2015	-	-	-	-	-	-	-	-	-	-2015
Oil refineries	-	-15102	12979	-	-	-	-	-	-	-	-2123
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-2	-	-	-2
Energy industry own use	-579	-1613	-348	-17973	-	-	-	-12	-2935	-1915	-25375
Losses	-2494	-193	-21	-487	-	-	-	-	-460	-759	-4414
<b>TFC</b>	<b>9676</b>	<b>532</b>	<b>12428</b>	<b>3313</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>92</b>	<b>5666</b>	<b>5948</b>	<b>37655</b>
<b>INDUSTRY</b>	<b>8138</b>	<b>532</b>	<b>4202</b>	<b>1652</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>3804</b>	<b>1855</b>	<b>20185</b>
Iron and steel	3635	-	461	307	-	-	-	-	1092	729	6225
Chemical and petrochemical	20	-	31	427	-	-	-	-	199	148	825
Non-ferrous metals	705	-	349	184	-	-	-	-	754	8	2000
Non-metallic minerals	2	-	157	-	-	-	-	-	124	-	283
Transport equipment	2	-	2	7	-	-	-	-	4	12	26
Machinery	28	-	23	15	-	-	-	-	26	37	128
Mining and quarrying	559	-	886	439	-	-	-	-	440	267	2591
Food and tobacco	35	-	62	214	-	-	-	-	119	166	597
Paper pulp and printing	0	-	5	18	-	-	-	-	6	18	47
Wood and wood products	0	-	1	1	-	-	-	-	3	3	8
Construction	28	-	2107	33	-	-	-	-	39	32	2239
Textile and leather	1	-	2	7	-	-	-	-	11	8	29
Non-specified	3123	532	117	-	-	-	-	-	987	428	5187
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>5187</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>279</b>	<b>-</b>	<b>5466</b>
Domestic aviation	-	-	80	-	-	-	-	-	-	-	80
Road	-	-	4856	-	-	-	-	-	10	-	4866
Rail	-	-	211	-	-	-	-	-	71	-	281
Pipeline transport	-	-	16	-	-	-	-	-	38	-	53
Domestic navigation	-	-	7	-	-	-	-	-	-	-	7
Non-specified	-	-	17	-	-	-	-	-	161	-	178
<b>OTHER</b>	<b>1538</b>	<b>-</b>	<b>2950</b>	<b>1234</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>92</b>	<b>1582</b>	<b>4093</b>	<b>11490</b>
Residential	879	-	1876	284	-	-	-	92	1049	1065	5245
Comm. and public services	551	-	603	925	-	-	-	-	480	1740	4299
Agriculture/forestry	108	-	460	25	-	-	-	-	53	86	732
Fishing	-	-	-	-	-	-	-	-	0	0	1
Non-specified	-	-	11	-	-	-	-	-	-	1201	1213
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>88</b>	<b>427</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>515</b>
in industry/transf./energy	-	-	88	427	-	-	-	-	-	-	515
of which: chem./petrochem.	-	-	-	427	-	-	-	-	-	-	427
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>70570</b>	<b>-</b>	<b>1920</b>	<b>22152</b>	<b>-</b>	<b>11621</b>	<b>364</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>106627</b>
Electricity plants	-	-	-	-	-	11621	364	-	-	-	11985
CHP plants	70570	-	1920	22152	-	-	-	-	-	-	94642
<b>Heat generated - TJ</b>	<b>351401</b>	<b>-</b>	<b>9621</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>361022</b>
CHP plants	351401	-	9621	-	-	-	-	-	-	-	361022
Heat plants	-	-	-	-	-	-	-	-	-	-	-

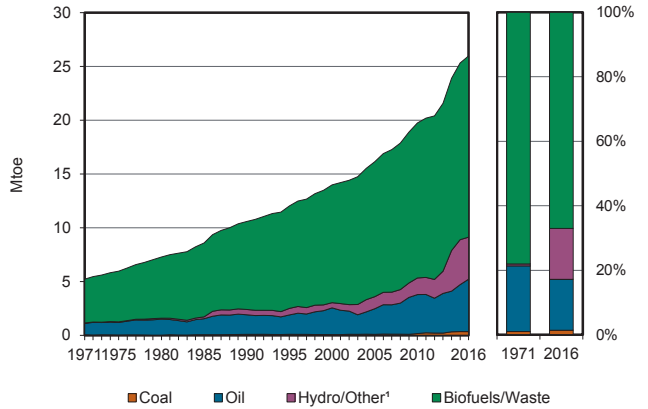
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Kenya

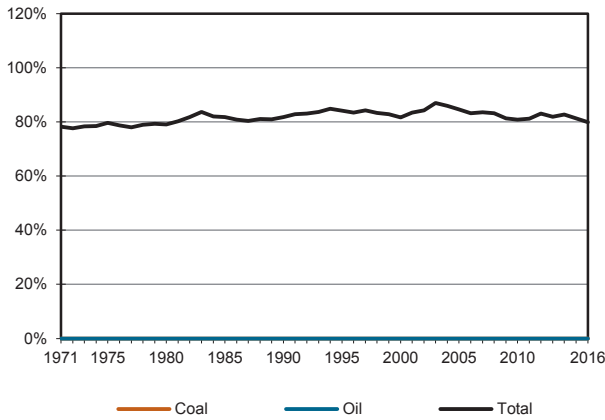
**Figure 1. Energy production**



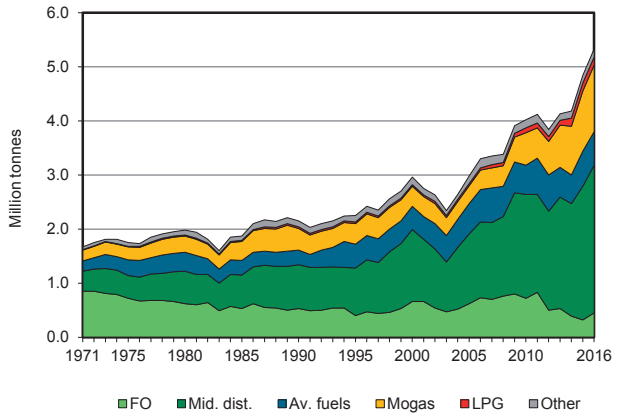
**Figure 2. Total primary energy supply<sup>2</sup>**



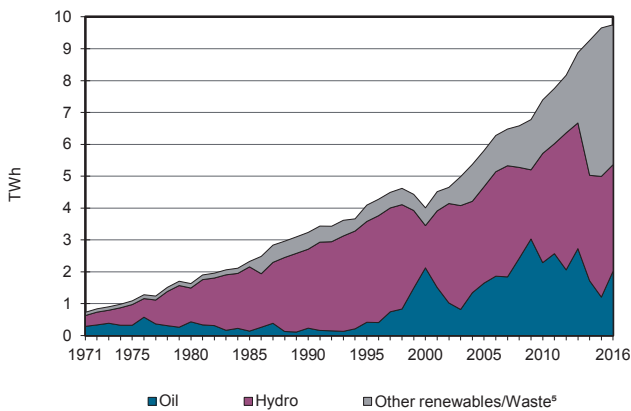
**Figure 3. Energy self-sufficiency<sup>3</sup>**



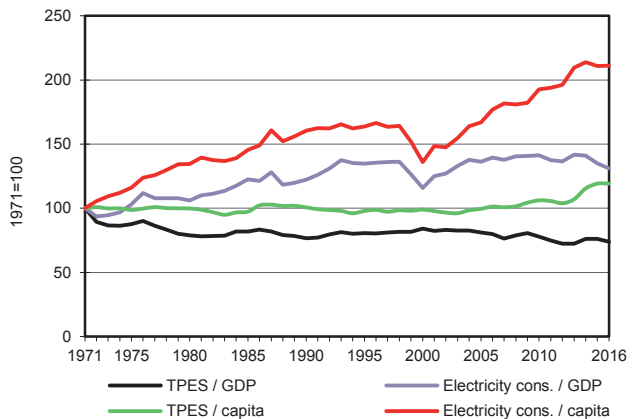
**Figure 4. Oil products demand<sup>4</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>6</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Kenya

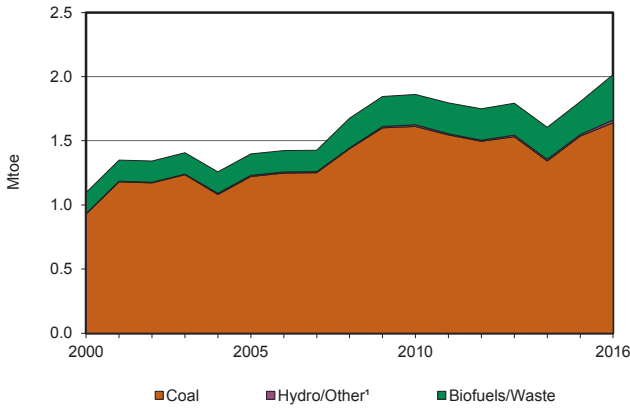
2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	-	-	-	-	287	3620	16851	-	-	20758
Imports	343	743	4863	-	-	-	-	-	16	-	5964
Exports	-	-	-26	-	-	-	-	-	-2	-	-28
Intl. marine bunkers	-	-	-43	-	-	-	-	-	-	-	-43
Intl. aviation bunkers	-	-	-659	-	-	-	-	-	-	-	-659
Stock changes	-	-	-	-	-	-	-	-	-	-	-
<b>TPES</b>	<b>343</b>	<b>743</b>	<b>4134</b>	-	-	<b>287</b>	<b>3620</b>	<b>16851</b>	<b>14</b>	-	<b>25992</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-	-	-	-	-	-	-	-	27	-	27
Electricity plants	-	-	-579	-	-	-287	-3620	-35	839	-	-3683
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-743	715	-	-	-	-	-	-	-	-28
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-5617	-	-	-5617
Energy industry own use	-	-	-37	-	-	-	-	-	-2	-	-38
Losses	-	-	-	-	-	-	-	-	-166	-	-166
<b>TFC</b>	<b>343</b>	-	<b>4233</b>	-	-	-	-	<b>11198</b>	<b>712</b>	-	<b>16487</b>
<b>INDUSTRY</b>	<b>343</b>	-	<b>689</b>	-	-	-	-	-	<b>377</b>	-	<b>1410</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	343	-	-	-	-	-	-	-	-	-	343
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	10	-	10
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	689	-	-	-	-	-	367	-	1056
<b>TRANSPORT</b>	-	-	<b>2938</b>	-	-	-	-	-	-	-	<b>2938</b>
Domestic aviation	-	-	5	-	-	-	-	-	-	-	5
Road	-	-	2887	-	-	-	-	-	-	-	2887
Rail	-	-	44	-	-	-	-	-	-	-	44
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	1	-	-	-	-	-	-	-	1
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	-	-	<b>490</b>	-	-	-	-	<b>11198</b>	<b>334</b>	-	<b>12023</b>
Residential	-	-	417	-	-	-	-	11198	231	-	11847
Comm. and public services	-	-	-	-	-	-	-	-	103	-	103
Agriculture/forestry	-	-	30	-	-	-	-	-	-	-	30
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	43	-	-	-	-	-	-	-	43
<b>NON-ENERGY USE</b>	-	-	<b>116</b>	-	-	-	-	-	-	-	<b>116</b>
in industry/transf./energy	-	-	116	-	-	-	-	-	-	-	116
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	-	-	<b>2020</b>	-	-	<b>3341</b>	<b>4268</b>	<b>123</b>	-	-	<b>9752</b>
Electricity plants	-	-	2020	-	-	3341	4268	123	-	-	9752
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

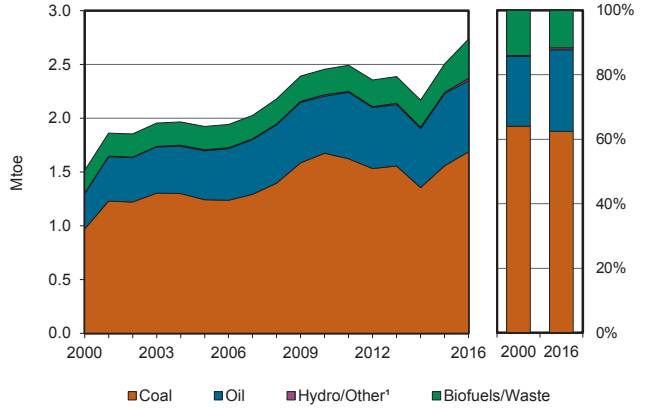
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Kosovo

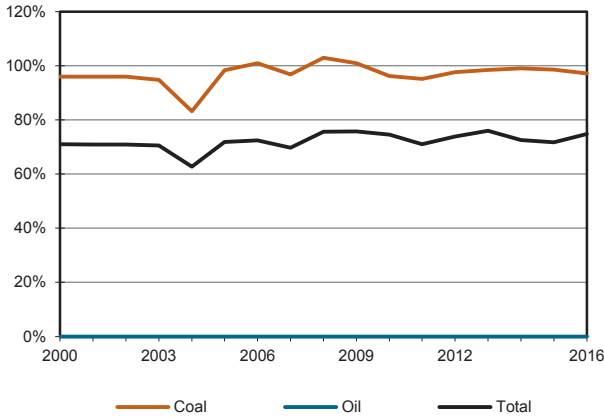
**Figure 1. Energy production**



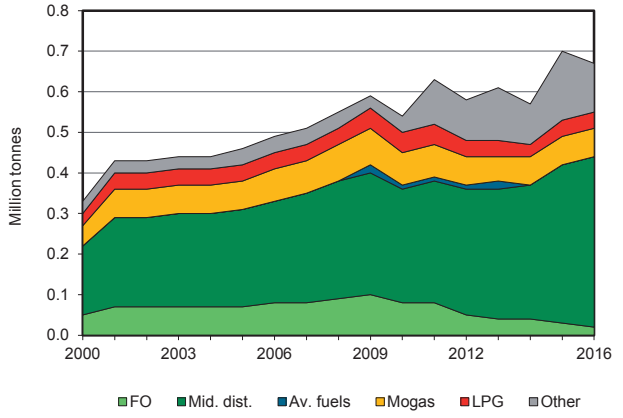
**Figure 2. Total primary energy supply<sup>2</sup>**



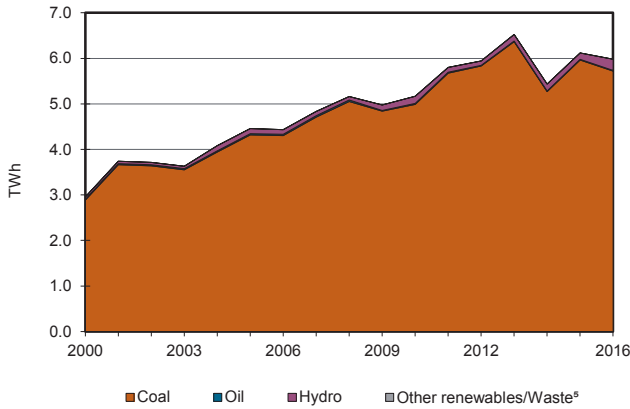
**Figure 3. Energy self-sufficiency<sup>3</sup>**



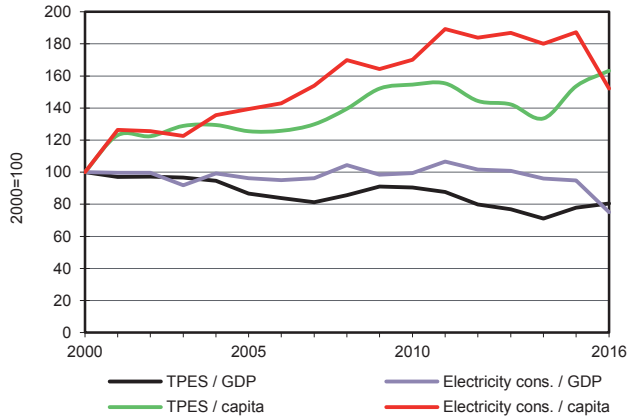
**Figure 4. Oil products demand<sup>4</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>6</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Kosovo

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	1640	-	-	-	-	21	0	354	-	-	2015
Imports	1	-	675	-	-	-	-	12	48	-	736
Exports	-3	-	-9	-	-	-	-	-	-91	-	-104
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-4	-	-	-	-	-	-	-	-4
Stock changes	50	-	-	-	-	-	-	-	-	-	50
<b>TPES</b>	<b>1688</b>	-	<b>662</b>	-	-	<b>21</b>	<b>0</b>	<b>366</b>	<b>-44</b>	-	<b>2693</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-1	-	-	-	-	-	-	-	0	-0	-1
Electricity plants	-1588	-	-5	-	-	-21	-	-	514	-	-1099
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-1	-	-	-	-	-	-	19	18
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-	-	-	-	-	-	-	-	-	-
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-	-	-	-
Energy industry own use	-	-	-	-	-	-	-	-	-37	-2	-39
Losses	-	-	-	-	-	-	-	-	-101	-3	-104
<b>TFC</b>	<b>100</b>	-	<b>656</b>	-	-	-	<b>0</b>	<b>366</b>	<b>333</b>	<b>13</b>	<b>1468</b>
<b>INDUSTRY</b>	<b>26</b>	-	<b>150</b>	-	-	-	-	<b>16</b>	<b>90</b>	-	<b>281</b>
Iron and steel	21	-	13	-	-	-	-	0	42	-	76
Chemical and petrochemical	-	-	2	-	-	-	-	0	0	-	2
Non-ferrous metals	-	-	20	-	-	-	-	-	1	-	21
Non-metallic minerals	-	-	73	-	-	-	-	0	4	-	77
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	1	-	-	-	-	0	1	-	2
Mining and quarrying	-	-	3	-	-	-	-	-	-	-	3
Food and tobacco	4	-	8	-	-	-	-	7	32	-	51
Paper pulp and printing	-	-	-	-	-	-	-	-	0	-	0
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	0	-	-	-	-	-	-	-	-	-	0
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	0	-	29	-	-	-	-	9	11	-	48
<b>TRANSPORT</b>	-	-	<b>390</b>	-	-	-	-	-	-	-	<b>390</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	387	-	-	-	-	-	-	-	387
Rail	-	-	2	-	-	-	-	-	-	-	2
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>74</b>	-	<b>74</b>	-	-	-	<b>0</b>	<b>350</b>	<b>243</b>	<b>13</b>	<b>755</b>
Residential	9	-	13	-	-	-	0	337	182	9	549
Comm. and public services	64	-	46	-	-	-	0	10	52	5	177
Agriculture/forestry	1	-	15	-	-	-	-	3	9	-	29
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>NON-ENERGY USE</b>	-	-	<b>42</b>	-	-	-	-	-	-	-	<b>42</b>
in industry/transf./energy	-	-	42	-	-	-	-	-	-	-	42
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>5721</b>	-	<b>15</b>	-	-	<b>245</b>	-	-	-	-	<b>5981</b>
Electricity plants	5721	-	15	-	-	245	-	-	-	-	5981
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	-	-	<b>46</b>	-	-	-	-	-	<b>749</b>	-	<b>795</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	46	-	-	-	-	-	749	-	795

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

Kuwait

Figure 1. Energy production

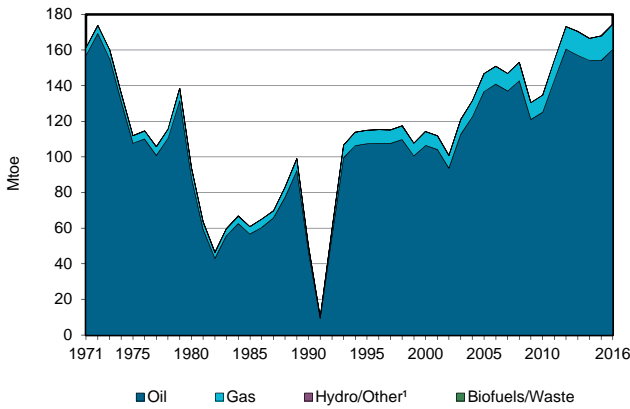


Figure 2. Total primary energy supply<sup>2</sup>

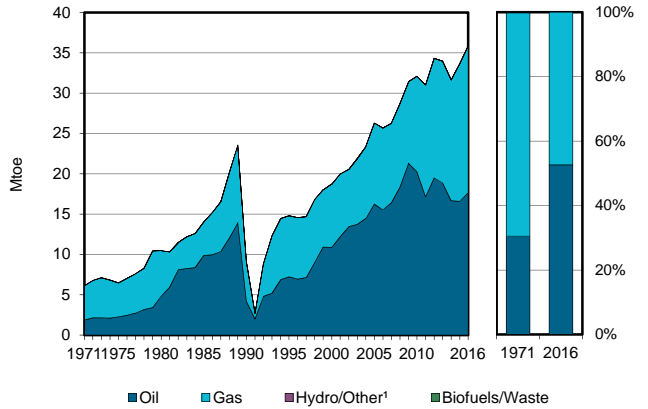


Figure 3. Energy self-sufficiency<sup>3</sup>

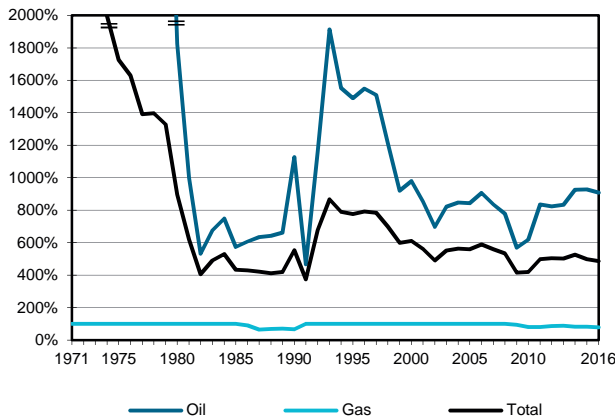


Figure 4. Oil products demand<sup>4</sup>

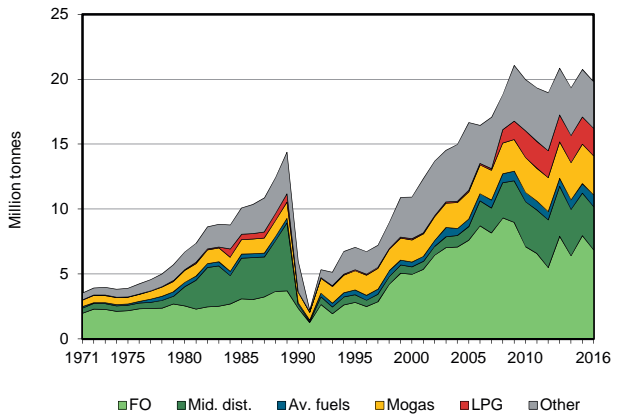


Figure 5. Electricity generation by source

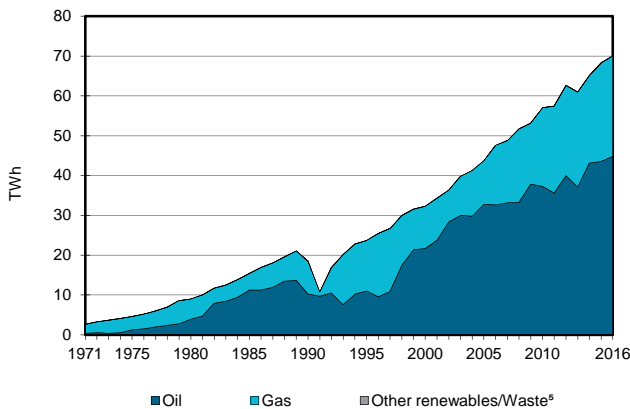
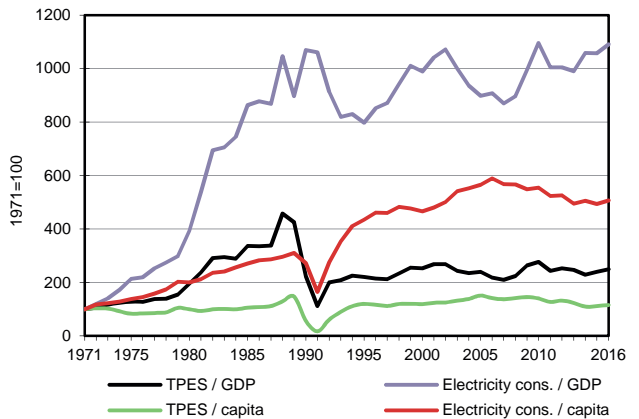


Figure 6. Selected indicators<sup>6</sup>



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency. Maximum scale refers to values greater than or equal to 2000%.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Kuwait

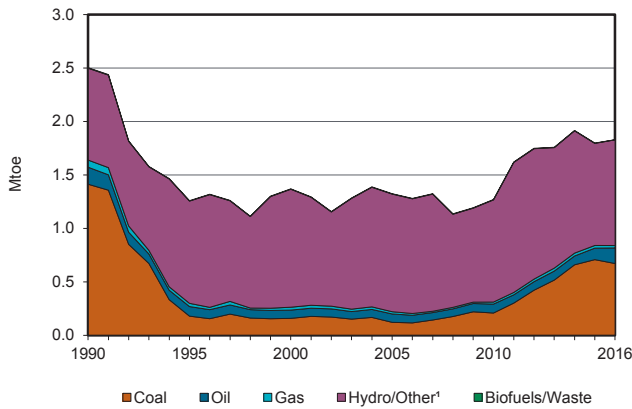
2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	160389	-	14124	-	-	0	-	-	-	174514
Imports	-	-	-	4052	-	-	-	-	-	-	4052
Exports	-	-109605	-31808	-	-	-	-	-	-	-	-141414
Intl. marine bunkers	-	-	-1074	-	-	-	-	-	-	-	-1074
Intl. aviation bunkers	-	-	-968	-	-	-	-	-	-	-	-968
Stock changes	-	-	726	-	-	-	-	-	-	-	726
<b>TPES</b>	-	<b>50784</b>	<b>-33125</b>	<b>18176</b>	-	-	<b>0</b>	-	-	-	<b>35835</b>
Transfers	-	-8235	9236	-	-	-	-	-	-	-	1001
Statistical differences	-	1045	661	-	-	-	-	-	-	-	1707
Electricity plants	-	-2634	-6466	-6214	-	-	-0	-	6027	-	-9287
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-40960	38905	-	-	-	-	-	-	-	-2056
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-	-	-	-
Energy industry own use	-	-	-426	-5495	-	-	-	-	-1394	-	-7315
Losses	-	-	-	-	-	-	-	-	-702	-	-702
<b>TFC</b>	-	-	<b>8785</b>	<b>6467</b>	-	-	-	-	<b>3930</b>	-	<b>19183</b>
<b>INDUSTRY</b>	-	-	<b>792</b>	<b>6467</b>	-	-	-	-	-	-	<b>7260</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	2609	-	-	-	-	-	-	2609
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	792	3858	-	-	-	-	-	-	4650
<b>TRANSPORT</b>	-	-	<b>4788</b>	-	-	-	-	-	-	-	<b>4788</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	4788	-	-	-	-	-	-	-	4788
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	-	-	<b>322</b>	-	-	-	-	-	<b>3930</b>	-	<b>4253</b>
Residential	-	-	322	-	-	-	-	-	2662	-	2985
Comm. and public services	-	-	-	-	-	-	-	-	1268	-	1268
Agriculture/forestry	-	-	-	-	-	-	-	-	-	-	-
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>NON-ENERGY USE</b>	-	-	<b>2883</b>	-	-	-	-	-	-	-	<b>2883</b>
in industry/transf./energy	-	-	2883	-	-	-	-	-	-	-	2883
of which: chem./petrochem.	-	-	2283	-	-	-	-	-	-	-	2283
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	-	-	<b>44799</b>	<b>25293</b>	-	-	<b>2</b>	-	-	-	<b>70094</b>
Electricity plants	-	-	44799	25293	-	-	2	-	-	-	70094
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

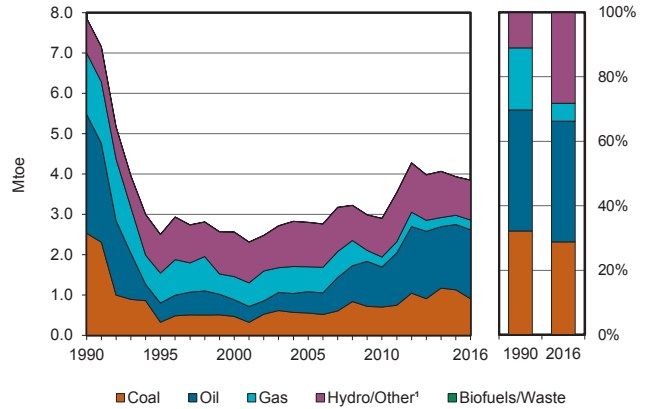
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Kyrgyzstan

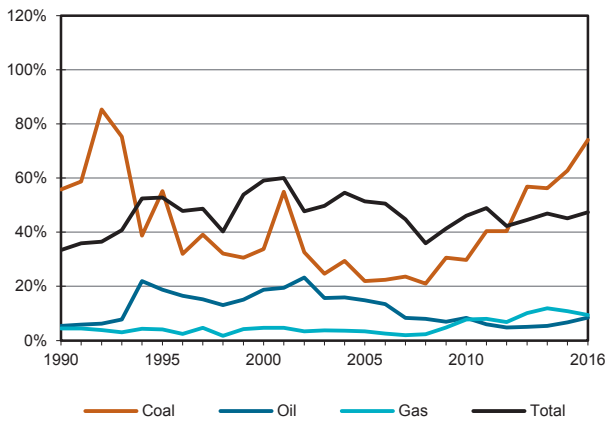
**Figure 1. Energy production**



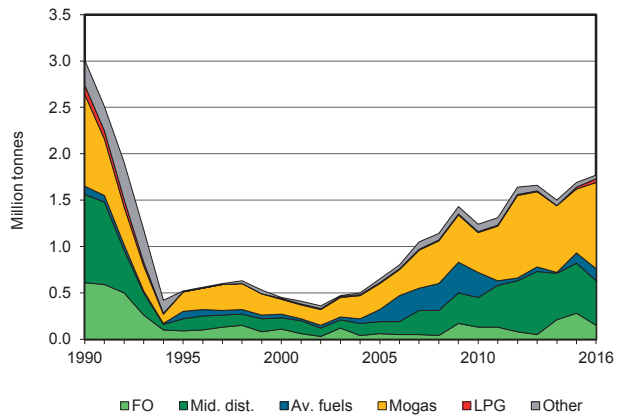
**Figure 2. Total primary energy supply<sup>2</sup>**



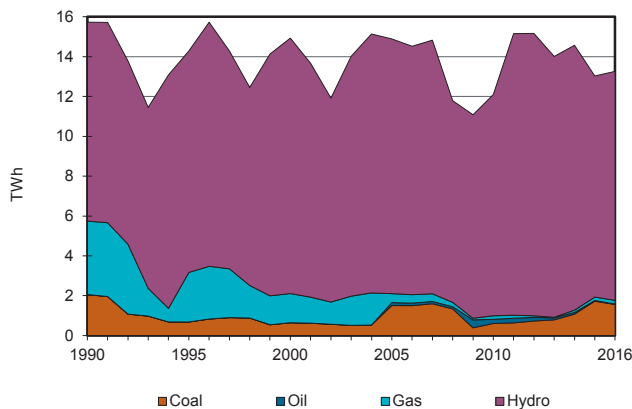
**Figure 3. Energy self-sufficiency<sup>3</sup>**



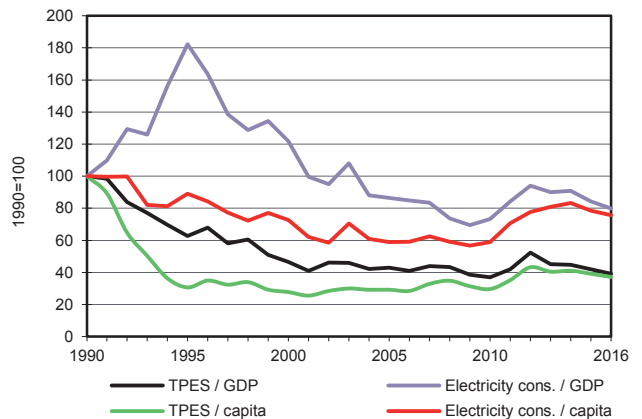
**Figure 4. Oil products demand<sup>4</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>5</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. GDP in 2010 USD.



## Kyrgyzstan

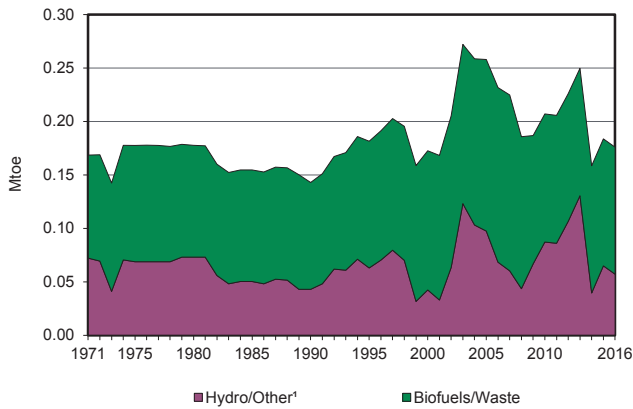
2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	671	146	-	22	-	988	-	1	-	-	1829
Imports	397	251	1376	217	-	-	-	-	28	-	2270
Exports	-143	-7	-66	-	-	-	-	-	-17	-	-233
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-106	-	-	-	-	-	-	-	-106
Stock changes	-20	-1	119	-	-	-	-	-	-	-	98
<b>TPES</b>	<b>905</b>	<b>389</b>	<b>1324</b>	<b>239</b>	<b>-</b>	<b>988</b>	<b>-</b>	<b>1</b>	<b>11</b>	<b>-</b>	<b>3858</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-2	-	-	-2	-	-	-	-	-11	83	68
Electricity plants	-9	-	-	-	-	-988	-	-	991	-	-7
CHP plants	-388	-	-9	-58	-	-	-	-	150	193	-112
Heat plants	-3	-	-10	-45	-	-	-	-	-	44	-15
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-389	389	-	-	-	-	-	-	-	-0
Petrochemical plants	-	-	-3	-	-	-	-	-	-	-	-3
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-	-	-	-
Energy industry own use	-	-	-	-2	-	-	-	-	-39	-19	-61
Losses	-0	-	-1	-4	-	-	-	-	-228	-21	-255
<b>TFC</b>	<b>502</b>	<b>-</b>	<b>1691</b>	<b>127</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>874</b>	<b>279</b>	<b>3474</b>
<b>INDUSTRY</b>	<b>105</b>	<b>-</b>	<b>128</b>	<b>22</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>147</b>	<b>24</b>	<b>426</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	1	-	1
Non-ferrous metals	-	-	-	-	-	-	-	-	9	1	10
Non-metallic minerals	30	-	4	0	-	-	-	-	26	2	61
Transport equipment	-	-	-	-	-	-	-	-	0	-	0
Machinery	-	-	-	10	-	-	-	-	3	2	15
Mining and quarrying	0	-	-	-	-	-	-	-	7	-	8
Food and tobacco	4	-	14	8	-	-	-	-	14	16	56
Paper pulp and printing	-	-	-	2	-	-	-	-	-	-	2
Wood and wood products	-	-	-	-	-	-	-	-	2	0	2
Construction	0	-	39	-	-	-	-	-	11	0	50
Textile and leather	1	-	2	-	-	-	-	-	3	0	6
Non-specified	69	-	69	3	-	-	-	-	70	3	214
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>1132</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>4</b>	<b>-</b>	<b>1136</b>
Domestic aviation	-	-	15	-	-	-	-	-	-	-	15
Road	-	-	1116	-	-	-	-	-	3	-	1119
Rail	-	-	1	-	-	-	-	-	0	-	1
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	1	-	1
<b>OTHER</b>	<b>384</b>	<b>-</b>	<b>427</b>	<b>105</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>723</b>	<b>255</b>	<b>1895</b>
Residential	256	-	296	81	-	-	-	1	628	169	1431
Comm. and public services	124	-	10	23	-	-	-	-	67	85	309
Agriculture/forestry	2	-	100	0	-	-	-	0	20	0	122
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	2	-	22	0	-	-	-	0	9	1	33
<b>NON-ENERGY USE</b>	<b>14</b>	<b>-</b>	<b>3</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>17</b>
in industry/transf./energy	14	-	3	-	-	-	-	-	-	-	17
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>1557</b>	<b>-</b>	<b>21</b>	<b>190</b>	<b>-</b>	<b>11494</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>13262</b>
Electricity plants	26	-	-	-	-	11494	-	-	-	-	11520
CHP plants	1531	-	21	190	-	-	-	-	-	-	1742
<b>Heat generated - TJ</b>	<b>6522</b>	<b>-</b>	<b>521</b>	<b>2861</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>9904</b>
CHP plants	6400	-	163	1512	-	-	-	-	-	-	8075
Heat plants	122	-	358	1349	-	-	-	-	-	-	1829

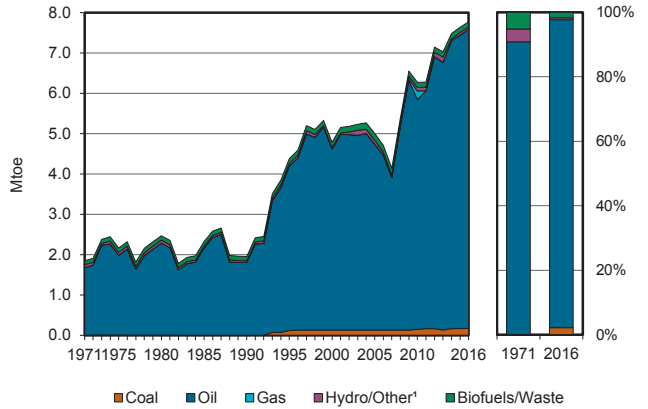
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Lebanon

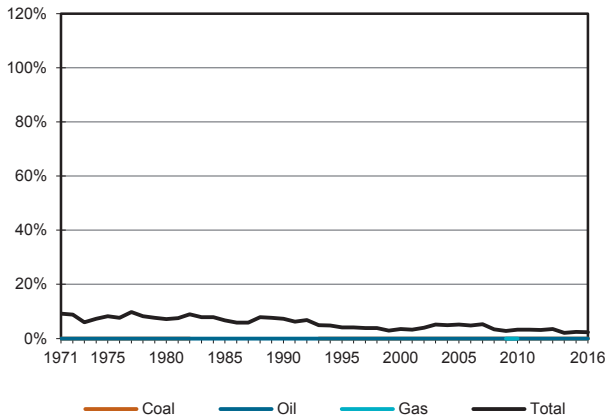
**Figure 1. Energy production**



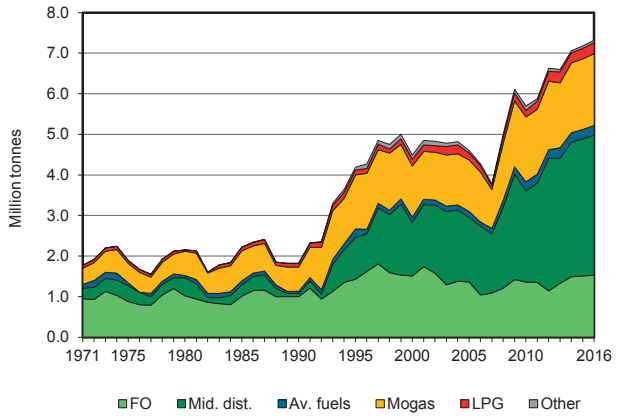
**Figure 2. Total primary energy supply<sup>2</sup>**



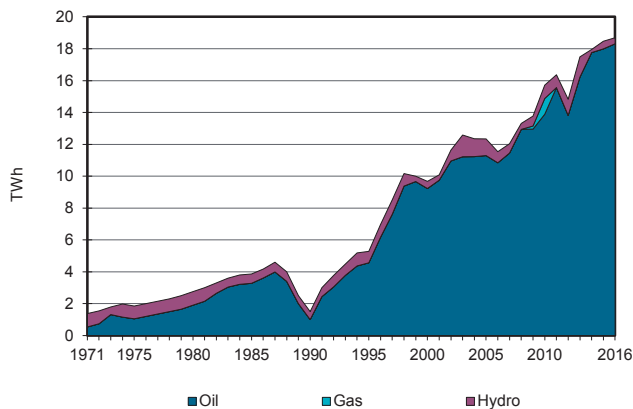
**Figure 3. Energy self-sufficiency<sup>3</sup>**



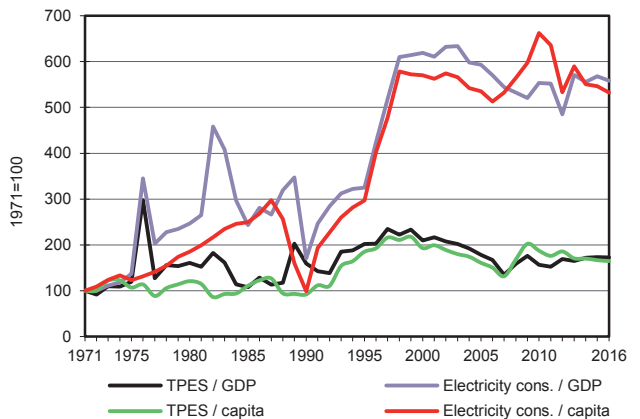
**Figure 4. Oil products demand<sup>4</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>5</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. GDP in 2010 USD.

## Lebanon

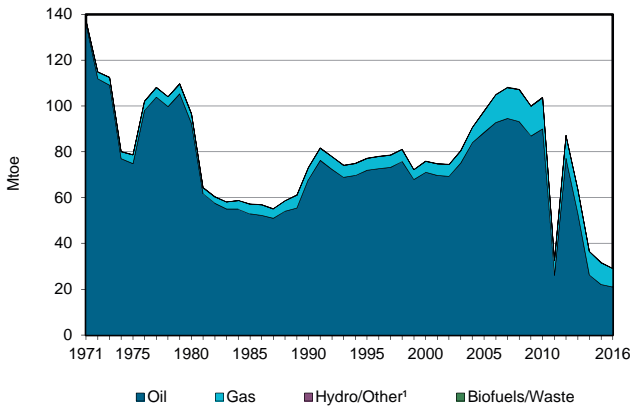
2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	-	-	-	-	33	24	119	-	-	176
Imports	170	-	7698	-	-	-	-	10	6	-	7885
Exports	-	-	-	-	-	-	-	-	-	-	-
Intl. marine bunkers	-	-	-31	-	-	-	-	-	-	-	-31
Intl. aviation bunkers	-	-	-252	-	-	-	-	-	-	-	-252
Stock changes	-	-	-	-	-	-	-	-	-	-	-
<b>TPES</b>	<b>170</b>	<b>-</b>	<b>7416</b>	<b>-</b>	<b>-</b>	<b>33</b>	<b>24</b>	<b>129</b>	<b>6</b>	<b>-</b>	<b>7778</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-	-	-	-	-	-	-	-	14	-	14
Electricity plants	-	-	-4198	-	-	-33	-	-	1607	-	-2624
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-	-	-	-	-	-	-	-	-	-
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-14	-	-	-14
Energy industry own use	-	-	-	-	-	-	-	-	-	-	-
Losses	-	-	-	-	-	-	-	-	-168	-	-168
<b>TFC</b>	<b>170</b>	<b>-</b>	<b>3218</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>24</b>	<b>115</b>	<b>1459</b>	<b>-</b>	<b>4986</b>
<b>INDUSTRY</b>	<b>170</b>	<b>-</b>	<b>137</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>-</b>	<b>377</b>	<b>-</b>	<b>686</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	170	-	-	-	-	-	-	-	-	-	170
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	137	-	-	-	1	-	377	-	516
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>1948</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1948</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	1948	-	-	-	-	-	-	-	1948
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>-</b>	<b>-</b>	<b>1080</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>23</b>	<b>115</b>	<b>1082</b>	<b>-</b>	<b>2300</b>
Residential	-	-	1080	-	-	-	16	98	570	-	1763
Comm. and public services	-	-	-	-	-	-	7	-	241	-	248
Agriculture/forestry	-	-	-	-	-	-	-	-	-	-	-
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	18	271	-	289
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>52</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>52</b>
in industry/transf./energy	-	-	52	-	-	-	-	-	-	-	52
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>-</b>	<b>-</b>	<b>18308</b>	<b>-</b>	<b>-</b>	<b>382</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>18690</b>
Electricity plants	-	-	18308	-	-	382	-	-	-	-	18690
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

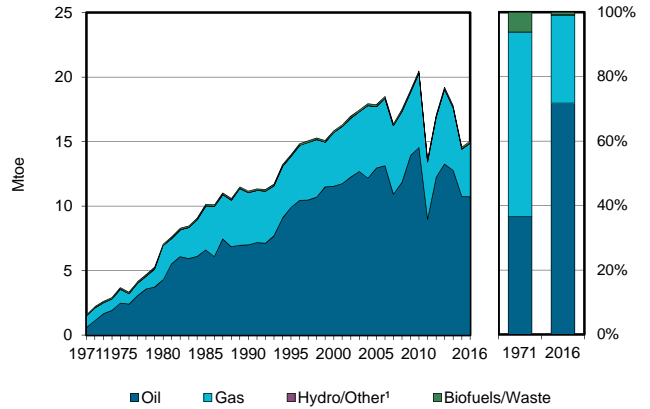
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Libya

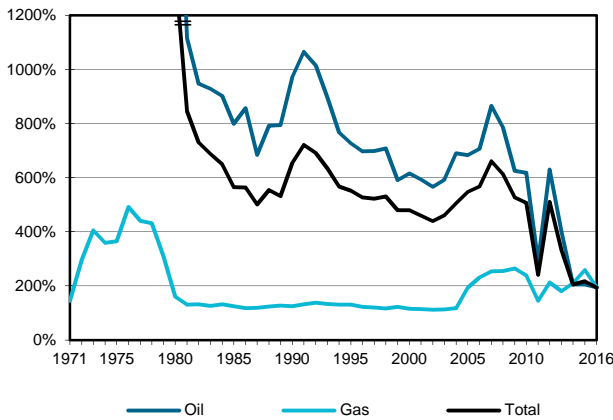
**Figure 1. Energy production**



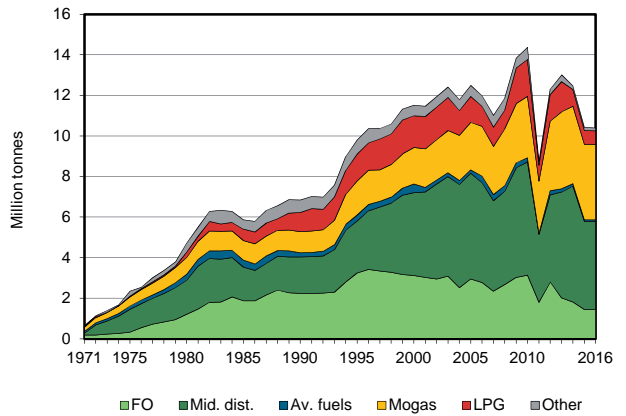
**Figure 2. Total primary energy supply<sup>2</sup>**



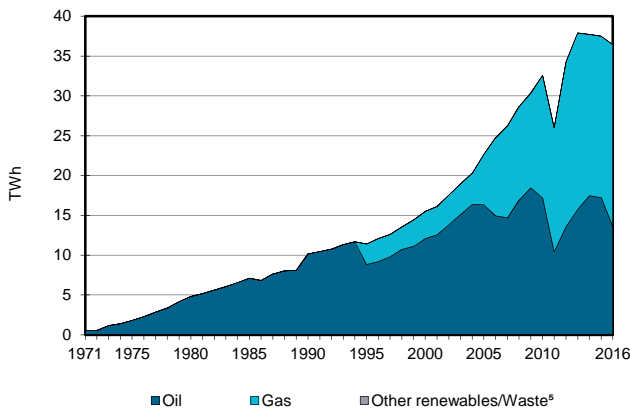
**Figure 3. Energy self-sufficiency<sup>3</sup>**



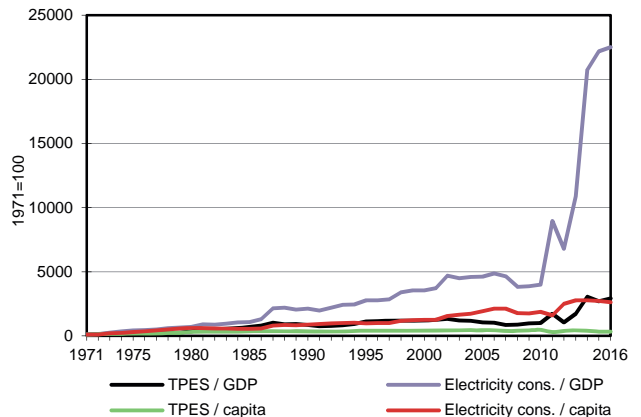
**Figure 4. Oil products demand<sup>4</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>6</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency. Maximum scale refers to values greater than or equal to 1200%.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Libya

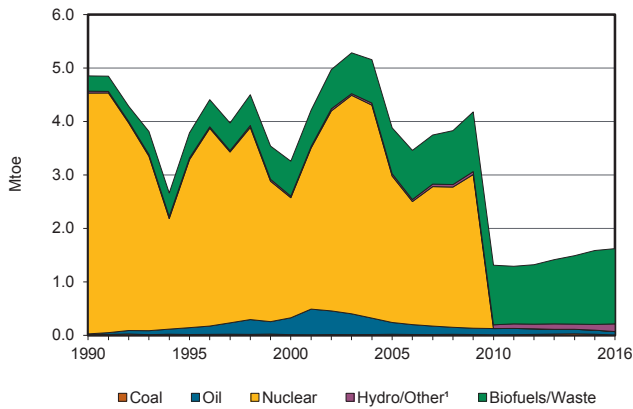
2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	20865	-	8087	-	-	1	153	-	-	29106
Imports	-	-	7034	-	-	-	-	-	32	-	7066
Exports	-	-16588	-1013	-3921	-	-	-	-	-	-	-21522
Intl. marine bunkers	-	-	-82	-	-	-	-	-	-	-	-82
Intl. aviation bunkers	-	-	-67	-	-	-	-	-	-	-	-67
Stock changes	-	568	-	-	-	-	-	-	-	-	568
<b>TPES</b>	-	<b>4845</b>	<b>5872</b>	<b>4166</b>	-	-	<b>1</b>	<b>153</b>	<b>32</b>	-	<b>15070</b>
Transfers	-	-673	720	-	-	-	-	-	-	-	48
Statistical differences	-	-	-	1247	-	-	-	-	-1280	-	-34
Electricity plants	-	-	-2046	-5235	-	-	-1	-	3132	-	-4150
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-4173	4078	-	-	-	-	-	-	-	-95
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-	-	-	-
Energy industry own use	-	-	-143	-49	-	-	-	-	-52	-	-245
Losses	-	-	-	-	-	-	-	-	-630	-	-630
<b>TFC</b>	-	-	<b>8481</b>	<b>128</b>	-	-	-	<b>153</b>	<b>1202</b>	-	<b>9964</b>
<b>INDUSTRY</b>	-	-	<b>481</b>	<b>45</b>	-	-	-	-	<b>104</b>	-	<b>631</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	481	45	-	-	-	-	104	-	631
<b>TRANSPORT</b>	-	-	<b>7092</b>	-	-	-	-	-	-	-	<b>7092</b>
Domestic aviation	-	-	2	-	-	-	-	-	-	-	2
Road	-	-	7090	-	-	-	-	-	-	-	7090
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	-	-	<b>423</b>	-	-	-	-	<b>153</b>	<b>1098</b>	-	<b>1674</b>
Residential	-	-	423	-	-	-	-	153	507	-	1083
Comm. and public services	-	-	-	-	-	-	-	-	129	-	129
Agriculture/forestry	-	-	-	-	-	-	-	-	105	-	105
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	356	-	356
<b>NON-ENERGY USE</b>	-	-	<b>485</b>	<b>83</b>	-	-	-	-	-	-	<b>568</b>
in industry/transf./energy	-	-	485	83	-	-	-	-	-	-	568
of which: chem./petrochem.	-	-	425	83	-	-	-	-	-	-	507
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	-	-	<b>13620</b>	<b>22802</b>	-	-	<b>8</b>	-	-	-	<b>36430</b>
Electricity plants	-	-	13620	22802	-	-	8	-	-	-	36430
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

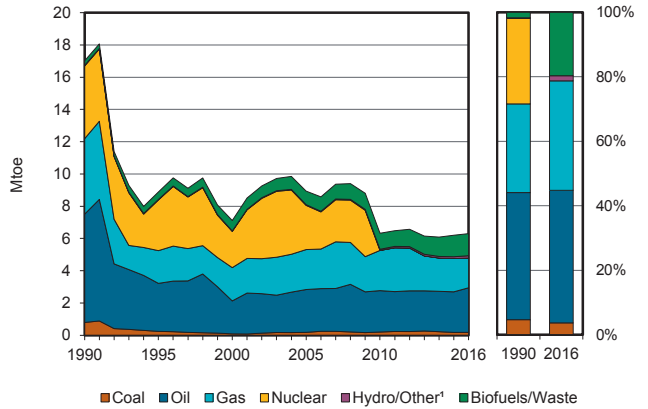
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Lithuania

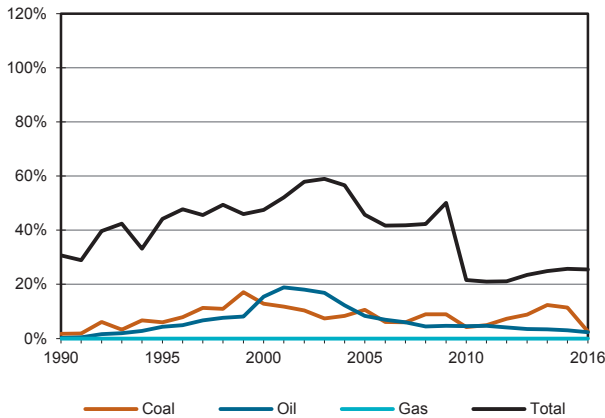
**Figure 1. Energy production**



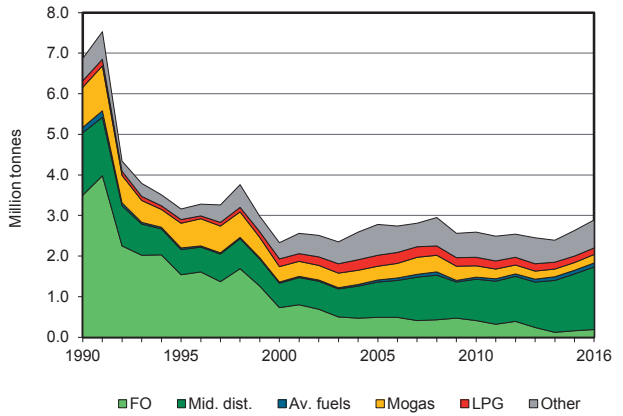
**Figure 2. Total primary energy supply<sup>2</sup>**



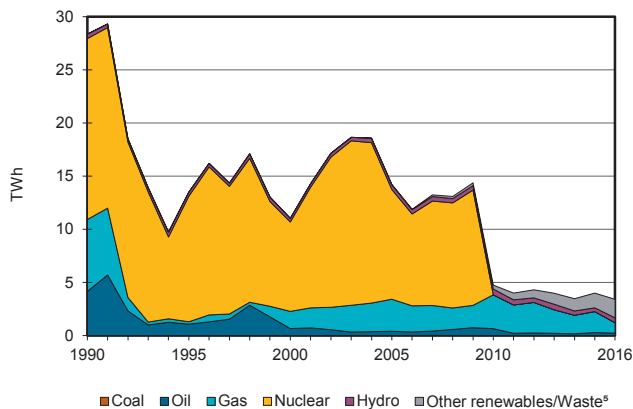
**Figure 3. Energy self-sufficiency<sup>3</sup>**



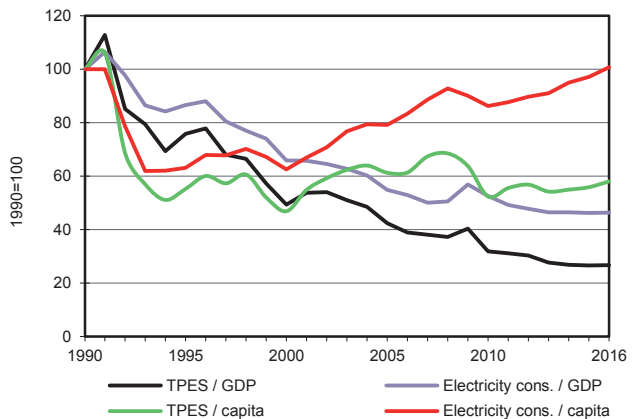
**Figure 4. Oil products demand<sup>4</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>6</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Lithuania

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal <sup>1</sup>	Crude oil <sup>2</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./ Solar/ etc.	Biofuels/ Waste	Electricity	Heat	Total
Production	5	65	-	-	-	39	105	1407	-	226	1846
Imports	165	10030	1599	1889	-	-	-	188	955	-	14827
Exports	-2	-54	-8609	-37	-	-	-	-226	-243	-	-9171
Intl. marine bunkers	-	-	-163	-	-	-	-	-	-	-	-163
Intl. aviation bunkers	-	-	-96	-	-	-	-	-	-	-	-96
Stock changes	16	-1	-9	-11	-	-	-	1	-	-	-3
<b>TPES</b>	<b>184</b>	<b>10040</b>	<b>-7277</b>	<b>1842</b>	<b>-</b>	<b>39</b>	<b>105</b>	<b>1370</b>	<b>712</b>	<b>226</b>	<b>7240</b>
Transfers	-	-	-3	-	-	-	-	-	-	-	-3
Statistical differences	-2	-	-	-	-	-	-	-1	-	-	-3
Electricity plants	-	-	-	-	-	-39	-103	-	166	-70	-46
CHP plants	-	-	-35	-313	-	-	-	-236	150	304	-130
Heat plants	-2	-	-10	-111	-	-	-2	-445	-0	501	-68
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-0	-	-	-	-	-	-	-	-	-	-0
Oil refineries	-	-10040	9977	-	-	-	-	-	-	-	-64
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-0	-	-	-0
Energy industry own use	-	-	-546	-26	-	-	-	-0	-111	-7	-690
Losses	-	-	-	-	-	-	-	-	-78	-120	-198
<b>TFC</b>	<b>180</b>	<b>-</b>	<b>2105</b>	<b>1392</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>688</b>	<b>838</b>	<b>834</b>	<b>6037</b>
<b>INDUSTRY</b>	<b>88</b>	<b>-</b>	<b>35</b>	<b>288</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>96</b>	<b>294</b>	<b>189</b>	<b>989</b>
Iron and steel	1	-	-	0	-	-	-	-	2	-	2
Chemical and petrochemical	-	-	1	114	-	-	-	5	64	155	340
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	85	-	2	25	-	-	-	7	22	1	142
Transport equipment	-	-	-	1	-	-	-	-	2	1	4
Machinery	-	-	-	8	-	-	-	0	16	3	27
Mining and quarrying	-	-	2	0	-	-	-	1	2	0	5
Food and tobacco	2	-	14	84	-	-	-	17	63	11	191
Paper pulp and printing	-	-	-	12	-	-	-	5	14	1	31
Wood and wood products	-	-	2	11	-	-	-	48	31	10	102
Construction	-	-	10	12	-	-	-	2	13	1	39
Textile and leather	-	-	1	15	-	-	-	1	14	3	35
Non-specified	0	-	2	4	-	-	-	11	51	3	72
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>1762</b>	<b>31</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>57</b>	<b>6</b>	<b>-</b>	<b>1856</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	1702	8	-	-	-	55	3	-	1768
Rail	-	-	50	-	-	-	-	2	1	-	53
Pipeline transport	-	-	-	23	-	-	-	-	2	-	25
Domestic navigation	-	-	4	-	-	-	-	-	-	-	4
Non-specified	-	-	6	-	-	-	-	-	-	-	6
<b>OTHER</b>	<b>92</b>	<b>-</b>	<b>107</b>	<b>232</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>536</b>	<b>538</b>	<b>645</b>	<b>2150</b>
Residential	51	-	48	145	-	-	-	484	239	466	1433
Comm. and public services	38	-	3	65	-	-	-	40	282	174	603
Agriculture/forestry	3	-	46	21	-	-	-	12	17	5	104
Fishing	-	-	1	-	-	-	-	-	0	-	1
Non-specified	-	-	8	-	-	-	-	-	-	-	8
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>202</b>	<b>841</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1043</b>
in industry/transf./energy	-	-	184	841	-	-	-	-	-	-	1025
of which: chem./petrochem.	-	-	80	841	-	-	-	-	-	-	921
in transport	-	-	18	-	-	-	-	-	-	-	18
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>-</b>	<b>-</b>	<b>221</b>	<b>986</b>	<b>-</b>	<b>454</b>	<b>1202</b>	<b>543</b>	<b>-</b>	<b>270</b>	<b>3676</b>
Electricity plants	-	-	-	-	-	454	1202	-	-	-	1656
CHP plants	-	-	221	986	-	-	-	543	-	270	2020
<b>Heat generated - TJ</b>	<b>134</b>	<b>-</b>	<b>339</b>	<b>11342</b>	<b>-</b>	<b>-</b>	<b>41</b>	<b>21837</b>	<b>9</b>	<b>9446</b>	<b>43148</b>
CHP plants	-	-	19	7278	-	-	-	5410	-	6151	18858
Heat plants	134	-	320	4064	-	-	41	16427	9	3295	24290

1. Includes peat.

2. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Malaysia

Figure 1. Energy production

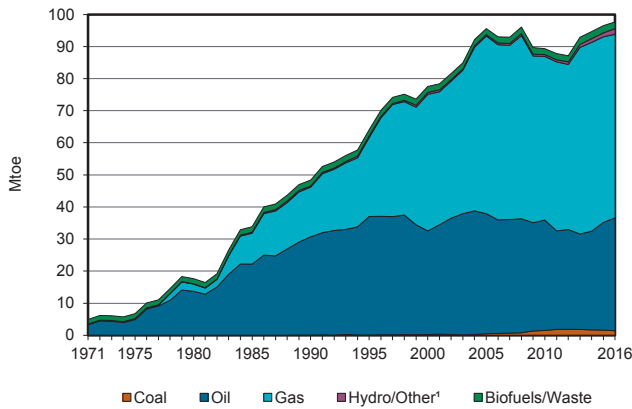


Figure 2. Total primary energy supply<sup>2</sup>

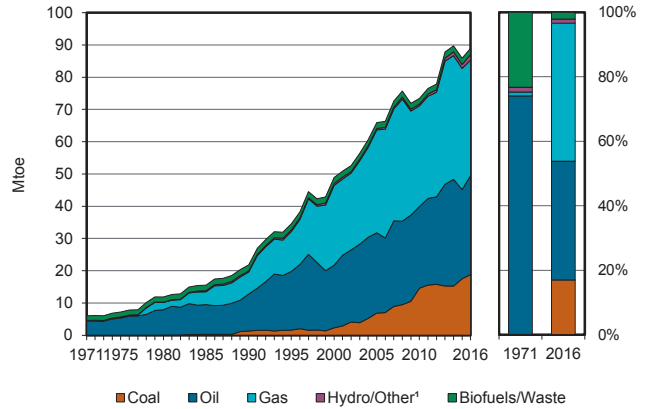


Figure 3. Energy self-sufficiency<sup>3</sup>

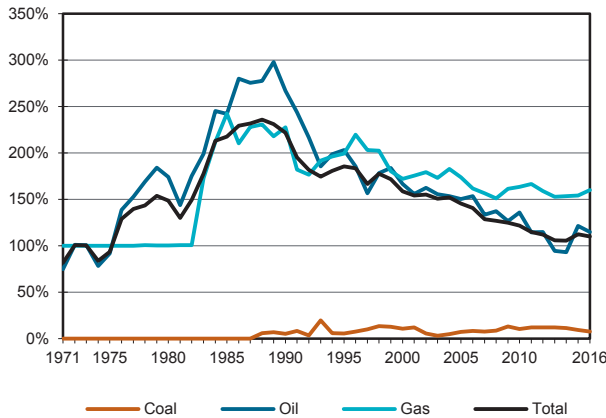


Figure 4. Oil products demand<sup>4</sup>

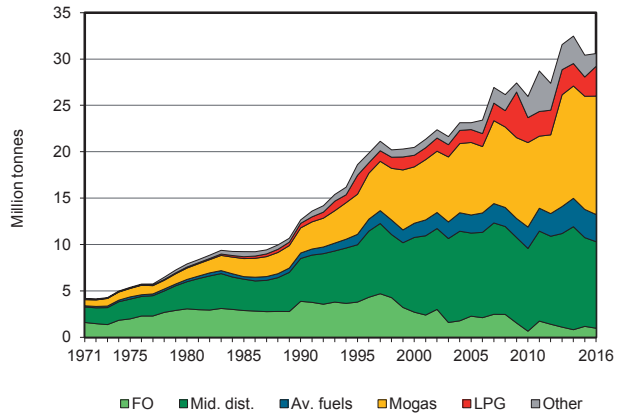


Figure 5. Electricity generation by source

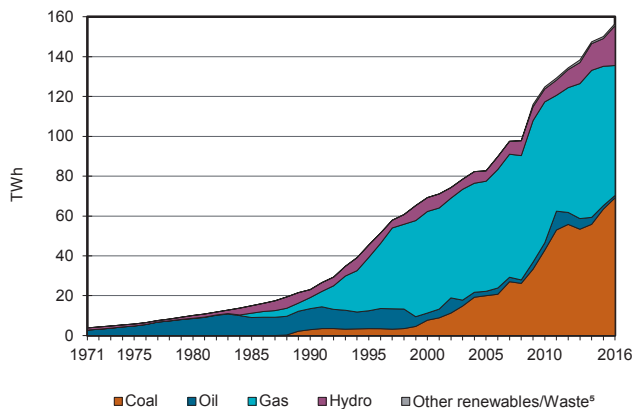
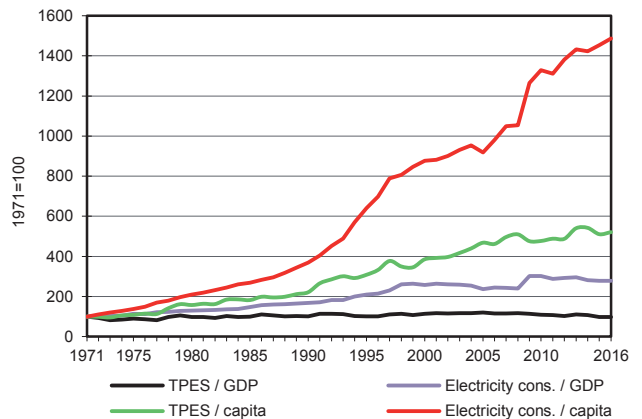


Figure 6. Selected indicators<sup>6</sup>



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.



## Malaysia

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	1424	35181	-	57229	-	1721	27	2091	-	-	97673
Imports	17171	10888	15341	6831	-	-	-	4	3	-	50239
Exports	-15	-16652	-12215	-28297	-	-	-	-118	-60	-	-57357
Intl. marine bunkers	-	-	-297	-	-	-	-	-	-	-	-297
Intl. aviation bunkers	-	-	-2415	-	-	-	-	-	-	-	-2415
Stock changes	245	70	798	-	-	-	-	-35	-	-	1078
<b>TPES</b>	<b>18825</b>	<b>29488</b>	<b>1212</b>	<b>35763</b>	<b>-</b>	<b>1721</b>	<b>27</b>	<b>1942</b>	<b>-57</b>	<b>-</b>	<b>88920</b>
Transfers	-	-2572	2633	-	-	-	-	-	-	-	61
Statistical differences	61	215	90	-0	-	-	-	-	366	-	732
Electricity plants	-17101	-	-365	-14354	-	-1721	-27	-257	13470	-	-20354
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-27524	24901	-	-	-	-	-	-	-	-2623
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	626	-	-1181	-	-	-	-	-	-	-555
Other transformation	-	-	-	-64	-	-	-	-448	-	-	-512
Energy industry own use	-	-233	-239	-6207	-	-	-	-	-458	-	-7137
Losses	-	-	-	-1654	-	-	-	-	-929	-	-2583
<b>TFC</b>	<b>1785</b>	<b>-</b>	<b>28231</b>	<b>12304</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1237</b>	<b>12392</b>	<b>-</b>	<b>55950</b>
<b>INDUSTRY</b>	<b>1785</b>	<b>-</b>	<b>2748</b>	<b>5989</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>5822</b>	<b>-</b>	<b>16343</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	1785	-	2748	5989	-	-	-	-	5822	-	16343
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>20955</b>	<b>208</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>388</b>	<b>29</b>	<b>-</b>	<b>21581</b>
Domestic aviation	-	-	604	-	-	-	-	-	-	-	604
Road	-	-	20345	208	-	-	-	388	-	-	20942
Rail	-	-	-	-	-	-	-	-	29	-	29
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	6	-	-	-	-	-	-	-	6
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>-</b>	<b>-</b>	<b>1883</b>	<b>24</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>849</b>	<b>6541</b>	<b>-</b>	<b>9297</b>
Residential	-	-	606	1	-	-	-	849	2678	-	4133
Comm. and public services	-	-	913	24	-	-	-	-	3816	-	4752
Agriculture/forestry	-	-	93	-	-	-	-	-	47	-	140
Fishing	-	-	271	-	-	-	-	-	-	-	271
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>2646</b>	<b>6083</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>8729</b>
in industry/transf./energy	-	-	2646	6083	-	-	-	-	-	-	8729
of which: chem./petrochem.	-	-	1996	6083	-	-	-	-	-	-	8079
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>69153</b>	<b>-</b>	<b>1184</b>	<b>65234</b>	<b>-</b>	<b>20019</b>	<b>310</b>	<b>760</b>	<b>-</b>	<b>-</b>	<b>156660</b>
Electricity plants	69153	-	1184	65234	-	20019	310	760	-	-	156660
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Malta

Figure 1. Energy production

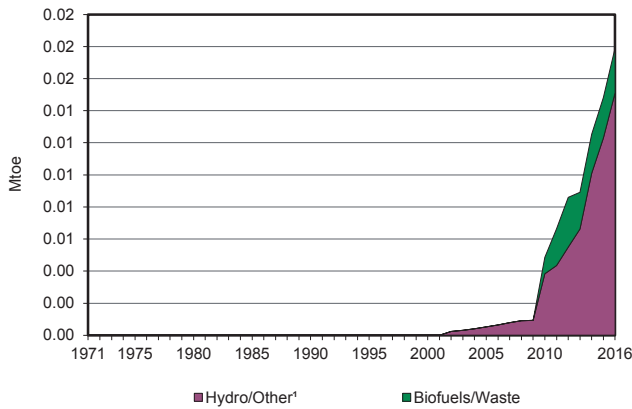


Figure 2. Total primary energy supply²

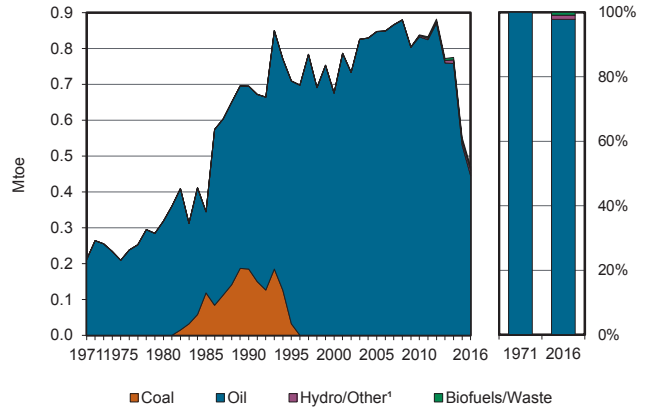


Figure 3. Energy self-sufficiency³

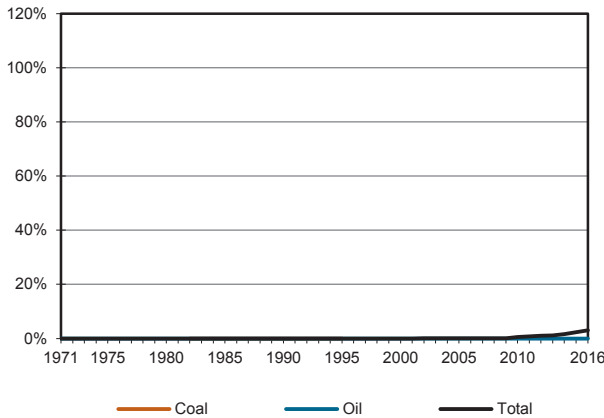


Figure 4. Oil products demand⁴

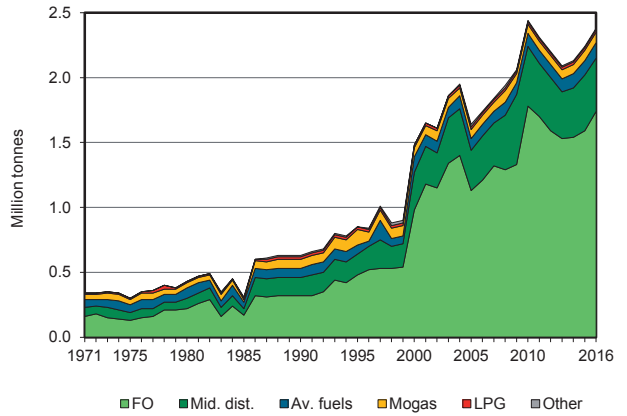


Figure 5. Electricity generation by source

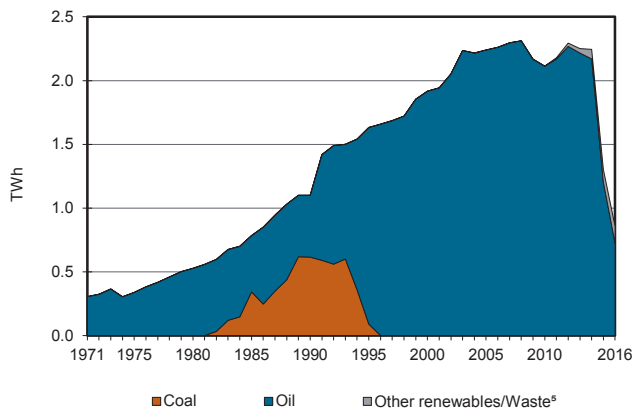
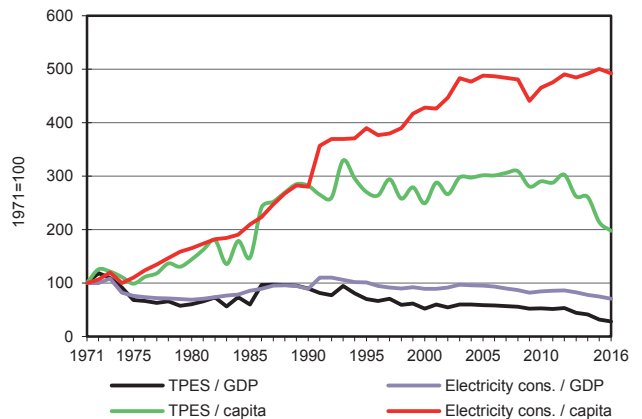


Figure 6. Selected indicators⁶



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Malta

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	-	-	-	-	-	15	3	-	-	18
Imports	-	-	2631	-	-	-	-	9	131	-	2772
Exports	-	-	-276	-	-	-	-	-	-	-	-276
Intl. marine bunkers	-	-	-1749	-	-	-	-	-	-	-	-1749
Intl. aviation bunkers	-	-	-124	-	-	-	-	-	-	-	-124
Stock changes	-	-	-36	-	-	-	-	-2	-	-	-38
<b>TPES</b>	-	-	<b>445</b>	-	-	-	<b>15</b>	<b>10</b>	<b>131</b>	-	<b>602</b>
Transfers	-	-	1	-	-	-	-	-	-	-	1
Statistical differences	-	-	-	-	-	-	-	-1	-	-	-1
Electricity plants	-	-	-172	-	-	-	-11	-	73	-	-110
CHP plants	-	-	-	-	-	-	-	-1	1	0	-0
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-	-	-	-	-	-	-	-	-	-
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-	-	-	-
Energy industry own use	-	-	-	-	-	-	-	-	-4	-	-4
Losses	-	-	-	-	-	-	-	-	-19	-	-19
<b>TFC</b>	-	-	<b>274</b>	-	-	-	<b>4</b>	<b>8</b>	<b>182</b>	<b>0</b>	<b>468</b>
<b>INDUSTRY</b>	-	-	<b>9</b>	-	-	-	-	-	<b>35</b>	-	<b>44</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	4	-	4
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	-	-	-	-	-	1	-	1
Transport equipment	-	-	-	-	-	-	-	-	2	-	2
Machinery	-	-	-	-	-	-	-	-	9	-	9
Mining and quarrying	-	-	-	-	-	-	-	-	0	-	0
Food and tobacco	-	-	-	-	-	-	-	-	5	-	5
Paper pulp and printing	-	-	-	-	-	-	-	-	2	-	2
Wood and wood products	-	-	-	-	-	-	-	-	0	-	0
Construction	-	-	-	-	-	-	-	-	2	-	2
Textile and leather	-	-	-	-	-	-	-	-	2	-	2
Non-specified	-	-	9	-	-	-	-	-	8	-	17
<b>TRANSPORT</b>	-	-	<b>192</b>	-	-	-	-	<b>6</b>	-	-	<b>198</b>
Domestic aviation	-	-	2	-	-	-	-	-	-	-	2
Road	-	-	177	-	-	-	-	6	-	-	183
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	13	-	-	-	-	-	-	-	13
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	-	-	<b>64</b>	-	-	-	<b>4</b>	<b>2</b>	<b>146</b>	<b>0</b>	<b>217</b>
Residential	-	-	18	-	-	-	4	1	57	-	81
Comm. and public services	-	-	38	-	-	-	-	1	85	0	124
Agriculture/forestry	-	-	4	-	-	-	-	-	1	-	5
Fishing	-	-	4	-	-	-	-	-	0	-	4
Non-specified	-	-	-	-	-	-	-	-	3	-	3
<b>NON-ENERGY USE</b>	-	-	<b>9</b>	-	-	-	-	-	-	-	<b>9</b>
in industry/transf./energy	-	-	9	-	-	-	-	-	-	-	9
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	-	-	<b>723</b>	-	-	-	<b>125</b>	<b>8</b>	-	-	<b>856</b>
Electricity plants	-	-	723	-	-	-	125	-	-	-	848
CHP plants	-	-	-	-	-	-	-	8	-	-	8
<b>Heat generated - TJ</b>	-	-	-	-	-	-	-	<b>8</b>	-	-	<b>8</b>
CHP plants	-	-	-	-	-	-	-	8	-	-	8
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Mauritius

Figure 1. Energy production

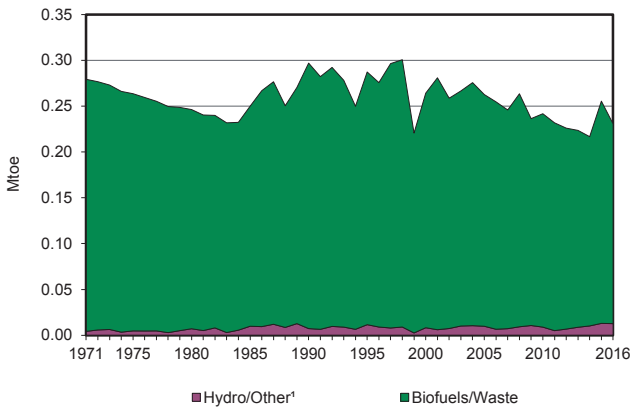


Figure 2. Total primary energy supply<sup>2</sup>

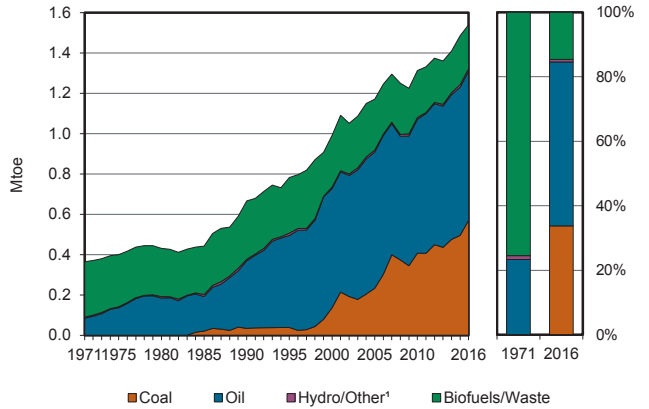


Figure 3. Energy self-sufficiency<sup>3</sup>

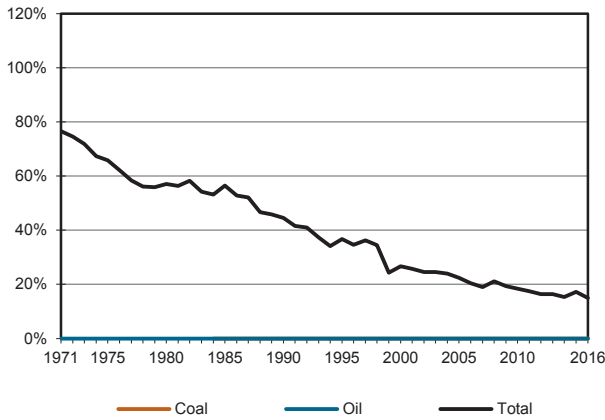


Figure 4. Oil products demand<sup>4</sup>

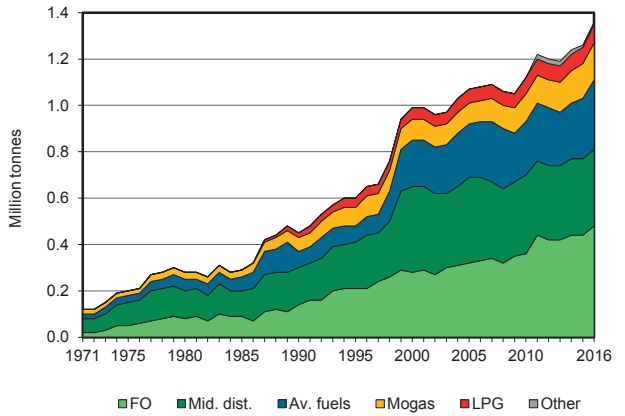


Figure 5. Electricity generation by source

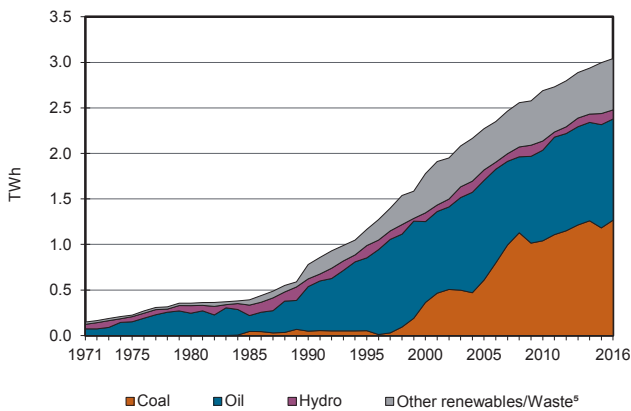
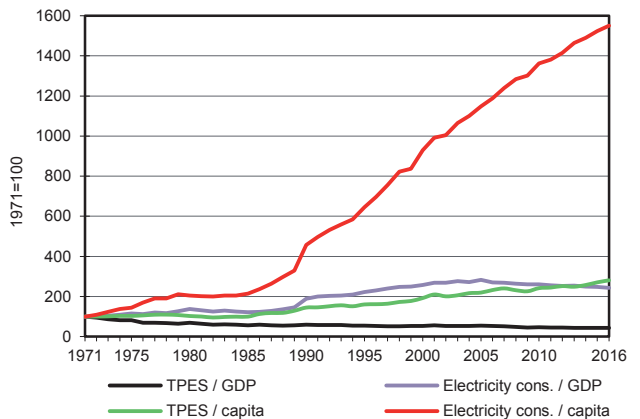


Figure 6. Selected indicators<sup>6</sup>



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Mauritius

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	-	-	-	-	9	4	218	-	-	231
Imports	571	-	1450	-	-	-	-	-	-	-	2021
Exports	-	-	-107	-	-	-	-	-	-	-	-107
Intl. marine bunkers	-	-	-332	-	-	-	-	-	-	-	-332
Intl. aviation bunkers	-	-	-308	-	-	-	-	-	-	-	-308
Stock changes	-	-	36	-	-	-	-	-	-	-	36
<b>TPES</b>	<b>571</b>	<b>-</b>	<b>739</b>	<b>-</b>	<b>-</b>	<b>9</b>	<b>4</b>	<b>218</b>	<b>-</b>	<b>-</b>	<b>1540</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-118	-	10	-	-	-	-	-	0	-	-108
Electricity plants	-432	-	-212	-	-	-9	-4	-186	262	-	-582
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-	-	-	-	-	-	-	-	-	-
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-0	-	-	-0
Energy industry own use	-	-	-	-	-	-	-	-	-4	-	-4
Losses	-	-	-	-	-	-	-	-	-15	-	-15
<b>TFC</b>	<b>20</b>	<b>-</b>	<b>537</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>32</b>	<b>243</b>	<b>-</b>	<b>832</b>
<b>INDUSTRY</b>	<b>20</b>	<b>-</b>	<b>79</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>26</b>	<b>83</b>	<b>-</b>	<b>208</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	20	-	79	-	-	-	-	26	83	-	208
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>369</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>369</b>
Domestic aviation	-	-	6	-	-	-	-	-	-	-	6
Road	-	-	349	-	-	-	-	-	-	-	349
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	9	-	-	-	-	-	-	-	9
Non-specified	-	-	5	-	-	-	-	-	-	-	5
<b>OTHER</b>	<b>-</b>	<b>-</b>	<b>77</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>6</b>	<b>160</b>	<b>-</b>	<b>242</b>
Residential	-	-	56	-	-	-	-	5	74	-	135
Comm. and public services	-	-	18	-	-	-	-	1	80	-	99
Agriculture/forestry	-	-	2	-	-	-	-	-	2	-	4
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	4	-	4
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>13</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>13</b>
in industry/transf./energy	-	-	-	-	-	-	-	-	-	-	-
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	13	-	-	-	-	-	-	-	13
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>1267</b>	<b>-</b>	<b>1111</b>	<b>-</b>	<b>-</b>	<b>100</b>	<b>48</b>	<b>516</b>	<b>-</b>	<b>-</b>	<b>3042</b>
Electricity plants	1267	-	1111	-	-	100	48	516	-	-	3042
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Moldova

Figure 1. Energy production

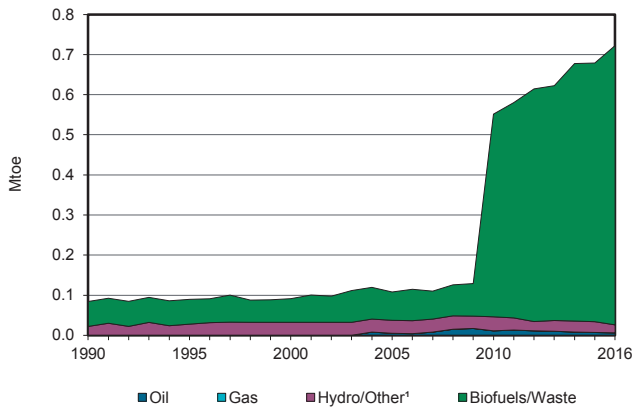


Figure 2. Total primary energy supply<sup>2</sup>

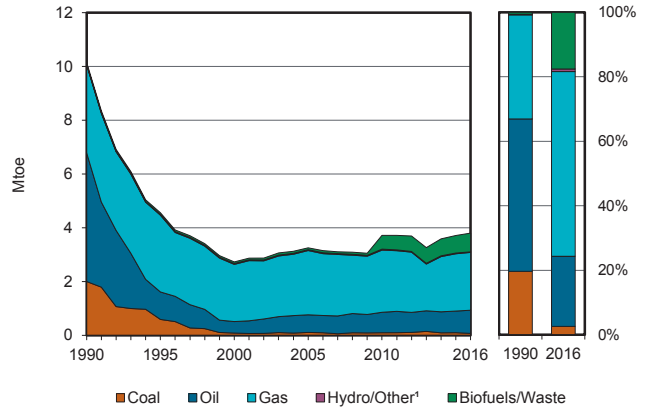


Figure 3. Energy self-sufficiency<sup>3</sup>

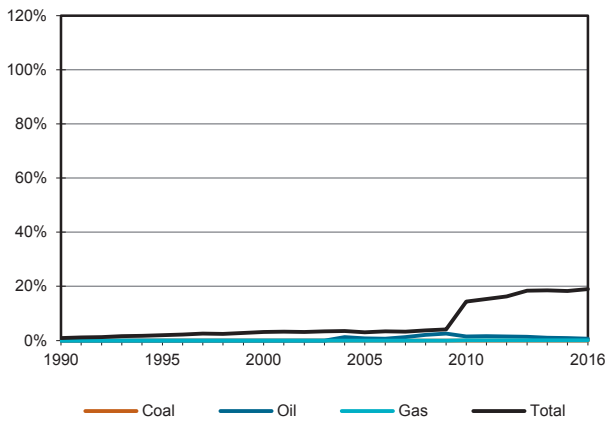


Figure 4. Oil products demand<sup>4</sup>

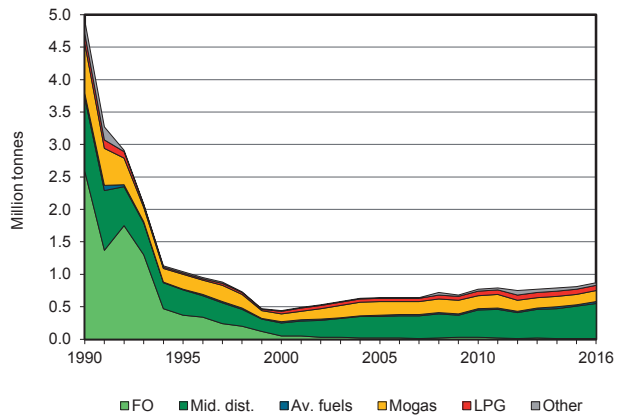


Figure 5. Electricity generation by source

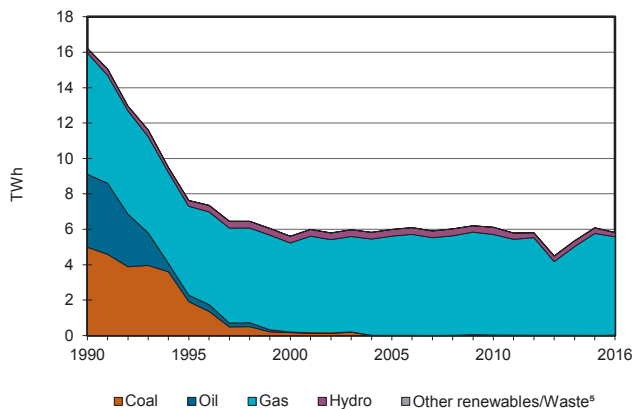
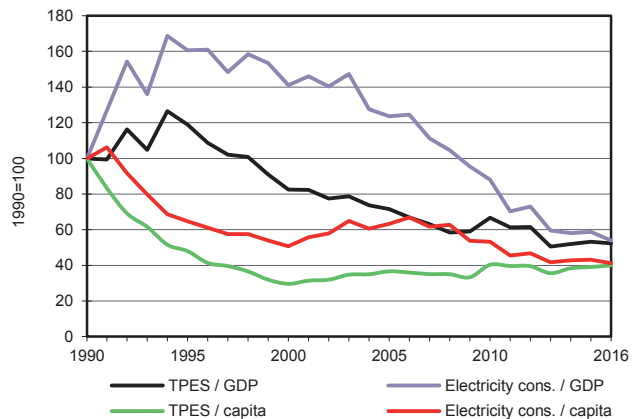


Figure 6. Selected indicators<sup>6</sup>



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Moldova

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal <sup>1</sup>	Crude oil <sup>2</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	6	-	0	-	20	0	696	-	-	722
Imports	57	-	922	2151	-	-	-	0	0	-	3130
Exports	-	-	-16	-	-	-	-	-	-	-	-16
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-33	-	-	-	-	-	-	-	-33
Stock changes	15	1	-18	-1	-	-	-	1	-	-	-2
<b>TPES</b>	<b>72</b>	<b>7</b>	<b>856</b>	<b>2150</b>	<b>-</b>	<b>20</b>	<b>0</b>	<b>698</b>	<b>0</b>	<b>-</b>	<b>3802</b>
Transfers	-	11	-10	-	-	-	-	-	-	-	1
Statistical differences	-0	-	-	-	-	-	-	-	-	-	-0
Electricity plants	-	-	-	-1163	-	-20	-0	-0	427	-	-756
CHP plants	-	-	-11	-251	-	-	-	-9	74	165	-31
Heat plants	-2	-	-1	-82	-	-	-	-9	-	88	-6
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-18	15	-	-	-	-	-	-	-	-2
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-1	-	-	-1
Energy industry own use	-	-	-	-	-	-	-	-	-35	-2	-37
Losses	-	-	-3	-45	-	-	-	-0	-94	-37	-180
<b>TFC</b>	<b>69</b>	<b>-</b>	<b>845</b>	<b>609</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>679</b>	<b>372</b>	<b>214</b>	<b>2789</b>
<b>INDUSTRY</b>	<b>22</b>	<b>-</b>	<b>9</b>	<b>286</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>106</b>	<b>45</b>	<b>469</b>
Iron and steel	-	-	-	-	-	-	-	-	0	-	0
Chemical and petrochemical	-	-	-	1	-	-	-	0	4	0	5
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	21	-	4	30	-	-	-	-	12	0	66
Transport equipment	-	-	-	0	-	-	-	0	0	-	0
Machinery	-	-	-	0	-	-	-	-	4	0	4
Mining and quarrying	-	-	1	-	-	-	-	-	1	-	2
Food and tobacco	1	-	1	20	-	-	-	1	34	42	98
Paper pulp and printing	-	-	-	1	-	-	-	-	1	1	2
Wood and wood products	-	-	-	-	-	-	-	0	3	-	4
Construction	-	-	3	0	-	-	-	0	1	0	4
Textile and leather	-	-	-	1	-	-	-	0	3	2	6
Non-specified	-	-	-	234	-	-	-	0	43	0	277
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>656</b>	<b>23</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>5</b>	<b>-</b>	<b>684</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	640	17	-	-	-	-	-	-	658
Rail	-	-	13	-	-	-	-	-	-	-	13
Pipeline transport	-	-	-	6	-	-	-	-	2	-	7
Domestic navigation	-	-	1	-	-	-	-	-	-	-	1
Non-specified	-	-	1	-	-	-	-	-	4	-	5
<b>OTHER</b>	<b>47</b>	<b>-</b>	<b>145</b>	<b>300</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>678</b>	<b>261</b>	<b>169</b>	<b>1600</b>
Residential	29	-	69	213	-	-	-	659	160	123	1253
Comm. and public services	18	-	3	85	-	-	-	10	97	46	259
Agriculture/forestry	1	-	72	2	-	-	-	1	4	0	80
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	7	-	-	7
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>36</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>36</b>
in industry/transf./energy	-	-	27	-	-	-	-	-	-	-	27
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	9	-	-	-	-	-	-	-	9
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>-</b>	<b>-</b>	<b>17</b>	<b>5564</b>	<b>-</b>	<b>227</b>	<b>5</b>	<b>14</b>	<b>-</b>	<b>-</b>	<b>5827</b>
Electricity plants	-	-	1	4733	-	227	5	-	-	-	4966
CHP plants	-	-	16	831	-	-	-	14	-	-	861
<b>Heat generated - TJ</b>	<b>58</b>	<b>-</b>	<b>471</b>	<b>9767</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>310</b>	<b>-</b>	<b>-</b>	<b>10606</b>
CHP plants	-	-	439	6464	-	-	-	13	-	-	6916
Heat plants	58	-	32	3303	-	-	-	297	-	-	3690

1. Includes peat.

2. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Mongolia

Figure 1. Energy production

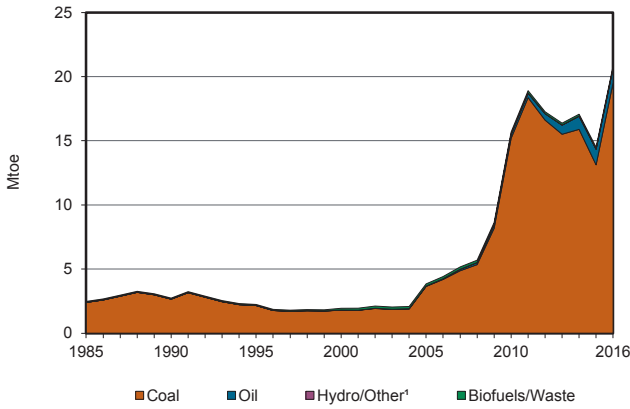


Figure 2. Total primary energy supply<sup>2</sup>

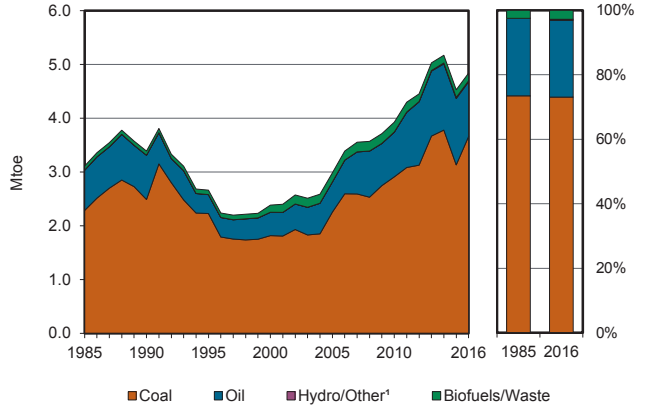


Figure 3. Energy self-sufficiency<sup>3</sup>

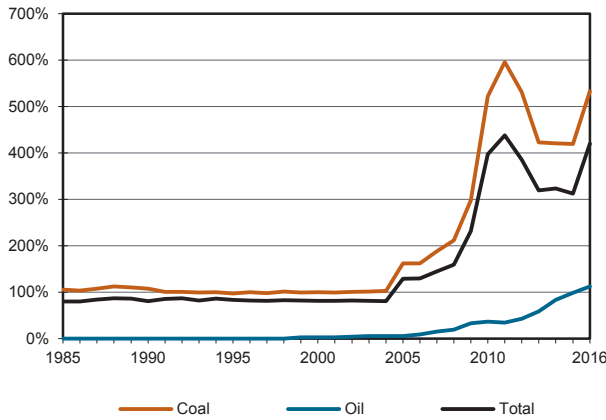


Figure 4. Oil products demand<sup>4</sup>

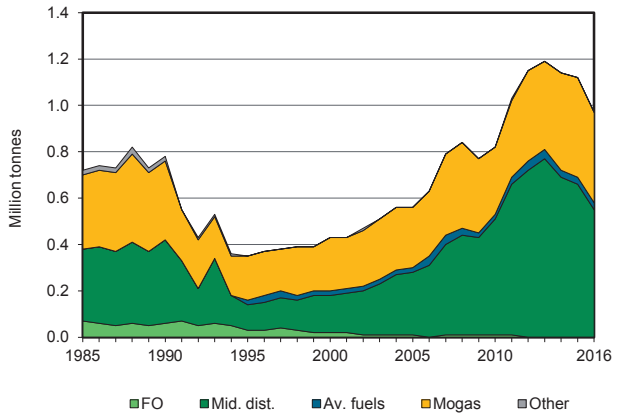


Figure 5. Electricity generation by source

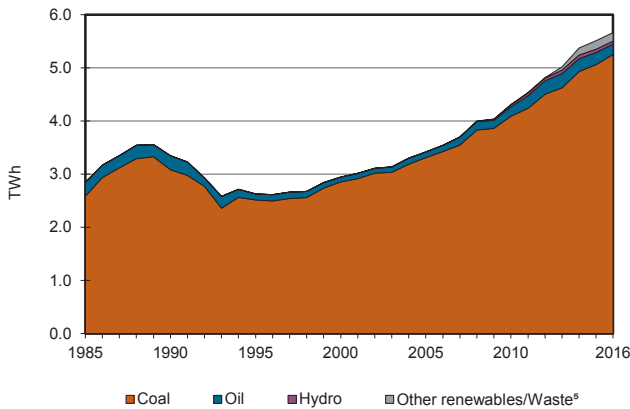
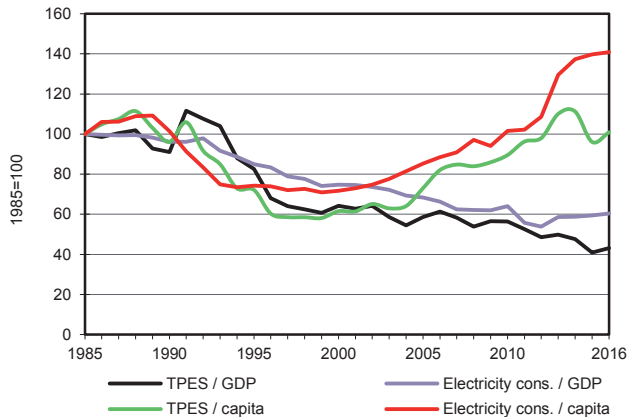


Figure 6. Selected indicators<sup>6</sup>



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.



## Mongolia

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	19519	1138	-	-	-	5	14	143	-	-	20819
Imports	1	-	1009	-	-	-	-	-	124	-	1134
Exports	-16085	-1106	-	-	-	-	-	-	-3	-	-17193
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-27	-	-	-	-	-	-	-	-27
Stock changes	228	-	-	-	-	-	-	-	-	-	228
<b>TPES</b>	<b>3662</b>	<b>32</b>	<b>983</b>	-	-	<b>5</b>	<b>14</b>	<b>143</b>	<b>121</b>	-	<b>4961</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	129	-32	-	-	-	-	-	-	-6	0	91
Electricity plants	-	-	-64	-	-	-5	-14	-	35	-	-48
CHP plants	-2781	-	-3	-	-	-	-	-	452	1080	-1252
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-5	-	-	-	-	-	-	-	-	-	-5
Oil refineries	-	-	-	-	-	-	-	-	-	-	-
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-51	-	-	-51
Energy industry own use	-4	-	-	-	-	-	-	-	-64	-57	-125
Losses	-145	-	-	-	-	-	-	-	-70	-32	-247
<b>TFC</b>	<b>856</b>	-	<b>916</b>	-	-	-	-	<b>93</b>	<b>468</b>	<b>991</b>	<b>3324</b>
<b>INDUSTRY</b>	<b>122</b>	-	<b>302</b>	-	-	-	-	-	<b>289</b>	<b>237</b>	<b>949</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	141	-	-	-	-	-	-	-	141
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	122	-	161	-	-	-	-	-	289	237	808
<b>TRANSPORT</b>	<b>17</b>	-	<b>566</b>	-	-	-	-	-	-	-	<b>583</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	440	-	-	-	-	-	-	-	440
Rail	15	-	126	-	-	-	-	-	-	-	141
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	2	-	-	-	-	-	-	-	-	-	2
<b>OTHER</b>	<b>717</b>	-	<b>47</b>	-	-	-	-	<b>93</b>	<b>180</b>	<b>755</b>	<b>1791</b>
Residential	405	-	-	-	-	-	-	65	114	411	995
Comm. and public services	-	-	-	-	-	-	-	-	-	303	303
Agriculture/forestry	2	-	47	-	-	-	-	7	5	5	66
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	310	-	-	-	-	-	-	20	61	36	428
<b>NON-ENERGY USE</b>	-	-	<b>1</b>	-	-	-	-	-	-	-	<b>1</b>
in industry/transf./energy	-	-	1	-	-	-	-	-	-	-	1
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>5254</b>	-	<b>193</b>	-	-	<b>59</b>	<b>161</b>	-	-	-	<b>5667</b>
Electricity plants	-	-	186	-	-	59	161	-	-	-	406
CHP plants	5254	-	7	-	-	-	-	-	-	-	5261
<b>Heat generated - TJ</b>	<b>45152</b>	-	<b>60</b>	-	-	-	-	-	-	-	<b>45212</b>
CHP plants	45152	-	60	-	-	-	-	-	-	-	45212
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Montenegro

Figure 1. Energy production

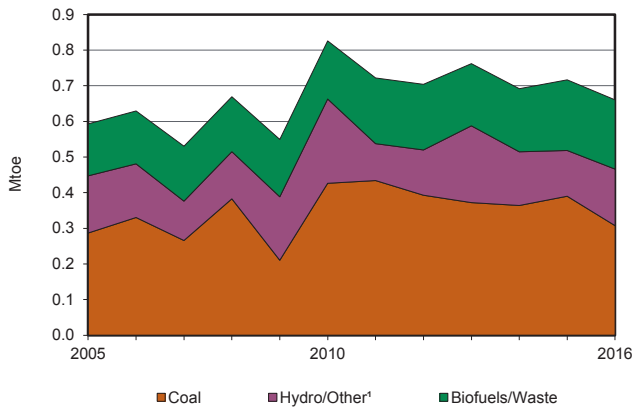


Figure 2. Total primary energy supply²

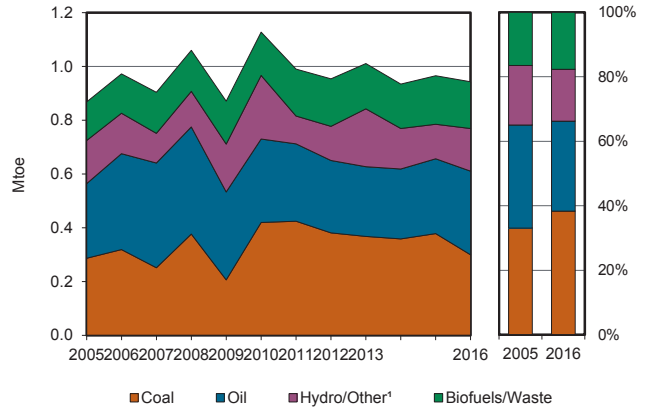


Figure 3. Energy self-sufficiency³

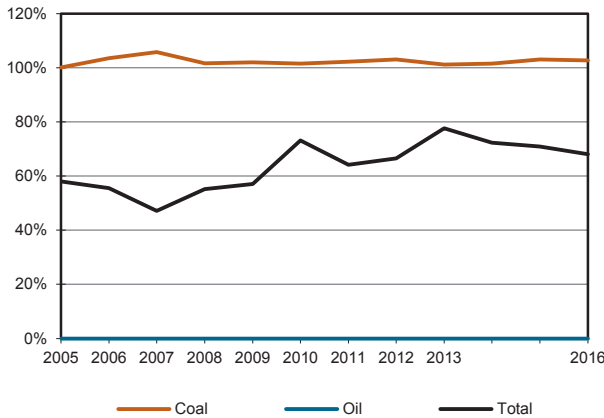


Figure 4. Oil products demand⁴

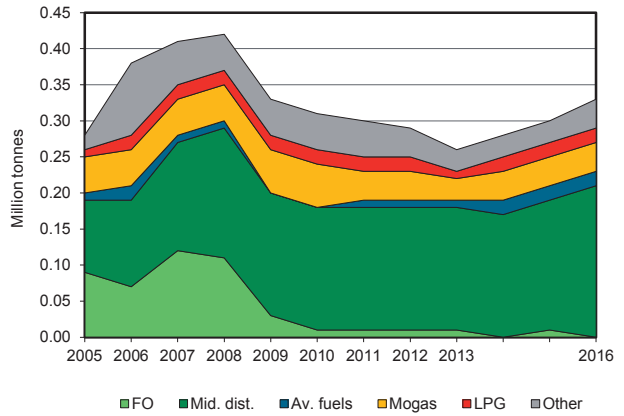


Figure 5. Electricity generation by source

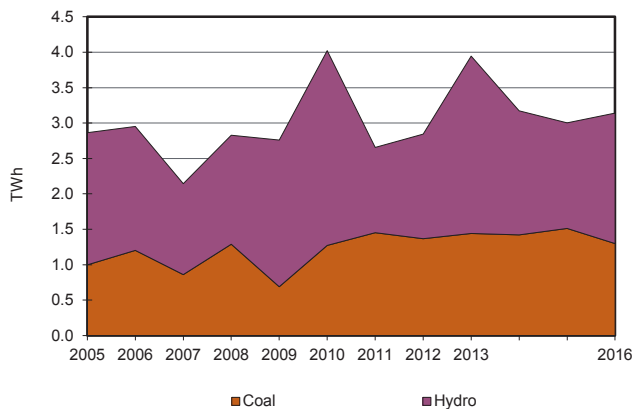
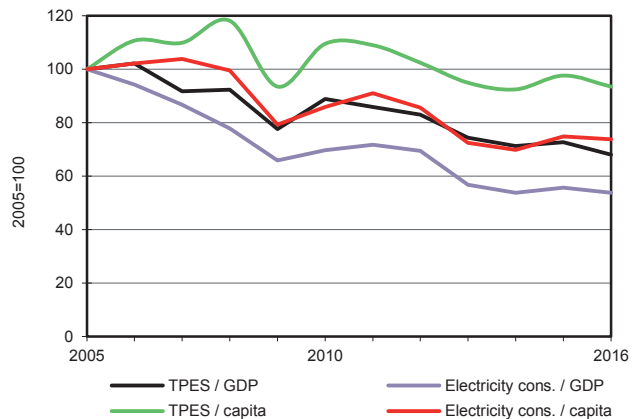


Figure 6. Selected indicators⁵



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. GDP in 2010 USD.

## Montenegro

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	308	-	-	-	-	158	0	194	-	-	660
Imports	1	-	361	-	-	-	-	2	104	-	468
Exports	-9	-	-15	-	-	-	-	-22	-78	-	-124
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-20	-	-	-	-	-	-	-	-20
Stock changes	-	-	-15	-	-	-	-	-	-	-	-15
<b>TPES</b>	<b>299</b>	<b>-</b>	<b>311</b>	<b>-</b>	<b>-</b>	<b>158</b>	<b>0</b>	<b>174</b>	<b>26</b>	<b>-</b>	<b>969</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-	-	-	-	-	-	-	-	-10	-	-10
Electricity plants	-287	-	-	-	-	-158	-	-	270	-	-176
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-	-	-	-	-	-	-	-	-	-
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-7	-	-	-7
Energy industry own use	-	-	-	-	-	-	-	-	-10	-	-10
Losses	-	-	-	-	-	-	-	-	-47	-	-47
<b>TFC</b>	<b>12</b>	<b>-</b>	<b>311</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0</b>	<b>167</b>	<b>230</b>	<b>-</b>	<b>720</b>
<b>INDUSTRY</b>	<b>6</b>	<b>-</b>	<b>47</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>9</b>	<b>57</b>	<b>-</b>	<b>119</b>
Iron and steel	5	-	-	-	-	-	-	-	3	-	8
Chemical and petrochemical	-	-	2	-	-	-	-	2	1	-	5
Non-ferrous metals	-	-	-	-	-	-	-	-	47	-	47
Non-metallic minerals	-	-	2	-	-	-	-	0	0	-	3
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	0	-	2	-	-	-	-	0	1	-	3
Mining and quarrying	-	-	5	-	-	-	-	-	0	-	5
Food and tobacco	1	-	9	-	-	-	-	6	3	-	18
Paper pulp and printing	-	-	-	-	-	-	-	-	0	-	0
Wood and wood products	0	-	10	-	-	-	-	0	1	-	12
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	0	0	-	0
Non-specified	0	-	17	-	-	-	-	0	1	-	18
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>216</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2</b>	<b>-</b>	<b>218</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	213	-	-	-	-	-	-	-	213
Rail	-	-	-	-	-	-	-	-	2	-	2
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	3	-	-	-	-	-	-	-	3
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>6</b>	<b>-</b>	<b>15</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0</b>	<b>157</b>	<b>171</b>	<b>-</b>	<b>349</b>
Residential	4	-	1	-	-	-	-	151	108	-	264
Comm. and public services	2	-	9	-	-	-	0	6	62	-	79
Agriculture/forestry	-	-	4	-	-	-	-	-	1	-	5
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>33</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>33</b>
in industry/transf./energy	-	-	22	-	-	-	-	-	-	-	22
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	6	-	-	-	-	-	-	-	6
in other	-	-	5	-	-	-	-	-	-	-	5
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>1298</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1843</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>3141</b>
Electricity plants	1298	-	-	-	-	1843	-	-	-	-	3141
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Mozambique

Figure 1. Energy production

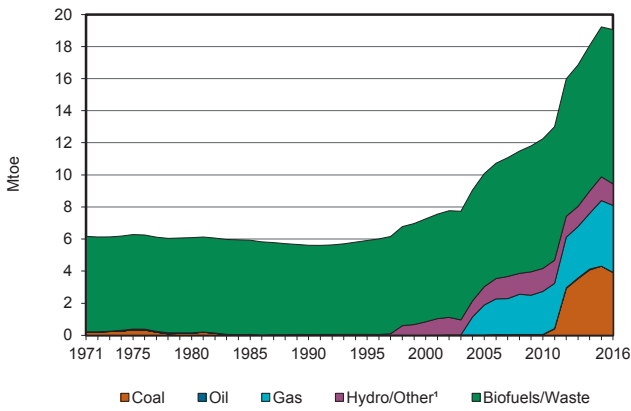


Figure 2. Total primary energy supply<sup>2</sup>

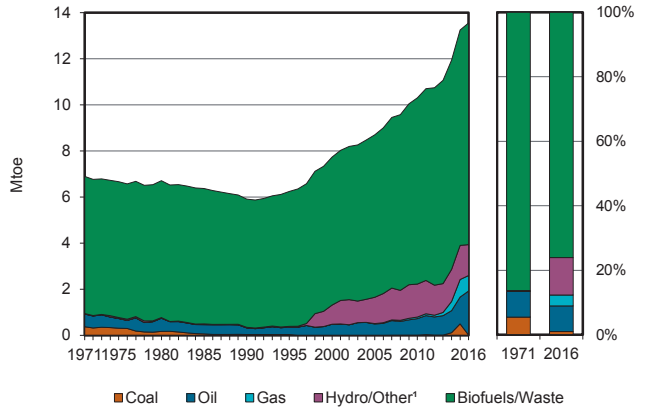


Figure 3. Energy self-sufficiency<sup>3</sup>

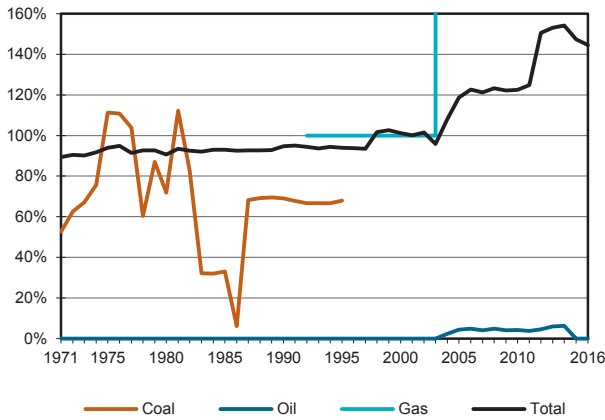


Figure 4. Oil products demand<sup>4</sup>

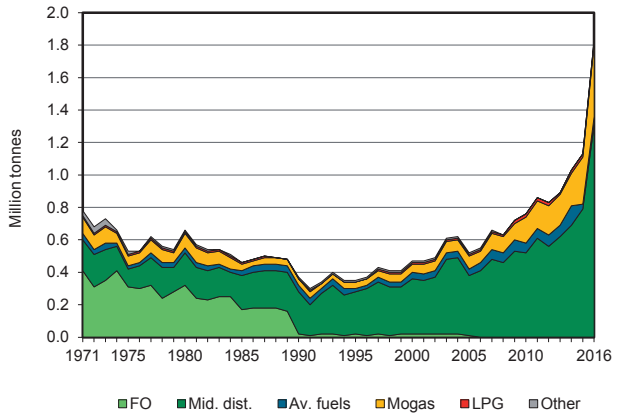


Figure 5. Electricity generation by source

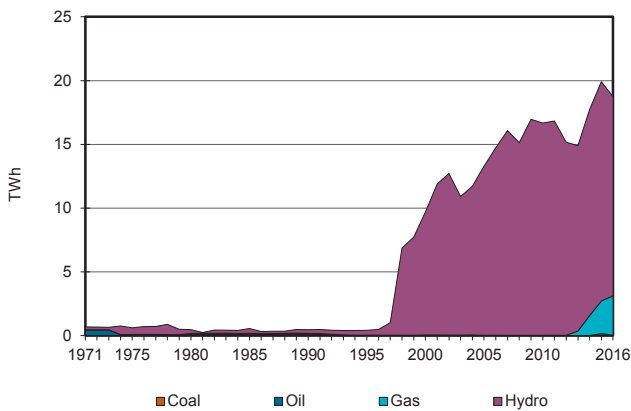
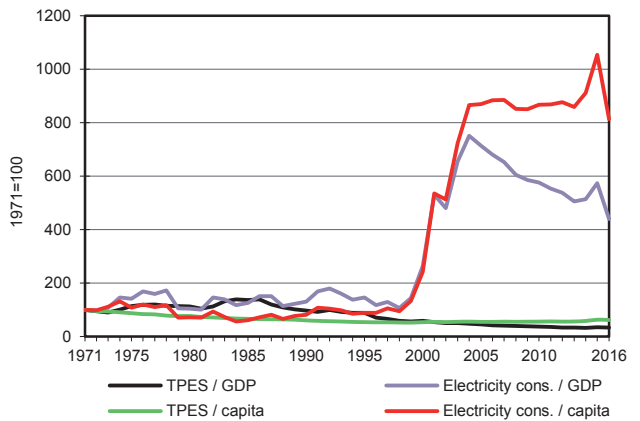


Figure 6. Selected indicators<sup>5</sup>



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency. Maximum scale refers to values greater than or equal to 160%.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. GDP in 2010 USD.

## Mozambique

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	3917	-	-	4175	-	1342	-	9617	-	-	19051
Imports	-	-	2031	-	-	-	-	-	854	-	2884
Exports	-5810	-	-	-3504	-	-	-	-	-1227	-	-10541
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-50	-	-	-	-	-	-	-	-50
Stock changes	1903	-	-68	-	-	-	-	-	-	-	1836
<b>TPES</b>	<b>10</b>	<b>-</b>	<b>1913</b>	<b>671</b>	<b>-</b>	<b>1342</b>	<b>-</b>	<b>9617</b>	<b>-373</b>	<b>-</b>	<b>13180</b>
Transfers	-	-	-1	-	-	-	-	-	-	-	-1
Statistical differences	-	-	-59	-11	-	-	-	-	-40	-	-110
Electricity plants	-	-	-5	-529	-	-1342	-	-	1611	-	-266
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-	-	-	-	-	-	-	-	-	-
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-1895	-	-	-1895
Energy industry own use	-10	-	-	-	-	-	-	-	-5	-	-15
Losses	-	-	-	-	-	-	-	-	-213	-	-213
<b>TFC</b>	<b>-</b>	<b>-</b>	<b>1848</b>	<b>131</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>7722</b>	<b>979</b>	<b>-</b>	<b>10680</b>
<b>INDUSTRY</b>	<b>-</b>	<b>-</b>	<b>132</b>	<b>128</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>942</b>	<b>743</b>	<b>-</b>	<b>1945</b>
Iron and steel	-	-	-	1	-	-	-	-	-	-	1
Chemical and petrochemical	-	-	-	0	-	-	-	-	-	-	0
Non-ferrous metals	-	-	-	47	-	-	-	-	643	-	690
Non-metallic minerals	-	-	-	68	-	-	-	-	-	-	68
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	8	-	-	-	-	-	-	8
Paper pulp and printing	-	-	-	1	-	-	-	-	-	-	1
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	132	-	-	-	-	-	-	-	132
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	3	-	-	-	942	99	-	1045
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>1278</b>	<b>2</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1280</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	1213	2	-	-	-	-	-	-	1215
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	65	-	-	-	-	-	-	-	65
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>-</b>	<b>-</b>	<b>438</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>6780</b>	<b>236</b>	<b>-</b>	<b>7455</b>
Residential	-	-	33	1	-	-	-	6405	145	-	6583
Comm. and public services	-	-	34	0	-	-	-	375	49	-	459
Agriculture/forestry	-	-	342	-	-	-	-	-	2	-	344
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	28	-	-	-	-	-	40	-	68
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
in industry/transf./energy	-	-	-	-	-	-	-	-	-	-	-
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>-</b>	<b>-</b>	<b>19</b>	<b>3104</b>	<b>-</b>	<b>15609</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>18732</b>
Electricity plants	-	-	19	3104	-	15609	-	-	-	-	18732
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Myanmar

Figure 1. Energy production

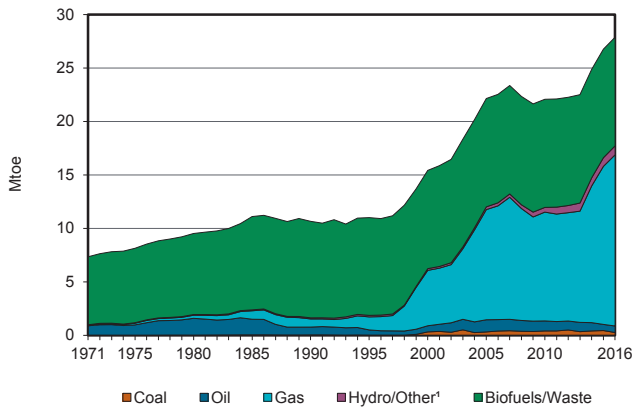


Figure 2. Total primary energy supply<sup>2</sup>

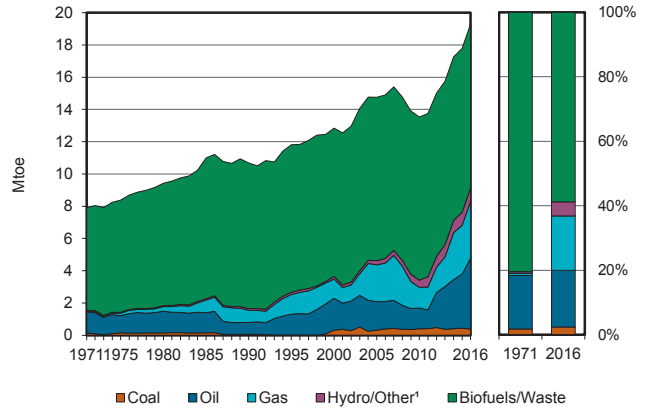


Figure 3. Energy self-sufficiency<sup>3</sup>

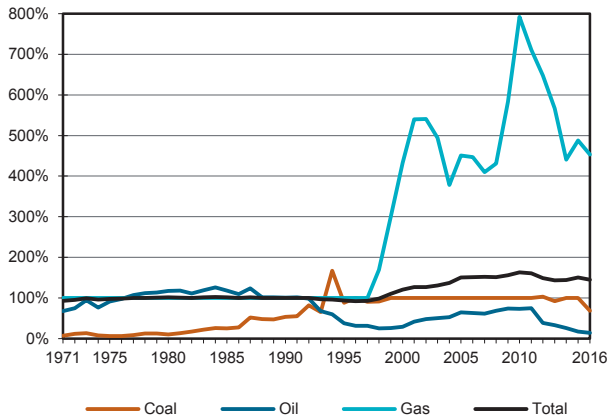


Figure 4. Oil products demand<sup>4</sup>

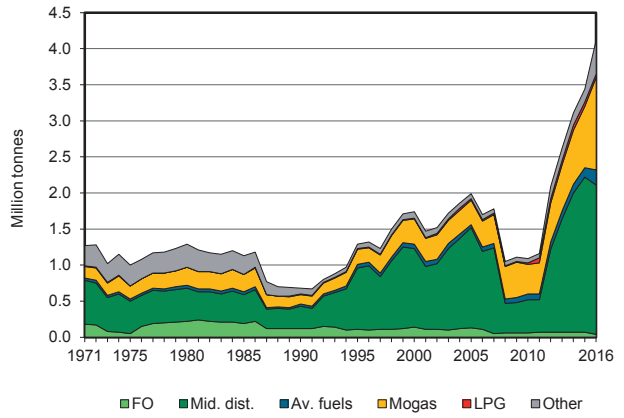


Figure 5. Electricity generation by source

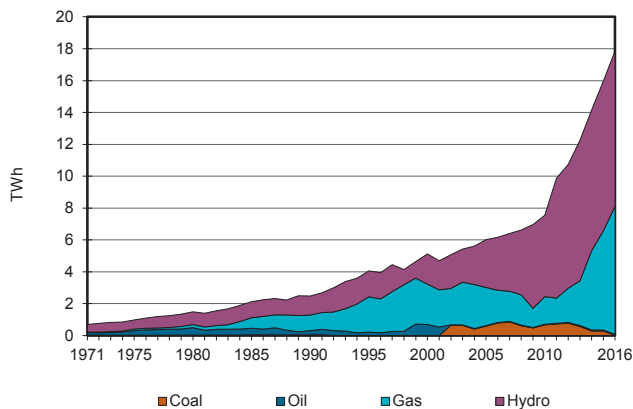
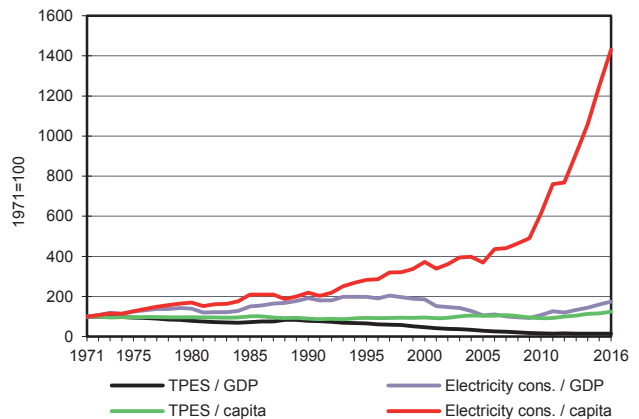


Figure 6. Selected indicators<sup>5</sup>



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. GDP in 2010 USD.

## Myanmar

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	262	608	-	16006	-	838	-	10157	-	-	27870
Imports	124	-	4006	-	-	-	-	-	-	-	4131
Exports	-4	-145	-183	-12475	-	-	-	-	-	-	-12807
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-95	-	-	-	-	-	-	-	-95
Stock changes	-	-	207	-	-	-	-	-	-	-	207
<b>TPES</b>	<b>382</b>	<b>462</b>	<b>3935</b>	<b>3531</b>	<b>-</b>	<b>838</b>	<b>-</b>	<b>10157</b>	<b>-</b>	<b>-</b>	<b>19306</b>
Transfers	-	-13	14	-	-	-	-	-	-	-	1
Statistical differences	-7	1	-205	95	-	-	-	-	-	-	-116
Electricity plants	-2	-	-16	-2654	-	-838	-	-	1536	-	-1974
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-450	444	-	-	-	-	-	-	-	-6
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-42	-	-	-42
Energy industry own use	-	-	-34	-419	-	-	-	-	-11	-	-464
Losses	-	-	-	-	-	-	-	-	-205	-	-205
<b>TFC</b>	<b>372</b>	<b>-</b>	<b>4139</b>	<b>553</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>10116</b>	<b>1320</b>	<b>-</b>	<b>16500</b>
<b>INDUSTRY</b>	<b>328</b>	<b>-</b>	<b>681</b>	<b>258</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>317</b>	<b>182</b>	<b>-</b>	<b>1766</b>
Iron and steel	47	-	-	6	-	-	-	-	-	-	53
Chemical and petrochemical	-	-	-	110	-	-	-	-	-	-	110
Non-ferrous metals	-	-	-	2	-	-	-	-	-	-	2
Non-metallic minerals	117	-	-	5	-	-	-	-	-	-	123
Transport equipment	-	-	-	1	-	-	-	-	-	-	1
Machinery	-	-	-	5	-	-	-	-	-	-	5
Mining and quarrying	-	-	143	-	-	-	-	-	-	-	143
Food and tobacco	-	-	37	10	-	-	-	-	-	-	46
Paper pulp and printing	-	-	-	0	-	-	-	-	-	-	0
Wood and wood products	-	-	52	-	-	-	-	-	-	-	52
Construction	40	-	437	110	-	-	-	-	-	-	587
Textile and leather	-	-	-	7	-	-	-	-	-	-	7
Non-specified	124	-	11	-	-	-	-	317	182	-	636
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>1369</b>	<b>160</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1529</b>
Domestic aviation	-	-	129	-	-	-	-	-	-	-	129
Road	-	-	942	160	-	-	-	-	-	-	1102
Rail	-	-	240	-	-	-	-	-	-	-	240
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	58	-	-	-	-	-	-	-	58
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>44</b>	<b>-</b>	<b>1663</b>	<b>0</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>9798</b>	<b>1138</b>	<b>-</b>	<b>12644</b>
Residential	-	-	16	-	-	-	-	9798	297	-	10111
Comm. and public services	2	-	299	-	-	-	-	-	118	-	420
Agriculture/forestry	-	-	921	-	-	-	-	-	-	-	921
Fishing	-	-	4	-	-	-	-	-	-	-	4
Non-specified	42	-	423	0	-	-	-	-	723	-	1188
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>426</b>	<b>135</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>561</b>
in industry/transf./energy	-	-	240	135	-	-	-	-	-	-	375
of which: chem./petrochem.	-	-	-	135	-	-	-	-	-	-	135
in transport	-	-	186	-	-	-	-	-	-	-	186
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>10</b>	<b>-</b>	<b>61</b>	<b>8052</b>	<b>-</b>	<b>9744</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>17867</b>
Electricity plants	10	-	61	8052	-	9744	-	-	-	-	17867
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Namibia

Figure 1. Energy production

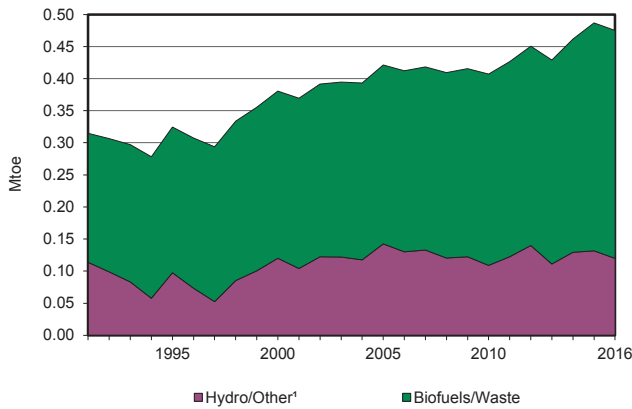


Figure 2. Total primary energy supply²

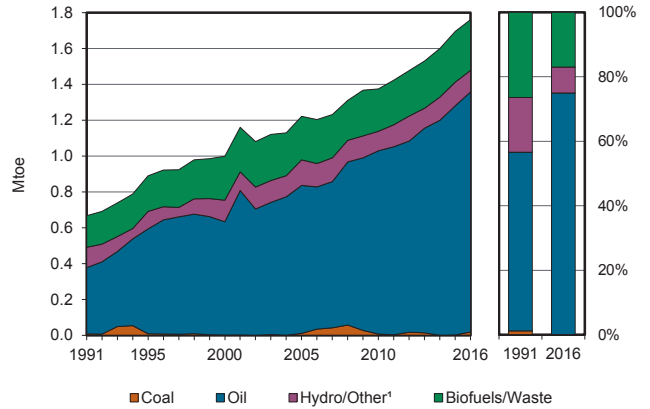


Figure 3. Energy self-sufficiency³

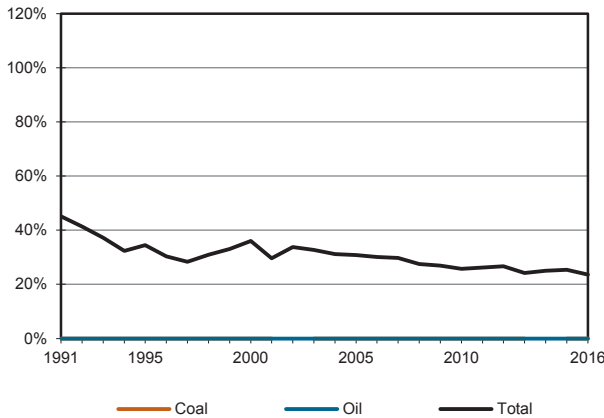


Figure 4. Oil products demand⁴

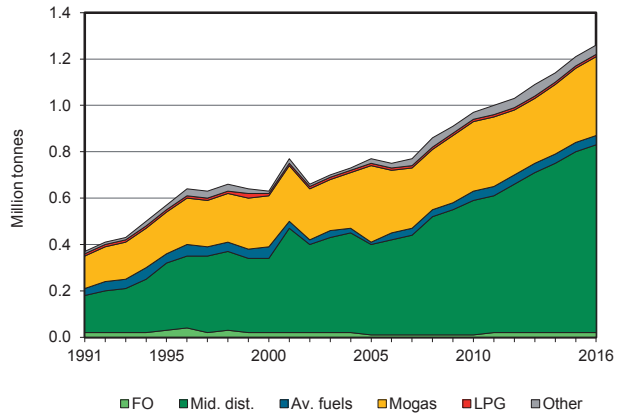


Figure 5. Electricity generation by source

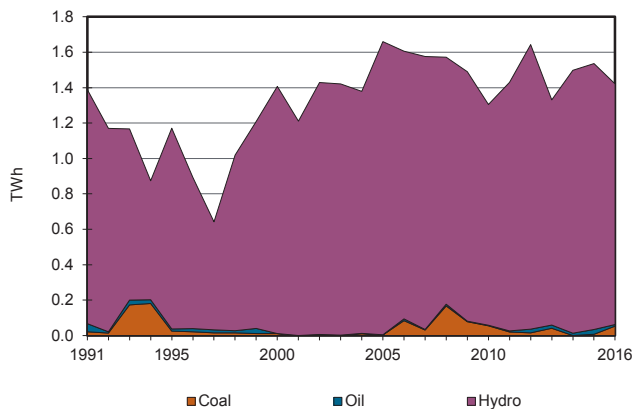
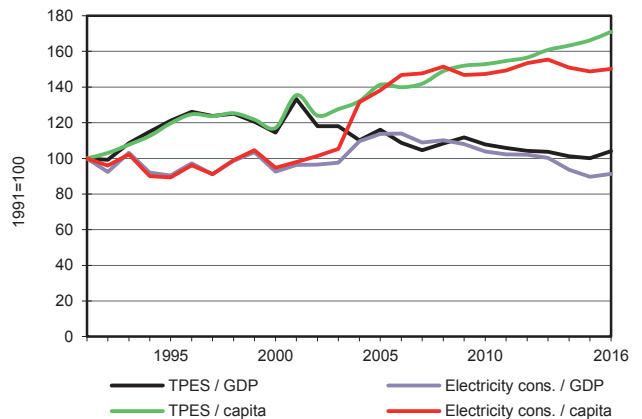


Figure 6. Selected indicators⁵



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. GDP in 2010 USD.



## Namibia

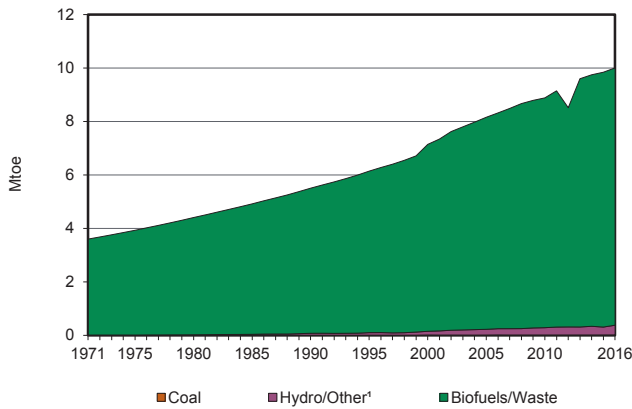
2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	-	-	-	-	117	3	355	-	-	475
Imports	-	-	1384	-	-	-	-	-	264	-	1649
Exports	-	-	-4	-	-	-	-	-72	-9	-	-85
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-40	-	-	-	-	-	-	-	-40
Stock changes	18	-	-	-	-	-	-	-	-	-	18
<b>TPES</b>	<b>18</b>	<b>-</b>	<b>1340</b>	<b>-</b>	<b>-</b>	<b>117</b>	<b>3</b>	<b>283</b>	<b>256</b>	<b>-</b>	<b>2017</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-	-	-1	-	-	-	-	-	-	-	-1
Electricity plants	-18	-	-3	-	-	-117	-	-	122	-	-16
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-	-	-	-	-	-	-	-	-	-
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-112	-	-	-112
Energy industry own use	-	-	-	-	-	-	-	-	-	-	-
Losses	-	-	-	-	-	-	-	-	-42	-	-42
<b>TFC</b>	<b>-</b>	<b>-</b>	<b>1336</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>3</b>	<b>171</b>	<b>336</b>	<b>-</b>	<b>1845</b>
<b>INDUSTRY</b>	<b>-</b>	<b>-</b>	<b>111</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>28</b>	<b>50</b>	<b>-</b>	<b>189</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	-	-	-	-	28	-	-	28
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	76	-	-	-	-	-	38	-	114
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	25	-	-	-	-	-	-	-	25
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	10	-	-	-	-	-	12	-	23
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>741</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>741</b>
Domestic aviation	-	-	6	-	-	-	-	-	-	-	6
Road	-	-	708	-	-	-	-	-	-	-	708
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	26	-	-	-	-	-	-	-	26
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>-</b>	<b>-</b>	<b>456</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>3</b>	<b>143</b>	<b>286</b>	<b>-</b>	<b>887</b>
Residential	-	-	2	-	-	-	-	143	-	-	145
Comm. and public services	-	-	2	-	-	-	-	-	-	-	2
Agriculture/forestry	-	-	375	-	-	-	-	-	-	-	375
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	76	-	-	-	3	-	286	-	365
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>28</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>28</b>
in industry/transf./energy	-	-	19	-	-	-	-	-	-	-	19
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	6	-	-	-	-	-	-	-	6
in other	-	-	3	-	-	-	-	-	-	-	3
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>53</b>	<b>-</b>	<b>9</b>	<b>-</b>	<b>-</b>	<b>1359</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1421</b>
Electricity plants	53	-	9	-	-	1359	-	-	-	-	1421
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

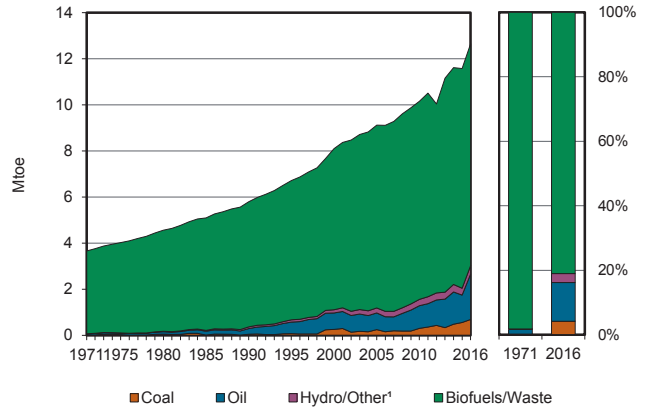
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Nepal

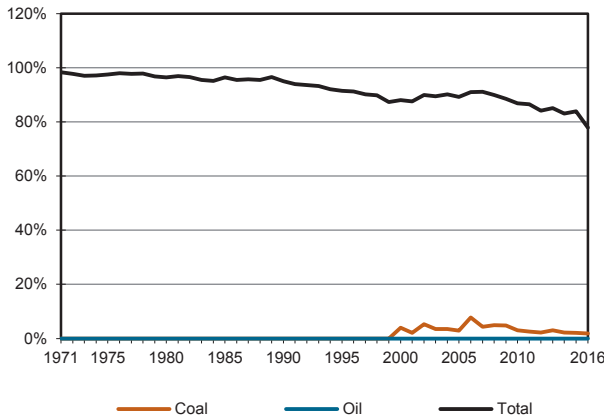
**Figure 1. Energy production**



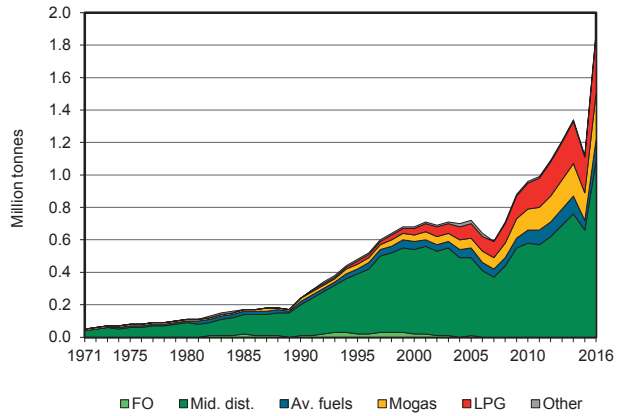
**Figure 2. Total primary energy supply<sup>2</sup>**



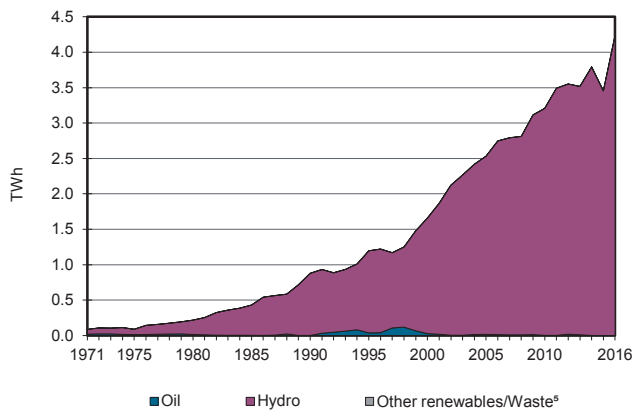
**Figure 3. Energy self-sufficiency<sup>3</sup>**



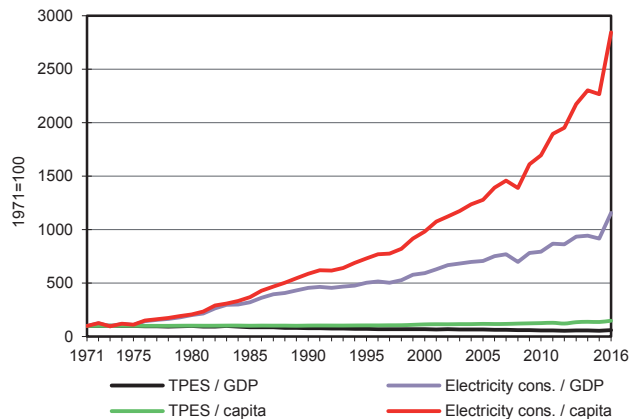
**Figure 4. Oil products demand<sup>4</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>6</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Nepal

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	13	-	-	-	-	364	1	9622	-	-	10000
Imports	677	-	2116	-	-	-	-	-	187	-	2980
Exports	-	-	-	-	-	-	-	-	-0	-	-0
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-142	-	-	-	-	-	-	-	-142
Stock changes	-	-	-	-	-	-	-	-	-	-	-
<b>TPES</b>	<b>689</b>	<b>-</b>	<b>1974</b>	<b>-</b>	<b>-</b>	<b>364</b>	<b>1</b>	<b>9622</b>	<b>187</b>	<b>-</b>	<b>12837</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-	-	-20	-	-	-	-	0	-1	-	-21
Electricity plants	-	-	-	-	-	-364	-1	-	365	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-	-	-	-	-	-	-	-	-	-
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-15	-	-	-15
Energy industry own use	-	-	-	-	-	-	-	-	-4	-	-4
Losses	-	-	-	-	-	-	-	-	-123	-	-123
<b>TFC</b>	<b>689</b>	<b>-</b>	<b>1954</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>9608</b>	<b>423</b>	<b>-</b>	<b>12674</b>
<b>INDUSTRY</b>	<b>687</b>	<b>-</b>	<b>18</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>61</b>	<b>149</b>	<b>-</b>	<b>915</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	687	-	18	-	-	-	-	61	149	-	915
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>1280</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>-</b>	<b>1280</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	1280	-	-	-	-	-	-	-	1280
Rail	-	-	-	-	-	-	-	-	1	-	1
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>2</b>	<b>-</b>	<b>647</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>9546</b>	<b>274</b>	<b>-</b>	<b>10470</b>
Residential	2	-	246	-	-	-	-	9487	198	-	9933
Comm. and public services	-	-	183	-	-	-	-	60	52	-	295
Agriculture/forestry	-	-	218	-	-	-	-	-	10	-	228
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	14	-	14
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>9</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>9</b>
in industry/transf./energy	-	-	9	-	-	-	-	-	-	-	9
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>4237</b>	<b>7</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>4244</b>
Electricity plants	-	-	-	-	-	4237	7	-	-	-	4244
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Nicaragua

Figure 1. Energy production

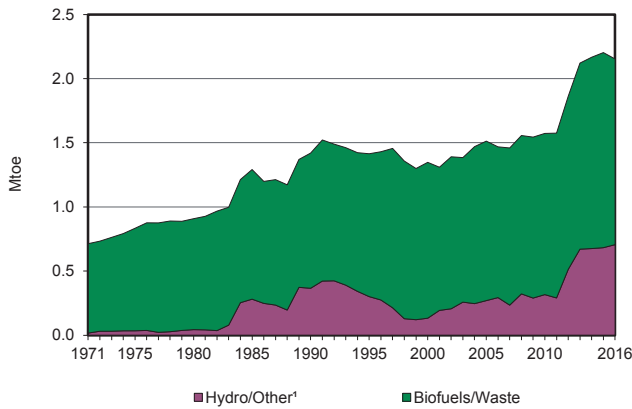


Figure 2. Total primary energy supply²

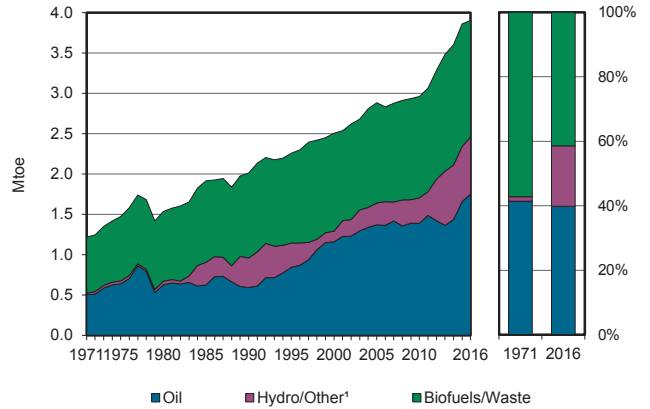


Figure 3. Energy self-sufficiency³

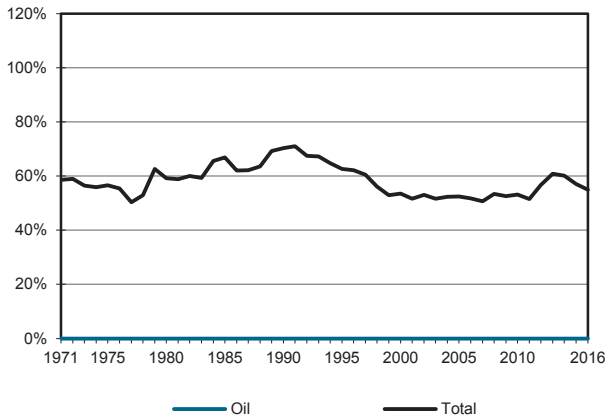


Figure 4. Oil products demand⁴

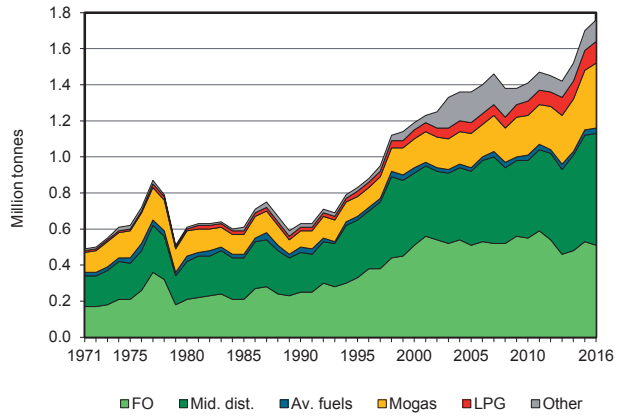


Figure 5. Electricity generation by source

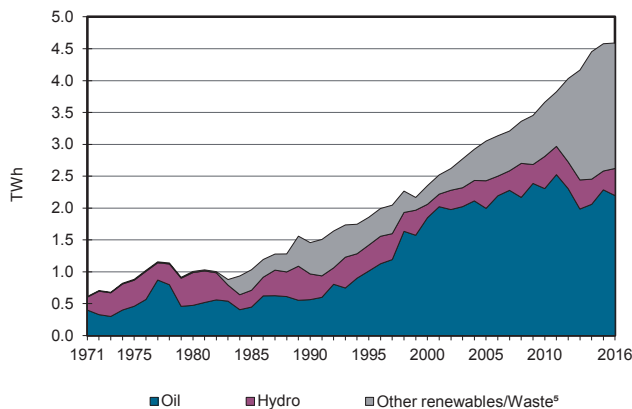
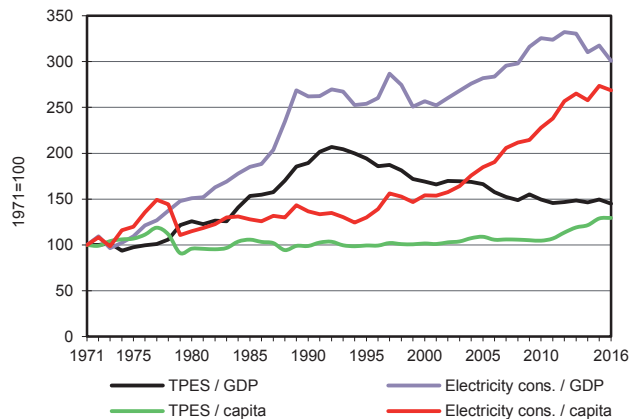


Figure 6. Selected indicators⁶



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Nicaragua

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	-	-	-	-	37	670	1446	-	-	2153
Imports	-	632	1105	-	-	-	-	-	18	-	1755
Exports	-	-	-18	-	-	-	-	-	-2	-	-19
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-23	-	-	-	-	-	-	-	-23
Stock changes	-	48	7	-	-	-	-	-	-	-	55
<b>TPES</b>	-	<b>680</b>	<b>1071</b>	-	-	<b>37</b>	<b>670</b>	<b>1446</b>	<b>16</b>	-	<b>3921</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-	-12	32	-	-	-	-	0	1	-	21
Electricity plants	-	-	-490	-	-	-37	-670	-402	395	-	-1203
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-669	659	-	-	-	-	-	-	-	-10
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-8	-	-	-8
Energy industry own use	-	-	-16	-	-	-	-	-	-34	-	-50
Losses	-	-	-	-	-	-	-	-	-90	-	-90
<b>TFC</b>	-	-	<b>1256</b>	-	-	-	-	<b>1037</b>	<b>287</b>	-	<b>2580</b>
<b>INDUSTRY</b>	-	-	<b>200</b>	-	-	-	-	<b>64</b>	<b>95</b>	-	<b>359</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	5	-	-	-	-	-	-	-	5
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	10	-	-	-	-	-	8	-	18
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	185	-	-	-	-	64	88	-	336
<b>TRANSPORT</b>	-	-	<b>784</b>	-	-	-	-	-	-	-	<b>784</b>
Domestic aviation	-	-	3	-	-	-	-	-	-	-	3
Road	-	-	706	-	-	-	-	-	-	-	706
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	75	-	-	-	-	-	-	-	75
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	-	-	<b>230</b>	-	-	-	-	<b>973</b>	<b>192</b>	-	<b>1394</b>
Residential	-	-	57	-	-	-	-	902	92	-	1051
Comm. and public services	-	-	157	-	-	-	-	38	90	-	285
Agriculture/forestry	-	-	16	-	-	-	-	33	10	-	58
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>NON-ENERGY USE</b>	-	-	<b>43</b>	-	-	-	-	-	-	-	<b>43</b>
in industry/transf./energy	-	-	43	-	-	-	-	-	-	-	43
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	-	-	<b>2195</b>	-	-	<b>426</b>	<b>1435</b>	<b>534</b>	-	-	<b>4590</b>
Electricity plants	-	-	2195	-	-	426	1435	534	-	-	4590
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Niger

Figure 1. Energy production

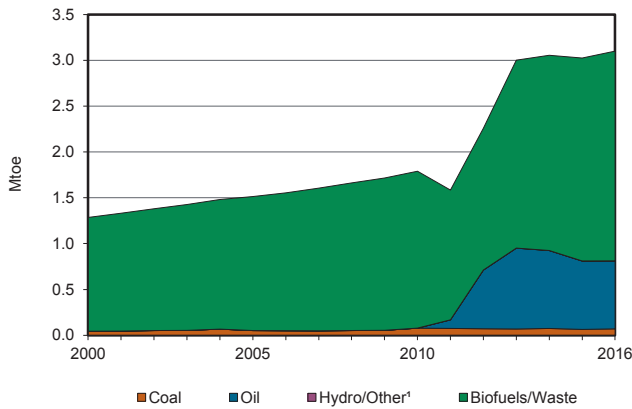


Figure 2. Total primary energy supply<sup>2</sup>

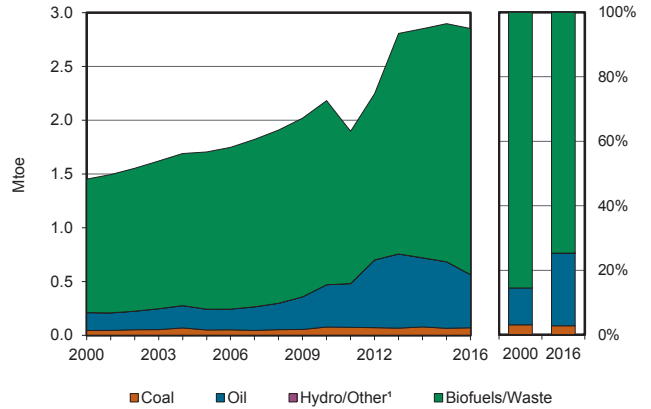


Figure 3. Energy self-sufficiency<sup>3</sup>

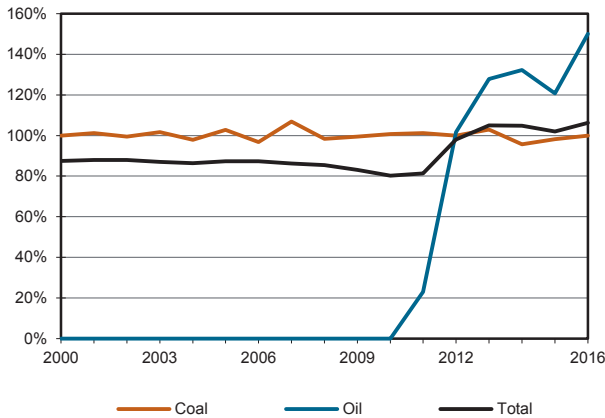


Figure 4. Oil products demand<sup>4</sup>

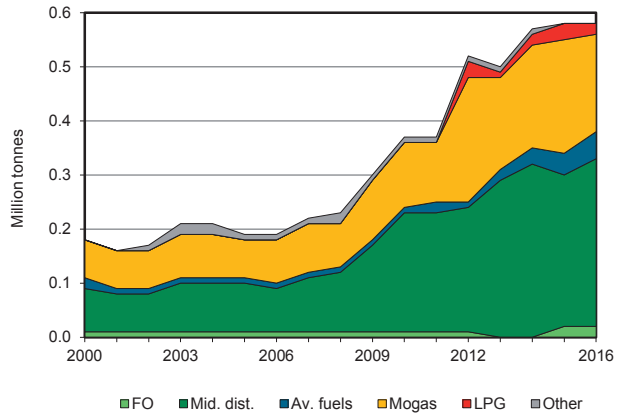


Figure 5. Electricity generation by source

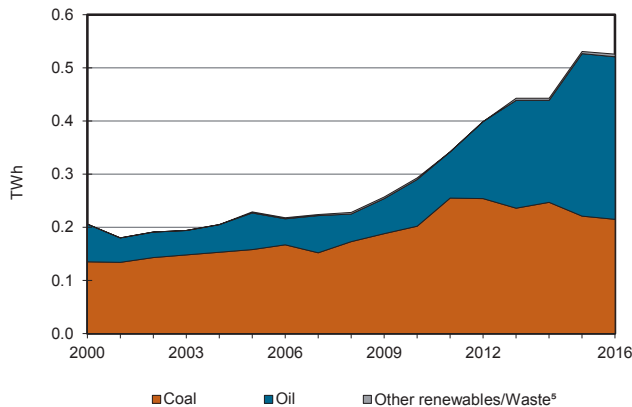
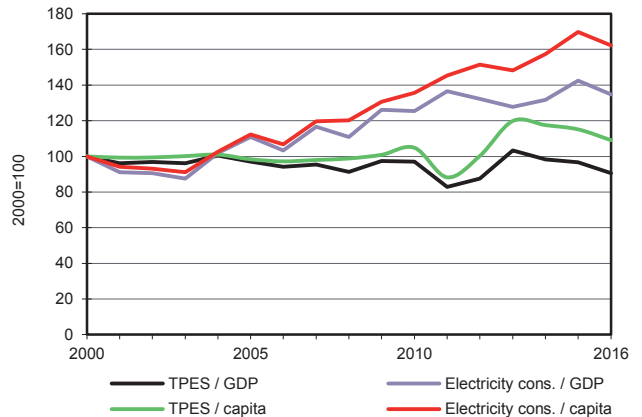


Figure 6. Selected indicators<sup>6</sup>



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Niger

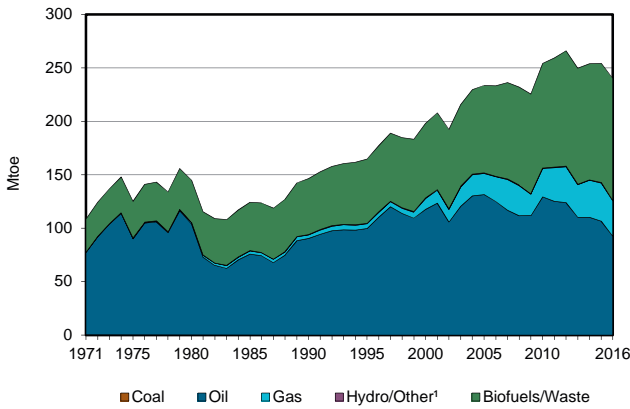
2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	70	741	-	-	-	-	0	2288	-	-	3100
Imports	-	-	128	-	-	-	-	-	67	-	195
Exports	-	-	-320	-	-	-	-	-	-	-	-320
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-48	-	-	-	-	-	-	-	-48
Stock changes	-	1	-8	-	-	-	-	-	-	-	-7
<b>TPES</b>	<b>70</b>	<b>742</b>	<b>-249</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0</b>	<b>2288</b>	<b>67</b>	<b>-</b>	<b>2919</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-3	95	152	-	-	-	-	-	-0	-	243
Electricity plants	-66	-	-70	-	-	-	-0	-	45	-	-92
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-1	-	-	-	-	-	-	-	-	-	-1
Oil refineries	-	-837	653	-	-	-	-	-	-	-	-184
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-71	-	-	-71
Energy industry own use	-	-	-	-	-	-	-	-	-10	-	-10
Losses	-	-	-	-	-	-	-	-	-18	-	-18
<b>TFC</b>	<b>-</b>	<b>-</b>	<b>486</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2217</b>	<b>84</b>	<b>-</b>	<b>2786</b>
<b>INDUSTRY</b>	<b>-</b>	<b>-</b>	<b>65</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>24</b>	<b>-</b>	<b>89</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	65	-	-	-	-	-	24	-	89
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>390</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>390</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	390	-	-	-	-	-	-	-	390
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>-</b>	<b>-</b>	<b>27</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2217</b>	<b>60</b>	<b>-</b>	<b>2304</b>
Residential	-	-	17	-	-	-	-	2198	50	-	2265
Comm. and public services	-	-	10	-	-	-	-	19	10	-	39
Agriculture/forestry	-	-	-	-	-	-	-	-	1	-	1
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>4</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>4</b>
in industry/transf./energy	-	-	4	-	-	-	-	-	-	-	4
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>215</b>	<b>-</b>	<b>306</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>5</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>526</b>
Electricity plants	215	-	306	-	-	-	5	-	-	-	526
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

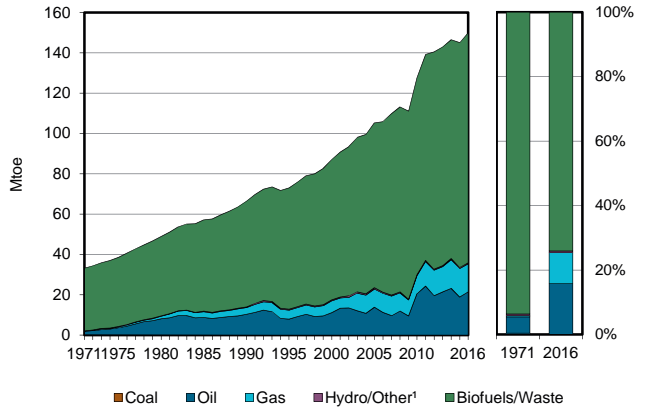
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Nigeria

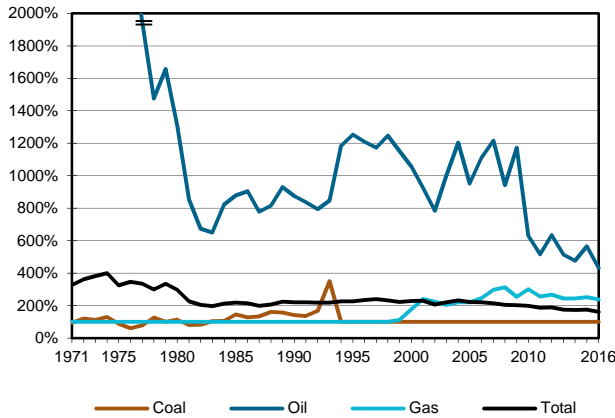
**Figure 1. Energy production**



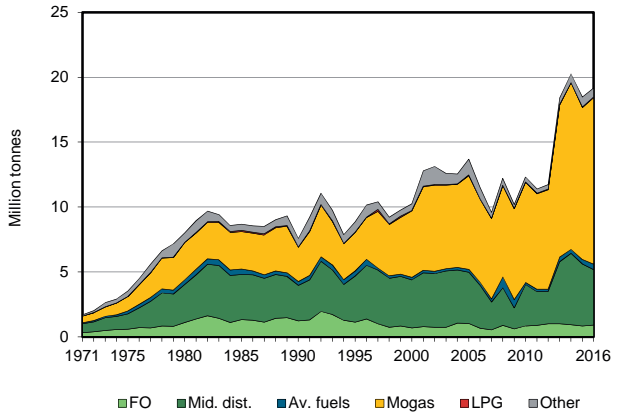
**Figure 2. Total primary energy supply<sup>2</sup>**



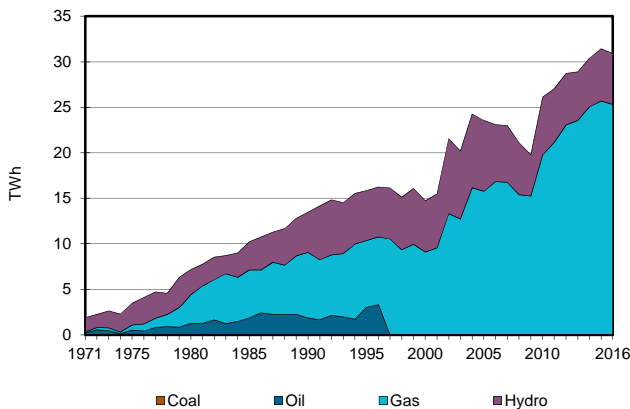
**Figure 3. Energy self-sufficiency<sup>3</sup>**



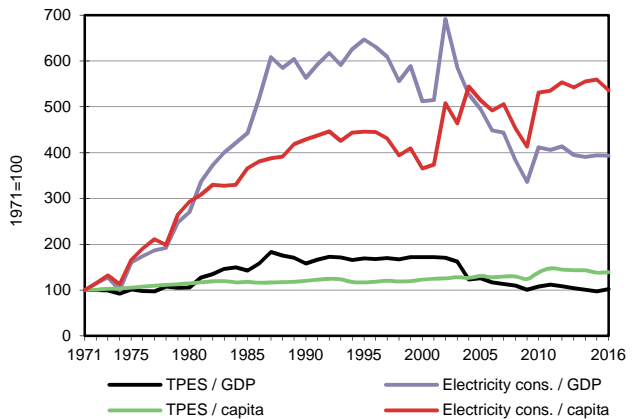
**Figure 4. Oil products demand<sup>4</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>5</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency. Maximum scale refers to values greater than or equal to 2000%.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. GDP in 2010 USD.



## Nigeria

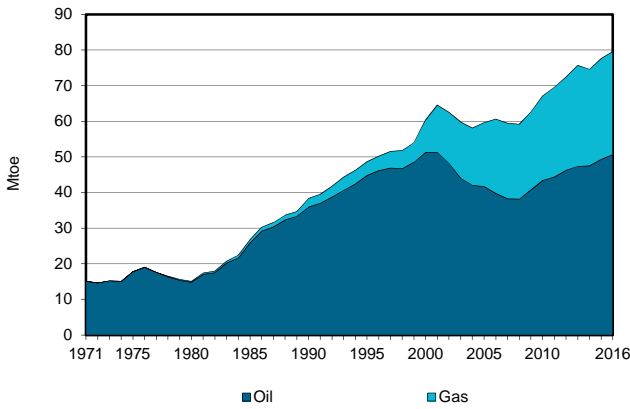
2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	28	92261	-	32919	-	480	-	114083	-	-	239772
Imports	-	-	19905	-	-	-	-	-	-	-	19905
Exports	-	-88917	-250	-19008	-	-	-	-	-	-	-108176
Intl. marine bunkers	-	-	-308	-	-	-	-	-	-	-	-308
Intl. aviation bunkers	-	-	-452	-	-	-	-	-	-	-	-452
Stock changes	-	-40	-737	-	-	-	-	-	-	-	-777
<b>TPES</b>	<b>28</b>	<b>3304</b>	<b>18158</b>	<b>13911</b>	<b>-</b>	<b>480</b>	<b>-</b>	<b>114083</b>	<b>-</b>	<b>-</b>	<b>149964</b>
Transfers	-	493	-440	-	-	-	-	-	-	-	53
Statistical differences	-	-	-2055	164	-	-	-	-	12	-	-1879
Electricity plants	-	-	-	-5441	-	-480	-	-	2657	-	-3265
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-3479	3497	-	-	-	-	-	-	-	18
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-8931	-	-	-8931
Energy industry own use	-	-	-317	-5229	-	-	-	-	-94	-	-5640
Losses	-	-319	-47	-	-	-	-	-	-399	-	-764
<b>TFC</b>	<b>28</b>	<b>-</b>	<b>18795</b>	<b>3406</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>105151</b>	<b>2176</b>	<b>-</b>	<b>129556</b>
<b>INDUSTRY</b>	<b>28</b>	<b>-</b>	<b>429</b>	<b>2211</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>4090</b>	<b>353</b>	<b>-</b>	<b>7110</b>
Iron and steel	-	-	-	231	-	-	-	-	-	-	231
Chemical and petrochemical	-	-	-	381	-	-	-	-	-	-	381
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	28	-	-	-	-	-	-	-	-	-	28
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	429	1599	-	-	-	4090	353	-	6470
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>17249</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>17249</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	17137	-	-	-	-	-	-	-	17137
Rail	-	-	56	-	-	-	-	-	-	-	56
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	56	-	-	-	-	-	-	-	56
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>-</b>	<b>-</b>	<b>839</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>101062</b>	<b>1823</b>	<b>-</b>	<b>103724</b>
Residential	-	-	582	-	-	-	-	98333	1269	-	100184
Comm. and public services	-	-	1	-	-	-	-	2729	554	-	3284
Agriculture/forestry	-	-	4	-	-	-	-	-	-	-	4
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	251	-	-	-	-	-	-	-	251
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>279</b>	<b>1194</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1473</b>
in industry/transf./energy	-	-	279	1194	-	-	-	-	-	-	1473
of which: chem./petrochem.	-	-	-	1194	-	-	-	-	-	-	1194
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>25311</b>	<b>-</b>	<b>5586</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>30897</b>
Electricity plants	-	-	-	25311	-	5586	-	-	-	-	30897
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

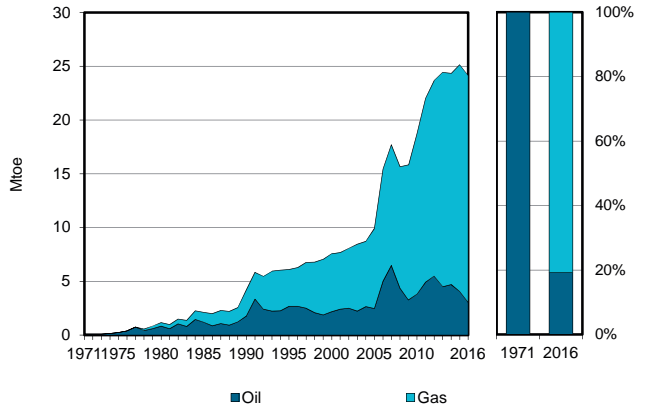
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Oman

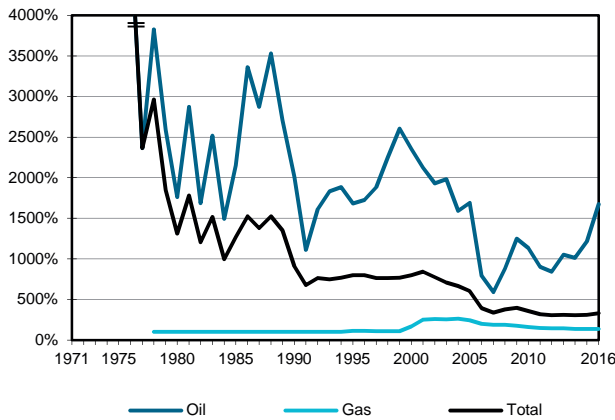
**Figure 1. Energy production**



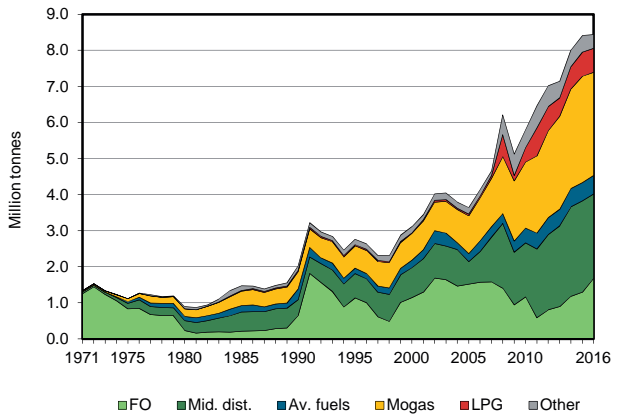
**Figure 2. Total primary energy supply<sup>1</sup>**



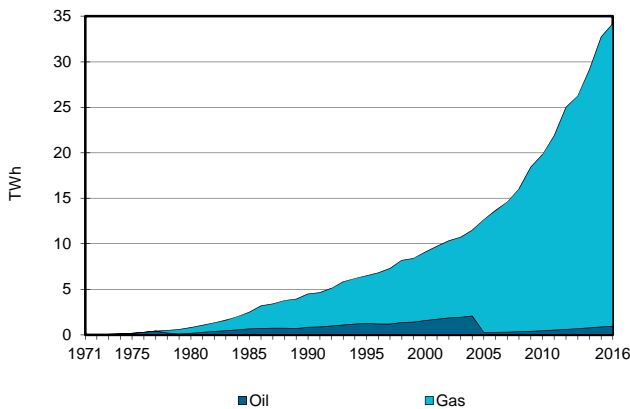
**Figure 3. Energy self-sufficiency<sup>2</sup>**



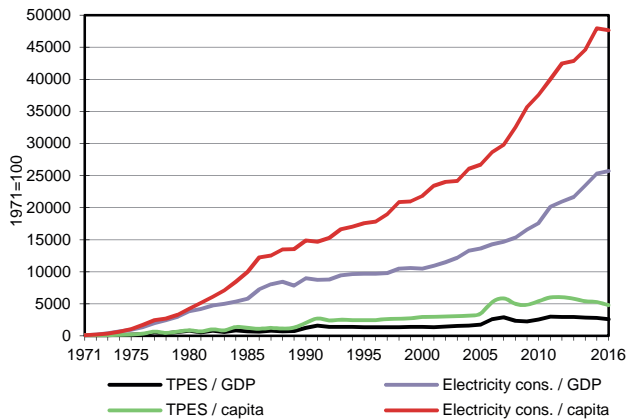
**Figure 4. Oil products demand<sup>3</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>4</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Excluding electricity trade.
2. Production divided by TPES. 100% represents full self-sufficiency. Maximum scale refers to values greater than or equal to 4000%.
3. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
4. GDP in 2010 USD.

## Oman

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	50656	-	28871	-	-	-	-	-	-	79527
Imports	-	259	56	1753	-	-	-	-	-	-	2068
Exports	-	-44131	-1467	-9538	-	-	-	-	-	-	-55135
Intl. marine bunkers	-	-	-1610	-	-	-	-	-	-	-	-1610
Intl. aviation bunkers	-	-	-548	-	-	-	-	-	-	-	-548
Stock changes	-	-	-191	-	-	-	-	-	-	-	-191
<b>TPES</b>	-	<b>6784</b>	<b>-3760</b>	<b>21087</b>	-	-	-	-	-	-	<b>24111</b>
Transfers	-	1147	-975	-	-	-	-	-	-	-	172
Statistical differences	-	3224	137	87	-	-	-	-	-	-	3448
Electricity plants	-	-	-232	-6555	-	-	-	-	2942	-	-3846
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-11155	11213	-	-	-	-	-	-	-	59
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-	-	-	-
Energy industry own use	-	-	-107	-3171	-	-	-	-	-52	-	-3330
Losses	-	-	-	-	-	-	-	-	-279	-	-279
<b>TFC</b>	-	-	<b>6277</b>	<b>11448</b>	-	-	-	-	<b>2610</b>	-	<b>20335</b>
<b>INDUSTRY</b>	-	-	<b>322</b>	<b>9688</b>	-	-	-	-	<b>443</b>	-	<b>10452</b>
Iron and steel	-	-	-	643	-	-	-	-	-	-	643
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	276	-	-	-	-	-	-	276
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	62	-	-	-	-	-	-	62
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	322	8707	-	-	-	-	443	-	9472
<b>TRANSPORT</b>	-	-	<b>4174</b>	-	-	-	-	-	-	-	<b>4174</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	4174	-	-	-	-	-	-	-	4174
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	-	-	<b>955</b>	<b>155</b>	-	-	-	-	<b>2167</b>	-	<b>3277</b>
Residential	-	-	212	-	-	-	-	-	1203	-	1416
Comm. and public services	-	-	-	-	-	-	-	-	930	-	930
Agriculture/forestry	-	-	-	-	-	-	-	-	34	-	34
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	743	155	-	-	-	-	-	-	898
<b>NON-ENERGY USE</b>	-	-	<b>827</b>	<b>1605</b>	-	-	-	-	-	-	<b>2432</b>
in industry/transf./energy	-	-	827	1605	-	-	-	-	-	-	2432
of which: chem./petrochem.	-	-	735	1605	-	-	-	-	-	-	2340
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	-	-	<b>940</b>	<b>33270</b>	-	-	-	-	-	-	<b>34210</b>
Electricity plants	-	-	940	33270	-	-	-	-	-	-	34210
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Pakistan

Figure 1. Energy production

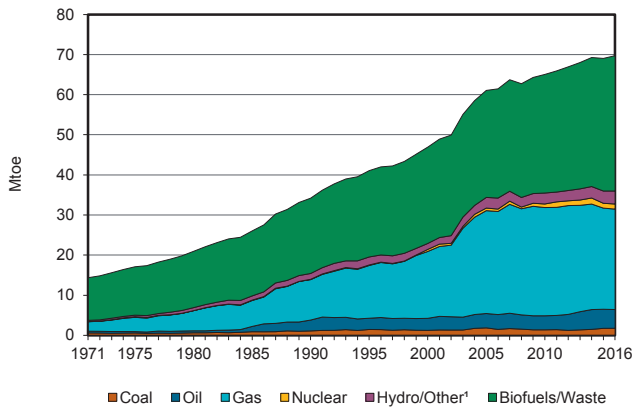


Figure 2. Total primary energy supply<sup>2</sup>

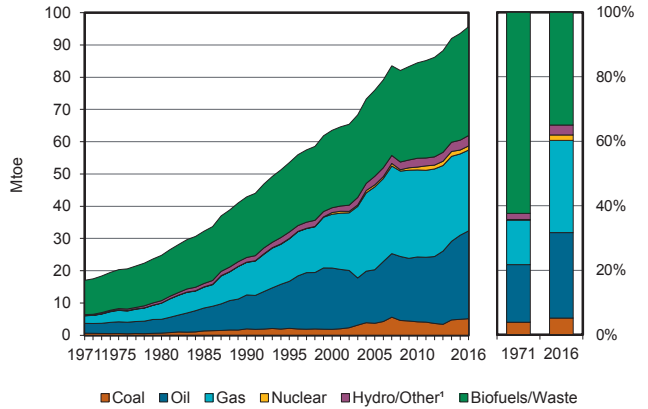


Figure 3. Energy self-sufficiency<sup>3</sup>

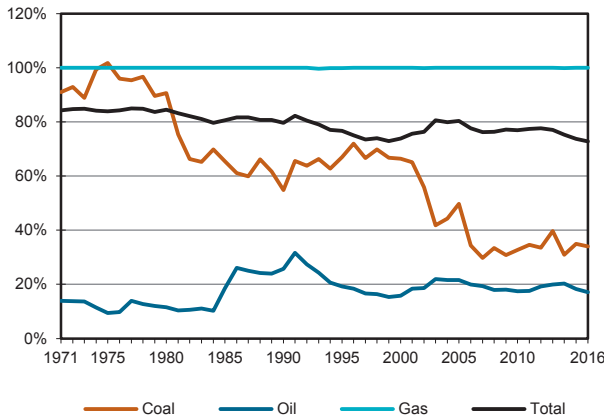


Figure 4. Oil products demand<sup>4</sup>

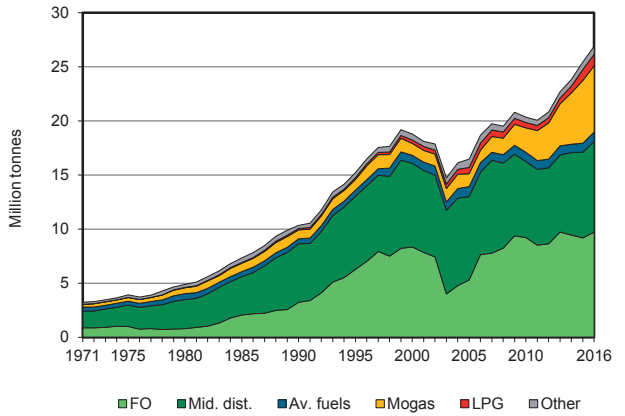


Figure 5. Electricity generation by source

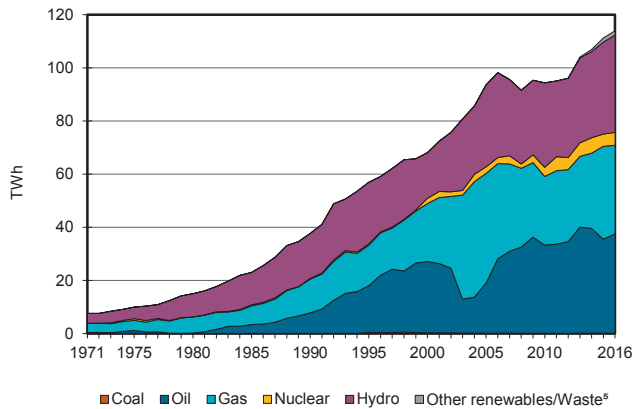
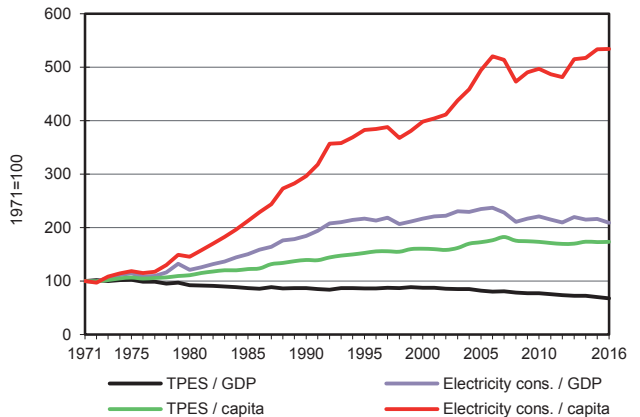


Figure 6. Selected indicators<sup>6</sup>



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Pakistan

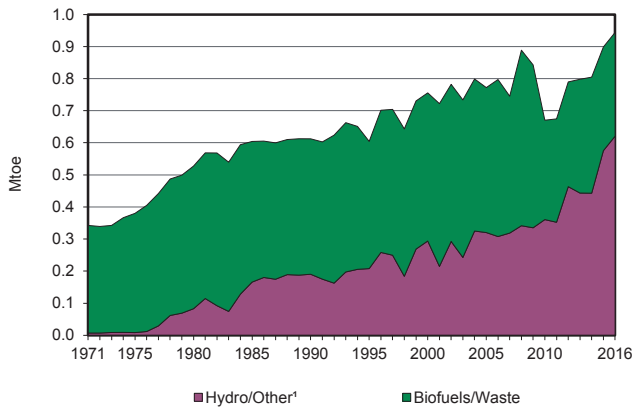
2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	1753	4666	-	25046	1269	3149	90	33736	-	-	69709
Imports	3410	9558	15321	-	-	-	-	-	42	-	28331
Exports	-	-313	-1144	-	-	-	-	-	-	-	-1457
Intl. marine bunkers	-	-	-53	-	-	-	-	-	-	-	-53
Intl. aviation bunkers	-	-	-791	-	-	-	-	-	-	-	-791
Stock changes	-	-	-38	-	-	-	-	-	-	-	-38
<b>TPES</b>	<b>5164</b>	<b>13911</b>	<b>13295</b>	<b>25046</b>	<b>1269</b>	<b>3149</b>	<b>90</b>	<b>33736</b>	<b>42</b>	<b>-</b>	<b>95701</b>
Transfers	-	-469	497	-	-	-	-	-	-	-	28
Statistical differences	74	-18	-2	1733	-	-	-	-	137	-	1924
Electricity plants	-126	-	-8019	-7760	-1269	-3149	-90	-253	9802	-	-10863
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-13424	13006	-	-	-	-	-	-	-	-418
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-668	-	-	-668
Energy industry own use	-	-	-424	-133	-	-	-	-	-363	-	-920
Losses	-	-	-	-1602	-	-	-	-	-1539	-	-3141
<b>TFC</b>	<b>5112</b>	<b>-</b>	<b>18352</b>	<b>17284</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>32815</b>	<b>8079</b>	<b>-</b>	<b>81643</b>
<b>INDUSTRY</b>	<b>5112</b>	<b>-</b>	<b>2139</b>	<b>6243</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>3642</b>	<b>2276</b>	<b>-</b>	<b>19412</b>
Iron and steel	-	-	-	23	-	-	-	-	-	-	23
Chemical and petrochemical	-	-	519	1331	-	-	-	-	-	-	1850
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	5112	-	1059	11	-	-	-	-	-	-	6181
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	561	4879	-	-	-	3642	2276	-	11357
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>14290</b>	<b>1365</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>15655</b>
Domestic aviation	-	-	119	-	-	-	-	-	-	-	119
Road	-	-	13877	1365	-	-	-	-	-	-	15241
Rail	-	-	295	-	-	-	-	-	-	-	295
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>-</b>	<b>-</b>	<b>1479</b>	<b>6456</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>29173</b>	<b>5803</b>	<b>-</b>	<b>42911</b>
Residential	-	-	554	5744	-	-	-	29173	3902	-	39373
Comm. and public services	-	-	712	712	-	-	-	-	1126	-	2550
Agriculture/forestry	-	-	17	-	-	-	-	-	775	-	792
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	196	-	-	-	-	-	-	-	196
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>444</b>	<b>3221</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>3664</b>
in industry/transf./energy	-	-	444	3221	-	-	-	-	-	-	3664
of which: chem./petrochem.	-	-	-	3221	-	-	-	-	-	-	3221
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>156</b>	<b>-</b>	<b>37392</b>	<b>33327</b>	<b>4869</b>	<b>36621</b>	<b>1050</b>	<b>588</b>	<b>-</b>	<b>-</b>	<b>114003</b>
Electricity plants	156	-	37392	33327	4869	36621	1050	588	-	-	114003
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

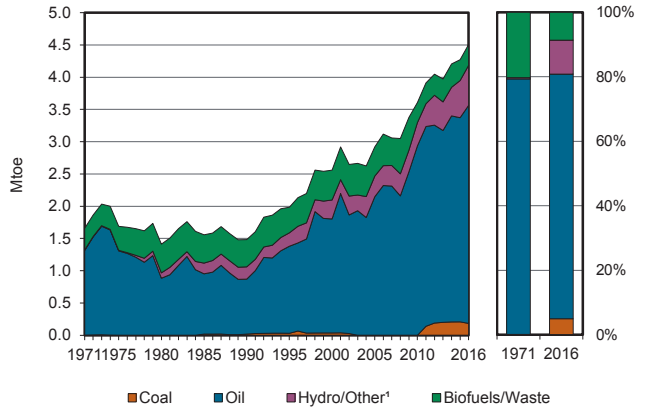
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Panama

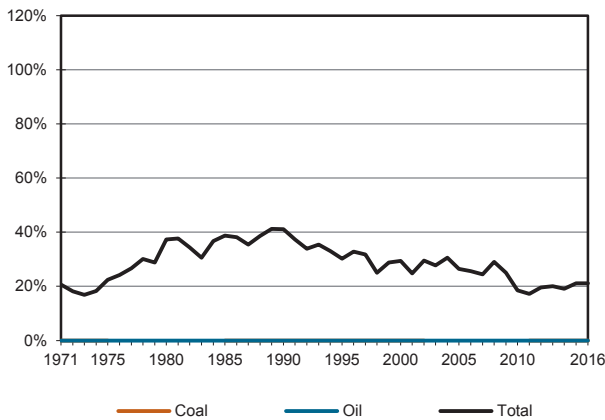
**Figure 1. Energy production**



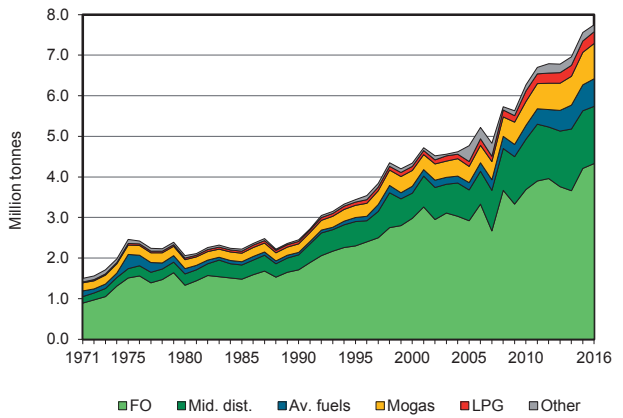
**Figure 2. Total primary energy supply²**



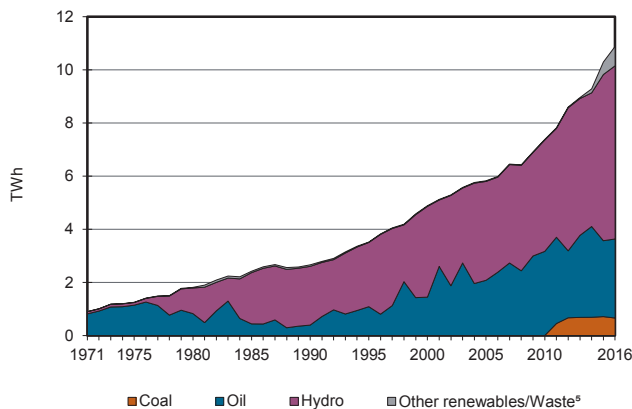
**Figure 3. Energy self-sufficiency³**



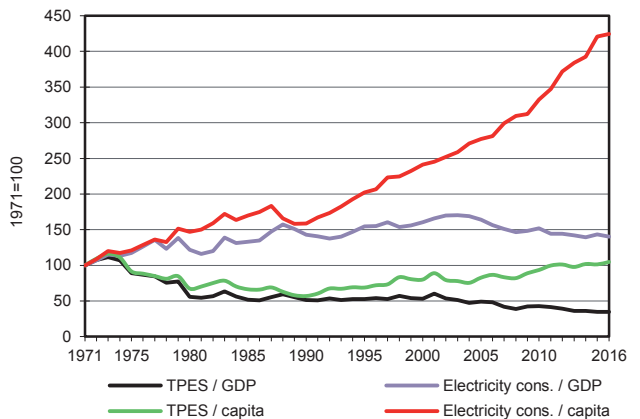
**Figure 4. Oil products demand⁴**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators⁶**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Panama

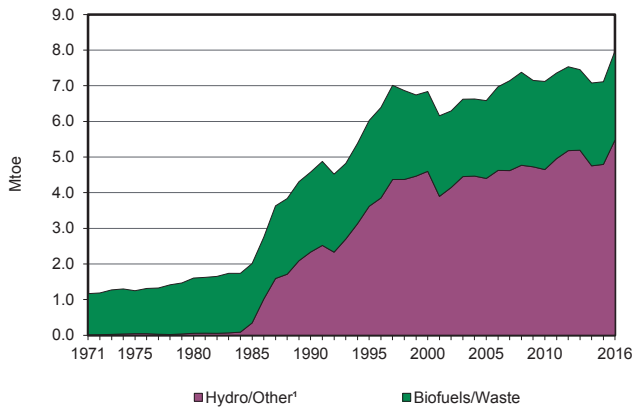
2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	-	-	-	-	561	60	323	-	-	944
Imports	185	-	7663	-	-	-	-	-	3	-	7850
Exports	-	-	-	-	-	-	-	-	-34	-	-34
Intl. marine bunkers	-	-	-3870	-	-	-	-	-	-	-	-3870
Intl. aviation bunkers	-	-	-721	-	-	-	-	-	-	-	-721
Stock changes	-	-	307	-	-	-	-	-	-	-	307
<b>TPES</b>	<b>185</b>	<b>-</b>	<b>3378</b>	<b>-</b>	<b>-</b>	<b>561</b>	<b>60</b>	<b>323</b>	<b>-32</b>	<b>-</b>	<b>4475</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-	-	-230	-	-	-	-	0	-17	-	-247
Electricity plants	-185	-	-586	-	-	-561	-60	-72	936	-	-528
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-	-	-	-	-	-	-	-	-	-
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-1	-	-	-1
Energy industry own use	-	-	-	-	-	-	-	-	-18	-	-18
Losses	-	-	-	-	-	-	-	-	-131	-	-131
<b>TFC</b>	<b>-</b>	<b>-</b>	<b>2562</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>251</b>	<b>739</b>	<b>-</b>	<b>3551</b>
<b>INDUSTRY</b>	<b>-</b>	<b>-</b>	<b>653</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>82</b>	<b>62</b>	<b>-</b>	<b>797</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	653	-	-	-	-	82	62	-	797
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>1561</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1561</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	1559	-	-	-	-	-	-	-	1559
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	2	-	-	-	-	-	-	-	2
<b>OTHER</b>	<b>-</b>	<b>-</b>	<b>294</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>169</b>	<b>677</b>	<b>-</b>	<b>1139</b>
Residential	-	-	223	-	-	-	-	168	240	-	631
Comm. and public services	-	-	53	-	-	-	-	1	436	-	490
Agriculture/forestry	-	-	18	-	-	-	-	-	-	-	18
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	1	-	1
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>54</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>54</b>
in industry/transf./energy	-	-	54	-	-	-	-	-	-	-	54
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>659</b>	<b>-</b>	<b>2975</b>	<b>-</b>	<b>-</b>	<b>6523</b>	<b>696</b>	<b>33</b>	<b>-</b>	<b>-</b>	<b>10886</b>
Electricity plants	659	-	2975	-	-	6523	696	33	-	-	10886
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

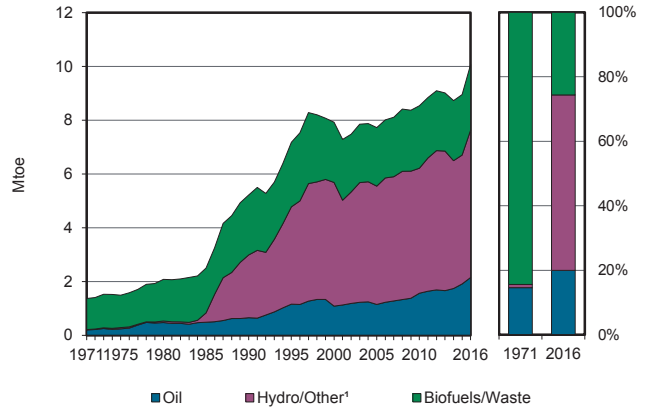
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Paraguay

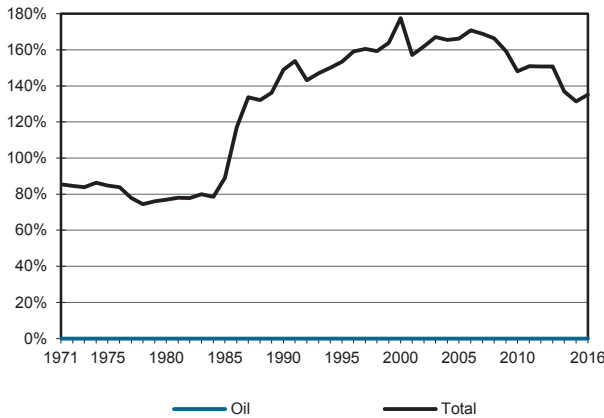
**Figure 1. Energy production**



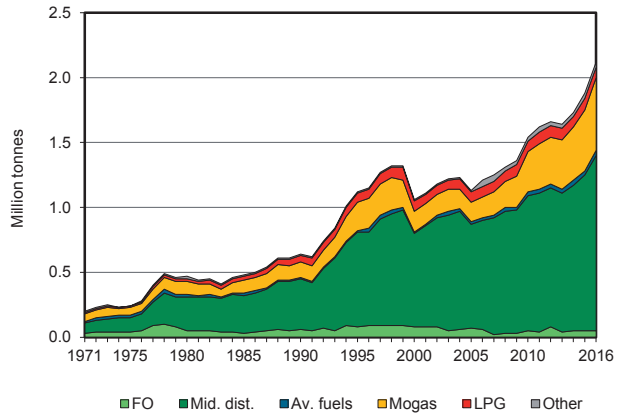
**Figure 2. Total primary energy supply²**



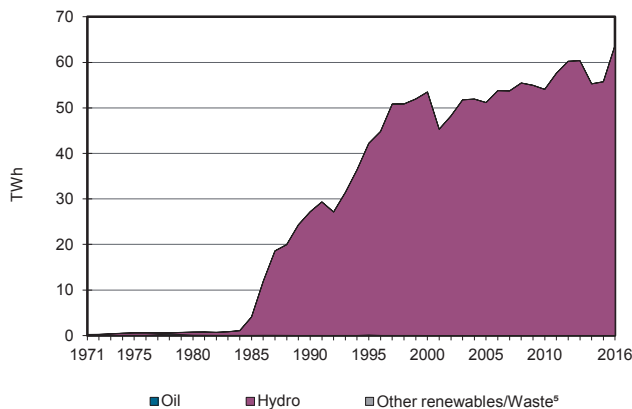
**Figure 3. Energy self-sufficiency³**



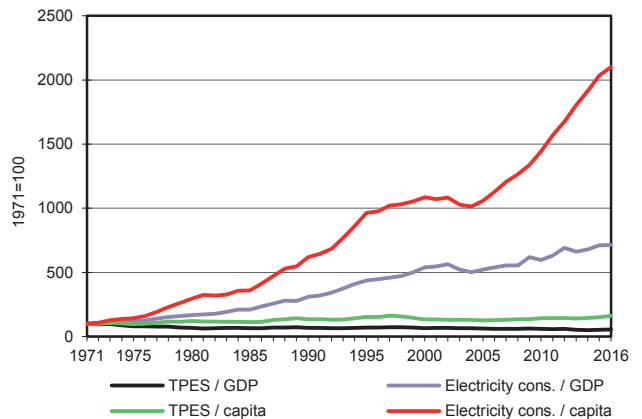
**Figure 4. Oil products demand⁴**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators⁶**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.



## Paraguay

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	-	-	-	-	5483	-	2500	-	-	7984
Imports	-	-	2100	-	-	-	-	-	-	-	2100
Exports	-	-	-	-	-	-	-	-63	-4163	-	-4226
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-42	-	-	-	-	-	-	-	-42
Stock changes	-	-	93	-	-	-	-	-	-	-	93
<b>TPES</b>	-	-	<b>2152</b>	-	-	<b>5483</b>	-	<b>2437</b>	<b>-4163</b>	-	<b>5909</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-	-	3	-	-	-	-	1	-	-	4
Electricity plants	-	-	-1	-	-	-5483	-	-	5483	-	-1
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-	-	-	-	-	-	-	-	-	-
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-293	-	-	-293
Energy industry own use	-	-	-	-	-	-	-	-	-45	-	-45
Losses	-	-	-	-	-	-	-	-	-329	-	-329
<b>TFC</b>	-	-	<b>2154</b>	-	-	-	-	<b>2144</b>	<b>947</b>	-	<b>5245</b>
<b>INDUSTRY</b>	-	-	<b>50</b>	-	-	-	-	<b>1111</b>	<b>187</b>	-	<b>1348</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	50	-	-	-	-	1111	187	-	1348
<b>TRANSPORT</b>	-	-	<b>1984</b>	-	-	-	-	<b>145</b>	-	-	<b>2129</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	1975	-	-	-	-	145	-	-	2120
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	9	-	-	-	-	-	-	-	9
<b>OTHER</b>	-	-	<b>80</b>	-	-	-	-	<b>889</b>	<b>760</b>	-	<b>1729</b>
Residential	-	-	80	-	-	-	-	885	412	-	1377
Comm. and public services	-	-	-	-	-	-	-	4	348	-	351
Agriculture/forestry	-	-	-	-	-	-	-	-	-	-	-
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>NON-ENERGY USE</b>	-	-	<b>39</b>	-	-	-	-	-	-	-	<b>39</b>
in industry/transf./energy	-	-	9	-	-	-	-	-	-	-	9
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	31	-	-	-	-	-	-	-	31
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	-	-	<b>1</b>	-	-	<b>63770</b>	-	-	-	-	<b>63771</b>
Electricity plants	-	-	1	-	-	63770	-	-	-	-	63771
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

Peru

Figure 1. Energy production

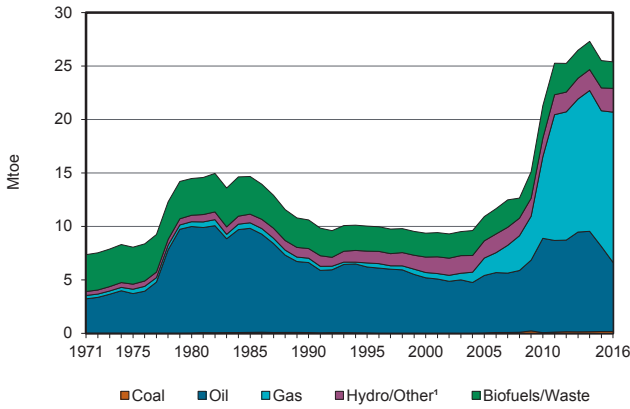


Figure 2. Total primary energy supply<sup>2</sup>

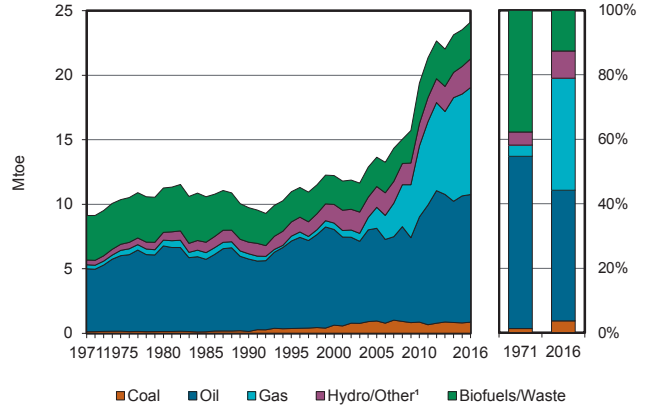


Figure 3. Energy self-sufficiency<sup>3</sup>

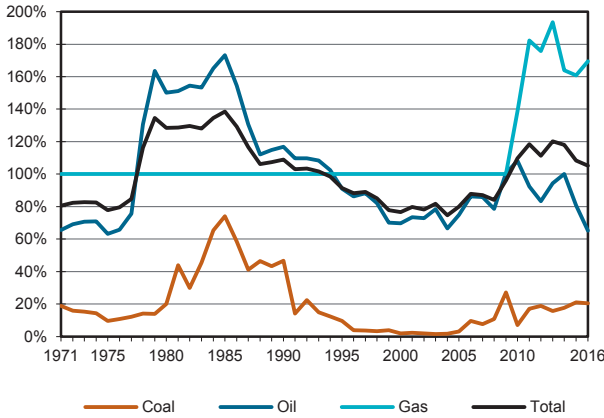


Figure 4. Oil products demand<sup>4</sup>

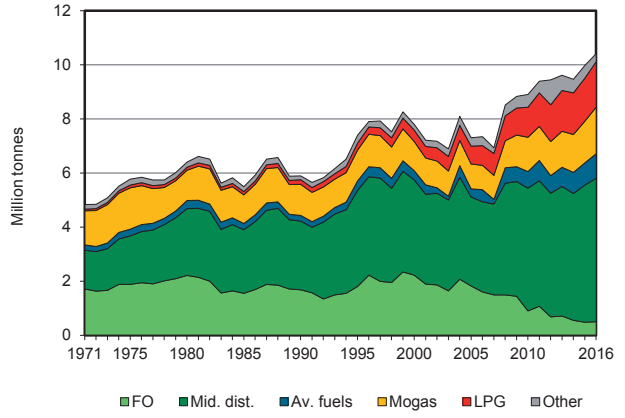


Figure 5. Electricity generation by source

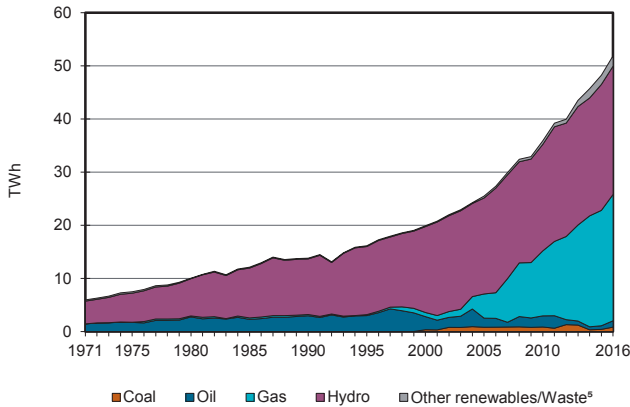
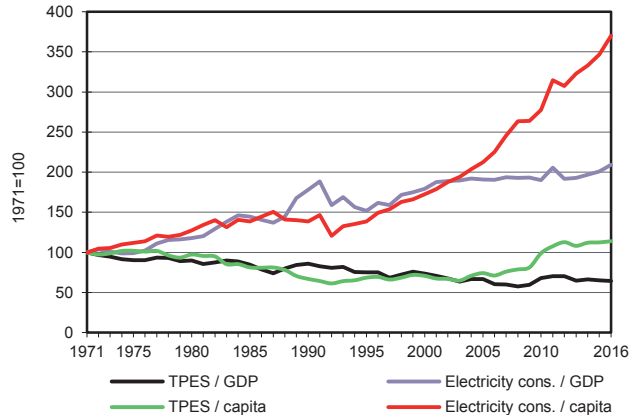


Figure 6. Selected indicators<sup>6</sup>



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Peru

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	176	6448	-	14053	-	2077	145	2480	-	-	25379
Imports	507	5323	3974	-	-	-	-	342	2	-	10149
Exports	-116	-117	-4013	-5756	-	-	-	-	-3	-	-10006
Intl. marine bunkers	-	-	-140	-	-	-	-	-	-	-	-140
Intl. aviation bunkers	-	-	-968	-	-	-	-	-	-	-	-968
Stock changes	296	14	-631	-	-	-	-	30	-	-	-291
<b>TPES</b>	<b>864</b>	<b>11667</b>	<b>-1779</b>	<b>8297</b>	<b>-</b>	<b>2077</b>	<b>145</b>	<b>2852</b>	<b>-1</b>	<b>-</b>	<b>24122</b>
Transfers	-	-2911	3099	-	-	-	-	-	-	-	188
Statistical differences	51	1	217	-252	-	-	-	2	-25	-	-6
Electricity plants	-299	-	-418	-4768	-	-2077	-112	-221	4465	-	-3430
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-8758	8340	-	-	-	-	-	-	-	-418
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-57	-	-	-57
Energy industry own use	-	-	-252	-1375	-	-	-	-	-64	-	-1691
Losses	-	-	-	-	-	-	-	-	-473	-	-473
<b>TFC</b>	<b>616</b>	<b>-</b>	<b>9207</b>	<b>1902</b>	<b>-</b>	<b>-</b>	<b>33</b>	<b>2576</b>	<b>3901</b>	<b>-</b>	<b>18235</b>
<b>INDUSTRY</b>	<b>616</b>	<b>-</b>	<b>895</b>	<b>1142</b>	<b>-</b>	<b>-</b>	<b>0</b>	<b>18</b>	<b>2253</b>	<b>-</b>	<b>4924</b>
Iron and steel	98	-	298	49	-	-	-	6	1261	-	1712
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	36	-	-	-	0	-	-	-	36
Non-metallic minerals	-	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	518	-	561	1093	-	-	0	11	992	-	3176
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>6892</b>	<b>649</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>328</b>	<b>4</b>	<b>-</b>	<b>7873</b>
Domestic aviation	-	-	1	-	-	-	-	-	-	-	1
Road	-	-	6847	649	-	-	-	328	-	-	7824
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	44	-	-	-	-	-	-	-	44
Non-specified	-	-	-	-	-	-	-	-	4	-	4
<b>OTHER</b>	<b>-</b>	<b>-</b>	<b>1238</b>	<b>111</b>	<b>-</b>	<b>-</b>	<b>33</b>	<b>2230</b>	<b>1644</b>	<b>-</b>	<b>5255</b>
Residential	-	-	911	76	-	-	20	1990	808	-	3804
Comm. and public services	-	-	236	22	-	-	13	20	729	-	1019
Agriculture/forestry	-	-	44	-	-	-	0	216	86	-	345
Fishing	-	-	48	13	-	-	-	4	22	-	86
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>182</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>182</b>
in industry/transf./energy	-	-	182	-	-	-	-	-	-	-	182
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>826</b>	<b>-</b>	<b>1198</b>	<b>23794</b>	<b>-</b>	<b>24158</b>	<b>1304</b>	<b>643</b>	<b>-</b>	<b>-</b>	<b>51923</b>
Electricity plants	826	-	1198	23794	-	24158	1304	643	-	-	51923
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Philippines

Figure 1. Energy production

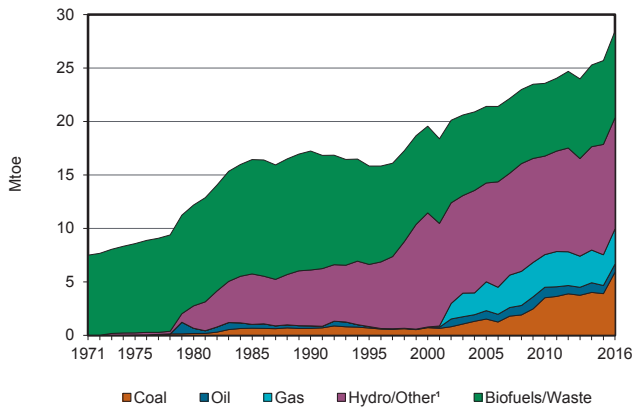


Figure 2. Total primary energy supply<sup>2</sup>

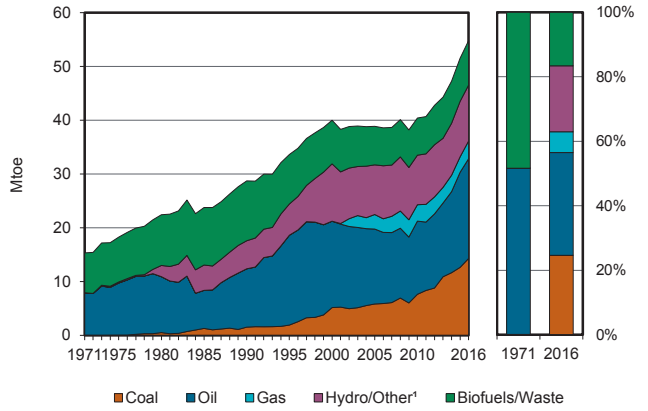


Figure 3. Energy self-sufficiency<sup>3</sup>

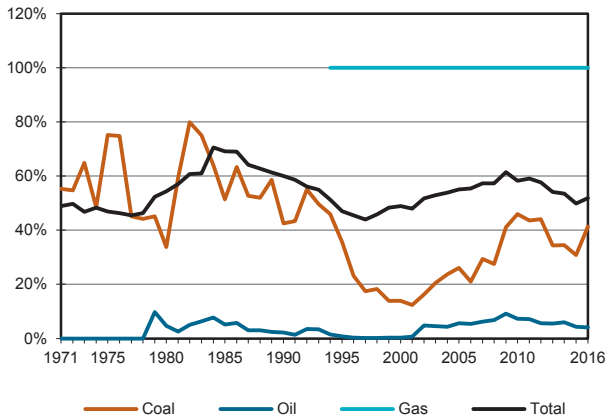


Figure 4. Oil products demand<sup>4</sup>

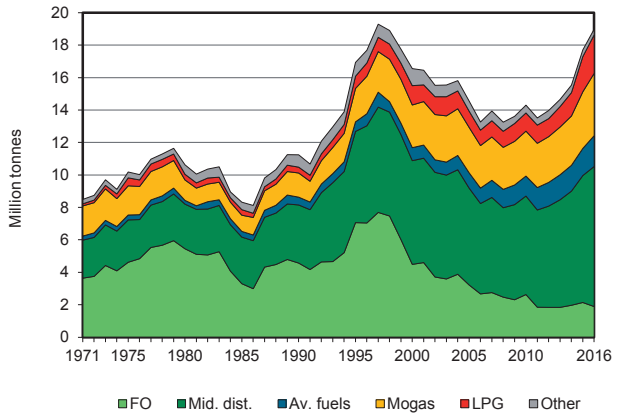


Figure 5. Electricity generation by source

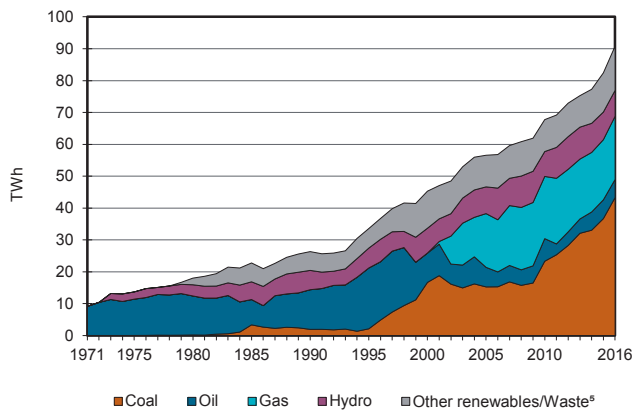
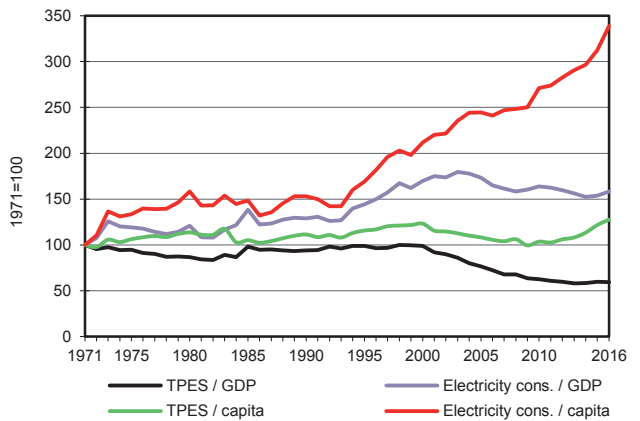


Figure 6. Selected indicators<sup>6</sup>



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Philippines

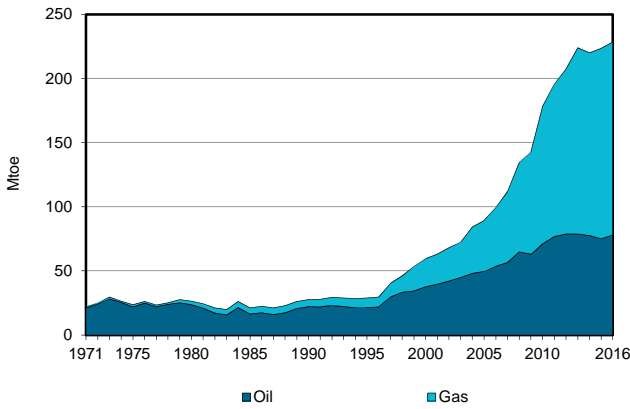
2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	5917	753	-	3294	-	697	9697	8102	-	-	28461
Imports	11786	10569	10885	-	-	-	-	145	-	-	33385
Exports	-3608	-725	-1246	-	-	-	-	-	-	-	-5579
Intl. marine bunkers	-	-	-50	-	-	-	-	-	-	-	-50
Intl. aviation bunkers	-	-	-1295	-	-	-	-	-	-	-	-1295
Stock changes	205	-217	-126	-	-	-	-	26	-	-	-112
<b>TPES</b>	<b>14301</b>	<b>10380</b>	<b>8167</b>	<b>3294</b>	<b>-</b>	<b>697</b>	<b>9697</b>	<b>8274</b>	<b>-</b>	<b>-</b>	<b>54809</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-288	240	-312	-	-	-	-	33	0	-	-327
Electricity plants	-11038	-	-1231	-3106	-	-697	-9697	-291	7807	-	-18253
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-136	-	-	-	-	-	-	-	-	-	-136
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-10498	10087	-	-	-	-	-	-	-	-412
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-2245	-	-	-2245
Energy industry own use	-	-121	-122	-124	-	-	-	-	-719	-	-1085
Losses	-	-	-	-	-	-	-	-	-712	-	-712
<b>TFC</b>	<b>2839</b>	<b>-</b>	<b>16590</b>	<b>65</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>5771</b>	<b>6376</b>	<b>-</b>	<b>31640</b>
<b>INDUSTRY</b>	<b>2839</b>	<b>-</b>	<b>1456</b>	<b>65</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1176</b>	<b>2074</b>	<b>-</b>	<b>7610</b>
Iron and steel	319	-	108	-	-	-	-	-	423	-	849
Chemical and petrochemical	12	-	189	-	-	-	-	1	126	-	328
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	2059	-	207	-	-	-	-	1	158	-	2425
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	162	-	-	-	-	1	518	-	681
Mining and quarrying	-	-	228	-	-	-	-	4	65	-	296
Food and tobacco	279	-	310	-	-	-	-	1152	379	-	2120
Paper pulp and printing	85	-	5	-	-	-	-	-	116	-	206
Wood and wood products	-	-	14	-	-	-	-	-	49	-	63
Construction	-	-	198	-	-	-	-	4	20	-	221
Textile and leather	8	-	11	-	-	-	-	-	161	-	180
Non-specified	78	-	24	65	-	-	-	14	60	-	240
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>11022</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>430</b>	<b>9</b>	<b>-</b>	<b>11461</b>
Domestic aviation	-	-	594	-	-	-	-	-	-	-	594
Road	-	-	9582	-	-	-	-	425	-	-	10006
Rail	-	-	2	-	-	-	-	-	9	-	11
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	844	-	-	-	-	6	-	-	850
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>-</b>	<b>-</b>	<b>2983</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>4165</b>	<b>4293</b>	<b>-</b>	<b>11441</b>
Residential	-	-	1121	-	-	-	-	3799	2204	-	7124
Comm. and public services	-	-	1632	-	-	-	-	361	1872	-	3865
Agriculture/forestry	-	-	41	-	-	-	-	1	192	-	234
Fishing	-	-	188	-	-	-	-	4	26	-	218
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>1129</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1129</b>
in industry/transf./energy	-	-	1129	-	-	-	-	-	-	-	1129
of which: chem./petrochem.	-	-	1018	-	-	-	-	-	-	-	1018
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>43303</b>	<b>-</b>	<b>5661</b>	<b>19854</b>	<b>-</b>	<b>8111</b>	<b>13142</b>	<b>726</b>	<b>-</b>	<b>-</b>	<b>90797</b>
Electricity plants	43303	-	5661	19854	-	8111	13142	726	-	-	90797
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

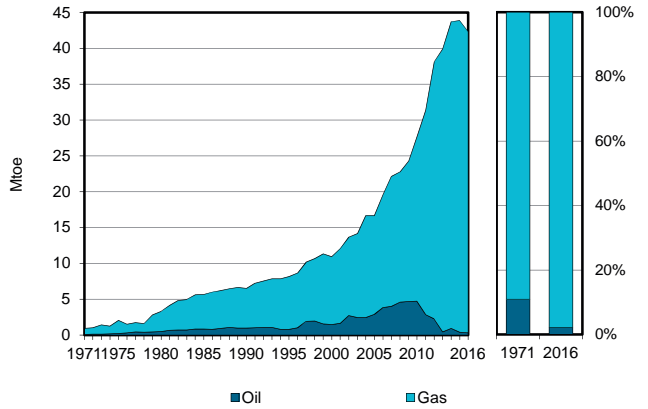
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Qatar

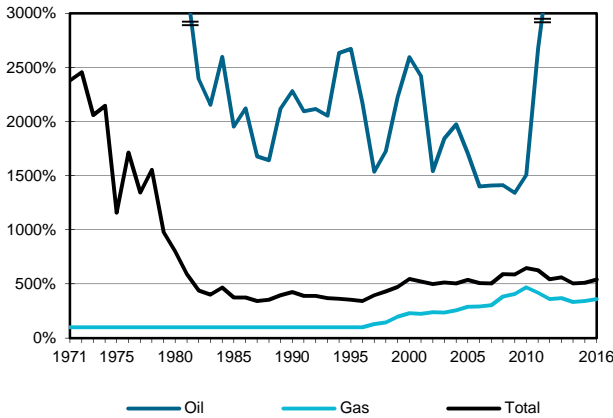
**Figure 1. Energy production**



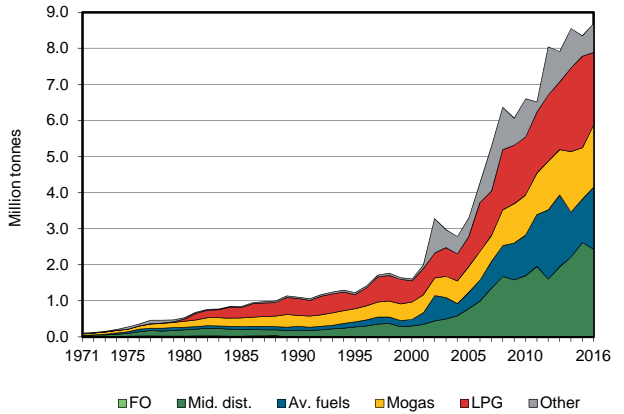
**Figure 2. Total primary energy supply<sup>1</sup>**



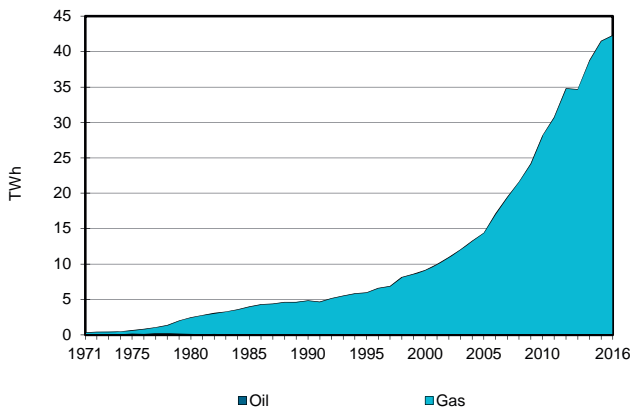
**Figure 3. Energy self-sufficiency<sup>2</sup>**



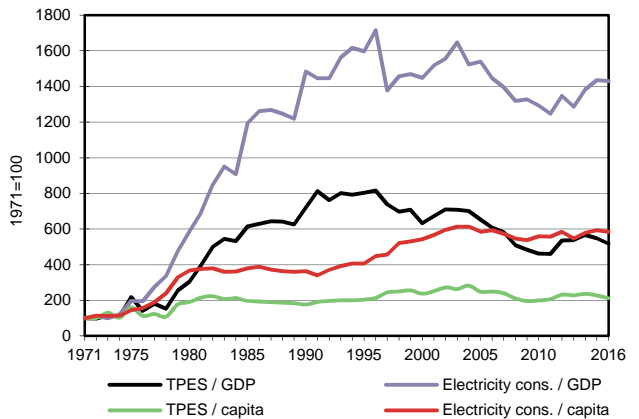
**Figure 4. Oil products demand<sup>3</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>4</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Excluding electricity trade.
2. Production divided by TPES. 100% represents full self-sufficiency. Maximum scale refers to values greater than or equal to 3000%.
3. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
4. GDP in 2010 USD.

## Qatar

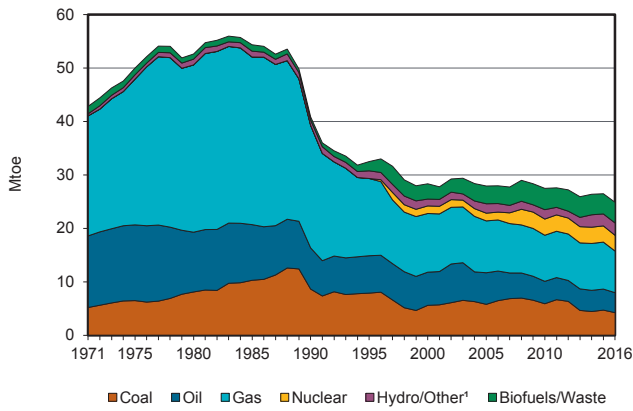
2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	78066	-	150327	-	-	-	-	-	-	228393
Imports	-	-	558	-	-	-	-	-	-	-	558
Exports	-	-52735	-20905	-108347	-	-	-	-	-	-	-181987
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-1831	-	-	-	-	-	-	-	-1831
Stock changes	-	-	-2836	-	-	-	-	-	-	-	-2836
<b>TPES</b>	-	<b>25332</b>	<b>-25014</b>	<b>41979</b>	-	-	-	-	-	-	<b>42297</b>
Transfers	-	-16843	17784	-	-	-	-	-	-	-	941
Statistical differences	-	-	1100	-	-	-	-	-	0	-	1100
Electricity plants	-	-	-	-8762	-	-	-	-	3638	-	-5124
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-13668	13597	-	-	-	-	-	-	-	-72
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	5180	-	-12559	-	-	-	-	-	-	-7379
Other transformation	-	-	-	-	-	-	-	-	-	-	-
Energy industry own use	-	-	-147	-13174	-	-	-	-	-227	-	-13548
Losses	-	-	-	-	-	-	-	-	-218	-	-218
<b>TFC</b>	-	-	<b>7320</b>	<b>7484</b>	-	-	-	-	<b>3193</b>	-	<b>17997</b>
<b>INDUSTRY</b>	-	-	<b>707</b>	<b>4865</b>	-	-	-	-	<b>1034</b>	-	<b>6606</b>
Iron and steel	-	-	-	505	-	-	-	-	-	-	505
Chemical and petrochemical	-	-	-	3696	-	-	-	-	-	-	3696
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	664	-	-	-	-	-	-	664
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	707	-	-	-	-	-	1034	-	1741
<b>TRANSPORT</b>	-	-	<b>4369</b>	-	-	-	-	-	-	-	<b>4369</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	4369	-	-	-	-	-	-	-	4369
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	-	-	<b>151</b>	-	-	-	-	-	<b>2159</b>	-	<b>2310</b>
Residential	-	-	151	-	-	-	-	-	1334	-	1486
Comm. and public services	-	-	-	-	-	-	-	-	552	-	552
Agriculture/forestry	-	-	-	-	-	-	-	-	-	-	-
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	272	-	272
<b>NON-ENERGY USE</b>	-	-	<b>2093</b>	<b>2620</b>	-	-	-	-	-	-	<b>4712</b>
in industry/transf./energy	-	-	2093	2620	-	-	-	-	-	-	4712
of which: chem./petrochem.	-	-	2093	2620	-	-	-	-	-	-	4712
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	-	-	-	<b>42307</b>	-	-	-	-	-	-	<b>42307</b>
Electricity plants	-	-	-	42307	-	-	-	-	-	-	42307
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

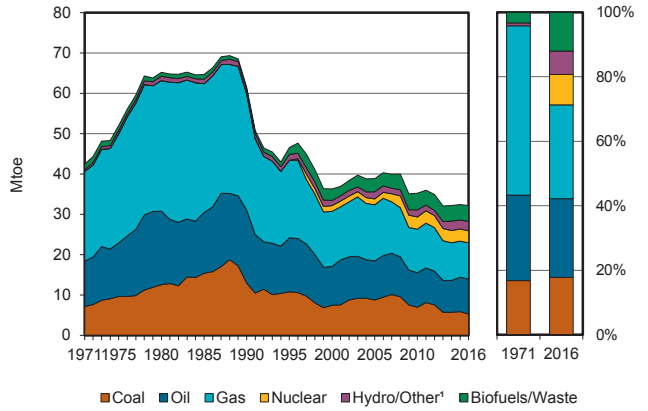
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Romania

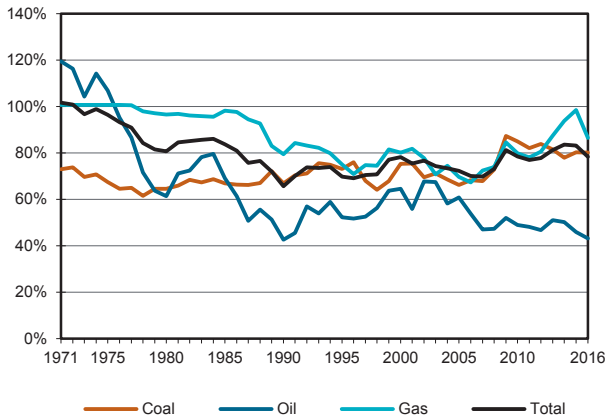
**Figure 1. Energy production**



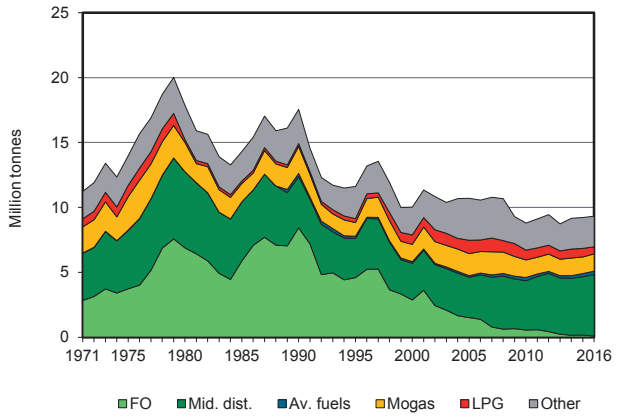
**Figure 2. Total primary energy supply<sup>2</sup>**



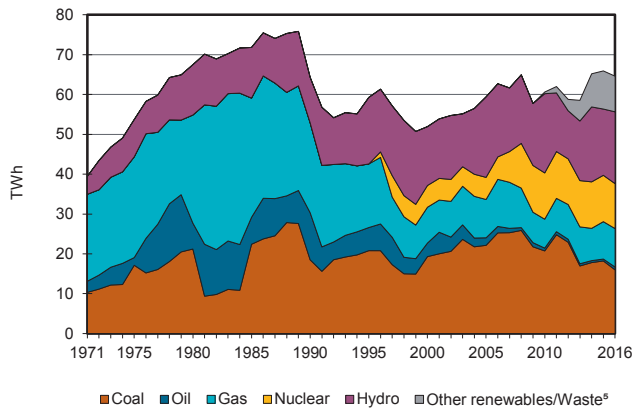
**Figure 3. Energy self-sufficiency<sup>3</sup>**



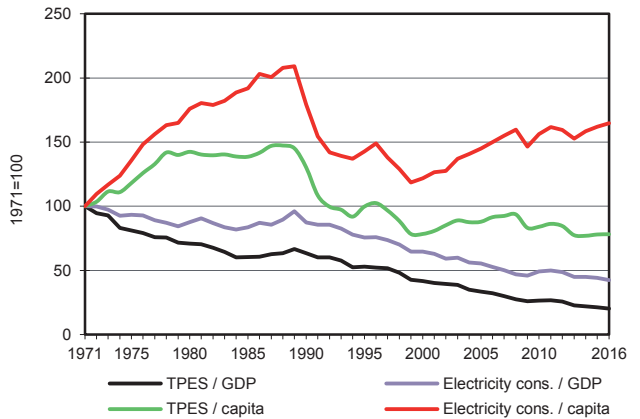
**Figure 4. Oil products demand<sup>4</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>6</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.



## Romania

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal <sup>1</sup>	Crude oil <sup>2</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	4235	3734	-	7784	2941	1550	760	3864	-	-	24868
Imports	1037	8074	2411	1176	-	-	-	214	359	-	13272
Exports	-1	-76	-5191	-1	-	-	-	-105	-791	-	-6163
Intl. marine bunkers	-	-	-32	-	-	-	-	-	-	-	-32
Intl. aviation bunkers	-	-	-255	-	-	-	-	-	-	-	-255
Stock changes	16	88	-94	49	-	-	-	-10	-	-	49
<b>TPES</b>	<b>5288</b>	<b>11821</b>	<b>-3160</b>	<b>9008</b>	<b>2941</b>	<b>1550</b>	<b>760</b>	<b>3963</b>	<b>-431</b>	<b>-</b>	<b>31739</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	90	161	-172	-62	-	-	-	-20	-27	54	23
Electricity plants	-3162	-	-3	-905	-2941	-1550	-723	-27	4776	-	-4536
CHP plants	-1234	-	-240	-1546	-	-	-	-129	779	1502	-868
Heat plants	-13	-	-79	-232	-	-	-10	-41	-	331	-44
Blast furnaces	-266	-	-	-	-	-	-	-	-	-	-266
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-12125	12472	-	-	-	-	-	-	-	347
Petrochemical plants	-	45	-44	-	-	-	-	-	-	-	1
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	105	-3	-117	-	-	-	-	-	-	-15
Energy industry own use	-37	-	-787	-576	-	-	-	-10	-764	-257	-2431
Losses	-22	-	-1	-91	-	-	-	-0	-613	-347	-1073
<b>TFC</b>	<b>643</b>	<b>7</b>	<b>7983</b>	<b>5479</b>	<b>-</b>	<b>-</b>	<b>26</b>	<b>3736</b>	<b>3719</b>	<b>1283</b>	<b>22878</b>
<b>INDUSTRY</b>	<b>576</b>	<b>7</b>	<b>887</b>	<b>2084</b>	<b>-</b>	<b>-</b>	<b>4</b>	<b>368</b>	<b>1790</b>	<b>275</b>	<b>5990</b>
Iron and steel	457	-	5	486	-	-	-	1	485	2	1435
Chemical and petrochemical	30	7	215	526	-	-	-	20	259	194	1252
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	77	-	318	261	-	-	-	97	220	6	979
Transport equipment	-	-	-	83	-	-	-	-	119	10	212
Machinery	-	-	15	140	-	-	3	2	188	12	361
Mining and quarrying	-	-	14	2	-	-	-	0	21	0	38
Food and tobacco	12	-	48	294	-	-	0	26	161	30	571
Paper pulp and printing	-	-	1	74	-	-	-	2	57	3	137
Wood and wood products	-	-	9	47	-	-	0	188	83	5	332
Construction	0	-	245	63	-	-	-	3	37	3	351
Textile and leather	-	-	3	82	-	-	0	1	61	3	150
Non-specified	-	-	13	27	-	-	-	28	99	6	174
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>5413</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>257</b>	<b>90</b>	<b>-</b>	<b>5762</b>
Domestic aviation	-	-	25	-	-	-	-	-	-	-	25
Road	-	-	5238	-	-	-	-	257	3	-	5498
Rail	-	-	110	-	-	-	-	0	85	-	195
Pipeline transport	-	-	-	1	-	-	-	-	2	-	3
Domestic navigation	-	-	41	-	-	-	-	-	-	-	41
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>67</b>	<b>-</b>	<b>756</b>	<b>3119</b>	<b>-</b>	<b>-</b>	<b>22</b>	<b>3111</b>	<b>1839</b>	<b>1009</b>	<b>9922</b>
Residential	56	-	240	2288	-	-	4	2975	1038	804	7404
Comm. and public services	1	-	88	762	-	-	19	6	738	192	1806
Agriculture/forestry	9	-	294	68	-	-	0	5	64	13	454
Fishing	-	-	-	0	-	-	-	-	0	-	0
Non-specified	-	-	134	-	-	-	-	125	-	-	259
<b>NON-ENERGY USE</b>	<b>1</b>	<b>-</b>	<b>927</b>	<b>276</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1203</b>
in industry/transf./energy	1	-	851	276	-	-	-	-	-	-	1127
of which: chem./petrochem.	-	-	106	276	-	-	-	-	-	-	382
in transport	-	-	63	-	-	-	-	-	-	-	63
in other	-	-	13	-	-	-	-	-	-	-	13
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>15981</b>	<b>-</b>	<b>704</b>	<b>9655</b>	<b>11286</b>	<b>18028</b>	<b>8410</b>	<b>531</b>	<b>-</b>	<b>-</b>	<b>64595</b>
Electricity plants	12398	-	19	5286	11286	18028	8410	113	-	-	55540
CHP plants	3583	-	685	4369	-	-	-	418	-	-	9055
<b>Heat generated - TJ</b>	<b>19167</b>	<b>-</b>	<b>6547</b>	<b>47568</b>	<b>-</b>	<b>-</b>	<b>256</b>	<b>3223</b>	<b>-</b>	<b>-</b>	<b>76761</b>
CHP plants	18667	-	3601	38776	-	-	-	1861	-	-	62905
Heat plants	500	-	2946	8792	-	-	256	1362	-	-	13856

1. Includes peat.

2. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Russian Federation

Figure 1. Energy production

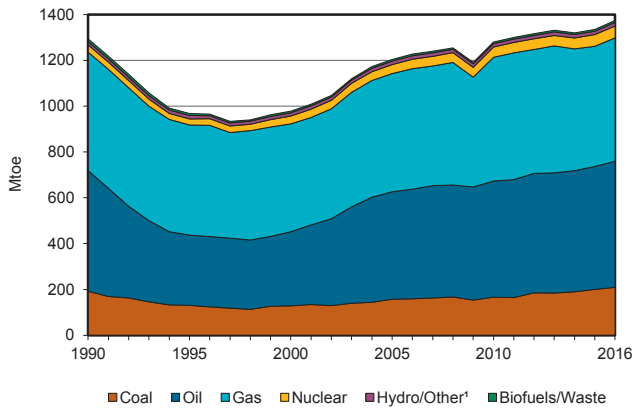


Figure 2. Total primary energy supply<sup>2</sup>

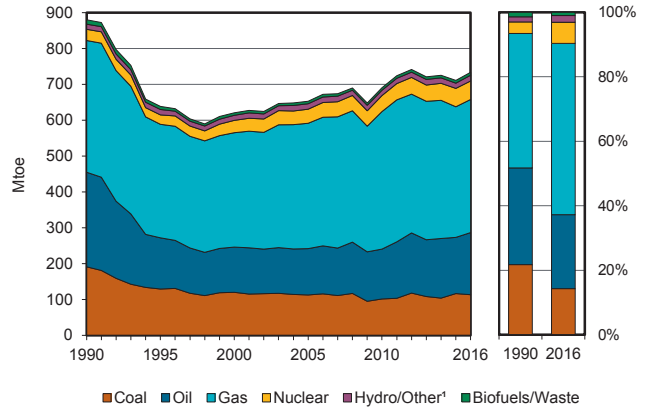


Figure 3. Energy self-sufficiency<sup>3</sup>

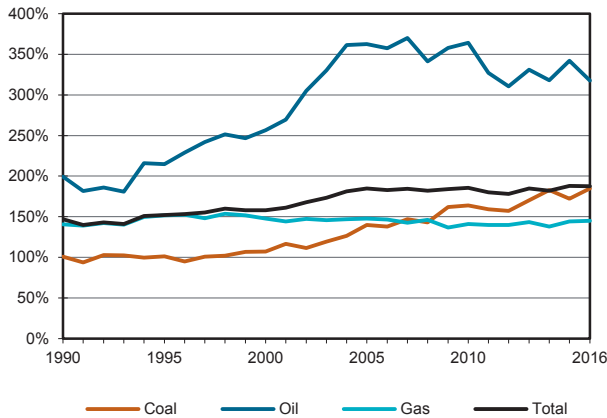


Figure 4. Oil products demand<sup>4</sup>

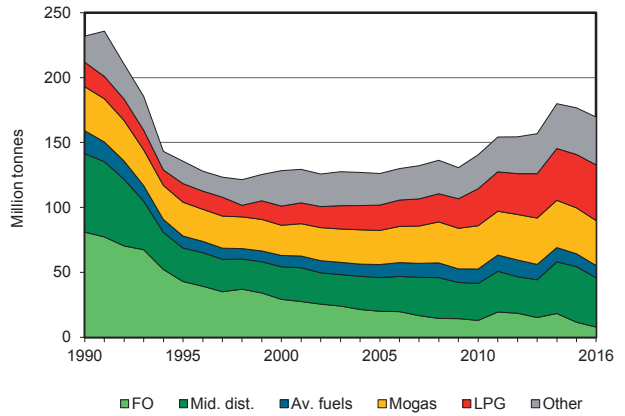


Figure 5. Electricity generation by source

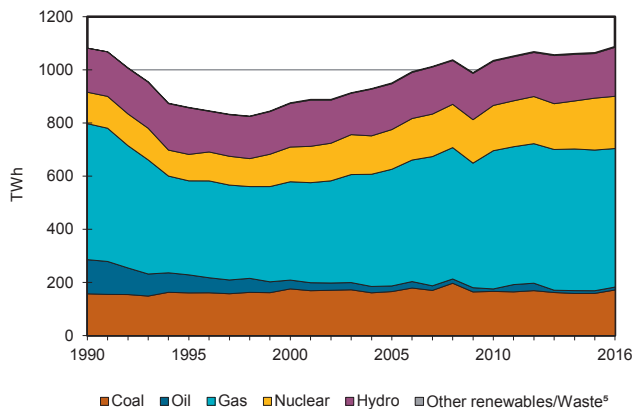
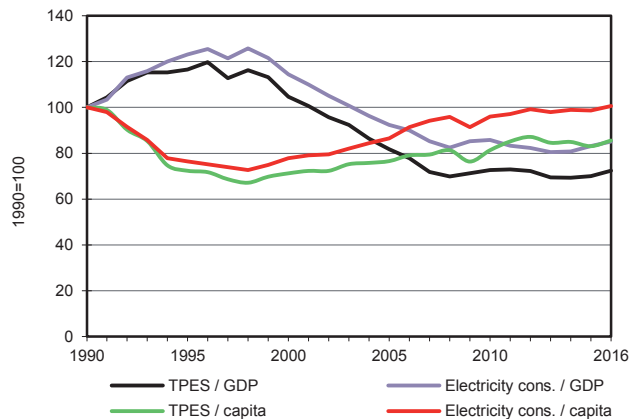


Figure 6. Selected indicators<sup>6</sup>



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Russian Federation

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal <sup>1</sup>	Crude oil <sup>2</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	209159	550364	-	538402	51579	15874	165	8135	-	-	1373678
Imports	14001	753	1164	7342	-	-	-	6	275	-	23540
Exports	-109034	-256134	-106137	-175120	-	-	-	-32	-1521	-	-647979
Intl. marine bunkers	-	-	-10743	-	-	-	-	-	-	-	-10743
Intl. aviation bunkers	-	-	-4882	-	-	-	-	-	-	-	-4882
Stock changes	-839	-414	-707	689	-	-	-	13	-	-	-1258
<b>TPES</b>	<b>113287</b>	<b>294569</b>	<b>-121305</b>	<b>371313</b>	<b>51579</b>	<b>15874</b>	<b>165</b>	<b>8122</b>	<b>-1247</b>	<b>-</b>	<b>732356</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-5254	-	-1611	-20	-	-	-	-	-	-	-6885
Electricity plants	-	-	-925	-4540	-51230	-15874	-155	-	33973	-	-38751
CHP plants	-51644	-12	-2292	-151526	-350	-	-	-2194	59659	70383	-77975
Heat plants	-9210	-830	-3593	-43325	-	-	-10	-2175	-	57974	-1169
Blast furnaces	-24050	-	-	-	-	-	-	-	-	-	-24050
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-9455	-	-	-	-	-	-	-	-	-	-9455
Oil refineries	-	-286585	275984	-	-	-	-	-	-	-	-10601
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-2214	-	-	-	-81	-	-	-2295
Energy industry own use	-2027	-295	-11797	-13286	-	-	-	-144	-19133	-11696	-58378
Losses	-	-6806	-	-5613	-	-	-	-	-9222	-11388	-33028
<b>TFC</b>	<b>11647</b>	<b>40</b>	<b>134461</b>	<b>150788</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>3529</b>	<b>64031</b>	<b>105274</b>	<b>469770</b>
<b>INDUSTRY</b>	<b>8260</b>	<b>22</b>	<b>16006</b>	<b>36418</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1145</b>	<b>28060</b>	<b>42924</b>	<b>132836</b>
Iron and steel	6898	-	154	12583	-	-	-	452	5170	6856	32112
Chemical and petrochemical	162	18	9754	5688	-	-	-	48	4037	12240	31948
Non-ferrous metals	-	-	-	-	-	-	-	-	7787	-	7787
Non-metallic minerals	913	1	118	9045	-	-	-	32	1492	2160	13762
Transport equipment	21	-	170	495	-	-	-	1	1076	2002	3765
Machinery	49	-	166	1396	-	-	-	0	1562	7676	10848
Mining and quarrying	65	-	1426	1253	-	-	-	26	2331	796	5897
Food and tobacco	112	3	660	1456	-	-	-	85	1359	4140	7815
Paper pulp and printing	17	-	156	544	-	-	-	70	1547	3980	6314
Wood and wood products	-	-	161	211	-	-	-	426	376	1175	2350
Construction	23	-	656	3646	-	-	-	2	1085	582	5994
Textile and leather	-	-	13	46	-	-	-	2	139	1216	1416
Non-specified	-	-	2571	55	-	-	-	1	99	101	2827
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>57624</b>	<b>29569</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>7100</b>	<b>-</b>	<b>94293</b>
Domestic aviation	-	-	4889	-	-	-	-	-	-	-	4889
Road	-	-	49291	159	-	-	-	-	-	-	49449
Rail	-	-	1574	-	-	-	-	-	4169	-	5744
Pipeline transport	-	-	234	29410	-	-	-	-	1752	-	31397
Domestic navigation	-	-	434	-	-	-	-	-	-	-	434
Non-specified	-	-	1202	-	-	-	-	-	1178	-	2380
<b>OTHER</b>	<b>3173</b>	<b>18</b>	<b>13141</b>	<b>50642</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2383</b>	<b>28871</b>	<b>62350</b>	<b>160579</b>
Residential	1872	-	7663	47038	-	-	-	1105	13861	43012	114551
Comm. and public services	1236	-	2126	2304	-	-	-	1152	13517	16889	37225
Agriculture/forestry	64	8	2807	1299	-	-	-	126	1476	2433	8212
Fishing	1	-	545	1	-	-	-	0	17	17	581
Non-specified	-	10	-	-	-	-	-	-	-	-	10
<b>NON-ENERGY USE</b>	<b>215</b>	<b>-</b>	<b>47690</b>	<b>34158</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>82063</b>
in industry/transf./energy	215	-	47690	34158	-	-	-	-	-	-	82063
of which: chem./petrochem.	215	-	39828	34158	-	-	-	-	-	-	74201
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>171443</b>	<b>8</b>	<b>10960</b>	<b>521788</b>	<b>196614</b>	<b>184612</b>	<b>1056</b>	<b>2464</b>	<b>-</b>	<b>-</b>	<b>1088945</b>
Electricity plants	-	-	3012	9812	196614	184612	1056	-	-	-	395106
CHP plants	171443	8	7948	511976	-	-	-	2464	-	-	693839
<b>Heat generated - TJ</b>	<b>992025</b>	<b>19056</b>	<b>172989</b>	<b>3697085</b>	<b>14637</b>	<b>-</b>	<b>363292</b>	<b>114976</b>	<b>-</b>	<b>-</b>	<b>5374060</b>
CHP plants	654145	152	30692	2207749	14637	-	-	39421	-	-	2946796
Heat plants	337880	18904	142297	1489336	-	-	363292	75555	-	-	2427264

1. Includes peat.

2. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Saudi Arabia

Figure 1. Energy production

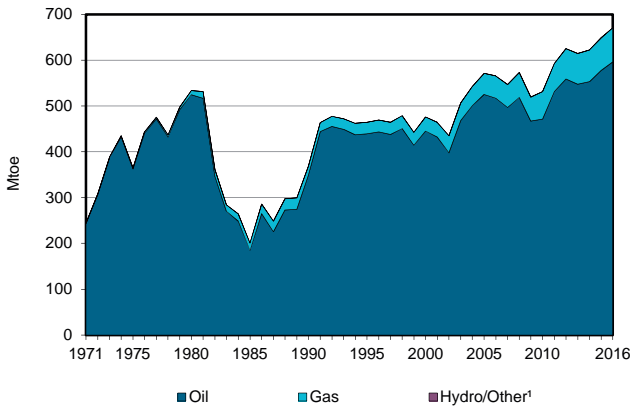


Figure 2. Total primary energy supply²

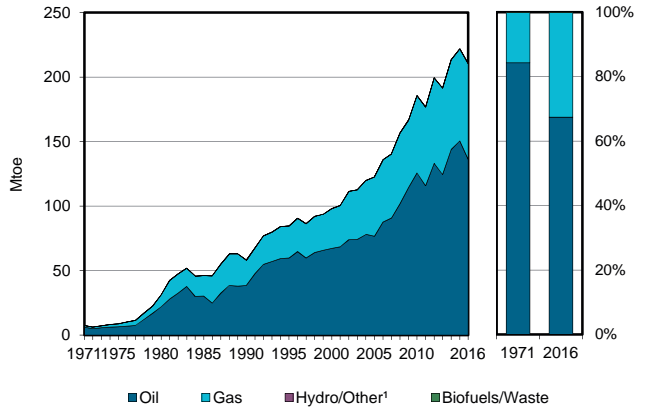


Figure 3. Energy self-sufficiency³

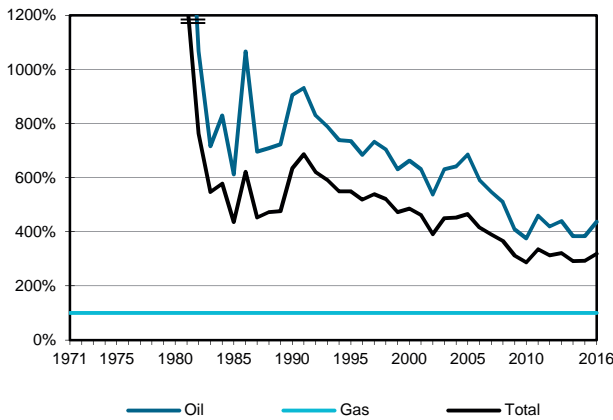


Figure 4. Oil products demand⁴

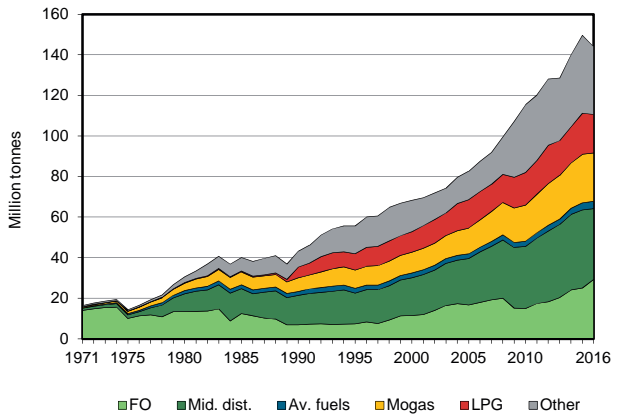


Figure 5. Electricity generation by source

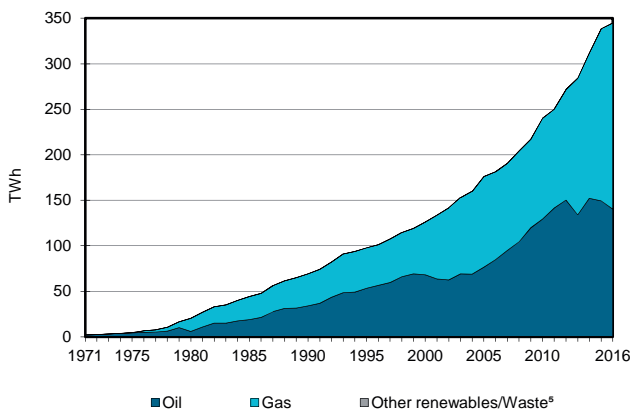
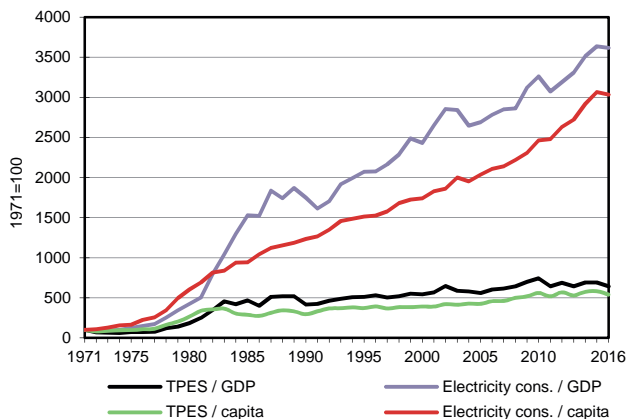


Figure 6. Selected indicators⁶



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency. Maximum scale refers to values greater than or equal to 1200%.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Saudi Arabia

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	596390	-	74165	-	-	0	-	-	-	670556
Imports	-	-	28909	-	-	-	-	7	-	-	28917
Exports	-	-379148	-96628	-	-	-	-	-	-	-	-475777
Intl. marine bunkers	-	-	-3315	-	-	-	-	-	-	-	-3315
Intl. aviation bunkers	-	-	-2870	-	-	-	-	-	-	-	-2870
Stock changes	-	-7332	247	-	-	-	-	-	-	-	-7086
<b>TPES</b>	-	<b>209910</b>	<b>-73657</b>	<b>74165</b>	-	-	<b>0</b>	<b>7</b>	-	-	<b>210425</b>
Transfers	-	-54701	57626	-	-	-	-	-	-	-	2925
Statistical differences	-	4768	432	-	-	-	-	-	-1009	-	4192
Electricity plants	-	-22519	-18902	-49927	-	-	-0	-	29648	-	-61700
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-134664	133750	-	-	-	-	-	-	-	-914
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-	-	-	-
Energy industry own use	-	-5	-8116	-2967	-	-	-	-	-1847	-	-12935
Losses	-	-	-	-	-	-	-	-	-2402	-	-2402
<b>TFC</b>	-	<b>2789</b>	<b>91132</b>	<b>21272</b>	-	-	-	<b>7</b>	<b>24391</b>	-	<b>139591</b>
<b>INDUSTRY</b>	-	<b>2789</b>	<b>20163</b>	<b>15933</b>	-	-	-	-	<b>3452</b>	-	<b>42337</b>
Iron and steel	-	-	-	-	-	-	-	-	378	-	378
Chemical and petrochemical	-	-	-	-	-	-	-	-	802	-	802
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	-	-	-	-	-	41	-	41
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	24	-	24
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	2789	20163	15933	-	-	-	-	2207	-	41093
<b>TRANSPORT</b>	-	-	<b>45800</b>	-	-	-	-	-	-	-	<b>45800</b>
Domestic aviation	-	-	957	-	-	-	-	-	-	-	957
Road	-	-	44843	-	-	-	-	-	-	-	44843
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	-	-	<b>1775</b>	-	-	-	-	<b>7</b>	<b>20939</b>	-	<b>22721</b>
Residential	-	-	1775	-	-	-	-	7	12353	-	14135
Comm. and public services	-	-	-	-	-	-	-	-	8549	-	8549
Agriculture/forestry	-	-	-	-	-	-	-	-	-	-	-
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	37	-	37
<b>NON-ENERGY USE</b>	-	-	<b>23394</b>	<b>5339</b>	-	-	-	-	-	-	<b>28733</b>
in industry/transf./energy	-	-	23394	5339	-	-	-	-	-	-	28733
of which: chem./petrochem.	-	-	20262	5339	-	-	-	-	-	-	25601
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	-	<b>76098</b>	<b>64053</b>	<b>204657</b>	-	-	<b>1</b>	-	-	-	<b>344809</b>
Electricity plants	-	76098	64053	204657	-	-	1	-	-	-	344809
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Senegal

Figure 1. Energy production

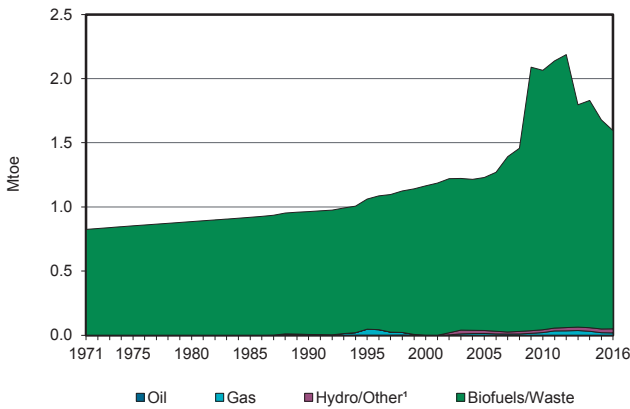


Figure 2. Total primary energy supply<sup>2</sup>

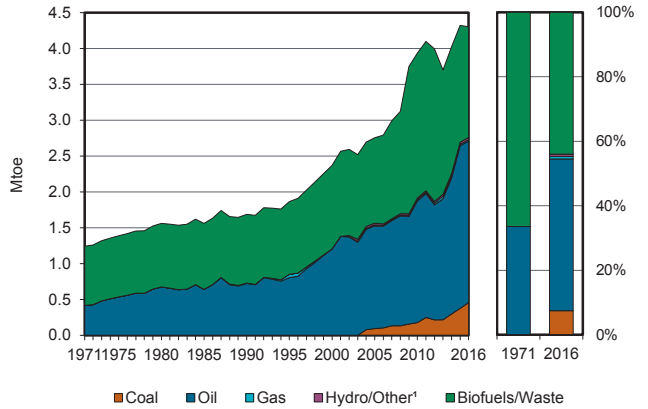


Figure 3. Energy self-sufficiency<sup>3</sup>

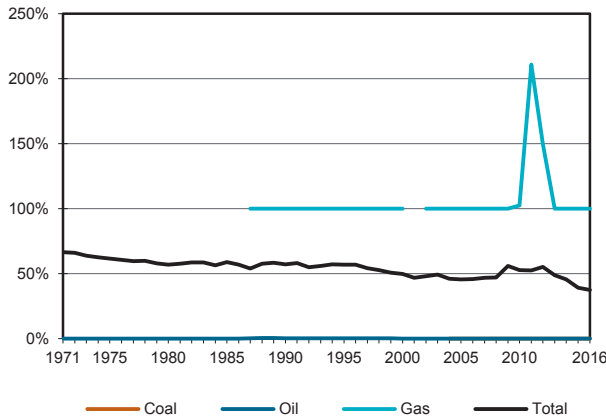


Figure 4. Oil products demand<sup>4</sup>

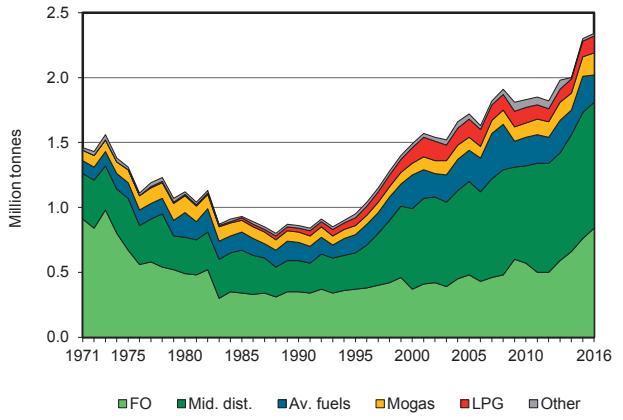


Figure 5. Electricity generation by source

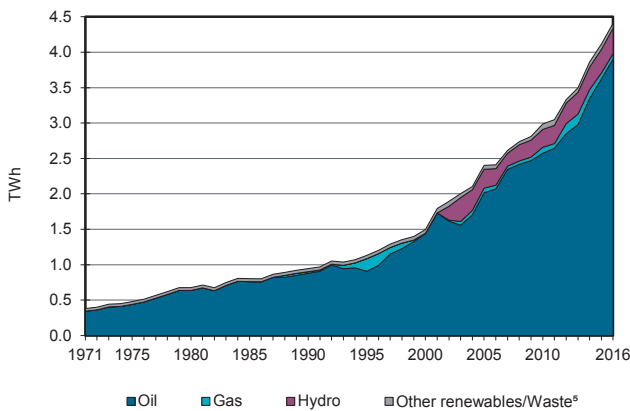
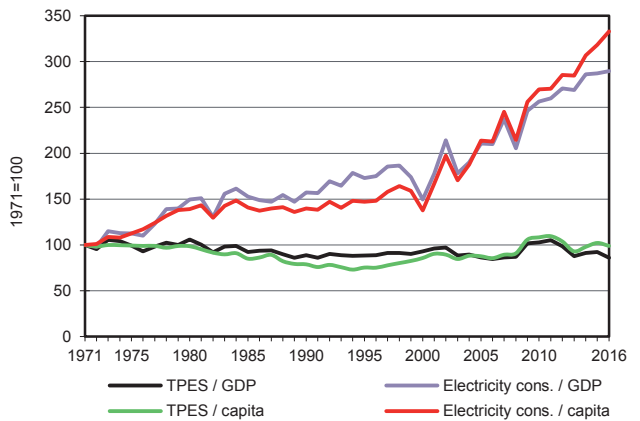


Figure 6. Selected indicators<sup>6</sup>



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Senegal

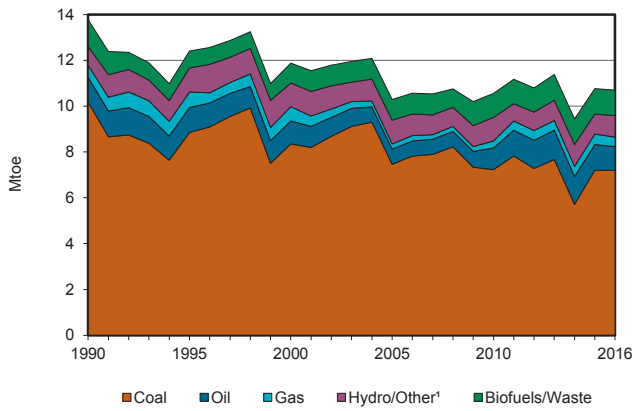
2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	-	-	19	-	31	1	1544	-	12	1606
Imports	456	1183	2171	-	-	-	-	-	-	-	3811
Exports	-	-	-891	-	-	-	-	-	-	-	-891
Intl. marine bunkers	-	-	-142	-	-	-	-	-	-	-	-142
Intl. aviation bunkers	-	-	-225	-	-	-	-	-	-	-	-225
Stock changes	-	69	88	-	-	-	-	-	-	-	157
<b>TPES</b>	<b>456</b>	<b>1252</b>	<b>1001</b>	<b>19</b>	<b>-</b>	<b>31</b>	<b>1</b>	<b>1544</b>	<b>-</b>	<b>12</b>	<b>4316</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-	1	-119	-	-	-	-	0	0	-	-118
Electricity plants	-138	-	-739	-19	-	-31	-1	-63	383	-12	-619
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-1253	1157	-	-	-	-	-	-	-	-97
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-379	-	-	-379
Energy industry own use	-	-	-26	-	-	-	-	-	-5	-	-31
Losses	-	-	-	-	-	-	-	-	-58	-	-58
<b>TFC</b>	<b>318</b>	<b>-</b>	<b>1273</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1102</b>	<b>321</b>	<b>-</b>	<b>3014</b>
<b>INDUSTRY</b>	<b>318</b>	<b>-</b>	<b>148</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>31</b>	<b>92</b>	<b>-</b>	<b>589</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	3	-	-	-	-	-	28	-	31
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	318	-	13	-	-	-	-	-	46	-	377
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	25	-	-	25
Food and tobacco	-	-	-	-	-	-	-	5	16	-	21
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	0	-	0
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	133	-	-	-	-	-	2	-	135
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>967</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>967</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	919	-	-	-	-	-	-	-	919
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	48	-	-	-	-	-	-	-	48
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>-</b>	<b>-</b>	<b>157</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1071</b>	<b>229</b>	<b>-</b>	<b>1457</b>
Residential	-	-	143	-	-	-	-	1071	96	-	1311
Comm. and public services	-	-	6	-	-	-	-	-	81	-	87
Agriculture/forestry	-	-	-	-	-	-	-	-	9	-	9
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	8	-	-	-	-	-	42	-	51
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
in industry/transf./energy	-	-	-	-	-	-	-	-	-	-	-
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>-</b>	<b>-</b>	<b>3905</b>	<b>76</b>	<b>-</b>	<b>360</b>	<b>6</b>	<b>63</b>	<b>-</b>	<b>47</b>	<b>4457</b>
Electricity plants	-	-	3905	76	-	360	6	63	-	47	4457
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>513</b>	<b>513</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	513	513

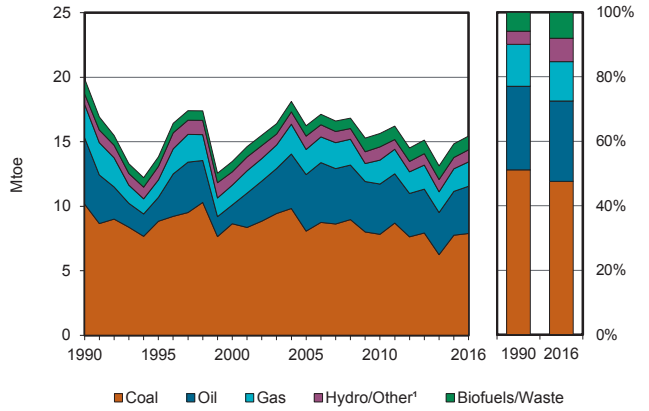
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Serbia

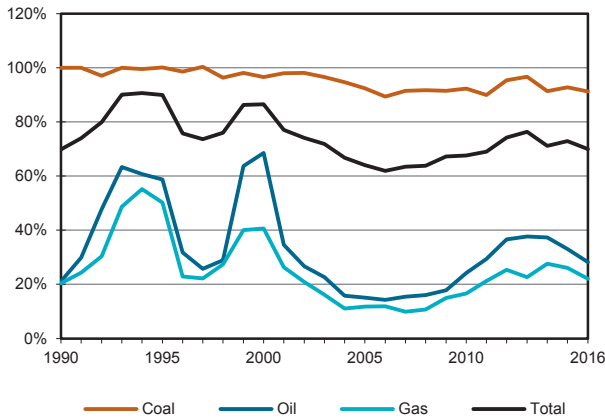
**Figure 1. Energy production**



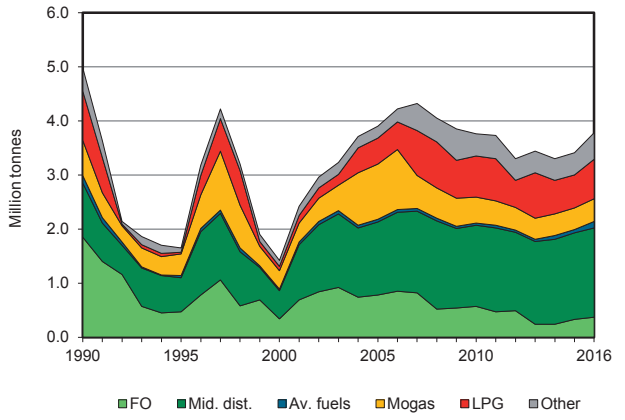
**Figure 2. Total primary energy supply<sup>2</sup>**



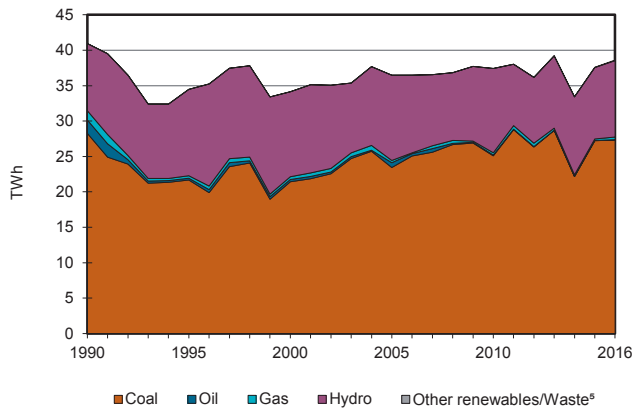
**Figure 3. Energy self-sufficiency<sup>3</sup>**



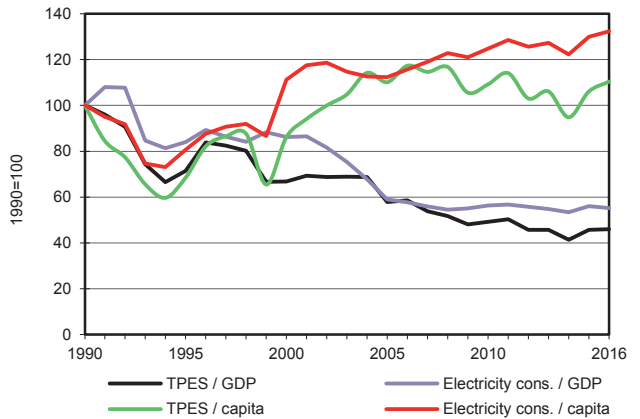
**Figure 4. Oil products demand<sup>4</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>6</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.



## Serbia

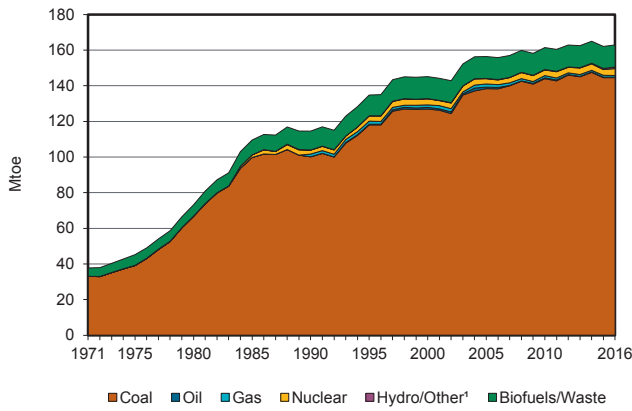
2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	7201	1030	-	417	-	928	8	1113	-	-	10696
Imports	639	2423	1060	1429	-	-	-	11	436	-	5998
Exports	-14	-10	-724	-	-	-	-	-67	-601	-	-1417
Intl. marine bunkers	-	-	-20	-	-	-	-	-	-	-	-20
Intl. aviation bunkers	-	-	-118	-	-	-	-	-	-	-	-118
Stock changes	64	-15	32	45	-	-	-	8	-	-	136
<b>TPES</b>	<b>7890</b>	<b>3428</b>	<b>229</b>	<b>1891</b>	<b>-</b>	<b>928</b>	<b>8</b>	<b>1065</b>	<b>-165</b>	<b>-</b>	<b>15275</b>
Transfers	-	40	-34	-	-	-	-	-	-	-	6
Statistical differences	-65	7	4	-	-	-	-	-	-	-	-54
Electricity plants	-2877	-	-	-	-	-928	-3	-	1993	-	-1815
CHP plants	-3804	-	-65	-115	-	-	-	-8	1327	226	-2438
Heat plants	-112	-	-125	-489	-	-	-	-2	-	636	-93
Blast furnaces	-221	-	-	-	-	-	-	-	-	-	-221
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-36	-	-	-	-	-	-	-	-	-	-36
Oil refineries	-	-3692	3482	-	-	-	-	-	-	-	-210
Petrochemical plants	-	142	-144	-	-	-	-	-	-	-	-2
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	74	-	-103	-	-	-	-16	-	-	-45
Energy industry own use	-	-	-161	-144	-	-	-	-	-391	-51	-747
Losses	-54	-	-	-18	-	-	-0	-0	-413	-81	-567
<b>TFC</b>	<b>721</b>	<b>-</b>	<b>3186</b>	<b>1023</b>	<b>-</b>	<b>-</b>	<b>5</b>	<b>1038</b>	<b>2350</b>	<b>730</b>	<b>9053</b>
<b>INDUSTRY</b>	<b>434</b>	<b>-</b>	<b>334</b>	<b>438</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>132</b>	<b>665</b>	<b>250</b>	<b>2252</b>
Iron and steel	143	-	-	70	-	-	-	-	73	17	303
Chemical and petrochemical	75	-	61	127	-	-	-	3	100	101	467
Non-ferrous metals	-	-	8	16	-	-	-	1	35	12	72
Non-metallic minerals	138	-	121	60	-	-	-	3	59	1	383
Transport equipment	-	-	8	21	-	-	-	0	20	1	51
Machinery	12	-	41	10	-	-	-	12	52	1	129
Mining and quarrying	-	-	17	0	-	-	-	0	36	-	54
Food and tobacco	18	-	44	91	-	-	-	46	128	59	387
Paper pulp and printing	17	-	4	22	-	-	-	3	40	21	107
Wood and wood products	-	-	1	1	-	-	-	15	10	0	28
Construction	1	-	12	-	-	-	-	-	28	-	41
Textile and leather	9	-	6	8	-	-	-	18	30	2	72
Non-specified	22	-	11	9	-	-	-	31	54	35	160
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>1973</b>	<b>5</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>30</b>	<b>-</b>	<b>2009</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	1954	4	-	-	-	-	-	-	1958
Rail	-	-	10	-	-	-	-	-	30	-	40
Pipeline transport	-	-	-	2	-	-	-	-	-	-	2
Domestic navigation	-	-	9	-	-	-	-	-	-	-	9
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>283</b>	<b>-</b>	<b>272</b>	<b>347</b>	<b>-</b>	<b>-</b>	<b>5</b>	<b>906</b>	<b>1655</b>	<b>480</b>	<b>3949</b>
Residential	216	-	64	168	-	-	-	873	1198	404	2922
Comm. and public services	67	-	72	157	-	-	2	31	430	76	835
Agriculture/forestry	-	-	136	23	-	-	3	3	27	-	191
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>NON-ENERGY USE</b>	<b>4</b>	<b>-</b>	<b>607</b>	<b>233</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>844</b>
in industry/transf./energy	4	-	590	233	-	-	-	-	-	-	827
of which: chem./petrochem.	-	-	382	233	-	-	-	-	-	-	615
in transport	-	-	17	-	-	-	-	-	-	-	17
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>27317</b>	<b>-</b>	<b>52</b>	<b>376</b>	<b>-</b>	<b>10792</b>	<b>38</b>	<b>39</b>	<b>-</b>	<b>-</b>	<b>38614</b>
Electricity plants	12349	-	-	-	-	10792	38	-	-	-	23179
CHP plants	14968	-	52	376	-	-	-	39	-	-	15435
<b>Heat generated - TJ</b>	<b>8533</b>	<b>-</b>	<b>6547</b>	<b>20868</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>149</b>	<b>-</b>	<b>-</b>	<b>36097</b>
CHP plants	4713	-	2553	2137	-	-	-	76	-	-	9479
Heat plants	3820	-	3994	18731	-	-	-	73	-	-	26618

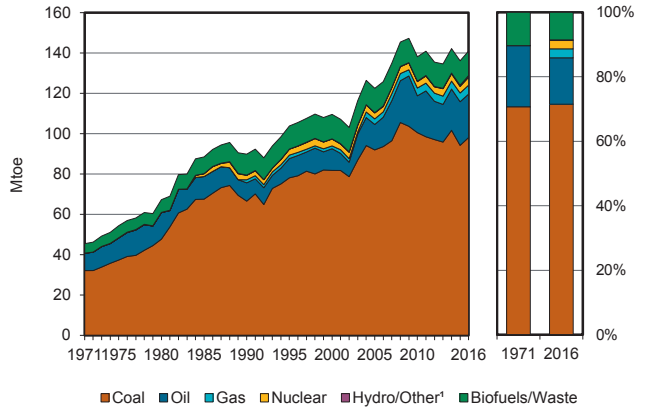
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## South Africa

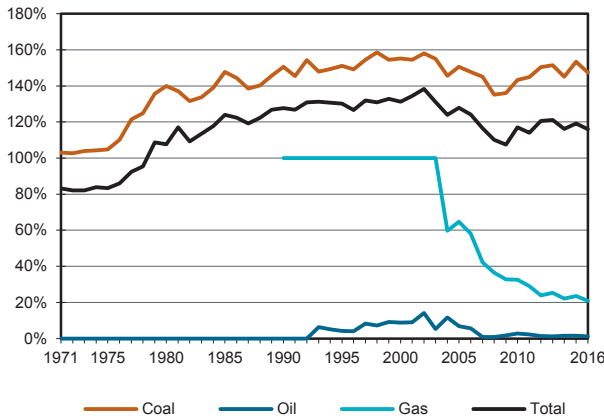
**Figure 1. Energy production**



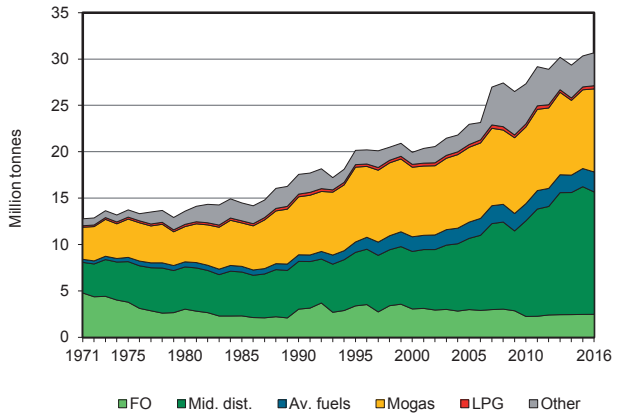
**Figure 2. Total primary energy supply<sup>2</sup>**



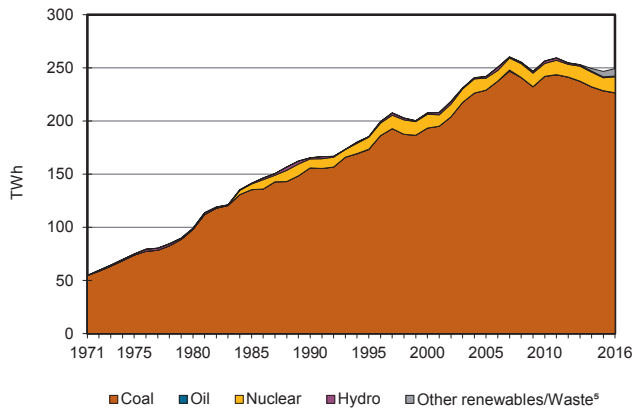
**Figure 3. Energy self-sufficiency<sup>3</sup>**



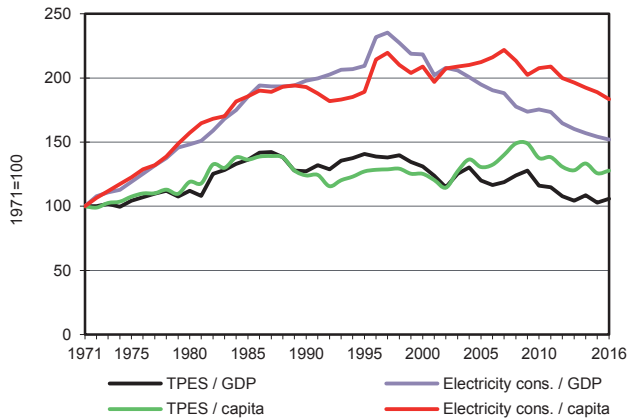
**Figure 4. Oil products demand<sup>4</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>6</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## South Africa

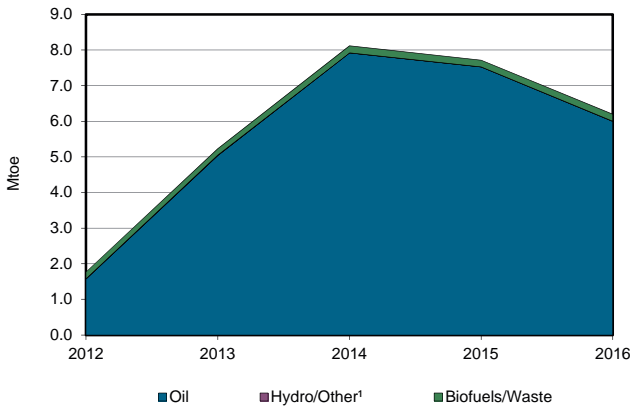
2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	144555	256	-	920	3915	60	790	12385	-	-	162880
Imports	392	22494	7338	3504	-	-	-	-	908	-	34636
Exports	-46839	-	-4291	-	-	-	-	-228	-1423	-	-52782
Intl. marine bunkers	-	-	-3454	-	-	-	-	-	-	-	-3454
Intl. aviation bunkers	-	-	-950	-	-	-	-	-	-	-	-950
Stock changes	-	118	-	-	-	-	-	-	-	-	118
<b>TPES</b>	<b>98108</b>	<b>22867</b>	<b>-1358</b>	<b>4424</b>	<b>3915</b>	<b>60</b>	<b>790</b>	<b>12157</b>	<b>-515</b>	<b>-</b>	<b>140448</b>
Transfers	-	-5234	5602	-	-	-	-	-	-	-	368
Statistical differences	-780	-118	-41	-	-	-	-	-	-109	-	-1048
Electricity plants	-59495	-	-45	-	-3915	-60	-672	-89	21449	-	-42827
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-737	-	-	-	-	-	-	-	-	-	-737
Gas works	-3950	-	-	-	-	-	-	-	-	-	-3950
Coke/pat.fuel/BKB/PB plants	-718	-	-	-	-	-	-	-	-	-	-718
Oil refineries	-	-22749	22873	-	-	-	-	-	-	-	124
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-5198	5234	-	-2731	-	-	-	-	-	-	-2695
Other transformation	-	-	-	-	-	-	-	-3173	-	-	-3173
Energy industry own use	-10470	-	-1080	-	-	-	-	-	-2405	-	-13955
Losses	-	-	-	-	-	-	-	-	-1840	-	-1840
<b>TFC</b>	<b>16761</b>	<b>-</b>	<b>25952</b>	<b>1693</b>	<b>-</b>	<b>-</b>	<b>118</b>	<b>8895</b>	<b>16579</b>	<b>-</b>	<b>69997</b>
<b>INDUSTRY</b>	<b>10027</b>	<b>-</b>	<b>2240</b>	<b>1691</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1535</b>	<b>9969</b>	<b>-</b>	<b>25462</b>
Iron and steel	2817	-	-	204	-	-	-	-	323	-	3344
Chemical and petrochemical	803	-	-	946	-	-	-	-	961	-	2709
Non-ferrous metals	1170	-	-	10	-	-	-	-	1467	-	2647
Non-metallic minerals	1283	-	-	324	-	-	-	-	221	-	1828
Transport equipment	-	-	-	14	-	-	-	-	4	-	17
Machinery	32	-	-	24	-	-	-	-	4	-	59
Mining and quarrying	188	-	1575	-	-	-	-	-	2599	-	4362
Food and tobacco	19	-	-	64	-	-	-	-	61	-	144
Paper pulp and printing	42	-	-	15	-	-	-	-	137	-	194
Wood and wood products	-	-	-	-	-	-	-	-	24	-	24
Construction	-	-	100	-	-	-	-	-	9	-	109
Textile and leather	-	-	-	0	-	-	-	-	10	-	11
Non-specified	3673	-	564	90	-	-	-	1535	4151	-	10012
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>18502</b>	<b>0</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>297</b>	<b>-</b>	<b>18799</b>
Domestic aviation	-	-	1172	-	-	-	-	-	-	-	1172
Road	-	-	17183	0	-	-	-	-	2	-	17185
Rail	-	-	144	-	-	-	-	-	245	-	389
Pipeline transport	-	-	-	-	-	-	-	-	6	-	6
Domestic navigation	-	-	3	-	-	-	-	-	-	-	3
Non-specified	-	-	-	-	-	-	-	-	43	-	43
<b>OTHER</b>	<b>5209</b>	<b>-</b>	<b>2720</b>	<b>2</b>	<b>-</b>	<b>-</b>	<b>118</b>	<b>7360</b>	<b>6313</b>	<b>-</b>	<b>21721</b>
Residential	3204	-	622	-	-	-	-	7360	3300	-	14486
Comm. and public services	1616	-	146	2	-	-	-	-	2398	-	4162
Agriculture/forestry	314	-	1128	-	-	-	-	-	486	-	1928
Fishing	-	-	62	-	-	-	-	-	-	-	62
Non-specified	74	-	761	-	-	-	118	-	130	-	1083
<b>NON-ENERGY USE</b>	<b>1525</b>	<b>-</b>	<b>2490</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>4015</b>
in industry/transf./energy	1525	-	2490	-	-	-	-	-	-	-	4015
of which: chem./petrochem.	1525	-	-	-	-	-	-	-	-	-	1525
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>226484</b>	<b>-</b>	<b>183</b>	<b>-</b>	<b>15026</b>	<b>700</b>	<b>6800</b>	<b>260</b>	<b>-</b>	<b>-</b>	<b>249453</b>
Electricity plants	226484	-	183	-	15026	700	6800	260	-	-	249453
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

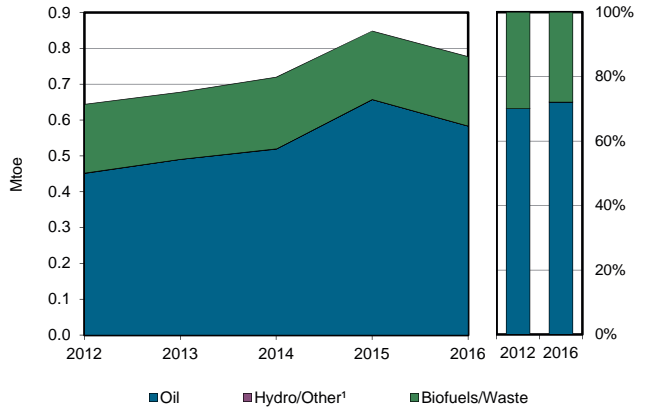
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## South Sudan

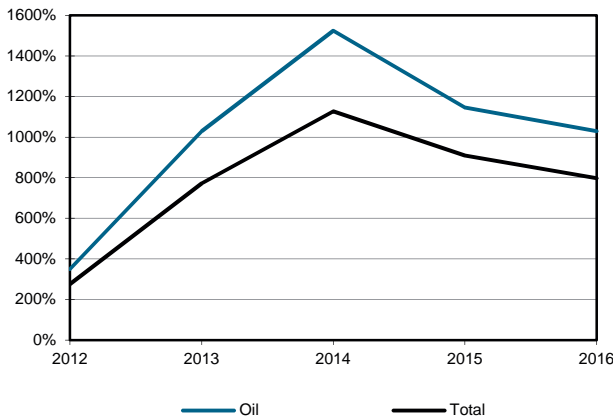
**Figure 1. Energy production**



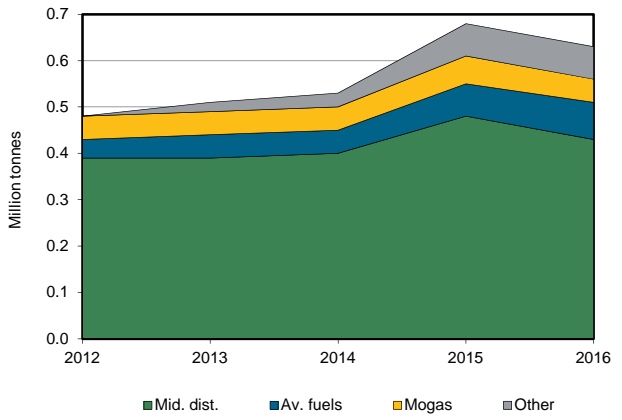
**Figure 2. Total primary energy supply<sup>2</sup>**



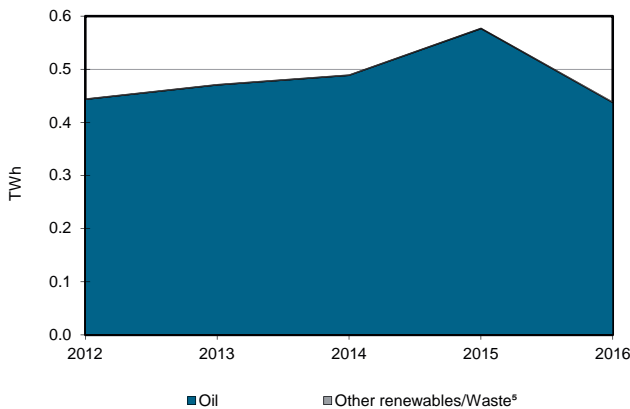
**Figure 3. Energy self-sufficiency<sup>3</sup>**



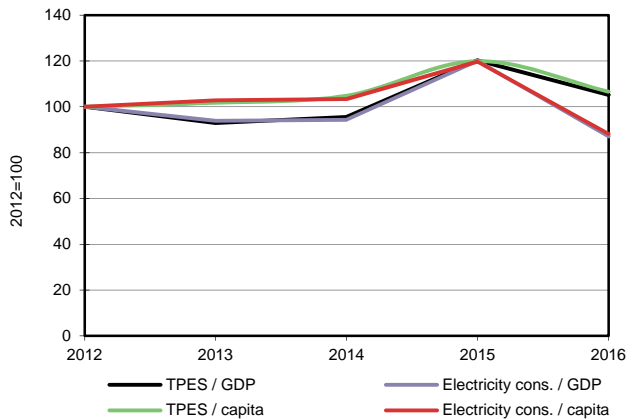
**Figure 4. Oil products demand<sup>4</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>6</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## South Sudan

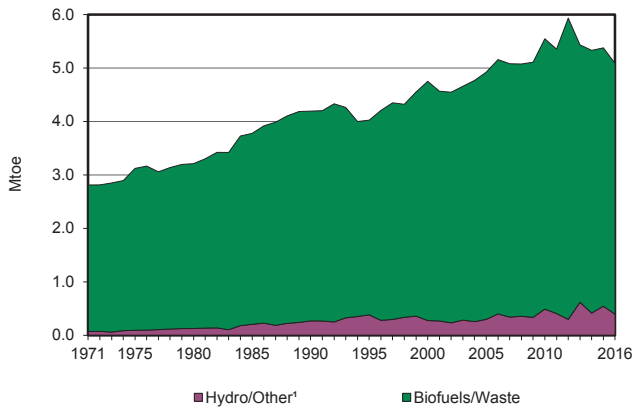
2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	5997	-	-	-	-	0	194	-	-	6191
Imports	-	-	577	-	-	-	-	-	-	-	577
Exports	-	-5926	-	-	-	-	-	-	-	-	-5926
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-65	-	-	-	-	-	-	-	-65
Stock changes	-	-	-	-	-	-	-	-	-	-	-
<b>TPES</b>	-	<b>71</b>	<b>512</b>	-	-	-	<b>0</b>	<b>194</b>	-	-	<b>777</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-	-	7	-	-	-	-	-2	-0	-	5
Electricity plants	-	-	-146	-	-	-	-0	-	38	-	-108
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-	-	-	-	-	-	-	-	-	-
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-33	-	-	-33
Energy industry own use	-	-71	-	-	-	-	-	-0	-1	-	-73
Losses	-	-	-16	-	-	-	-	-2	-2	-	-19
<b>TFC</b>	-	-	<b>357</b>	-	-	-	-	<b>156</b>	<b>35</b>	-	<b>548</b>
<b>INDUSTRY</b>	-	-	<b>8</b>	-	-	-	-	-	-	-	<b>8</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	8	-	-	-	-	-	-	-	8
<b>TRANSPORT</b>	-	-	<b>320</b>	-	-	-	-	-	-	-	<b>320</b>
Domestic aviation	-	-	16	-	-	-	-	-	-	-	16
Road	-	-	304	-	-	-	-	-	-	-	304
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	-	-	<b>29</b>	-	-	-	-	<b>156</b>	<b>35</b>	-	<b>220</b>
Residential	-	-	4	-	-	-	-	148	15	-	168
Comm. and public services	-	-	-	-	-	-	-	7	14	-	21
Agriculture/forestry	-	-	24	-	-	-	-	0	5	-	30
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	1	-	-	-	-	-	-	-	1
<b>NON-ENERGY USE</b>	-	-	-	-	-	-	-	-	-	-	-
in industry/transf./energy	-	-	-	-	-	-	-	-	-	-	-
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	-	-	<b>437</b>	-	-	-	<b>2</b>	-	-	-	<b>439</b>
Electricity plants	-	-	437	-	-	-	2	-	-	-	439
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

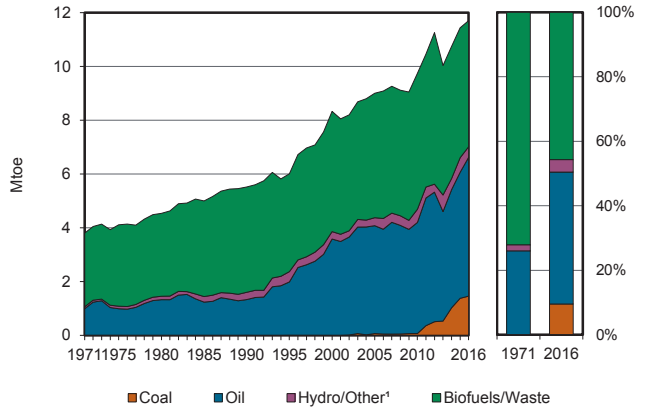
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Sri Lanka

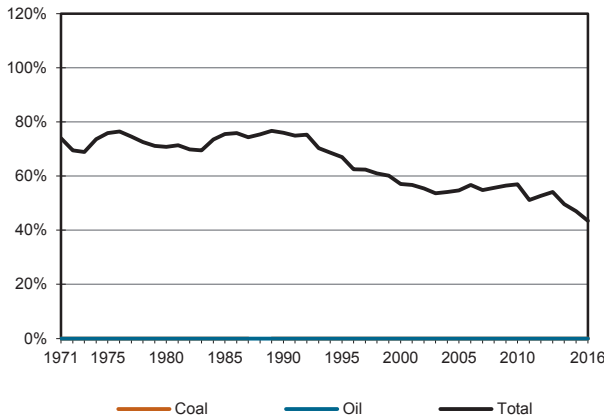
**Figure 1. Energy production**



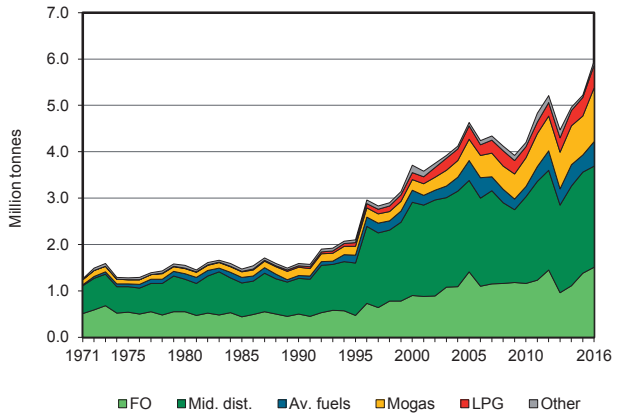
**Figure 2. Total primary energy supply²**



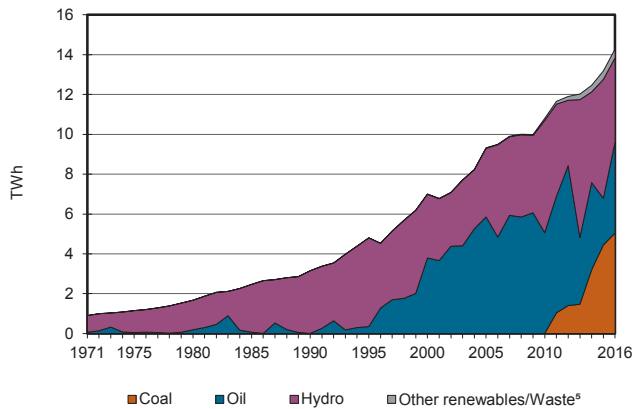
**Figure 3. Energy self-sufficiency³**



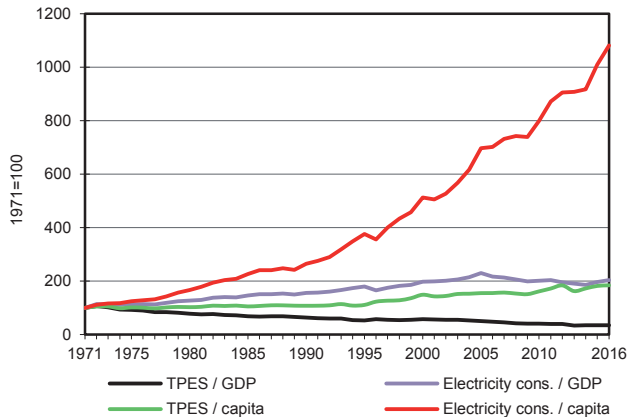
**Figure 4. Oil products demand⁴**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators⁶**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Sri Lanka

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	-	-	-	-	363	32	4688	-	-	5082
Imports	1684	1736	3824	-	-	-	-	-	-	-	7244
Exports	-	-	-92	-	-	-	-	-	-	-	-92
Intl. marine bunkers	-	-	-595	-	-	-	-	-	-	-	-595
Intl. aviation bunkers	-	-	-549	-	-	-	-	-	-	-	-549
Stock changes	-226	63	775	-	-	-	-	-	-	-	612
<b>TPES</b>	<b>1457</b>	<b>1798</b>	<b>3364</b>	-	-	<b>363</b>	<b>32</b>	<b>4688</b>	-	-	<b>11702</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-	-	-24	-	-	-	-	-0	7	-	-17
Electricity plants	-1403	-	-983	-	-	-363	-32	-47	1228	-	-1599
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-1798	1711	-	-	-	-	-	-	-	-88
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-44	-	-	-44
Energy industry own use	-	-	-16	-	-	-	-	-	-56	-	-72
Losses	-	-	-	-	-	-	-	-	-86	-	-86
<b>TFC</b>	<b>55</b>	-	<b>4052</b>	-	-	-	-	<b>4597</b>	<b>1093</b>	-	<b>9797</b>
<b>INDUSTRY</b>	<b>55</b>	-	<b>447</b>	-	-	-	-	<b>1767</b>	<b>357</b>	-	<b>2626</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	55	-	-	-	-	-	-	-	-	-	55
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	447	-	-	-	-	1767	357	-	2571
<b>TRANSPORT</b>	-	-	<b>3097</b>	-	-	-	-	-	-	-	<b>3097</b>
Domestic aviation	-	-	3	-	-	-	-	-	-	-	3
Road	-	-	2989	-	-	-	-	-	-	-	2989
Rail	-	-	41	-	-	-	-	-	-	-	41
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	65	-	-	-	-	-	-	-	65
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	-	-	<b>440</b>	-	-	-	-	<b>2829</b>	<b>737</b>	-	<b>4006</b>
Residential	-	-	243	-	-	-	-	2709	444	-	3396
Comm. and public services	-	-	59	-	-	-	-	120	292	-	472
Agriculture/forestry	-	-	-	-	-	-	-	-	-	-	-
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	138	-	-	-	-	-	-	-	138
<b>NON-ENERGY USE</b>	-	-	<b>68</b>	-	-	-	-	-	-	-	<b>68</b>
in industry/transf./energy	-	-	66	-	-	-	-	-	-	-	66
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	2	-	-	-	-	-	-	-	2
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>5047</b>	-	<b>4576</b>	-	-	<b>4221</b>	<b>368</b>	<b>72</b>	-	-	<b>14284</b>
Electricity plants	5047	-	4576	-	-	4221	368	72	-	-	14284
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Sudan

Figure 1. Energy production

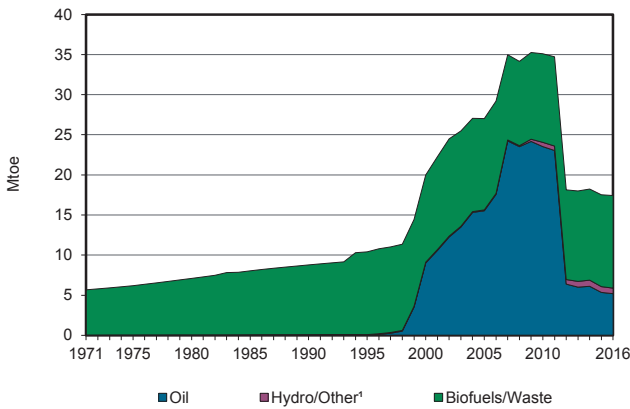


Figure 2. Total primary energy supply<sup>2</sup>

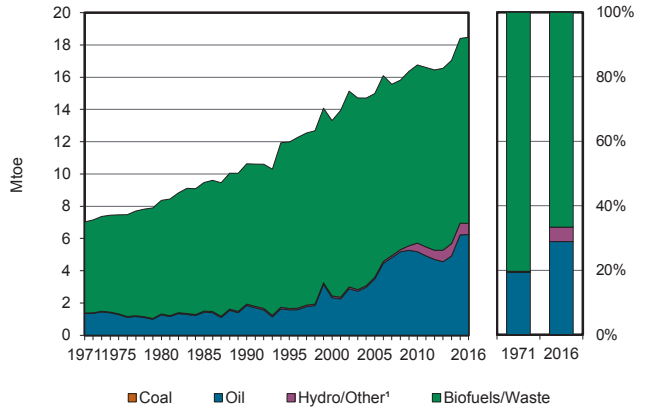


Figure 3. Energy self-sufficiency<sup>3</sup>

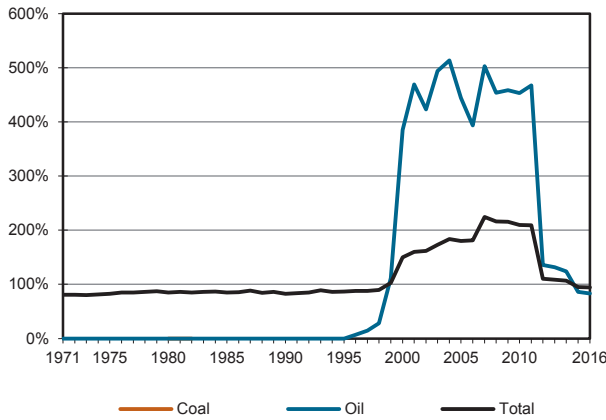


Figure 4. Oil products demand<sup>4</sup>

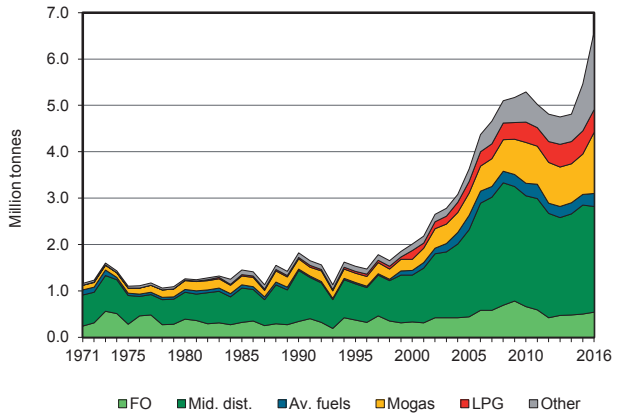


Figure 5. Electricity generation by source

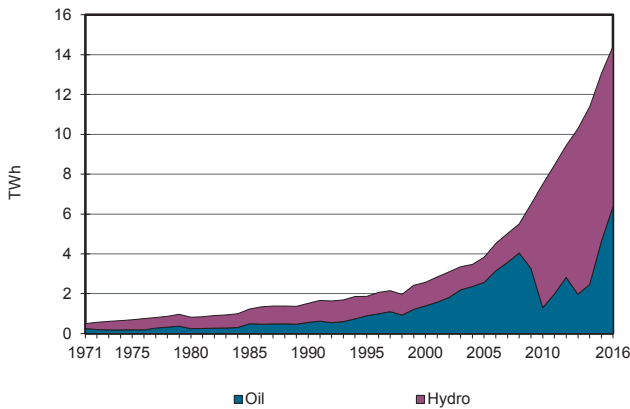
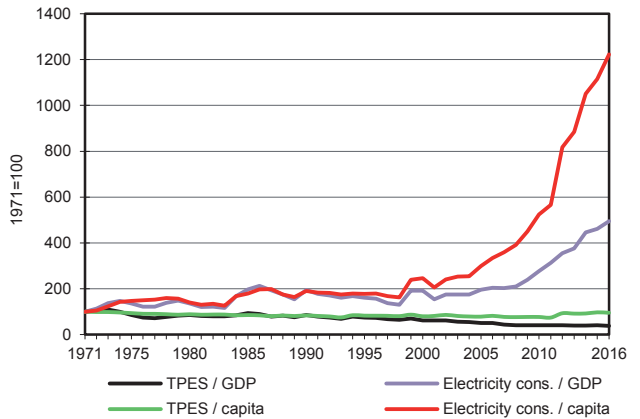


Figure 6. Selected indicators<sup>5</sup>



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. GDP in 2010 USD.



## Sudan

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	5191	-	-	-	692	-	11539	-	-	17422
Imports	-	1123	1275	-	-	-	-	-	-	-	2398
Exports	-	-966	-52	-	-	-	-	-	-	-	-1018
Intl. marine bunkers	-	-	-24	-	-	-	-	-	-	-	-24
Intl. aviation bunkers	-	-	-300	-	-	-	-	-	-	-	-300
Stock changes	-	-	-	-	-	-	-	-	-	-	-
<b>TPES</b>	-	<b>5348</b>	<b>899</b>	-	-	<b>692</b>	-	<b>11539</b>	-	-	<b>18478</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-	358	-44	-	-	-	-	-	-	-	315
Electricity plants	-	-1123	-827	-	-	-692	-	-	1241	-	-1401
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-4583	4460	-	-	-	-	-	-	-	-123
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-4671	-	-	-4671
Energy industry own use	-	-	-55	-	-	-	-	-	-5	-	-59
Losses	-	-	-	-	-	-	-	-	-160	-	-160
<b>TFC</b>	-	-	<b>4433</b>	-	-	-	-	<b>6868</b>	<b>1076</b>	-	<b>12378</b>
<b>INDUSTRY</b>	-	-	<b>437</b>	-	-	-	-	<b>740</b>	<b>154</b>	-	<b>1331</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	21	-	-	-	-	-	-	-	21
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	122	-	-	-	-	-	-	-	122
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	34	-	-	-	-	-	-	-	34
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	261	-	-	-	-	740	154	-	1155
<b>TRANSPORT</b>	-	-	<b>3138</b>	-	-	-	-	-	-	-	<b>3138</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	3117	-	-	-	-	-	-	-	3117
Rail	-	-	19	-	-	-	-	-	-	-	19
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	2	-	-	-	-	-	-	-	2
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	-	-	<b>598</b>	-	-	-	-	<b>6128</b>	<b>922</b>	-	<b>7649</b>
Residential	-	-	210	-	-	-	-	4687	575	-	5472
Comm. and public services	-	-	153	-	-	-	-	1442	284	-	1879
Agriculture/forestry	-	-	43	-	-	-	-	-	62	-	105
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	192	-	-	-	-	-	-	-	192
<b>NON-ENERGY USE</b>	-	-	<b>260</b>	-	-	-	-	-	-	-	<b>260</b>
in industry/transf./energy	-	-	260	-	-	-	-	-	-	-	260
of which: chem./petrochem.	-	-	12	-	-	-	-	-	-	-	12
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	-	<b>3918</b>	<b>2460</b>	-	-	<b>8051</b>	-	-	-	-	<b>14429</b>
Electricity plants	-	3918	2460	-	-	8051	-	-	-	-	14429
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Suriname

Figure 1. Energy production

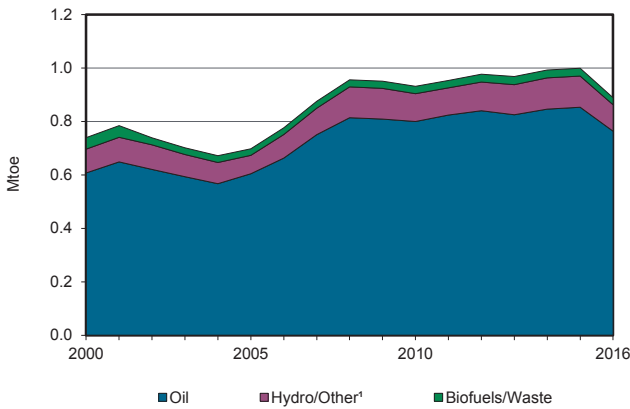


Figure 2. Total primary energy supply²

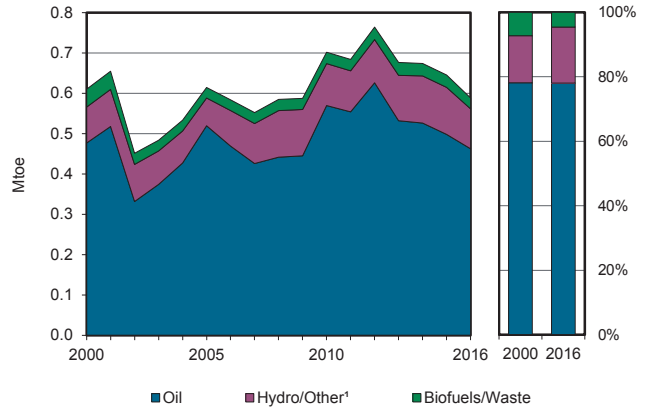


Figure 3. Energy self-sufficiency³

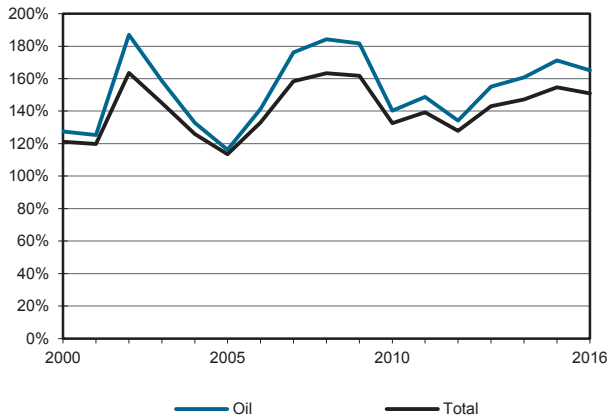


Figure 4. Oil products demand⁴

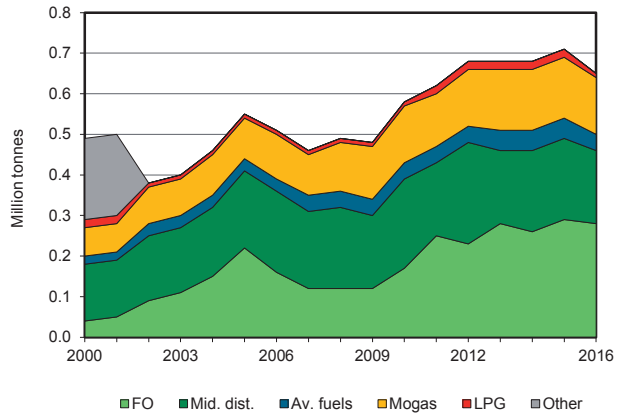


Figure 5. Electricity generation by source

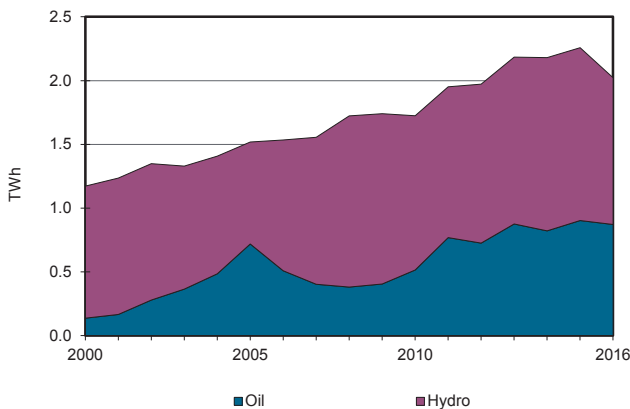
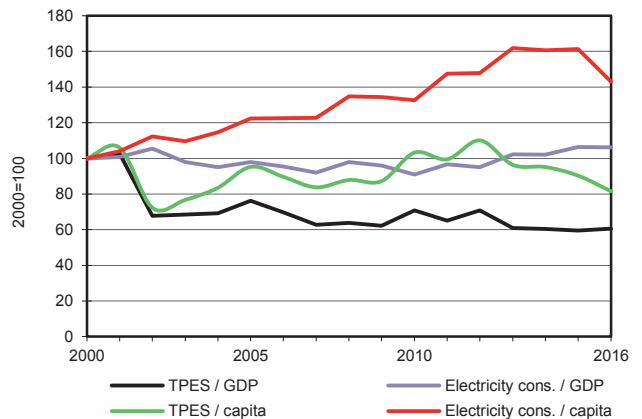


Figure 6. Selected indicators⁵



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. GDP in 2010 USD.

## Suriname

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	763	-	-	-	99	-	26	-	-	888
Imports	-	-	461	-	-	-	-	1	-	-	462
Exports	-	-	-715	-	-	-	-	-	-	-	-715
Intl. marine bunkers	-	-	-47	-	-	-	-	-	-	-	-47
Intl. aviation bunkers	-	-	-	-	-	-	-	-	-	-	-
Stock changes	-	-	-	-	-	-	-	-	-	-	-
<b>TPES</b>	-	<b>763</b>	<b>-301</b>	-	-	<b>99</b>	-	<b>27</b>	-	-	<b>588</b>
Transfers	-	-436	545	-	-	-	-	-	-	-	109
Statistical differences	-	65	-2	-	-	-	-	-	-	-	63
Electricity plants	-	-	-266	-	-	-99	-	-	174	-	-191
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-390	369	-	-	-	-	-	-	-	-20
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-	-	-	-
Energy industry own use	-	-3	-3	-	-	-	-	-	-3	-	-9
Losses	-	-	-	-	-	-	-	-	-19	-	-19
<b>TFC</b>	-	-	<b>342</b>	-	-	-	-	<b>27</b>	<b>152</b>	-	<b>521</b>
<b>INDUSTRY</b>	-	-	<b>20</b>	-	-	-	-	<b>4</b>	<b>73</b>	-	<b>97</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	8	-	-	-	-	-	-	-	8
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	12	-	-	-	-	4	73	-	89
<b>TRANSPORT</b>	-	-	<b>204</b>	-	-	-	-	-	-	-	<b>204</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	132	-	-	-	-	-	-	-	132
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	72	-	-	-	-	-	-	-	72
<b>OTHER</b>	-	-	<b>118</b>	-	-	-	-	<b>23</b>	<b>79</b>	-	<b>220</b>
Residential	-	-	14	-	-	-	-	23	51	-	87
Comm. and public services	-	-	8	-	-	-	-	0	28	-	36
Agriculture/forestry	-	-	97	-	-	-	-	-	-	-	97
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>NON-ENERGY USE</b>	-	-	-	-	-	-	-	-	-	-	-
in industry/transf./energy	-	-	-	-	-	-	-	-	-	-	-
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	-	-	<b>871</b>	-	-	<b>1151</b>	-	-	-	-	<b>2022</b>
Electricity plants	-	-	871	-	-	1151	-	-	-	-	2022
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Syrian Arab Republic

Figure 1. Energy production

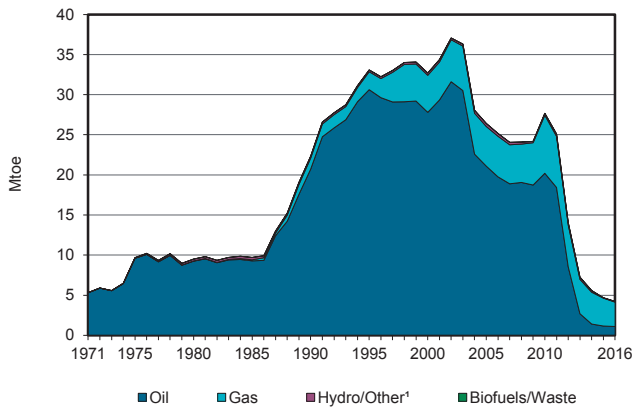


Figure 2. Total primary energy supply<sup>2</sup>

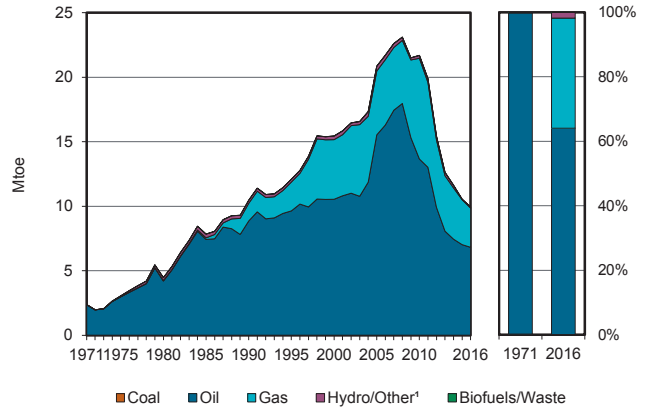


Figure 3. Energy self-sufficiency<sup>3</sup>

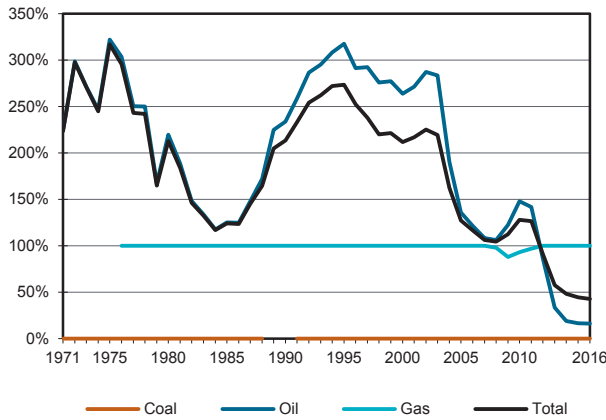


Figure 4. Oil products demand<sup>4</sup>

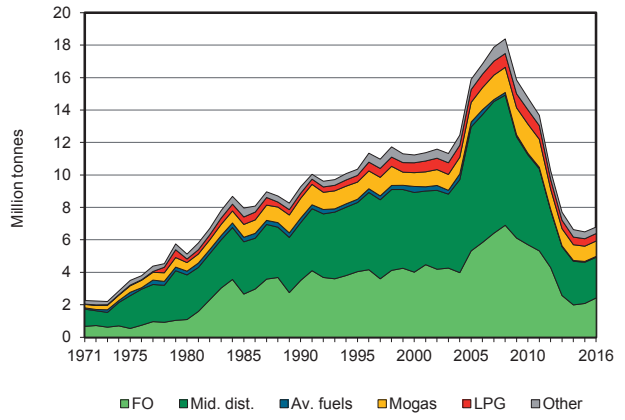


Figure 5. Electricity generation by source

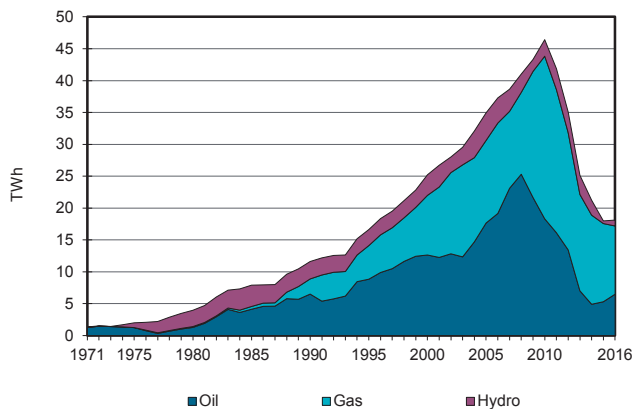
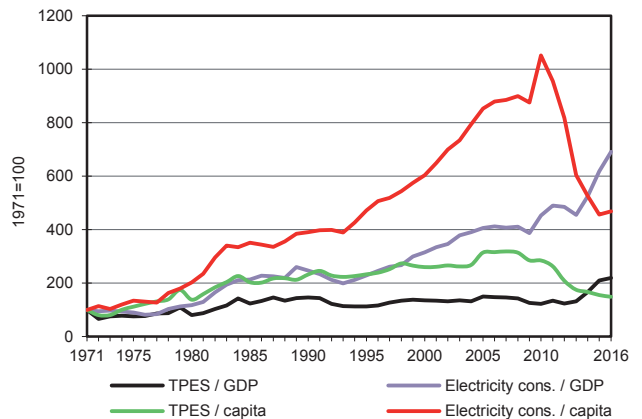


Figure 6. Selected indicators<sup>5</sup>



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. GDP in 2010 USD.

## Syrian Arab Republic

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	1097	-	3039	-	80	-	6	-	-	4222
Imports	1	5093	1479	-	-	-	-	-	-	-	6573
Exports	-	-	-676	-	-	-	-	-	-6	-	-682
Intl. marine bunkers	-	-	-160	-	-	-	-	-	-	-	-160
Intl. aviation bunkers	-	-	-17	-	-	-	-	-	-	-	-17
Stock changes	-	-	-	-	-	-	-	-	-	-	-
<b>TPES</b>	<b>1</b>	<b>6191</b>	<b>626</b>	<b>3039</b>	<b>-</b>	<b>80</b>	<b>-</b>	<b>6</b>	<b>-6</b>	<b>-</b>	<b>9936</b>
Transfers	-	-76	86	-	-	-	-	-	-	-	10
Statistical differences	-	-	-65	1	-	-	-	-	-	-	-64
Electricity plants	-	-	-1750	-2487	-	-80	-	-	1557	-	-2760
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-1	-	-	-	-	-	-	-	-	-	-1
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-6114	6069	-	-	-	-	-	-	-	-45
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-0	-	-	-0
Energy industry own use	-	-	-178	-45	-	-	-	-	-178	-	-401
Losses	-	-	-	-	-	-	-	-	-244	-	-244
<b>TFC</b>	<b>0</b>	<b>-</b>	<b>4787</b>	<b>508</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>5</b>	<b>1129</b>	<b>-</b>	<b>6430</b>
<b>INDUSTRY</b>	<b>0</b>	<b>-</b>	<b>972</b>	<b>179</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>380</b>	<b>-</b>	<b>1531</b>
Iron and steel	0	-	-	-	-	-	-	-	-	-	0
Chemical and petrochemical	-	-	-	179	-	-	-	-	-	-	179
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	972	-	-	-	-	-	380	-	1352
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>2146</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2146</b>
Domestic aviation	-	-	33	-	-	-	-	-	-	-	33
Road	-	-	2113	-	-	-	-	-	-	-	2113
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>-</b>	<b>-</b>	<b>1373</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>5</b>	<b>749</b>	<b>-</b>	<b>2128</b>
Residential	-	-	830	-	-	-	-	-	517	-	1346
Comm. and public services	-	-	179	-	-	-	-	-	117	-	296
Agriculture/forestry	-	-	260	-	-	-	-	-	-	-	260
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	105	-	-	-	-	5	116	-	225
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>297</b>	<b>328</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>625</b>
in industry/transf./energy	-	-	288	328	-	-	-	-	-	-	616
of which: chem./petrochem.	-	-	1	328	-	-	-	-	-	-	330
in transport	-	-	9	-	-	-	-	-	-	-	9
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>-</b>	<b>-</b>	<b>6481</b>	<b>10702</b>	<b>-</b>	<b>929</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>18112</b>
Electricity plants	-	-	6481	10702	-	929	-	-	-	-	18112
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Chinese Taipei

Figure 1. Energy production

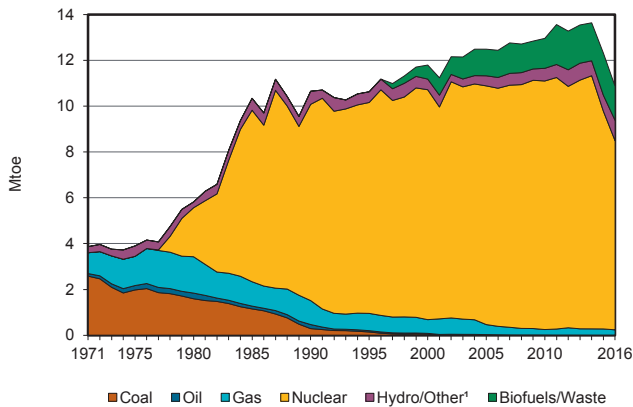


Figure 2. Total primary energy supply<sup>2</sup>

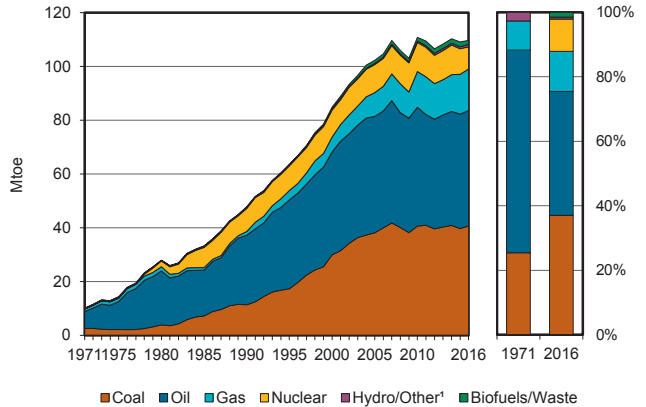


Figure 3. Energy self-sufficiency<sup>3</sup>

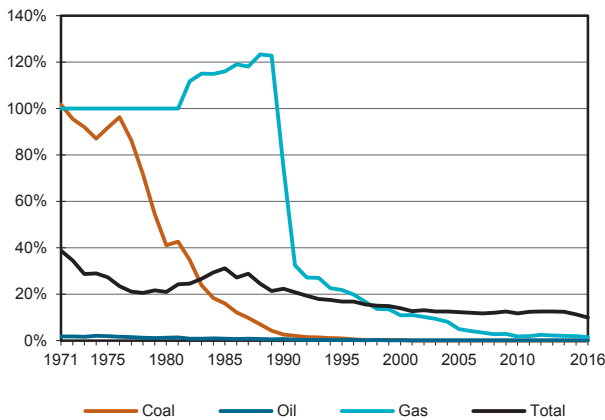


Figure 4. Oil products demand<sup>4</sup>

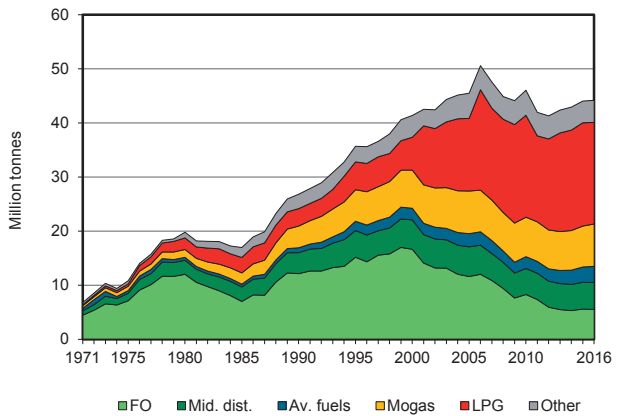


Figure 5. Electricity generation by source

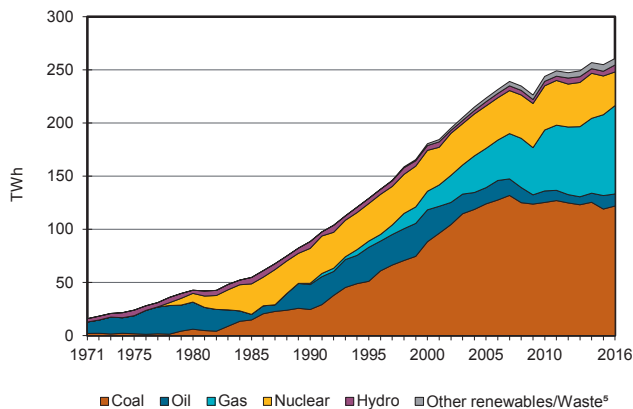
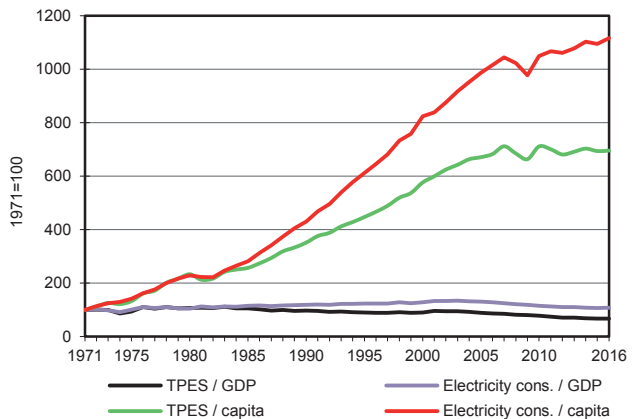


Figure 6. Selected indicators<sup>6</sup>



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Chinese Taipei

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	8	-	231	8250	564	326	1482	-	-	10861
Imports	40570	45692	18458	15993	-	-	-	-	-	-	120713
Exports	-1	-	-17488	-	-	-	-	-	-	-	-17488
Intl. marine bunkers	-	-	-1241	-	-	-	-	-	-	-	-1241
Intl. aviation bunkers	-	-	-2924	-	-	-	-	-	-	-	-2924
Stock changes	98	204	225	-777	-	-	-	-	-	-	-250
<b>TPES</b>	<b>40668</b>	<b>45903</b>	<b>-2969</b>	<b>15447</b>	<b>8250</b>	<b>564</b>	<b>326</b>	<b>1482</b>	-	-	<b>109671</b>
Transfers	-	-	-247	-	-	-	-	-	-	-	-247
Statistical differences	-313	74	324	869	-	-	-0	-0	-6	-	948
Electricity plants	-19926	-	-2332	-13070	-8250	-564	-223	-1381	19423	-	-26324
CHP plants	-6977	-	-305	-58	-	-	-	-	3005	-	-4335
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-2973	-	-	-	-	-	-	-	-	-	-2973
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-696	-	-	-	-	-	-	-	-	-	-696
Oil refineries	-	-45977	45248	-	-	-	-	-	-	-	-729
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-	-	-	-
Energy industry own use	-1174	-	-1509	-185	-	-	-	-	-1345	-	-4213
Losses	-75	-	-	-	-	-	-	-	-747	-	-821
<b>TFC</b>	<b>8533</b>	-	<b>38212</b>	<b>3003</b>	-	-	<b>103</b>	<b>101</b>	<b>20331</b>	-	<b>70283</b>
<b>INDUSTRY</b>	<b>8274</b>	-	<b>1665</b>	<b>1693</b>	-	-	-	<b>101</b>	<b>11667</b>	-	<b>23399</b>
Iron and steel	1529	-	164	190	-	-	-	-	1299	-	3181
Chemical and petrochemical	4355	-	560	376	-	-	-	-	3152	-	8442
Non-ferrous metals	-	-	27	35	-	-	-	-	108	-	170
Non-metallic minerals	1379	-	187	162	-	-	-	-	459	-	2188
Transport equipment	-	-	26	715	-	-	-	-	215	-	956
Machinery	143	-	101	149	-	-	-	-	4835	-	5228
Mining and quarrying	-	-	28	0	-	-	-	-	38	-	66
Food and tobacco	48	-	178	19	-	-	-	13	356	-	612
Paper pulp and printing	414	-	46	14	-	-	-	88	330	-	893
Wood and wood products	-	-	5	-	-	-	-	-	33	-	38
Construction	-	-	50	-	-	-	-	-	51	-	101
Textile and leather	407	-	169	30	-	-	-	-	459	-	1065
Non-specified	-	-	124	3	-	-	-	-	333	-	460
<b>TRANSPORT</b>	-	-	<b>12710</b>	-	-	-	-	-	<b>117</b>	-	<b>12827</b>
Domestic aviation	-	-	102	-	-	-	-	-	-	-	102
Road	-	-	12429	-	-	-	-	-	-	-	12429
Rail	-	-	19	-	-	-	-	-	117	-	136
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	160	-	-	-	-	-	-	-	160
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	-	-	<b>2297</b>	<b>1310</b>	-	-	<b>103</b>	-	<b>8547</b>	-	<b>12258</b>
Residential	-	-	1065	676	-	-	100	-	4070	-	5911
Comm. and public services	-	-	751	619	-	-	3	-	2559	-	3932
Agriculture/forestry	-	-	4	-	-	-	-	-	168	-	172
Fishing	-	-	347	-	-	-	-	-	83	-	429
Non-specified	-	-	131	15	-	-	-	-	1667	-	1813
<b>NON-ENERGY USE</b>	<b>259</b>	-	<b>21539</b>	-	-	-	-	-	-	-	<b>21798</b>
in industry/transf./energy	259	-	21539	-	-	-	-	-	-	-	21798
of which: chem./petrochem.	-	-	18842	-	-	-	-	-	-	-	18842
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>121941</b>	-	<b>11305</b>	<b>83253</b>	<b>31661</b>	<b>6562</b>	<b>2596</b>	<b>3524</b>	-	-	<b>260842</b>
Electricity plants	88182	-	10448	82916	31661	6562	2596	3524	-	-	225889
CHP plants	33759	-	857	337	-	-	-	-	-	-	34953
<b>Heat generated - TJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Tajikistan

Figure 1. Energy production

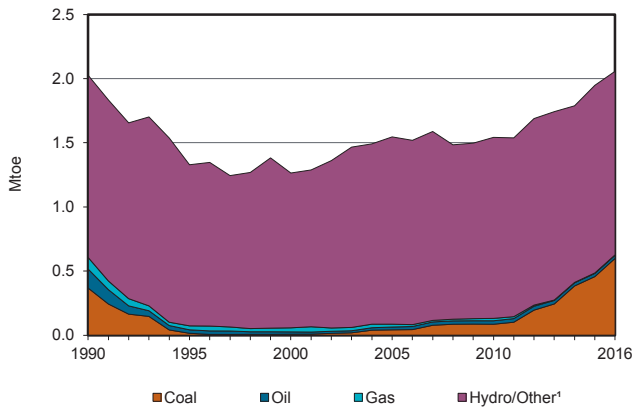


Figure 2. Total primary energy supply<sup>2</sup>

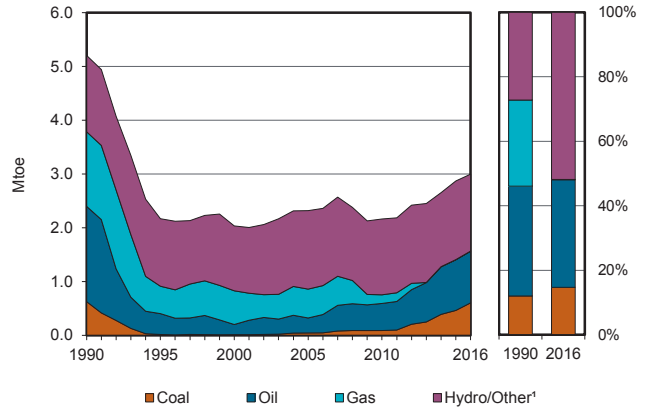


Figure 3. Energy self-sufficiency<sup>3</sup>

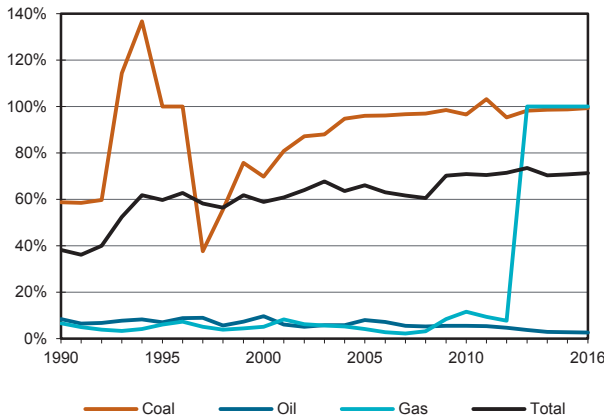


Figure 4. Oil products demand<sup>4</sup>

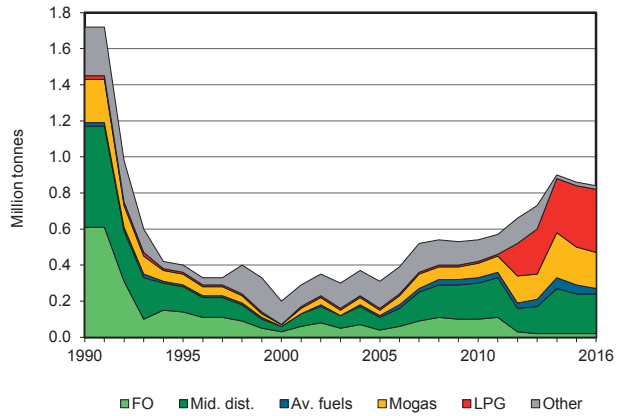


Figure 5. Electricity generation by source

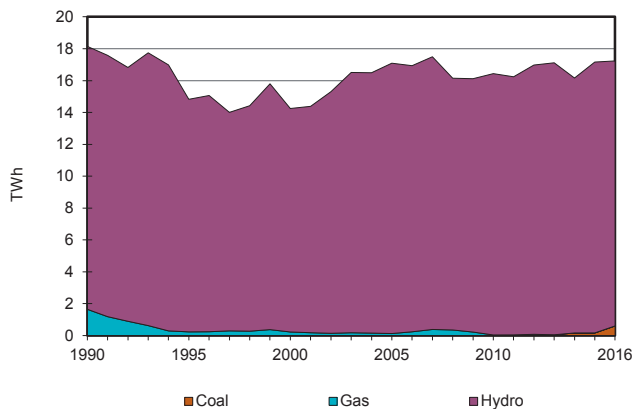
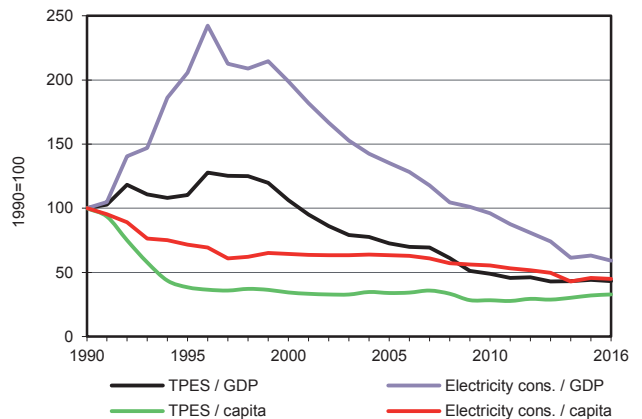


Figure 6. Selected indicators<sup>5</sup>



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. GDP in 2010 USD.



## Tajikistan

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	599	25	-	3	-	1430	-	-	-	-	2057
Imports	4	-	968	-	-	-	-	-	9	-	982
Exports	-	-	-	-	-	-	-	-	-123	-	-123
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-33	-	-	-	-	-	-	-	-33
Stock changes	-	-	-	-	-	-	-	-	-	-	-
<b>TPES</b>	<b>604</b>	<b>25</b>	<b>935</b>	<b>3</b>	<b>-</b>	<b>1430</b>	<b>-</b>	<b>-</b>	<b>-114</b>	<b>-</b>	<b>2883</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-	-	-99	-	-	-	-	-	11	-	-88
Electricity plants	-	-	-	-	-	-1430	-	-	1430	-	-
CHP plants	-134	-	-	-	-	-	-	-	52	39	-43
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-25	16	-	-	-	-	-	-	-	-10
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-	-	-	-
Energy industry own use	-	-	-	-	-	-	-	-	-20	-	-20
Losses	-	-	-	-	-	-	-	-	-236	-	-236
<b>TFC</b>	<b>470</b>	<b>-</b>	<b>852</b>	<b>3</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1123</b>	<b>39</b>	<b>2487</b>
<b>INDUSTRY</b>	<b>-</b>	<b>-</b>	<b>23</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>354</b>	<b>-</b>	<b>377</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	9	-	9
Non-ferrous metals	-	-	-	-	-	-	-	-	321	-	321
Non-metallic minerals	-	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	2	-	2
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	5	-	5
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	0	-	0
Construction	-	-	-	-	-	-	-	-	6	-	6
Textile and leather	-	-	-	-	-	-	-	-	11	-	11
Non-specified	-	-	23	-	-	-	-	-	-	-	23
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>427</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>3</b>	<b>-</b>	<b>430</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	427	-	-	-	-	-	-	-	427
Rail	-	-	-	-	-	-	-	-	2	-	2
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	1	-	1
<b>OTHER</b>	<b>470</b>	<b>-</b>	<b>383</b>	<b>3</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>766</b>	<b>39</b>	<b>1662</b>
Residential	-	-	-	-	-	-	-	-	417	39	456
Comm. and public services	-	-	-	-	-	-	-	-	99	-	99
Agriculture/forestry	-	-	-	-	-	-	-	-	251	-	251
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	470	-	383	3	-	-	-	-	-	-	856
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>19</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>19</b>
in industry/transf./energy	-	-	3	-	-	-	-	-	-	-	3
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	16	-	-	-	-	-	-	-	16
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>600</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>16632</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>17232</b>
Electricity plants	-	-	-	-	-	16632	-	-	-	-	16632
CHP plants	600	-	-	-	-	-	-	-	-	-	600
<b>Heat generated - TJ</b>	<b>1648</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1648</b>
CHP plants	1648	-	-	-	-	-	-	-	-	-	1648
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Tanzania

Figure 1. Energy production

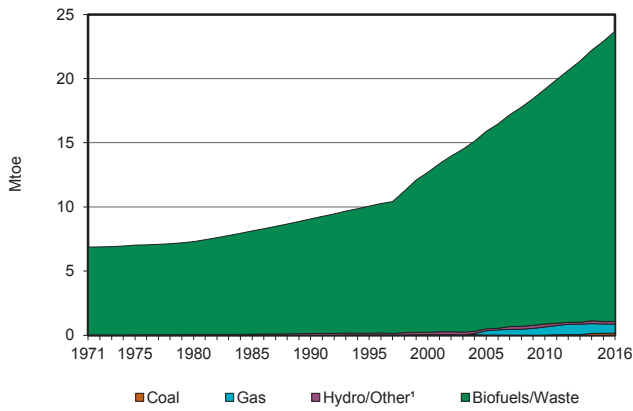


Figure 2. Total primary energy supply<sup>2</sup>

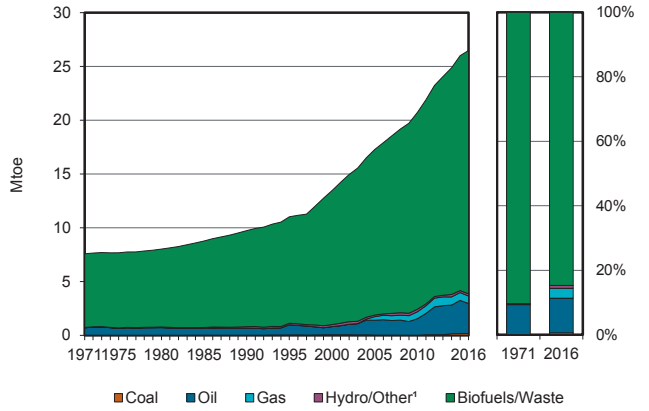


Figure 3. Energy self-sufficiency<sup>3</sup>

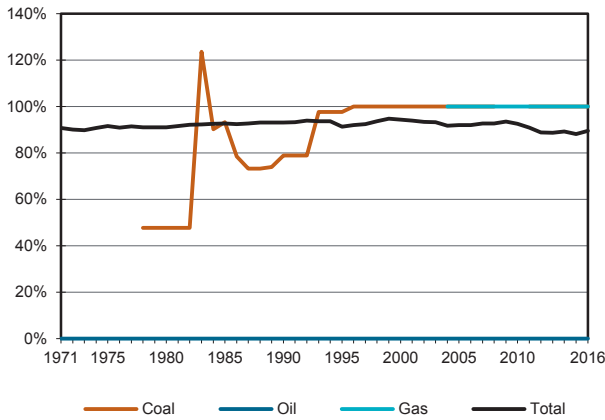


Figure 4. Oil products demand<sup>4</sup>

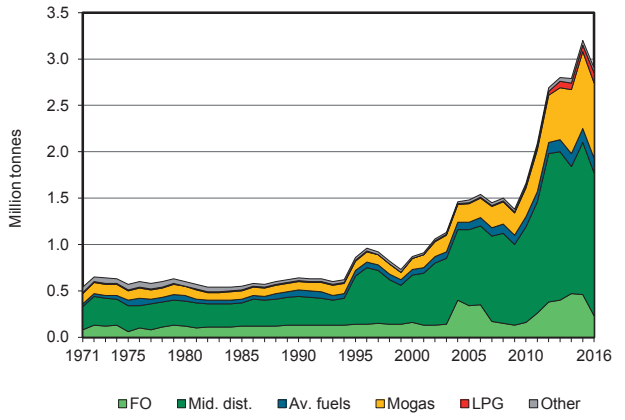


Figure 5. Electricity generation by source

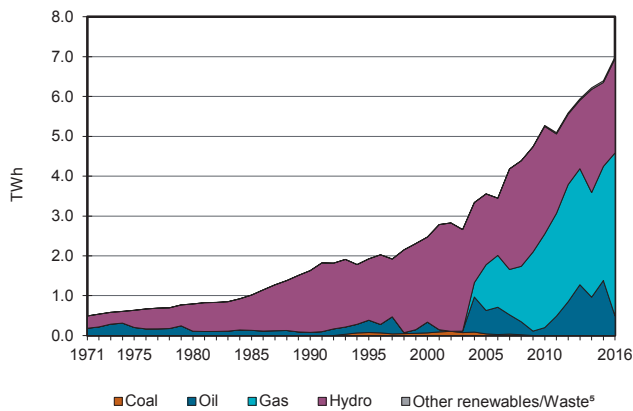
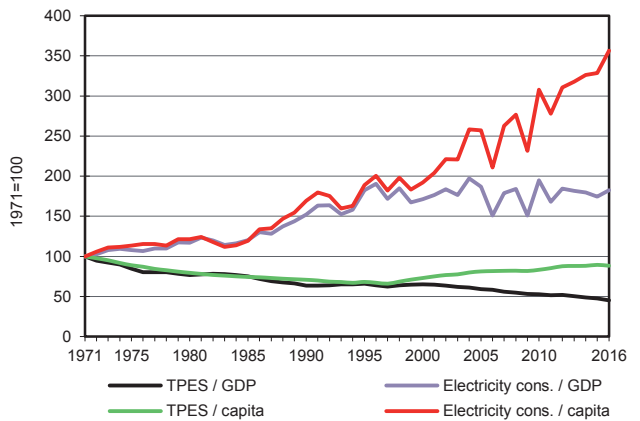


Figure 6. Selected indicators<sup>6</sup>



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Tanzania

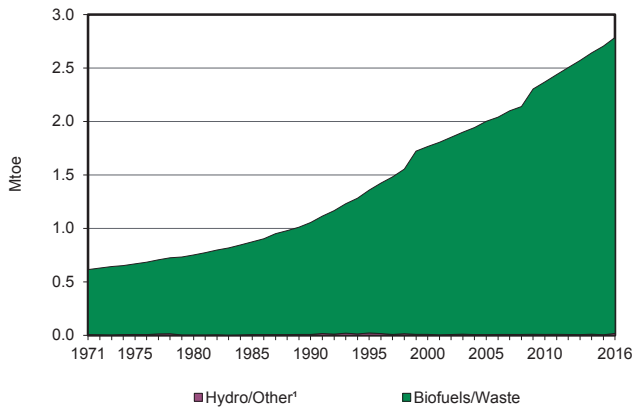
2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	170	-	-	696	-	203	2	22628	-	-	23699
Imports	-	-	3023	-	-	-	-	-	9	-	3032
Exports	-	-	-	-	-	-	-	-	-	-	-
Intl. marine bunkers	-	-	-67	-	-	-	-	-	-	-	-67
Intl. aviation bunkers	-	-	-168	-	-	-	-	-	-	-	-168
Stock changes	-	-	-	-	-	-	-	-	-	-	-
<b>TPES</b>	<b>170</b>	<b>-</b>	<b>2787</b>	<b>696</b>	<b>-</b>	<b>203</b>	<b>2</b>	<b>22628</b>	<b>9</b>	<b>-</b>	<b>26495</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-	-	-	-	-	-	-	-	-37	-	-37
Electricity plants	-	-	-150	-549	-	-203	-2	-9	602	-	-312
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-	-	-	-	-	-	-	-	-	-
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-2816	-	-	-2816
Energy industry own use	-	-	-	-	-	-	-	-	-2	-	-2
Losses	-	-	-	-	-	-	-	-	-96	-	-96
<b>TFC</b>	<b>170</b>	<b>-</b>	<b>2637</b>	<b>146</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>19803</b>	<b>475</b>	<b>-</b>	<b>23232</b>
<b>INDUSTRY</b>	<b>170</b>	<b>-</b>	<b>102</b>	<b>146</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2989</b>	<b>127</b>	<b>-</b>	<b>3533</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	40	-	-	-	-	-	-	40
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	170	-	102	106	-	-	-	2989	127	-	3494
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>2297</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2297</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	2297	-	-	-	-	-	-	-	2297
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>-</b>	<b>-</b>	<b>190</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>16814</b>	<b>349</b>	<b>-</b>	<b>17353</b>
Residential	-	-	167	-	-	-	-	15282	215	-	15664
Comm. and public services	-	-	-	-	-	-	-	-	106	-	106
Agriculture/forestry	-	-	23	-	-	-	-	911	15	-	949
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	621	13	-	634
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>49</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>49</b>
in industry/transf./energy	-	-	49	-	-	-	-	-	-	-	49
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>-</b>	<b>-</b>	<b>489</b>	<b>4097</b>	<b>-</b>	<b>2366</b>	<b>25</b>	<b>21</b>	<b>-</b>	<b>-</b>	<b>6998</b>
Electricity plants	-	-	489	4097	-	2366	25	21	-	-	6998
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

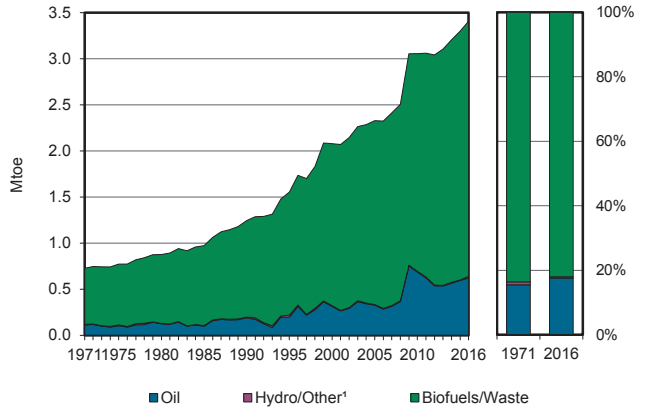
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Togo

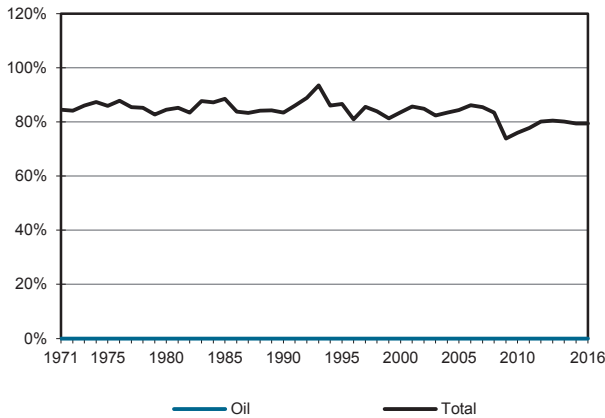
**Figure 1. Energy production**



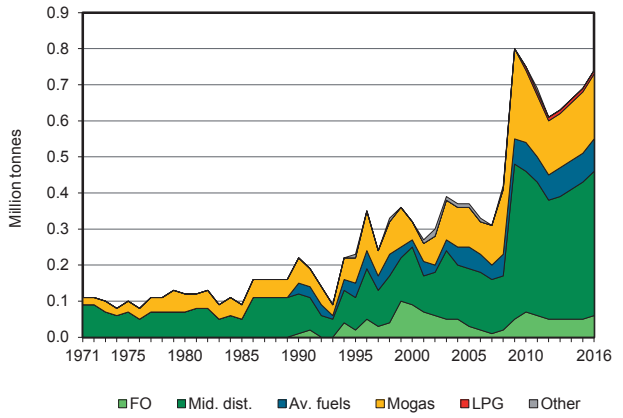
**Figure 2. Total primary energy supply<sup>2</sup>**



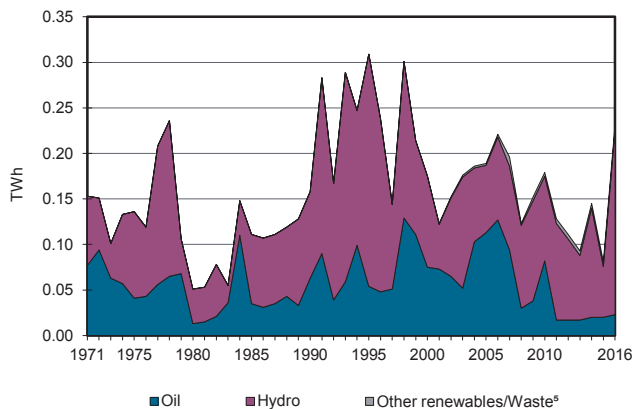
**Figure 3. Energy self-sufficiency<sup>3</sup>**



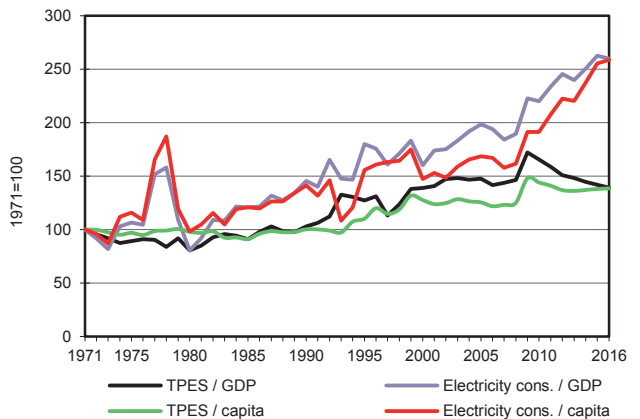
**Figure 4. Oil products demand<sup>4</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>6</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Togo

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	-	-	-	-	18	-	2767	-	-	2785
Imports	-	-	709	-	-	-	-	-	98	-	807
Exports	-	-	-	-	-	-	-	-	-	-	-
Intl. marine bunkers	-	-	-20	-	-	-	-	-	-	-	-20
Intl. aviation bunkers	-	-	-91	-	-	-	-	-	-	-	-91
Stock changes	-	-	24	-	-	-	-	-	-	-	24
<b>TPES</b>	-	-	<b>622</b>	-	-	<b>18</b>	-	<b>2767</b>	<b>98</b>	-	<b>3505</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-	-	24	-	-	-	-	17	-	-	41
Electricity plants	-	-	-6	-	-	-18	-	-2	20	-	-6
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-	-	-	-	-	-	-	-	-	-
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-1245	-	-	-1245
Energy industry own use	-	-	-	-	-	-	-	-	-1	-	-1
Losses	-	-	-	-	-	-	-	-	-10	-	-10
<b>TFC</b>	-	-	<b>640</b>	-	-	-	-	<b>1538</b>	<b>107</b>	-	<b>2285</b>
<b>INDUSTRY</b>	-	-	<b>55</b>	-	-	-	-	<b>3</b>	<b>35</b>	-	<b>92</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	53	-	-	-	-	-	16	-	69
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	11	-	11
Food and tobacco	-	-	2	-	-	-	-	-	0	-	2
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	3	-	3
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	3	4	-	7
<b>TRANSPORT</b>	-	-	<b>506</b>	-	-	-	-	-	-	-	<b>506</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	506	-	-	-	-	-	-	-	506
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	-	-	<b>76</b>	-	-	-	-	<b>1535</b>	<b>73</b>	-	<b>1684</b>
Residential	-	-	76	-	-	-	-	1326	53	-	1455
Comm. and public services	-	-	-	-	-	-	-	209	14	-	223
Agriculture/forestry	-	-	-	-	-	-	-	-	-	-	-
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	6	-	6
<b>NON-ENERGY USE</b>	-	-	<b>3</b>	-	-	-	-	-	-	-	<b>3</b>
in industry/transf./energy	-	-	3	-	-	-	-	-	-	-	3
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	-	-	<b>23</b>	-	-	<b>204</b>	-	<b>5</b>	-	-	<b>232</b>
Electricity plants	-	-	23	-	-	204	-	5	-	-	232
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Trinidad and Tobago

Figure 1. Energy production

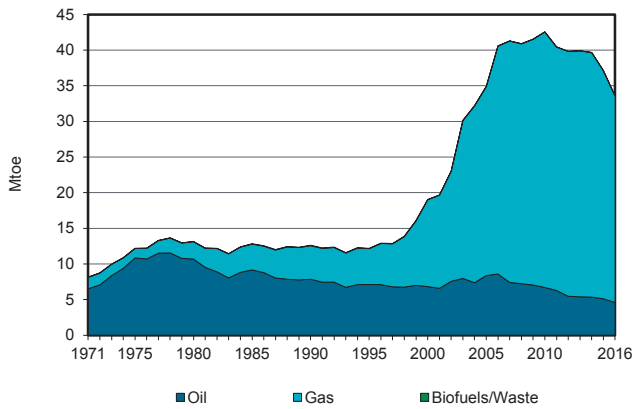


Figure 2. Total primary energy supply<sup>1</sup>

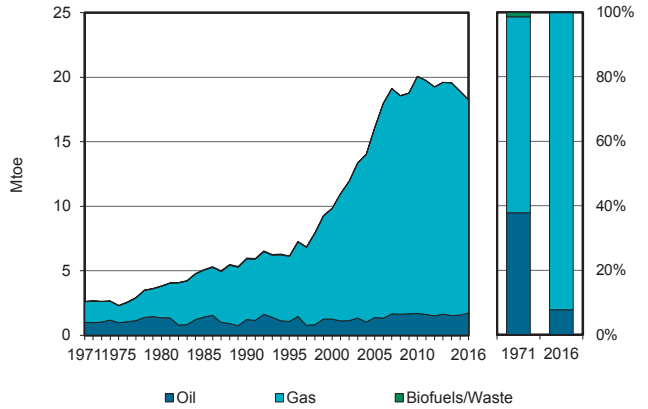


Figure 3. Energy self-sufficiency<sup>2</sup>

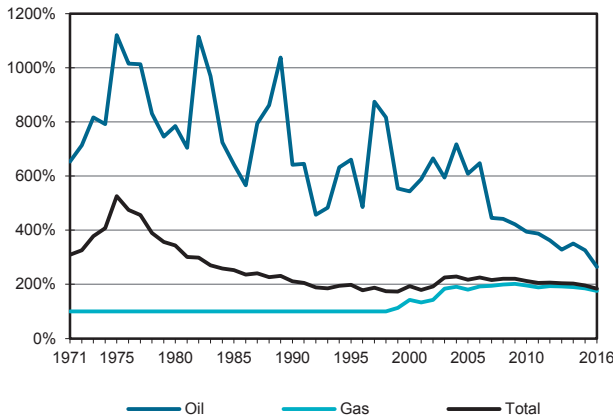


Figure 4. Oil products demand<sup>3</sup>

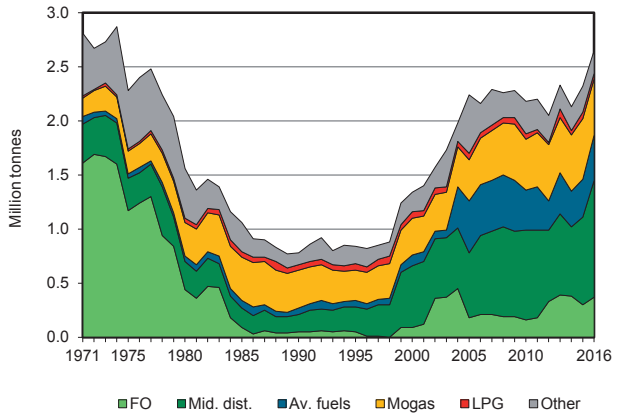


Figure 5. Electricity generation by source

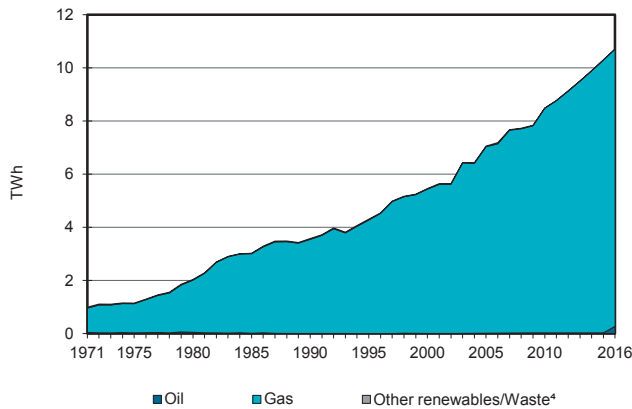
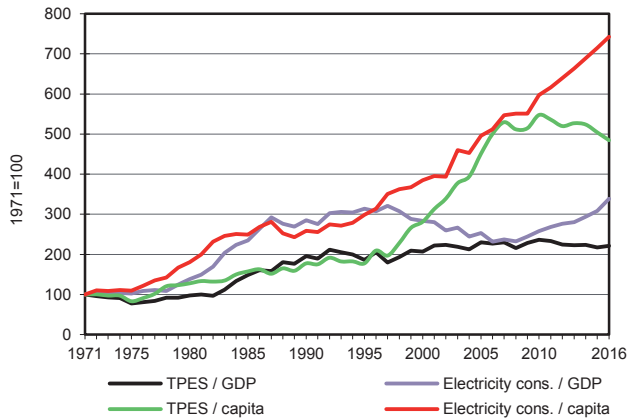


Figure 6. Selected indicators<sup>5</sup>



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Excluding electricity trade.
2. Production divided by TPES. 100% represents full self-sufficiency.
3. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
4. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
5. GDP in 2010 USD.

## Trinidad and Tobago

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	4593	-	28956	-	-	-	13	-	-	33562
Imports	-	5275	-	-	-	-	-	-	-	-	5275
Exports	-	-1462	-5709	-12450	-	-	-	-	-	-	-19621
Intl. marine bunkers	-	-	-570	-	-	-	-	-	-	-	-570
Intl. aviation bunkers	-	-	-329	-	-	-	-	-	-	-	-329
Stock changes	-	191	-255	-	-	-	-	-	-	-	-64
<b>TPES</b>	-	<b>8597</b>	<b>-6863</b>	<b>16506</b>	-	-	-	<b>13</b>	-	-	<b>18254</b>
Transfers	-	-900	993	-	-	-	-	-	-	-	93
Statistical differences	-	35	138	-	-	-	-	-	-2	-	171
Electricity plants	-	-	-80	-2344	-	-	-	-	921	-	-1504
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-7732	7598	-	-	-	-	-	-	-	-134
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-2	-	-	-2
Energy industry own use	-	-	-244	-2700	-	-	-	-	-34	-	-2978
Losses	-	-	-	-1001	-	-	-	-	-18	-	-1019
<b>TFC</b>	-	-	<b>1542</b>	<b>10461</b>	-	-	-	<b>12</b>	<b>868</b>	-	<b>12882</b>
<b>INDUSTRY</b>	-	-	<b>211</b>	<b>1550</b>	-	-	-	-	<b>525</b>	-	<b>2286</b>
Iron and steel	-	-	-	364	-	-	-	-	-	-	364
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	104	-	-	-	-	-	-	104
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	211	1082	-	-	-	-	525	-	1817
<b>TRANSPORT</b>	-	-	<b>1238</b>	-	-	-	-	-	-	-	<b>1238</b>
Domestic aviation	-	-	116	-	-	-	-	-	-	-	116
Road	-	-	1122	-	-	-	-	-	-	-	1122
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	-	-	<b>82</b>	<b>69</b>	-	-	-	<b>12</b>	<b>343</b>	-	<b>506</b>
Residential	-	-	71	69	-	-	-	12	249	-	401
Comm. and public services	-	-	10	-	-	-	-	-	95	-	105
Agriculture/forestry	-	-	-	-	-	-	-	-	-	-	-
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>NON-ENERGY USE</b>	-	-	<b>11</b>	<b>8841</b>	-	-	-	-	-	-	<b>8853</b>
in industry/transf./energy	-	-	11	8841	-	-	-	-	-	-	8853
of which: chem./petrochem.	-	-	-	8841	-	-	-	-	-	-	8841
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	-	-	<b>272</b>	<b>10440</b>	-	-	-	-	-	-	<b>10712</b>
Electricity plants	-	-	272	10440	-	-	-	-	-	-	10712
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Tunisia

Figure 1. Energy production

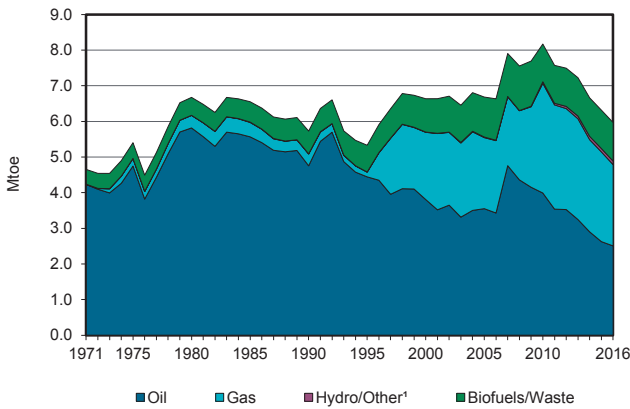


Figure 2. Total primary energy supply<sup>2</sup>

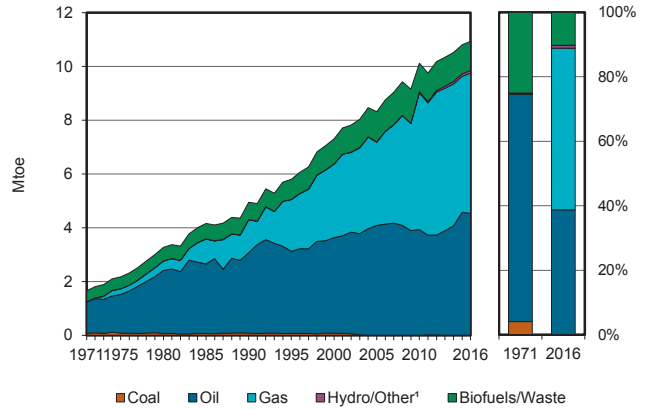


Figure 3. Energy self-sufficiency<sup>3</sup>

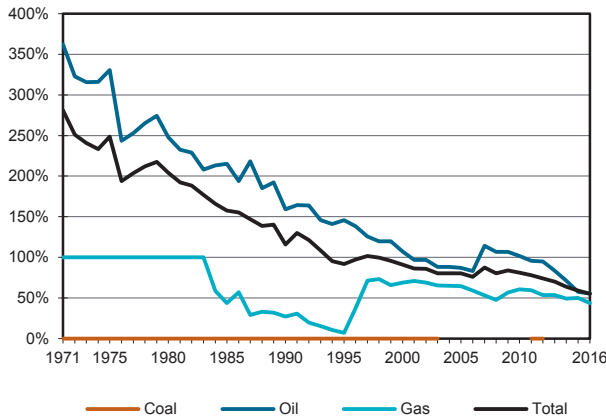


Figure 4. Oil products demand<sup>4</sup>

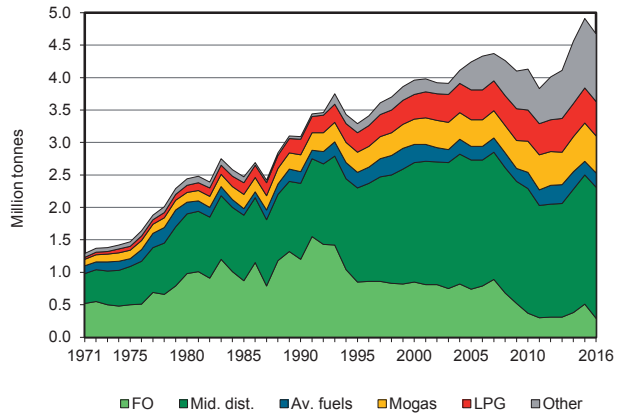


Figure 5. Electricity generation by source

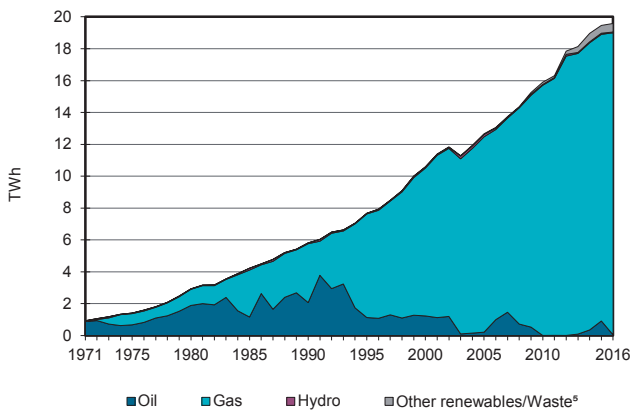
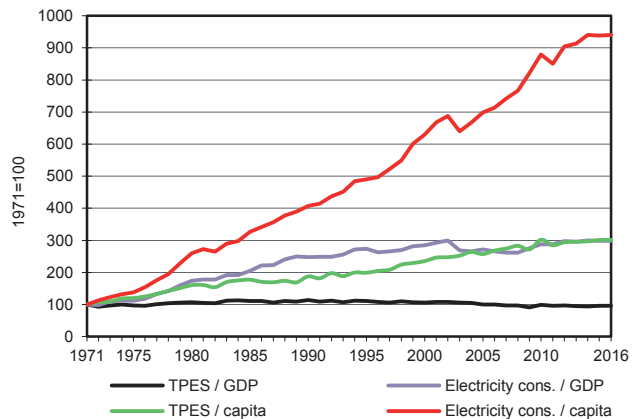


Figure 6. Selected indicators<sup>6</sup>



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.



## Tunisia

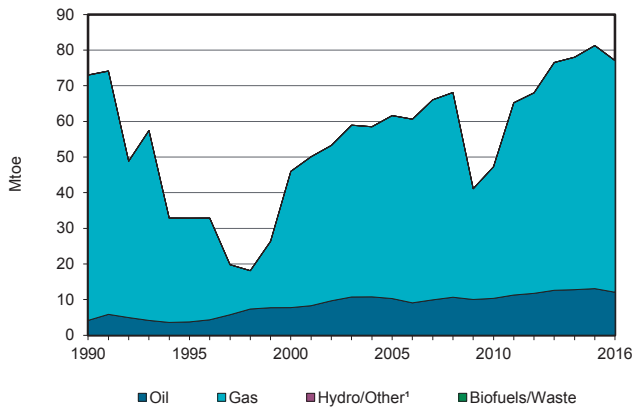
2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./ Solar/ etc.	Biofuels/ Waste	Electricity	Heat	Total
Production	-	2507	-	2280	-	4	96	1081	-	77	6044
Imports	-	913	3840	2935	-	-	-	-	12	-	7699
Exports	-	-1868	-605	-	-	-	-	-	-22	-	-2495
Intl. marine bunkers	-	-	-2	-	-	-	-	-	-	-	-2
Intl. aviation bunkers	-	-	-223	-	-	-	-	-	-	-	-223
Stock changes	-	-40	15	-	-	-	-	-	-	-	-25
<b>TPES</b>	-	<b>1511</b>	<b>3026</b>	<b>5215</b>	-	<b>4</b>	<b>96</b>	<b>1081</b>	<b>-10</b>	<b>77</b>	<b>10999</b>
Transfers	-	-144	166	-	-	-	-	-	-	-	22
Statistical differences	-	-132	-4	-7	-	-	-	-0	-12	-	-155
Electricity plants	-	-	-19	-3605	-	-4	-46	-	1667	-77	-2084
CHP plants	-	-	-	-36	-	-	-	-	36	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-1230	1206	-	-	-	-	-	-	-	-24
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-210	-	-	-210
Energy industry own use	-	-5	-41	-163	-	-	-	-	-79	-	-289
Losses	-	-	-	-	-	-	-	-	-262	-	-262
<b>TFC</b>	-	-	<b>4334</b>	<b>1403</b>	-	-	<b>50</b>	<b>871</b>	<b>1339</b>	-	<b>7997</b>
<b>INDUSTRY</b>	-	-	<b>875</b>	<b>786</b>	-	-	-	-	<b>466</b>	-	<b>2127</b>
Iron and steel	-	-	-	7	-	-	-	-	25	-	32
Chemical and petrochemical	-	-	-	106	-	-	-	-	58	-	164
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	576	442	-	-	-	-	141	-	1160
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	8	-	-	-	-	27	-	35
Food and tobacco	-	-	-	77	-	-	-	-	66	-	143
Paper pulp and printing	-	-	-	48	-	-	-	-	20	-	68
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	56	-	-	-	-	40	-	96
Non-specified	-	-	298	41	-	-	-	-	89	-	428
<b>TRANSPORT</b>	-	-	<b>2149</b>	<b>231</b>	-	-	-	-	<b>8</b>	-	<b>2388</b>
Domestic aviation	-	-	3	-	-	-	-	-	-	-	3
Road	-	-	2129	-	-	-	-	-	-	-	2129
Rail	-	-	17	-	-	-	-	-	6	-	24
Pipeline transport	-	-	-	231	-	-	-	-	2	-	233
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	-	-	<b>1013</b>	<b>387</b>	-	-	<b>50</b>	<b>871</b>	<b>864</b>	-	<b>3185</b>
Residential	-	-	547	212	-	-	48	858	398	-	2063
Comm. and public services	-	-	102	154	-	-	2	12	366	-	636
Agriculture/forestry	-	-	364	21	-	-	-	-	100	-	486
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>NON-ENERGY USE</b>	-	-	<b>297</b>	-	-	-	-	-	-	-	<b>297</b>
in industry/transf./energy	-	-	230	-	-	-	-	-	-	-	230
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	58	-	-	-	-	-	-	-	58
in other	-	-	9	-	-	-	-	-	-	-	9
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	-	-	<b>41</b>	<b>18961</b>	-	<b>45</b>	<b>537</b>	-	-	<b>224</b>	<b>19808</b>
Electricity plants	-	-	41	18538	-	45	537	-	-	224	19385
CHP plants	-	-	-	423	-	-	-	-	-	-	423
<b>Heat generated - TJ</b>	-	-	-	-	-	-	-	-	-	<b>3217</b>	<b>3217</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	3217	3217

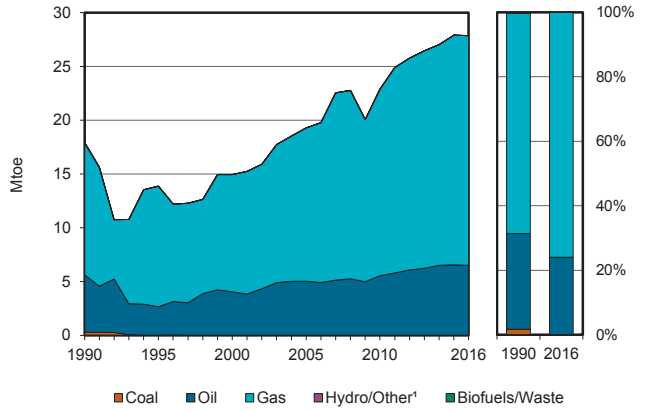
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Turkmenistan

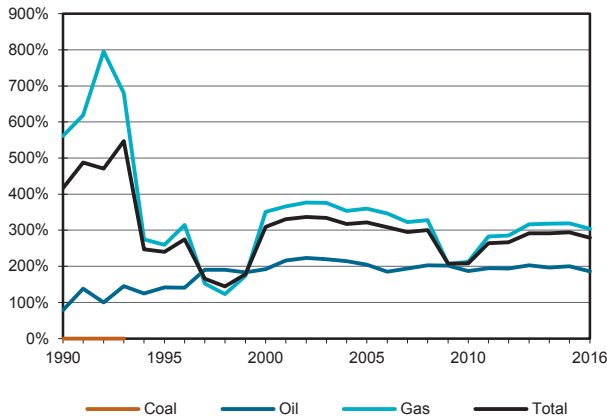
**Figure 1. Energy production**



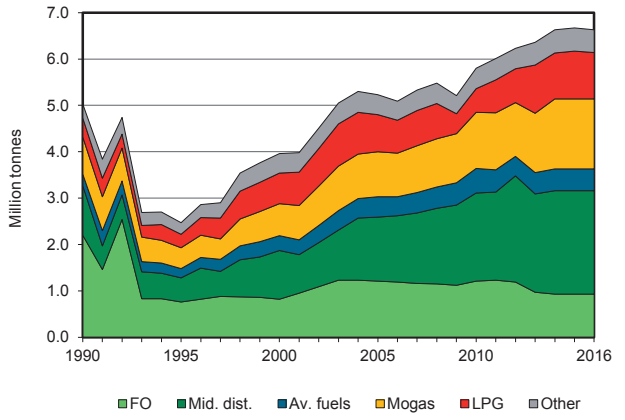
**Figure 2. Total primary energy supply<sup>2</sup>**



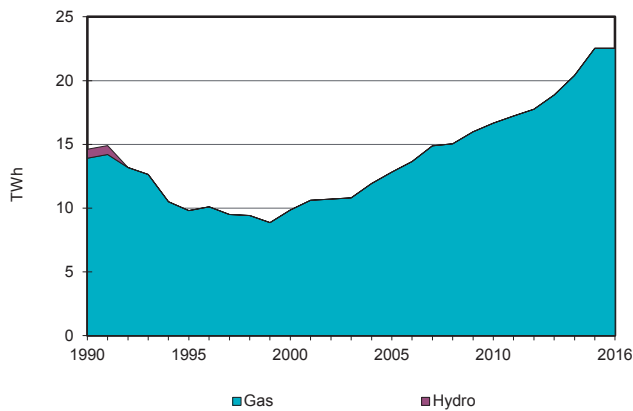
**Figure 3. Energy self-sufficiency<sup>3</sup>**



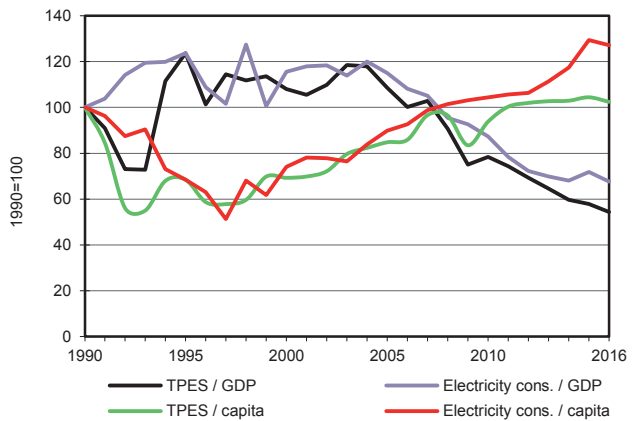
**Figure 4. Oil products demand<sup>4</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>5</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. GDP in 2010 USD.

## Turkmenistan

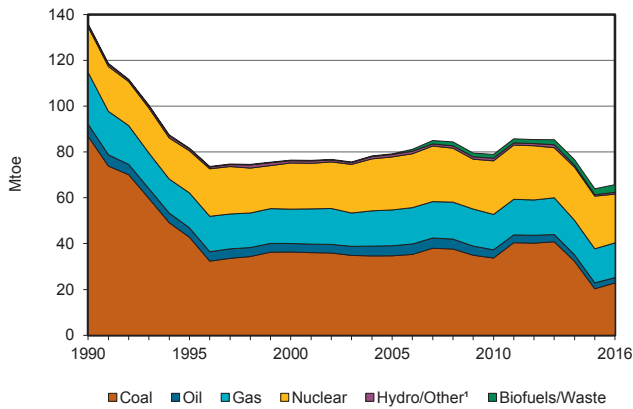
2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	12070	-	64970	-	-	-	2	-	-	77043
Imports	-	-	-	-	-	-	-	7	-	-	7
Exports	-	-2492	-2588	-43620	-	-	-	-	-275	-	-48976
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-483	-	-	-	-	-	-	-	-483
Stock changes	-	-	-	-	-	-	-	-	-	-	-
<b>TPES</b>	-	<b>9578</b>	<b>-3071</b>	<b>21350</b>	-	-	-	<b>10</b>	<b>-275</b>	-	<b>27592</b>
Transfers	-	-639	701	-	-	-	-	-	-	-	62
Statistical differences	-	-	-	-	-	-	-	-	-	-	-
Electricity plants	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-8830	-	-	-	-	1938	235	-6657
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-8939	8704	-	-	-	-	-	-	-	-236
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-	-	-	-
Energy industry own use	-	-	-142	-2073	-	-	-	-	-341	-	-2556
Losses	-	-	-	-	-	-	-	-	-249	-	-249
<b>TFC</b>	-	-	<b>6192</b>	<b>10447</b>	-	-	-	<b>10</b>	<b>1072</b>	<b>235</b>	<b>17956</b>
<b>INDUSTRY</b>	-	-	-	<b>1001</b>	-	-	-	<b>2</b>	<b>387</b>	-	<b>1390</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	126	-	126
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	1001	-	-	-	2	261	-	1265
<b>TRANSPORT</b>	-	-	<b>2640</b>	<b>1658</b>	-	-	-	-	<b>28</b>	-	<b>4326</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	2640	-	-	-	-	-	-	-	2640
Rail	-	-	-	-	-	-	-	-	28	-	28
Pipeline transport	-	-	-	1658	-	-	-	-	-	-	1658
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	-	-	<b>3552</b>	<b>7788</b>	-	-	-	<b>7</b>	<b>658</b>	<b>235</b>	<b>12240</b>
Residential	-	-	154	-	-	-	-	7	225	-	387
Comm. and public services	-	-	-	7174	-	-	-	-	-	-	7174
Agriculture/forestry	-	-	-	-	-	-	-	-	341	-	341
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	3398	615	-	-	-	-	91	235	4339
<b>NON-ENERGY USE</b>	-	-	-	-	-	-	-	-	-	-	-
in industry/transf./energy	-	-	-	-	-	-	-	-	-	-	-
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	-	-	-	<b>22534</b>	-	-	-	-	-	-	<b>22534</b>
Electricity plants	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	22534	-	-	-	-	-	-	22534
<b>Heat generated - TJ</b>	-	-	-	<b>9846</b>	-	-	-	-	-	-	<b>9846</b>
CHP plants	-	-	-	9846	-	-	-	-	-	-	9846
Heat plants	-	-	-	-	-	-	-	-	-	-	-

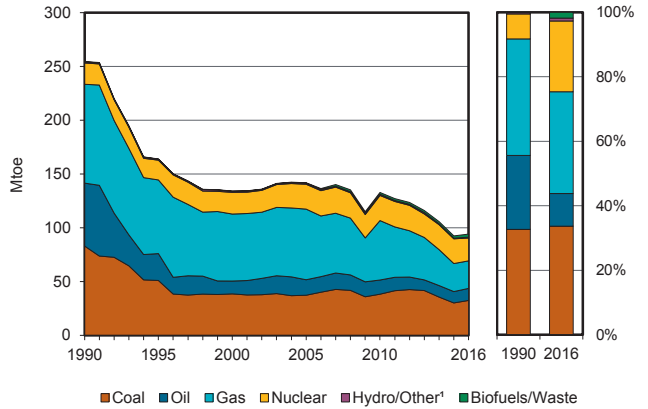
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Ukraine

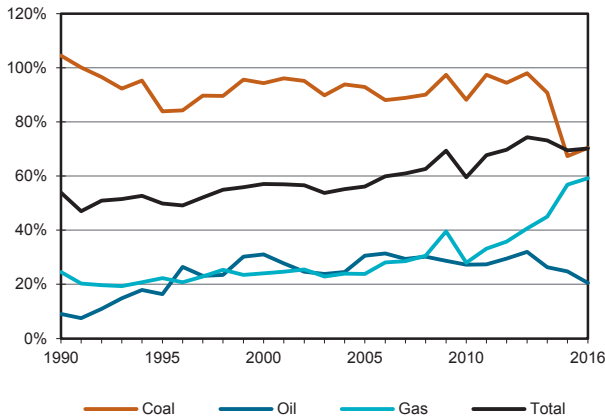
**Figure 1. Energy production**



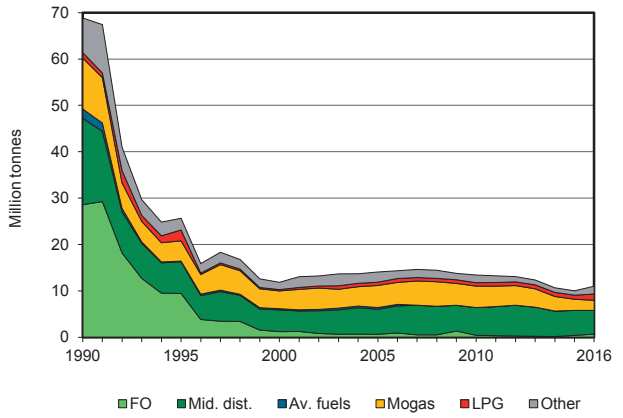
**Figure 2. Total primary energy supply<sup>2</sup>**



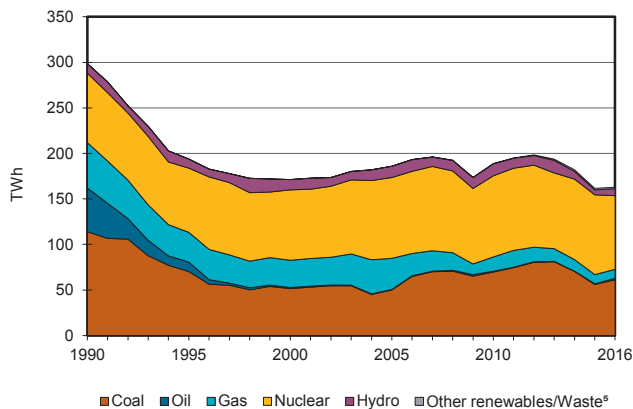
**Figure 3. Energy self-sufficiency<sup>3</sup>**



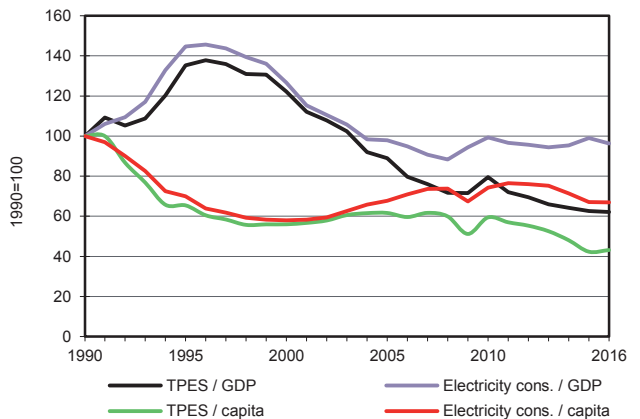
**Figure 4. Oil products demand<sup>4</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>6</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Ukraine

2016

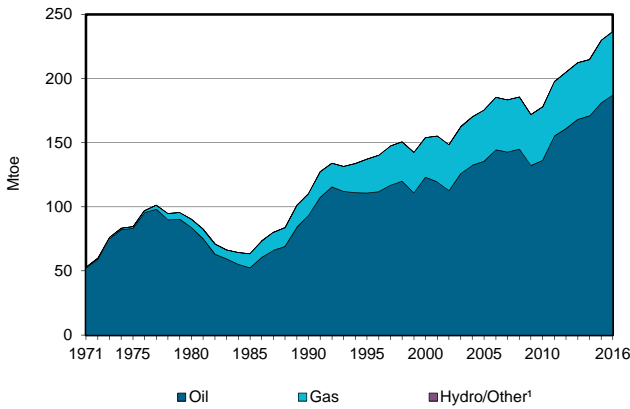
Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal <sup>1</sup>	Crude oil <sup>2</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	22869	2304	-	15175	21244	660	124	3348	-	599	66323
Imports	10617	527	9155	8809	-	-	-	38	7	-	29152
Exports	-495	-25	-24	-	-	-	-	-554	-329	-	-1427
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-157	-	-	-	-	-	-	-	-157
Stock changes	-541	-0	-586	1620	-	-	-	-1	-	-	492
<b>TPES</b>	<b>32450</b>	<b>2806</b>	<b>8387</b>	<b>25603</b>	<b>21244</b>	<b>660</b>	<b>124</b>	<b>2832</b>	<b>-323</b>	<b>599</b>	<b>94383</b>
Transfers	-	293	-278	-	-	-	-	-	-	-	15
Statistical differences	-93	-	-94	-181	-	-	-	-	-538	-65	-970
Electricity plants	-14700	-	-65	-99	-21092	-660	-124	-5	12642	-59	-24162
CHP plants	-2086	-	-541	-3278	-151	-	-	-255	1368	3237	-1706
Heat plants	-1452	-	-930	-5003	-	-	-	-557	-	6852	-1090
Blast furnaces	-3666	-	-	-	-	-	-	-	-	-	-3666
Gas works	-34	-	-	-	-	-	-	-	-	-	-34
Coke/pat.fuel/BKB/PB plants	-2556	-	-	-	-	-	-	-	-	-	-2556
Oil refineries	-	-3081	3200	-	-	-	-	-	-	-	119
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-137	-	-	-	-	-	-	-291	-	-	-428
Energy industry own use	-964	-5	-48	-897	-	-	-	-0	-1622	-1332	-4870
Losses	-456	-7	-1	-471	-	-	-	-	-1430	-1022	-3388
<b>TFC</b>	<b>6307</b>	<b>6</b>	<b>9630</b>	<b>15673</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1724</b>	<b>10098</b>	<b>8211</b>	<b>51649</b>
<b>INDUSTRY</b>	<b>5377</b>	<b>-</b>	<b>176</b>	<b>2482</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>51</b>	<b>4294</b>	<b>2575</b>	<b>14955</b>
Iron and steel	4683	-	53	1186	-	-	-	14	1797	533	8265
Chemical and petrochemical	2	-	2	205	-	-	-	0	255	544	1009
Non-ferrous metals	96	-	1	129	-	-	-	-	127	243	596
Non-metallic minerals	573	-	14	364	-	-	-	3	192	58	1202
Transport equipment	-	-	6	15	-	-	-	0	61	41	124
Machinery	1	-	4	101	-	-	-	2	211	92	410
Mining and quarrying	1	-	26	287	-	-	-	0	818	92	1223
Food and tobacco	20	-	18	152	-	-	-	9	362	715	1276
Paper pulp and printing	0	-	1	18	-	-	-	0	75	118	214
Wood and wood products	-	-	4	3	-	-	-	21	48	86	162
Construction	1	-	43	10	-	-	-	1	70	11	136
Textile and leather	-	-	1	5	-	-	-	0	26	16	49
Non-specified	-	-	2	8	-	-	-	1	252	28	290
<b>TRANSPORT</b>	<b>6</b>	<b>-</b>	<b>7139</b>	<b>1399</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>37</b>	<b>584</b>	<b>-</b>	<b>9165</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	6975	28	-	-	-	37	-	-	7040
Rail	4	-	109	-	-	-	-	-	488	-	601
Pipeline transport	-	-	6	1369	-	-	-	-	35	-	1410
Domestic navigation	-	-	48	-	-	-	-	-	-	-	48
Non-specified	2	-	1	2	-	-	-	-	61	-	66
<b>OTHER</b>	<b>439</b>	<b>-</b>	<b>1679</b>	<b>10009</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1636</b>	<b>5220</b>	<b>5635</b>	<b>24618</b>
Residential	274	-	115	9286	-	-	-	1507	3088	3318	17588
Comm. and public services	157	-	105	584	-	-	-	109	1827	2074	4856
Agriculture/forestry	8	-	1427	139	-	-	-	20	302	244	2139
Fishing	-	-	2	-	-	-	-	-	2	-	4
Non-specified	-	-	31	-	-	-	-	-	-	-	31
<b>NON-ENERGY USE</b>	<b>485</b>	<b>6</b>	<b>636</b>	<b>1784</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2910</b>
in industry/transf./energy	485	6	522	1784	-	-	-	-	-	-	2796
of which: chem./petrochem.	-	-	90	1711	-	-	-	-	-	-	1801
in transport	-	-	12	-	-	-	-	-	-	-	12
in other	-	-	102	-	-	-	-	-	-	-	102
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>61213</b>	<b>-</b>	<b>1615</b>	<b>9831</b>	<b>80950</b>	<b>7671</b>	<b>1445</b>	<b>136</b>	<b>-</b>	<b>79</b>	<b>162940</b>
Electricity plants	56284	-	241	341	80950	7671	1445	16	-	-	146948
CHP plants	4929	-	1374	9490	-	-	-	120	-	79	15992
<b>Heat generated - TJ</b>	<b>88000</b>	<b>-</b>	<b>41437</b>	<b>264611</b>	<b>6339</b>	<b>-</b>	<b>-</b>	<b>20275</b>	<b>1769</b>	<b>25095</b>	<b>447526</b>
CHP plants	37738	-	11860	74461	6339	-	-	5138	-	17743	153279
Heat plants	50262	-	29577	190150	-	-	-	15137	1769	7352	294247

1. Includes peat.

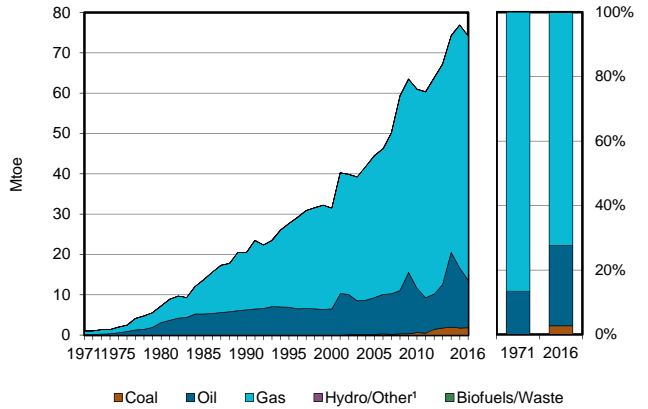
2. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## United Arab Emirates

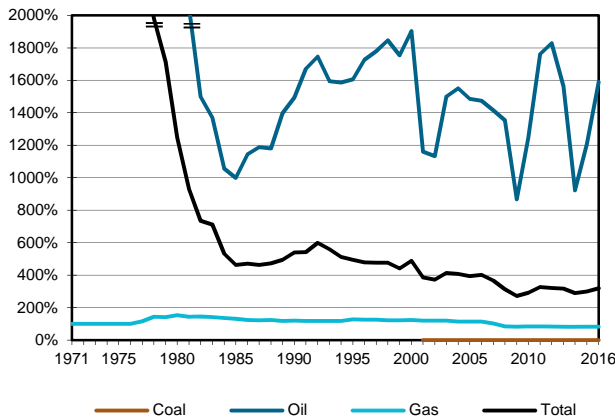
**Figure 1. Energy production**



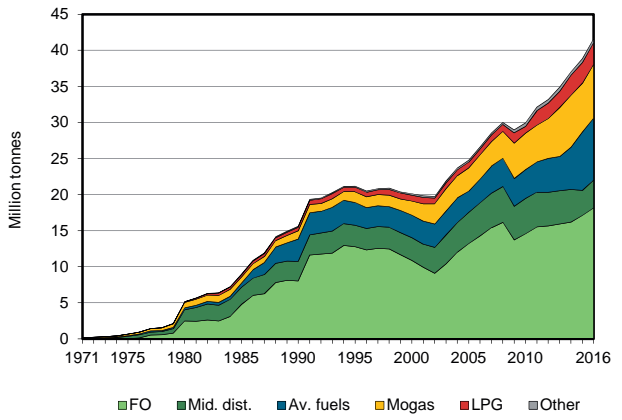
**Figure 2. Total primary energy supply<sup>2</sup>**



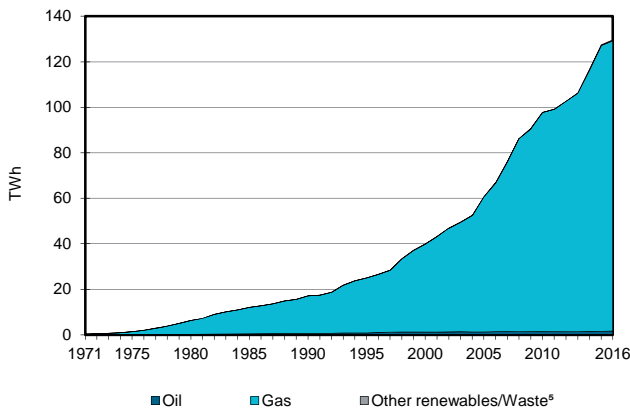
**Figure 3. Energy self-sufficiency<sup>3</sup>**



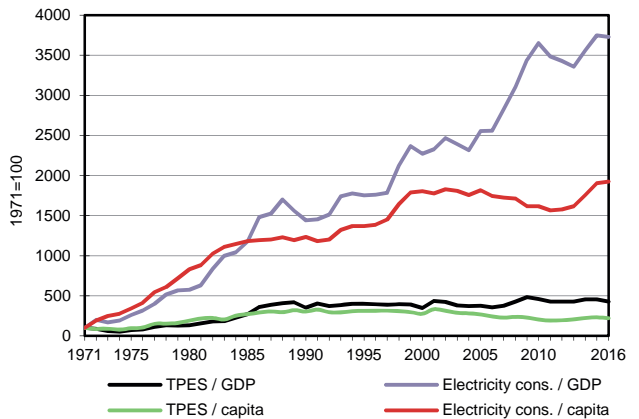
**Figure 4. Oil products demand<sup>4</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>6</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency. Maximum scale refers to values greater than or equal to 2000%.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## United Arab Emirates

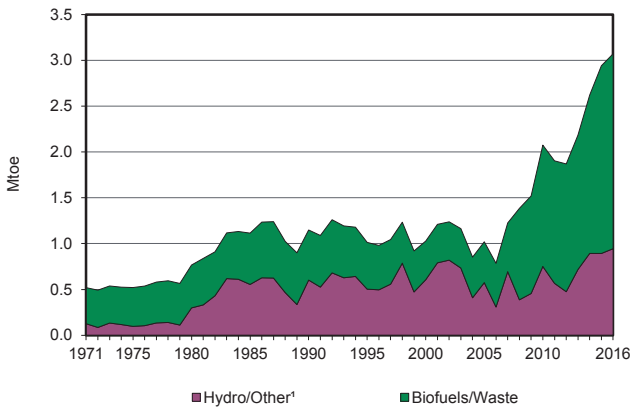
2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	187103	-	49475	-	-	76	-	-	-	236654
Imports	1841	-	18141	17158	-	-	-	46	98	-	37284
Exports	-	-122401	-45510	-6131	-	-	-	-	-44	-	-174086
Intl. marine bunkers	-	-	-16103	-	-	-	-	-	-	-	-16103
Intl. aviation bunkers	-	-	-8809	-	-	-	-	-	-	-	-8809
Stock changes	-	7	-666	-	-	-	-	-	-	-	-659
<b>TPES</b>	<b>1841</b>	<b>64709</b>	<b>-52946</b>	<b>60501</b>	<b>-</b>	<b>-</b>	<b>76</b>	<b>46</b>	<b>55</b>	<b>-</b>	<b>74281</b>
Transfers	-	-15287	16747	-	-	-	-	-	-	-	1459
Statistical differences	-	2238	1514	-	-	-	-	-	-	-	3752
Electricity plants	-	-	-620	-35638	-	-	-76	-	11143	-	-25191
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-51659	52430	-	-	-	-	-	-	-	771
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-	-	-	-
Energy industry own use	-	-	-485	-613	-	-	-	-	-602	-	-1700
Losses	-	-	-	-	-	-	-	-	-800	-	-800
<b>TFC</b>	<b>1841</b>	<b>-</b>	<b>16640</b>	<b>24250</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>46</b>	<b>9796</b>	<b>-</b>	<b>52573</b>
<b>INDUSTRY</b>	<b>1841</b>	<b>-</b>	<b>1414</b>	<b>23975</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1202</b>	<b>-</b>	<b>28432</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	47	180	-	-	-	-	-	-	228
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	377	-	-	-	-	-	-	-	-	-	377
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	1464	-	1366	23795	-	-	-	-	1202	-	27827
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>11692</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>11692</b>
Domestic aviation	-	-	342	-	-	-	-	-	-	-	342
Road	-	-	11350	-	-	-	-	-	-	-	11350
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>-</b>	<b>-</b>	<b>291</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>46</b>	<b>8594</b>	<b>-</b>	<b>8932</b>
Residential	-	-	291	-	-	-	-	-	3522	-	3814
Comm. and public services	-	-	-	-	-	-	-	-	3444	-	3444
Agriculture/forestry	-	-	-	-	-	-	-	-	-	-	-
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	46	1628	-	1674
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>3242</b>	<b>275</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>3517</b>
in industry/transf./energy	-	-	3135	275	-	-	-	-	-	-	3410
of which: chem./petrochem.	-	-	3116	275	-	-	-	-	-	-	3391
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	107	-	-	-	-	-	-	-	107
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>-</b>	<b>-</b>	<b>1597</b>	<b>127643</b>	<b>-</b>	<b>-</b>	<b>356</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>129596</b>
Electricity plants	-	-	1597	127643	-	-	356	-	-	-	129596
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

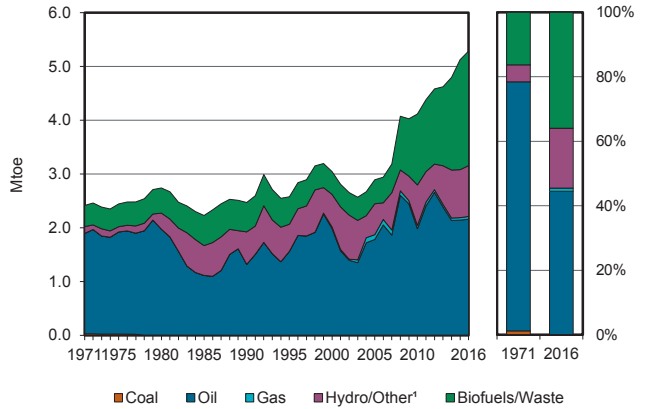
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Uruguay

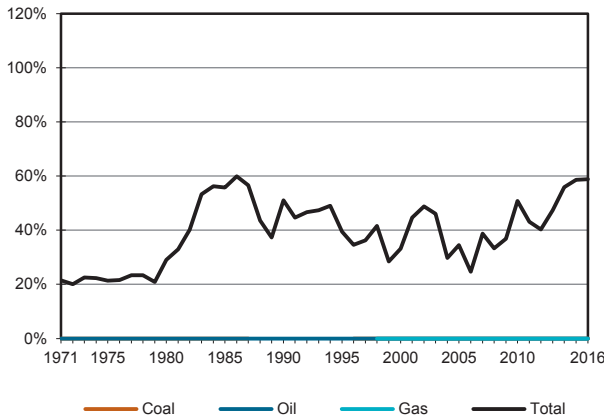
**Figure 1. Energy production**



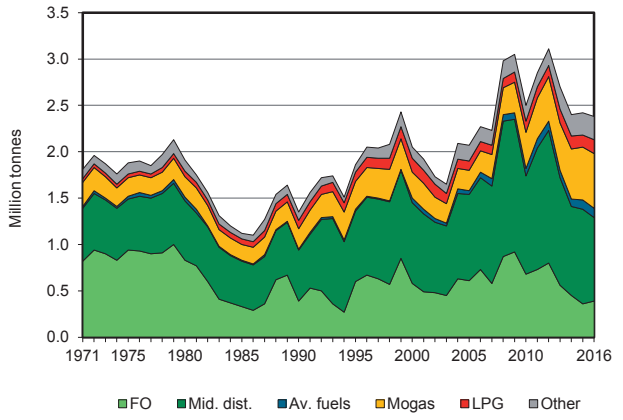
**Figure 2. Total primary energy supply²**



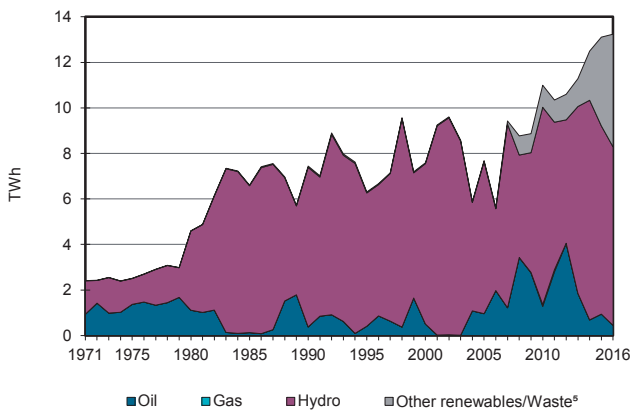
**Figure 3. Energy self-sufficiency³**



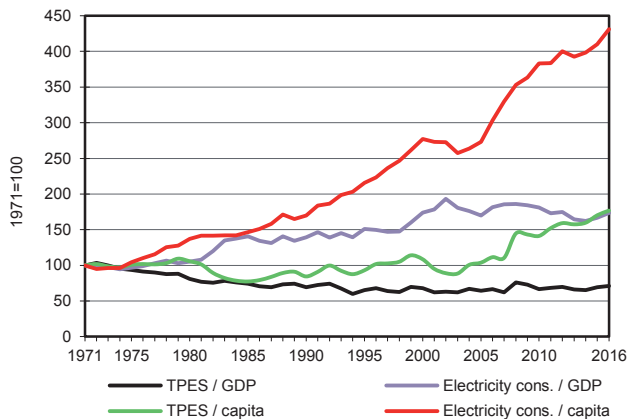
**Figure 4. Oil products demand⁴**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators⁶**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.



## Uruguay

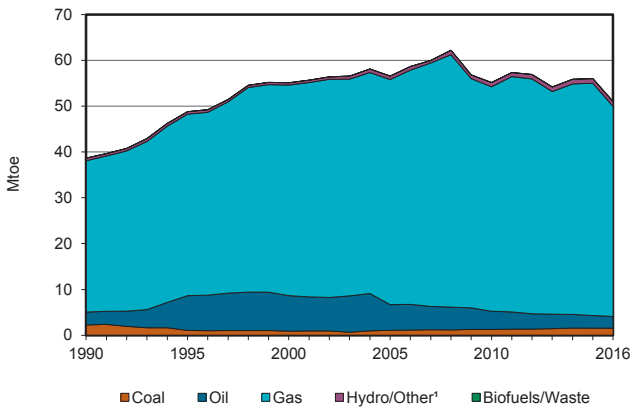
2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	-	-	-	-	674	271	2125	-	-	3070
Imports	3	2092	229	52	-	-	-	2	2	-	2380
Exports	-	-	-	-	-	-	-	-1	-67	-	-68
Intl. marine bunkers	-	-	-144	-	-	-	-	-	-	-	-144
Intl. aviation bunkers	-	-	-100	-	-	-	-	-	-	-	-100
Stock changes	-	63	16	-	-	-	-	4	-	-	83
<b>TPES</b>	<b>3</b>	<b>2154</b>	<b>1</b>	<b>52</b>	<b>-</b>	<b>674</b>	<b>271</b>	<b>2130</b>	<b>-65</b>	<b>-</b>	<b>5220</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-	10	-5	0	-	-	-	-2	54	-	57
Electricity plants	-	-	-111	-	-	-674	-271	-118	1001	-	-172
CHP plants	-	-	-	-	-	-	-	-179	137	-	-41
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-2163	2156	-	-	-	-	-	-	-	-7
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-	-	-	-
Energy industry own use	-	-	-156	-3	-	-	-	-	-34	-	-193
Losses	-	-1	-28	-1	-	-	-	-1	-138	-	-169
<b>TFC</b>	<b>3</b>	<b>-</b>	<b>1859</b>	<b>48</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1831</b>	<b>956</b>	<b>-</b>	<b>4696</b>
<b>INDUSTRY</b>	<b>-</b>	<b>-</b>	<b>245</b>	<b>12</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1397</b>	<b>291</b>	<b>-</b>	<b>1945</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	9	1	-	-	-	4	66	-	79
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	13	2	-	-	-	3	7	-	24
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	45	6	-	-	-	117	78	-	245
Paper pulp and printing	-	-	111	1	-	-	-	1042	103	-	1257
Wood and wood products	-	-	3	-	-	-	-	2	12	-	17
Construction	-	-	16	1	-	-	-	1	19	-	37
Textile and leather	-	-	3	1	-	-	-	11	7	-	21
Non-specified	-	-	47	-	-	-	-	217	-	-	263
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>1203</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>76</b>	<b>-</b>	<b>-</b>	<b>1279</b>
Domestic aviation	-	-	6	-	-	-	-	-	-	-	6
Road	-	-	1195	-	-	-	-	76	-	-	1271
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	2	-	-	-	-	-	-	-	2
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>-</b>	<b>-</b>	<b>328</b>	<b>36</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>358</b>	<b>665</b>	<b>-</b>	<b>1387</b>
Residential	-	-	151	25	-	-	-	293	382	-	852
Comm. and public services	-	-	22	11	-	-	-	22	257	-	312
Agriculture/forestry	-	-	143	-	-	-	-	43	25	-	211
Fishing	-	-	12	-	-	-	-	-	1	-	12
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>NON-ENERGY USE</b>	<b>3</b>	<b>-</b>	<b>82</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>85</b>
in industry/transf./energy	3	-	80	-	-	-	-	-	-	-	83
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	2	-	-	-	-	-	-	-	2
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>-</b>	<b>-</b>	<b>443</b>	<b>-</b>	<b>-</b>	<b>7842</b>	<b>3146</b>	<b>1807</b>	<b>-</b>	<b>-</b>	<b>13238</b>
Electricity plants	-	-	443	-	-	7842	3146	210	-	-	11641
CHP plants	-	-	-	-	-	-	-	1597	-	-	1597
<b>Heat generated - TJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

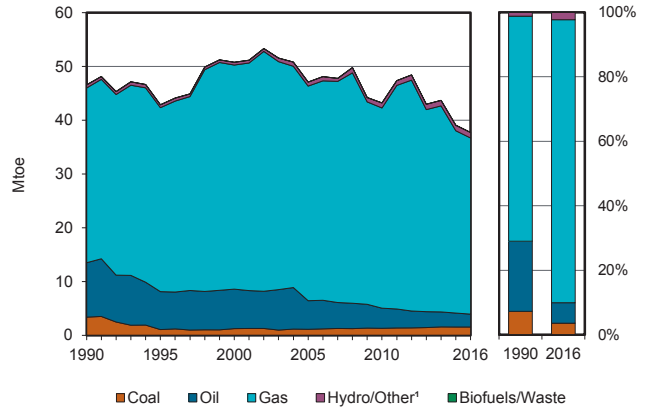
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Uzbekistan

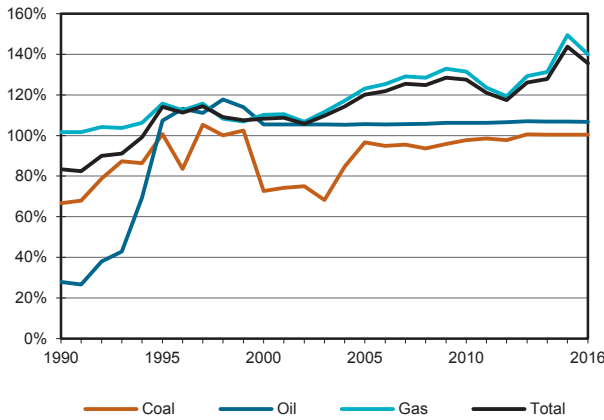
**Figure 1. Energy production**



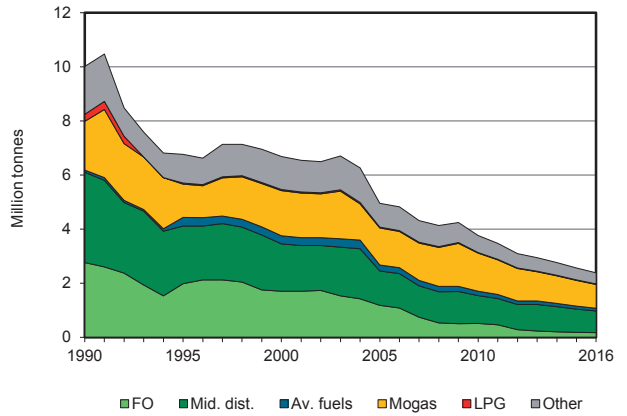
**Figure 2. Total primary energy supply<sup>2</sup>**



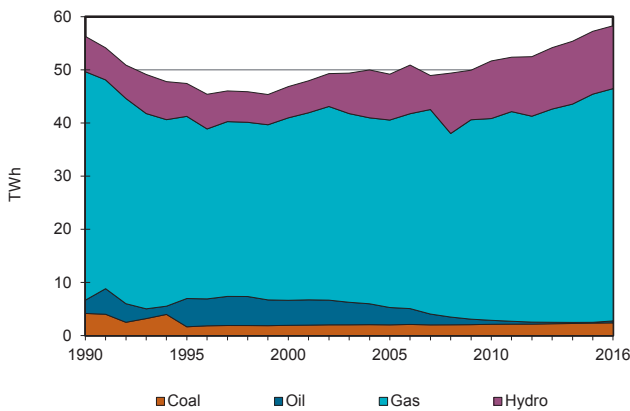
**Figure 3. Energy self-sufficiency<sup>3</sup>**



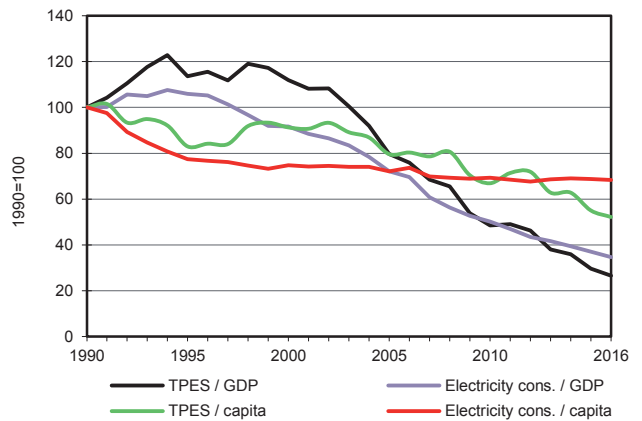
**Figure 4. Oil products demand<sup>4</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>5</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. GDP in 2010 USD.

## Uzbekistan

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	1556	2550	-	45852	-	1017	-	4	-	-	50979
Imports	7	14	-	-	-	-	-	-	932	-	953
Exports	-14	-	-173	-13099	-	-	-	-	-1059	-	-14346
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-	-	-	-	-	-	-	-	-
Stock changes	-	-	-	-	-	-	-	-	-	-	-
<b>TPES</b>	<b>1549</b>	<b>2564</b>	<b>-173</b>	<b>32752</b>	<b>-</b>	<b>1017</b>	<b>-</b>	<b>4</b>	<b>-127</b>	<b>-</b>	<b>37586</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-	-	2	-	-	-	-	-	-	-	2
Electricity plants	-556	-	-18	-5867	-	-1017	-	-	3211	-	-4248
CHP plants	-478	-	-25	-5998	-	-	-	-	1804	1412	-3285
Heat plants	-2	-	-50	-1539	-	-	-	-	-	1452	-138
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-2492	2522	-	-	-	-	-	-	-	31
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-	-	-	-
Energy industry own use	-2	-5	-96	-1108	-	-	-	-	-418	-	-1630
Losses	-14	-26	-	-1040	-	-	-	-	-430	-	-1510
<b>TFC</b>	<b>496</b>	<b>41</b>	<b>2162</b>	<b>17200</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>4</b>	<b>4039</b>	<b>2865</b>	<b>26808</b>
<b>INDUSTRY</b>	<b>227</b>	<b>-</b>	<b>138</b>	<b>4130</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1547</b>	<b>-</b>	<b>6042</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	1	-	-	-	-	-	-	-	1
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	3	-	-	-	-	-	-	-	3
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	112	-	-	-	-	-	-	-	112
Textile and leather	-	-	8	-	-	-	-	-	-	-	8
Non-specified	227	-	14	4130	-	-	-	-	1547	-	5918
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>1198</b>	<b>908</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>133</b>	<b>-</b>	<b>2238</b>
Domestic aviation	-	-	105	-	-	-	-	-	-	-	105
Road	-	-	1047	40	-	-	-	-	-	-	1087
Rail	-	-	46	-	-	-	-	-	16	-	62
Pipeline transport	-	-	-	868	-	-	-	-	85	-	953
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	32	-	32
<b>OTHER</b>	<b>269</b>	<b>-</b>	<b>604</b>	<b>11318</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>4</b>	<b>2359</b>	<b>2865</b>	<b>17419</b>
Residential	17	-	77	9348	-	-	-	-	732	-	10173
Comm. and public services	-	-	-	1870	-	-	-	-	313	-	2183
Agriculture/forestry	5	-	419	100	-	-	-	-	1315	-	1838
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	247	-	108	-	-	-	-	4	-	2865	3225
<b>NON-ENERGY USE</b>	<b>-</b>	<b>41</b>	<b>222</b>	<b>845</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1108</b>
in industry/transf./energy	-	41	177	845	-	-	-	-	-	-	1063
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	45	-	-	-	-	-	-	-	45
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>2382</b>	<b>-</b>	<b>365</b>	<b>43742</b>	<b>-</b>	<b>11830</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>58319</b>
Electricity plants	1564	-	288	23658	-	11830	-	-	-	-	37340
CHP plants	818	-	77	20084	-	-	-	-	-	-	20979
<b>Heat generated - TJ</b>	<b>4705</b>	<b>-</b>	<b>4819</b>	<b>110423</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>119947</b>
CHP plants	4654	-	3774	50709	-	-	-	-	-	-	59137
Heat plants	51	-	1045	59714	-	-	-	-	-	-	60810

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Venezuela

Figure 1. Energy production

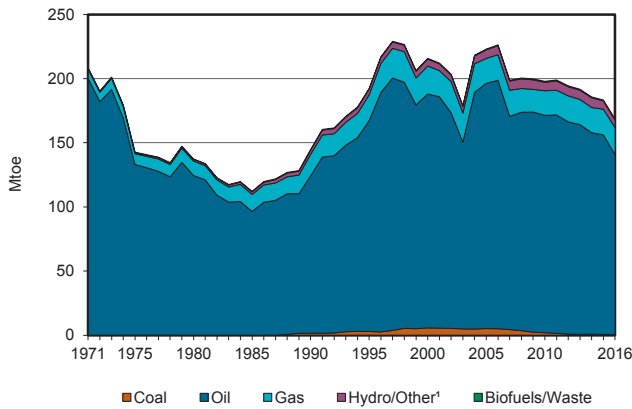


Figure 2. Total primary energy supply<sup>2</sup>

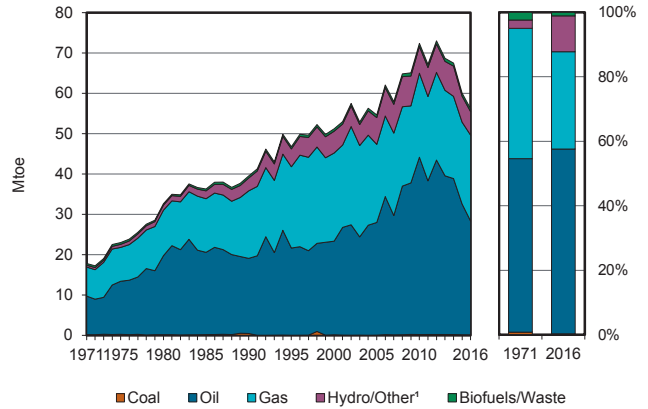


Figure 3. Energy self-sufficiency<sup>3</sup>

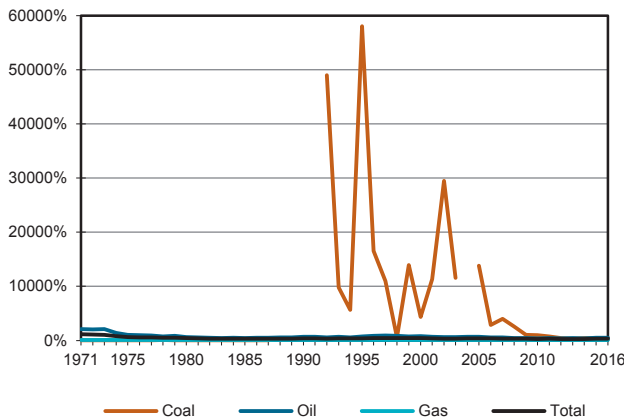


Figure 4. Oil products demand<sup>4</sup>

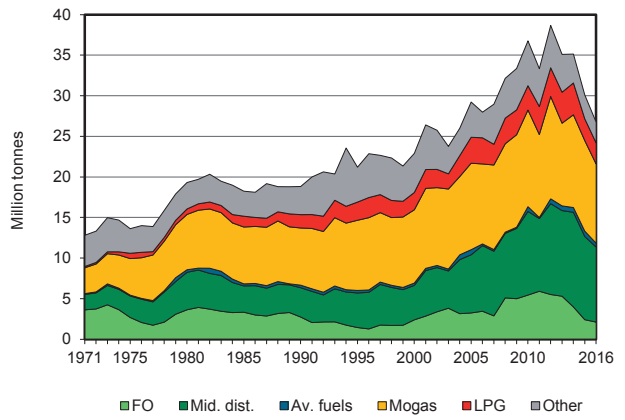


Figure 5. Electricity generation by source

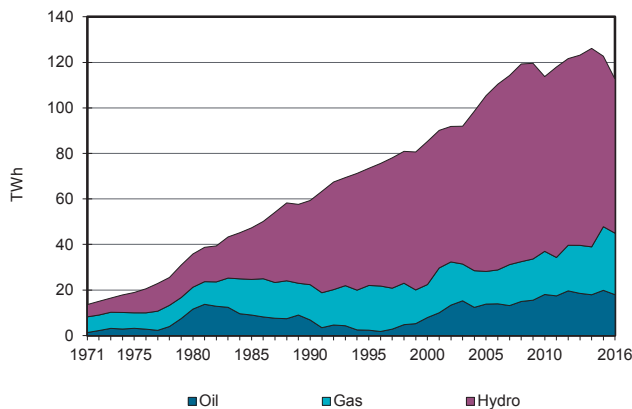
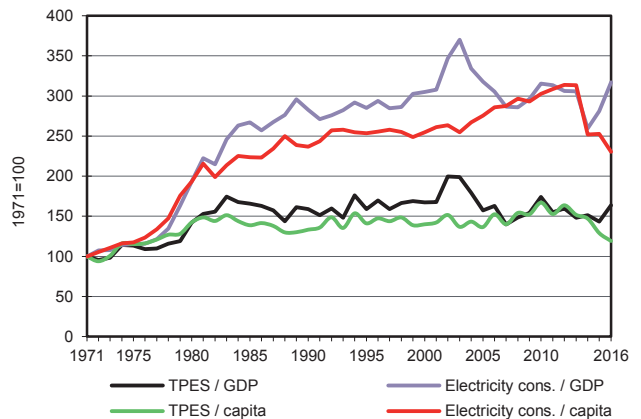


Figure 6. Selected indicators<sup>5</sup>



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. GDP in 2010 USD.

## Venezuela

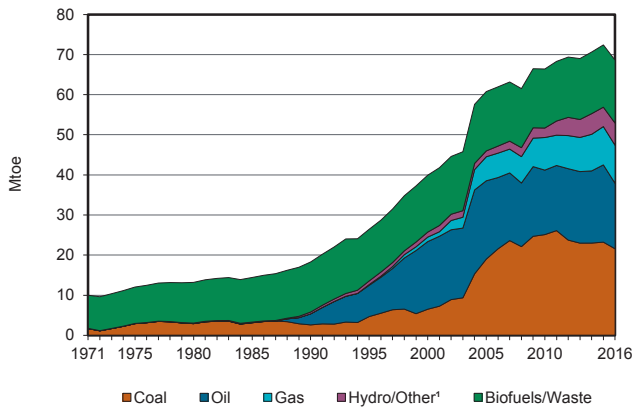
2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	547	140014	-	21306	-	5815	-	734	-	-	168415
Imports	-	-	1419	-	-	-	-	-	-	-	1419
Exports	-423	-95886	-16155	-	-	-	-	-	-	-	-112465
Intl. marine bunkers	-	-	-723	-	-	-	-	-	-	-	-723
Intl. aviation bunkers	-	-	-514	-	-	-	-	-	-	-	-514
Stock changes	-	-	40	-	-	-	-	-	-	-	40
<b>TPES</b>	<b>123</b>	<b>44128</b>	<b>-15933</b>	<b>21306</b>	<b>-</b>	<b>5815</b>	<b>-</b>	<b>734</b>	<b>-</b>	<b>-</b>	<b>56173</b>
Transfers	-	-2520	2956	-	-	-	-	-	-	-	437
Statistical differences	-	-	819	-1649	-	-	-	-0	-415	-	-1245
Electricity plants	-	-	-5587	-7019	-	-5815	-	-	9680	-	-8741
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-41608	40408	-	-	-	-	-	-	-	-1200
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-4	-	-	-4
Energy industry own use	-	-	-2811	-6453	-	-	-	-	-217	-	-9481
Losses	-	-	-	-	-	-	-	-	-3211	-	-3211
<b>TFC</b>	<b>123</b>	<b>-</b>	<b>19853</b>	<b>6185</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>730</b>	<b>5837</b>	<b>-</b>	<b>32728</b>
<b>INDUSTRY</b>	<b>123</b>	<b>-</b>	<b>4356</b>	<b>5141</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>470</b>	<b>2440</b>	<b>-</b>	<b>12531</b>
Iron and steel	-	-	-	1802	-	-	-	-	89	-	1891
Chemical and petrochemical	-	-	1931	1591	-	-	-	-	239	-	3761
Non-ferrous metals	-	-	-	248	-	-	-	-	602	-	850
Non-metallic minerals	123	-	45	390	-	-	-	-	-	-	559
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	470	-	-	470
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	2379	1111	-	-	-	-	1509	-	4999
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>13595</b>	<b>7</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>19</b>	<b>-</b>	<b>13621</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	13595	-	-	-	-	-	-	-	13595
Rail	-	-	-	-	-	-	-	-	19	-	19
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	7	-	-	-	-	-	-	7
<b>OTHER</b>	<b>-</b>	<b>-</b>	<b>1142</b>	<b>1037</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>259</b>	<b>3378</b>	<b>-</b>	<b>5816</b>
Residential	-	-	838	780	-	-	-	211	1883	-	3712
Comm. and public services	-	-	305	256	-	-	-	48	1459	-	2068
Agriculture/forestry	-	-	-	-	-	-	-	-	36	-	36
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>760</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>760</b>
in industry/transf./energy	-	-	760	-	-	-	-	-	-	-	760
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>-</b>	<b>-</b>	<b>17930</b>	<b>27014</b>	<b>-</b>	<b>67633</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>112577</b>
Electricity plants	-	-	17930	27014	-	67633	-	-	-	-	112577
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

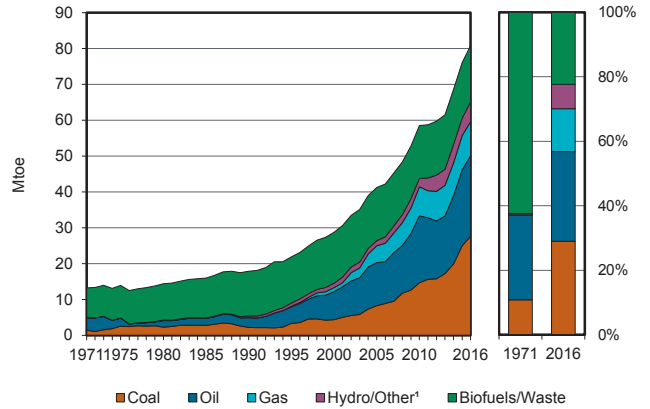
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Viet Nam

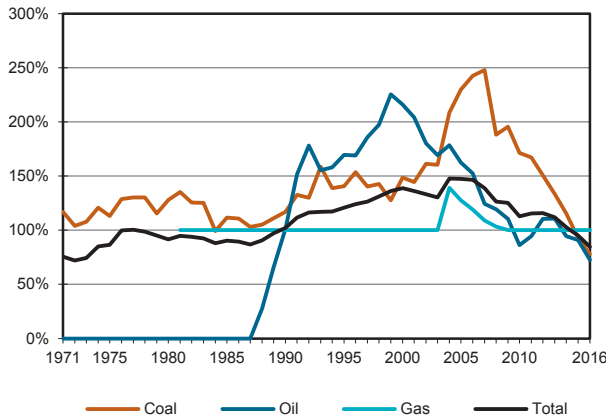
**Figure 1. Energy production**



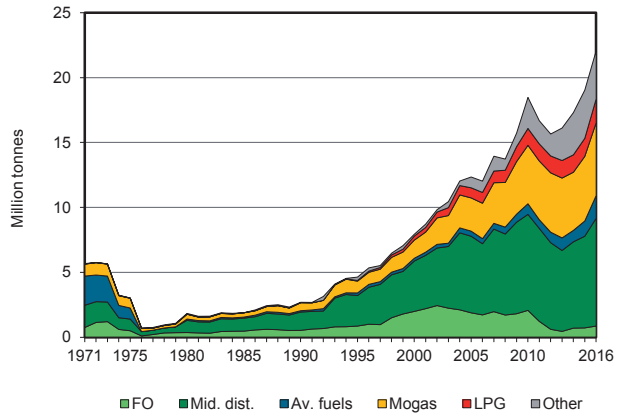
**Figure 2. Total primary energy supply<sup>2</sup>**



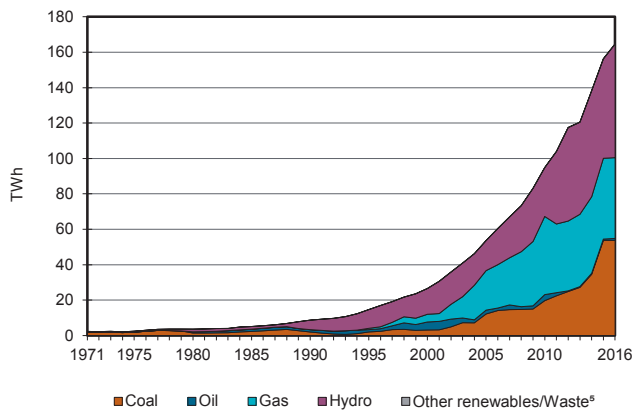
**Figure 3. Energy self-sufficiency<sup>3</sup>**



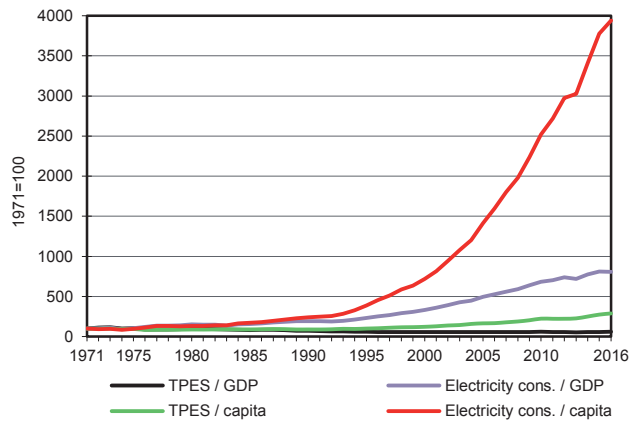
**Figure 4. Oil products demand<sup>4</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>6</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Viet Nam

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal <sup>1</sup>	Crude oil <sup>2</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	21575	16307	-	9486	-	5512	17	15686	-	-	68584
Imports	7265	443	17229	-	-	-	-	-	235	-	25173
Exports	-819	-6971	-3137	-	-	-	-	-	-64	-	-10992
Intl. marine bunkers	-	-	-205	-	-	-	-	-	-	-	-205
Intl. aviation bunkers	-	-	-1442	-	-	-	-	-	-	-	-1442
Stock changes	-378	-	255	-	-	-	-	-	-	-	-123
<b>TPES</b>	<b>27643</b>	<b>9779</b>	<b>12701</b>	<b>9486</b>	<b>-</b>	<b>5512</b>	<b>17</b>	<b>15686</b>	<b>171</b>	<b>-</b>	<b>80995</b>
Transfers	-	-833	856	-	-	-	-	-	-	-	23
Statistical differences	-	-1076	12	0	-	-	-	-1	1147	-	83
Electricity plants	-13200	-	-374	-7887	-	-5512	-17	-16	14173	-	-12834
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-7869	7304	-	-	-	-	-	-	-	-566
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-928	-	-	-928
Energy industry own use	-	-	-	-	-	-	-	-	-380	-	-380
Losses	-	-	-	-	-	-	-	-	-1462	-	-1462
<b>TFC</b>	<b>14443</b>	<b>-</b>	<b>20498</b>	<b>1599</b>	<b>-</b>	<b>-</b>	<b>0</b>	<b>14741</b>	<b>13649</b>	<b>-</b>	<b>64930</b>
<b>INDUSTRY</b>	<b>12856</b>	<b>-</b>	<b>2029</b>	<b>1599</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2755</b>	<b>7331</b>	<b>-</b>	<b>26570</b>
Iron and steel	456	-	81	64	-	-	-	-	526	-	1128
Chemical and petrochemical	237	-	94	654	-	-	-	-	465	-	1451
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	5723	-	126	-	-	-	-	-	1555	-	7403
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	778	-	278	77	-	-	-	-	787	-	1920
Paper pulp and printing	402	-	53	36	-	-	-	-	705	-	1195
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	1731	-	113	26	-	-	-	-	678	-	2548
Non-specified	3528	-	1283	741	-	-	-	-	2755	2617	10925
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>12281</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>12281</b>
Domestic aviation	-	-	359	-	-	-	-	-	-	-	359
Road	-	-	11870	-	-	-	-	-	-	-	11870
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	52	-	-	-	-	-	-	-	52
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>1588</b>	<b>-</b>	<b>2621</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0</b>	<b>11985</b>	<b>6317</b>	<b>-</b>	<b>22512</b>
Residential	1177	-	1122	-	-	-	0	11982	4792	-	19074
Comm. and public services	393	-	1020	-	-	-	-	3	1304	-	2719
Agriculture/forestry	18	-	480	-	-	-	-	-	221	-	719
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>3567</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>3567</b>
in industry/transf./energy	-	-	3567	-	-	-	-	-	-	-	3567
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>53730</b>	<b>-</b>	<b>1108</b>	<b>45629</b>	<b>-</b>	<b>64103</b>	<b>201</b>	<b>61</b>	<b>-</b>	<b>-</b>	<b>164832</b>
Electricity plants	53730	-	1108	45629	-	64103	201	61	-	-	164832
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes peat.

2. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Yemen

Figure 1. Energy production

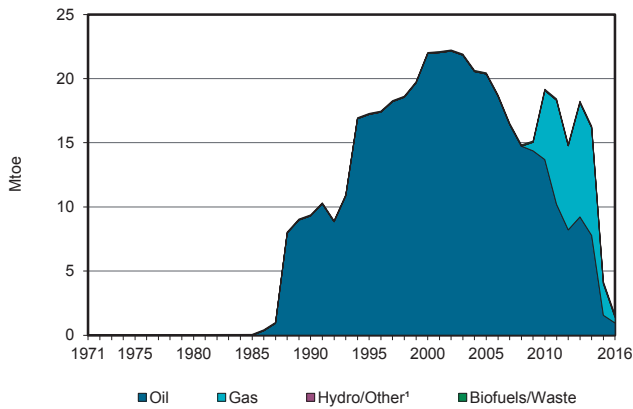


Figure 2. Total primary energy supply<sup>2</sup>

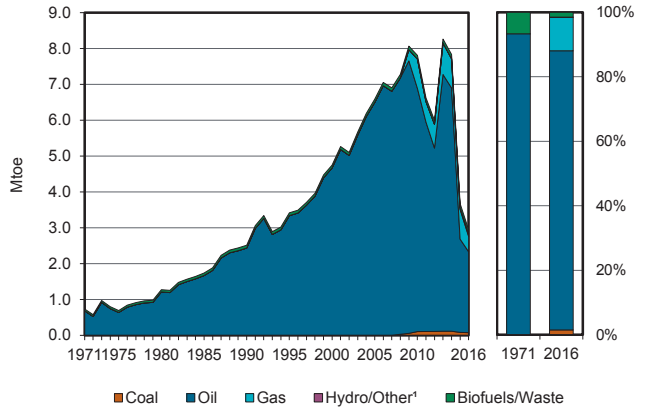


Figure 3. Energy self-sufficiency<sup>3</sup>

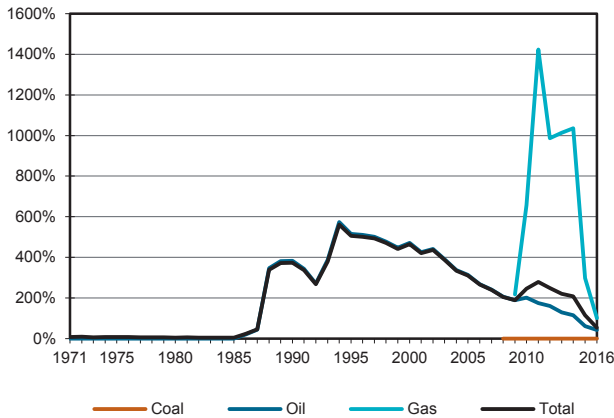


Figure 4. Oil products demand<sup>4</sup>

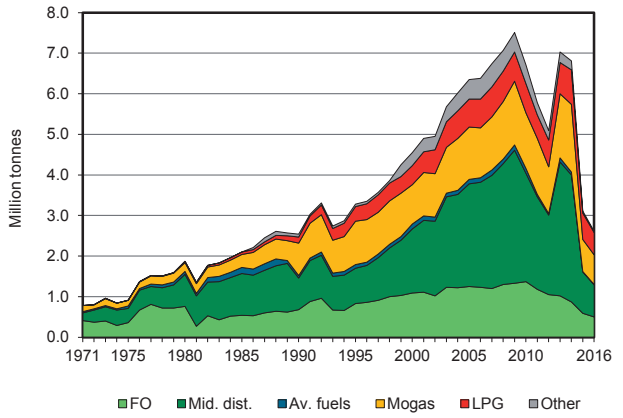


Figure 5. Electricity generation by source

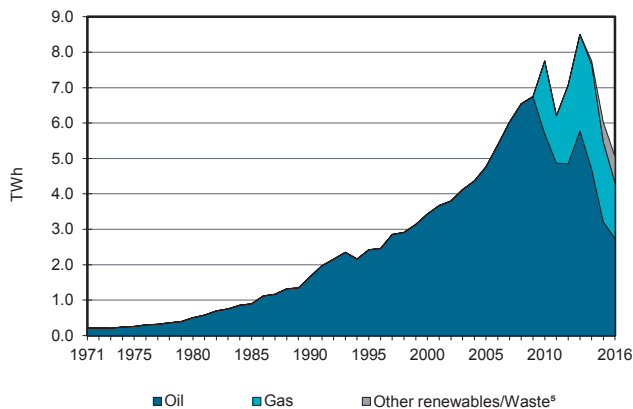
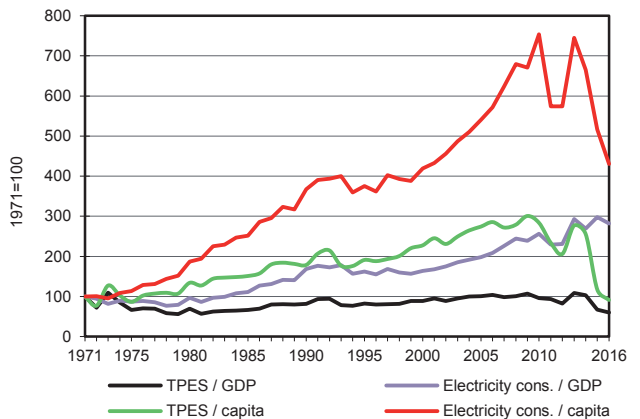


Figure 6. Selected indicators<sup>6</sup>



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.



## Yemen

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	957	-	431	-	-	63	119	-	-	1571
Imports	75	-	1564	-	-	-	-	-	-	-	1639
Exports	-	-	-	-	-	-	-	-	-	-	-
Intl. marine bunkers	-	-	-52	-	-	-	-	-	-	-	-52
Intl. aviation bunkers	-	-	-6	-	-	-	-	-	-	-	-6
Stock changes	-	-	-208	-	-	-	-	-	-	-	-208
<b>TPES</b>	<b>75</b>	<b>957</b>	<b>1298</b>	<b>431</b>	<b>-</b>	<b>-</b>	<b>63</b>	<b>119</b>	<b>-</b>	<b>-</b>	<b>2943</b>
Transfers	-	-67	581	-	-	-	-	-	-	-	514
Statistical differences	-	-	-26	-	-	-	-	-	66	-	40
Electricity plants	-	-	-687	-431	-	-	-63	-	434	-	-747
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-865	801	-	-	-	-	-	-	-	-64
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-60	-	-	-60
Energy industry own use	-	-26	-16	-	-	-	-	-	-58	-	-99
Losses	-	-	-	-	-	-	-	-	-95	-	-95
<b>TFC</b>	<b>75</b>	<b>-</b>	<b>1952</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>60</b>	<b>347</b>	<b>-</b>	<b>2433</b>
<b>INDUSTRY</b>	<b>75</b>	<b>-</b>	<b>226</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>8</b>	<b>-</b>	<b>308</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	75	-	-	-	-	-	-	-	-	-	75
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	226	-	-	-	-	-	8	-	234
<b>TRANSPORT</b>	<b>-</b>	<b>-</b>	<b>943</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>943</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	943	-	-	-	-	-	-	-	943
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>-</b>	<b>-</b>	<b>777</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>60</b>	<b>339</b>	<b>-</b>	<b>1176</b>
Residential	-	-	659	-	-	-	-	-	277	-	936
Comm. and public services	-	-	78	-	-	-	-	-	36	-	114
Agriculture/forestry	-	-	40	-	-	-	-	-	-	-	40
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	60	26	-	85
<b>NON-ENERGY USE</b>	<b>-</b>	<b>-</b>	<b>6</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>6</b>
in industry/transf./energy	-	-	6	-	-	-	-	-	-	-	6
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>-</b>	<b>-</b>	<b>2736</b>	<b>1577</b>	<b>-</b>	<b>-</b>	<b>732</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>5045</b>
Electricity plants	-	-	2736	1577	-	-	732	-	-	-	5045
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Zambia

Figure 1. Energy production

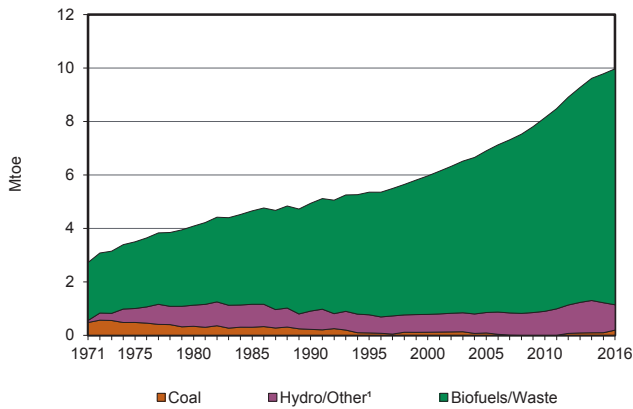


Figure 2. Total primary energy supply<sup>2</sup>

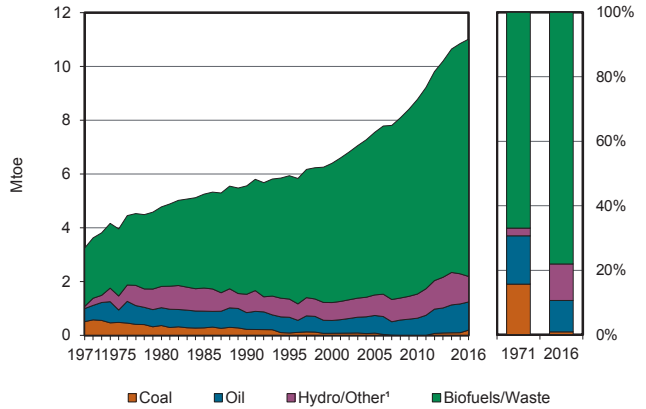


Figure 3. Energy self-sufficiency<sup>3</sup>

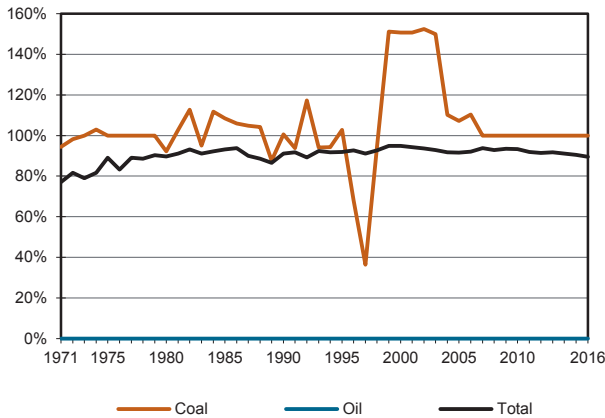


Figure 4. Oil products demand<sup>4</sup>

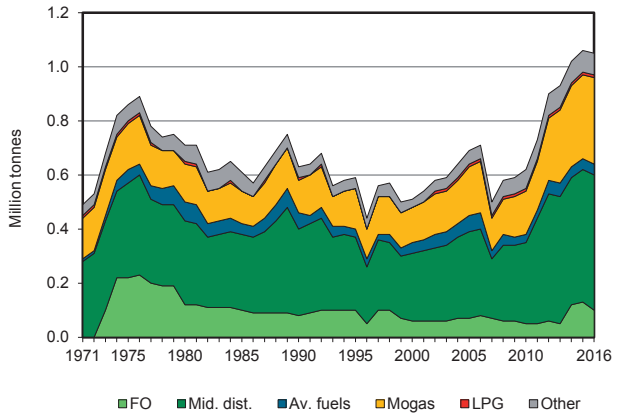


Figure 5. Electricity generation by source

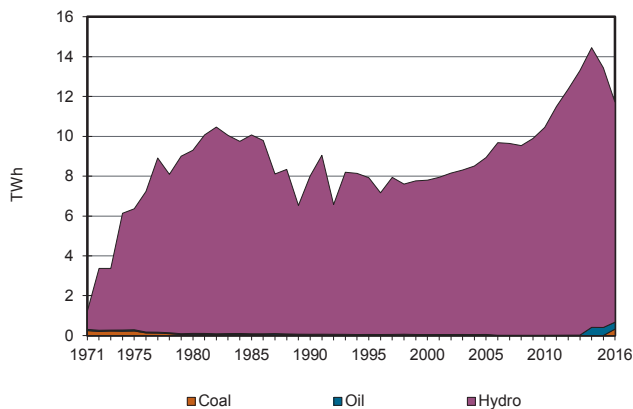
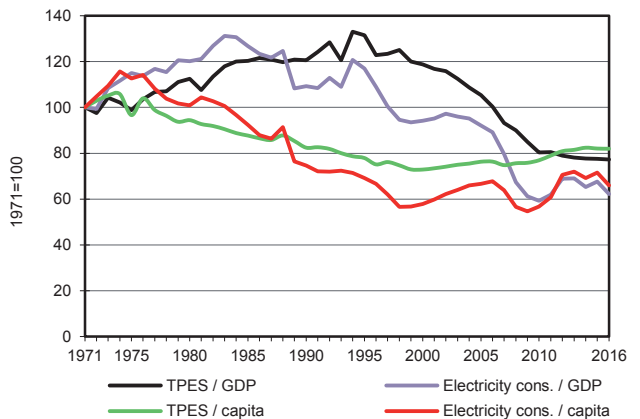


Figure 6. Selected indicators<sup>5</sup>



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. GDP in 2010 USD.

## Zambia

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	194	-	-	-	-	948	-	8826	-	-	9967
Imports	-	494	604	-	-	-	-	-	188	-	1285
Exports	-	-	-10	-	-	-	-	-	-68	-	-79
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-39	-	-	-	-	-	-	-	-39
Stock changes	-	-	-	-	-	-	-	-	-	-	-
<b>TPES</b>	<b>194</b>	<b>494</b>	<b>554</b>	-	-	<b>948</b>	-	<b>8826</b>	<b>120</b>	-	<b>11135</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-	-	-	-	-	-	-	-	-	-	-
Electricity plants	-94	-	-77	-	-	-948	-	-	1006	-	-113
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-494	464	-	-	-	-	-	-	-	-29
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-1946	-	-	-1946
Energy industry own use	-	-	-11	-	-	-	-	-	-28	-	-39
Losses	-	-	-	-	-	-	-	-	-164	-	-164
<b>TFC</b>	<b>100</b>	-	<b>930</b>	-	-	-	-	<b>6880</b>	<b>934</b>	-	<b>8843</b>
<b>INDUSTRY</b>	<b>100</b>	-	<b>365</b>	-	-	-	-	<b>1646</b>	<b>555</b>	-	<b>2667</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	23	-	-	-	-	-	509	-	531
Non-metallic minerals	-	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	270	-	-	-	-	2	5	-	277
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	53	-	-	-	-	-	1	-	54
Textile and leather	-	-	-	-	-	-	-	64	-	-	64
Non-specified	100	-	20	-	-	-	-	1580	40	-	1740
<b>TRANSPORT</b>	-	-	<b>401</b>	-	-	-	-	-	<b>2</b>	-	<b>404</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	386	-	-	-	-	-	-	-	386
Rail	-	-	15	-	-	-	-	-	2	-	18
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	-	-	<b>94</b>	-	-	-	-	<b>5233</b>	<b>376</b>	-	<b>5703</b>
Residential	-	-	4	-	-	-	-	5233	291	-	5529
Comm. and public services	-	-	28	-	-	-	-	-	59	-	87
Agriculture/forestry	-	-	31	-	-	-	-	-	20	-	50
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	31	-	-	-	-	-	7	-	38
<b>NON-ENERGY USE</b>	-	-	<b>70</b>	-	-	-	-	-	-	-	<b>70</b>
in industry/transf./energy	-	-	70	-	-	-	-	-	-	-	70
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>326</b>	-	<b>344</b>	-	-	<b>11025</b>	-	-	-	-	<b>11695</b>
Electricity plants	326	-	344	-	-	11025	-	-	-	-	11695
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Zimbabwe

Figure 1. Energy production

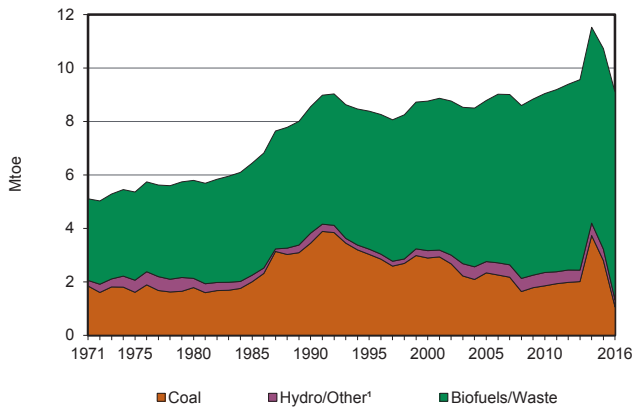


Figure 2. Total primary energy supply<sup>2</sup>

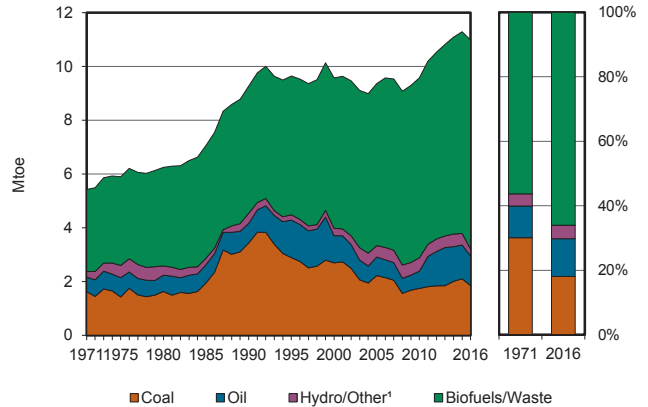


Figure 3. Energy self-sufficiency<sup>3</sup>

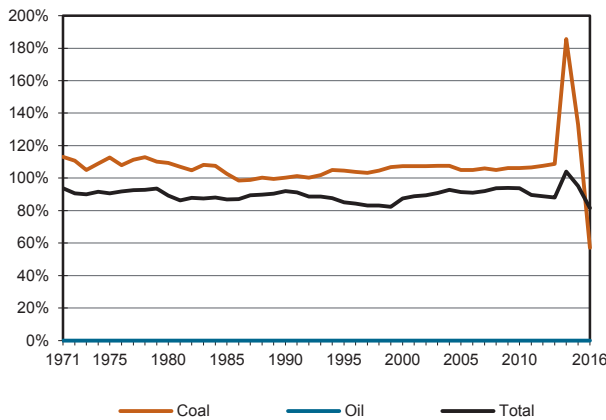


Figure 4. Oil products demand<sup>4</sup>

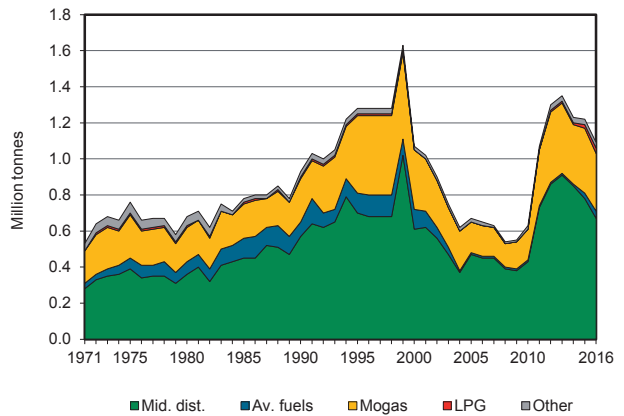


Figure 5. Electricity generation by source

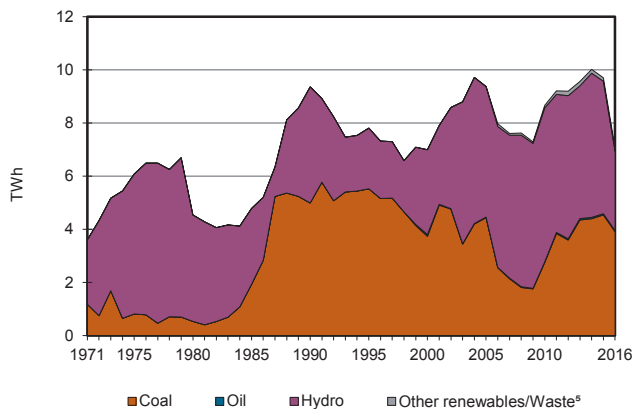
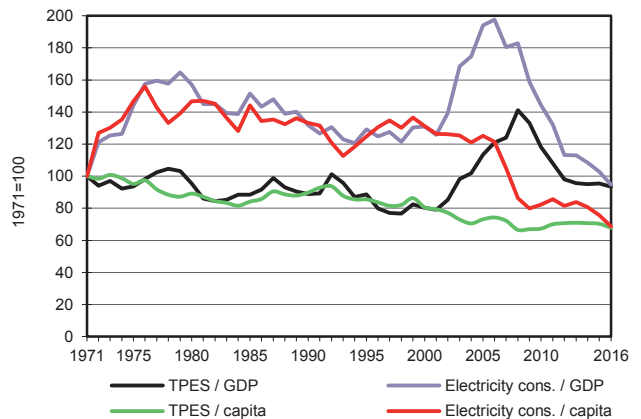


Figure 6. Selected indicators<sup>6</sup>



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Zimbabwe

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	1055	-	-	-	-	257	-	7771	-	-	9082
Imports	15	-	1147	-	-	-	-	-	191	-	1353
Exports	-142	-	-	-	-	-	-	-	-32	-	-174
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-46	-	-	-	-	-	-	-	-46
Stock changes	920	-	-	-	-	-	-	-	-	-	920
<b>TPES</b>	<b>1848</b>	-	<b>1101</b>	-	-	<b>257</b>	-	<b>7771</b>	<b>159</b>	-	<b>11136</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	9	-	-8	-	-	-	-	-	6	-	8
Electricity plants	-1526	-	-13	-	-	-257	-	-42	607	-	-1231
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-60	-	-	-	-	-	-	-	-	-	-60
Oil refineries	-	-	-	-	-	-	-	-	-	-	-
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-17	-	-	-17
Energy industry own use	-20	-	-13	-	-	-	-	-	-14	-	-47
Losses	-	-	-	-	-	-	-	-	-132	-	-132
<b>TFC</b>	<b>251</b>	-	<b>1066</b>	-	-	-	-	<b>7712</b>	<b>626</b>	-	<b>9656</b>
<b>INDUSTRY</b>	<b>241</b>	-	<b>51</b>	-	-	-	-	<b>143</b>	<b>227</b>	-	<b>662</b>
Iron and steel	65	-	2	-	-	-	-	-	-	-	67
Chemical and petrochemical	1	-	2	-	-	-	-	-	-	-	3
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	53	-	6	-	-	-	-	-	-	-	59
Transport equipment	1	-	-	-	-	-	-	-	-	-	1
Machinery	1	-	2	-	-	-	-	-	-	-	3
Mining and quarrying	1	-	18	-	-	-	-	-	126	-	145
Food and tobacco	64	-	7	-	-	-	-	-	-	-	71
Paper pulp and printing	11	-	2	-	-	-	-	-	-	-	13
Wood and wood products	20	-	1	-	-	-	-	-	-	-	21
Construction	-	-	5	-	-	-	-	-	-	-	5
Textile and leather	2	-	1	-	-	-	-	-	-	-	3
Non-specified	22	-	4	-	-	-	-	143	102	-	271
<b>TRANSPORT</b>	<b>3</b>	-	<b>709</b>	-	-	-	-	<b>28</b>	-	-	<b>740</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	676	-	-	-	-	28	-	-	704
Rail	3	-	33	-	-	-	-	-	-	-	36
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>OTHER</b>	<b>7</b>	-	<b>287</b>	-	-	-	-	<b>7541</b>	<b>399</b>	-	<b>8234</b>
Residential	-	-	83	-	-	-	-	7149	235	-	7466
Comm. and public services	2	-	-	-	-	-	-	-	117	-	119
Agriculture/forestry	5	-	109	-	-	-	-	392	42	-	549
Fishing	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	95	-	-	-	-	-	5	-	100
<b>NON-ENERGY USE</b>	-	-	<b>20</b>	-	-	-	-	-	-	-	<b>20</b>
in industry/transf./energy	-	-	20	-	-	-	-	-	-	-	20
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	<b>3908</b>	-	<b>39</b>	-	-	<b>2987</b>	-	<b>121</b>	-	-	<b>7055</b>
Electricity plants	3908	-	39	-	-	2987	-	121	-	-	7055
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.



# NET CALORIFIC VALUES

## OECD country-specific net calorific values

2016

<i>kJ/kg</i>	Australia	Austria	Belgium	Canada	Chile	Czech Republic	Denmark	Estonia	Finland
<b>Crude oil</b>									
Production	43985	42500	-	42790	43203	42401	43000	-	-
Imports	42655	42500	42214	42790	43203	42400	43000	-	42660
Exports	43985	-	-	42790	-	42400	43000	-	-
Average	43282	42500	42214	42790	43203	42400	43000	-	42660
<b>NGL</b>	45410	42500	45200	45220	48127	-	-	-	44000
<b>Refinery feedstocks</b>	43282	42835	42214	42500	44799	40200	42700	-	42500
<b>Additives</b>	-	-	-	25120	22651	39500	-	-	42500
<b>Other hydrocarbons</b>	41868	-	-	41868	-	-	-	39353	42500
<b>Biogasoline</b>	26800	27520	28800	26800	-	27000	-	26800	29804
<b>Biodiesels</b>	36800	37229	37700	36800	-	37000	37500	-	43424
<b>Other liquid biofuels</b>	-	37087	37700	-	-	-	37200	-	46236
<b>Anthracite</b>									
Production	26700	-	-	-	-	-	-	-	-
Imports	26700	26700	28425	26381	-	27976	-	-	27550
Exports	26700	-	28425	-	-	31722	-	-	-
Main activity elec. generation	-	-	-	-	-	-	-	-	-
Industry	26700	26700	28425	26381	-	27976	-	-	-
Other uses	26700	26700	28425	26381	-	28756	-	-	27550
<b>Coking coal</b>									
Production	28500	-	-	24781	-	28370	-	-	-
Imports	28000	28661	29250	28400	28638	29346	-	-	29300
Exports	28500	-	-	24781	-	28372	-	-	-
Coke ovens	28500	28661	29250	28400	29724	29509	-	-	29300
Main activity elec. generation	-	-	-	-	-	-	-	-	-
Industry	-	-	-	24781	-	-	-	-	-
Other uses	28500	29206	29250	24781	28638	28709	-	-	29300
<b>Other bituminous coal</b>									
Production	25700	-	22664	27302	16808	26730	-	-	-
Imports	-	27559	26292	27302	23744	23055	23318	27150	25478
Exports	25700	-	26292	27302	16808	29125	23340	-	-
Coke ovens	-	-	-	-	-	-	-	-	-
Main activity elec. generation	25700	27313	25711	27310	24436	22588	22385	-	24903
Industry	25700	27559	26292	27302	16808	24847	24273	27150	24929
Other uses	25700	27559	26292	27302	25216	24941	23318	27150	24929
<b>Sub-bituminous coal</b>									
Production	18478	-	-	17897	-	-	-	-	-
Imports	-	22054	-	17897	-	-	-	-	-
Exports	-	-	-	17897	-	-	-	-	-
Main activity elec. generation	18478	-	-	17897	-	-	-	-	-
Industry	19195	22054	-	17897	-	-	-	-	-
Other uses	18478	21914	-	17897	-	-	-	-	-
<b>Lignite</b>									
Production	9800	-	-	14019	-	12506	-	-	-
Imports	-	9900	-	14019	-	13909	-	-	-
Exports	-	-	-	14019	-	17789	-	-	-
Main activity elec. generation	9800	-	-	14018	-	11451	-	-	-
Industry	9800	9900	-	14019	-	14013	-	-	-
Other uses	9800	9900	-	14019	-	16141	-	-	-
<b>Patent fuel</b>	-	31000	30480	-	-	-	-	-	-
<b>Coke oven coke</b>	27000	28876	29308	27457	28452	28116	29300	28500	29300
<b>Coal tar</b>	35714	37030	38519	-	40561	35124	-	-	37000
<b>BKB</b>	20995	19800	20682	-	-	20005	-	-	-
<b>Peat</b>	-	-	-	-	-	-	-	10192	9950
<b>Peat products</b>	-	-	-	-	-	-	-	15200	16900
<b>Oil shale</b>	-	-	-	-	-	-	-	10860	-
<b>Charcoal</b>	-	30000	29300	-	28232	-	-	-	-



## OECD country-specific net calorific values

2016

<i>kJ/kg</i>	France	Germany	Greece	Hungary	Iceland	Ireland	Israel	Italy	Japan
<b>Crude oil</b>									
Production	42781	42505	38158	41800	-	-	42538	41868	42105
Imports	42781	42505	41540	41800	-	42814	42538	41868	42105
Exports	-	42505	41860	41800	-	-	-	41868	-
Average	42781	42505	41228	41800	-	42814	42538	41868	42105
<b>NGL</b>	42002	-	-	43000	-	-	-	-	45582
<b>Refinery feedstocks</b>	41855	42496	41318	41800	-	44589	44799	42500	42500
<b>Additives</b>	25121	37516	41318	41800	-	-	-	37000	-
<b>Other hydrocarbons</b>	-	-	-	40000	-	47219	-	-	-
<b>Biogasoline</b>	28511	26541	-	26600	27000	26500	-	35856	26800
<b>Biodiesels</b>	37479	37516	37980	37500	43614	37273	-	37000	36800
<b>Other liquid biofuels</b>	44000	22797	-	-	-	-	-	36617	-
<b>Anthracite</b>									
Production	-	29700	-	-	-	-	-	-	-
Imports	32322	29700	-	-	28050	29899	-	-	27246
Exports	-	29700	-	-	-	31993	-	-	-
Main activity elec. generation	-	29701	-	-	-	-	-	-	-
Industry	32322	29700	-	-	28050	-	-	-	-
Other uses	32322	29700	-	-	28050	29614	-	-	27246
<b>Coking coal</b>									
Production	-	29000	-	-	-	-	-	-	-
Imports	29500	29000	-	31711	-	-	-	30984	28076
Exports	-	-	-	-	-	-	-	-	-
Coke ovens	29500	29000	-	31711	-	-	-	30984	28076
Main activity elec. generation	-	29000	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-	28076
Other uses	29500	29000	-	29411	-	-	-	30984	28076
<b>Other bituminous coal</b>									
Production	-	28212	-	-	-	-	-	-	21429
Imports	26000	27028	25542	26781	-	24848	24875	24985	24415
Exports	-	29700	-	-	-	-	-	-	25056
Coke ovens	-	-	-	-	-	-	-	-	25056
Main activity elec. generation	25916	25823	-	27294	-	24895	24845	25253	24453
Industry	26000	30489	25542	26781	-	27838	25002	24985	25056
Other uses	26000	29116	27216	24158	-	27838	25002	24985	25056
<b>Sub-bituminous coal</b>									
Production	-	-	-	-	-	-	-	-	-
Imports	-	-	-	18920	-	-	-	18832	-
Exports	-	-	-	-	-	-	-	-	-
Main activity elec. generation	-	-	-	19420	-	-	-	19305	-
Industry	-	-	-	21837	-	-	-	-	-
Other uses	-	-	-	18166	-	-	-	18853	-
<b>Lignite</b>									
Production	-	9003	5096	6644	-	-	-	-	-
Imports	17000	18416	-	16090	-	-	-	10468	-
Exports	-	-	-	7751	-	-	-	-	-
Main activity elec. generation	-	8839	6068	6566	-	-	-	-	-
Industry	17000	10518	9140	9558	-	-	-	10468	-
Other uses	17000	10652	5096	9139	-	-	-	10468	-
<b>Patent fuel</b>	32000	31400	-	-	-	-	-	-	-
<b>Coke oven coke</b>	28000	28650	-	29754	26670	-	-	29000	29400
<b>Coal tar</b>	37883	-	-	38000	-	-	-	38519	35393
<b>BKB</b>	20097	19236	-	19032	-	19816	-	-	-
<b>Peat</b>	-	-	-	-	-	13105	-	-	-
<b>Peat products</b>	-	-	-	-	-	18548	-	-	-
<b>Oil shale</b>	-	-	-	-	-	-	2931	-	-
<b>Charcoal</b>	-	-	31000	-	29600	-	30800	30800	29300

## OECD country-specific net calorific values

2016

<i>kJ/kg</i>	Korea	Latvia	Luxembourg	Mexico	Netherlands	New Zealand	Norway	Poland	Portugal
<b>Crude oil</b>									
Production	42700	-	-	43509	42700	43604	42200	42500	-
Imports	42700	-	-	-	42700	42752	42200	42499	43040
Exports	-	-	-	43509	42700	43707	42200	42500	-
Average	42700	-	-	43509	42700	43080	42200	42500	43040
<b>NGL</b>	-	-	-	41338	44000	45782	43795	-	-
<b>Refinery feedstocks</b>	44800	-	-	42350	44000	43884	42300	43116	42600
<b>Additives</b>	41868	-	-	38701	38670	-	36800	40190	37000
<b>Other hydrocarbons</b>	-	39350	-	41868	-	-	-	42500	120000
<b>Biogasoline</b>	-	26800	26803	-	27000	29657	26800	27000	27000
<b>Biodiesels</b>	42390	37200	38133	-	37000	-	36800	37000	37000
<b>Other liquid biofuels</b>	36800	-	-	-	-	-	36800	36028	37000
<b>Anthracite</b>									
Production	18631	-	-	26700	-	-	-	-	-
Imports	20599	27433	26700	26662	29268	-	-	25000	27875
<b>Exports</b>	-	-	-	26700	29244	-	-	25680	-
Main activity elec. generation	20377	-	-	-	-	-	-	-	-
Industry	20599	-	26700	26455	29268	-	-	27499	27875
Other uses	18631	27433	29300	26700	29300	-	-	26700	30353
<b>Coking coal</b>									
Production	-	-	-	29335	-	30282	-	29606	-
Imports	28219	-	-	28954	28627	-	-	29200	-
Exports	-	-	-	-	-	30282	-	29200	-
Coke ovens	28219	-	-	27095	28631	-	-	29547	-
Main activity elec. generation	-	-	-	-	-	-	-	-	-
Industry	28219	-	-	27095	28630	30282	-	29556	-
Other uses	28219	-	-	29335	28630	30282	-	29222	-
<b>Other bituminous coal</b>									
Production	-	-	-	-	-	25967	28100	22754	-
Imports	24660	23720	24400	25875	25001	25967	28100	22850	24743
Exports	-	23720	-	-	24928	-	28100	25680	-
Coke ovens	-	-	-	-	-	-	-	-	-
Main activity elec. generation	24660	26220	-	24741	25211	-	28100	21619	24743
Industry	24660	23720	24400	-	-	25967	28100	22762	-
Other uses	24660	23720	24400	23483	24676	25967	28100	25975	24765
<b>Sub-bituminous coal</b>									
Production	-	-	-	20374	-	20299	-	-	-
Imports	21353	-	-	19001	-	20299	-	-	-
Exports	-	-	-	-	-	-	-	-	-
Main activity elec. generation	21353	-	-	21817	-	20665	-	-	-
Industry	-	-	-	19714	-	20299	-	-	-
Other uses	21353	-	-	19405	-	20299	-	-	-
<b>Lignite</b>									
Production	-	-	-	11330	-	14508	-	8116	-
Imports	-	-	-	13908	19999	-	-	8116	-
Exports	-	-	-	-	-	-	-	8116	-
Main activity elec. generation	-	-	-	-	-	-	-	8102	-
Industry	-	-	-	11261	20000	14508	-	11013	-
Other uses	-	-	-	11261	20000	14508	-	9342	-
<b>Patent fuel</b>	18631	-	-	-	-	-	-	23171	-
<b>Coke oven coke</b>	28889	-	28500	26521	28500	29500	28500	27859	29567
<b>Coal tar</b>	37000	-	-	37970	41900	-	-	37667	-
<b>BKB</b>	-	-	22200	18000	20000	-	-	17499	-
<b>Peat</b>	-	10050	-	-	-	-	-	-	-
<b>Peat products</b>	-	-	-	-	-	-	-	-	-
<b>Oil shale</b>	-	-	-	-	-	-	-	-	-
<b>Charcoal</b>	-	30000	-	-	30000	-	-	-	29500

## OECD country-specific net calorific values

2016

<i>kJ/kg</i>	Slovak Republic	Slovenia	Spain	Sweden	Switzerland	Turkey	United Kingdom	United States
<b>Crude oil</b>								
Production	43210	-	42665	-	-	44270	43371	42679
Imports	41996	-	42665	42161	43225	44320	43371	43604
Exports	43210	-	-	-	43225	-	43371	42694
Average	41999	-	42665	42161	43225	44295	43371	42871
<b>NGL</b>	42420	-	-	-	-	-	45296	46503
<b>Refinery feedstocks</b>	42000	-	42500	44244	43700	43500	42000	43538
<b>Additives</b>	42000	-	25100	25121	41325	25120	32711	37863
<b>Other hydrocarbons</b>	41500	-	-	-	-	41868	28230	51004
<b>Biogasoline</b>	21000	30324	26995	26886	26524	26800	26826	32021
<b>Biodiesels</b>	39486	36900	36990	37512	32040	39500	37191	42179
<b>Other liquid biofuels</b>	-	-	-	38159	-	-	-	21583
<b>Anthracite</b>								
Production	-	-	20640	-	-	-	-	29505
Imports	26263	-	25840	-	25500	-	-	30327
Exports	-	-	25840	-	-	-	-	28515
Main activity elec. generation	25804	-	21965	-	-	-	-	25248
Industry	26263	-	24740	-	25500	-	-	30060
Other uses	26263	-	26400	-	25500	-	-	13774
<b>Coking coal</b>								
Production	-	-	-	-	-	26000	30740	28916
Imports	29810	-	29200	30000	-	30200	30240	28224
Exports	-	-	-	-	-	29400	30740	27589
Coke ovens	29810	-	29200	30000	-	30200	30240	32297
Main activity elec. generation	-	-	-	-	-	25080	-	-
Industry	-	-	-	-	-	27915	30400	-
Other uses	29810	-	29300	30000	-	28030	30740	28532
<b>Other bituminous coal</b>								
Production	-	-	18990	-	-	22200	24994	26593
Imports	26336	27256	23250	27400	25500	26115	25289	24397
Exports	-	-	23250	-	-	24900	29868	27882
Coke ovens	-	-	-	-	-	-	-	-
Main activity elec. generation	23506	25141	21776	27900	-	24359	23924	25248
Industry	26336	27256	23980	26860	25500	27500	26412	26234
Other uses	26336	27256	27080	27400	25500	27500	29836	26902
<b>Sub-bituminous coal</b>								
Production	-	-	13520	-	-	20908	-	19035
Imports	-	19376	-	-	-	-	-	19995
Exports	-	-	-	-	-	-	-	19601
Main activity elec. generation	-	18621	13103	-	-	20909	-	19820
Industry	-	19203	-	-	-	20908	-	19114
Other uses	-	19023	8621	-	-	20908	-	19354
<b>Lignite</b>								
Production	10240	11775	-	-	-	8353	-	13946
Imports	13809	9327	-	-	23600	-	-	13845
Exports	-	-	-	-	-	-	-	11910
Main activity elec. generation	10944	11731	-	-	-	7097	-	14634
Industry	10719	9327	-	-	23600	17000	-	14817
Other uses	10719	11746	-	-	23600	17000	-	14981
<b>Patent fuel</b>	28000	-	-	-	-	-	28310	-
<b>Coke oven coke</b>	28158	29985	26795	28080	25500	27000	29800	28865
<b>Coal tar</b>	33490	-	38519	-	-	37429	35035	-
<b>BKB</b>	17245	-	-	-	-	-	-	-
<b>Peat</b>	-	-	-	12500	-	-	-	-
<b>Peat products</b>	-	-	-	-	-	-	-	-
<b>Oil shale</b>	-	-	-	-	-	-	-	-
<b>Charcoal</b>	-	-	30800	-	-	-	-	-

## Non-OECD country-specific net calorific values

2016

<i>kJ/kg</i>	Albania	Algeria	Angola	Argentina	Armenia	Azerbaijan	Bahrain	Bangladesh
<b>Crude oil</b>								
Production	41868	43292	42747	41868	-	42077	42705	-
Imports	-	42370	-	41868	-	-	42705	42161
Exports	41868	43292	42747	41868	-	42077	-	-
Average	41868	43292	42747	41868	-	42077	42705	42161
<b>NGL</b>	-	46725	41868	42496	-	41910	42705	42705
<b>Refinery feedstocks</b>	-	-	-	44799	-	-	44799	-
<b>Additives</b>	-	-	-	41868	-	-	-	-
<b>Other hydrocarbons</b>	-	-	-	-	-	-	-	-
<b>Biogasoline</b>	-	-	-	26800	-	-	-	-
<b>Biodiesels</b>	36800	-	-	36800	-	-	-	-
<b>Other liquid biofuels</b>	-	-	-	-	-	-	-	-
<b>Anthracite</b>								
Production	-	-	-	-	-	-	-	-
Imports	25163	-	-	-	24793	-	-	-
Exports	-	-	-	-	-	-	-	-
Main activity elec. generation	-	-	-	-	-	-	-	-
Industry	25163	-	-	-	-	-	-	-
Other uses	25163	-	-	-	24793	-	-	-
<b>Coking coal</b>								
Production	-	-	-	-	-	-	-	-
Imports	-	-	-	30145	-	-	-	-
Exports	-	-	-	-	-	-	-	-
Coke ovens	-	-	-	30145	-	-	-	-
Main activity elec. generation	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-
Other uses	-	-	-	24702	-	-	-	-
<b>Other bituminous coal</b>								
Production	14285	-	-	24702	-	-	-	20926
Imports	-	-	-	27000	-	-	-	20926
Exports	-	-	-	24702	-	-	-	-
Coke ovens	-	-	-	-	-	-	-	-
Main activity elec. generation	-	-	-	27000	-	-	-	20926
Industry	14285	-	-	30145	-	-	-	20926
Other uses	14285	-	-	24702	-	-	-	20926
<b>Sub-bituminous coal</b>								
Production	-	-	-	-	-	-	-	-
Imports	-	-	-	-	-	-	-	-
Exports	-	-	-	-	-	-	-	-
Main activity elec. generation	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-
Other uses	-	-	-	-	-	-	-	-
<b>Lignite</b>								
Production	-	-	-	-	-	-	-	-
Imports	-	-	-	-	-	-	-	-
Exports	-	-	-	-	-	-	-	-
Main activity elec. generation	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-
Other uses	-	-	-	-	-	-	-	-
<b>Patent fuel</b>	-	-	-	-	-	-	-	-
<b>Coke oven coke</b>	-	28200	-	28458	-	-	-	-
<b>Coal tar</b>	-	-	-	-	-	-	-	-
<b>BKB</b>	-	-	-	-	-	-	-	-
<b>Peat</b>	-	-	-	-	9760	-	-	-
<b>Peat products</b>	-	-	-	-	-	-	-	-
<b>Oil Shale</b>	-	-	-	-	-	-	-	-
<b>Charcoal</b>	30800	-	30800	27214	-	-	-	30800

## Non-OECD country-specific net calorific values

2016

<i>KJ/kg</i>	Belarus	Benin	Bolivia	Bosnia and Herzegovina	Botswana	Brazil	Brunei Darussalam	Bulgaria
<b>Crude oil</b>								
Production	42077	-	43333	-	-	42705	42747	40721
Imports	42077	-	-	42747	-	42705	-	42538
Exports	42077	-	-	-	-	42705	42747	-
Average	42077	-	43333	42747	-	42705	42747	42538
<b>NGL</b>	41910	-	43333	-	-	45217	42747	-
<b>Refinery feedstocks</b>	44799	-	-	-	-	44506	-	42500
<b>Additives</b>	-	-	-	-	-	-	41868	23027
<b>Other hydrocarbons</b>	-	-	-	-	-	119960	-	41868
<b>Biogasoline</b>	-	-	-	-	-	28261	-	26800
<b>Biodiesels</b>	36800	-	-	-	-	42287	-	36800
<b>Other liquid biofuels</b>	-	-	-	-	-	26377	-	-
<b>Anthracite</b>								
Production	-	-	-	-	-	-	-	-
Imports	-	-	-	-	-	-	-	30231
Exports	-	-	-	-	-	-	-	-
Main activity elec. generation	-	-	-	-	-	-	-	24567
Industry	-	-	-	-	-	-	-	29896
Other uses	-	-	-	-	-	-	-	28794
<b>Coking coal</b>								
Production	-	-	-	-	-	-	-	-
Imports	-	-	-	29065	-	30982	-	-
Exports	-	-	-	-	-	-	-	-
Coke ovens	-	-	-	29065	-	30982	-	-
Main activity elec. generation	-	-	-	-	-	-	-	-
Industry	-	-	-	29065	-	-	-	-
Other uses	-	-	-	29065	-	30982	-	-
<b>Other bituminous coal</b>								
Production	-	-	-	-	23597	23865	-	16287
Imports	25205	25800	-	-	-	23865	-	27615
Exports	25205	-	-	-	23597	-	-	-
Coke ovens	-	-	-	-	-	-	-	-
Main activity elec. generation	-	-	-	-	23597	23865	-	24662
Industry	25205	25800	-	-	23597	23865	-	27656
Other uses	25205	25800	-	-	23597	23865	-	29224
<b>Sub-bituminous coal</b>								
Production	-	-	-	-	-	18388	-	-
Imports	-	-	-	-	-	18631	-	-
Exports	-	-	-	-	-	-	-	-
Main activity elec. generation	-	-	-	-	-	17794	-	-
Industry	-	-	-	-	-	19577	-	-
Other uses	-	-	-	-	-	18388	-	-
<b>Lignite</b>								
Production	-	-	-	10803	-	12926	-	6812
Imports	-	-	-	10803	-	-	-	-
Exports	-	-	-	10803	-	-	-	10824
Main activity elec. generation	-	-	-	10803	-	12916	-	6764
Industry	-	-	-	10803	-	12826	-	10600
Other uses	-	-	-	10803	-	12861	-	7099
<b>Patent fuel</b>	-	-	-	-	-	-	-	-
<b>Coke oven coke</b>	29015	-	-	28540	-	28889	-	28500
<b>Coal tar</b>	-	-	-	-	-	35797	-	-
<b>BKB</b>	-	-	-	-	-	-	-	18200
<b>Peat</b>	10000	-	-	-	-	-	-	-
<b>Peat products</b>	14650	-	-	-	-	-	-	-
<b>Oil Shale</b>	-	-	-	-	-	-	-	-
<b>Charcoal</b>	30800	29308	30354	30800	-	27047	-	26000

## Non-OECD country-specific net calorific values

2016

<i>kJ/kg</i>	Cambodia	Cameroon	PR of China	Colombia	Congo	Costa Rica	Côte d'Ivoire	Croatia
<b>Crude oil</b>								
Production	-	42454	41868	42245	42915	-	42622	42600
Imports	-	42454	41868	-	-	-	42622	42600
Exports	-	42454	41868	42245	42915	-	42622	-
Average	-	42454	41868	42245	42915	-	42622	42700
<b>NGL</b>	-	-	42705	41868	45217	-	42622	46059
<b>Refinery feedstocks</b>	-	-	44799	-	-	-	42622	42700
<b>Additives</b>	-	-	-	-	-	-	-	42700
<b>Other hydrocarbons</b>	-	-	41868	-	-	-	-	48750
<b>Biogasoline</b>	-	-	26800	26800	-	-	-	-
<b>Biodiesels</b>	-	-	36800	36800	-	-	-	36800
<b>Other liquid biofuels</b>	-	-	-	-	-	-	-	-
<b>Anthracite</b>								
Production	-	-	-	-	-	-	-	-
Imports	-	-	20934	-	-	-	-	-
Exports	-	-	-	-	-	-	-	-
Main activity elec. generation	-	-	-	-	-	-	-	-
Industry	-	-	18899	-	-	-	-	-
Other uses	-	-	22659	-	-	-	-	-
<b>Coking coal</b>								
Production	-	-	26745	27214	-	-	-	-
Imports	-	-	26745	-	-	-	-	-
Exports	-	-	26745	27214	-	-	-	-
Coke ovens	-	-	26745	27214	-	-	-	-
Main activity elec. generation	-	-	26745	-	-	-	-	-
Industry	-	-	26745	27214	-	-	-	-
Other uses	-	-	26745	27214	-	-	-	-
<b>Other bituminous coal</b>								
Production	-	-	22135	27214	-	-	-	-
Imports	-	-	20934	-	-	25800	-	25061
Exports	-	-	27214	27214	-	-	-	-
Coke ovens	-	-	22155	-	-	-	-	-
Main activity elec. generation	-	-	20586	27214	-	-	-	24950
Industry	-	-	21671	27214	-	25800	-	27390
Other uses	-	-	21246	27214	-	25800	-	24220
<b>Sub-bituminous coal</b>								
Production	-	-	-	-	-	-	-	-
Imports	19887	-	-	-	-	-	-	-
Exports	-	-	-	-	-	-	-	-
Main activity elec. generation	19887	-	-	-	-	-	-	-
Industry	18900	-	-	-	-	-	-	-
Other uses	18900	-	-	-	-	-	-	-
<b>Lignite</b>								
Production	-	-	-	-	-	-	-	-
Imports	-	-	-	-	-	-	-	16882
Exports	-	-	-	-	-	-	-	-
Main activity elec. generation	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	16882
Other uses	-	-	-	-	-	-	-	16882
<b>Patent fuel</b>	-	-	17752	-	-	-	-	-
<b>Coke oven coke</b>	-	-	26796	20097	-	28200	-	29310
<b>Coal tar</b>	-	-	33494	-	-	-	-	-
<b>BKB</b>	-	-	-	-	-	-	-	-
<b>Peat</b>	-	-	-	-	-	-	-	-
<b>Peat products</b>	-	-	-	-	-	-	-	-
<b>Oil Shale</b>	-	-	-	-	-	-	-	-
<b>Charcoal</b>	28889	16957	-	30800	30800	30800	30800	30800

## Non-OECD country-specific net calorific values

2016

<i>kJ/kg</i>	Cuba	Curaçao <sup>1</sup>	Cyprus <sup>1</sup>	DPR of Korea	DR of the Congo	Dominican Republic	Ecuador	Egypt
<b>Crude oil</b>								
Production	42559	-	-	-	42161	-	41868	42538
Imports	42559	42161	-	42161	-	42161	-	42538
Exports	-	-	-	-	42161	-	41868	42538
Average	42559	42161	-	42161	42161	42161	41868	42538
<b>NGL</b>	41701	42705	-	-	-	-	42454	42538
<b>Refinery feedstocks</b>	-	44799	-	-	-	-	-	-
<b>Additives</b>	-	-	-	-	-	-	-	-
<b>Other hydrocarbons</b>	-	-	-	-	-	-	-	-
<b>Biogasoline</b>	25101	-	-	-	-	-	26800	-
<b>Biodiesels</b>	-	-	36800	-	-	-	-	-
<b>Other liquid biofuels</b>	-	-	-	-	-	-	-	-
<b>Anthracite</b>								
Production	-	-	-	26700	-	-	-	-
Imports	26700	-	-	26700	-	-	-	-
Exports	-	-	-	26700	-	-	-	-
Main activity elec. generation	-	-	-	-	-	-	-	-
Industry	26700	-	-	-	-	-	-	-
Other uses	26700	-	-	26700	-	-	-	-
<b>Coking coal</b>								
Production	-	-	-	-	-	-	-	-
Imports	-	-	-	-	-	-	-	25749
Exports	-	-	-	-	-	-	-	-
Coke ovens	-	-	-	-	-	-	-	25749
Main activity elec. generation	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-
Other uses	-	-	-	-	-	-	-	25749
<b>Other bituminous coal</b>								
Production	-	-	-	25800	-	-	-	-
Imports	-	-	-	25800	-	25800	-	-
Exports	-	-	-	25800	-	-	-	-
Coke ovens	-	-	-	-	-	-	-	-
Main activity elec. generation	-	-	-	25800	-	25800	-	-
Industry	-	-	-	25800	-	25800	-	-
Other uses	-	-	-	25800	-	25800	-	-
<b>Sub-bituminous coal</b>								
Production	-	-	-	17585	-	-	-	-
Imports	-	-	-	-	-	-	-	-
Exports	-	-	-	-	-	-	-	-
Main activity elec. generation	-	-	-	17585	-	-	-	-
Industry	-	-	-	17585	-	-	-	-
Other uses	-	-	-	17585	-	-	-	-
<b>Lignite</b>								
Production	-	-	-	-	-	-	-	-
Imports	-	-	-	-	-	-	-	-
Exports	-	-	-	-	-	-	-	-
Main activity elec. generation	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-
Other uses	-	-	-	-	-	-	-	-
<b>Patent fuel</b>	-	-	-	-	-	-	-	-
<b>Coke oven coke</b>	28200	-	-	28200	-	28200	-	27214
<b>Coal tar</b>	-	-	-	-	-	-	-	-
<b>BKB</b>	-	-	-	-	-	-	-	-
<b>Peat</b>	-	-	-	-	-	-	-	-
<b>Peat products</b>	-	-	-	-	-	-	-	-
<b>Oil Shale</b>	-	-	-	-	-	-	-	-
<b>Charcoal</b>	30229	-	30800	30800	30800	30800	-	-

1. Please refer to section 'Geographical coverage'.

## Non-OECD country-specific net calorific values

2016

<i>KJ/kg</i>	El Salvador	Eritrea	Ethiopia	FYR of Macedonia	Gabon	Georgia	Ghana	Gibraltar
<b>Crude oil</b>								
Production	-	-	-	-	42622	42077	42622	-
Imports	-	-	-	-	-	42077	42622	-
Exports	-	-	-	-	42622	42077	42622	-
Average	-	-	-	-	42622	42077	42622	-
<b>NGL</b>	-	-	-	-	-	-	-	-
<b>Refinery feedstocks</b>	-	-	-	-	-	44799	-	-
<b>Additives</b>	-	-	-	-	-	-	-	-
<b>Other hydrocarbons</b>	-	-	-	-	-	-	-	-
<b>Biogasoline</b>	-	-	26800	-	-	-	-	-
<b>Biodiesels</b>	-	-	-	-	-	-	-	-
<b>Other liquid biofuels</b>	-	-	-	-	-	-	-	-
<b>Anthracite</b>								
Production	-	-	-	-	-	-	-	-
Imports	-	-	-	26399	-	27550	-	-
Exports	-	-	-	-	-	-	-	-
Main activity elec. generation	-	-	-	-	-	-	-	-
Industry	-	-	-	26365	-	27550	-	-
Other uses	-	-	-	25052	-	27550	-	-
<b>Coking coal</b>								
Production	-	-	-	-	-	-	-	-
Imports	-	-	-	-	-	-	-	-
Exports	-	-	-	-	-	-	-	-
Coke ovens	-	-	-	-	-	-	-	-
Main activity elec. generation	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-
Other uses	-	-	-	-	-	-	-	-
<b>Other bituminous coal</b>								
Production	-	-	-	-	-	-	-	-
Imports	-	-	25800	26106	-	25000	-	-
Exports	-	-	-	-	-	-	-	-
Coke ovens	-	-	-	-	-	-	-	-
Main activity elec. generation	-	-	-	-	-	-	-	-
Industry	-	-	25800	26106	-	25000	-	-
Other uses	-	-	25800	27891	-	25000	-	-
<b>Sub-bituminous coal</b>								
Production	-	-	-	-	-	-	-	-
Imports	-	-	-	22289	-	-	-	-
Exports	-	-	-	22281	-	-	-	-
Main activity elec. generation	-	-	-	-	-	-	-	-
Industry	-	-	-	22281	-	-	-	-
Other uses	-	-	-	22281	-	-	-	-
<b>Lignite</b>								
Production	-	-	-	6057	-	17000	-	-
Imports	-	-	-	7914	-	-	-	-
Exports	-	-	-	-	-	17000	-	-
Main activity elec. generation	-	-	-	6041	-	17000	-	-
Industry	-	-	-	9320	-	17000	-	-
Other uses	-	-	-	9320	-	17000	-	-
<b>Patent fuel</b>	-	-	-	-	-	-	-	-
<b>Coke oven coke</b>	-	-	-	26503	-	25121	-	-
<b>Coal tar</b>	-	-	-	-	-	-	-	-
<b>BKB</b>	-	-	-	-	-	-	-	-
<b>Peat</b>	-	-	-	-	-	-	-	-
<b>Peat products</b>	-	-	-	-	-	-	-	-
<b>Oil Shale</b>	-	-	-	-	-	-	-	-
<b>Charcoal</b>	30800	30800	30800	-	-	-	30800	-



## Non-OECD country-specific net calorific values

2016

<i>kJ/kg</i>	Guatemala	Haiti	Honduras	Hong Kong, China	India	Indonesia	Islamic Rep. of Iran	Iraq
<b>Crude oil</b>								
Production	42454	-	-	-	42789	42663	42663	42831
Imports	-	-	-	-	42789	42663	-	-
Exports	42454	-	-	-	-	42663	42663	42831
Average	42454	-	-	-	42789	42663	42663	42831
<b>NGL</b>	-	-	-	-	42998	42768	42538	42831
<b>Refinery feedstocks</b>	-	-	-	-	40000	44799	44799	-
<b>Additives</b>	-	-	-	-	-	-	41868	-
<b>Other hydrocarbons</b>	-	-	-	-	-	-	-	-
<b>Biogasoline</b>	-	-	-	-	26800	-	-	-
<b>Biodiesels</b>	-	-	-	36800	36800	36800	-	-
<b>Other liquid biofuels</b>	-	-	-	-	-	-	-	-
<b>Anthracite</b>								
Production	-	-	-	-	-	-	-	-
Imports	-	-	-	-	-	-	-	-
Exports	-	-	-	-	-	-	-	-
Main activity elec. generation	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-
Other uses	-	-	-	-	-	-	-	-
<b>Coking coal</b>								
Production	-	-	-	-	20490	28200	28200	-
Imports	-	-	-	-	28286	28200	28200	-
Exports	-	-	-	-	20490	28200	28200	-
Coke ovens	-	-	-	-	26589	-	28200	-
Main activity elec. generation	-	-	-	-	20490	-	-	-
Industry	-	-	-	-	26589	28200	-	-
Other uses	-	-	-	-	26589	28200	28200	-
<b>Other bituminous coal</b>								
Production	-	-	-	-	16110	25800	25800	-
Imports	25800	-	25800	25800	25371	-	25800	-
Exports	-	-	-	-	16110	25800	-	-
Coke ovens	-	-	-	-	-	-	-	-
Main activity elec. generation	25800	-	-	25800	15336	-	-	-
Industry	25800	-	25800	25800	18518	25800	25800	-
Other uses	25800	-	25800	25800	16110	25800	25800	-
<b>Sub-bituminous coal</b>								
Production	-	-	-	-	-	21122	-	-
Imports	-	-	-	-	18000	-	-	-
Exports	-	-	-	-	-	22000	-	-
Main activity elec. generation	-	-	-	-	18000	18780	-	-
Industry	-	-	-	-	-	18780	-	-
Other uses	-	-	-	-	9797	18780	-	-
<b>Lignite</b>								
Production	-	-	-	-	9546	-	-	-
Imports	-	-	-	-	-	-	-	-
Exports	-	-	-	-	9546	-	-	-
Main activity elec. generation	-	-	-	-	9546	-	-	-
Industry	-	-	-	-	9546	-	-	-
Other uses	-	-	-	-	9546	-	-	-
<b>Patent fuel</b>	-	-	-	-	-	-	-	-
<b>Coke oven coke</b>	-	-	-	-	28200	-	28200	-
<b>Coal tar</b>	-	-	-	-	-	-	38000	-
<b>BKB</b>	-	-	-	-	20000	20000	-	-
<b>Peat</b>	-	-	-	-	-	-	-	-
<b>Peat products</b>	-	-	-	-	-	-	-	-
<b>Oil Shale</b>	-	-	-	-	-	-	-	-
<b>Charcoal</b>	30800	30800	30800	30800	30800	30800	30800	30800

## Non-OECD country-specific net calorific values

2016

<i>KJ/kg</i>	Jamaica	Jordan	Kazakhstan	Kenya	Kosovo	Kuwait	Kyrgyzstan	Lebanon
<b>Crude oil</b>								
Production	-	-	42876	-	-	42538	42077	-
Imports	42161	42705	42673	42077	-	-	42077	-
Exports	-	-	42920	-	-	42538	42077	-
Average	42161	42705	42823	42077	-	42538	42077	-
<b>NGL</b>	-	-	46000	-	-	42622	-	-
<b>Refinery feedstocks</b>	-	-	-	-	-	-	-	-
<b>Additives</b>	-	-	-	-	-	-	-	-
<b>Other hydrocarbons</b>	-	-	-	-	-	-	-	-
<b>Biogasoline</b>	26800	-	-	-	-	-	-	-
<b>Biodiesels</b>	-	-	-	-	-	-	-	-
<b>Other liquid biofuels</b>	-	-	36800	-	-	-	-	-
<b>Anthracite</b>								
Production	-	-	-	-	-	-	-	-
Imports	-	26700	-	-	-	-	18581	-
Exports	-	-	-	-	-	-	18581	-
Main activity elec. generation	-	-	-	-	-	-	-	-
Industry	-	26700	-	-	-	-	18581	-
Other uses	-	26700	-	-	-	-	18581	-
<b>Coking coal</b>								
Production	-	-	18581	-	-	-	-	-
Imports	-	-	-	-	-	-	-	-
Exports	-	-	18581	-	-	-	-	-
Coke ovens	-	-	18581	-	-	-	-	-
Main activity elec. generation	-	-	19226	-	-	-	-	-
Industry	-	-	18581	-	-	-	-	-
Other uses	-	-	18581	-	-	-	-	-
<b>Other bituminous coal</b>								
Production	-	-	18581	-	-	-	18581	-
Imports	25800	-	18581	25800	22525	-	20882	27675
Exports	-	-	18581	-	-	-	18581	-
Coke ovens	-	-	-	-	-	-	-	-
Main activity elec. generation	-	-	18581	-	-	-	18581	-
Industry	25800	-	18581	25800	22525	-	18581	27675
Other uses	25800	-	18581	25800	22880	-	20882	27675
<b>Sub-bituminous coal</b>								
Production	-	-	-	-	-	-	-	-
Imports	-	-	-	-	-	-	-	-
Exports	-	-	-	-	-	-	-	-
Main activity elec. generation	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-
Other uses	-	-	-	-	-	-	-	-
<b>Lignite</b>								
Production	-	-	14654	-	7802	-	14654	-
Imports	-	-	-	-	7802	-	14654	-
Exports	-	-	14654	-	7802	-	14654	-
Main activity elec. generation	-	-	14654	-	7802	-	14654	-
Industry	-	-	14654	-	7802	-	14654	-
Other uses	-	-	14654	-	7802	-	14654	-
<b>Patent fuel</b>	-	-	-	-	-	-	-	-
<b>Coke oven coke</b>	-	28200	25121	-	-	-	-	-
<b>Coal tar</b>	-	-	-	-	-	-	-	-
<b>BKB</b>	-	-	-	-	-	-	-	-
<b>Peat</b>	-	-	-	-	-	-	-	-
<b>Peat products</b>	-	-	-	-	-	-	-	-
<b>Oil Shale</b>	-	-	-	-	-	-	-	-
<b>Charcoal</b>	30800	30800	30800	30800	-	-	-	30800

## Non-OECD country-specific net calorific values

2016

<i>KJ/kg</i>	Libya	Lithuania	Malaysia	Malta	Mauritius	Moldova	Mongolia	Montenegro
<b>Crude oil</b>								
Production	42998	42320	43300	-	-	42077	42161	-
Imports	-	42320	42613	-	-	-	-	-
Exports	42998	42320	43333	-	-	-	42161	-
Average	42998	42320	43333	-	-	42077	42161	-
<b>NGL</b>	42998	-	44413	-	-	-	-	-
<b>Refinery feedstocks</b>	-	43955	42538	-	-	44799	-	-
<b>Additives</b>	-	41860	-	-	-	-	-	-
<b>Other hydrocarbons</b>	-	-	42119	-	-	-	-	-
<b>Biogasoline</b>	-	27000	-	-	-	-	-	-
<b>Biodiesels</b>	-	37000	36800	36800	-	-	-	-
<b>Other liquid biofuels</b>	-	-	-	-	-	-	-	-
<b>Anthracite</b>								
Production	-	-	-	-	-	-	-	-
Imports	-	25120	-	-	-	24770	-	-
Exports	-	-	-	-	-	-	-	-
Main activity elec. generation	-	-	-	-	-	-	-	-
Industry	-	25120	-	-	-	24770	-	-
Other uses	-	25120	-	-	-	24770	-	-
<b>Coking coal</b>								
Production	-	-	-	-	-	-	28200	-
Imports	-	-	-	-	-	-	-	-
Exports	-	-	-	-	-	-	28200	-
Coke ovens	-	-	-	-	-	-	28200	-
Main activity elec. generation	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-
Other uses	-	-	-	-	-	-	28200	-
<b>Other bituminous coal</b>								
Production	-	-	26394	-	-	-	28596	-
Imports	-	25120	26394	-	25800	22655	28596	-
Exports	-	-	26394	-	-	-	28596	-
Coke ovens	-	-	-	-	-	-	-	-
Main activity elec. generation	-	25120	26394	-	-	-	28596	-
Industry	-	25120	26394	-	25800	22655	28596	-
Other uses	-	25120	26394	-	25800	22655	28596	-
<b>Sub-bituminous coal</b>								
Production	-	-	-	-	-	-	-	-
Imports	-	-	-	-	-	-	-	-
Exports	-	-	-	-	-	-	-	-
Main activity elec. generation	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-
Other uses	-	22705	-	-	-	-	-	-
<b>Lignite</b>								
Production	-	-	-	-	-	-	14403	9210
Imports	-	-	-	-	-	-	-	9210
Exports	-	-	-	-	-	-	14403	9210
Main activity elec. generation	-	-	-	-	-	-	14403	9210
Industry	-	-	-	-	-	-	14403	9210
Other uses	-	-	-	-	-	-	14403	9210
<b>Patent fuel</b>	-	-	-	-	-	-	-	-
<b>Coke oven coke</b>	-	-	-	-	-	-	28200	-
<b>Coal tar</b>	-	-	-	-	-	-	-	-
<b>BKB</b>	-	-	-	-	-	-	-	-
<b>Peat</b>	-	11720	-	-	-	-	-	-
<b>Peat products</b>	-	13300	-	-	-	-	-	-
<b>Oil Shale</b>	-	-	-	-	-	-	-	-
<b>Charcoal</b>	-	30800	28889	-	30800	30800	30800	30800

## Non-OECD country-specific net calorific values

2016

<i>kJ/kg</i>	Morocco	Mozambique	Myanmar	Namibia	Nepal	Nicaragua	Niger	Nigeria
<b>Crude oil</b>								
Production	38937	-	42245	-	-	-	42161	42747
Imports	-	-	-	-	-	40863	-	-
Exports	-	-	42245	-	-	-	-	42747
Average	42460	-	42245	-	-	40863	42161	42747
<b>NGL</b>	-	-	42705	-	-	-	-	42747
<b>Refinery feedstocks</b>	-	-	-	-	-	-	-	44799
<b>Additives</b>	-	-	-	-	-	-	-	-
<b>Other hydrocarbons</b>	-	-	-	-	-	-	-	-
<b>Biogasoline</b>	-	-	-	-	-	-	-	-
<b>Biodiesels</b>	-	-	-	-	-	-	-	-
<b>Other liquid biofuels</b>	-	-	-	-	-	-	-	-
<b>Anthracite</b>								
Production	-	-	-	-	-	-	-	-
Imports	-	-	-	-	-	-	-	-
Exports	-	-	-	-	-	-	-	-
Main activity elec. generation	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-
Other uses	-	-	-	-	-	-	-	-
<b>Coking coal</b>								
Production	-	28200	-	-	-	-	-	-
Imports	-	-	-	-	-	-	-	-
Exports	-	28200	-	-	-	-	-	-
Coke ovens	-	-	-	-	-	-	-	-
Main activity elec. generation	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-
Other uses	-	28200	-	-	-	-	-	-
<b>Other bituminous coal</b>								
Production	-	24995	25800	-	25121	-	-	25800
Imports	27633	-	-	-	25121	-	-	-
Exports	-	24995	-	-	-	-	-	-
Coke ovens	-	-	-	-	-	-	-	-
Main activity elec. generation	27633	-	25800	22692	-	-	-	-
Industry	27633	-	25800	-	25121	-	-	25800
Other uses	27633	24995	25800	22692	25121	-	-	25800
<b>Sub-bituminous coal</b>								
Production	-	-	-	-	-	-	-	-
Imports	-	-	-	-	-	-	-	-
Exports	-	-	-	-	-	-	-	-
Main activity elec. generation	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-
Other uses	-	-	-	-	-	-	-	-
<b>Lignite</b>								
Production	-	-	11900	-	-	-	11900	-
Imports	-	-	11900	-	-	-	-	-
Exports	-	-	11900	-	-	-	-	-
Main activity elec. generation	-	-	-	-	-	-	11900	-
Industry	-	-	11900	-	-	-	-	-
Other uses	-	-	11900	-	-	-	11900	-
<b>Patent fuel</b>	-	-	-	-	-	-	-	-
<b>Coke oven coke</b>	-	-	-	-	-	-	-	-
<b>Coal tar</b>	-	-	-	-	-	-	-	-
<b>BKB</b>	-	-	-	-	-	-	20000	-
<b>Peat</b>	-	-	-	-	-	-	-	-
<b>Peat products</b>	-	-	-	-	-	-	-	-
<b>Oil Shale</b>	-	-	-	-	-	-	-	-
<b>Charcoal</b>	30800	30019	30800	30800	29730	30800	30800	30800

## Non-OECD country-specific net calorific values

2016

<i>kJ/kg</i>	Oman	Pakistan	Panama	Paraguay	Peru	Philippines	Qatar	Romania
<b>Crude oil</b>								
Production	42705	41990	-	-	42747	41471	42873	40639
Imports	-	43415	-	-	42161	41471	-	41857
Exports	42705	41990	-	-	42747	41471	42873	40645
Average	42705	42937	-	-	42747	41471	42873	41430
<b>NGL</b>	42705	42873	-	-	42747	-	44800	49458
<b>Refinery feedstocks</b>	44799	-	-	-	-	-	-	44799
<b>Additives</b>	41868	25121	-	-	-	-	-	36792
<b>Other hydrocarbons</b>	-	-	-	-	-	-	41868	49457
<b>Biogasoline</b>	-	-	-	26800	26800	29655	-	26800
<b>Biodiesels</b>	-	-	-	-	36800	39423	-	36800
<b>Other liquid biofuels</b>	-	-	-	-	-	-	-	-
<b>Anthracite</b>								
Production	-	-	-	-	-	-	-	-
Imports	-	-	-	-	-	-	-	25533
Exports	-	-	-	-	-	-	-	-
Main activity elec. generation	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	25533
Other uses	-	-	-	-	-	-	-	25533
<b>Coking coal</b>								
Production	-	-	-	-	-	-	-	-
Imports	-	-	-	-	-	-	-	27500
Exports	-	-	-	-	-	-	-	-
Coke ovens	-	-	-	-	-	-	-	-
Main activity elec. generation	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	27500
Other uses	-	-	-	-	-	-	-	27500
<b>Other bituminous coal</b>								
Production	-	18810	-	-	29308	-	-	-
Imports	-	27645	25800	-	29308	25121	-	-
Exports	-	-	-	-	29308	-	-	-
Coke ovens	-	-	-	-	-	-	-	-
Main activity elec. generation	-	24379	25800	-	29308	24325	-	-
Industry	-	24379	-	-	29308	-	-	-
Other uses	-	24379	25800	-	29308	24325	-	-
<b>Sub-bituminous coal</b>								
Production	-	-	-	-	-	22098	-	-
Imports	-	-	-	-	-	22098	-	24603
Exports	-	-	-	-	-	22098	-	-
Main activity elec. generation	-	-	-	-	-	22098	-	24603
Industry	-	-	-	-	-	22098	-	24603
Other uses	-	-	-	-	-	22098	-	24603
<b>Lignite</b>								
Production	-	11900	-	-	-	-	-	7714
Imports	-	-	-	-	-	11900	-	9234
Exports	-	-	-	-	-	-	-	7391
Main activity elec. generation	-	-	-	-	-	-	-	7714
Industry	-	11900	-	-	-	11900	-	10341
Other uses	-	11900	-	-	-	11900	-	7391
<b>Patent fuel</b>	-	-	-	-	-	-	-	-
<b>Coke oven coke</b>	-	-	-	-	28200	28200	-	26370
<b>Coal tar</b>	-	-	-	-	-	-	-	-
<b>BKB</b>	-	-	-	-	-	-	-	-
<b>Peat</b>	-	-	-	-	-	-	-	8790
<b>Peat products</b>	-	-	-	-	-	-	-	-
<b>Oil Shale</b>	-	-	-	-	-	-	-	-
<b>Charcoal</b>	-	30800	30800	28889	27214	25104	-	-

## Non-OECD country-specific net calorific values

2016

<i>KJ/kg</i>	Russian Federation	Saudi Arabia	Senegal	Serbia	Singapore	South Africa	South Sudan	Sri Lanka
<b>Crude oil</b>								
Production	42077	42538	-	44194	-	40520	42622	-
Imports	-	-	42622	44194	42705	40520	-	43124
Exports	42077	42538	-	-	42705	-	42622	-
Average	42077	42538	42622	44194	42705	40520	42622	43124
<b>NGL</b>	41910	44924	-	46000	-	42743	-	-
<b>Refinery feedstocks</b>	-	-	-	43324	42833	-	-	-
<b>Additives</b>	-	-	-	35109	-	-	-	-
<b>Other hydrocarbons</b>	-	-	-	119960	-	40520	-	-
<b>Biogasoline</b>	-	-	-	-	-	-	-	-
<b>Biodiesels</b>	-	-	-	-	-	-	-	-
<b>Other liquid biofuels</b>	-	-	-	-	-	-	-	-
<b>Anthracite</b>								
Production	29000	-	-	-	-	23597	-	-
Imports	29000	-	-	25104	-	-	-	-
Exports	29000	-	-	-	-	27993	-	-
Main activity elec. generation	-	-	-	-	-	-	-	-
Industry	-	-	-	24515	-	26996	-	-
Other uses	29000	-	-	24515	-	26996	-	-
<b>Coking coal</b>								
Production	28500	-	-	-	-	30995	-	-
Imports	28500	-	-	-	-	30995	-	-
Exports	28500	-	-	-	-	30995	-	-
Coke ovens	28500	-	-	-	-	30995	-	-
Main activity elec. generation	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-
Other uses	28500	-	-	-	-	30995	-	-
<b>Other bituminous coal</b>								
Production	24901	-	-	-	-	23597	-	-
Imports	25000	-	25916	25743	25800	-	-	29308
Exports	26107	-	-	-	-	27993	-	-
Coke ovens	-	-	-	-	-	-	-	-
Main activity elec. generation	24009	-	-	-	25800	20097	-	29308
Industry	24009	-	25916	24691	25800	26996	-	29308
Other uses	24009	-	25916	24691	25800	26996	-	25800
<b>Sub-bituminous coal</b>								
Production	-	-	-	-	-	-	-	-
Imports	-	-	-	-	-	-	-	-
Exports	-	-	-	-	-	-	-	-
Main activity elec. generation	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-
Other uses	-	-	-	-	-	-	-	-
<b>Lignite</b>								
Production	14918	-	-	7843	-	-	-	-
Imports	14918	-	-	8093	-	-	-	-
Exports	14918	-	-	8088	-	-	-	-
Main activity elec. generation	14918	-	-	7557	-	-	-	-
Industry	14918	-	-	18488	-	-	-	-
Other uses	14918	-	-	11990	-	-	-	-
<b>Patent fuel</b>	-	-	-	-	-	-	-	-
<b>Coke oven coke</b>	29015	-	-	26974	28200	26498	-	-
<b>Coal tar</b>	-	-	-	-	-	-	-	-
<b>BKB</b>	-	-	-	17608	-	-	-	-
<b>Peat</b>	9965	-	-	-	-	-	-	-
<b>Peat products</b>	17585	-	-	-	-	-	-	-
<b>Oil Shale</b>	-	-	-	-	-	-	-	-
<b>Charcoal</b>	30800	30800	28889	30800	-	30800	30145	30800

## Non-OECD country-specific net calorific values

2016

<i>kJ/kg</i>	Sudan	Suriname	Syrian Arab Republic	Chinese Taipei	Tajikistan	Tanzania	Thailand	Togo
<b>Crude oil</b>								
Production	42622	42161	42035	42370	42077	-	42226	-
Imports	42622	-	42035	42370	-	-	42226	-
Exports	42622	-	-	-	-	-	42226	-
Average	42622	42161	42035	42370	42077	-	42226	-
<b>NGL</b>	-	-	42035	-	-	-	46850	-
<b>Refinery feedstocks</b>	-	-	-	43961	-	-	44799	-
<b>Additives</b>	-	-	-	41868	-	-	-	-
<b>Other hydrocarbons</b>	-	-	-	-	-	-	-	-
<b>Biogasoline</b>	-	-	-	-	-	-	26800	-
<b>Biodiesels</b>	-	-	-	-	-	-	36800	-
<b>Other liquid biofuels</b>	-	-	-	-	-	-	-	-
<b>Anthracite</b>								
Production	-	-	-	-	-	-	-	-
Imports	-	-	-	27424	-	-	26377	-
Exports	-	-	-	25958	-	-	26377	-
Main activity elec. generation	-	-	-	-	-	-	-	-
Industry	-	-	-	26377	-	-	26377	-
Other uses	-	-	-	26796	-	-	26377	-
<b>Coking coal</b>								
Production	-	-	-	-	-	-	-	-
Imports	-	-	-	27424	-	-	-	-
Exports	-	-	-	-	-	-	-	-
Coke ovens	-	-	-	28889	-	-	-	-
Main activity elec. generation	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-
Other uses	-	-	-	26796	-	-	-	-
<b>Other bituminous coal</b>								
Production	-	-	-	-	18581	25800	-	-
Imports	-	-	-	27424	18581	-	26377	-
Exports	-	-	-	-	-	-	26377	-
Coke ovens	-	-	-	28889	-	-	-	-
Main activity elec. generation	-	-	-	26796	18581	-	26377	-
Industry	-	-	-	26377	-	25800	26377	-
Other uses	-	-	-	26796	18581	25800	26377	-
<b>Sub-bituminous coal</b>								
Production	-	-	-	-	-	-	-	-
Imports	-	-	-	18900	-	-	-	-
Exports	-	-	-	-	-	-	-	-
Main activity elec. generation	-	-	-	18900	-	-	-	-
Industry	-	-	-	18900	-	-	-	-
Other uses	-	-	-	18900	-	-	-	-
<b>Lignite</b>								
Production	-	-	-	-	14654	-	10618	-
Imports	-	-	-	-	-	-	12142	-
Exports	-	-	-	-	-	-	-	-
Main activity elec. generation	-	-	-	-	-	-	10371	-
Industry	-	-	-	-	-	-	18250	-
Other uses	-	-	-	-	14654	-	12142	-
<b>Patent fuel</b>	-	-	-	-	-	-	-	-
<b>Coke oven coke</b>	-	-	28200	28200	-	-	28200	-
<b>Coal tar</b>	-	-	-	-	-	-	-	-
<b>BKB</b>	-	-	-	-	-	-	-	-
<b>Peat</b>	-	-	-	-	-	-	-	-
<b>Peat products</b>	-	-	-	-	-	-	-	-
<b>Oil Shale</b>	-	-	-	-	-	-	-	-
<b>Charcoal</b>	30145	30800	30800	-	-	30800	30800	30800

## Non-OECD country-specific net calorific values

2016

<i>KJ/kg</i>	Trinidad and Tobago	Tunisia	Turkme- nistan	Ukraine	United Arab Emirates	Uruguay	Uzbekistan	Venezuela
<b>Crude oil</b>								
Production	42245	43124	42077	42077	42622	-	42077	44736
Imports	42245	43124	-	42077	-	42223	-	-
Exports	42245	43124	42077	-	42622	-	-	44736
Average	42245	43124	42077	42077	42622	42462	42077	44736
<b>NGL</b>	41868	43124	41910	41910	42622	-	-	41994
<b>Refinery feedstocks</b>	-	-	-	44799	-	-	-	-
<b>Additives</b>	-	-	-	41868	-	-	25121	-
<b>Other hydrocarbons</b>	-	-	-	-	-	-	41868	-
<b>Biogasoline</b>	-	-	-	26800	-	26796	-	-
<b>Biodiesels</b>	-	-	-	-	-	39775	-	-
<b>Other liquid biofuels</b>	-	-	-	-	-	-	-	-
<b>Anthracite</b>								
Production	-	-	-	24093	-	-	-	-
Imports	-	-	-	24093	26700	-	-	-
Exports	-	-	-	24093	-	-	-	-
Main activity elec. generation	-	-	-	24093	-	-	-	-
Industry	-	-	-	24093	26700	-	-	-
Other uses	-	-	-	24093	26700	-	-	-
<b>Coking coal</b>								
Production	-	-	-	28604	-	-	-	-
Imports	-	-	-	28604	28200	-	-	-
Exports	-	-	-	28604	-	-	-	-
Coke ovens	-	-	-	28604	-	-	-	-
Main activity elec. generation	-	-	-	28604	-	-	-	-
Industry	-	-	-	-	28200	-	-	-
Other uses	-	-	-	28604	28200	-	-	-
<b>Other bituminous coal</b>								
Production	-	-	-	21983	-	-	18581	30564
Imports	-	-	-	21983	25800	25800	-	-
Exports	-	-	-	21983	-	-	-	30564
Coke ovens	-	-	-	-	-	-	-	-
Main activity elec. generation	-	-	-	21983	-	-	-	-
Industry	-	-	-	21983	25800	-	18581	30564
Other uses	-	-	-	21983	25800	25800	18581	30564
<b>Sub-bituminous coal</b>								
Production	-	-	-	-	-	-	-	-
Imports	-	-	-	-	-	-	-	-
Exports	-	-	-	-	-	-	-	-
Main activity elec. generation	-	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-	-
Other uses	-	-	-	-	-	-	-	-
<b>Lignite</b>								
Production	-	-	-	-	-	-	14654	-
Imports	-	-	-	-	-	-	14654	-
Exports	-	-	-	-	-	-	14654	-
Main activity elec. generation	-	-	-	-	-	-	14654	-
Industry	-	-	-	-	-	-	14654	-
Other uses	-	-	-	-	-	-	14654	-
<b>Patent fuel</b>	-	-	-	-	29000	-	-	-
<b>Coke oven coke</b>	-	-	-	25121	28200	-	-	-
<b>Coal tar</b>	-	-	-	38000	-	-	-	-
<b>BKB</b>	-	-	-	-	-	-	-	-
<b>Peat</b>	-	-	-	9703	-	-	-	-
<b>Peat products</b>	-	-	-	14655	-	-	-	-
<b>Oil Shale</b>	-	-	-	-	-	-	-	-
<b>Charcoal</b>	30800	30800	30800	30800	30800	31401	-	30800



## Non-OECD country-specific net calorific values

2016

<i>KJ/kg</i>	Viet Nam	Yemen	Zambia	Zimbabwe	Other Africa	Other non-OECD Amer.	Other non-OECD Asia
<b>Crude oil</b>							
Production	42622	42998	-	-	42161	42161	42161
Imports	42622	-	42702	-	-	42161	42161
Exports	42622	-	-	-	42161	42161	42161
Average	42622	42998	42702	-	42161	42161	42161
<b>NGL</b>	42705	42538	-	-	42705	-	42705
<b>Refinery feedstocks</b>	-	-	-	-	-	-	-
<b>Additives</b>	-	-	-	-	-	-	-
<b>Other hydrocarbons</b>	-	-	-	-	-	-	-
<b>Biogasoline</b>	-	-	-	26800	-	-	-
<b>Biodiesels</b>	-	-	-	-	-	-	-
<b>Other liquid biofuels</b>	-	-	-	-	-	-	36800
<b>Anthracite</b>							
Production	23446	-	-	-	-	-	-
Imports	23446	-	-	-	-	-	-
Exports	23446	-	-	-	-	-	-
Main activity elec. generation	23446	-	-	-	-	-	-
Industry	23446	-	-	-	-	-	-
Other uses	23446	-	-	-	-	-	-
<b>Coking coal</b>							
Production	-	-	-	26996	-	-	-
Imports	-	-	-	-	-	-	-
Exports	-	-	-	-	-	-	-
Coke ovens	-	-	-	26996	-	-	-
Main activity elec. generation	-	-	-	-	-	-	-
Industry	-	-	-	-	-	-	-
Other uses	-	-	-	26996	-	-	-
<b>Other bituminous coal</b>							
Production	-	-	24706	26996	25800	-	25800
Imports	23446	25800	-	26996	25800	25800	25800
Exports	-	-	-	-	25800	-	25800
Coke ovens	-	-	-	-	-	-	25800
Main activity elec. generation	23446	-	24706	26996	25800	25800	25800
Industry	23446	25800	24706	26996	25800	25800	25800
Other uses	23446	25800	24706	26996	25800	25800	25800
<b>Sub-bituminous coal</b>							
Production	-	-	-	-	-	-	-
Imports	18900	-	-	-	-	-	-
Exports	-	-	-	-	-	-	-
Main activity elec. generation	-	-	-	-	-	-	-
Industry	18900	-	-	-	-	-	-
Other uses	18900	-	-	-	-	-	-
<b>Lignite</b>							
Production	-	-	-	-	-	-	14403
Imports	-	-	-	-	-	-	-
Exports	-	-	-	-	-	-	-
Main activity elec. generation	-	-	-	-	-	-	14403
Industry	-	-	-	-	-	-	14403
Other uses	-	-	-	-	-	-	14403
<b>Patent fuel</b>	-	-	-	-	-	29000	-
<b>Coke oven coke</b>	28200	-	-	25121	-	-	28200
<b>Coal tar</b>	-	-	-	-	-	-	-
<b>BKB</b>	-	-	-	-	-	-	-
<b>Peat</b>	9760	-	-	-	9760	9760	-
<b>Peat products</b>	-	-	-	-	-	-	-
<b>Oil Shale</b>	-	-	-	-	-	-	-
<b>Charcoal</b>	30800	30800	32594	30800	30800	30800	30800

## Regional and country-specific net calorific values for oil products

2016

<i>kJ/kg</i>	OECD Europe <sup>1</sup>	OECD Americas	OECD Asia Oceania	Non- OECD <sup>2</sup>	Algeria	Argen- tina	Brazil	Cam- bodia	PR of China	Colombia	Cuba
Refinery gas	49500	48100	48100	48100	-	-	35169	-	46055	-	-
Ethane	49500	49400	49400	49400	-	-	-	-	-	-	-
Liquefied petroleum gases	46000	47300	47700	47300	49404	46055	46473	49404	50242	46139	47650
Motor gasoline	44000	44800	44600	44800	-	43543	43543	42488	43124	43570	44945
Aviation gasoline	44000	44800	44600	44800	-	43543	44380	-	43124	-	44945
Gasoline type jet fuel	43000	44800	44600	44800	-	43543	-	-	43124	-	-
Kerosene type jet fuel	43000	44600	44500	44600	-	43124	43543	43015	43124	44158	44150
Other kerosene	43000	43800	42900	43800	-	43124	43543	42643	43124	43100	44150
Gas/diesel oil	42600	42600	42600	43300	-	42705	42287	43158	42705	43102	43155
Fuel oil	40000	40200	42600	40200	-	41031	40151	41868	41868	41268	40570
Naphtha	44000	45000	43200	45000	-	43333	44506	-	43124	-	44945
White spirit	43600	43000	43000	43000	-	-	47060	-	38519	-	44945
Lubricants	42000	42000	42900	42000	-	-	42370	41064	38519	-	40968
Bitumen	39000	40000	38800	39000	-	-	40989	-	-	-	40968
Paraffin waxes	40000	40000	40000	40000	-	-	-	-	-	-	-
Petroleum coke	32000	32000	33800	32000	-	30145	35127	-	-	-	-
Non-specified oil products	40000	40000	40000	40000	-	-	42825	-	38519	-	-
	Egypt	Iran	Jordan	Lebanon	Malaysia	Mozam- bique	Namibia	Nepal	Nica- ragua	Oman	Pakistan
Refinery gas	-	-	58615	-	-	-	-	-	-	-	-
Ethane	-	-	-	-	-	-	-	-	-	-	-
Liquefied petroleum gases	-	-	46557	-	45544	45594	-	49240	47018	-	45427
Motor gasoline	-	43546	43543	-	43961	-	46892	47270	44129	-	-
Aviation gasoline	-	-	43543	-	43961	-	51498	-	-	-	43752
Gasoline type jet fuel	-	-	-	-	-	-	-	-	-	-	-
Kerosene type jet fuel	45636	-	43585	44673	43199	-	44213	46600	42915	-	43292
Other kerosene	45469	-	43292	-	43208	-	-	46060	42915	-	43292
Gas/diesel oil	44631	-	42663	45217	42496	-	45427	45890	42747	-	44087
Fuel oil	40696	-	40486	-	41500	-	41742	44210	41324	-	40863
Naphtha	44799	-	-	-	44129	-	-	-	-	-	44841
White spirit	-	-	-	-	43208	-	-	-	-	-	-
Lubricants	-	-	-	-	42140	-	-	-	-	-	-
Bitumen	-	-	-	-	41800	-	-	-	-	-	-
Paraffin waxes	-	-	-	-	43333	-	-	-	-	-	-
Petroleum coke	-	-	-	-	36400	-	-	-	-	-	-
Non-specified oil products	-	-	-	39775	42496	-	-	-	-	46781	-
	Paraguay	Philip- pines	Senegal	South Africa	Sri Lanka	Thailand	Tunisia	Uruguay	Vene- zuela	Viet Nam	Zambia
Refinery gas	-	-	-	-	-	-	-	-	-	-	-
Ethane	-	-	-	-	-	46892	-	-	-	-	-
Liquefied petroleum gases	45845	45050	-	46767	44380	49296	46306	46055	49271	45552	45421
Motor gasoline	-	44254	-	44045	45636	43196	43878	43899	46942	43961	43002
Aviation gasoline	-	44254	-	45552	45636	-	43878	44162	47107	-	-
Gasoline type jet fuel	-	44254	-	40738	45636	-	43878	-	47156	-	-
Kerosene type jet fuel	40528	41688	43961	41073	43961	-	43333	43528	46092	43208	43332
Other kerosene	-	41261	43961	43250	43961	43703	43208	43214	45928	43208	43332
Gas/diesel oil	42873	42073	43543	42915	43961	42331	42998	41780	45245	42496	42772
Fuel oil	41031	41110	-	41826	41031	42304	40989	-	43286	41491	40892
Naphtha	39942	46185	44799	44924	45636	-	44129	44568	47090	-	43951
White spirit	-	-	-	42496	-	-	43585	-	-	-	-
Lubricants	-	-	-	-	-	-	42705	-	44852	-	-
Bitumen	-	38720	-	-	-	-	42705	40361	44158	-	42702
Paraffin waxes	-	-	-	-	-	-	-	-	-	-	-
Petroleum coke	-	-	-	-	-	-	-	-	28889	-	-
Non-specified oil products	-	41299	-	-	-	-	42705	42262	41868	-	-

1. Defaults for Europe were applied to non-OECD Europe and Eurasia.

2. Unless country-specific net calorific values are available.

# COUNTRY NOTES AND SOURCES

## OECD COUNTRIES

### General notes

The notes given in this document refer to data for the years 1960 to 2017 published in the book, as well as on CD-ROM and in the on-line data service. In general, more detailed notes are available for data starting in 1990.

Data are obtained through annual submission of five fuel questionnaires from national administrations, as indicated for each country in the section on sources.

In some instances it has been necessary for the IEA Secretariat to estimate some data; explanations of the estimates are provided in the country notes. For more information on fuel-specific methodologies, please refer to the various IEA information books. Energy data reported for 2017 (shown as 2017p) in the final release are provisional supply data based on submissions received in early 2018 and on monthly submissions to the IEA from member countries.

This section lists a few specific notes that apply to all countries, and it is followed by a time series of comprehensive country-specific notes by fuel and flow.

Prior to 1974, most fuel inputs and electricity and heat outputs for autoproducers are included in main activity producers. The figures for the quantities of fuels used for the generation of electricity and heat and the corresponding outputs in CHP and heat plants should be used with caution. Despite estimates introduced by the IEA Secretariat, inputs and outputs are not always consistent. Please refer to notes below under *Electricity and heat*.

Data for anthracite, coking coal, other bituminous coal, sub-bituminous coal and lignite are available separately from 1978. Prior to 1978, only data for hard coal and brown coal (lignite/sub-bituminous coal) are available.

In 1996, the IEA Secretariat extensively revised data on coal and coke use in blast furnaces, and in the iron and steel industry (for those countries with blast furnaces), based on data provided to the OECD Steel Committee and other sources. The quantities of fuels transformed into blast furnace gas have been estimated by the IEA Secretariat based on its blast furnace model.

For biofuels and waste (i.e. solid biofuels, biogases, liquid biofuels, industrial waste and municipal waste), there may be breaks in time series between 1988 and 1989, as in 1997 the IEA Secretariat extensively revised these data based on data from Eurostat (for the EU-15 member countries) and on other national sources for other OECD member countries, and data from Eurostat were generally available from 1989. Generally, data on biofuels and waste are reported in non-specified prior to 1989.

## Australia

### Source

Department of Environment and Energy, Canberra.

### General notes

All data refer to the fiscal year (e.g. July 2015 to June 2016 for 2016).

Starting with the 2013 edition and following, data for Australia were revised back to 2003 due to the adoption of the National Greenhouse and Energy Reporting (NGER) as the main energy consumption data source for the Australian Energy Statistics. As a result, there are breaks in the time series for many data between 2002 and 2003. The revisions have also introduced some methodological issues, including identifying inputs and outputs to certain transformation processes such as gas works plants, electricity plants and CHP plants. Energy industry own use and inputs to the

transformation processes are sometimes not reported separately in the correct categories. More detail is given in the notes below.

## Coal

### General notes

- In the 2017 edition, the Australian administration revised data on **coal tar** back to 2010 resulting in breaks in time series between 2009 and 2010.
- In the 2016 edition, extensive revisions were made to 2010 to 2013 data for many primary and manufactured products causing breaks in production, trade and consumption between 2009 and 2010. Time series which begin in 2010 may be reported in other flows until 2009. 2014 data were reported on the same basis as 2010 to 2013.
- In the 2015 edition, increases of production and consumption of **other bituminous coal** for 2013 are due to both new mine capacity and improved classification data. In the 2016 edition, these revisions were extended back to 2010. Apparent switching between **sub-bituminous coal** and **other bituminous coal** between 2009 and 2010 suggests that some **other bituminous coal** was reported as **sub-bituminous coal** prior to this, across several flows.
- In the 2013 edition, production data for all **manufactured gases** were revised downwards as part of the new national methodology, leading to significant statistical differences.
- Reclassification of some **coal** types in the 2013 edition were calculated on an energy basis and resulted in a net increase of quantities of primary coal from 2003 to 2011.
- Breaks in the time series for **gas works gas** between 2008 and 2009 are due to a change of survey, while reduced production and consumption between 2006 and 2008 are due to the removal of some **natural gas** inputs.
- Data on **blast furnace gas** for electricity production by autoproducers begins in 1986.
- **Hard coal** data prior to 1978 may include **sub-bituminous coal**.

### Supply

- The decrease of lignite production and consumption in 2017 was due to the closure of brown coal fired Hazelwood power plant in early 2017, contributing to a higher consumption of other bituminous coal.

- Only **anthracite** exports are reported separately; the remainder that is consumed domestically is included with **other bituminous coal**.
- Export trade in **coke oven coke** between 2005 and 2011 exists, but data are unavailable for reasons of confidentiality.

### Transformation

- In 2015, a new plant within the mining sector started its operations increasing the consumption of **coke oven coke**.
- The one company producing **BKB** closed its operation during 2015. As such, production and consumption declined significantly.
- For 2003 to 2012, **coke oven gas** reported as energy industry own-use in electricity or CHP plants is used for generation purposes, while **natural gas** used for own-use plant support is reported in the transformation sector.
- **Natural gas** consumed to fuel the distribution of **natural gas** in natural gas networks is reported as transformation for **gas works gas** production until 2005.
- The drop in **BKB** production in 2004 was due to a fire in the main production plant.

### Consumption

- In the 2016 edition, revisions for 2010 onwards have increased the quantities of **sub-bituminous coal** and decreased the quantities of **other bituminous coal** being used in the non-metallic minerals industry as more accurate information has become available.
- Consumption in wood and wood products is included in paper, pulp and print from 2001 onwards.

## Oil

### General notes

- In 2017, the Australian administration added new companies to their reporting. This primarily impacts the stocks of **motor gasoline** and **gas/diesel oil**.
- Between 2009 and 2010 some breaks in time series may occur due to changes in methodologies and to improved data sources, with major revisions explained below.
- **Other hydrocarbons** reported under *from other sources natural gas* correspond to hydrogen used

in refineries, also represented as the output of *non-specified transformation* in the balances format.

- An in-depth review of Australian oil statistics, in particular investigation of amounts currently reported under recycled products as well as statistical differences for **motor gasoline** and **bitumen**, is on-going and may result in further improvements in the next editions.

### Supply

- **Crude oil** production and imports continued to decline in 2016 following the closure of domestic refining capacity in New South Wales (Kurnell Refinery) and Queensland (Bulwer Island Refinery). Refinery outputs also fell as a result. These two sites have been converted to import terminals helping Australia expanding its import capacity. As a result refined products imports increased considerably in 2016.
- From 2010 **crude oil** production estimates for selected companies have been replaced by actual data.
- Imports of **fuel oil** have been estimated by the Australian administration.
- In the 2015 data, **fuel oil** imports dropped significantly due to the closure of the two large consumers of this product, the Gove alumina refinery and the Point Henry aluminium smelter.
- There is a break in the time series for **crude oil** and **NGL** between 2001 and 2002.
- The drop in the production of **crude oil** in 1999 is due to a gas explosion at the Longford plant.
- Prior to 1992, part of the **NGL** production is included in **crude oil**.

### Transformation

- As a result of a new methodology adopted to split **gas/diesel oil** inputs between main activity and autoproducer plants, breaks in series appear between 2009 and 2010.

### Consumption

- Breaks in the time series appear between 2009 and 2010 in transport consumption due to a change in methodology.

### Natural gas

#### General notes

- In the 2016 edition, the Australian administration revised natural gas demand data for some flows

back to 2010, resulting in breaks in time series between 2009 and 2010.

- In 2015, the Australian administration revised production and certain consumption data back to 2006. The production figures now include previously uncaptured flows.
- Prior to 1991 natural gas data include ethane.

### Supply

- For 2017, there is a significant increase in production (+21%) and exports (+35%) of gas, due to the LNG exporting capacity coming online in 2016 and 2017.
- Around 30% of the production (mainly coal seam gas) is estimated by the Australian administration.

### Transformation

- *Non-specified transformation* of natural gas represents amounts used to produce hydrogen for hydrodesulphurization in refineries.
- Until 2005, natural gas consumed to fuel the distribution of natural gas in natural gas networks was reported as transformation for gas works gas production.

### Consumption

- Consumption in the residential and agriculture sectors is estimated by the Australian administration based on models.
- Between 2009 and 2010 some breaks in time series may occur due to changes in methodologies and to improved data sources. Revisions to the consumption data include changes to energy use in liquefaction plants, and a shift of gas works gas (transformation) to non-specified energy from 2006 onwards. Revisions to previous years are pending.
- Between 2001 and 2002 there are breaks in time series for consumption data due to an industry structural shift and changes in methodology.
- Data for 1999 and 2000 end-use consumption are estimated by the Australian administration.

### Biofuels and waste

#### General notes

- In the 2018 edition, **biogases** were revised downward by the Australian administration back to 2015 as a result of the removal on 1 July 2015 of a production subsidy for domestic ethanol. The subsidy was equal to the excise rate on unleaded petrol.

- Increases in production of **solid biofuels** since 2014 are related to incentives under the Renewable Energy Target legislation, which went into effect in 2001 and aims to increase the share of electricity generation from renewable sources. More information is available here: <http://www.cleanenergyregulator.gov.au/RET>.
- The data for **biogasoline** and **biodiesel** are not available before 2003 and 2004 respectively.
- From 1996, a different industry consumption breakdown for biofuels and waste is available and leads to breaks in time series.

### Supply

- **Biogas** production data at sewage treatment works are not available.
- Indigenous production of **biodiesel** has decreased substantially in 2016 because one of the major **bio-diesel** producers ceased production in January 2016. The trend continues in 2017, when, according to Bioenergy Australia, low oil prices and higher feedstock prices created a difficult market for the remaining **biodiesel** producers.
- Production of **biogasoline (ethanol)** decreased since the Ethanol Production Grants Programme ended on 30 June 2015. On 1 July 2015, the fuel excise on domestically produced ethanol was reduced to zero and will be increased by 2.5 cents per litre until it reaches 12.5 cents per litre. Additionally, 2017 quantities were also affected by low oil prices.

### Consumption

- In the 2018 edition, **solid biofuels** were revised back to 2010 by the Australian administration, expanding the scope from the revisions in the 2016 and 2017 editions to indigenous production and consumption sectors which weren't previously revised. This results in a break in time series between 2009 and 2010.
- In the 2017 edition of this publication, there has been a revision to the time series of **solid biofuels** consumption in "Paper, pulp and printing" sector. This time series has been revised back to 2010 resulting in break in time series between 2009 and 2010.
- In the 2016 edition of this publication, the Australian administration revised **primary solid biofuels** back to 2010 which impact mostly final consumption in Food and Tobacco. This created breaks in time series.

- The consumption data of **biogases** in industry is not available before 2003.

## Electricity and heat

### General notes

- In the 2016 edition, several combustible fuel electricity production time series as well as some electricity consumption time series were revised by the Australian administration back to 2010 in order to limit the use of estimated data and are causing some breaks.
- From 1992 onwards, heat data are not available.

### Supply

- Data for production of electricity from **wind** are available from 1994.
- Data for electricity production from **solar photovoltaic** start in 1992 and from **solar thermal** in 2003.

### Transformation

- Fuels used for generation by autoproducers represent single fuel-fired units only. The use of fuel in multi-fired units operated by autoproducers is included in industry consumption.
- In the 2018 edition, new methodologies were introduced by the Australian administration for reporting electricity production from solar sources. First, the methodology for reporting electricity production from **solar PV** and **solar thermal** was changed between 2009 and 2010, resulting in a break in time series. Prior to 2010, the ratio of electricity production from **solar thermal** to total solar was assumed to be the same each year. After 2010, **solar PV** autoproducer electricity production is the residual after the main activity **solar PV** and **solar thermal** are deducted from total solar production. There is an additional break in time series between 2013 and 2014 for **solar** production when a new methodology for determining large-scale **solar PV** production was introduced for main activity **solar PV** plants.
- In the 2017 edition, following an extended review of past data, the Australian administration revised electricity outputs of **blast furnace gas** autoproducer electricity plants for the period 2003-2004 and of autoproducer CHP plants fuelled by **other oil products** for 2009, resulting in more realistic efficiency rates for these plants.
- In 2002, the Australian administration started to use a new survey methodology and reclassified the



types of plants between main activity producers and autoproducers.

- Prior to 1995, electricity production from **biogases** is included in natural gas.
- Prior to 1986, inputs and outputs from autoproducer CHP plants are not available.

### Consumption

- The opening of large-scale production at Australia's new east coast LNG plants led to significant growth in **electricity** consumption in the oil and gas sector in 2016.
- Prior to 2006, **electricity** consumption in mining and quarrying includes consumption in liquefaction/regasification plants.
- From 1990 to 2008, **electricity** consumption in wood and wood products is included together with paper, pulp and printing.
- The direct use of **solar heat** (mostly domestic solar panels) is available from 1974.
- **Electricity** consumption in coke ovens has been estimated by the Australian administration from 1974 to 1999.
- Prior to 1974, the breakdown of **electricity** consumption in industry and energy sub-sectors is not available and energy industry consumption is included in industry.
- **Electricity** consumption in the *non-specified transport* sector represents support services for transport for mining operations.
- Prior to 1971 **electricity** consumption in the commercial and public services sector is included in industry.
- Reported **electricity** consumption in the oil and gas extraction section may include some consumption in LNG/regasification plants.

## Austria

### Source

Bundesanstalt Statistik Österreich, Vienna.

### General notes

- Starting with the 2016 edition and following, widespread data revisions were received due to enhanced reporting from 2005 onwards as a consequence of improved Austrian Final Energy

Consumption surveys. For some time series, these revisions were extrapolated back to 1990. As a consequence, there may be breaks between 2004 and 2005, and 1989 and 1990.

### Coal

#### General notes

- In the 2017 edition, revisions concerning the iron and steel industry were received for data since 2005. The revisions impacted the energy sector for **coke oven gas** and **blast furnace gas**.
- In the 2016 edition, revisions concerning the iron and steel industry were received for data since 1990. The following flows were impacted by these revisions: inputs to blast furnaces, the breakdown between transformation and own-use energy support, and calorific values.
- The last **lignite** mine closed in the second quarter of 2004 and **lignite** use for power generation ceased in 2006.
- Since 1996, **gas works gas** data are reported with **natural gas** because it is distributed in the same network. The amount of **gas works gas** is negligible and it is mostly consumed by households.
- "Trockenkohle" is included with **BKB** because of its high calorific value.
- LD gas, which should normally be reported as **other recovered gases**, is reported with **blast furnace gas**.

### Oil

#### Supply

- Exports of **naphtha** are no longer reported from 2014, past values may refer to exports of petrochemical raw material.
- Deliveries of **gas/diesel** to international marine bunkers were revised back to 1990 after implementation of a new study results.
- Prior to 1990, a portion of **naphtha** is included with **other oil products**.

### Natural gas

#### Supply

- Export amounts are calculated by the national administration by subtracting stock changes and domestic consumption from import figures.

### Transformation

- In the 2018 edition, the time series for Blast Furnaces was reclassified from 1990 onwards, and thus moved from the Transformation to the Energy sector. This has resulted in increasing the efficiency of the Blast Furnaces process.
- Between 1995 and 1996 there is a break in time series for autoproducer electricity and CHP plants due to the availability of more detailed data.

### Consumption

- In the 2018 edition, the Austrian administration revised consumption data in 2014 and 2015 to include information from new surveys on energy consumption in small and medium sized industries.
- There are inconsistencies in the time series for commercial/public services as this sub-sector is computed as a residual.
- The increase in pipeline transport consumption for 2013 is due to a new methodology of data collection. Historical revisions are pending. Prior to 2000, differences due to measurement are included with distribution losses.

### Biofuels and waste

#### General notes

- Data for 1986 to 1989 for **solid biofuels**, **industrial waste**, **biogases** and **liquid biofuels** are IEA Secretariat estimates based on information published by OSTAT in *Energieversorgung Österreichs Endgültige Energiebilanz*.

#### Consumption

- In the 2016 edition, improvement in the iron and steel industry data have allowed more precision in the consumption, among other for **industrial waste** in blast furnaces.
- In the 2016 edition, the consumption of **solid biofuels** in the residential sector was revised down from 2005 data.

### Electricity and heat

#### Supply

- Amounts for both net electricity production and plant own use are calculated by the Austrian administration by applying a fixed percentage multiplier to the gross production of all plants in the public grid, regardless of plant type or fuel.

### Transformation

- Electricity plants data may include some CHP plants operating in **electricity** only mode.
- Fluctuating efficiencies from year to year for **solid biofuel** and **industrial waste** plants are related to operational decisions which are governed by a formula described in the *Standard documentation Meta information on Energy balances for Austria and the Laender of Austria* published in June 2016 on the Statistics Austria website.
- In the 2018 edition, electricity production from **municipal waste** main activity electricity plants was revised from 2003-2009. Additionally, electricity production from **municipal waste** main activity CHP plants was revised in 2014.
- A large autoproducer electricity plant was reclassified as an autoproducer CHP plant and therefore creates a break in time series for **municipal waste** in 2011.
- In 2009, inputs of **other oil products** to autoproducer CHP plants were reclassified as **refinery gas** and **natural gas**.
- Due to a change in the survey methodology, the **heat** produced in small plants (capacity inferior to 1 MW) is not reported starting in 2002.
- **Heat from chemical processes** used for **electricity** production is available from 2004.
- Electricity generation from **geothermal** started in 2002.
- Prior to 2002, data for **biogases** only include plants of 1 MW or larger.
- Prior to 1981, inputs to main activity producer electricity plants include inputs to CHP plants. All electricity production by CHP plants is included in electricity plants, and only production from combustible fuel sources is taken into account. Autoproducer CHP heat production is included in main activity producer CHP plants. For heat, own use is included in distribution losses.

#### Consumption

- **Electricity** consumption in oil refineries includes consumption in gas works plants prior to 1991.
- From 1990 to 2009, small amounts of **electricity** used in heat pumps have been included in the residential sector.
- Starting in 1990, consumption of **electricity** in the field of electricity supply, district heating and water supply are included in *other energy industry own*



use, prior to that it was included in commercial/public services.

- Also prior to 1991, **electricity** consumption in the iron and steel industry includes consumption in coke ovens and blast furnaces.

## Belgium

### Source

Observatoire de l'Energie, Brussels.

### Coal

#### General notes

- In the 2016 edition, improved data collection has led to some breaks in time series. These revisions include **hard coal** classifications, products and processes in integrated iron and steel manufacture and may be extended further back in future editions.
- Data for **anthracite** prior to 2014 may include a small portion of **other bituminous coal**.
- **Hard coal** data prior to 1978 may include **sub-bituminous coal**.
- **Other bituminous coal** and **sub-bituminous coal** data reported in *from other sources* refer to coal recuperated from coal dumps.

#### Supply

- Supply-side data are obtained through surveying questionnaires instead of customs data.
- Conventional production of **other bituminous coal** ceased on 31 August 1992.

#### Transformation

- In 2016, the decrease of **other bituminous coal** inputs to main activity producer electricity plants was due to the permanent closure of Langerlo, Belgium's last coal-fired main activity electricity.
- In 2015, the decrease of **coke oven gas** inputs to autoproducer CHP plants is due to a power plant closure in 2015.
- In 2014 and 2015, **coking coal** inputs to coke ovens decreased due to a coke oven closure in June 2014.
- In 2014, the decrease of **other bituminous coal** inputs to main activity producer electricity plants is due to a power plant closure in 2014.

### Consumption

- In the 2018 edition, industrial consumption for the period 2013 through 2015 was revised for **coking coal** and **anthracite**, as more accurate consumption data became available. Data for **coking coal** prior to 2013 may include a small portion of **anthracite**.
- The decrease of **other bituminous coal** and **coke oven coke** in the iron and steel industry in 2002 is due to the closure of several plants.
- The use of **coke oven gas** in chemical and petrochemical activities ceased in 1996.

### Oil

#### General notes

- Between 2008 and 2009 breaks in series occur for **naphtha** and **LPG** in both transformation and final consumption in the petrochemical sector as a result of methodological improvements made by the Belgian administration.
- Data on biofuels are not available before 2009.

#### Supply

- Consumption in international marine bunkers dipped in 2014 and 2015 due to the closure of several bunkering companies. During 2015 these were replaced by new companies which became fully operational in 2016.
- Starting from 2013, a new data source was introduced for petroleum coke trade.

#### Transformation

- In 2002, patent fuel plants used fuel oil to increase the calorific value of patent fuel.

#### Consumption

- The decrease of fuel oil in industry consumption since 1993 is due to the introduction of an excise tax as well as increased use of natural gas.

### Natural gas

#### Supply

- Since 2009 gas trade in Belgium includes imported LNG which is regasified and subsequently exported to other countries.

#### Transformation

- The Belgian administration is in the process of revising 2010 and 2011 transformation sector data. As

such, an unusually high quantity of natural gas is reported under not elsewhere specified (transformation).

- Between 2008 and 2009, there is a break in efficiency of **natural gas** autoproducer CHP plants due to a change in methodology regarding the reporting of unsold heat.

### Consumption

- Consumption in the transport equipment sector decreased in 2015 due to the closure of a large industry of this sector in December 2014.
- In 2003, the large decrease in *non-specified industry* consumption is due to improvements in data collection.
- Since 2000, natural gas began to replace blast furnace gas in the iron and steel industry.

## Biofuels and waste

### General notes

- Renewable **municipal waste** includes a share of renewable **industrial waste**.
- Data for **biodiesels** and **biogasoline** are available starting in 2009.

### Supply

- Data on pure **biogasoline** and **biodiesels** trade are not available for 2009 and 2010.

### Transformation

- In 2015, part of the law regulating the blending of biodiesel with diesel was temporarily suspended but in 2016, this law was reinstated.

### Consumption

- Consumption of **bioethanol** increased in 2017 due to legislation coming into effect on 1 January 2017, which increased the blending obligation for gasoline products.
- **Industrial waste** consumption in the chemical sector started in 2013.
- **Other liquid biofuels** consumed in power plants reported before 2011 can include **biodiesel**.
- New data on consumption cause breaks in time series for **primary solid biofuels** between 2011 and 2012.

## Electricity and heat

### Supply

- The electricity production under **other sources** represents mainly production at a gas expansion

station with heat recovery and at a hydraulic turbine in a waste water treatment plant.

- From 2013 onwards, reported **heat** distribution losses decreased due to a more precise estimation method.
- The production of electricity from **wind** is available from 1987.

### Transformation

- Langerlo, Belgium's last coal-fired main activity electricity producer closed permanently in March 2016.
- Heat production from chemical processes used for electricity production is available from 2005.
- In 2012, heat production from chemical sources has been estimated by the IEA Secretariat.
- Prior to 2009 some unsold heat was reported in natural gas autoproducer CHP plants, together with the associated natural gas input. This causes the drop in efficiency in 2009.
- In 2007 data, no information was available on heat production in main activity CHP plants for **industrial waste**.
- In 2003, combustion of **municipal waste** for electricity and heat generation purposes increased significantly. However, because a large portion of the heat produced is not used (sold), plant efficiencies dropped significantly between 2002 and 2003.
- In 2000, most autoproducer electricity plants using **combustible fuels** were reclassified as autoproducer CHP plants; the heat production from these plants was used for internal industrial processes and not sold to third parties until 2005.
- For 1998 and 1999, **electricity** production at main activity producer CHP plants with annual heat output below 0.5 TJ is reported with main activity producer electricity only plants.
- Prior to 1982, **electricity** production in main activity producer CHP plants is included in production from electricity plants. Also, inputs of fuels for electricity generation in main activity producer electricity plants include inputs for heat production in CHP plants.

### Consumption

- For 2012, **electricity** consumption in the mining and quarrying sector has been estimated by the IEA Secretariat.
- For 2012, oil refineries **electricity** consumption has been estimated by the IEA Secretariat based on refinery activity data. Part of the estimated amount

has been removed from consumption in the chemical and petrochemical sector.

- Breaks in time series may exist between 2007 and 2008 due to revisions of the Classification of the Economic Activities in the European Community (NACE) classifications.
- There is no **heat** consumption starting in 2007 in the iron and steel industry because the installation concerned became an autoproducer in July 2006 and the heat is no longer sold.

## Canada

### Source

Natural Resources Canada, Ottawa.

### General notes

- In the 2018 edition, data for Canada were revised back to 2005 following a ten year revision of the Report on Energy Supply and Demand (RES-D), the main set of Canadian annual data. The revision standardizes the methodology used for the IEA data submission and has mainly affected the demand side. Additional details are given under each fuel.
- From the 2014 edition, the Canadian administration revised time series back to 2005, using additional data from the Annual Industrial Consumption of Energy, the Annual Survey of Secondary Distributors, the Report on Energy Supply and Demand and the Natural Resources Canada Office of Energy Efficiency. Breaks in time series also between appear 1989 and 1990, due to changes in methodology, incorporated in 2002.

## Coal

### General notes

- Due to the extensive revisions of the Report on Energy Supply and Demand (RES-D), significant statistical differences can be observed for several coal products for the period 2005-2015. This issue is under investigation and further improvements are expected in future editions.
- In the 2016 and 2017 edition, extensive revisions for the period 2005 to 2015 were received as more data became available due to improvements in data collection.
- In the 2014 and 2015 editions, some revisions to the 2004 to 2006 data were received in addition to some time series and products for 2007 to 2011.

- Due to a Canadian confidentiality law, it is not possible for the Canadian administration to submit disaggregated time series for all of the **coal** types. Between 2002 and 2006, the IEA Secretariat has estimated some of the missing time series. The data for 2007 onwards are given directly as reported, however data may be present in non-representative products, and additionally these ad hoc reclassification methodologies contribute significantly to larger than normal statistical differences across products.
- At this point in time, **oil shale and oil sands** data are not submitted, and this energy source is deemed to enter the supply stream as shale oil (**other hydrocarbons**).

### Supply

- Due to confidentiality constraints, from 2014 the breakdown of production by type of coal is estimated by the Canadian administration, while stock changes and statistical differences are estimated since 2001.

### Transformation

- Injection of pulverized coal into blast furnaces (**PCI**) occurs, but is not available for confidentiality reasons. Coals consumed in this manner are reported in the iron and steel industry along with other consumption.
- Before 1978, **lignite** inputs to main activity producer heat plants are included in final consumption. Starting in 1979, these inputs are included in main activity producer electricity plants.

### Consumption

- Since 2001, consumption of **anthracite** in non-energy use is estimated by the Canadian administration. Statistical differences include consumption in iron and steel.
- Due to the unavailability of data, non-energy use of **coke oven coke** and **hard coal** is included with final consumption sectors prior to 1978 and 1980, respectively.

## Oil

### General notes

- The 2018 edition includes numerous time series revisions for the years 2005-2016. This is due to the 10 year revision of the Report on Energy Supply and Demand, which is the main set of

Canadian annual data. The majority of these revisions were applied to the demand side.

- In the 2016 edition, the Canadian administration was able to reconcile some historical inconsistencies by reporting inputs and outputs to upgraders. In the supply side, these quantities are reported under **Other Hydrocarbons**. In the demand side, they are reported under the respective output products (**Refinery Gas, Road Diesel, and Petroleum Coke**).
- Time series for **other non-specified oil products** may fluctuate as they have been computed as residuals.

### Supply

- In the 2018 edition the domestic supply of crude oil was revised due overall revisions to the Report on Energy Supply and Demand and the inclusion of additional data sources in the reporting.
- From 2014 data the Canadian administration started using customs based trade data to report crude oil imports. In the 2017 edition, **crude oil** imports data have been revised back to 2005 following this methodology. Some revisions to imports of secondary products have already been made and further revisions are expected.
- Condensates and pentanes plus are included in **crude oil** from 2005, in **NGL** 1990 to 2004 and in **LPG** prior to 1990. Historical revisions are pending.
- From 2005 primary oil products include direct imports of condensates by crude oil producers.
- Production of **other hydrocarbons** represents synthetic crude oil produced from tar sands.
- From 2005, **other hydrocarbons** from other sources natural gas corresponds to natural gas used for the upgrading of synthetic crude oil (reported under GTL transformation in the natural gas consumption data) and natural gas used to upgrade petroleum products (reported under non-specified transformation in the natural gas consumption data). From 1990 to 2005, these quantities are reported in indigenous production of **other hydrocarbons**. Prior to 1990, they are included in the natural gas supply.
- Imports of **other hydrocarbons** from 1994 to 2000 correspond to orimulsion imports from Venezuela.
- Refinery output from **gas/diesel oil** and **petroleum coke** includes output from oil sands and upgraders.

- The Canadian administration is currently unable to provide a figure for the domestic production of additives, but is working on solutions which will make this possible. Meanwhile, significant statistical differences can be observed for several secondary oil products.

### Consumption

- Due to confidentiality issues, consumption data for selected products and flows, such as fuel oil and gas/diesel consumption in iron and steel from 2009, are not available. For the same reason, selected products may include estimates provided by the Canadian administration, such as Fuel Oil and Bitumen data for 2014.
- International marine bunkers are included with inland waterways prior to 1978.

### Natural gas

#### General notes

- The 2018 edition includes numerous time series revisions for the years 2005-2016. This is due to the 10 year revision of the Report on Energy Supply and Demand, which is the main set of Canadian annual data. The majority of these revisions were applied to the demand side.
- For the 2015 edition, revisions back to 2005 were submitted by the Canadian administration, creating a break in time series between 2004 and 2005. Among others, the amounts reported as transport equipment; machinery; food, beverages and tobacco; wood and wood products; textiles and leather were reported as *non-specified industry* prior to 2005.

#### Supply

- Production is measured by the Canadian administration by upscaling the marketable production by approximately 11% to account for own-use in the extraction process.
- Associated gas has been estimated by the Canadian administration for 2016.
- Non-associated gas production data include colliery gas as well as associated gas produced in Alberta.

#### Transformation

- For 2000, the increase in main activity producer electricity is due to new generation plants in Alberta and Ontario.



- Due to confidentiality reasons, the Canadian administration estimated natural gas consumption in oil refineries for the 2014-2016.
- Gas-to-liquids (transformation) represents quantities of natural gas consumed in the production of synthetic crude oil.
- *Non-specified transformation* represents quantities of natural gas used for the upgrading of refined oil products.

### Consumption

- Starting with 2014 data, natural gas distribution losses will no longer be reported by Canada as this flow was historically computed as a balancing variable.
- Due to confidentiality reasons, the Canadian administration estimated natural gas consumption in the following sectors for 2014-2016: iron and steel between, non-ferrous metal, transport equipment and machinery.
- For 2011, the increase consumption by non-metallic mineral production is due to switching from coal to natural gas in cement manufacturing.
- Prior to 1990 data for consumption of natural gas for construction are not available.
- Prior to 1978, consumption in *non-specified industry* includes gas used as fuel in oil refineries.
- Prior to 1978, agriculture is included in industry, and no detailed industry sub-sector data are available.

### Biofuels and waste

#### General notes

- The split of **municipal waste** reported assumes 65% renewable and 35% non-renewable.
- The IEA Secretariat has estimated the data for **biogases, industrial and municipal waste** from 1990 to 2004, **biogasoline** (ethanol) from 1998 to 2004 based on information supplied by Natural Resources Canada.

#### Supply

- Canadian **biodiesel** production increased significantly in 2014 because a large producer came online at the end of 2013. In 2016 again, there was a big increase in production of **biodiesel** due to a large plant coming online in Alberta. This is also the reason for the increase in export, as Canada exports most of its **biodiesel** to the US.

- There were no exports of **biogasoline** since 2013.

### Consumption

- The **solid biofuels** consumption data for the residential sector in 2015 and 2016 are equal to 2014 data because firewood data are delayed.

### Electricity and heat

#### General notes

- The Canadian administration has undertaken revisions of many parts of the electricity time series back to 2005, based on the results of the Report on Energy Supply and Demand in Canada (RESO). In particular, revisions were made on the inputs and outputs of power plants fuelled by combustible fuels and on the breakdown of final electricity consumption, resulting in possible breaks in time series.

#### Supply

- In the 2018 edition, revisions were made to electricity production from **wind** back to 2013.
- Starting in 2009, a new source has been used for electricity production from **solar, wind, and tide**. This new source covers production from **solar** and **wind** only from plants with capacity higher than 500 kW.
- **Heat** production includes **heat** produced by **nuclear** power stations for distribution to other consumers up to 1997.
- Discrepancies occur between respective reported figures for electricity trade between the US and Canada for 2016.

#### Transformation

- In the 2016 edition of this publication, there was a reclassification from autoproducer to main activity producer for plants fuelled by **biogases** and **municipal waste**.
- For autoproducers generating electricity with process steam produced from biofuels and waste, the energy required to produce the initial steam is not taken into account by the Canadian administration and as a result the efficiencies are overstated.
- The breakdown of electricity and heat generation between natural gas and oil products in main activity producer CHP plants has been estimated by the Canadian administration starting in 1990. This may cause breaks in the time series between 1989 and 1990.

- Net electricity production by autoproducers prior to 1990 includes production from combustible fuel sources only.
- Inputs of fuels to heat plants are not available for 1979 to 1987.

### Consumption

- *Non-specified (Other sectors)* is being partly treated as a residual under the new methodology introduced in the 2018 Edition. Data submitted by Canada for 2015 were for negative -19,998 GWh, which is not possible, so this has been revised to zero by the IEA Secretariat, with the increased consumption being removed from *Statistical differences*.
- **Electricity** transmission and distribution losses could include statistical difference for certain years.
- Consumption of **electricity** in oil and gas extraction is not available prior to 1987.
- Consumption of **electricity** in coal mines is not available between 1982 and 1986.
- Breaks in the time series occur between 1973 and 1974 in agriculture, and between 1987 and 1988 in the industry sector.

## Chile

### Source

Energía Abierta, Comisión Nacional de Energía, Ministerio de Energía, Santiago.

### General notes

- Data are available starting in 1971.
- In the 2017 edition, data for 2014 and 2015 were revised to replace figures previously estimated by the Secretariat.
- From 1990, consumption in paper and pulp includes forestry and consumption in agriculture is included in *non-specified industry*. In general, a new methodology has been applied for data since 1990, leading to other breaks in time series between 1989 and 1990.

### Coal

#### General notes

- **Other bituminous coal** data includes **sub-bituminous coal** for all years, if present.

### Oil

#### General notes

- There are breaks in time series between 2008 and 2009 due to a change in methodology by the Chilean administration.

### Natural gas

#### Supply

- Chile started reporting exports of natural gas with 2016 data.
- Data representing LPG injected into the natural gas distribution network are available starting in 2009. They are reported in *from other sources - oil*.

#### Transformation

- For 2009 and 2010, inputs of natural gas to autoproducer CHP plants were estimated by the Chilean administration. For other years, these inputs are included in autoproducer electricity consumption
- Natural gas used for oil and gas extraction is included in gas consumption for energy use in refineries.
- *Non-specified transport* corresponds to marine transport.

### Biofuels and waste

#### Supply

- Production of **landfill gas** ceased in 2001 as landfill sites stopped producing adequate gas to continue collection.

#### Transformation

- A new survey on primary **solid biofuels** causes breaks in production and input to autoproducer CHP between 2011 and 2012.

#### Consumption

- **Charcoal** production and consumption have been estimated by the IEA Secretariat until 2013. From 2014 data, only **solid biofuels** input to **charcoal** production plant is estimated.
- The Chilean administration applied a new revised methodology for *final consumption* of **primary solid biofuels**. This may lead to data breaks in time series between 2013 and 2014.

## Electricity and heat

### Supply

- Electricity production from **geothermal** started at Cerro Pabellón in 2017.
- In 2014, the Chilean administration applied a new methodology in the reporting of electricity generation from **solar PV** and **wind**, resulting in breaks in time series between 2013 and 2014. Revisions for previous years are pending.
- The majority of electricity generation *from other sources* is from a conveyor belt transporting crushed rock from high altitude to lower altitude in a mine. A small amount from waste heat is also included.
- **Solar thermal heat** production has been estimated by the IEA Secretariat using data published by Chilean ministry of energy.

### Transformation

- In 2014, data inputs to transformation processes were taken from the published energy balance, and the output was estimated based on the efficiency reported in previous years.
- Electricity production from **other bituminous coal** includes sub-bituminous coal.
- Production of **chemical heat** used for electricity generation started in 2013. Besides chemical heat, data for heat production in CHP and heat plants are not available.
- Increases in electricity from **natural gas** in 2010 are due to the openings of new LNG terminals.
- The split of electricity generation by main activity and autoproducer by fuel was estimated by the Chilean administration for the period 1990 to 2003.

### Consumption

- Increases in **electricity** consumption in the *road transport* sector from 2014 onwards are the result of a new estimation methodology, while electric vehicles used for the transportation of ores are reported as consumption within the mining and quarrying industry.
- **Solar thermal** consumption data are not available so all consumption data are allocated to the *non-specified other* sector.
- Prior to 2009, statistical differences are included in distribution losses.

## Czech Republic

### Sources

Czech Statistical Office, Prague.

Ministry of Industry and Trade, Prague.

### General notes

- Due to ongoing review of energy data for 2010-2014, revisions have been made in the 2017 edition. Full details are given under each fuel.
- Data are available starting in 1971.

### Coal

#### General notes

- **Other bituminous coal** data include **sub-bituminous coal** for all years, if present.
- In the 2018 edition, data for the Czech Republic were revised back to 2010 based on administrative data causing breaks in time series between 2009 and 2010. These revisions impacted mainly industrial consumption for **lignite**, **BKB** and **other recovered gases**.
- In the 2017 edition, coal consumption in the residential sector has been revised back to 2010 due to a new survey in households made by Czech Statistical Office, creating breaks in time series between 2009 and 2010.
- Increased production and consumption of other recovered gases in 2014 is due to improved tracking of by-products from various transformation processes. Tail gases from the production of carbon black from coal tar are reported here, as are off gases from the manufacture and cleaning of syngas from lignite for an IGCC plant.
- Coal which had been previously classified as **sub-bituminous coal** until the 2008 edition is now reported under **lignite** for all years.
- Revisions by the Czech administration have resulted in some breaks in time series between 2001 and 2002.
- Data for 1990 to 1995 were estimated based on the Czech publication Energy Economy Year Book.
- In 1995, town gas production (included in **gas works gas**) ceased.

## Supply

- **Other recovered gases** are combustible gases obtained during the production of **gas works gas** and as a result of chemical processes.
- Production *from other sources* of **other bituminous coal** is from coal slurries.
- A portion of **other bituminous coal** reported under *from other sources* for the period 2010-2015 correspond to reclassified **coking coal**.
- Statistical differences for **coking coal** for the period 2010-2015 are partly due to the reclassification of coking coal to **other bituminous coal**.

## Consumption

- In the 2015 edition, improved reporting enabled revisions to be made for certain primary **coal** consumption flows between 2010 and 2012.
- In the 2014 edition, residential consumption for the period 1990 through 2011 was revised for **other bituminous coal, lignite, coke oven coke** and **BKB**, as more accurate consumption data became available.
- Due to economic restructuring in consumption in the late 1990s (big state enterprises subdividing and/or privatising and the utilisation of new technologies by businesses), there may be breaks in time series in these sectors.

## Oil

### General notes

- Data prior to 1994 are estimated by the IEA Secretariat.
- In 2016 both Czech refineries were affected by accidents which resulted in decreased refinery throughput, increased refinery losses and a large decrease in imports of crude oil offset by increased imports of finished products. The second accident affected the ethylene production unit and led to decreased activity in the petrochemical sector. Data for 2017 provisional show a return to regular refinery activity.

### Transformation

- From 2002 data onwards, some amounts of **fuel oil** have been reclassified under **other products**. This change mainly affects the transformation sector.

### Consumption

- Between 1998 and 1999, breaks in **gas/diesel** final consumption time series are due to a new data

management system implemented by the Czech administration.

## Natural gas

### General notes

- Between 1993 and 1994 there are some breaks in time series due to a change in the energy balance methodology between former Czechoslovakia and the Czech Republic. Since 1993, data have been officially submitted by the Czech Statistical Office.

### Supply

- From 2013 all non-associated gas production was reclassified as colliery gas production.

### Transformation

- In 1996 natural gas inputs into gas works ended.

### Consumption

- Prior to 1994 data in transport are for former Czechoslovakia.
- There is a break in time series in the industry and transformation sectors between 2009 and 2010 due to new available data from distribution companies.
- Starting with 2008 data, hydrogen production is reported in petrochemical feedstocks as non-energy use. Up to 2007, petrochemical consumption includes both energy and non-energy use.

## Biofuels and waste

### General notes

- The restructuring of the Czech electricity market leads to breaks in the time series in all sectors between 1998 and 1999.
- Data for **municipal waste** and **solid biofuels** are not available prior to 1990 and **liquid biofuels** data are not available prior to 1992.

### Transformation

- Starting in 2016, an increased excise duty was imposed on **biofuels**, causing a decline in consumption.
- In 2016, a main activity producer CHP incineration plant fired by **municipal waste** was in test operation at Chotikov.

### Consumption

- In the 2017 edition, due to a new survey in households made by the Czech Statistical Office in 2015



(ENERGO 2015), **solid biofuels** consumption in residential sector has been considerably revised upwards since 1990.

- Hospital waste previously reported as **municipal waste** is reported under **industrial waste** since 2008.
- New survey systems cause breaks in final consumption in 1999 and in 2002. Breaks in both supply and consumption of biofuels and waste occur again in 2003.

## Electricity and heat

### General notes

- In the 2017 edition, data for the Czech Republic were revised back to 2010 due to the acquisition of new administrative data, allowing access to more accurate and detailed data sources. As a result, there are breaks in several time series between 2009 and 2010.
- Data from 1990 onwards have been officially submitted by the Czech administration. This may lead to breaks in time series between 1989 and 1990.
- Electricity statistics from 1971 to 1989 have been estimated by the IEA Secretariat except for final consumption and trade which were submitted by the Czech administration.

### Supply

- The amount of heat reported under **other sources** is primarily waste heat from the glass industry until 2009.
- From 1999 onwards, small amounts of **heat** have been exported to Slovak Republic.

### Transformation

- Electricity generated from **waste heat** in CHP plants is included with the total production from **combustible fuels**.
- In the 2017 edition, a revision of the methodology for reporting the production of autoproducer plants running on **combustible fuels** causes multiple breaks in time series between 2009 and 2010 for CHP and electricity only plants.
- Data on **heat** own use and **heat** imports start in 2010 and 2009 respectively, following extensive revisions by the Czech administration in the 2017 edition due to the acquisition of new administrative data. Prior to this period, data are not available due to lack of sources.

- The production of electricity reported in the category **other fuel sources** refers to electricity produced from turbines driven by the mixture of air, ammonia and other non-coal gases derived from the petrochemical industry.
- From 2014, some autoproducer **heat** plants production figures became too small to appear in data collected.
- From 2012 data, new autoproducer **heat** plants were added to the data collection, causing a break in time series.
- In 2012, a main activity producer electricity plant using **solid biofuels** started to produce also heat and was reclassified as main activity CHP plant.
- A different reporting methodology used by the Czech administration for **biofuels and waste** causes some breaks in time series between 2002 and 2003.
- In 1999 and 2000, various big enterprises have been divided, sold and merged. This causes breaks in the time series of all types of plants.
- **Industrial waste** use in main activity producer electricity plants is included with **solid biofuels** from 1996.
- Data on **biogases** and waste used in main activity producer CHP and autoproducer heat plants start in 1993.
- Prior to 1990, electricity production in main activity producer CHP and autoproducer CHP plants is included in main activity producer electricity plants.
- Prior to 1990, heat production excludes heat sold by industry. In addition, heat production prior to 1990 is reported under main activity heat plants because the breakdown by producer and plant type is not available before then.
- The breakdown of net **electricity** production by source is not available prior to 1990.
- Data on **heat** production, and the corresponding fuel inputs, have been estimated from 1980 to 1989 based on consumption in residential and commercial/public services. Prior to that, inputs are included in industry.

### Consumption

- Data for direct use of **solar energy** are available from 2003.
- Prior to 2000, the split of *rail transport* and *non-specified transport* is not available.

## Denmark

### Source

Danish Energy Agency, Copenhagen.

### General notes

- In the 2004 edition, major revisions were made by the Danish administration for the 1990 to 2001 data, which may cause breaks in time series between 1989 and 1990.

### Coal

#### Supply

- A large increase of **steam coal** imports in 2003 was related to a drought in Scandinavia. Thermal power plants were operated more intensively to replace hydro-generated electricity that was consumed in the country. Additionally, more coal-generated electricity was exported to other countries in the region. Significant fluctuations in demand are also evident for other years for similar reasons, including 2006 and 2013, but exist to a lesser extent.
- Declines in stocks of **steam coal** stem from extensive deployment of renewable generation technologies and policy to further reduce Denmark's utilisation of coal-fired power and implement co-firing with renewable fuels as a part of their *Energy Strategy 2050*.

### Oil

#### General notes

- Starting with 2013 data the Danish administration reports products transferred to refinery feedstocks. In previous years refinery output is reported net of product transfers.
- From 2012, due to confidentiality issues, all liquid biofuels are reported under **biodiesel**
- Between 1995 and 2004, **other hydrocarbon** imports and inputs to main activity producer CHP plants represent orimulsion.
- From 1990 onwards, Greenland and the Danish Faroes are not included in the oil data.
- Information on waste oil recycling and final consumption begins in 1989 and is reported in other oil products.
- In 1988, consumption of **gasoline type jet fuel** ceased.

- As of 1987, separate data for **paraffin waxes** are no longer available.
- Prior to 1975, **refinery gas** is reported net of consumption in refineries.

#### Transformation

- Due to improved survey methods, inputs to electricity and heat generation have been reclassified, causing a break in time series between 1993 and 1994. The oil inputs used in industrial sub-sectors for producing surplus heat, which is delivered to district heating networks, are allocated to these industrial sub-sectors.
- In 1994, the marked increase in inputs to CHP production is due to increased electricity exports to Norway.
- From 1974 to 1979, consumption of fuel oil for the CHP production by autoproducers has been estimated.

#### Consumption

- Consumption data are based on a detailed survey sent to companies in Denmark every other year. For non-survey years, the consumption figures are estimated by the Danish Energy Agency
- **White spirit** and **lubricants** deliveries are estimated by Denmark.
- For 1994 and 1995, industry detail is based on a new survey.
- Prior to 1990, **gas/diesel oil** and **fuel oil** consumption for fishing are included in domestic navigation

### Natural gas

#### Consumption

- The consumption of LNG for marine transport and international marine bunkers is not reported due to confidentiality.
- The breakdown for industrial consumption for the latest year is estimated by the Danish administration using the previous year's industry sector sub-sectoral shares and updated the following year.

### Biofuels and waste

#### Supply

- Data for production of **municipal wastes** and **solid biofuels** were estimated by the Danish administration for 2017 based on consumption in the

transformation sector. Imports of **municipal wastes** and **solid biofuels** for 2017 are estimated by the Danish administration using the indigenous production growth rates.

### Transformation

- From 2012, biogasoline trade designated to be blended with motor gasoline is included under bio-diesels, for confidentiality reasons.
- From 2012, biodiesel production was confidential and gathered with imports.

### Consumption

- In the 2017 edition of this publication, the Danish administration used the 2014 figures of **municipal waste** consumption in industrial sector for the 2015 figures. These figures will be revised in the 2018 edition.
- In the 2016 edition, the Danish administration revised energy consumption in industry sectors causing some breaks in **solid biofuels** consumption between 2010 and 2011.

## Electricity and heat

### General notes

- **Heat** data are not available prior to 1976.

### Supply

- In 2017, the declines in **electricity** and **heat** output from **other bituminous coal** and the corresponding increases in output from **solid biofuels** are attributable to fuel switching in co-fired plants.
- The amount of **heat** reported under *other sources* is heat recovered from industrial processes and sold for district heating.
- **Heat** produced for sale by heat pumps starts in 1994.
- **Geothermal** and **solar heat** production for sale is available from 1989.
- From 1984 onwards, small amounts of **heat** have been imported from Germany.
- The production of electricity from **wind** is available from 1978.

### Transformation

- Fish oil used in main activity producer heat plants is included with **solid biofuels**.

- Due to the high number of heating companies burning wood chips that are equipped with boilers with flue-gas condensation, the **solid biofuels** heat plants show a high efficiency. The efficiency decline evident in 2016 was due to two less efficient plants switching to biofuels.
- For some years, heat plants for **natural gas**, municipal waste and **biogases** show efficiencies larger than 100%, on a net calorific value basis, due to the use of condensing boilers that recover the latent heat of vaporisation.
- **Biodiesels** and **biogasoline** consumption for electricity and heat production are reported under **other liquid biofuels**, for confidentiality reasons.
- Data for **other liquid biofuels** main activity heat plants are available back to 1994.

### Consumption

- In the 2016 edition, the Danish administration revised **electricity** and **heat** consumption in the industry sector from 1990.
- For 2015 and 2016 data, the breakdown of **electricity** and **heat** total final consumption is estimated by the Danish administration based on 2014 data and will be revised in the following reporting cycle once their new industry survey results are released.
- The direct use of **solar thermal** energy is available from 1978.
- **Electricity** consumption in *non-specified industry* includes consumption in district heating plants and for the distribution of electricity.

## Estonia

### Source

Statistics Estonia, Tallinn.

### General notes

- Data for Estonia are available starting in 1990. Prior to that, they are included in Former Soviet.

### Coal

#### General notes

- Fuels reported as **coke oven coke** and **gas works gas** are the solid and gaseous by-products of oil shale liquefaction. Inputs of **oil shale** to “gas

works”, “coke ovens” and for coal liquefaction plants, while reported separately, combined, are the inputs for retorting in liquefaction plants.

- In the 2013 edition, data for **oil shale** production for the period 1991 to 1997 were revised to match Estonian GHG National Inventory values. Consumption data remained unchanged.

### Supply

- Indigenous production of **peat products** stopped in 2016.

## Oil

### General notes

- In 2012 data, breaks in time series occur for trade figures, now including re-exports, and for international bunkers.
- For 1990 to 2007, oil data are based on direct communication with Statistics Estonia and UNECE.

## Natural gas

### General notes

- Estonia was unable to provide provisional natural gas data for 2017. These data have been estimated by the IEA Secretariat.

### Consumption

- Consumption reported under not elsewhere specified (Energy) represents consumption of different activities of companies in the energy sector (NACE 35) for own uses without transformation.
- There are inconsistencies in the time series for residential consumption as this sector is computed as a residual.
- In 2014 Estonia’s main company in the chemical and petrochemical sector ceased activity, resulting in no non-energy use of natural gas.
- In 2009 Estonia’s main producer of fertilisers ceased activity, resulting in a sharp decrease in the non-energy use of natural gas. The plant reopened in 2012.

## Biofuels and waste

### General notes

- Data for **biogases** include **landfill gas** starting in 2005.

## Electricity and heat

### Transformation

- Fuels reported as **coke oven coke** and **gas works gas** are the solid and gaseous by-products of **oil shale** liquefaction, and main activity heat and electricity generation from these fuels is tightly associated with liquefaction plants.
- Inputs of fuel oil and gas works gas to transformation processes include shale oil.
- In the 2018 edition, the surge in main activity heat from **solid biofuels** was related to reclassification from autoproducer heat plants, where previously autoproducer own use heat and associated fuel inputs are not reported, and the fuel consumption appears in the main economic activity of the autoproducer.
- From 1990 to 1999, some of the electricity and heat production are reported under *other oil products* while the inputs are reported under the individual fuels.

### Consumption

- **Electricity** consumption in the non-specified energy sector includes consumption in the Classification of the Economic Activities in the European Community (NACE) 3512 and 3513 categories.

## Finland

### Source

Statistics Finland, Helsinki.

### General notes

- In 2014, a new survey system and a reclassification of the data lead to breaks in the time series between 1999 and 2000 for most products and sectors. The new survey system is more detailed and has better product coverage, especially in electricity, CHP and heat production, as well as in industry.

## Coal

### General notes

- **Coal tar** used for non-energy purposes or exported is not reported in either production or consumption.
- In the 2015 edition, revisions were received for some consumption flows of **other bituminous coal** and **coke oven coke**, while **other recovered**

**gases** (from ferrochromium manufacture) were reported separately for the first time, with revisions back to 2000. Prior to 2000, off-gases from ferrochromium manufacture are included in blast furnace gas, and inputs of **coke oven coke** for ferrochromium manufacture in inputs to blast furnaces instead of *non-specified transformation*.

- Prior to 2008, **peat products** are included with peat data.
- A large increase of steam coal imports in 2003 is related to a drought in Scandinavia. Thermal power plants were operated more intensively to replace hydro-generated electricity that is consumed in the country. Additionally, more coal-generated electricity was exported to other countries in the region.
- The increase of **other bituminous coal** inputs into main activity producer electricity plants from 1993 to 1994 was due to coal replacing imported electricity and hydro power.
- Production of **gas works gas** ceased in April 1994.
- Hard coal data prior to 1978 may include sub-**bituminous coal**.

### Transformation

- In the 2017 edition, fuel inputs and heat production from **peat** main activity heat plants have been revised from 2000 as a result of new data access for smaller peat heat plant units.
- The significant increases and decreases of **other bituminous coal** inputs into main activity producer electricity plants from year to year are due to coal replacing imported electricity and hydro power.
- Likewise, **peat** production is highly dependent upon favourable weather conditions and the pricing of other fuels. The decrease in **peat** and **other bituminous coal** usage in main activity electricity plants in 2008 was due to record electricity generation from hydro plants. A similar circumstance occurred in 2012.
- The first coking plant started operation in 1987, hence imports of **coking coal** and production of **coke oven coke** and **coke oven gas** started in that year.

## Oil

### General notes

- The 2018 edition includes revisions to data for several products from 1999 onwards.

- Several revisions to petrochemical data were introduced, including a reclassification of quantities between energy and non-energy use. Further revisions are pending.
- In spring 2015, the Porvoo refinery had the largest shut down in its history for maintenance works. This is the reason for the large decrease in refinery throughput in 2015.
- In 2014, the Finnish administration revised the time series for **refinery gas** from 2000 and included flaring of petrochemical gases under *distribution losses*.
- Prior to 2002, **petroleum coke** used as *refinery fuel* was included with refinery gas.
- In 1995, there is a break in time series for **oil products** trade due to the aligning of the National Board of Customs trade data collection system with the European Union's Intrastat system.
- **Other hydrocarbons** reported under *from other sources natural gas* correspond to hydrogen used in refineries, also represented as the output of *non-specified transformation* in the balances format.

### Consumption

- Data on non-energy transformation of naphtha in the petrochemical sector is now available from 1990 onwards.
- Due to a new calculation model, there is a break in **fuel oil other consumption** between 1998 and 1999.

## Natural gas

### General notes

- Finland imports LNG since September 2016. As there is only one company operating in this market, LNG supply data is confidential.
- Between 1999 and 2000 there are some breaks in the time series due to a new survey system and a reclassification of the data.

### Transformation

- *Non-specified transformation* data represent natural gas used for hydrogen manufacture. This hydrogen is used for hydrodesulphurization and hydrocracking in oil refineries

### Consumption

- Not elsewhere specified (transport) includes LNG consumption for domestic navigation and international marine bunkers.



- Since 1995 data, the breakdown between residential and commercial/public services is available due to a new system of data collection.
- Prior to 1989, **natural gas** consumption in residential and agriculture/forestry has been estimated by the Finnish administration.

## Biofuels and waste

### General notes

- Prior to 2004, **industrial waste** also included other energy forms such as hydrogen, heat from chemical processes, natural gas and blast furnace gas.
- Data for **biogases** and **industrial waste** are available from 1996.

### Supply

- Due to confidentiality, the **biodiesel** production includes trade figures and stock changes for 2015-2016. Regarding **biogasoline** for the same time period, import covers production, exports and stock changes.

### Transformation

- The amount of **biodiesel** used for blending with diesel fell greatly in 2016 after record levels for the past two years. Annual variation in the consumption of biofuels is possible and caused by Finland's biofuel legislation, which gives distributors the possibility to fulfil the bio obligation flexibly in advance.

## Electricity and heat

### Supply

- **Electricity** production in Finland is affected by the connection to the Nord Pool. In period of high waterfalls, importing electricity from other Nordic countries is more economic than producing it. This can cause breaks in the time series.
- **Other sources** include hydrogen and purchased steam.
- The increasing heat production from **heat pumps** in 2007 and 2008 is from the new Katri Vala district heating and cooling plant.
- **Heat from chemical processes** and associated electricity generation are available from 2000.

### Transformation

- Electricity plants data may include some CHP plants operating in electricity only mode. Likewise,

heat plants data may include some CHP plants operating in heat only mode.

- In the 2017 edition, fuel inputs and heat production from **peat** main activity heat plants have been revised since 2000 as new data became available for small peat heat plant units.
- In the 2016 edition, the allocation of **solar photovoltaic** between main activity and autoproducer plants was revised.
- From 2014 data, an autoproducer in the field of iron and steel industry running on **coke oven gases** and **blast furnace gases** was sold and is now reported as main-activity producer.
- The increase in heat production from **municipal waste** in 2014 is due to the opening of a new plant.
- In 2014, the new consumption of **other liquid biofuels** in main activity electricity plant corresponds to biopyrolysis oil made from wood chips.
- Data on **peat products** electricity and heat generation are available since 2008. Prior to that, they are included in **peat**.
- **Heat** output from autoproducer CHP plants is available starting in 1996 and from autoproducer heat plants starting in 2000; corresponding inputs may be under-reported.
- Before 1999, all electricity production from autoproducers running on **fuelwood** is allocated to CHP plants.
- Electricity and heat production from **biogases** are available from 1996.
- Prior to 1992, outputs from the use of **combustible renewables and waste** to generate electricity and/or heat were included in peat. Therefore, the IEA Secretariat estimated the breakdown of outputs from **municipal waste** and **solid biofuels** based on reported inputs.
- Inputs of **liquid fuels** and **natural gas** to CHP plants are included with the inputs of these fuels to main activity producer electricity only and heat only plants prior to 1978.
- Electricity production from **biofuels and waste** is not available between 1974 and 1976.

### Consumption

- For 2016 data, the production of **heat** from oil refineries in autoproducer plants ceased, following the change of ownership of these plants and their reclassification to main activity producers. This result in the consumption of (sold) heat under the

oil refineries sector to jump as most heat formerly produced by oil and gas autoproducers are now purchased.

- In the 2017 edition and following, an extended review of NACE sector encoding by the Finnish administration resulted in the revision of the sectoral heat consumption time series back to 2007, leading to breaks in time series between 2006 and 2007 in some heat consumption sectors.
- A new survey of the agriculture and forestry sector leads to breaks in the **electricity** consumption between 2007 and 2008.
- The split of **heat** consumption in the different industry sectors is available starting from 2007. Prior to that, it is aggregated in *non-specified industry*.
- Prior to 2000, consumption of **heat** in *residential* includes consumption in *agriculture/forestry* and *commercial/public services*.
- Consumption of **electricity** in the industry sub-sector *machinery* includes consumption in transport equipment prior to 1995.

## France

### Source

*Ministère de la Transition Écologique et Solidaire, Paris.*

### General notes

- In the 2018 edition, data for France were revised back to 2011 following changes in methodology and procedures used by the energy statistics sub-department (SDSE) within the Ministry for the ecological and inclusive transition. As a result, the revisions, to bring the reporting more in line with the international standards, impacted all fuels. Additional details are given under each fuel.
- From 2012, the energy consumption is more detailed due to a more precise national survey.

### Coal

#### General notes

- In 2018 edition, the calorific value of coking coal has been revised in agreement with Eurostat and the IEA. The revision was made for the period 1990 to 2016.
- In the 2017 edition, the French administration undertook comprehensive revisions on sectoral

coal consumption back to 2011. Starting this edition, new information became available for **anthracite, BKB and other recovered gases**.

- From 2012, the energy consumption is more detailed due to a more precise national survey.
- Prior to 2011, **other manufactured gases** (oxygen steel furnace gas) are included in **blast furnace gas**.
- For 1989 to 1998, the IEA Secretariat has estimated industry consumption based on *Consommations d'Énergie dans l'Industrie*, SESSI.
- Prior to 1985, consumption of colliery gas is included with the use of **coke oven gas** by autoproducers.
- Hard coal data prior to 1978 may include **sub-bituminous coal**.

### Transformation

- In 2016 the company that consumed **blast furnace gas** for electricity and heat generation ceased its activity.

### Consumption

- In the 2018 edition, the split of energy consumption between the residential sector and the commerce and public services sector has been revised back to 1990 by the French administration for **other bituminous coal, lignite, coke oven coke, BKB and patent fuel**.
- **Blast furnace gas** and **coke oven gas** used for energy purposes in blast furnaces are no longer reported under the iron and steel industry. As of the 2018 edition these quantities are reported under the energy sector.
- Final consumption in industry is estimated by the Secretariat from 1986 to 2001 for some products.

### Oil

#### General notes

- The 2017 provisional data for oil were estimated based on monthly oil data submitted by the French administration. Following a methodological change in the French monthly statistics coverage, data from January 2017 include the overseas departments (French Guiana, Guadeloupe, Martinique, Mayotte and Reunion). This results in numerous breaks in time series.
- Statistical differences observed for motor gasoline and naphtha are partly due to the absence of a specific naphtha category in the customs classification.

- Statistical differences appear for other products as a result of different definitions used for this residual category between the customs, refineries, power plants and petrochemical industry.
- From 2013, information is available for imports of condensates used by the petrochemical sector. These are reported under imports of NGL, inter-product transfers of NGL to other oil products, and consumption of other products.
- From 1991, **additives and oxygenates** data are available.

### Supply

- From 2009, transfers of **kerosene type jet fuel** to **white spirit** correspond to kerosene used as a base for making white spirit.
- From 2008 data, refinery intake of **refinery feedstock** and refinery output of **refinery gas** output figures exclude natural gas used in the steam reformer of the Gonfreville refinery.
- From 2008 data, **ethane** refinery output is reported
- From 2002 data onwards, ethylene produced in Lacq is not included in NGL.
- From 1998 data, a different treatment of transfers was adopted. Imported oil products needing further refinery processing are no longer reported as **refinery feedstock** imports but as oil product imports and products transferred. **Fuel oil** includes part of the amounts previously reported in **other oil products** from 1999 and various other products from 2001.

### Transformation

- Starting in 2012, separate data on main activity heat plants inputs are available.

### Consumption

- The breakdown between international and domestic marine bunkers is estimated by the French administration.
- Between 2005 and 2006, a break is visible in **LPG** time series, as consumption from one chemical company was re-classified from energy use to non-energy use. Breaks in **LPG** time series also appear in 2001 due to improved data collection.
- From 2000 data, **petroleum coke** consumption in the non-ferrous metals industry is no longer available separately. Prior to 1982, no breakdown between energy and non-energy use is available for this product.

- From 1998 data, military consumption of **kerosene type jet fuel** is reported separately from domestic aviation.
- Prior to 1988, **LPG** includes ethane consumption.
- Prior to 1985, the residential sector consumption of **gas/diesel oil** is reported under the commerce/public services sector, as no separate data were available.

## Natural gas

### General notes

- The French administration revised the methodology used in the 2018 edition to bring it more in line with the international standards. More specifically, (i) Supply figures were revised for the period 2007-2016, (ii) Transformation sector consumption for 2007-2016, (iii) Energy sector consumption for 2011-2016, (iv) Transport and Commercial and Public services for 2000-2016, (v) Industry sector for 2011-2016 and (vi) Imports and Exports for 2011-2016.
- Until 2007, some statistical differences reported by the French utilities were included in distribution losses. Since 2008, these amounts are included under statistical differences.
- Between 1999 and 2000, there are some breaks in time series due to a new methodology for preparing the natural gas balances.

### Supply

- The total imports and exports data include transit amounts.
- From 1990 to 1998, statistical difference includes gas consumption which is not broken down by sector.

### Consumption

- The increase in natural gas consumption in the electricity sector for 2016 is mainly driven by the decrease in nuclear generation due to maintenance operations, which is compensated by gas-fired power plants.
- The updates for 2007-2008 in the Transformation sector are still pending implementation, for consistency reasons with the electricity figures.
- Gas for pipelines is included in distribution losses.
- Between 2005 and 2006, there is a break in the time series of the industry sub-sectors.



## Biofuels and waste

### General notes

- In the 2018 edition, following an analysis of **biogases** in the energy sector by the French administration, there are revisions in **biogas** indigenous production, inputs to the transformation sector, heat production and final consumption back to 2005. Electricity production from **biogases** is revised back to 2011. This causes breaks in time series between 2004 and 2005 as well as 2010 and 2011.
- Indigenous production, transformation and final consumption of **industrial waste** are reported from 2013. In the 2018 edition, indigenous production and transformation of **industrial waste** were added from 2007 - 2012. It follows that there is a break in time series between 2012 and 2013.
- In the 2018 edition, **solid biofuels'** indigenous production and inputs to main activity and auto-producer heat plants have been revised back to 2007. Electricity production has been revised back to 2013. This causes breaks in time series between 2006 and 2007 as well as 2012 and 2013.
- In the 2018 edition, indigenous production and inputs to main activity heat plants have been revised back to 2007 for **municipal waste**. Electricity production has been revised back to 2011. This causes breaks in time series between 2006 and 2007 as well as 2010 and 2011.
- Prior to 2007, production and consumption of **industrial waste** were included in municipal waste.

### Transformation

- Plants using **municipal waste** were reclassified as autoproducer CHP plants from 1995, which leads to a break in time series.
- Breaks in time series in 2005 for **municipal waste** and **solid biofuels** are caused by sectoral reclassifications.

### Consumption

- A revision of the **solid biofuels** and **biogases** time series created breaks in the direct use time series between 2004 and 2005.
- The breakdown of the final energy consumption of **biogases** was estimated by the French administration from 1970 to 2003.

## Electricity and heat

### Supply

- All **photovoltaic** plants with capacity above 100 kWp are considered as main activity producers, while all plants with capacity below that value are considered autoproducers.
- Heat production from **heat pumps** is available starting from 2013.
- Electricity production from *other sources* is available starting in 2007, representing production of electricity from purchased steam. The input is shown under *non-specified transformation*.
- Data on electricity production from **wind** are available from 1990.

### Transformation

- Revisions for **heat** production in all plant types were received and accepted for many fuels from 2007 onwards, with the exception of natural gas, where the planned revisions for 2007 and 2008 are still pending implementation by the Secretariat.
- Electricity production from **hydro** was revised back to the year 2000, in some cases only amounting to plant reclassification, in the 2018 edition.
- Electricity production from **geothermal** started in 2011 and stopped in 2012 due to the maintenance of the only plant. This production restarted in 2016.
- The amount of heat not sold in autoproducer plants is included in total heat production up to 2007.
- In 2005, autoproducer CHP efficiencies for **biogases** drop due to the opening of a larger, less efficient plant.
- From 2000 several plants have been reclassified from electricity only to CHP plants. This causes breaks in the time series between 1999 and 2000.
- Prior to 2000, inputs and outputs of **oil products** are not available separately and are reported together under **other oil products**. From 2000 to 2008, there are further classification problems for inputs and outputs of electricity and heat from oil products. The French administration is working to reconcile their data collection methods for the inputs and the outputs for electricity generation.
- A new method of survey and a reclassification between main activity producer electricity plants and autoproducer electricity plants may cause

breaks in the time series for **other bituminous coal** between 1998 and 1999.

- There was re-classification on autoproducer plants using **municipal waste** in 1995, which leads to a break in the time series.
- Net electricity production by autoproducer CHP plants is available from 1989.
- Net **electricity** production by autoproducers prior to 1983 includes production from combustible fuel sources only.

### Consumption

- In the 2018 edition, revisions for 2011 onwards were received for all **electricity** consumption flows, based on an improved survey. This has led to breaks in time series between 2010 and 2011. Similarly, **heat** consumption from 2007 onwards was revised to account for autoproducer own use heat generation in its correct economic activity.
- In the 2017 edition, the French administration undertook comprehensive revisions on sectoral electricity consumption time series, for some sectors revising back to 1990. **Electricity** consumption at railway and bus stations, shipping piers and airports is no longer included in the transport sector but in the commercial and public services sector. Road **electricity** consumption has also been revised back to 1990, following an extended review of NACE sector encoding by the administration. These revisions created breaks in time series for several sectors, which the administration anticipates to address in subsequent reporting cycles.
- For the 2014 edition of this publication, the French administration revised **electricity** consumption data in the agriculture sector back to 2004, resulting in breaks in time series.
- Consumption of **electricity** in uranium treatment plants is confidential for the period 2003 through 2010, and unavailable prior to 1980.
- Data on **heat** distribution losses are available only starting from 2007. Prior to that, they were included in final consumption.
- Prior to 2005, all the **geothermal** heat consumption was reported as direct use. From 2005 data, some quantities are reported as output of heat plants, resulting in breaks in time series for production, transformation and consumption.
- Consumption of **electricity** for oil and gas extraction includes that used in oil refineries from 1988 to 2000.

- *Non-specified other* consumption includes exports to Monaco prior to 1992 and defence-related activities, among others.
- The industry classifications used by the French administration were changed in 1986.
- There are major breaks in the time series in 1965 when more detailed breakdown of data on **electricity** consumption became available.

## Germany

### Source

Federal Ministry for Economic Affairs and Energy, Berlin.

### General notes

- Data starts in 1960. German data include the new federal states of Germany from 1970 onwards.
- The German administration has changed the methodology for reporting heat over time:
- Starting in 2007, more information is available on main activity heat plants and additional inputs started to be reported for this category. This causes breaks in time series between 2006 and 2007.
- Between 2003 and 2006, autoproducer heat output was provided, but no inputs.
- Between 2002 and 2003 and between 2003 and 2004, breaks in time series occur, due to the implementation of the Energy Statistics Act, collection concerning heat produced in heat plants and district heating plants became more efficient and more complete.

### Coal

#### General notes

- Comprehensive official data are only collected for the aggregate of hard coal. Due to the unavailability of detailed data, the split into **anthracite**, **coking coal** and **other bituminous coal** is partly estimated by the national administration.
- In the 2014 edition, significant revisions were submitted for all primary coal types, derived products and manufactured gases for the period 2003 to 2011 as previous estimations were updated with more accurate information. Revisions primarily affected consumption, including industry and other sectors; but also supply, statistical differences and weighted calorific values.

- Up to 2002, **other bituminous coal** includes **anthracite**.
- Between 1998 and 2005, breaks in time series may occur for **coke oven gas** and **blast furnace gas**.
- Between 1990 and 1992, breaks in time series may occur due to earlier reclassification of several sectors by the German administration; this particularly affects **BKB**, **lignite** and **coke oven coke**.

### Transformation

- Breaks in time series between 2014 and 2015 for **coke oven gas** and **blast furnace gas** are due to a reclassification of main activity producers and autoproducers.
- In 1997, **BKB** inputs to gas works plants stopped.

### Consumption

- Consumption of **non-renewable municipal waste** and **other solid biofuels** as a reductant occurs in German blast furnaces, but is not currently quantified. Likewise, **coal tar** is a by-product of coke ovens, but not currently reported.

## Oil

### General notes

- In 2017, the German administration included additional firms in the chemical sector to their data collection system. As a result, for 2017 provisional data there is an increase in deliveries of oil products to the petrochemical sector.
- In 2016 the German administration reclassified the consumption of a chemical company from **fuel oil** to **other oil products**. This leads to a decrease in the supply and consumption of fuel oil with a corresponding increase for other oil products. Due to the assumptions made by the German administration about the energy consumption of the respective products, this also creates a break in time series in the split between energy and non-energy consumption for the chemical sector.
- In 2016 there are breaks in time series for **white spirit** due to an increase in data coverage. Historical revisions are expected in the next edition.
- From 2000 data, part of the product *Andere Rückstände* (other residues) is included with fuel oil instead of other oil products.
- Starting from 1994 data, there has been a reclassification of jet gasoline to kerosene type jet fuel.

- Prior to 1979 data, **other products** include **paraffin waxes**, **bitumen**, **white spirit** & **SBP** and **lubricants** for eastern Germany.
- The methodology to determine net calorific values has been changed for 2015 data. The values for crude oil and refinery feedstocks were revised back to 2003.

### Consumption

- The data for the sectors of construction, agriculture/forestry and fishing is subsumed within the commercial and public services sector.
- Between 2002 and 2003, breaks in time series in consumption data are due to structural changes in energy statistics following the newly introduced Energy Statistics Act.
- In 1995 data, a break in **gas/diesel oil** consumption occurs as a result of an alignment with the Classification of the Economic Activities in the European Community (NACE).
- Beginning in 1994, final consumption by individual sector has been improved due to new survey methods instituted by the *Minerölwirtschaftsverband*.
- In 1989, end-use consumption of **gas/diesel oil** decreased due to an exceptionally warm winter and a lowering of consumer stocks.
- Prior to 1980 data, consumption of **fuel oil** in blast furnaces was included in the iron and steel sector
- Prior to 1970 data, consumption of **refinery gas** in the chemical industry is included with refineries' own consumption.

## Natural gas

### General notes

- Between 2009 and 2010, there is a break in time series due to a new, more comprehensive legal framework that resulted in methodological changes for production and new calorific values for natural gas.

### Supply

- Imports include all the gas purchased by German companies, whether it is finally consumed in Germany or not.
- Exports include all the gas sold by German companies (these are mainly re-exports).

## Transformation

- In 2003, there is a break in time series for input to electricity and CHP plants (both autoproducers and main activity producers).
- Prior to 1995, inputs of natural gas for main activity producer heat plants are included with main activity producer CHP plants.

## Consumption

- Since 2003, there are no official data for the construction sector.
- Since 2003, consumption in agriculture and *non-specified other*, which were previously estimated, are no longer shown, and losses data have been included in statistical differences.
- Since 2003, gas consumption in coke ovens was negligible.
- Between 2002 and 2003, there are breaks in time series for some sectors due to modifications in reporting methodology.
- Between 1994 and 1995, there are some breaks in time series due to the fact that the industry sub-sector breakdown is based on the 1995 NACE classification.
- Also, prior to 1995, end-use consumption data are based on *Arbeitsgemeinschaft Energiebilanzen*.
- Before 1970 there is no detailed breakdown available for the industry sector with the exception of iron and steel and chemical industries.

## Biofuels and waste

### General notes

- A revision of the time series for **solid biofuels**, including trade, and **other liquid biofuels** is planned for autumn 2018.
- In 2011, numerous changes to methodology and classifications have caused many breaks in time series.
- Starting in 2008, **municipal waste** and **industrial waste** data were collected separately. This leads to breaks in the time series between 2007 and 2008.
- Between 1996 and 1997, a new survey for renewables causes breaks in the time series.

### Supply

- Trade data for **biogasoline** are available from 2004 and for **biodiesels** from 2003.

## Consumption

- For **solid biofuels** consumption in the commercial and public services sector, new data were derived in cooperation with the Federal Research Institute for Rural Areas, Forestry and Fisheries by applying a different calculation approach based on the total demand for material and energy use of the resource wood in Germany. This had resulted in break in time series between 2013 and 2014.

## Electricity and heat

### General notes

- In the 2014 edition, the German administration performed some major revisions back to 2003. This led to breaks in the time series between 2002 and 2003.
- Prior to 1970, **heat** production and consumption have been estimated by the Secretariat based on *Energie-bilanz der Bundesrepublik für das Jahr 1990* provided by the German Institute for Economic Research.

### Supply

- In some instances, electricity generation from nuclear, hydro, solar, wind and biogases in auto-producer electricity plants is confidential or not available and therefore is included in main activity producer electricity plants.
- Since 2011, due to a reclassification of wind energy and solar photovoltaic in the official data of the German Federal Statistical Office, the production is now only reported under main activity producer plants.
- Electricity production **from other sources** is available starting in 2003. This refers to the production of electricity from turbines which are located at pressure drops in fluid transport and from purchased waste heat.
- Prior to 1991, **electricity** trade data includes only trade of the Former Federal Republic of Germany.
- Data on electricity production from **wind** and **solar** are available from 1986 and 1990, respectively.
- Starting in 1984, small amounts of **heat** have been exported to Denmark.

### Transformation

- Detailed data by fuel are not available for total **heat** production. The non-allocated part is reported



as heat production from **non-specified combustible fuels**.

- Weather conditions were not favourable for **wind** and **solar** generation in 2016.
- In 2015, a reclassification of some main activity producer electricity and CHP plants to autoproducer **CHP plants** powered by **coke oven gas** results in a break in time series for this period. Similarly, a reclassification of **blast furnace gas** main activity **electricity plants** into autoproducer plants results in a break in time series for the same period.
- From 2003 onwards, all **heat** production in auto-producers is considered as non-sold (i.e. for self-use) and, therefore, not reported. Inputs for this heat production are no longer reported in the transformation sector.
- For 2002 and 2003, the German administration did not submit the breakdown of electricity and heat production from **combustible fuels**. The data were estimated as follows: renewables and waste were taken from the Renewables and Waste Questionnaire and the other combustible fuels were estimated pro rata based on 2001 estimates.
- Prior to 2003, **electricity** production in electricity plants includes production from CHP plants and heat production in CHP plants includes production from heat plants.
- Due to the implementation of the Energy Statistics Act, collection concerning heat produced in **heat** plants and district heating plants became more efficient and more complete. This leads to breaks in time series between 2002 and 2003 and between 2003 and 2004.
- A new survey for the renewable products can cause breaks in the time series between 1998 and 1999.
- Prior to 1993, all heat production from **BKB/peat briquettes** is included in main activity producer CHP plants.

### Consumption

- Breaks in time series appear between 2015 and 2016 in the *road transport* sector **electricity** consumption following the introduction of a new model for this consumption sector. The German administration plans to revise the historical series in subsequent cycles.
- Increases in 2016 **electricity** generation by auto-producers within the *transport equipment* manufacture industrial sector are due to reclassification from main activity generation, rather than development of new plant.

- More information on district heat became available, causing breaks in the time series between 2006 and 2007.
- Data on **geothermal heat** production and direct consumption are only available starting in 2003.
- From 2002, **electricity** consumption in the commercial and public sector includes the construction sector, and the fishing, agriculture and forestry sectors for the whole time series.
- In 2000, revisions from the German administration to the **electricity** consumption data may cause breaks in the time series.
- In 1995, the German Federal Statistics Office reclassified some industrial branches which may cause a break in time series in industry sub-sectors.
- Between 1971 and 1980 **electricity** consumption in coal mines includes consumption in coke ovens and BKB plants.

## Greece

### Source

Ministry for Environment and Energy, Athens.

### Oil

#### General notes

- In the 2016 edition, the Greek administration reclassified gasoline-type jet fuel as aviation gasoline starting from 2009 data.
- Between 2012 and 2013, breaks time in time series for biodiesel, lubricants and stocks appear due to the introduction of a new reporting system.

### Supply

- **Crude oil** production stopped on 30 November 1998 and started again in December 1999.
- From 1986 data onwards, information on **refinery feedstocks** is available

### Transformation

- From 1990 onwards, there has been an increased use of **refinery gas** in electricity generation, replacing **fuel oil**.

### Consumption

- In 2013 data, the drop of **gas/diesel oil** residential consumption is linked with changes in the taxation of heating oil.

- From 1993 data onwards, more information is available on the allocation of **fuel oil** to specific industrial sub-sectors. Fuel oil consumption in the agriculture and residential sectors has been replaced by **gas/diesel oil** starting in 1993.
- Prior to 1987 data, consumption in the commerce/public services sector is included with residential. Peaks in residential sector consumption in 1978 and 1982 are due to unusually cold winters.

## Natural gas

### General notes

- Natural gas produced in Greece has a higher than average gross calorific value due to a high content of C<sub>2</sub>/C<sub>4</sub> hydrocarbons.

### Supply

- In November 1998 the production of natural gas stopped in and started again in December 1999.
- In 1997, Greece started importing natural gas as a result of a new operational pipeline between Russia and Greece.

### Consumption

- In 2011 there is a break in time series for the non-ferrous metals due to a new methodology for measuring gas consumption in this sub-sector.
- For 1998 data, consumption in the residential sector is included with commercial/public services.

## Biofuels and waste

### General notes

- New information on **solid biofuels** is available from 1996 and leads to breaks between 1995 and 1996.
- Data for **biogases** are available from 1990 and data for **industrial waste** from 1992.

### Supply

- Indigenous production of **solid biofuels** is estimated for 2015 and 2016 based on consumption.

### Transformation

- The big increase in delivery of **industrial waste** to autoproducer CHP plant in 2010 is mainly due to the opening of a new plant.
- Inputs of **solid biofuels** to **charcoal** production are estimated for 2007 to 2010 by the IEA Secretariat assuming an efficiency of 40%.

- **Industrial waste** used in autoproducer CHP plants decreased substantially in 2006 because a plant closed.

### Consumption

- **Solid biofuels** consumption in commercial/public services is included in residential until 2011.
- The consumption of **solid biofuels** in the paper, pulp and printing industry is not available from 2003 to 2012.

## Electricity and heat

### Supply

- For 2016, **gross electricity** generation from **combustible fuels** in main activity electricity and autoproducer CHP units was estimated by the IEA Secretariat, based upon the gross to net ratio for combustible fuels for these plant types in 2015. This increase in production was assigned to lignite-fired and natural gas-fired plant.
- No production of **solar heat** is reported.

### Transformation

- In 2008 a new plant using refinery gas started operating in an experimental phase, causing a low efficiency.
- Production and consumption of distributed heat (heat sold) that is produced from lignite is available from 1997.
- Data for **biofuels and waste** input and output to transformation are available from 1992.

### Consumption

- Electricity consumption in road is available from 2013.
- A break in time series exists between 1991 and 1992 for electricity consumption in transport.
- Direct use of **geothermal** heat in residential is available starting in 2004.
- Electricity consumption in iron and steel and in the non-ferrous metals industry prior to 1971 has been estimated by the Secretariat.

## Hungary

### Source

Hungarian Energy and Public Utility Regulatory Authority, Budapest.

## General notes

- Data are available starting in 1965.
- The Hungarian administration submitted questionnaires to the IEA Secretariat for the first time with 1993 data.

## Coal

### General notes

- From 1992, the production of **sub-bituminous** coal has been included with **lignite** due to the low quality of the coal. For 1990 to 1999, the use of this domestic coal in main activity producer electricity and CHP plants has also been reclassified to **lignite**.

### Transformation

- Autoproducer heat and power plants using **coke oven gas** and **blast furnace gas** were reclassified in 1998 as main activity power plants.

## Oil

### General notes

- From 2010, *from other sources - natural gas* of **other hydrocarbons** correspond to hydrogen used in refineries, also represented as the output of *non-specified transformation* in the balances format.
- Starting from 1998, data for additives and aviation gasoline are available.
- From 1994 onwards, other products include aromatics and other products that were previously included mainly under white spirit. Prior to 1993, **white spirit** is included in motor gasoline. Data for **refinery gas**, **paraffin waxes** and **lubricants** are partly estimated by the Secretariat.

### Supply

- In 2016 the closure of the Val d'Agri oil centre between April and August led to a decrease in production of crude oil.

### Consumption

- In the 2016 and 2017 editions, revisions to consumption data back to 2010 were provided by the Hungarian administration following a survey introduced in 2014. This results in breaks in time series between 2009 and 2010.

## Natural gas

### General notes

- Between 2012 and 2013 there are some breaks in time series for energy sector, transport and industry consumption due to a new methodology. Historical revisions are pending.
- Between 1996 and 1997 some breaks in time series exist due to a new methodology applied by the Hungarian administration.

### Transformation

- Since 2010, data reported for *non-specified transformation* represent natural gas used for hydrogen manufacture used in refineries for hydrodesulphurization. Prior to this year, these quantities are reported under oil refineries.
- Since 1997 two autoproducer heat plants have been reclassified to main activity producer heat plants.

### Consumption

- Beginning in 2016, electricity consumption under the *non-specified other* sector includes military usage, following recent clearance to disseminate these data.
- Prior to 2004 *iron and steel* consumption includes transformation of natural gas in blast furnaces.

## Biofuels and waste

### General notes

- Data for **biogases** are available from 2000; for **industrial waste** from 2003; for **biodiesel** production from 2007.

### Supply

- A 2012 change in **biogasoline** reporting methodology results in break in time series between 2011 and 2012.

### Consumption

- In the 2018 edition, the Hungarian administration has revised **solid biofuels** consumption in other sectors back to 2005 based on the new survey from Hungarian Central Statistical Office (HCSO). This resulted in break in time series between 2004 and 2005.
- A new reporting methodology for the direct use of **geothermal** energy was applied from 2014 resulting in break in time series between 2013 and 2014.

## Electricity and heat

### Supply

- In 2017, a main activity producer CHP plant was reclassified as an autoproducer. As a result, declines are observed in **heat production from other bituminous coal** and **industrial waste**, as heat reported as previously sold may now be considered as used onsite.
- *Other sources* electricity and heat production is available from 2013 and represents generation from residual tail gases from the manufacturing of soot as well as from hydrogen.
- **Geothermal** heat production from main activity producer heat plants is available from 1995.
- **Nuclear** electricity production in main activity producer electricity plants is available from 1983.

### Transformation

- **Heat** and **electricity** consumption by military services is reported under *Other sectors - non-specified* for the first time in 2015. The change is due to the recent authorization to disseminate these data. Previously they were included under *Commercial and public services*.
- From 2014 data onwards, more data suppliers were involved in submitting energy data to the national administration, causing new autoproducer time series to appear for **geothermal** and **industrial waste** plants.
- In 2014 data, some CHP plants running on **solid biofuels** produced only heat and were reclassified to heat plants.
- The Hungarian administration reclassified some of their plants between 1996 and 2000, which may lead to breaks in the time series.
- Prior to 2000, electricity output from sub-bituminous coal is included with lignite.
- Data on electricity and heat production from **solid biofuels** in autoproducer CHP plants are available from 1995.
- Autoproducer electricity, CHP, and heat plants using coke oven gas and blast furnace gas were reclassified as main activity power plants in 1998.

### Consumption

- Data for direct use of **solar thermal** heat are available from 2001 and from 1990 for **geothermal** heat.

## Iceland

### Source

National Energy Authority, Reykjavik.

### General notes

- Iceland was unable to provide provisional data for 2017. These data have been estimated by the IEA Secretariat.
- Prior to 1970, final consumption includes inputs and outputs to heat production.
- The industrial classifications used by the Icelandic administration were changed in 1987.

### Coal

#### General notes

- Hard coal data prior to 1978 may include sub-bituminous coal.

#### Consumption:

- Final consumption increased in 2000 as a new iron and steel plant came on-line.

### Oil

#### General notes

- In 2014, the Icelandic administration revised petroleum coke data from 1990 to exclude imports of anodes for the aluminium industry.
- Oil supply and consumption data for 2008 and 2009 are estimated by the IEA Secretariat.

### Biofuels and waste

#### General notes

- In the 2018 edition, supply and consumption of **solid biofuels** has been reported for the first time, with 2013 as the first year of data availability.

#### Consumption

- **Biodiesel** consumption data for 2014 are estimated by the Icelandic administration based on 2013.
- **Biogases** used for transport purposes were reported for the first time in 2007.



## Electricity and heat

### Supply

- The increase in **hydro** and **geothermal** electricity production from 2007 is due to the expansion of the aluminium industry.

### Transformation

- For 2016, access to improved data revealed considerably better heat plant efficiencies than previously inferred, with increases in heat production seen during this period. The Icelandic administration plans to revise previous years' figures in succeeding editions.
- From 2013 data, the Hellisheidi **geothermal** power plant, previously reported under main activity electricity plant, was categorised as main activity CHP plant.
- Heat production from **municipal waste** is available from 1993 and stops in 2010.
- In 1998, 60 MW of generating capacity was installed in the **geothermal** CHP plant at Nesjavellir. Since the plant was inoperable for four months, production of **geothermal** heat decreased compared to 1997. The extra electricity capacity caused electricity production from **geothermal** to almost double over the same period.
- Electricity production from **geothermal** sources in main activity producer CHP plants is available from 1992.

### Consumption

- Gross heat production from geothermal sources increased by 30% in 2016 from 2015. This is due to more accurate reporting from Reykjavik Energy about the temperature of delivered and returned water, rather than physical increases in supply or generation. Revisions to historical data may be forthcoming in future editions.
- In the 2015 edition, the **heat** consumption breakdown by sector for the years 1990 onwards has become available following reviews by the Icelandic administration. In addition, heat consumption was revised significantly upwards as more information became available. This has caused large breaks in time series across the heat balance between 1989 and 1990.
- Direct use of **geothermal** in the industrial sector is reported under *non-specified industry*, as the Icelandic administration decided not to estimate the allocation amongst the sub-sectors of industry.

- Revisions in direct use of **geothermal heat** starting in 2013 create breaks in time series between 2012 and 2013.
- **Electricity** consumption in *non-specified transport* includes consumption for ferries and cruise lines.
- Non-specified consumption of **electricity** within the energy sector refers mainly to the use of electricity by the **geothermal** industry to pump hot water from underground sources, and from 1991, also includes electricity used for the transport by pipeline of hot water from Nesjavellir to Reykjavik.
- The increase of **electricity** consumption in the construction sector from 2004 to 2007 is due to the drilling of tunnels for the Kárahnjúkar power plant.
- The consumption of **electricity** reported in *non-specified other* corresponds to a NATO base at Keflavik airport which closed in 2005.
- Prior to 1990, all **heat** for space heating was reported in residential.
- The residential sector includes agriculture prior to 1983.
- Prior to 1970, total final consumption includes inputs to and outputs from **heat** production and non-energy use. After 1970, data on inputs and outputs in CHP plants and in main activity producer heat plants (district heat plants) and for non-energy use are separately specified.

## Ireland

### Sources

Department of Communications, Energy and Natural Resources, Dublin.

Sustainable Energy Authority of Ireland, Cork.

### Coal

#### General notes

- Due to confidentiality reasons, inputs of **anthracite**, **other bituminous coal** and **peat briquettes** for patent fuel transformation are reported with residential consumption, while production and consumption of **patent fuel** is not reported.
- Prior to 1990, any imports of **BKB** were included with imports of **peat products**, as is the case for consumption.

## Supply

- Rainfall in 2012 led to the lowest **peat** harvest since IEA records began in 1960, requiring large stock drawdown and increased use of **biofuels** for electricity generation. In 2013, production targets were met before the end of the year however production continued in order to further build stocks to alleviate the potential impacts of future weather events.
- Low production of **peat** in 1985 was due to a poor “harvest”, due to an unusually wet summer.
- Production data for **peat products** (briquettes) are available from 1975.

## Transformation

- A reclassification caused a break in the time series for peat consumption in the energy industry own use in BKB/peat product plants from 1989 to 1990.
- The production of gas works gas ceased in 1987 due to fuel switching to natural gas.
- Other bituminous coal inputs to main activity producer electricity plants increased from 1986 due to three new generating units at Moneypoint coming on-line.

## Oil

### General notes

- In the 2018 edition the Irish administration revised the methodology for reporting final consumption of oil products. This leads to some breaks in series between 2015 and 2016. Revisions to historical data are expected in the next edition.
- *From other sources - natural gas of other hydrocarbons* correspond to natural gas blended with refinery gas.
- For confidentiality reasons, inputs of **petroleum coke** into patent fuel transformation are reported with residential consumption.

### Consumption

- In 2014, the drop of fuel oil consumption in non-metallic minerals sector is linked with the replacement of HFO boilers by natural gas boilers as the primary source of steam for alumina production.
- In 2013 and 2014, bitumen consumption data are not available and calculated as residual.

- Between 2008 and 2009, there is a break in time series for **gas/diesel oil**, **LPG**, **kerosene-type jet fuel** and **petroleum coke** due to a new methodology being applied to sectoral demand by Sustainable Energy Ireland (SEI). This change also explains breaks between 2006 and 2007 for **bitumen**, **lubricants**, **white spirit**, and **paraffin waxes**.
- Between 1989 and 1990, breaks in time series appear for consumption of **gas/diesel oil**, **LPG**, **other kerosene** and **fuel oil** as a result of a detailed consumption survey done for 1993. Data for historical years back to 1990 were revised by the national administration based on the results of this survey.
- From 1986, **gas/diesel oil** consumption in the agricultural sector is available.
- From 1970 to 1977, the split between commercial and public services and agricultural use of **other kerosene** has been estimated by the Secretariat. Consumption in commercial/public services includes quantities used by state-owned agricultural companies.

## Natural gas

### General notes

- Since April 2017 there is no gas storage facility in Ireland.

### Supply

- Natural gas production has been increasing since 2015, as the Corrib Gas field began production at the end of that year.
- Since 1996, the increase in imports is due to the depletion of the Kinsale gas field and the availability of a new pipeline system to the United Kingdom.

### Transformation

- Since 2006, a different methodology for allocating unsold steam from autoproducer CHP is used.
- *Non specified transformation* corresponds to natural gas blended with refinery gas.

### Consumption

- In the 2018 edition, Irish administration revised industrial and commercial consumption in 2015 due to the reclassification of some consumers.
- In 2011 the increase in non-ferrous metals consumption is due to a fuel switch to natural gas.

- Since 2009, the disaggregation of consumption into all the industry sub sectors excluding non-ferrous metals is done according to data from the Census of Industrial Production (CIP). The last energy consumption data available from the CIP are from 2009 and therefore the 2009-2015 sub-sector breakdown is the same every year.
- In 2007 the increase in machinery consumption is due to changes in industry sub-sector structure and fuel usage.
- In 2004, there is a break in the time series in food, beverages and tobacco consumption due to a change in methodology.
- In 2003, feedstock use in the petrochemical industry stopped due to the shutdown of a fertiliser plant.
- In 2001, natural gas consumption in the iron and steel industry stopped due to the shutdown of Ireland's main steel plant.
- Prior to 1986, detailed consumption figures for the use of natural gas in industry and other sectors are not available.

## Biofuels and waste

### General notes

- Data for **municipal waste** are available from 2009.
- Data for **solid biofuels** and **biogases** are available from 1990.

### Supply

- Due to increased demand from a second waste to energy electricity plant which began operation in 2017, production of **municipal waste** increased sharply.
- Prior to 2011, production and trade of **biogasoline** and **biodiesels** cannot be distinguished due to confidentiality issues.

### Transformation

- Starting in 2016, the increase of electricity production of **solid biofuels** is a result of a decarbonisation programme and comes from a plant which is co-firing peat and biomass.
- In 2012 and 2013, the renewable fraction of tyre-derived fuel (12%) used by a cement plant was reported by the administration under **renewable municipal waste**; the non-renewable fraction (88%) was reported under **industrial waste**.

## Consumption

- The Biofuels Obligation Scheme places an obligation on suppliers of mineral oil to ensure that 8.695% (by volume) of the **gas/diesel oil** they place on the market in Ireland is produced from renewable sources, e.g. **bioethanol** and **biodiesel**. The obligation was increased from the 1st January, 2017, from the previous level of 6.383%.
- Despite the Biofuels Obligation Scheme, **bioethanol** consumption decreased in 2017 because there was a reduction in overall motor gasoline use and of fuel tourism.
- Increases in **biodiesel** consumption in 2017 are related to the Biofuels Obligation Scheme and to increases in road freight, which is heavily dependent on **diesel oil**.
- The consumption of pure **biodiesel** in the industry sector and in road transport refers to one site, which is no longer in operation since 2014.

## Electricity and heat

### Supply

- Electricity production from **wind** begins in 1992 and from **biogases** in 1996.

### Transformation

- In the 2016 edition, revisions were introduced in the **electricity** generation by fuel from 2010 due to improved data available from the transmission system operator.
- In 2015, a new combined cycle gas turbine plant began commercial operations at Great Island power station, replacing the existing heavy fuel oil power plant.
- In 2012, a new main activity electricity plant burning **municipal waste** (the Meath plant) started operation.
- In 2011, very little electricity was produced from **pumped hydro** following Turlough Hill, Ireland's pumped storage station, being taken offline in late 2010 up until February 2012. The 2011 values appear as zero due to rounding.
- From 1984 to 1989, inputs of **hard coal** in auto-producer CHP plants have been estimated by the Secretariat.

## Consumption

- In 2004, the increase of **electricity** consumption is due to the new light rail transit system in Dublin.

- The decrease of **electricity** consumption in the iron and steel industry from 2001 onwards is due to Ireland's main steel plant ceasing production.
- Prior to 1990, **electricity** consumption in agriculture is included with residential.
- **Electricity** consumption in the iron and steel industry includes consumption in the non-ferrous metals industry prior to 1990.
- Data for direct use of **geothermal heat** and **solar thermal heat** are available from 1989 and 1990, respectively.

## Israel

### Source

Israel Central Bureau of Statistics, Jerusalem.

### General notes

- Data are available starting in 1971.
- The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli administration. The use of such data by the OECD and/or the IEA is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.
- Due to the unavailability of data for certain fuels, IEA estimations are also present in Israel data. In particular this is valid for oil data in 2014 and 2015, **natural gas** data from 2012 onwards, **renewables and waste** data in 2013.

### Coal

#### Supply

- Due to confidentiality constraints, imports of **other bituminous coal** have been estimated by the IEA Secretariat for 2016.

### Oil

#### General notes

- Oil data for 2013 to 2016 have been revised based on Israel's national energy balance. As a result, breaks in time series may appear between 2012 and 2013. Israel's national energy balance aggregates bitumen, petroleum coke and other oil products. The split of these products was estimated by the IEA secretariat for all flows. The split of refinery output between jet kerosene and other

kerosene was also estimated by the IEA Secretariat, as was the sectoral breakdown of consumption of liquefied petroleum gases.

- Supply and consumption of kerosene type jet fuel for 2011 and 2012 have been estimated by the IEA Secretariat.
- From 2007 to 2009, oil data are estimated by the IEA Secretariat based on information from the Ministry of National Infrastructures.

#### Supply

- From 2010 onwards, white spirit is included in other products.

#### Consumption

- From 2013, consumption data are based on a new and detailed classification system and on estimations made by the Israeli administration.

### Natural gas

#### General notes

- From 2012, all natural gas data, except inputs to electricity production, have been estimated by the IEA Secretariat.
- For the 2018 edition, gas data have been revised back to 2013 based on a publication by the Israeli Natural Gas Authority. As a result, breaks in time series appear between 2012 and 2013. More specifically, this revision impacted oil refineries, the *industry* sector and *other* sectors. Finally, all *industry* is categorised as *non-specified industry* and all *other* sectors as *non-specified other*, because no disaggregation is available.

#### Supply

- Imports of natural gas began in 2008.

#### Transformation

- In the 2017 edition, the Israeli administration revised transformation data back to 2013, introducing breaks in the series between 2012 and 2013.
- In the 2018 edition the 2016 data for inputs to electricity production were estimated by the IEA Secretariat.

### Biofuels and waste

#### General notes

- In the 2018 edition, data on imports and consumption of **charcoal** were estimated since 1992

using data from the Forestry Production and Trade database from the Food and Agriculture Organization of the United Nations.

## Electricity and heat

### Supply

- Electricity production from **wind** begins in 2001.
- Autoproducer electricity generation from chemical heat (production of sulfuric acid) occurs, but is not reported separately or included elsewhere in national totals.

### Transformation

- For 2016 data, due to confidentiality reasons, electricity production reported under **solar PV** auto-producer electricity plants includes **hydro** and **wind** electricity generation.
- For 2013 and 2014, **other oil products** inputs to autoproducer electricity plants were estimated by the IEA Secretariat.

### Consumption

- Since the 2017 edition, **solar thermal** production and direct consumption were revised, and are now estimated by the IEA Secretariat from 2012 onwards, using data published in the IEA-Solar Heating and Cooling Programme Annual Report. These estimations may create breaks in time series between 2011 and 2012.
- For 2013, 2015 and 2016, the split of **electricity** consumption in industry is estimated by the IEA Secretariat.
- **Electricity** own use, as well as transmission and distribution losses were estimated by the IEA Secretariat from 2010 to 2012.

## Italy

### Sources

Ministry of Economic Development, Rome.

Terna, Rome.

### General note

- A change in methodology lead to breaks in time series for industry and transformation between 2003 and 2004.

## Coal

### General notes

- The increase in production of **coke oven gas** in 2012 was the consequence of improvements in scope of reporting. As such, coke oven gas data in prior years should be viewed as under-representing production and consumption, and coke oven efficiencies will likewise appear lower than actual.
- Due to a change in the survey system, breaks in time series may occur between 1997 and 1998 for final consumption.
- From 1986 onwards, figures from **lignite** are given using the same methodology as in the *Bilancio Energetico Nazionale*.

### Supply

- In the 2018 edition, production of **coke oven coke**, **coke oven gas**, **coal tar** and **other recovered gases** was revised back to 2014 due to new available information. The revisions increased efficiencies of coke ovens and blast furnaces and led to breaks between 2013 and 2014.
- **Other bituminous coal** production ceased in 2016 due to the closure of the one coal mine in 2015.

### Transformation

- Breaks in the time series between 2014 and 2015 for **coke oven gas**, **blast furnace gas** and **other recovered gases** are due to a reclassification of main activity producers and autoproducers.
- Prior to 2009, sub-bituminous coal used in main activity electricity plants was included with other bituminous coal consumption.
- For data since 2001, calorific values for imports of **other bituminous coal** and **sub-bituminous coal** are derived from inputs to main activity electricity generation.

### Consumption

- In 1991, all industrial activities were reclassified on the basis of ISTAT/NACE 91. This has implied some transfers of activities which may result in some anomalies between 1991 and earlier years.

## Oil

### General notes

- For **crude oil**, statistical difference may arise as trade corresponding to stock held for Austria and Germany in the Port of Trieste are not included.



- Inputs to electricity and heat generation have been estimated by the IEA Secretariat for the years 1984 to 1997 based on submissions of the Electricity and heat Questionnaire. All other data for the years 1992 to 1997 and the detailed consumption breakdown for other years have been estimated by the IEA Secretariat based on *Bilancio Energetico Nazionale*.

### Supply

- In 2016 and 2017, the closure of the Val d'Agri oil centre lasting several months led to a decrease in production of **crude oil**.
- From 2009 onwards, transfers of **lubricants** could not be disaggregated from refinery output data.
- From 2004 onwards, increased production of **non-specified oil** products is due to methodological changes.
- A new survey to determine the split between international marine bunkers and domestic navigation caused a break in time series for **gas/diesel oil** in 1999 and **fuel oil** in 1996.

### Consumption

- For **gas/diesel oil**, non-specified use is included in commercial/public services.
- Between 1998 and 1999, due to new surveys, breaks appear in the consumption time series.

## Natural gas

### Transformation

- Prior to 2008, inputs of natural gas to all heat production in industry were reported in final consumption.
- Between 2003 and 2004 there are breaks in time series in industry and transformation due to a new data reporting methodology
- From 2000 to 2002, for confidentiality reasons, autoproducers are included in main activity producer plants.
- In 1996 the production of gas works gas from natural gas ceased.

### Consumption

- In the 2018 edition, Italian administration estimated the split of the energy sector. These figures will be revised in the next edition.
- Since 2007, a more detailed breakdown of consumption for *energy industry own use* is available.

## Biofuels and waste

### Supply

- **Biogasoline** includes **bio-ETBE**.
- From 2014, a distinction between trade and production became available for **other liquid biofuels**.

### Transformation

- In 2008, data for **biofuels and waste** were reclassified, which results in several breaks in the time series for transformation.

### Consumption

- The final consumption of **biogas** has been constant from 2013 to 2015, as these figures are the result of a survey which is not carried out annually. Figures are expected to be revised after the next survey.
- In the 2016 edition, the methodology used to calculate **solid biofuels** consumption in the residential sector for 2002 to 2014 was updated and this created a break in time series between 2001 and 2002. This also affects the indigenous production of **solid biofuels**. The revisions were limited backwards to 2002 because of reliability issues.

## Electricity and heat

### Supply

- The production of electricity reported in the category *other fuel sources* refers to electricity produced from turbines which are located at pressure drops in fluid transport.
- The methodology of data collection for **photovoltaic** electricity production changed in 2009 and the distinction between main activity and autoproducer plants could not be determined, causing a break in the time series.
- **Electricity** trade with Malta commenced in 2015, following the opening of the Malta-Sicily interconnector submarine power cable in the same year.

### Transformation

- In 2016, the decline in autoproducer electricity generation and sold heat production by oil refineries is partly due to the activities of these units being split off and reclassified as main activity enterprises.
- The methodology of data collection for the **geothermal** sector changed in 2010, causing a break in time series between 2009 and 2010.

- Prior to 2009, sub-bituminous coal used in main activity electricity plants was included under other bituminous coal.
- With the introduction of a new survey in 2008, amounts of naphtha and other kerosene that were previously included in *other oil products* have been reported separately in autoproducer CHP plants.
- Prior to 2004, electricity production from orimulsion is confidential and is included with fuel oil.
- Heat production is reported starting in 2004 and includes self-generation in industry.
- From 2000 onwards, the Italian administration defines electricity and heat production from autoproducers as generation from producers that consume more than 70% of their own electricity production. However, for the 2000 to 2002 period, all electricity production from autoproducers is reported with main activity producers.
- The breakdown of renewables and waste inputs into electricity, heat and CHP plants is available from 1989 only. Prior to that year, the total of the different fuels involved is reported as non-specified renewables.
- Prior to 1984, net electricity production by autoproducers includes production from combustible fuel sources only.

### Consumption

- *Non specified energy industry own use* includes electricity consumption for blast furnaces. From 2000, it also includes consumption for the distribution of gas and prior to 1989 consumption for uranium extraction.
- The breakdown of heat consumption by sector is estimated by the Italian administration.
- Revisions of the final consumption of **heat** by the Italian administration led to breaks between 2010 and 2011.
- From 1981, consumption of electricity in transport includes electricity used for pumping in oil pipelines.

## Japan

### Source

The Institute of Energy Economics Japan, Tokyo.

### General notes

- In the 2018 edition, data for Japan were revised back to 1990 based on new methodology. Additional details are given under each fuel.
- From 1990, data are reported on a fiscal year basis (e.g. April 2015 to March 2016 for 2015).
- In the 2018 edition, Japan revised their data back to 1990 based on new methodology in all questionnaires.
- Consumption data for commercial/public services may include consumption in small and medium-sized industries. The Japanese administration expects that this shortcoming will be corrected in the near future.

### Coal

#### General notes

- **Other bituminous coal** includes sub-bituminous coal.
- The net calorific values for **coal** and **coal products** have been recalculated by the IEA Secretariat based upon gross values submitted by Japan.
- In the 2018 edition, imports of **other bituminous coal** and **coking coal** –by partner country - have been estimated by the IEA Secretariat for data from 1990 to 2016, based on customs data and total imports by coal type.
- **Hard coal** data prior to 1978 may include sub-bituminous coal.

#### Supply

- Statistical differences for **hard coal** include stock changes since 2001. Large positive differences for several years since 2004 are partly due to stock build by final consumers.

#### Transformation

- The inputs of **coke oven coke** to blast furnaces as well as the final consumption of **coke oven coke** in the iron and steel industry have been estimated by the IEA Secretariat since 1990.
- From 1998, inputs of **coke oven gas**, **blast furnace gas** and **other recovered gases** into autoproducer electricity plants include the amount used to produce electricity with TRT technology (Top pressure Recovery Turbines) which was previously included in industry.

- Inputs of manufactured gases (**coke oven gas**, **blast furnace gas** and **other recovered gases**) to main activity electricity and heat plants are calculated based on outputs and using efficiencies of main activity producers from other fuels. For auto-producers, the specific inputs are known, however the specific electricity production by each gas is estimated based on a pro-rata of the total electricity generation from all gas types.
- Coal injected in blast furnaces (PCI) is classified as **coking coal** in order to be consistent with Japanese trade statistics.

## Oil

### General notes

- In the 2018 edition, data for Japan were revised back to 1990 by the Japanese administration based on new methodology for the Energy Balance Table.
- In the 2016 edition, the Japanese administration revised several NCVs of both primary and secondary **oil products** back to 1990. The Japanese administration reviews calorific values every five years, with the other most recent revisions occurring in 2005 and in 2013.

### Supply

- The high statistical difference for **crude oil** in 2013 and 2014 is explained by large amount of stocks held on board incoming vessels in port or at mooring in March 2014 (end of Japan's 2013 financial year). These amounts are included in the stock change but not in the imports in 2013 annual data.
- Orimulsion was imported for electricity generation between 1991 and 2006.

### Transformation

- Other hydrocarbons in *non-specified transformation* represents orimulsion burnt for power generation. Historical revisions are pending.

### Consumption

- Road consumption, is based on the "Automobile fuel consumption survey" from the Ministry of Land, Infrastructure, Transport and Tourism (MLIT).
- **Lubricants** consumption is estimated by the Japanese administration since 2000.

## Natural gas

### General notes

- The 2018 edition contains major revisions to time series which go back to 1990. These have occurred as the result of a change in the statistical methodology implemented in November 2017.
- Since 1990 most of the gas works gas production and consumption has been included with natural gas.

### Supply

- In the 2018 edition, receipts from other sources, import data, stock changes and stock levels were revised back to 1990.

### Transformation

- In the 2018 edition, main activity and auto-producer electricity plants were revised back to 1990. Similarly, flows of the energy sector were revised back up to 1990.
- In 2017 edition, the Japanese administration revised transformation data for the period 1990-1999.

### Consumption

- In the 2018 edition, all the industry flows and other sectors flows were revised back to 1990 and the transport sector back to 2011.

## Biofuels and waste

### General notes

- There was a large revision in **municipal waste** data in the 2016 edition of this publication. This revision has removed data for **municipal waste** for the entire time series up to 2010.
- For **municipal waste** data, the breakdown between renewable and non-renewable **municipal waste** is estimated by the IEA Secretariat, assuming a 50% split in transformation and supply.

### Transformation

- Input data of **solid biofuels** to charcoal production are estimated by the IEA Secretariat assuming an efficiency of 40%.
- The **industrial waste** consumption in the *non-specified transformation* sector surged in 2013, because of the increase in use of waste plastics for coke production.



## Electricity and heat

### Supply

- Generation of electricity and heat from combustible fuels is calculated by removing electricity and heat generation from other sources, such as wind, solar and nuclear, making it a residual item. Splits between combustible fuel types and consumption flows are also calculated.
- Large increases in 2016 of main activity electricity generation from solar PV and wind are due to reclassification from autoproducer status after liberalisation of the Japanese power market in April 2016.
- For 2017, electricity production from **wind** has been estimated by the IEA Secretariat.
- Due to the events related to the March 2011 tsunami, the Japanese administration decided to scale back the level of their **nuclear** programme. As a consequence, there was no nuclear electricity generation in 2014. The nuclear electricity generation started again at a greatly reduced scale in 2015, while a significant increase was observed in 2017, with generation resuming at four facilities (Takahama 3 and 4, Ooi 3, and Genkai 3).
- Other sources electricity represents electricity generated with purchased steam. Other sources heat represents heat derived from waste heat.
- Net and Gross electricity generation from autoproducers equal, as no information is collected concerning autoproducer own use.
- The Japanese administration estimate the electricity input of **electric boilers** based on 100% efficiency.
- Autoproducer **solar photovoltaic** capacity is derived from data from the Japanese administration as well as the IEA Photovoltaic Power Systems Programme (IEA-PVPS) report, “Trends in Photovoltaic Applications” published in 2017.
- Data on electricity production from **wind** began in 1992.
- Heat produced for sale in main activity producer heat plants from **waste heat** and from **electric boilers** is available from 1977 and 1983, respectively.

### Transformation

- **Electricity** production from **pumped storage** includes production from both mixed hydro and pure pumped storage.

- Data on **heat** produced for sale by autoproducer heat plants are not available.
- Fuels used and corresponding electricity and heat produced in CHP plants are not included in the CHP data time series, but instead are reported as separate **electricity** or **heat** components, leading to some plant efficiency figures not to be accurately calculated.
- Inputs of **biofuels and waste** for electricity production and related outputs are available from 1982.
- Net electricity production by autoproducers prior to 1982 includes production from **combustible fuel** sources only.
- Between 1972 and 1976, the use of **combustible fuels** in main activity producer heat plants is included in non-specified.

### Consumption

- Consumption of **electricity** in *non-specified industry* includes wood and wood products and construction prior to 1982.

## Korea

### Sources

Korea Energy Economics Institute, Ulsan.

Korea National Oil Corporation, Ulsan.

### General notes

- Data are available starting in 1971.
- Data for 2002 onwards have been reported on a different basis, causing breaks in time series between 2001 and 2002, especially for inputs and outputs to electricity generation and consumption in the iron and steel industry. The Korean administration is planning to revise the historical time series as time and resources allow.

### Coal

#### General notes

- Data for **coal** and **coal products** from 1971 to 2001 are based on information provided by the Korean administration, as well as information from the *Yearbook of Energy Statistics 2002*, the *Yearbook of Coal Statistics 2001* (both from the Ministry of Commerce, Industry and Energy), and

*Statistics of Electric Power in Korea 2001* (from the Korea Electric Power Corporation). During this period, import data by coal type were estimated by the IEA Secretariat, based on statistics of the exporting countries.

- **Hard coal** data prior to 1978 may include **sub-bituminous coal**.

### Transformation

- Statistical differences for **manufactured gases** for 2012 are partly the result of classification issues. The Korean administration is working to improve reporting of coal-derived gases production and consumption.

### Consumption

- Data on **blast furnace gas** used for energy purposes in blast furnaces prior to 2007 are reported in the iron and steel industry.
- Consumption of imported **coke oven coke** starting in 2002 is reported under *non-specified industry*.
- Consumption of **manufactured gases** in the iron and steel industry starting in 2002 includes the consumption in blast furnaces, oxygen steel furnaces and other iron and steel processing plants.

## Oil

### Consumption

- Inputs of **fuel oil** to autoproducer electricity and autoproducer CHP are included with final consumption.

## Natural gas

### Supply

- Korea reports production of natural gas since 2005. The production is decreasing and the reservoir is expected to be depleted by the end of 2017.

### Consumption

- Energy industry own use in liquefaction plants includes losses and measuring errors.
- Prior to 2007, consumption of natural gas in machinery was included with transport equipment.
- From 1987 to 1991, the breakdown of final consumption has been estimated by the IEA Secretariat, as well as the residential subsector for 1992.

## Biofuels and waste

### General notes

- Due to the change of reporting methodology, breaks in time series may occur between 2013-2014 and 2014-2015.
- Electricity statistics from 1971 to 1993 have been estimated by the IEA Secretariat based on the Korean National Statistics. Data from 1994 have been submitted by the Korean administration. This leads to breaks in time series between 1993 and 1994.
- Heat data are available starting in 1993.

### Transformation

- Inputs to *autoproducer* heat plants have been estimated by the IEA Secretariat because of efficiency issues for municipal waste prior to 2011 and in 2012 and for biogas in 2008, 2011 and 2012.
- New plants were included in the Korean survey creating breaks in time series in 2011.
- In 2007, some main activity heat plants and autoproducers in the commercial/public services sector were reclassified as main activity CHP plants, resulting in a break in the time series between 2006 and 2007 for **biogases**.

## Electricity and heat

### Supply

- The own use of **heat** in heat plants is very irregular due to a lack of data.
- Electricity generation reported under *other sources* is from fuel cells.
- Production of electricity from **tides** began in 2013.
- Data for **heat from chemical processes** that is sold is available from 2008.
- Data for electricity production using **heat from chemical processes** in copper and zinc plants is available from 2005. The corresponding heat inputs were estimated until 2013 data. In 2014 the corresponding company switched to diesel oil for electricity generation.

### Transformation

- Some data discrepancies currently exist for **residual fuel oil**, between the oil databases and the electricity and heat databases. The Korean administration envisages remedying this situation next year.

- Prior to 2009, autoproducer **heat** production includes amounts of unsold heat.
- Data for electricity and heat production by autoproducers using **natural gas** and **liquid fuels** are available from 2000.
- In 2000, the Korean administration started to report **heat** statistics for some heat plants which were not reported before.
- Between 1993 and 1999, the breakdown of **heat** output by type of fuel was estimated by the IEA Secretariat.
- Before 1994, **electricity** production from main activity producer CHP plants is included with main activity producer electricity only plants.

### Consumption

- Data for direct use of **geothermal heat** are available from 2002. **Geothermal** direct use data are overstated as it refers to heat production by geothermal heat pumps, which include inputs of electricity and/or gas in the transformation process.
- **Heat** consumption by subsector was reclassified in 2010 due to new information available on heat sales from autoproducers to end-users by sector.
- Prior to 2008, sales of **electricity** by Korea's main electricity distributor, KEPCO, to the non-ferrous metals sector are included in iron and steel consumption.
- Data on production and consumption of **electricity** and **heat** in oil refineries and LNG liquefaction/regasification plants are included in the industry sector. From 2007, oil refinery **electricity** and **heat** production and consumption started to be reported under the correct energy sector.
- Data for **heat** consumption by sector are available from 2000.
- Data for **electricity** consumption in the transport equipment sector are included in machinery from 1994 to 1999.

## Latvia

### Source

Central Statistical Bureau, Riga.

### General notes

- Data for Latvia are available starting in 1990. Prior to that, they are included in Former Soviet Union in the publication *World Energy Statistics*.

## Coal

### Supply

- The increase of distribution losses for **peat** in 2003 is due to a fire in one of the warehouses.

### Consumption

- The drop in the iron and steel industry in 2014 is due to the bankruptcy of the major company in the market.

## Oil

### Supply

- **Other hydrocarbons** data represent shale oil.

## Natural gas

### Consumption

- The consumption in the iron and steel industry decreased in 2014 due to the bankruptcy of the major company in the market.

## Biofuels and waste

### Transformation

- Due to a reclassification in 2004, there was break in time series of electricity production from autoproducer electricity plant fuelled by biogas between 2003 and 2004.

### Consumption

- The increase in supply for **solid biofuels** from 2016 to 2017 is due to increased usage in the industry sector.
- From 2014, **biodiesel** consumption has been decreasing due to policies which support the sale of arctic diesel fuel without renewable additives.

## Electricity and heat

### Transformation

- From 2012 onwards, the increase in electricity production from **solid biofuels** is due to the deployment of six new main activity producer CHP plants running on wood chips.

### Consumption

- For 2012, the increase in electricity consumption in the iron and steel sector is due to switching from open earth furnace to electricity furnace of a factory.

## Luxembourg

### Source

STATEC, Institut national de la statistique et des études économiques du Grand-Duché du Luxembourg, Luxembourg.

### Coal

#### General notes

- For the 2011 edition, the Luxembourgian administration revised the time series from 2000 for most **coal** and coal products. Time series for **BKB** consumption were revised from 1990.
- Prior to 1978, some **sub-bituminous coal** may be included in **hard coal**.
- Steel production from blast furnaces ceased at the end of 1997.

### Oil

#### Consumption

- In the late 1970s, the reduction in consumption of **fuel oil** in the iron and steel industry was due to substitution by coal.

### Natural gas

#### General notes

- In 1982 there is a break in the time series in transformation and industry due to a change in methodology.

#### Transformation

- In the 2017 edition a main CHP plant was reclassified as one main electricity plant and one main heat plant. Data were revised back to 2014.
- Since 2002, the increase in the transformation sector is due to a new 350-MW combined cycle power plant.

#### Consumption

- In 2015, Luxembourg integrated supplementary data from ETS companies and industrial consumption was revised back to the year 2000.
- The breakdown of total final consumption for the latest year is preliminary and will be finalised in the next edition of the book.

- Since 2012, the methodology to determine final consumption was changed in order to integrate basic data from National Accounts.
- Since 2000, a more detailed breakdown of final consumption data is available due to a change in methodology.
- Since 2000, consumption in the non-ferrous metals sub-sector is included in iron and steel for reasons of confidentiality.
- Since 2000 consumption in not elsewhere specified (Industry) includes activity of companies reclassified to preserve the confidentiality.
- Prior to 2000, residential consumption includes consumption in commercial/public services and agriculture/forestry.

### Biofuels and waste

#### General notes

- The Luxembourgian administration started including trade figure of wood chips in trade figure of **solid biofuels** from 2015 data. This creates breaks in time series between 2014 and 2015.
- Data on **solid biofuels** are available from 1992.

#### Transformation

- In 2011, the blending of **biogases** with **natural gas** started.

### Electricity and heat

#### General notes

- Data for **solar thermal** are available starting in 2001 and for **solar PV** starting in 2000.
- A revision in the classification of power plants by type and the production and consumption data for both **electricity** and **heat** back to 2000 causes breaks in the time series.

#### Supply

- Most of the **hydro** production shown for Luxembourg is from the Vianden pumped storage plant and is exported directly to Germany.
- Starting in 2005, data for **electricity** transmission and distribution losses were obtained from the network operator. Prior to that, they were estimated by the Luxembourgian administration.

- In the 2017 edition, following plant reclassification, **heat** production by main activity plants were revised from 2011 onwards.

### Transformation

- Luxembourg's natural gas fired, main activity electricity plant closed for the majority of 2016 for economic reasons.
- The production of electricity from **solid biofuels** from 2013 corresponds to the opening of a new plant burning wood wastes.
- Data on electricity production from biogases are available from 1998 and heat production from 2010.
- In 2002, the increase in electricity production is due to a new **natural gas** combined cycle power plant.
- At the end of 1997, the iron and steel industry stopped production of **electricity**.
- Electricity data for **natural gas** autoproducer CHP plants are available starting in 1995, and for main activity CHP plants starting in 1996.
- Prior to 1990, **net electricity** production by auto-producers includes production from combustible fuel sources only.

### Consumption

- In 2015, the observed declines in the **heat** used in the textiles and leather sector and the chemical and petrochemical sector lead to the closure of two industrial main CHP plants. The heating needs of these sectors were met through direct purchase of natural gas, due in part to attractive pricing during this period.
- In 2015, following the procurement of new information, data for **heat** distribution losses and **heat** consumption in industry and energy sectors were revised from 2000 onwards.
- A change in the data source caused some breaks in the industry **electricity** consumption time series between 2010 and 2011.
- The breakdown of **electricity** consumption in industry is not available from 1990 to 1999.

## Mexico

### Source

Secretaría de Energía, Mexico City.

### General notes

- Data are available starting in 1971.
- The Mexican administration submitted data directly by questionnaire for the first time with 1992 data. As a result, some breaks in time series may occur between 1991 and 1992. For prior years, data are partly estimated based on the publication *Balance Nacional - Energía*.
- In the 2016 edition, the Mexican administration completed a major work on revisions of the time series back to 1990. More revisions to historical data are pending.

### Coal

#### General notes

- The Mexican administration is currently undertaking major work on revisions of the time series back to 1990. For several products, revisions back to 2003 were provided in the 2016 edition. Further revisions to historical data are pending.
- The time series for **blast furnace gas** and inputs of **coke oven coke** to blast furnaces start in 1991.
- **Hard coal** data prior to 1978 may include **sub-bituminous coal**.

#### Consumption

- Use of pulverised coal injection in blast furnaces occurs in Mexico, but is not currently reported.
- Oxygen steel furnace gas production and production of other **other recovered gases** occur as by-products of heavy industry, but are not reported.

#### IEA estimations

- Imports by country of origin for other **bituminous coal** and **coking coal** for 2016 have been estimated by the IEA Secretariat, based on partner data.
- For **coking coal**, amounts reported for consumption in main activity electricity generation and associated imports for the years 2003 to 2016 have been reallocated to **other bituminous coal** by the IEA Secretariat.
- **Blast furnace gas** production and consumption have been estimated by the IEA for 1990 to 2016 based on inputs of **coke oven coke** to blast furnaces.
- **Coke oven coke** production was estimated by the IEA for some years between 1999 and 2012 based



off historical and commodities data, as were inputs of **coking coal** to coke ovens between 1990 and 2012.

- The methodology currently used by Mexico to estimate production of **coal tar** and **coke oven gas** for recent years uses **coke oven coke** production as a guide. This was extended to the time series from 1990 to 2001, and to the years where **coke oven coke** production was estimated by the IEA.

## Oil

### General notes

- In the 2016 edition, major revisions were carried by the Ministry of Energy on the time series back to 1990 based on updated information available from PEMEX, the Mexican Institute of Petroleum and the Federal Electricity Commission (CFE). Revisions include notably crude production, refinery output, gas separation plant production, autoproducer generation and road consumption.
- New data reported as **additives** from 1990 correspond to methyl tertiary butyl ether.
- From 1993, data for production *from other sources (natural gas)* of **other hydrocarbons** correspond to hydrogen used at the Minatitlan refinery, also represented as the output of *non-specified transformation* in the balances format.
- The split between domestic and international aviation consumption of **kerosene-type jet fuel** is not available. By default, all **kerosene-type jet fuel** consumption is reported under international aviation.

### Supply

- In the 2018 edition, trade information is based on daily customs data now available to the Ministry of Energy. Historical revisions are pending.
- For 2017, production of **crude oil** and **NGL** was impacted by heavy maintenance at the Ku-Maloob-Zaap field.
- The large refinery losses from 2005 onwards are the result of the downward revisions to refinery output of **gas/diesel oil** carried out in 2017.
- **NGL** production reported in the IEA publications may be different from what is reported in the Mexican energy publications as the IEA includes in its oil data liquids produced in conjunction with natural gas.
- In the 2016 edition, **crude oil** production was revised from 2000 to 2004 based on updated information from PEMEX.

- In the 2016 edition, main revisions were carried to **NGL, LPG, naphtha, ethane** supply. New data became available on input of NGL to refineries prior to 2011. Data on ethane production from gas separation plants (positive transfers from NGL) was revised upwards for 1990 to 1998. LPG gas separation plant production was revised down. Naphtha refinery output was revised upwards from 1990.

### Transformation

- For several months in 2017, the Salina Cruz refinery was under extensive maintenance.
- In the 2016 edition, data for crude oil refinery input and refinery output of **gas/diesel, naphtha, refinery gas, bitumen, paraffin wax** and **other products** were revised back to 1990 (see general notes).
- Data for **fuel oil** and **gas/diesel** inputs to autoproducer CHP generation are available from 1999.
- In 2003, a new facility was added to a refinery to produce **petroleum coke**.

### Consumption

- Consumption of **motor gasoline** and **road diesel** was impacted by changes to fuel subsidies introduced on January 1, 2017.
- In the 2016 edition, **naphtha** non-energy use consumption in the chemical/industry was revised significantly revised down from 1990 to 2008 based on PEMEX information.
- In the 2016 edition, **gas/diesel** and **motor gasoline** road consumption data were revised back to 1990 based on updated information from the Mexican Institute of Petroleum and PEMEX.
- Consumption of **lubricants, bitumen** and **paraffin waxes** are available from 1990 and **petroleum coke** from 1993.
- Prior to 1987, the split of **LPG** consumption between residential and commercial/public services has been estimated by the IEA Secretariat.

## Natural gas

### General notes

- **Natural gas** reported in the IEA publications may be different from what is reported in the Mexican energy publications, as IEA includes only dry gas and excludes natural gas liquids, which are considered as part of oil.

### Transformation

- The split of natural gas used for hydrogen manufacture and used in refineries is not currently available and it will be provided in the 2019 edition of this publication.

### Consumption

- Losses and pipeline transport have been included in oil and gas extraction.
- From 1993 to 1999, part of energy industry own use and *non-specified industry* data were estimated.
- Since 1993, the breakdown of the energy sector and of other sectors is available.

### Biofuels and waste

#### Supply

- Data for **bagasse** production are available from 2008.

#### Consumption

- Data for **solid biofuels** used in autoproducer electricity plants from 1991 to 2005 have been estimated by the Mexican administration.
- Data on **biogases** consumption are available from 1997.

### Electricity and heat

#### General notes

- The Mexican administration is currently undertaking revisions of the **electricity** time series back to 1996. Revisions include changes on inputs and outputs on power plants fuelled mainly by **combustible fuels** and the reclassification of main electricity plants previously reporting **sub-bituminous coal** as fuel to **other bituminous coal** for the period 2003-2015.

#### Supply

- Production of main activity producer electricity plants from **wind** is available from 1994.
- Electricity production from **wind** and **solar photovoltaic** is available from 1990.
- Discrepancies occur between respective reported figures for electricity trade between the US and Mexico for the years 2013 to 2016.

### Transformation

- New autoproducer electricity plants fuelled with **coke oven gases** were put on-line in 1999.
- Electricity production from **solid biofuels** and **biogases** data are available respectively from 1991 and 1997.

### Consumption

- Some electricity consumption in energy industry is included in the industry sub-sector where it was generated (e.g. the chemical industry, as well as in *non-specified industry*).
- Direct use of **solar thermal** heat is available from 1990.

## Netherlands

### Source

The Netherlands Central Bureau of Statistics, The Hague.

### General notes

- The Netherlands Central Bureau of Statistics has conducted reviews and revisions of their energy balance three times; in 2005, 2011 and 2015. The 2005 revisions were to improve basic energy statistics, particularly with respect to carbon and CO<sub>2</sub> reporting, while the 2011 revisions were part of a harmonization program with international energy statistics. The 2015 revisions were the result of increased data collection, availability of new source information, and further alignment with international energy definitions. More details are available here: [www.cbs.nl](http://www.cbs.nl).

### Coal

#### General notes

- International trade into and through the hub ports of Amsterdam and Rotterdam is complicated by the capacity to purchase coal directly at these points. The majority of coal passing through these ports is intended for consumption in European countries other than the Netherlands, which is neither the country of origin or destination, therefore these data have been removed where possible.
- Following revisions made in the previous edition to data for 1995 onwards, this edition includes

further revisions made by the Dutch administration for the period 1990 to 1994. These revisions are the result of increased data collection, availability of new source information, and further alignment with international energy standards.

### Supply

- From 2013 onwards, trade reported by the Central Bureau of Statistics includes **coal** in transit, to align more closely with gross trade data.
- In the 2013 edition, non-specified exports for 2011 were estimated by the Central Bureau of Statistics due to a lack of information from key market players.
- For data prior to 2011, stock changes for primary coal types were estimated by the Dutch administration based on trade and consumption data.
- For 1984 to 1986, production *from other sources* of **other bituminous coal** represents a stock of “smalls” washed for re-use.

### Transformation

- At the end of 2015 three low-efficiency plants running on bituminous coal input closed down. These closures were part of the so-called Agreement on Energy for Sustainable Growth in the Netherlands agreed upon by the Social and Economic Council of the Netherlands (SER) and more than forty representative organisations and stakeholders.

### Consumption

- Prior to 1989, non-energy use is included with industry consumption.

## Oil

### General notes

- For 2017 data, large amounts of fuel oil were re-classified as other products due to their chemical properties.
- Data for gas/diesel road consumption become more difficult to collect in 2013, as the distinction in taxation between road diesel and gasoil was abolished.
- Following revisions made in the previous edition to data for 1995 onwards, this edition includes further revisions made by the Dutch administration for the period 1990 to 1994. These revisions are

the result of increased data collection, availability of new source information, and further alignment with international energy definitions

- Motor gasoline includes other light oils until 1990.
- Some breaks in time series occur in 1990 when the Dutch administration started to report the petrochemical industry according to IEA methodology.
- From 1990 onwards, naphtha includes aromatics, naphtha and other light oils.

### Consumption

- In the 2018 edition, the Dutch administration made adjustments to gross inland deliveries to the petrochemical sector going back to 1990.
- Refinery gas includes chemical gas and is included in chemical industry consumption.

## Natural gas

### General notes

- In the 2018 edition, the Dutch administration revised the supply side data for 1990-2016 in order to (i) better account for flows from underground storages which used to be incorporated in the production data, and also (ii) handle inflows/outflows of gas stored in Germany as imports/exports. The revision also included updated figures on natural gas receipts from other sources oil and on stock levels.
- Between 1981 and 1982, and between 1983 and 1984 there are breaks in time series due to the introduction of more comprehensive surveys on end-use consumption.

### Supply

- A production cap of natural gas was set by the government in 2015, which has been extended and gradually tightened for 2016 and 2017. Dutch trade figures include transit volumes.
- In the past, the amounts reported under production also included quantities coming from stock changes. The reason was that the Dutch administration could not distinguish between quantities of **natural gas** falling under marketable production and amounts being moved from offshore fields to onshore fields without undergoing any purification and/or other necessary production processes. From 2015, the data reported distinguish between amounts to be reported as production and amounts that should be classified as stock changes.



### Transformation

- Data for *non-specified (energy own-use)* represent natural gas combusted by the distribution operator for the purpose of operating the gas distribution grid.
- The 2009 increase in input to main activity electricity consumption is due to the opening of a new plant in the second half of 2008.

### Consumption

- In the 2018 edition, the Dutch administration provided data for the *non specified (other) non-energy use* flow for the years 2007-2014, which represent the volume of gas injected as cushion gas in a new underground storage.

### Biofuels and waste

#### Supply

- From 2009 to 2012, and again from 2014 the production and trade of pure **biogasoline** were confidential; net imports were estimated by the Dutch administration based on consumption.

#### Transformation

- Trade data for **municipal waste** are available from 2011.

#### Consumption

- Increases in **biodiesel** production for 2017 are related to increased capacity of existing plants and increased demand.
- From 2014, a better allocation of heat own-use was available for **biogas** digester prewarming, and in **municipal waste** burning plants for flue gas cleaning.
- The final consumption of **solid biofuels** in the residential and agriculture sector increased in 2014 and again in 2016 due to the results of new surveys and parameters.

### Electricity and heat

#### General notes

- In the 2017 edition, following an extended review of old national publications, data for the Netherlands were revised for the years 1990-1994 to follow on the revisions entered in the previous edition, covering period 1995-2013. This revision endeavours to maintain data comparability throughout the entire time series. As part of these

revisions, most of the time series for the consumption sectors in both **electricity** and **heat** were revised using newly obtained data from grid operators' client files by the Dutch administration.

#### Supply

- The decrease of electricity produced from **nuclear** in 2013 data is due to a maintenance period of two and a half months of one nuclear power plant in this year.
- Electricity **from other sources** represents generation from expansion gases and chemical waste gases (the latter up to 2007).
- The large increase in **electricity** trade in 1999 is due to the liberalisation of the Dutch electricity market. Until 2003, trade data are based on contracted quantities instead of physical flows.
- The decrease of electricity produced from **nuclear** in 1997 is due to the closure for five months of one nuclear power plant.
- The increase of heat produced in main heat plants in 1995 is due to a change in ownership of one large installation, resulting in its reclassification from being an autoproducer to a main activity plant.
- Electricity production from **solar photovoltaic** is available from 1990.

#### Transformation

- Heat used for electricity production represents waste heat bought from other industries that was generated from **combustible fuels**.
- Autoproducer heat plants using **refinery gases** are included with autoproducer CHP plants because data are considered confidential for 1990.
- **Heat** production in commercial and public services includes production in agriculture.
- All municipal waste autoproducer electricity and heat only plants have been reclassified by Statistics Netherlands as autoproducer CHP from 2012, causing breaks in the time series.
- Prior to 2008, a few small autoproducer electricity plants using **solid biofuels** were included with main activity plants for reasons of confidentiality.
- In 2006, some **municipal waste** plants changed ownership and were reclassified from electricity only to CHP plants as they started heat projects.
- A new main activity producer CHP plant fuelled by **refinery gas** started up in 1999 and there was a fuel reclassification in 2000.

- For **natural gas**, all electricity production prior to 1998 is included in CHP plants.
- For **biofuels and waste**, all electricity and heat produced prior to 1995 is included in CHP plants.
- Data for heat produced from **biofuels and waste** are available from 1990.
- Prior to 1990, all electricity and heat produced from **coal** is included in CHP plants.
- Inputs of **hard coal** for electricity production from 1981 to 1989 in terajoules (TJ) are estimated by the Secretariat based on data submitted in kilotonnes (kt) by the Dutch administration.
- Net electricity production by autoproducers prior to 1988 includes production from **combustible fuel** sources only.
- Data for **heat** production by fuel in heat plants prior to 1987 are estimated by the Secretariat based on fuel inputs submitted by the Dutch administration.
- Data for heat production from main activity producer CHP plants and heat plants are available from 1982.
- Prior to 1982, **electricity** production from and inputs to main activity producer CHP plants are included with main activity producer electricity plants.
- For 1970 to 1973, **electricity** output from auto-producer CHP plants has been included with main activity producer CHP plants.

### Consumption

- Increasing **electricity** consumption in agriculture/forestry is due to expansion of greenhouse farming.
- Direct use of **geothermal heat** in agriculture/forestry starting in 2008 is due to a new project extracting deep **geothermal** heat.
- Prior to 1979, **electricity** consumption in agriculture is included in commercial and public services.

## New Zealand

### Source

Ministry of Business, Innovation and Employment, Wellington.

### General notes

- Prior to 1994, data refer to fiscal year (April 1993 to March 1994 for 1993). From 1994, data refer to calendar year.

## Coal

### General notes

- **Peat**, although produced in New Zealand, is not used as a fuel, and is used for agricultural purposes only.
- In the 2014 edition, the definition of **hard coal** was aligned with the International Recommendations for Energy Statistics. Prior to this, **hard coal** for New Zealand from 1960 to 1977 had contained **sub-bituminous coal**. The portion of **sub-bituminous coal** production and residential consumption has been estimated by the IEA Secretariat for this period and moved to **brown coal**.
- In the 2011 edition, the New Zealand administration has revised some of the **coal**, natural gas, oil, renewable and electricity time series back to 1990.

### Supply

- Breakdown of exports of **coking coal** by country of destination for 2016 has been estimated by the IEA Secretariat, based on partner data.
- The decrease of **other bituminous coal** production in 2015 is due to a temporary shutdown in one of the coal mines at the beginning of 2015 and another one at the end of 2015.
- A detailed breakdown of exports of **coking coal** by country of destination between 2001 and 2011 is estimated by the IEA, based on secondary sources and partner data.

### Transformation

- **Sub-bituminous coal** inputs into coke ovens refers to coal that is merged with iron sands and limestone to form the inputs for the multi-hearth-furnaces, kilns and melters that produce direct reduced iron (Glenbrook Steel Site), with off-gases and supplemental and natural gas driving CHP plants. This method, while not the typical iron and steel process, produces similar by-products. The **sub-bituminous coal** inputs are reported under coke oven coke transformation and the resulting off-gases are reported as production of **coke oven gas** and **blast furnace gas**.
- **Blast furnace gas** production and distribution losses prior to 1998 are IEA Secretariat estimates. Portions of this gas will have been used for energy purposes in the multi-hearth furnaces or elsewhere in the plant. Some transformation efficiencies will

appear higher than normal due to non-reporting of certain inputs, including some confidential data.

### Consumption

- In final consumption, some industry data are reported in *non-specified industry* for confidentiality reasons.
- In 2014, the increase in consumption of **sub-bituminous coal** in mines included the combustion of some unsold coal fines for safety reasons.
- Prior to 2010, the construction sector is included with commercial/public services.
- Prior to 2009, mining and quarrying is included in agriculture.

## Oil

### General notes

- For 2016, the following data were estimated by the IEA Secretariat: consumption of **lubricants**; imports of **bitumen**; and refinery output, and inter-product transfers of **other oil products**.
- For 2015, the following data were estimated by the IEA Secretariat: stock changes and consumption of **lubricants**; consumption of **bitumen**, and all figures for petroleum coke and **other oil products**.
- From 1998, **gas/diesel oil** includes light fuel oil. Until 1997, light fuel oil is under fuel oil.
- Until 1997, other hydrocarbons from natural gas sources correspond to synthetic gasoline production (ceased in February 1997).
- For reasons of confidentiality, beginning in 1994, the New Zealand administration no longer reports data on the production of methanol.

### Supply

- Between 2013 and 2014, the jump in imports of **kerosene-type jet fuel** can be explained by an anticipated strike at the refineries.

### Consumption

- Between 2009 and 2010, a break in time series appears for demand of **gas/diesel** as the administration changed its methodology for commercial/public services
- For 1960 to 1973, Consumption data have been estimated by the Secretariat.

## Natural gas

### Supply

- There are no imports nor exports of natural gas for New Zealand.

### Transformation

- The large 1998 increase in input to autoproducer CHP plants is due to two new autoproducer CHP plants.
- In February 1997, production of synthetic gasoline from natural gas ended.

### Consumption

- Between 2012 and 2013 there are breaks in time series for the final consumption breakdown due to the introduction of a new survey.
- In 2005, the decline in chemical industry consumption was due to the closure of the Motunui methanol production plant, which was then reopened in late 2008.
- Prior to 2003, gas consumed in industry includes some gas for energy industry own-use. Since 1990, detailed consumption breakdown for industry is available. From 1977 to 1979 and from 1986 to 1989, losses are included in statistical differences.

## Biofuels and waste

### General notes

- Due to improved wood data collection starting with 2016 data, increases in **solid biofuels** in transformation, supply and consumption may not be a true increase but more representative of increased data survey respondents. This results in a break in time series between 2015 and 2016.

### Transformation

- In the 2018 edition, revisions were made to **biogas** transformation data back to 2002 due to reclassification and methodological changes. This results in a break in time series between 2001 and 2002.

## Electricity and heat

### General notes

- There are several breaks in the time series between 1987 and 1988 due to a reorganisation of government departments during 1987.

## Supply

- **Heat** outputs from main activity and autoproducer CHP plants are not available.

## Transformation

- **Electricity** and **heat** production from **other sources** represents waste heat recovered and used for electricity production.
- In 1999, a reclassification of autoproducer plants causes some breaks in the time series.
- Data for **geothermal** electricity production by autoproducers are available from 1990.
- The New Zealand administration has updated efficiencies for **electricity** production from **geothermal heat** from 10% to 15% from 1990 onwards; this causes a break in the time series between 1989 and 1990.
- Data for heat from chemical processes used for electricity production are available from 1990 and corresponds to acid plants in the fertiliser industry where sulphur is the main input.
- In the 2018 edition, revisions in electricity production in **hydro** plants back to 2002 are related to a change in methodology. This results in a break in time series between 2001 and 2002.
- **Electricity** production by autoproducers from natural gas and from oil has been estimated by the Secretariat from 1970 to 1973.

## Consumption

- In the 2018 edition, **electricity** consumption generated by autoproducer electricity and CHP plant in the *Commercial and public services* sector for 2002 to 2016 have been estimated by the IEA Secretariat, based on revised biogas data, submitted in the Renewables and Waste questionnaire.
- A new survey starting with the 2013 data can cause breaks in data for final consumption of **electricity**.
- The consumption of electricity by the transport sector is collected under the Australian and New Zealand Standard Industrial Classification (ANZSIC) 2006 system's "Transport, Postal and Warehousing" category. As this covers commercial services as well as transport, MBIE estimates the amount of this that can be allocated to transport. At present this data does not allow for the disaggregation by transport sub-sector.

- Beginning in 2013, the falling **electricity** consumption in the pulp, paper and printing sector follows with the permanent closure of a paper machine in one of New Zealand's larger energy users, following decreased demand for newsprint.
- Data on direct use of **geothermal heat** are available from 1990 and direct use of **solar thermal heat** from 2002.
- From 1974 to 1993 distribution losses include the statistical differences.
- The classifications used by the administration of New Zealand were changed in 1991.
- Electricity consumption in paper, pulp and printing is included in wood and wood products prior to 1990.

## Norway

### Source

Statistics Norway, Oslo.

### General Notes

- In the 2018 edition, data for Norway were revised back to 2010, following the introduction of a new system for energy balances and energy accounts. Breaks in series may appear between 2009 and 2010 as a result. For more detailed information regarding the methodological changes, please refer to the documentation of statistics production since statistics year 2010 on the Statistics Norway website. At the time of writing, the document was available in Norwegian as "Dokumentasjon av statistikkproduksjonen fra statistikkår 2010 og fremover".

### Coal

#### General notes

- Other bituminous coal includes lignite.
- Production of **coking coal**, **coke oven coke** and **coke oven gas** ceased in the late 1980s.

### Supply

- The decrease of **other bituminous coal** production in 2015 is due to a temporary shutdown in one of the coal mines.
- The decrease of **other bituminous coal** production in 2005 is due to a fire in one of the coal mines;



this entailed a break in the production for a large part of the year.

## Oil

### General notes

- In the 2018 edition, the Norwegian administration made widespread revisions to their data back to 2010, following the introduction of a new system for energy balances and energy accounts. Breaks in series may appear between 2009 and 2010 as a result.
- A major project is being carried by Statistics Norway in order to reduce the statistical differences observed between calculated supply and demand of oil. Starting with 2014 data, new methodologies have been introduced for reporting **crude oil**, **NGL** and **naphtha** (see details below). Balances for **motor gasoline**, **gas/diesel oil**, **kerosene-type jet fuel** and **fuel oil** are also under investigation. Further improvements are expected in future editions.
- The IEA Secretariat estimates the net calorific value for Norwegian **crude oil** based on the oil product outputs of the oil refineries.
- Prior to 1990, **ethane** is included with **LPG**.

### Supply

- **Crude oil** production includes condensates.
- Starting with 2014 data, Statistics Norway has changed the source for annual **crude oil** exports to include shipping information collected by the National Petroleum Directorate.
- Starting from 2014 data, there is a break in **naphtha** supply time series due to a change in reporting methodology adopted by Statistics Norway.
- Prior to 2002 data, a part of **LPG** exports was reported as **NGL** exports.
- Since 1986, imports of **refinery feedstocks** are reported under the relevant oil product imports.

### Transformation

- In 2016 the Slagen refinery underwent maintenance which led to a decrease in refinery throughput for that year.
- In 2014, the strong decrease in **crude oil** refinery intake is linked to heavy maintenance work carried in the refineries in fall 2014.
- Starting with 1990 data, **gas/diesel oil** used for autoproduced electricity on oil and gas platforms are reported under energy industry own use.

- From 1970 to 1975, **gas/diesel oil** for electricity generation has been estimated by the Secretariat.

### Consumption

- Data on **naphtha** consumption in Norway are currently unavailable.
- Consumption of lubricants is reported within industry, as no further breakdown is available.
- In 2005 data, breaks in **petroleum coke** consumption time series appear due to reallocation in the industry sector. Refinery fuel is reported from 2001 data.
- In 2003 and 1993 data, breaks in time series appear for consumption in the chemical/petrochemical industry due to newly available information.
- Prior to 2000, **gas/diesel oil** used in fishing is included in agriculture/forestry.

## Natural gas

### General notes

- For Norway, the supply of **natural gas** is the residual of two very large and opposite amounts: production and exports. As a result, large statistical differences in some years may lead to discrepancies in the growth rates of supply and demand of natural gas.

### Supply

- Since 2008 data on stocks are available.

### Transformation

- Since 2007, gas inputs to all electricity and CHP plants are included in autoproducer electricity plants for confidentiality reasons.

### Consumption

- In the 2017 edition, consumption figures for the industry sector and other sectors were revised back to 2010.
- Prior to 2008, **natural gas** amounts used in gas extraction by offshore platforms were not included in production data.
- Since 2002 domestic navigation is included under *non-specified transport*.
- The 2007 increase in *non-specified transport* is due to the wider use of gas-powered sea vessels.
- Before 2000, energy use in oil and gas extraction also included some final consumption amounts.
- In 1992 the increase in oil and gas extraction is due to the start-up of new fields.

- Consumption for pipeline transport is included in energy industry own use.

## Biofuels and waste

### General notes

- Prior to 2007, equal shares of renewable and non-renewable **municipal waste** were estimated because the actual split was not known.
- Data for **industrial waste** and **biogases** are available from 1991.

### Supply

- In 2014, the **biodiesel** production facility closed.
- Data for **liquid biofuels** imports are available starting in 2006.

### Consumption

- Distribution losses for **biogases** are included in commercial/public services prior to 2003.

## Electricity and heat

### Supply

- No data on electricity production from **solar** energy are submitted to the IEA by the Norwegian administration.
- The electricity generated from **other sources** represents electricity from waste heat.
- Until the 2018 edition, distribution losses included statistical differences. Statistical differences now exist for 2010 onwards.
- Heat produced by autoproducer heat plants from chemical processes and from *other sources* and used for electricity production has been estimated by the IEA Secretariat for the period 1990 to 2006.
- Electricity production from wind is available from 1993.
- Data for **heat** production from heat pumps and electric boilers (including the electricity used for this production) are available from 1989.
- Data for heat production are not available prior to 1983.

### Transformation

- In the 2016 edition, Norway corrected the **industrial waste** consumption in heat plants, and reclassified some the corresponding heat output under other sources.

- Starting in 2007, data for **natural gas** electricity and CHP plants are aggregated in autoproducer electricity plants for confidentiality reasons. The revisions received for the 2018 edition partially altered these data for the period 2010 to 2016, but no explanations were given.
- Breaks in the time series between 1996 and 1997 and between 2001 and 2002 and now 2009 and 2010 are due to a reclassification of main activity producers and autoproducers. This includes the apparent cessation of autoproducer pumped hydro and hydro electricity generation since 2010, where this generation has been reclassified as main activity.
- Data for heat production from biogases are available from 1995.
- Prior to 1991, net **electricity** production by autoproducers by industry sub-sector was estimated by the Secretariat based on data submitted by the Norwegian administration.
- Data on inputs and outputs in **heat** plants are not available prior to 1983 for main activity heat plants and prior to 1988 for autoproducer heat plants.

### Consumption

- Consumption of **electricity** for pipeline transport is included in oil and gas extraction.
- The breakdown of **heat** consumption by industry sub-sector was expanded in 1992, reclassified in 1994 and collected by a new reporting system in 1997.

## Poland

### Source

Central Statistical Office, Warsaw.

### Coal

#### General notes

- **Other recovered gases** which appear in the balances as output from blast furnaces also include off-gases from zinc and copper smelting, ceramics kilns and steel production, thus artificially increasing the overall efficiency of blast furnaces when calculated.
- Prior to 2016 data, **other bituminous coal** includes **anthracite**.

### Transformation

- In the past two editions, the Central Statistical Office has revised their methodology which accounts for sold heat produced from autoproducer heat plants using **coking coal** and **other bituminous coal**, resulting in lower, but more accurate data for 2007 onwards.

### Consumption

- Consumption in agriculture/forestry for **BKB**, and own use in power stations for **lignite** are residual flows, so may contain statistical differences and other consumption not reported elsewhere. As a consequence, changes in these time series may not be wholly representative of the activities shown.
- Prior to 2010, own use in coal mines included workers' take home allowance, which should be included in residential consumption.

### Oil

#### General notes

- From 1997, production *from other sources (natural gas)* of **other hydrocarbons** corresponds to hydrogen used in refineries, also represented as the output of *non-specified transformation* in the balances format.

#### Consumption

- In 2015, a new flue-gas desulphurisation unit was installed. As this unit facilitates high sulphur fuel oil burning in place of natural gas, this explains the increase in **fuel oil** consumption in oil refineries.

### Natural gas

#### Supply

- Exports include all the gas sold by companies operating in Poland (these are mainly re-exports).
- Natural gas reported in associated production contains some heavier hydrocarbons. This results in a high gross calorific value for production.

#### Transformation

- *Non-specified transformation* data represent natural gas used for hydrogen manufacture. This hydrogen is used for hydrodesulphurization in oil refineries.
- In 2013 and 2014 some CHP plants were used as backup reserve plants, resulting in a decrease in consumption under main activity producers CHP plants.

- In 2004 and 2005 small amounts of gas were used to start up main activity electricity plants.

#### Consumption

- Distribution losses may include some statistical differences.
- *Non-specified energy* includes gas used for heating and pumping operations in the distribution network.

### Biofuels and waste

#### General notes

- Several breaks in the **industrial waste** time series are caused by difficulties in the classification of wastes.
- In the 2018 edition, **solid biofuels** were corrected for 2015 data.
- There is a break in time series between 2015 and 2016 for **biogases** due to reclassification from autoproducer to main activity plants.
- The increases in **municipal wastes** starting in 2016 are related to two new plants.
- Data on **biodiesels** are available from 2005; **biogasoline** data from 2003; and **other liquid biofuels** data from 2009.
- In 2008, a new questionnaire was launched which increased the coverage of renewable and waste data.

#### Supply

- Under current Polish law, only producers and importers of **biodiesel** are obliged to fulfil the National Indicative Target of share of biofuels in the total usage of transportation fuels. Since the regulation is currently not applied to retail distributors they, for economic reason, rather export the **biodiesel** than sell it domestically. This results in low domestic consumption and increase of exports in 2016.
- Production of **other liquid biofuels** increased in 2015 because new companies started to report their biofuels production to the Polish administration.

#### Transformation

- Before 2000, **industrial waste** was used interchangeably with **light fuel oil** in some plants, which might result in breaks in the time series.

#### Consumption

- Increases in consumption of **biodiesel** are related to a policy change in the middle of 2016.

- Data for **biogases** refer only to the gas from fermentation of biomass.
- Until 1998, data for **industrial waste** include **other recovered gases** which have to be reported in Coal questionnaire, causing a break between 1997 and 1998.
- Between 1992 and 1993, due to data availability, there is a large increase in **solid biofuels** for residential, commercial/public services and agriculture/forestry.

## Electricity and heat

### General notes

- Prior to 2010, **heat** supply and consumption can include autoproducers unsold heat. Previous attempts to address such issue may have caused breaks for heat production and fuel in autoproducer heat plants (1993) and in autoproducer CHP plants, and for heat consumption in industry sub-sectors.

### Supply

- Electricity and heat from **chemical heat** and other sources are available from 2011. Prior to that, these amounts could be included under different categories.
- **Heat** distribution losses are available from 2010 and prior to that they are included in consumption.
- Heat production from heat pumps is available from 2009.

### Transformation

- Starting with 2017 edition and following, the Polish administration revised electricity production data from power plants run by combustible fuels, re-classifying those that were previously reported as main activity CHP as main activity electricity plants. These revisions mainly affected coal-fired power plants and created breaks in time series from 2004 onwards.
- State support for biomass co-firing was reduced in 2016, resulting in electricity production from **solid biofuels** falling during this period.
- Due to a reclassification of plant types, there is a break in time series in 2015 for the generation of heat in autoproducer CHP plants in the iron and steel sector.
- In 2008 and 2014, a number of CHP plants were reclassified from autoproducer to main activity producer due to an industry re-organisation.
- Data for electricity production in autoproducer electricity plants are available from 1986.

### Consumption

- **Heat** consumption in energy industry own use includes process heat not sold before 1995.
- Data for direct use of **geothermal heat** are available from 2000 and direct use of **solar thermal heat** in commercial/public services from 2002 and in residential from 2009.
- In the 2017 edition, the Polish administration re-classified some amounts of electricity consumption from the chemical and petrochemical sector to oil refineries, following access to improved survey methods.

## Portugal

### Source

Direcção-Geral de Energia e Geologia, Lisbon.

### Coal

#### General notes

- **Hard coal** data prior to 1978 may include **sub-bituminous coal**.

#### Consumption

- Between 1997 and 2001 **gas works gas** was gradually replaced by **natural gas** in the commercial/public service and residential sectors.
- The production of pig iron ceased in the first quarter of 2001, leading to decreases in supply and consumption of **coking coal**, **coke oven coke**, **coke oven gas** and **blast furnace gas** in 2001.

### Oil

#### General notes

- The increase in refinery throughput in 2015 is a result of increased refinery capacity linked to the expansion of the Sines refinery.
- A new hydrocracking unit started operations in Sines Refinery in April 2013. This explains the 2013 increase in **refinery feedstock** imports, as well as middle distillate production.

#### Supply

- Production *from other sources (natural gas)* of **other hydrocarbons** corresponds to hydrogen used in refineries, also represented as the output of



*non-specified transformation* in the balances format.

### Consumption

- Consumption of **gas/diesel oil** in industry and commercial/public services represents diesel use in mobile fleets.

### Natural gas

#### Supply

- In February 1997, Portugal started to import natural gas.
- There is a surge in 2017 imports attributed to the consumption of gas-fired power plants that filled in the gap of decreased hydro-generation due to a drought.

#### Transformation

- Since 2012, data reported for *non-specified transformation* represent natural gas used for hydrogen manufacture. Prior to this year, these quantities are reported under oil refineries.
- The 2002 decrease in natural gas used for gas works is due to the closing of the Lisbon gas works plant in May 2001.

### Biofuels and waste

#### General notes

- Data for **solid biofuels** were revised by the National administration from 1990 to 2001, which may result in breaks in time series between 1989 and 1990.
- Data are available from 1994 for **biogases**, from 1999 for **municipal waste** and from 2003 for **industrial waste**.

#### Consumption

- The use of **biogasoline** for blending decreased in 2017 because it is no longer compulsory to use biofuels in gasoline.
- Data for **solid biofuels** were further revised based on a new survey on industry, resulting in breaks in sub-sectoral consumption for 2012.
- Between 2009 and 2010 a new survey on energy consumption in households creates a break in time series in the **solid biofuels** consumption in residential time series.

### Electricity and heat

#### Supply

- Data for production of electricity from **solar photovoltaic** and **wind** are available from 1989.
- For 2017 data, **solar photovoltaic** includes own use.
- The large decrease in electricity output from **hydro** for 2017 is due to decreased rainfall.

#### Transformation

- For 2016 data onwards, **heat** and **electricity** production from chemical sources have been reclassified as autoproducer CHP production from **industrial waste**, causing cessation of the heat and electricity generated from heat from chemical processes time series, and causing breaks in the industrial waste time series between 2015 and 2016.
- Electricity production from **other oil products** refers to methanol.
- In the 2017 edition, the data for production of **electricity** by autoproducer **hydro** plants were revised between 1990 and 1999, according to a new national methodology.
- In 2007, some power plants that were previously reported as main activity CHP have been reclassified as autoproducer CHP.
- In 2007, the power station that burns **industrial waste** started to work as a CHP plant, whereas previously it was only producing electricity.
- New plants fuelled by **solid biofuels** and by **municipal waste** started in 1999.
- Prior to 1992, data for net electricity production by autoproducers include production from combustible fuel sources only.
- Data for production of **electricity** in main activity producer CHP plants and the associated fuel inputs are not available prior to 1980.

#### Consumption

- In the 2017 edition, the Portuguese administration reclassified some amounts of heat consumption from the residential to the commercial and public services sector for the period 1998 to 2014 following a new national methodology.
- Data for direct use of **solar thermal heat** is available from 1989 and direct use of **geothermal heat** from 1994.

## Slovak Republic

### Source

Statistical Office of the Slovak Republic, Bratislava.

### General notes

- Data are available starting in 1971.
- The Slovak Republic became a separate state in 1993 and harmonised its statistics to EU standards in 2000. These two facts lead to several breaks in time series between 1992 and 1993, and between 2000 and 2001.

### Coal

#### General notes

- Data for **anthracite**, **patent fuel** and **coal tar** all begin in 2005. Prior to this, **anthracite** was included with other hard coals, and **patent fuel** and **coal tar** data were not reported.
- Since 2005, data for **coal tar** and **patent fuel** are based solely on trade receipts. Production of **coal tar** which is consumed within the national boundary is not reported. Consumption of **patent fuel** adopts the residual methodology for statistical differences described above.
- Breaks in time series may exist between 2000 and 2001 as the result of the implementation of a new survey system.
- Commercial/public services also includes statistical differences for **other bituminous coal**, **lignite**, **patent fuel** and **coke oven coke** from 1980 onwards and **BKB** from 1989 onwards.

### Oil

#### General notes

- Starting with 2016 data **ethane** is included with **refinery gas**.
- From 2001 onwards, **kerosene type jet fuel** includes small amounts of **other kerosene**.

#### Transformation

- Between 2008 and 2009, one of the companies changed its status from autoproducer CHP plant to main activity producer CHP plant, resulting in a decrease in **fuel oil** consumption for autoproducer CHP.

### Consumption

- For **gas/diesel** oil, road data include rail use.
- Small quantities of **kerosene-type jet fuel** used for domestic aviation are included in international aviation bunkers data.
- Data for energy use of **white spirit** are not available.

### Natural gas

#### General notes

- Data for losses were not available between 2009 and 2013.
- Between 1970 and 1971 and between 1978 and 1979, there are breaks in time series due to a revision of data for 1968-1969 and 1979-92 made in 2003. Data for 1970 were estimated by the Secretariat.

#### Supply

- In 2002 the gross calorific value (GCV) of production increased significantly as extraction from a field with a low GCV ended.
- Imports include gas used for pipeline compressor stations.

#### Transformation

- In 2014, the decrease in autoproducer CHP plants consumption was due to a plant closure.
- Amounts in *non-specified transformation* mainly represent natural gas used for hydrogen manufacture. This hydrogen is used for hydrodesulphurization and for hydrocracking in oil refineries.

### Consumption

- In 2016, non-energy use of natural gas in the chemical and petrochemical industry decreased due to a two-month stoppage in ammonia production.
- In 2001, there is a break in time series for energy use in oil and gas extraction due to the application of the IEA's definition starting that year.
- There are inconsistencies in the time series of commerce/public services as this sub-sector was computed as a residual.

### Biofuels and waste

#### General notes

- Prior to 2001, the data reported as **industrial waste** include **biogases** and **municipal waste**.

## Electricity and heat

### General notes

- Data for **solar photovoltaic** are available from 2010.

### Transformation

- Electricity and heat production from combustible fuels from 1990 to 2003 have been estimated based on the data on fuel used for electricity and heat plants reported in the annual fuel questionnaires.
- Prior to 2001, electricity generation from primary **solid biofuels**, **municipal waste** and **biogases** are included with **industrial waste**.

### Consumption

- The low electricity consumption in oil refineries in 2003 and 2004 is due to a change in ownership and work carried out on a refinery.
- Data for direct use of **geothermal heat** are available from 2001 and direct use of **solar thermal heat** from 2005.

## Slovenia

### Source

Statistical Office of the Republic of Slovenia, Ljubljana.

### General notes

- A new energy data collection system was implemented in January 2001, causing some breaks in time series between 1999 and 2000.
- Data for Slovenia are available starting in 1990. Prior to that, they are included in Former Yugoslavia.

### Coal

#### Transformation

- In 2015, one of the main activity electricity plants burning lignite ceased its operations.

### Oil

#### Supply

- Between 2013 and 2014, a break in imports and exports time series for **kerosene-type jet fuel** and

**fuel oil** appears due to improvements in reporting methodology. New trade corresponds to imports that are first stocked on Slovenian territory and later re-exported.

#### Consumption

- Time series for **motor gasoline** and **gas/diesel** consumption in road fluctuate as they are computed by the Slovenian administration as residual between the supply and the total consumption of all other categories.

### Natural gas

#### Transformation

- In 2014, improvements in a CHP plant resulted in a substantial reduction of natural gas consumption in this sector.

#### Consumption

- In 2011, the decrease in the chemical sector consumption is due to minimal use of gas for production of methanol.
- There are inconsistencies in the time series for commercial/public services as this sub-sector is computed by the Slovenian administration as a residual.

### Biofuels and waste

#### Consumption

- Increases in consumption of **biodiesel** starting from 2017 are the result of an amended energy policy, which went into effect in mid-2017.
- The break in time series between 2008 and 2009 for **solid biofuels** is due to revisions based on a new household survey which is to be carried out on an annual basis.
- Breaks in total final consumption for **industrial waste** prior to 2008 are a result of a sectoral reclassification.

### Electricity and heat

#### Consumption

- Direct use of **solar thermal** and **geothermal heat** is available from 2009.
- Surveys for data on heat consumption are available from 2003 onwards for the residential, industry and energy sectors. Prior to 2003, the data have been estimated by the Slovenian administration.

## Spain

### Source

Ministerio de Energía, Turismo y Agenda Digital, Madrid.

### General notes

- Spain is currently working on improving its data collection system. Therefore breaks in time series are present in the data and historical revisions are expected in future editions.

### Coal

#### General notes

- The calorific values for **sub-bituminous coal** are correct on an as received basis, and comply with definitions of **sub-bituminous coal** on a moist, but ash free basis.

#### Supply

- Lignite** mining ceased in 2008.

#### Transformation

- In 2018 edition, a reclassification of plants from autoproducer to main activity has led to breaks between 2015 and 2016.

### Oil

#### General notes

- A change in the reporting system occurred mid-1996 resulting in some breaks in time series.

#### Supply

- The rise in crude production in 2013 is linked with the development of the Montanazo-Lubina deep off shore field.

#### Consumption

- A more detailed breakdown in some consumption time series appears between 2012 and 2013 due to an update and improvement in the reporting methodology.

### Natural gas

#### General notes

- Spain has implemented a new tool in data collection, so there are currently breaks in the time series

for 2014 and 2015 in transformation and industry respectively.

#### Transformation

- Due to the implementation of an updated tool for gathering information on electricity generation plants in 2013 many autoproducer electricity plants were reclassified as autoproducer CHP plants.
- In 1997, the increase in input to main activity producer electricity is due to two main activity producer electricity producers running on natural gas.
- Between 1993 and 1994 there is a break in time series in autoproducer CHP plants consumption, since a new survey revealed a large number of CHP autoproducers that were previously included in industry consumption.
- Since 1990 the decrease of natural gas inputs into gas works gas production is due to the substitution of natural gas by manufactured gas.

#### Consumption

- Since 2001, the final consumption breakdown is estimated by the Spanish administration.
- Between 2005 and 2006 there are some breaks in time series for the energy industry own use and for final consumption due to a change in the estimation methodology.
- Since 1988 the increase of natural gas used as feedstock is due to a substitution of naphtha for the production of fertilisers.
- Prior to 1982 natural gas consumption in textiles and leather, transportation equipment and machinery has been included in *non-specified industry*.

### Biofuels and waste

#### General notes

- The Spanish administration verifies that production and consumption of **industrial waste** do exist but data are not available after 2001.

#### Transformation

- From 2013 data, a revision of the industry sector of some companies causes breaks in time series for **solid biofuels, municipal waste and biogases**.

#### Consumption

- Increased consumption of **biofuels** from 2016 to 2017 is a result of increased demand for motor gasoline/diesel.

- Prior to 2006, inputs of **biogases** used to generate process heat were erroneously included as inputs to transformation when they should have been reported in the appropriate industry in final consumption.
- The breakdown of **solid biofuels** direct use in the industry sector prior to 1999 is not available.

## Electricity and heat

### Supply

- Electricity reported under *other sources* is from waste heat.
- Transmission and distribution losses are estimated by the Spanish administration.
- Data for electricity from **solar thermal** plants are available from 2007.
- Starting in 2006, a new method was used to estimate the losses from final consumption, resulting in a break in time series between 2005 and 2006.
- From 2005, residential rooftop **solar photovoltaic** electricity production data, previously reported under autoproducer, are included in main activity electricity plants according to the Spanish administration classification.
- Electricity production from **wind** and **solar** are reported from 1989 when data became available.

### Transformation

- In the 2017 edition, a change in reporting methodology resulting in reclassification of plants from autoproducer **electricity** to autoproducer CHP has led to breaks in electricity production in autoproducer electricity plants between 2012 and 2013 and 2014 and 2015. The administration anticipates further revisions to the time series in subsequent cycles.
- The National Energy Commission reclassified plants that consume **biogases**, leading to breaks in time series between 2007 and 2008.
- In 2000 and 2006, many plants were reclassified from main activity producer to autoproducer or vice versa.
- For 2004 and 2005, electricity production from gas/diesel oil is included with fuel oil.
- The large increase in electricity output from main activity producer electricity plants fuelled by natural gas in 1997 is due to the opening of a new plant.

- Prior to 1989 inputs and outputs from the use of **biofuels and waste** to generate electricity and/or heat (i.e. comprising **solid** and **liquid biofuels, industrial waste, municipal waste** and **biogases**) are reported under non-specified **biofuels and waste**.
- Prior to 1987 **electricity** production in main activity producer CHP plants is included with production from main activity producer electricity plants.
- From 1983, net **electricity** production by autoproducers has been estimated by the Spanish administration, and includes production from combustible fuel sources only and net electricity production by autoproducer CHP plants is included in electricity plants.

### Consumption

- For 2012, the **electricity** consumption data are estimated by the Spanish administration.
- Data for direct use of **solar thermal heat** are available from 1994.
- Data for direct use of **geothermal heat** are available from 1990.
- **Electricity** consumption under the *non-specified industry* category includes the consumption for the manufacture of rubber and plastic products, furniture, repair and installation of machinery and equipment (except repair and maintenance of ships and boats) and other manufacturing. This aligns with the Classification of the Economic Activities in the European Community (NACE) group code 22 and 31 to 33 (excluding class 33.15).

## Sweden

### Sources

Statistics Sweden, Örebro.

Swedish Energy Agency (Energimyndigheten), Eskilstuna.

### Coal

### General notes

- **Peat products** data may be reported under the category of **peat**, particularly for imports.
- Autoproducer inputs to waste heat production that are sold are reported in the respective final consumption sectors and not in transformation.



- Some mixture of LNG with air to form a lower calorie product is reported as **gas works gas** production replacing traditional gas works gas manufacture.

### Supply

- **Other bituminous coal** production until 1992 is coal recovered during the quarrying of clay.

## Oil

### General notes

- Swedish stock data include peacetime crisis stocks. Since these stocks may be held in **crude oil** instead of oil products, there may be occurrences of negative stock levels for products.
- Data are available from 2003 for **refinery gas** and from 2000 for **additives** and **ethane**.
- Beginning in 2002, Sweden has changed some of the conversion factors for some products. That explains the small breaks in time series between 2001 and 2002.

### Transformation

- In 2014, **gas/diesel oil** inputs to main activity CHP electricity plants are confidential and aggregated with **fuel oil**.
- In 2013 data, the drop in **crude oil** refinery intake is related with maintenance in August and September 2013 at the Swedish refineries.
- From 2011, the country's gas works plants stopped using **naphtha**.

### Consumption

- Starting from 1995 data, Sweden has changed its standard classification of industry sub-sectors
- Between 1985 and 1986, there are breaks in consumption time series of **fuel oil** due to more detailed reporting.
- In 1984 data, consumption of **other kerosene** in the road sector is discontinued due to product re-classification.

## Natural gas

### Transformation

- Since 2005, the natural gas inputs to gas works has been estimated by the IEA Secretariat.

- Autoproducer inputs to waste-heat production that are sold are reported in the respective end-use sectors and not in the transformation sector.

### Consumption

- For 2013, data for the energy use of gas by oil refineries have been estimated by the IEA Secretariat.
- For 2008, data for total final consumption and its breakdown have been estimated by the IEA Secretariat based on other Statistics Sweden publications.
- For years prior to 1993, road transport is included in commercial/public services.

## Biofuels and waste

### General notes

- There are some breaks in time series between 2015 and 2016 in pumped hydro, **industrial waste** and **other liquid biofuels** figures due to the lack of data. The figures are expected to be modified in the 2018 edition.
- From 1990 to 2006, **municipal waste** was reported as 60% non-renewable and 40% renewable. In 2007, reanalysis of the waste revealed the content was 40% non-renewable and 60% renewable. This was re-analysed again starting from 2016 data, when the result of the analysis revealed the split should be 52% renewable and 48% non-renewable. This results in breaks in the time series between 2006 and 2007 and also 2015 and 2016 for both renewable and non-renewable **municipal waste**.
- In the 2018 edition, data for **biodiesels** were revised from 2006 to 2015 while **biogasoline** and **bioethanol** were revised from 2005 to 2015. The revisions affected indigenous production due to increased information about net trade, as well as the transformation sector, for blending with motor gasoline/diesel/kerosene and consumption in the road sector.

### Supply

- In the 2018 edition, trade data were added for **primary solid biofuels** starting from 2012. As the net trade used to be reported together with indigenous production, this has resulted in a downward revision of indigenous production for 2012-2015.

### Consumption

- Due to confidentiality issues, **solid biofuels** consumption in food, beverages and tobacco is reported with paper, pulp and printing for 2014 data.
- Consumption data by sector for **biogases** are available from 2011.
- In 2011 data, there was a change in the reporting methodology for consumption of solid biofuels and waste in the residential sector, which is responsible for breaks in time series between 2010 and 2011.

### Electricity and heat

#### Supply

- **Heat** data for 2017 are based on a quarterly survey which does not have the same coverage as the annual survey. Therefore, data are provisional and subject to revision.
- Inputs to **heat pumps** include heat recovered from industry and from ambient sources (including sewage and seawater).
- Ambient heat is shown as the indigenous production of **heat**.
- Information on heat for sale produced in **heat pumps** and **electric boilers** is available starting in 1992.

#### Transformation

- In Sweden, heat produced in **heat pumps** is sold to third parties (as district heat) and is therefore included in transformation.
- The electricity used to drive **heat pumps** is considered to be transformed and appears as output in transformation rather than as electricity used in energy industry own use.
- Heat production from **solid biofuels** in auto-producer CHP includes waste heat and chemical heat.
- For 2012 and 2013, small quantities of bio-methanol used to produce electricity are included in **other liquid biofuels**, under production, as well as input and output of autoproducer CHP.
- For 1997 and 1998, heat production from **liquid fuels** in main activity producer CHP plants includes heat recovered from flue-gas condensing.
- Prior to 1992, data on electricity production from **biogases** is included with **solid biofuels**.

- Heat produced for sale by autoproducer CHP plants is reported starting in 1992.
- From 1987, the breakdown of net **electricity** production by industry for autoproducer electricity plants is available.
- Prior to 1987 net **electricity** production by auto-producer plants includes data for CHP plants only.
- Prior to 1980, **heat** produced in main activity producer heat plants is not available.
- Prior to 1974, **heat** produced in main activity producer CHP plants is not available.

### Consumption

- Consumption of electricity for distribution of district heat is included with other energy industry own use.
- Fuel inputs to the **heat** that is recovered by the heat pump are reported in the appropriate industry sub-sector (i.e. chemical and paper, pulp and printing).
- In 2014, consumption of **electricity** in the mining and quarrying and the pulp, paper and printing sectors are confidential and were incorporated under the *non-specified industry* sector.
- Data on direct use of **solar thermal** are available from 1989.
- Consumption of **heat** in industry and other sectors is available from 1984.

## Switzerland

### Sources

Swiss Federal Office of Energy (SFOE), Ittigen.

Carbura - Swiss Organisation for the Compulsory Stockpiling of Oil Products, Zurich.

### General notes

From 1999, data on consumption result from a new survey and are not comparable with data for previous years.

### Coal

#### General notes

- Calorific values for **anthracite**, **other bituminous coal** and **coke oven coke** are taken from a common default figure. Calorific values for **lignite**

are also default, but are based on dried **lignite** fines which have a higher calorific value.

### Consumption

- From 1985, industrial consumption of **gas works gas** is reported in *non-specified industry* to prevent the disclosure of commercially confidential data.
- The allocation of consumption between certain coal types is estimated by the Swiss administration.

## Oil

### General notes

- The statistical differences for **gas/diesel oil** are partly due to changes in consumer stocks.
- In 2004, **petroleum coke** production started due to the installation of a cracking unit in a refinery
- As of 1993, the Swiss administration has reported figures for **naphtha** that are net of quantities used for blending into motor gasoline. For 1994, 1995, 1997, 1999, 2001 and 2002 this reporting has led to negative production numbers for naphtha. For these years, the IEA Secretariat has moved the data into transfers and reduced the production of motor gasoline by corresponding amounts.

### Supply

- In 2015, low refinery throughput is due to maintenance in May and June and to an unplanned outage in October due to a leak in a heat exchanger at the Cressier refinery. The closure of the Collombey refinery from March 2015 also contributed. As a result, imports of many oil products increased in 2015.
- The Collombey refinery remained closed in 2016, resulting in decreased refinery throughput and increased imports in this year. Refinery output of **petroleum coke** stopped as this product was only produced at the Collombey refinery.
- Data for refinery losses at the remaining Cressier refinery are low and are under investigation.

### Transformation

- **Gas/diesel oil non-specified transformation** represents inputs to mobile and stationary power generators, of which the electricity output is unknown at this stage.
- In 2012, low refinery intake is due to the temporary shutdown of the refinery in Cressier in the first semester of 2012 and maintenance at Collombey refinery.

- In 1988, the reduction in refinery intake of refinery **feedstocks** in 1988 is partly due to a switch to crude oil and partly to a shutdown for maintenance of a refinery.

### Consumption

- In 1994, the increase in consumption of **gas/diesel oil** is due to consumer stock-building prior to the introduction of a value-added excise tax on heating fuels as of 1 January 1995.

## Natural gas

### General notes

- The statistical difference is reported under Agriculture/Forestry, and it is not possible to differentiate between the two.

### Transformation

- Since 2013 there are fluctuations in gas consumption of main activity producers CHP plants due to the fuel flexibility of a plant.
- In 1996, the increase of gas input to main activity CHP plants is due to more complete accounting for all producing entities.

### Consumption

- Between 1977 and 1978, there are breaks in time series due to the introduction of a new survey by industry type.

## Biofuels and waste

### Supply

- Due to a new program launched in September 2014 in which CO<sub>2</sub> emissions due to traffic can be compensated by substituting fossil gasoline and diesel by biofuels, the imports and road consumption of **biodiesels** and **biogasoline** increased sharply starting in 2015.

### Consumption

- Consumption data for **biogases** in the transport sector are available from 1996 to 2012 as a biogas fuel station had stopped selling biogas in 2013.

## Electricity and heat

### Supply

- **Heat** production includes heat produced by nuclear power stations and distributed to other consumers.



- Data for electricity production from **wind** are available from 1996.
- Data for **solar** electricity production by auto-producers are available from 1990.

### Transformation

- In 2016, two new **pumped hydroelectric** plants went into operation.
- For 2015, the large decline in **electricity** and **heat** production from **industrial waste** is due to one large main activity CHP plant significantly reduces their activity. This plant eventually closed in 2016, further lowering **electricity** and **heat** generation for this fuel.
- From 2012, the **municipal waste** autoproducer plant previously reported as electricity plant met the CHP requirements and was reclassified as such.
- **Biogas** is no longer being used for heat production as of 2011.
- The decrease in the use of **natural gas** in main activity CHP plants in 2007 is caused by the reduced operation of one plant after the start-up of a new waste-incineration plant and the shutting down of another plant. Use increases again in 2008 due to the re-starting of a district heating plant.
- The autoproducer heat plant that produced heat for sale using **municipal waste** was closed in 2006.
- The breakdown of **electricity** and heat generation from autoproducers by sector is not available after 1990.
- Prior to 1978, data for **heat** output from CHP plants are not available.
- The allocation of **electricity** production in main activity producer electricity only and CHP plants between 1967 and 1973, and in main activity producer CHP and autoproducer CHP plants in 1974 are Secretariat estimates.
- All **hydro electricity** production is reported under large scale hydro (> 10 MW) due to the fact that production data are not being collected by different size capacity categories.

### Consumption

- **Electricity** consumption in the transport equipment industry is included with machinery.
- **Geothermal** direct use is overstated as it refers to heat production by **geothermal heat** pumps, which include inputs from electricity and/or gas in the transformation process.

- The breakdown of final consumption of electricity in the industry sector from 2000 to 2001 was estimated by the Secretariat.
- Data for direct use of **geothermal** heat and **solar thermal** heat are available from 1990.

## Turkey

### Sources

Ministry of Energy and Natural Resources (Enerji ve Tabii Kaynaklar Bakanlığı), Ankara.

Petrol İşleri Genel Müdürlüğü, Ankara.

### Coal

#### General notes

- In the 2018 edition, revisions were conducted by the Turkish administration back to 1990 impacting the transformation and industrial sector. The revisions in the transformation sector were the result of new data submitted by the Turkish Electricity Transmission Company (TECT).
- In the 2017 edition, historical revisions on **coal tar** data were conducted by the Turkish administration due to new available information.
- In the middle of 2014, most autoproducer electricity, heat and CHP plants in Turkey were reclassified as main activity producer due to a change in the legislation. Although the licences of these plants changed, the administration decided to restore the affected plants' classification back to autoproducer in 2017 to harmonise with plant definitions in the IEA questionnaire.
- Data from 2012 onwards utilised the latest census data, causing breaks in time series between 2011 and 2012.
- Data from 2008 are provided from the results of an improved questionnaire. Significant changes occur in consumption patterns within the iron and steel industry, coal mining as well as across industry, residential and commercial/public services for **other bituminous coal**.
- Calorific values for fuels used for electricity, CHP and heat plants are obtained from data submitted to the Ministry of Energy and Natural Resources (MENR) by the Turkish Electricity Transmission Company, and these values may differ significantly from production and import values provided by MENR, causing imbalances for some years.

- Production of **gas works gas** declined in 1989 due to plant closures; the last plant closed in 1994. Use of **gas coke** and **gas works gas** ceased in 1994.
- Due to government regulations in industry and residential, in particular, there has been a shift from the use of domestically produced **coal** to imported **coal** and **natural gas**.

### Transformation

- In the middle of 2014, most autoproducer plants in Turkey were reclassified as main activity producer due to a change in the legislation. Amongst other things, this brought the reporting of unsold heat and prorated inputs in line with IEA methodology.

### Consumption

- In the 2018 edition, revisions on industrial coal consumption were conducted by the Turkish administration back to 2010 due to new available information.
- Privatisation of state owned coke ovens in recent years results in incomplete information on **coke oven gas** distribution.
- In the 2017 edition, consumption of **sub-bituminous coal** in construction has been reclassified by the Turkish administration as consumption in the non-metallic minerals industry.
- In 2015, a new survey was introduced by the Turkish administration to collect more detailed industrial consumption data, resulting in breaks in time series between 2014 and 2015.

## Oil

### General notes

- A project to upgrade the İzmit refinery was completed in 2015. This resulted in considerably higher refinery throughput in 2015, compared to previous years. The project included a new unit to convert high sulphur fuel oil into higher grade products, such as gas/diesel oil and motor gasoline, and producing petroleum coke as a by-product.
- In the 2016 edition, the Ministry of Energy revised time series for **kerosene-type jet fuel** from 2013. Sales to foreign airlines, previously accounted for under exports, are now reported under international aviation according to the IEA methodology. Data could not be revised for prior years. Exports of **jet kerosene** up to 2012 years may include international aviation consumption.

- In the 2016 edition, the Ministry of Energy revised crude oil net calorific values from 2010 due to a new methodology for calculating them.
- Production *from other sources (natural gas)* of **other hydrocarbons** corresponds to hydrogen used in refineries, also represented as the output of *non-specified transformation* in the balances format.
- From 2013, marine fuels are reported under **fuel oil** instead of **gas/diesel oil**.
- From 2012, **petroleum coke** data are reported.

### Supply

- In 2014, the drop in **lubricants** imports and consumption is related to a legislation change effective 1st of January 2014 regarding base oil imports.
- From 2012, new information on **additives** imports (MTBE) data became available.
- From 2012, no exports breakdown is available for **white spirit, lubricants, bitumen** and **other products**.
- From 2010 data, more accurate NCVs for crude oil are available due to the implementation of a new survey.
- For the years 1978, 1980, 1981, 1983, 1984, international marine bunkers are included in exports.

### Transformation

- **Gas/diesel oil** and **fuel oil** consumed to produce electricity are used in both oil and coal-fired plants.

### Consumption

- For the 2015 data, new surveys were used to create a more detailed breakdown of the industry and other sectors. This led to breaks in time series between 2014 and 2015.
- From 2014, information on gas/diesel consumption in fishing is available.
- From 2013, additional information on **petroleum coke** cement consumption is available.
- Prior to 2012, consumption of **other oil products** in the chemical sector was included under *non-specified industry*.
- Between 2010 and 2011, breaks in consumption time series for **LPG, motor gasoline** and **gas/diesel oil** appear due to improved survey methods.
- Between 1977 and 1978, the end-use classification of **gas/diesel oil** and **fuel oil** were changed in the

Turkish national statistics resulting in breaks in time series.

## Natural gas

### Supply

- Exports reported by the Turkish administration represent transit gas.
- In 2008, there is a break in time series for stock changes due to a revision of storage capacity data.
- In December 2016, the first Floating Storage and Regasification Unit (FSRU) terminal started to work, allowing thus greater import quantities and stock levels.

### Transformation

- *Non-specified transformation* of natural gas represents amounts used to produce hydrogen for hydrocracking in refineries.
- In the 2018 edition, Turkish administration revised 2014 and 2015 data, as some main activity producing plants in Turkey were reclassified as autoproducers.

### Consumption

- In 2015, a new survey was introduced by the Turkish administration to collect industrial consumption data, resulting in a substantial decrease of consumption reported under *non-specified industry*.
- In 2013, energy use of **natural gas** in blast furnaces was zero, as gas was replaced by coal and coke.
- From 2009, there are some breaks in time series across all sectors, as consumption data started being collected by a different institution, the Turkish Energy Market Regulatory Authority.
- In 2006, there is a break in time series for non-energy use in chemical industry due to improvements in the classification.
- Prior to 2000, data for commercial/public services were included in the residential sector.
- Between 1999 and 2001, the decrease in natural gas petrochemical feedstocks is linked to the activity of the fertiliser industry.
- Since 1988, data for natural gas consumption in the chemical industry (for fertilisers) and in *non-specified industry* (dye industry) are available.
- *Non-specified industry* includes the natural gas distributed by OIZ (Organised Industrial Zones).

## Biofuels and waste

### General notes

- The Turkish administration only intermittently surveys **renewables and waste** used for power and heat. Due to this fact, some breaks may appear in the **biofuels and waste** time series.

### Consumption

- Prior to 1998, consumption in the **wood and wood products** sector includes that of the paper, pulp and printing industry.

## Electricity and heat

### Supply

- *Other sources* **heat** production represent purchased steam (waste heat) from the industry, mainly from cement and glass manufacturing, while *other sources* **electricity** is the proportion of generation by plant obtained from this heat.
- Electricity production from **wind** is available starting in 1998.

### Transformation

- In the 2006 edition, the Turkish Statistical Office started providing **electricity** and **heat** output on the basis of a new survey that revised time series back to 2000. This causes breaks in the time series between 1999 and 2000. Not all of the input time series have been revised.
- A new gas-fired main activity producer CHP plant was put into operation in 1999 and a new auto-producer electricity plant fuelled with coking coal started in 2000.
- Data for blast furnace gas for electricity and heat generation are available from 1995.
- Data on electricity generated from **biofuels** are available from 1991.
- In 1995, the Turkish administration reclassified autoproducer plants by type and source to be consistent with IEA definitions. This causes breaks between 1994 and 1995 for electricity production, most notably in plants fuelled by **biogases**.

### Consumption

- Consumption data in the machinery sector includes transport equipment.
- Comprehensive data on electricity consumption are available from 1973. This causes a break in the time series between 1972 and 1973.

## United Kingdom

### Source

Department for Business, Energy and Industrial Strategy (BEIS), London.

### Coal

#### General notes

- Oxygen steel furnace gas data are reported with **blast furnace gas** rather than as **other recovered gases**.
- In the 2017 edition, calorific values of **other bituminous coal** were revised for the period 2002-2015 due to a change in the methodology, impacting all flows.
- Prior to 1994, the consumption of substitute natural gas is included with **natural gas** while its production is included with **gas works gas**.

#### Supply

- Underground production of **other bituminous coal** in 2016 decreased due to the closure of Hatfield, Thoresby and Kellingley mines.

#### Transformation

- The consumption of **solid biofuels** increased in 2015, as the largest power station in the UK converted a further unit from **coal** to **biomass** mid-year, and the previously converted unit had a full year of operation in 2015 rather than just the last few months of 2014.
- The market decline in use of **other bituminous coal** from 2013 onwards for autoproducer electricity generation was due to a plant being sold to a dedicated main-activity electricity producer.

#### Consumption

- Consumption shown for the commercial/public services includes consumption of some of *non-specified other*.

### Oil

#### General notes

- Breaks in time series occur for **LPG** between 2007 and 2008 due the inclusion of additional information from the petrochemical sector.
- For international marine bunkers and domestic navigation, a different bunkers methodology is

applied from 2008, in line with UK's National Atmospheric Emissions Inventory. From 2013 onwards, improved data are available for international marine bunkers. Deliveries to international marine bunkers may be underestimated in previous years.

- For consumption of oil products, the UK administration revised its methodology from 2008 to better track consumption of imported oil products and domestically refined oil products sold through third parties to final consumers.
- Breaks in time series appear in 2013 for **ethane, naphtha, white spirit, lubricants, bitumen, petroleum coke and other oil products**, as new information became available on the energy use of these products.
- From 2002 to 2004, products transfers data include backflows and interproduct transfers. From 2005 onwards, backflows were estimated by the UK administration.

#### Supply

- From 2008 data on **naphtha** and **motor gasoline** better reflects the blending of these products. Breaks in series may appear between 2007 and 2008.
- Between 2007 and 2008 breaks in time series appear for **NGL** as a result of the UK administration obtaining additional information on the destination of some upstream **NGL**. Previously classified as exports, these amounts now appear as transfers, mainly to **LPG**, then as consumption in the petrochemical sector.
- Condensates are reported in **NGL** from 1980 and in crude oil until 1979.
- **LPG** includes ethane until 1980.
- **Other hydrocarbons**, reported until 1994, correspond to bitumen production from coal.

#### Consumption

- Breaks in time series may occur in the consumption of **gas/diesel oil** between 2011 and 2012,, following the UK administration's improved access to customs trade data, in particular duty figures for demand in agriculture.

### Natural gas

#### General notes

- Since 1992, distribution losses include metering differences and losses due to pipeline leakage.



## Supply

- In the 2018 edition, UK administration revised the supply balance back to 2008 to update Norwegian imports from two terminals previously reported as indigenous production.
- In 2002, the increase in imports is due to increased supplies from the Norwegian sector of the North Sea through the Vesterled pipeline, which was commissioned in the 4th quarter of 2001.

## Transformation

- The natural gas reported in coke-oven transformation is used to form synthetic coke oven gas rather than undergoing a coking process.

## Consumption

- In the 2018 edition, natural gas consumption in the sectors of industry, residential, commercial and public services, was revised back to 2008 to include information from other data sources such as the Purchases Inquiry, EU ETS and ONS Index of Services and Production.
- Before 2008, the commercial sector consumption is included in *non-specified other*, while that of public services is shown separately.
- Between 2007 and 2008 there are some breaks in time series in sectoral consumption due to a new methodology of data estimation.
- Natural gas consumption includes substitute natural gas made at gas works and piped into the natural gas distribution system.
- *Non-specified industry* represent to sales by independent gas suppliers unallocated by category.
- Consumption by the mining and quarrying and the wood and wood products sectors is included in *non-specified industry*.
- *Non-specified energy* includes gas used for heating and pumping operations in the distribution network.

## Biofuels and waste

### General notes

- In the 2017 edition, the UK government revised the data time series for **municipal waste** and **solid biofuels** back to 2001. As a result, breaks in time series may occur between 2000 and 2001.

### Transformation

- From 2015, the UK administration started collecting data from the main-activity **solar PV**

companies. Prior to this, all data were included under autoproducers.

- The consumption of **solid biofuels** has increased in 2015, as the largest power station in the UK halfway through the year converted a further unit from coal to biomass, plus the previously converted unit had a full year of operation in 2015 rather than just the last few months of 2014.
- Prior to 2013, due to data confidentiality reasons, one or two main-activity **municipal waste** plants had to be included within the autoproducer plant category. Since 2013, as there have been at least three main-activity companies, these plants have been reclassified from autoproducer plant to main activity electricity plant, with some CHP plants included under main electricity due to confidentiality reasons.

### Consumption

- The UK administration undertook a survey of domestic wood consumption in 2015 and revised figures back to 2008. This resulted in breaks in time series for **solid biofuels** consumption in residential between 2007 and 2008.
- In the 2018 edition, following a review of the consumption of **biogases** and **municipal wastes** for 2015 and 2016 data, data that were allocated to other sectors have been reallocated to the industry sectors. This has caused a break in time series between 2014 and 2015. A review prior to 2015 is expected in the next cycle.

## Electricity and heat

### General notes

- For the United Kingdom, it is necessary to combine figures for main activity producers and autoproducers in order to prevent the disclosure of information relating to less than three electricity generating companies, since this information is considered confidential. For this reason, data for main activity producer CHP plants have been included with autoproducer CHP plants from 1988. Prior to 1988, electricity output from CHP plants was included with autoproducer electricity plants.
- The re-organisation and subsequent privatisation of the electricity supply industry in 1990 has resulted in some breaks in time series.

### Supply

- Large declines in electricity generation from coal-fired power since 2013 are due to concrete plans to

phase out coal use for electricity generation entirely by 2025. Alternative generation has been supplied by increases from other sources, including biomass, natural gas, nuclear, solar and wind generation, and increases in imports through undersea HVDC interconnectors.

- Electricity production data for **solar PV** are available from 1999.
- The launch of a feed-in-tariff scheme in April 2010 resulted in a rapid increase of capacity and corresponding electricity production growth from **solar PV** in the following years.
- In 1996, the break in electricity production from **nuclear** is due to a reclassification of plants from autoproducer to main activity producer plants.
- Data on electricity production from **wind** is available from 1989.

### Transformation

- In 2007, outputs of electricity from **petroleum coke** are included in **fuel oil**.
- Prior to 2003, all outputs of electricity and heat from **oil products** are reported in the other oil products category.
- **Heat** production from autoproducers is available starting in 1999.
- Inputs and output from **natural gas** for main activity producer electricity production are included in autoproducer electricity for 1990 (for reasons of confidentiality).

### Consumption

- Consumption in gas works includes electricity use in the transmission/distribution of public supply gas.
- Consumption in the non-metallic mineral products sector includes mining and quarrying.
- **Electricity** consumption in coal mines includes consumption in patent fuel plants.
- Data for **electricity** consumption in transport was classified by sub-sector only starting from 2004 resulting in a break in time series between 2003 and 2004. Prior to 2004, *non-specified transport* includes consumption for traction by urban rails and road vehicles, and consumption for non-traction by railways and bus stations and airports. From 2004 onwards, road vehicles consumption is included under road transport. Prior to 2004,

electricity consumption in rail refers to industrial rail only. From 2004 onwards it includes both industrial and urban rail.

- Consumption in the machinery sub-sector includes that of the transport equipment industry before 1996.
- Starting in 1990, small amounts of **electricity** used in heat pumps have been included in residential.
- From 1984 onwards, the **electricity** consumption in the *non-specified industry* sector includes that of the wood and wood products sub-sector and unallocated consumption. The unallocated consumption comes from data reported as 'Other industries' by companies and includes Standard Industrial Classification (SIC) codes 7, 22, 31, 32, 33.19, 36, 38.3.
- **Electricity** consumption in energy non-specified sub-sector is primarily made up of 'gas and electricity supply' and includes Standard Industrial Classification (SIC) codes 24.46 and 35.

## United States

### Source

US Energy Information administration, Washington D.C.

### General notes

- End-use energy consumption data for the United States present a break in time series with historical data due to a change in methodology in 2014. The break in time series occurs between 2011 and 2012 for oil; and between 2001 and 2002 for electricity and natural gas. The new methodology is based on the last historical year of the most recent Annual Energy Outlook (AEO) publication. Changes occur primarily in reported end-use energy consumption in the industrial sector and its subsectors, including the non-manufacturing industries of mining, construction and agriculture. Historical revisions are pending. Due to other changes in reporting methodologies, there are numerous breaks in time series for the US data, particularly in 1992, 1999, 2001, 2002 and 2013. Care should be taken when evaluating consumption by sector since inputs of fuel to autoproducers are included in final consumption for some years. No data are available for most energy products in the construction and mining and quarrying industries.

## Coal

### General notes

- Since the Energy Information Administration (EIA) and the US Department of Commerce do not collect separate data on **patent fuel** exports by country, total exports data of **patent fuel** are included in the exports of **other bituminous coal**.
- **Coal tar** as a by-product of coke ovens is not currently reported.
- In 2002, the United States reported “synfuel” production as **patent fuel** for the first time. Prior to 2002, the consumption of this fuel was reported with **other bituminous coal**. Production ceased in 2007 for economic reasons.
- **Hard coal** data prior to 1978 may include **sub-bituminous coal**.

### Supply

- *Other sources coal* production represents coal production that does not have a Mine Health and Safety Administration (MSHA) identifier.

## Oil

### General notes

- In the 2018 edition, the US administration revised data back to 2011 for several products owing to the introduction of a number of methodological changes. This results in a number of breaks in the time series between 2010 and 2011, particularly in the consumption data.
- From 2011 onwards, olefins are reported under other oil products instead of LPG.
- Breaks in time series due to methodology improvements and newly available information to the US administration also appear in historical data: in 1990 for fuel oil (new methodology for marine bunkers); in 1992 for LPG/NGL (specific densities); in 1993 for oxygenates (new collection system to accommodate the revised Clean Air Act); in 1994 for motor gasoline (new model from the US Department of Transportation); in 1999-2000 for industry consumption (new available data from the 2002 MECS survey); in 2001 for fuel oil (changes in methodology for classifying imports of unfinished oils) and in 2011 for refinery gas (new density).

### Supply

- In the 2018 edition, the breakdown of exports by destination of low sulphur fuel oil and high sulphur fuel oil is not available. The time series was revised back to 2011.
- High statistical differences for crude oil represent “unaccounted for crude oil”, the difference between the supply and disposition of crude oil.
- From 2013, the US administration reports exports of **refinery feedstocks**, some of which were previously reported under **white spirit and SBP**.
- Stocks changes for **gas/diesel oil, fuel oil and petroleum coke** were estimated by the IEA Secretariat from 1996 onwards to include stock changes at utilities.

### Transformation

- From 2002 onwards, the IEA Secretariat has estimated the amounts of refinery gas used for auto-producer electricity production.

### Consumption

- Between 2010 and 2011, end-use energy consumption data for the United States present a break in time series due to a change in methodology. For the period 2011-2016, quantities of non-energy use of LPG in chemical and petrochemical, and of other oil products in non-specified industry have been estimated by the IEA Secretariat.
- From 2013 onwards, road use lubricants are reported under non energy consumption in transport equipment, machinery, and wood and wood products. Previously, such quantities were reported under non-specified industry.
- From 1995 onwards, **LPG** inputs to gas works are included in industry.

## Natural gas

### Supply

- In the 2017 edition of this publication, the indigenous production data for 2014 was revised by the US administration creating a break in the time series between 2013 and 2014 due to a change in the methodology. In addition, this increased the statistical difference that remained high in 2015 and 2016.

- From 1990 to 2002, the amounts of gas works gas that are blended with natural gas have been estimated on the basis of the output efficiency of the process.
- The exports have increased since 2015, due to new liquefaction capacity (i.e. Sabine Pass) coming online at the end of that year.

### Transformation

- Since 2012, data reported under *non-specified transformation* represent **natural gas** used for hydrogen manufacture. Prior to 2012, these quantities are reported under the petrochemical sector.
- Between 1999 and 2000, there are some breaks in time series for the transformation subsectors due to a new data reporting method.
- Between 1990 and 2002, the amounts of gas works gas that are blended with natural gas have been estimated on the basis of the output efficiency of the process.
- Since 1989, consumption by autoproducer CHP plants is available, while consumption by autoproducer electricity and main activity producer CHP plants is available since 1991. Prior to these years, these consumptions are included with industry and commerce/public services.

### Consumption

- The administration of the United States made significant revisions to the iron and steel model in the 2017 edition. For this reason, there is a break in the time series between 2014 and 2015 for the consumption in blast furnaces (energy).
- Until 2001, agriculture and forestry consumption is included under industry.
- From 1995 to 2001, the detailed breakdown of industry consumption is estimated by the Energy Information Administration using the Manufacturing Energy Consumption Survey (MECS), which is conducted quadrennially.
- Prior to 1995 a detailed breakdown of industry consumption is not available (between 1990 and 1994, chemical consumption is estimated by the American administration).
- In 1991 data on natural gas use in the road sector were collected for the first time, and are not available for previous years.
- *Non-specified energy industry own use* represents gas consumed for the production of ethanol.
- Consumption in fisheries is included under industry.

## Biofuels and waste

### General notes

- Due to the change in reporting methodology for **liquid biofuels**, breaks in time series occur between 2009 and 2010. This is especially noticeable in **biodiesel** time series.

### Supply

- Data for production of **industrial waste** have been decreasing since May 2014 due to reclassification, resulting in a break in series between 2013 and 2014.
- Indigenous production of **biodiesel** is estimated in 2010 based on the EIA's Monthly Energy Report.

### Transformation

- The EIA collects generation and consumption data from all plants 1 MW or more in capacity.

### Consumption

- Some amounts of the statistical differences in **biodiesel** for the years 2010 – 2016 may be partially allocated to consumption in the transportation sector. A revision is expected with the next data release.
- Due to an improved estimation, there are some breaks in time series of the industry sector and other sectors between 2009 and 2010: for industry, **geothermal**, **biogases** and **industrial waste** (paper, pulp and printing); for other sectors, **geothermal** and **solar thermal**.

## Electricity and heat

### General notes

- **Geothermal** supply and transformation data are estimated by the IEA Secretariat starting in 2009 because of efficiency discrepancies.
- Between 2001 and 2002, there are breaks in time series concerning the total production of electricity and heat in the United States. Comprehensive data on electricity and heat production and consumption in main activity producer electricity, CHP and heat plants and autoproducer electricity and CHP plants are not available for all years.

### Supply

- The IEA Secretariat estimated US **solar PV** electricity generation from autoproducers starting in 1999 by multiplying the dispersed and distributed



PV capacity estimated by the US administration by an average capacity factor of 12%. The capacity factor was based on a report published in 2007 by the IEA Photovoltaic Power Systems Programme, Cost and Performance Trends in Grid-Connected Photovoltaic Systems and Case Studies. The corresponding consumption of electricity has been included under *non-specified other*.

- Data for electricity absorbed by pumping and electricity production from **pumped storage** plants became available starting in 1987.
- Discrepancies occur between respective reported figures for electricity trade between the US and Mexico for the years 2013 to 2016, and between the US and Canada for 2016.

### Transformation

- Beginning with 2016 data, the calculation for **heat** production in CHP plants has changed, resulting in breaks in time series. The United States administration is currently unable to apply this methodology to historic years, so will only cover heat data for 2016 onwards. As a result of this methodology change, several combustible fuel power plants have their overall efficiency values increased, recording increased heat production. The previous methodology existed for the years 2006 to 2015, so further breaks exist between 2005 and 2006.
- For 2016, **electricity** and **heat** generation from some types of coal and some plant types were estimated by the IEA Secretariat, based on an initial submission from the US administration and subsequent reclassification of portions of this coal between coal types.
- Accurate accounting of **coke oven gas** and **refinery gas** inputs is not always possible, which can lead to efficiencies of over 100% in main activity producer CHP plants.
- *Other sources* **electricity** production represents purchased steam and waste heat from industries.
- The low efficiencies from 2011 for **other bituminous coal** autoproducer electricity plants are due to the fact that one unit; the Albany Brewery Power Plant only produces unsold heat, and is reported in the wrong category of plant.
- From 2007 to 2009, heat from **industrial waste** includes recovered heat from industrial processes. From 2010, the electricity produced from recovered heat is reported under **other sources**.
- The decline in **patent fuel** used for electricity production in 2008 and subsequent cessation in 2009 is a result of the termination of the “synthetic fuel from coal” tax credit in 2008, which had been in the order of \$20 to \$25 USD per tonne, and while intended to deal with coal liquefaction and similar technologies, it had spawned an industry of cosmetic upgrading as a tax minimisation vehicle.
- From 2004 to 2013, the EIA reported electricity and heat production from **anthracite** under **other bituminous coal**. The Secretariat estimated the split of generation output by fuel type based on the assumption that the plant efficiencies of the aggregate are equal to that of each part.
- Starting in 2002, autoproducer electricity output for **oil** includes generation from **refinery gases** with a low average calorific value. Prior to 2002, this output was not accounted for.
- Prior to 2001, some data on plants consuming **sub-bituminous coal** and **lignite** have been estimated by the Secretariat using information provided in the EIA’s Annual Electricity Generator Report – Utility.
- Data for **peat** are confidential between 1994 and 1998 and from 2000 are not reported.
- Prior to 2000, autoproducers include small and independent power producers which under IEA definitions are considered as main activity producers. Production from these small and independent power producers accounts for about 25% of reported production of electricity by autoproducers in the United States. This reclassification causes breaks between 1999 and 2000.
- In the 2003 edition, the United States administration reclassified some plants to autoproducers. This reclassification causes more breaks between 1998 and 1999.
- Data for **heat** produced in main activity producer heat plants are available from 1992 to 1999, and for autoproducer CHP plants for 1989 to 1999.
- From 1999 onwards, the fuel used in **heat** production by autoproducers is included in final consumption because the US administration cannot distinguish between the heat used directly on-site and the heat sold. Therefore, this may underestimate the heat sold to third parties.
- Prior to 1999, **solar thermal** electricity production includes generation from natural gas because some natural gas units are attached to **solar thermal** plants and their production could not be separated.

- Prior to 1991 some of the fuel inputs to **electricity** and **heat** production reported for autoproducer plants are reported as final consumption in the particular economic sector in which the autoproducer is operating.
- Prior to 1989, there are no generation data available from autoproducers.
- **Sub-bituminous coal** inputs for electricity and heat production are included in **hard coal** before 1983.

### Consumption

- Consumption breakdown data for **electricity** are modelled based on data obtained from the Annual Energy Outlook and conversion factors. These data are based on fiscal values rather than physical tonnage, so if commodity prices increase or decrease between AEO versions and the conversion factors are not updated, derived changes in consumption may appear that are not supported by physical changes in production, or actual changes in consumption. For example in 2016, production of steel in electric arc furnaces increased by 6%, however consumption of electricity in the *iron and steel* industry was reported as declining by 17%.
- For the 2017 edition, the breakdown of final electricity consumption for 2015 was based on the results of the Annual Energy Outlook (AEO) of 2016. Breaks in time series appear in the mining and agricultural electricity consumption sectors as a result of introduction of individual industry benchmarking for 2015 results. Changes in iron and steel, and pulp and paper data from 2014 to 2015 are the result of fundamental revisions of the iron and steel and pulp and paper models between AEO2014 and AEO2016 as well as the use of individual industry benchmarking for AEO2016. These changes are a few notable examples of series changes, and any series can change between AEO releases because of data updates and methodology changes.
- Prior to 1991, total consumption of **heat** sold referred to consumption in commercial/public services.
- No data are available for **heat** sold that is consumed in the residential and agriculture/forestry sectors for any years.
- Data for direct use of **solar thermal** heat in residential are available from 1999.
- Since 1995, **heat** consumption data by sector are no longer collected, and have been estimated by the Secretariat, resulting in breaks in time series between 1994 and 1995, and 1999 and 2000.
- Data for consumption of **heat** sold in industry are available from 1991 and in energy industry own use from 1992.

## NON-OECD COUNTRIES

Before 2016, the IEA Secretariat published separately “Energy balances of non-OECD countries” and “Energy balances of OECD countries”. The two were combined into “World energy balances” in 2016.

When making references to “this publication”, it includes “Energy balances for non OECD countries” produced until 2016.

In the references below, both the statistical year (2016) for which data are being published in this edition, as well as publication dates of the many documents which have been consulted during the development of this publication are mentioned. As a general rule, where specific documents or personal communications have been used, the date that is referenced is the date of publication of the document or the date of the communication, whereas, where data received through the completion of questionnaires are mentioned, the date that is referenced is the statistical year for which data are being published in this edition, namely 2016.

Data may not include all informal and/or illegal trade, production or consumption of energy products, although the IEA Secretariat makes efforts to estimate these where reliable information is available.

### General references

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- *Annual Bulletin of Electric Energy Statistics for Europe*, Economic Commission for Europe (ECE), New York, 1994.
- *Annual Bulletin of Gas Statistics for Europe*, Economic Commission for Europe (ECE), New York, 1994.
- *Annual Bulletin of General Energy Statistics for Europe*, Economic Commission for Europe (ECE), New York, 1994.
- *Annual Crude Steel production*, World Steel Association, [www.worldsteel.org](http://www.worldsteel.org).
- *Annual Report July 1991-June 1992*, South African Development Community (SADC), Gaborone, 1993.
- *Annual Statistical Bulletin*, Organization of Petroleum Exporting Countries (OPEC), Vienna, various editions up to 2017.
- *Annual Statistical Report*, Organization of Arab Petroleum Exporting Countries (OAPEC), Kuwait, various editions up to 2017.
- *APEC Energy Database*, Tokyo, 2017.
- *Arab Oil and Gas Directory*, Arab Petroleum Research Centre, Paris, various editions up to 2017.
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- *CIS and East European Energy Databook*, Eastern Bloc Research Ltd, Tolsta Chaolais, various editions up to 2017.
- *Eastern Bloc Energy*, Tadcaster, various issues up to May 1999.
- *Energy Indicators of Developing Member Countries*, Asian Development Bank (ADB), Manila, 1994.
- *Energy-Economic Information System (SIEE)*, Latin American Energy Organization (OLADE), Quito: <http://sier.olade.org/>.
- *Energy Statistics Yearbook 1990*, South African Development Community (SADC), Luanda, 1992.
- *Energy Statistics Yearbook 2008*, United Nations, New York, 2011.
- *External Trade of the CIS countries*, The Interstate Statistical Committee of the Commonwealth of Independent States, Moscow, 2005.
- *Forestry Data*, Food and Agriculture Organisation of the United Nations, Rome, 2000.
- *Foreign Scouting Service, Commonwealth of Independent States*, IHS Energy Group – IEDS Petroconsultants, Geneva.
- *Forests and Biomass Sub-sector in Africa*, African Energy Programme of the African Development Bank, Abidjan, 1996.

- *Global E&P Service, Commonwealth of Independent States*, IHS Energy Group – IEDS Petroconsultants, Geneva.
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- *Statistical Yearbook of the Member States of the CMEA*, Council of Mutual Economic Assistance (CMEA), Moscow, 1985 and 1990.
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- *The United Nations Energy Statistics Database*, United Nations Statistical Office, New York, various editions up to 2018.
- *World Development Indicators*, The World Bank, Washington, various editions up to 2017.

**Note:**

- EU4Energy is a 4-year (2016-2020) EU-funded programme working to support evidence-based energy policy and decision making in the areas of energy security, energy markets and sustainable development in 11 focus countries - Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Tajikistan, Turkmenistan, Uzbekistan and Ukraine. The IEA is responsible for the programme's energy-data management and data use in policy design.
- The OLADE database was used for several Non-OECD Americas countries.
- The UN database was the only source of information for time series of the countries not listed individually and included in the regions Other Africa, Other non-OECD Americas and Other non-OECD Asia. It was also used in a number of other countries as a complementary data source.



## Albania

### General notes

Before 1993, large quantities of oil, widely reported to have moved through Albania into Former Yugoslavia, are not included in oil trade. Although they might have represented up to 100% of domestic consumption levels, no reliable figures for this trade are available.

Starting from 2011, motor gasoline consumption is reported in the residential sector. This consumption corresponds to motor gasoline used in electricity generators.

### Sources

#### *Sources 2011 to 2016:*

- Direct communication with the National Agency of Natural Resources, Tirana.
- Joint IEA/Eurostat/UNECE annual energy questionnaires.

#### *Sources 2005 to 2010:*

- *Energy Balances 2005-2010*, Energy Department of the National Agency of Natural Resources of Albania, Tirana.
- IEA Secretariat estimates.

#### *Sources up to 2004:*

- Joint IEA/Eurostat/UNECE annual energy questionnaires 1994, 1995, 1998.
- *Energy Balances*, National Agency of Energy of Albania, 1999 to 2004.
- *The UN Energy Statistics Database*.
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- IEA Secretariat estimates.

#### *Sources for biofuels and waste:*

- The UN Energy Statistics Database.
- Joint IEA/Eurostat/UNECE annual energy questionnaire on renewables.
- IEA Secretariat estimates.

## Algeria

### General notes

Crude oil production and export data do not include field condensate. Field condensate quantities are included with natural gas liquids.

Revisions were made to the energy balances in 2009 and 2010 which add more detail for certain products and flows. This may result in breaks in time series between 2008 and 2009.

### Sources

#### *Sources 1990 to 2016:*

- Direct communication with the Ministry of Energy and Mining, Algiers.

#### *Additional sources 2008:*

- SONEGASZ, Société nationale de l'électricité et du gaz, online statistics on electricity production, Algiers.

#### *Sources up to 1989:*

- *Annuaire Statistique de l'Algérie 1980-1984*, Office National des Statistiques, Algiers, 1985.
- *Bilan Energétique National*, Gouvernement Algérien, Algiers, 1984.
- *Algérie Energie, N° 6*, Ministère de l'Énergie et des Industries Chimiques et Pétrochimiques, Algiers, 1979 to 1983.

#### *Sources for biofuels and waste:*

- The UN Energy Statistics Database.
- Direct communication with the Ministry of Energy and Mining, Algiers.
- IEA Secretariat estimates.

## Angola

### General notes

Crude oil production and export data do not include field condensate. Field condensate quantities are included with natural gas liquids.

The natural gas export terminal, Soyo, began operations in 2013 and halted operations in 2014. Soyo terminal re-opened in 2016. Breaks in time series in natural gas export, supply, and consumption can be observed between 2013 and 2016.

In the 2018 edition, revisions to biofuels and waste data are due to revisions in population data for Angola.

## Sources

### Sources 2003 to 2016:

- Direct communication with the Ministério da Energia e Águas (Ministry of Energy and Water), Luanda.
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- *Annual Report*, Southern African Power Pool, Harare, various editions up to 2012.
- IEA Secretariat estimates.

### Sources 1992 to 2002:

- Direct communication with oil industry sources.
- IEA Secretariat estimates.
- *Eskom Annual Statistical Yearbook, 1993, 1994, 1995* citing Empresa Nacional de Electricidade as a source, Johannesburg, 1994-1996.
- The UN Energy Statistics Database.

### Sources up to 1991:

- *Le Pétrole et l'Industrie Pétrolière en Angola en 1985*, Ambassade de France, Poste d'Expansion Economique de Luanda, Luanda, 1985.

### Sources for biofuels and waste:

- IEA Secretariat estimates based on 1991 data from African Energy Programme of the African Development Bank, *Forests and Biomass Sub-sector in Africa*, Abidjan, 1996.

## Argentina

### General notes

Since 2010 a different methodology was adopted by Argentina for reporting refinery flows leading to more detailed information (e.g. reprocessing of some oil products). This may result in breaks in time series between 2009 and 2010.

## Sources

### Sources up to 2016:

- Direct communication with the Ministry of Economy, Secretariat of Energy, Buenos Aires.
- *Balance Energético Nacional*, Ministerio de Economía, Secretaria de Energía, Buenos Aires, various editions up to 2016.
- *Informe del sector eléctrico*, Ministerio de Planificación Federal, Inversión Pública y Servicios, Secretaria de Energía, Dirección Nacional de Prospectiva, Buenos Aires, various editions up to 2017.
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## Armenia

### General notes

Data for Armenia are available starting in 1990. Prior to that, they are included in Former Soviet Union.

Armenia is one of the 11 EU4Energy focus countries.

Since 2015, more accurate data on electricity and CHP plants became available. This might lead to breaks in time series for 2014-2015.

From 2015, survey data on the consumption of energy products in Armenia are available. Partial data were already available for 2014 for some products as Armenia ran a pilot survey. Prior to 2014, consumption data were not available and have been estimated by the IEA Secretariat based on supply. Therefore breaks in time series occur between 2013 and 2014 and 2014 and 2015. 2015 should be used as reference year. Data for 2014 and prior estimates may be revised after a few years of survey results.

### Sources

#### Sources 2014-2016:

- Direct communication with National Statistical Service, Yerevan.
- Joint IEA/Eurostat/UNECE annual energy questionnaires.
- IEA Secretariat estimates.

#### Sources 1992 to 2013:

- Direct communication with National Statistical Service, Yerevan.
- Joint IEA/Eurostat/UNECE annual energy questionnaires on Coal, Electricity and heat, Natural gas, Oil.
- IEA Secretariat estimates.

#### Sources 1990 to 1991:

- IEA Secretariat estimates.

#### Sources for biofuels and waste:

- Joint IEA/Eurostat/UNECE annual energy questionnaires on renewables, 2014-2016.
- Prior to 2014: *Forestry Statistics*, FAO, Rome, IEA Secretariat estimates.

## Azerbaijan

### General notes

Data for Azerbaijan are available starting in 1990. Prior to that, they are included in Former Soviet Union.

Azerbaijan is one of the 11 EU4Energy focus countries.

Natural gas production data may differ from Azerbaijan national energy balance. Natural gas produced and used in the oil and gas extraction industry is counted by the IEA Secretariat in natural gas production.

Breaks in time series appear for inputs and outputs of electricity, CHP and heat plants in Azerbaijan between 2006 and 2007 due to an improved data collection methodology in the country from 2007 onwards.

For the purpose of calculating CO<sub>2</sub> emissions, an allocation between domestic and international aviation consumption of jet kerosene was estimated by the IEA Secretariat for 1990-2006 based on total aviation consumption reported by Azerbaijan and the 2007 allocation.

A break in time series may be observed between 2015 and 2016 consumption data due to a household consumption survey.

### Sources

#### Sources 1990 to 2016:

- Direct communication with the State Committee of Statistics and the Ministry of Economics of Azerbaijan, Baku.
- Joint IEA/Eurostat/UNECE annual energy questionnaires, 1992 to 2016.

#### Sources for biofuels and waste:

- Joint IEA/Eurostat/UNECE annual energy questionnaires on renewables, 2000-2016.
- Before 2000: IEA Secretariat estimates.

## Bahrain

### General notes

Crude oil production includes half the production from the Abu Sa'fah field, which is shared with Saudi Arabia.

Consumption of natural gas for autoproducer power generation may include quantities used for non-power generation purposes.

Estimations of the use of petroleum coke in the manufacture of aluminium have been made to track this consumption from 2000 onwards. This may lead to breaks in time series between 1999 and 2000.

Historical revisions in LPG, naphtha and refinery gas data from 2011 are consistent with official report from Bahrain National Gas Company. Breaks in time series are observed in 2011 for LPG exports.

### Sources

#### Sources 1992 to 2016:

- Direct communication with National Oil and Gas Authority of Bahrain, Manama.
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- *Statistical Abstract, 1994, 1998, 1999, 2000, 2001, 2002 and 2003*, Council of Ministers, Control Statistics Organisation, Bahrain.
- The UN Energy Statistics Database.
- IEA Secretariat estimates.

#### Sources up to 1991:

- *Statistical Abstract 1990*, Council of Ministers, Central Statistics Organisation, Manama, 1991.

- *1986 Annual Report*, Bahrain Monetary Agency, Manama, 1987.
- *B.S.C. Annual Report*, Bahrain Petroleum Company, Manama, 1982-1984.
- *Foreign Trade Statistics*, Council of Ministers, Central Statistics Organisation, Manama, 1985.
- *Bahrain in Figures*, Council of Ministers, Central Statistics Organisation, Manama, 1983-1985.

## Bangladesh

### General notes

Data are reported on a fiscal year basis, beginning on 1 July and ending on 30 June of the subsequent year.

In 2013, time series were revised from 2008 to 2011 based on data retrieved from the Bangladesh Power Development Board. This may result in breaks in time series between 2007 and 2008 for electricity.

In 2014, time series were revised from 2004 to 2012 based on new data on petroleum products retrieved from the Bangladesh Petroleum Corporation and the Eastern Refinery Limited. This may result in breaks in time series between 2004 and 2005 for primary and secondary oil products.

### Sources

#### Sources 2008 to 2016:

- *Annual Report*, PetroBangla - Bangladesh Oil, Gas and Mineral Corporation, Dhaka, various editions up to 2016.
- *Annual Report*, Bangladesh Power Development Board (BPDB), Dhaka, various editions from 2007 to 2016.
- *Annual Report*, Dhaka Electric Supply Company Limited (DESCO), Dhaka, various editions from 2008 to 2017.
- *Bangladesh Economic Review*, Ministry of Finance, Dhaka, various editions from 2008 to 2017.
- *Coal Recent Mine Activities*, Barapukuria Coal Mining Company Limited (BCMCL), Dhaka, 2017.
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- *Production Activities*, Eastern Refinery Limited, online statistics: erl.com.bd, 2016.
- *Commercial & Operation – Petroleum products*, Bangladesh Petroleum Corporation (BPC), online statistics: www.bpc.gov.bd.
- IEA Secretariat estimates.

#### **Sources 1996 to 2007:**

- US Agency for International Development, Dhaka, 2003 to 2008.
- IEA Secretariat estimates.
- *Statistical Yearbook of Bangladesh 1996 to 1999*, Ministry of Planning, Bangladesh Bureau of Statistics, Dhaka, 1997 to 2000.

#### **Sources 1992 to 1995:**

- *Statistical Pocket Book of Bangladesh*, Ministry of Planning, Bangladesh Bureau of Statistics, Dhaka, 1986 to 1996.
- The UN Energy Statistics Database.

#### **Sources up to 1991:**

- *Bangladesh Energy Balances 1976-1981*, Government of Bangladesh, Dhaka, 1982.
- *Statistical Yearbook of Bangladesh 1991*, Government of Bangladesh, Dhaka, 1976 to 1991.
- *Monthly Statistical Bulletin of Bangladesh*, Ministry of Planning, Bangladesh Bureau of Statistics, Statistics Division, Dhaka, June 1986 and October 1989.

#### **Sources for biofuels and waste:**

- *Forestry Statistics*, FAO, Rome, 2014.
- IEA Secretariat estimates.

## Belarus

### **General notes**

Data for Belarus are available starting in 1990. Prior to that, they are included in Former Soviet Union.

Belarus is one of the 11 EU4Energy focus countries. In 2016, due to reclassification of enterprises' economic activities break in time series can be observed in autoproducers' electricity, CHP plant and non-specified industry sector.

Imports of refinery feedstocks were recorded for the first time in 2015.

In 2016 edition methane produced as a by-product during the petrochemical transformation of naphtha was re-classified by Belarus for the period 1998-2011 from industrial waste to refinery gas. This may lead to breaks in time series between 1997 and 1998.

Jet kerosene was reported under "other products" until 2012. Breaks in time series appear in gas/diesel and fuel oil between 2011 and 2012 as a result of a new classification of industrial products (heating oil re-classified under high sulphur fuel oil).

Oil trade in 2010 shows a significant drop due to higher customs fee of imported quantities of crude oil from Russian Federation.

Since January 2010, Belarus became a member of a Customs Union with Russia and Kazakhstan. Breaks in trade time series and statistical differences appear from 2009 to 2011 as the Customs progressively shifted from one accounting system to another. Belarus reports all inputs and outputs to CHP and heat auto-producer plants including those corresponding to own use of heat.

### **Sources**

#### **Sources 1990 to 2016:**

- Direct communication with the National Statistical Committee of Belarus, Minsk.
- Joint IEA/Eurostat/UNECE annual energy questionnaires.

#### **Sources for biofuels and waste:**

- Joint IEA/Eurostat/UNECE annual energy questionnaires on renewables.
- IEA Secretariat estimates.

## Benin

### **General notes**

In the 2017 edition, times series were revised from 2011 to 2014 based on new data received from the Ministry of Energy, Water, and Mines. Breaks in time series may occur between 2010 and 2011.

## Sources

### Sources 1999 to 2016:

- *Système d'Information Énergétique du Bénin (SIE-Bénin)* 2015, Direction Générale de l'Énergie, Ministère de l'Énergie, de l'Eau et des Mines.
- Direct communication with the *Ministère des Mines, de l'Énergie et de l'Hydraulique*, Cotonou, through the WEC-IEA Joint Energy Reporting Format for Africa, 1999 to 2002, 2004, 2006, 2007, 2011, 2012.
- IEA Secretariat estimates.

### Sources up to 1998:

- Direct communication with the Secretariat, Direction de l'Énergie, Cotonou, 1999, 2000.
- Direct communication with the electricity utility, Cotonou, 1998 to 1999.
- *The UN Energy Statistics Database*.
- *Rapport sur l'Etat de l'Economie Nationale*, Ministère de l'Économie, Cotonou, September 1993.
- IEA Secretariat estimates.

### Sources for biofuels and waste up to 1995:

- IEA Secretariat estimates based on 1991 data from *Forests and Biomass Sub-sector in Africa*, African Energy Programme of the African Development Bank, Abidjan, 1996.

## Bolivia

### General notes

Due to new information available in 2018, 2015 data were revised.

In this edition, time series for solid biofuels were revised from 2000 to 2015 due to revisions in the OLADE balances.

Data for international aviation bunkers are estimated by the IEA Secretariat based on passenger data.

Breaks in time series for solid biofuels occur between 2009 and 2010. This is due to differences in definitions between Bolivia and IEA.

## Sources

### Sources 1992 to 2016:

- *Balance Energético Nacional*, 2015 and 2016. Ministerio de Energías, La Paz, 2018.
- *Anuario Estadístico*, Autoridad de Fiscalización y Control Social de Electricidad, La Paz, 2016.
- *Energy-Economic Information System (SIEE)*, Latin American Energy Organization (OLADE), Quito, accessed April 2018: <http://sier.olade.org/>.
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- *Balance Energético Nacional 2000-2014*, Ministerio de Hidrocarburos y Energía, La Paz, 2014.
- *Anuario Estadístico*, Agencia nacional de hidrocarburos, various editions from 2013 to 2014.
- *Anuario Estadístico*, Ministerio de Hidrocarburos y Energía, La Paz, 2012.
- *Memoria Anual*, Comité Nacional de Despacho de Carga, 2011.
- *Informe Estadístico*, Yacimientos Petrolíferos Fiscales Bolivianos, La Paz, various editions from 1992 to 1998.
- *Anuario Estadístico*, Superintendencia de Electricidad, La Paz, various editions from 1996 to 2007.
- IEA Secretariat estimates.

### Sources up to 1991:

- *Boletín Estadístico 1973-1985*, Banco Central de Bolivia, División de Estudios Económicos, La Paz, 1986.
- *Diez Anos de Estadística Petrolera en Bolivia 1976-1986*, Dirección de Planeamiento, División de Estadística, La Paz, 1987.
- *Empresa Nacional de Electricidad S.A. 1986 Ende Memoria*, Empresa Nacional de Electricidad, La Paz, 1987.

## Bosnia and Herzegovina

### General notes

Data for Bosnia and Herzegovina are available starting in 1990. Prior to that, they are included in Former Yugoslavia.

Energy statistics are available from the Agency for Statistics of Bosnia and Herzegovina (BHAS) from 2008 for electricity and heat and from 2009 for coal and natural gas. As a consequence, breaks in time series may occur between 2007 and 2008 for electricity and heat and 2008 and 2009 for other products.

Until 2012, the source for crude oil and secondary oil products data is the publication “Industrial Production Bosnia and Herzegovina 2012” and “Oil Trade Data” both produced by the Agency for Statistics of Bosnia and Herzegovina.

In 2014, BHAS conducted their first survey on oil product consumption. Breaks in time series may occur between 2012 and 2013.

In 2015, BHAS conducted their first household survey on biomass consumption. Due to this newly available data breaks in time series may occur between 2013 and 2014. Also, due to the ongoing work of BHAS to further improve the biomass data quality, data for the period 2014-2016 were revised in this edition

In this edition, data on blast furnace gas and coke oven gas production became available for 2016. Also, the calorific values of coking coal and coke oven coke were revised for 2014-2016. This may result in breaks in time series on the efficiencies of blast furnaces and coke ovens between 2013 and 2014. In 2018, BHAS received technical expertise from the IEA Secretariat and reallocated inputs of sub-bituminous coal to electricity, CHP and heat plants to lignite for the period 2014-2016. This may lead to breaks in time series between 2013 and 2014.

## Sources

### Sources 2009 to 2016:

- Direct communication with the Agency for Statistics of Bosnia and Herzegovina, Sarajevo.
- Joint IEA/Eurostat/UNECE annual energy questionnaires.
- Energy Statistics: Oil products, Issue 1, Agency for Statistics of Bosnia and Herzegovina, Sarajevo.
- PRODCOM Survey - Industrial Production, Bosnia and Herzegovina, 2009 to 2012.
- IEA Secretariat estimates.

### Sources 2006 to 2008:

- European Network of Transmission System Operators for Electricity, online statistics, 2010.

- Union for the Co-ordination of Transmission of Electricity, online statistics, 2009.
- IEA Secretariat estimates.

### Sources 2000 to 2005:

- *Energy Sector Study BiH*, Third Electric Power Reconstruction Project, consortium led by Energy Institute Hrvoje Pozar, Sarajevo, 2008.
- Direct communication with the Joint Power Co-ordination Centre (JPCC).
- *Statistical Yearbook of BiH*, Federation of Bosnia and Herzegovina Federal Office of Statistics, Sarajevo, 2008.
- *Power Generation and Transmission System in Bosnia Herzegovina*, International Management Group, European Commission, Sarajevo, November 2000.
- *Energy Outlook*, Federal Ministry of Energy, Mining and Industry, Sarajevo, December 2001.
- The UN Energy Statistics Database.

## Botswana

### General note

Data for Botswana are available from 1981. Prior to that, they are included in Other Africa.

## Sources

### Sources 1981 to 2016:

- Direct communication with the Department of Energy, Ministry of Minerals, Energy and Water Resources, Gaborone.
- *Annual Report*, Botswana Power Corporation (BPC), Gaborone. Various editions up to 2016. Note: BPC data are published on a fiscal year basis (April to March).
- *Environment Statistics 2012*, Botswana Central Statistics Office, Gaborone.
- Indices of the physical volume of mining production 3Q 2014, Botswana Central Statistics Office, Gaborone.
- *Botswana in Figures 2011*, Botswana Central Statistics Office, Gaborone.
- *Statistical Yearbook 2010*, Botswana Central Statistics Office, Gaborone.

- *Annual Report 2009*, Department of Mines, Gaborone.
- *Energy Statistics*, Central Statistics Office, Gaborone.
- IEA Secretariat Estimates.

## Brazil

### General notes

Brazil joined the IEA as an Association country in October 2017.

The split between domestic and international marine bunkers is done based on flag (nationality) of ships.

New information became available in 2015 which explains the types of product transfers within Brazilian refineries. The IEA attempted to reflect these transfers as accurately as possible.

In the IEA balance for Brazil, “Biogasoline” refers to anhydrous ethanol while “Other liquid biofuels” refers to hydrated ethanol. The national energy balance of Brazil shows bioethanol as two separate products: anhydrous ethanol (“álcool anidro”, i.e. nearly pure ethanol, containing less than 1% of water) and hydrated ethanol (“álcool hidratado”, i.e. a blend of ethanol and water, in the proportion of about 95% to 5%, generally obtained from conventional distillation). While anhydrous ethanol is blended with gasoline (the blend sold at the pump generally contains 20-25% of ethanol), hydrated ethanol is sold at separate pumps as a product by itself (álcool) to be used in flex fuel cars, i.e. vehicles that can run on any mix of gasoline and ethanol.

Although IEA’s balance is based on Brazil’s national statistics, differences with the national energy balance can be observed due to the different methodologies adopted for reporting nuclear, chemical heat, natural gas, renewables, blast furnaces and coke ovens.

Brazil produces a large share of its pig iron in blast furnaces that are fuelled and fed with charcoal. The blast furnace gases produced when charcoal is used as a reagent in the blast furnaces are renewable products and they have been reported in this publication under the product “Biogases from thermal processes”. Additionally, only the part of these gases consumed for power generation (i.e. energy purposes) has been accounted for in the transformation sector. The remaining charcoal consumed in or used to heat the blast furnaces is reported in final consumption under

the iron and steel industry with no distinction between transformation and final consumption.

Prior to the year 2000 blast furnace gases data availability is limited to the input to auto producer electricity plants. Therefore, from 1971 to 1999, the other flows (e.g. production, consumption etc.) are IEA Secretariat estimates.

The Itaipu hydroelectric plant, operating since 1984 and located on the Paraná River (which forms the border of Brazil and Paraguay) was formed as a joint venture between Eletrobrás and the Paraguayan government. Production is shared equally between Brazil and Paraguay.

### Sources

#### Sources 1971 to 2016:

- Direct communication with the Ministério de Minas e Energia, Brasilia.
- *Solar Heat Worldwide*, AEE - Institute for Sustainable Technologies, Gleisdorf, IEA Solar Heating & Cooling Programme various editions up to 2018.

## Brunei Darussalam

### General notes

In 2009, new information became available on the split in consumption of refinery gas. This may lead to breaks in time series between 2008 and 2009.

### Sources

#### Sources 2006 to 2016:

- APEC Energy Database, Tokyo, 2018.
- Direct communication with the Prime Minister's Office, Strategic Planning Division, Bandar Seri Begawan.
- Direct communication with the Prime Minister's Office, Department of Electrical Services, Bandar Seri Begawan.
- IEA Secretariat estimates.

#### Sources 1992 to 2005:

- APEC Energy Database, Tokyo, 2007.
- Direct communication with the UN Statistics Division.
- Direct communication with the Office of the Prime Minister, Petroleum Unit

- Direct communication with the Asia Pacific Energy Research Centre.
- Direct communication with the Ministry of Development, Electrical Services Department.
- *Brunei Statistical Yearbook, 1992 to 1994*, Ministry of Finance, Statistics Section, Bandar Seri Begawan, 1993, 1995.

#### Sources up to 1991:

- *Fifth National Development Plan 1986-1990*, Ministry of Finance, Economic Planning Unit, Bandar Seri Begawan, 1985.

#### Sources for biofuels and waste:

- The UN Energy Statistics Database.

## Bulgaria

### General notes

Non-specified transformation of natural gas to other hydrocarbons corresponds to hydrogen used in refineries.

Bulgaria has re-classified black liquor from industrial waste to solid biofuels and the renewable portion of tyres from industrial waste to municipal waste – renewables from 2008. Breaks in time series may occur between 2007 and 2008.

A break in the time series for natural gas stock changes may occur between 2003 and 2004 as cushion gas is excluded starting in 2004.

### Sources

#### Sources 1990 to 2016:

- Direct communication with the National Statistical Institute, Sofia.
- Joint IEA/Eurostat/UNECE annual energy questionnaires.
- Energy Balances, National Statistical Institute, Sofia, 1995.

#### Sources up to 1991:

- *Energy Development of Bulgaria*, Government of Bulgaria, Sofia, 1980 and 1984.
- *Energy in Bulgaria*, Government of Bulgaria, Sofia, 1980 to 1983.

- *General Statistics in the Republic of Bulgaria 1989/1990*, Government of Bulgaria, Sofia, 1991.

#### Sources for biofuels and waste:

- Joint IEA/Eurostat/UNECE annual energy questionnaires on renewables.
- The UN Energy Statistics Database.

## Cambodia

### General notes

Data for Cambodia are available starting in 1995. Prior to that, they are included in Other Asia.

In the 2018 edition, information on the split of consumption for some petroleum products became available for 2016. This may lead in breaks in time series between 2015 and 2016.

In 2015, new information regarding the imports of petroleum products in Cambodia from 2007 onwards became available. Data for these products were revised accordingly and as a result breaks in time series may occur for different products between 2007 and 2013.

### Sources

#### Sources 1995 to 2016:

- Direct communication with the Energy Statistics Office of the Ministry of Mines and Energy, Phnom Penh.
- *Cambodia National Energy Statistics 2016*, Economic Research Institute for ASEAN and East Asia.
- *Report on Power Sector of the Kingdom of Cambodia*, Electricity Authority of Cambodia, Phnom Penh, various editions up to 2017.
- *Petroleum Products Imports Data from the Customs Office*, General Department of Petroleum of Cambodia, Phnom Penh, 2014.
- APEC annual energy questionnaires, 2010-2011.
- Direct communication with the Department of Energy, Ministry of Industry, Mines and Energy, Phnom Penh through the APEC annual energy statistics questionnaire, 1995-2011.
- Direct communication with the Department of Corporate Planning and Projects, Ministry of Industry, Mines and Energy, Phnom Penh through the APEC annual energy statistics questionnaire, 1995-2011.



- Direct communication with the Electricity Authority of Cambodia, Phnom Penh through the APEC annual energy statistics questionnaire, 1995-2011.
- Direct communication with Electricité du Cambodge, Phnom Penh through the APEC annual energy statistics questionnaire, 1995-2011.
- IEA Secretariat estimates.

## Cameroon

### General notes

In 2018, Cameroon provided energy balances for 2015. 2016 data were therefore estimated by the IEA Secretariat.

In 2015, new information regarding Cameroon became available. Data points were revised accordingly which may lead to breaks in times series between 2011 and 2012 for electricity own use and losses and between 2011 and 2011 for crude oil trade and production.

### Sources

#### Sources 1971 to 2016:

- Direct communication with Ministère de l'Energie et de l'Eau, Yaoundé.
- *Annuaire Statistique sur le Commerce*, CELSTAT, 2015.
- *Annual Report*, Eneo, 2014.
- *Statistiques Annuelles*, Société Nationale des Hydrocarbures (SNH), 2013, 2014, 2015, 2016.
- *Statistiques économiques*, Banque des Etats de l'Afrique Centrale (BEAC), online database, 2011.
- Direct communication with Société Nationale de Raffinage (SONARA).
- Direct communication with Société Nationale d'Electricité du Cameroun (*AES – SONEL*), Douala.
- The UN Energy Statistics Database
- IEA Secretariat estimates.

#### Sources for biofuels and waste:

- IEA Secretariat estimates based on 1991 data from *Forests and Biomass Sub-sector in Africa*, African Energy Programme of the African Development Bank, Abidjan, 1996.

## People's Republic of China

### General notes

The People's Republic of China (China) joined the IEA as an Association country in November 2015.

### Revisions of China's 2000 - 2010 energy data

In early 2016, the National Bureau of Statistics (NBS) of the People's Republic of China (China) supplied the IEA with detailed energy balances for 2000 to 2010 and the IEA revised its data accordingly.

In September 2015, the NBS published China's energy statistics for 2013, as well as revised statistics for the years 2011 and 2012. These have already been taken into account by the IEA in the "Special data release with revisions for the People's Republic of China" in November 2015.

All revisions show significant changes both on the supply and demand side for a number of energy products, resulting in breaks in time series between 1999 and 2000. Most importantly, the previously significant statistical difference for coal has now been allocated in industrial consumption based on findings from a national economic census.

### Coal

NBS and IEA collaborate to provide additional detail on energy production, transformation and consumption of all five different types of coal (e.g. anthracite, coking coal, other bituminous, sub-bituminous and lignite). At the moment NBS only provides quantities of raw coal and washed coal (split between cleaned coal and other washed coal) in their energy balances and the IEA Secretariat has attributed these quantities to coking coal and other bituminous coal. It is expected that the continuing work to provide disaggregated data on the five different coals will result in greater detail in future editions.

In this edition, the National Bureau of Statistics (NBS) changed the definition of cleaned coal and other washed coal. Now, only the coal used for coking is called cleaned coal. This might result in breaks in time series in coking coal between 2015 and 2016. As this change of methodology resulted in uncertainty on the use of cleaned coal, the IEA Secretariat estimated the use of coking coal in transformation and final consumption sectors.

In this edition, based on new information, coal consumption in rail was revised for the whole time series

to reflect the fact that coal is used for other usages than transport in the Rail sector. The IEA Secretariat has allocated part of the coal reported under rail to other non-specified sectors for the period 1990-2003. For the period 2004-2016 the IEA Secretariat allocated the total amount of coal reported under rail to other non-specified sectors.

In this edition, based on new information, coal inputs to main activity heat plants and part of coal inputs to main activity electricity plants were allocated to main activity CHP plants for the period 2005-2016.

Net calorific values (NCV) for coal inputs to power generation from 2000 are estimated by applying assumptions used by China on the average thermal efficiency of coal-fired power stations in these years. NCVs are also estimated for bituminous coal production from 2000 as well as for inputs to main activity CHP plants from 2008.

Since 2000, imports and exports of cleaned coal are no longer reported in the national energy balance of China. The IEA Secretariat has used secondary sources of information to report this coking coal trade and corresponding quantities have been removed from bituminous coal trade. Consumption of this coking coal is assumed to be in coke ovens.

The IEA data of coal stocks for the years 1985 and 1990 as well as coal production for the years 1997-1999 are estimates and do not represent official data released by the Chinese government. Those estimates were based on the assumption that coal consumption statistics are more reliable than coal production statistics and that the production-consumption relationship should maintain a balance over time. In recent years, China has reported large increases in stocks for different types of coal. These stock increases are seen as consistent with trends in economic growth and development in China; however, information is currently lacking on the scale of the infrastructure available for this magnitude of stock increases.

Data for coal trade in this publication may not match data from secondary sources of information.

## Oil

Starting with 2010 data, NBS increased the level of detail of the national energy balance regarding oil products and coal gases. Breaks in time series may occur between 2009 and 2010.

In 2012, new information became available on how NBS accounts for international aviation and marine

bunkers in the China's national energy balance. Previously international flights by Chinese airlines and ships had been excluded. A revised methodology was implemented that now includes fuel use for international airplanes and ships, regardless of whether they are foreign- or China-owned.

Coal to liquids output was estimated based on projected production slate of operational coal-to-liquid plants.

In recent years, China has reported large increases in stocks for crude oil and oil products. These stock increases are seen as consistent with trends in economic growth and development in China; however, information is currently lacking on the scale of the infrastructure available for this magnitude of stock increases.

## Natural gas

In the 2018 edition, based on new information, natural gas inputs to main activity heat plants and part of natural gas inputs to main activity electricity plants were allocated to main activity CHP plants for the period 2005-2016.

In the 2012 edition, information became available on natural gas consumption in public transportation in China. This consumption was added to the natural gas time series to ensure proper coverage of the transport sector.

Coal to gas output is estimated based on operational capacity of coal-to-gas plants.

## Biofuels and waste

Since 2016, the IEA has been working with the Institute of Built Environment of Tsinghua University, Beijing, to improve its data on biomass consumption in the residential sector in China. Biomass figures have therefore been revised in this edition back to 1997 to reflect the results of their study and of IEA analysis. Information also became available in 2012 from NBS on the production and consumption of gangue, a mining waste product that has been classified as industrial waste in the IEA energy balances. This quantity of industrial waste is not likely to represent the only combustion of industrial waste in China; however, information is not available to provide more complete data on this activity.

Time series for liquid biofuels and biogases are based on tertiary sources of information and IEA Secretariat estimates. None of these time series are reported in the national energy balance of China.

## Electricity and heat

In this edition, based on new information, heat production from main activity heat plants using coal and natural gas and part of electricity production from main activity electricity plants using coal and natural gas were attributed to main activity CHP plants for the period 2005-2015. Estimates on the electricity consumption in road transportation are included, starting with 2001 data.

Electricity production from pumped storage hydro is reported from 2010.

Time series for wind (prior to 2010), geothermal, solar photovoltaic and solar thermal generation are based on tertiary sources of information and IEA Secretariat estimates. None of these time series are reported in the national energy balance of China.

## Sources

### Sources 1990 to 2016:

- *China Energy Statistical Yearbook*, National Bureau of Statistics, Beijing, various editions up to 2016.
- Direct communication with the China National Bureau of Statistics (NBS), Beijing.
- Direct communication with the China National Renewable Energy Centre (CNREC), National Energy Administration (NEA), Beijing.
- Direct communication with the Institute of Built Environment of Tsinghua University, Beijing.
- *Solar Heat Worldwide*, AEE - Institute for Sustainable Technologies, Gleisdorf, IEA Solar Heating & Cooling Programme, various editions up to 2018.
- China Electricity Council, online statistics, various editions up to 2016.
- *Trends in Photovoltaic Applications*, International Energy Agency Photovoltaic Power Systems Programme, 2013 edition.
- Zhang G., *Report on China's Energy Development 2010*, China's National Energy Administration, Beijing, editions 2009 to 2011.
- Zheng et. al, *Steady Industrialized Development of Geothermal Energy in China: Country Update Report*, Beijing, 2005-2009.
- Lund et. al, *Direct Utilization of Geothermal Energy 2010 Worldwide Review*, World Geothermal Congress, Bali, 2010.

- *The Global Biodiesel Balance for 2012 and 2013*, World Ethanol and Biofuels Report, F.O. Lichts, London, Vol. 11 No. 16, Apr. 23, 2013.
- IEA Secretariat estimates.

### Sources up to 1990:

- *Electric Industry in China in 1987*, Ministry of Water Resources and Electric Power, Department of Planning, Beijing, 1988.
- *Outline of Rational Utilization and Conservation of Energy in China*, Bureau of Energy Conservation State Planning Commission, Beijing, June 1987.
- *China Coal Industry Yearbook*, Ministry of Coal Industry, People's Republic of China, Beijing, 1983, 1984, 1985 and 2000.
- *Energy in China 1989*, Ministry of Energy, People's Republic of China, Beijing, 1990.
- *China: A Statistics Survey 1975-1984*, State Statistical Bureau, Beijing, 1985.
- *China Petro-Chemical Corporation (SINOPEC) Annual Report*, SINOPEC, Beijing, 1987.
- *Almanac of China's Foreign Economic Relations and Trade*, The Editorial Board of the Almanac, Beijing, 1986.

### Sources for biofuels and waste:

- IEA Secretariat estimates.

## Colombia

### General notes

In 2018, time series for the period 2013-2016 were revised based on new energy balances received from the Unidad de Planeación Minero Energética (UPME). Breaks in time series may occur between 2012 and 2013.

## Sources

### Sources 1992 to 2016:

- *Energy-Economic Information System (SIEE)*, Latin American Energy Organization (OLADE), Quito, accessed May 2018: <http://sier.olade.org/>.
- Unidad de Planeación Minero Energética (UPME) Online statistics, Ministerio de Minas y Energía, various editions up to 2016.



- Direct communication with the Ministry of Mines and Energy, Energy Information Department, Bogotá.
- *Statistics 1996-2016*, Sistema de Información Eléctrico Colombiano, Ministry of Mines and Energy, online statistics, various editions up to 2016.
- IEA Secretariat estimates.

#### Sources up to 1991:

- *Boletín Minero-Energético*, Ministerio de Minas y Energía, Bogotá, December 1991.
- *Estadísticas Minero-Energéticas 1940-1990*, Ministerio de Minas y Energía, Bogotá, 1990.
- *Estadísticas Básicas del Sector Carbón*, Carbocol, Oficina de Planeación, Bogotá, various editions from 1980 to 1988.
- *Colombia Estadística 1985*, DANE, Bogotá, 1970 to 1983 and 1987.
- *Empresa Colombiana de Petróleos, Informe Anual*, Empresa Colombiana de Petróleos, Bogotá, 1979, 1980, 1981 and 1985.
- *Estadísticas de la Industria Petrolera Colombiana Bogotá 1979-1984*, Empresa Colombiana de Petróleos, Bogotá, 1985.
- Informe Estadístico Sector Eléctrico Colombiano, Government of Colombia, Bogotá, 1987 and 1988.
- *La Electrificación en Colombia 1984-1985*, Instituto Colombiano de Energía Eléctrica, Bogotá, 1986.
- *Balances Energéticos 1975-1986*, Ministerio de Minas y Energía, Bogotá, 1987.
- *Energía y Minas Para el Progreso Social 1982-1986*, Ministerio de Minas y Energía, Bogotá, 1987.

#### Sources for Biofuels and waste:

- Ministry of Mines and Energy, Energy Information Department, Bogotá.

## Congo

### General notes

For 2015 and 2016 figures, no official data were available therefore figures are based on secondary sources and IEA estimates.

In 2016, time series for the period 2000-2012 were revised based on new energy balances received from the Ministry of Energy. Breaks in time series may occur between 1999 and 2000.

The Imboulou Hydro Plant (120MW) began operating in May 2011.

### Sources

#### Sources 1971 to 2016:

- Direct communication with the Ministère de l'Energie et de l'Hydraulique, Brazzaville.
- *Rapport annuel SIE-Congo* 2014.
- Direct communication with the Agence de Régulation de l'Aval Pétrolier, Brazzaville.
- *Les chiffres caractéristiques de la Société Nationale d'Électricité 2005-2011*, SNE, Brazzaville.
- IEA Secretariat estimates.

#### Sources for biofuels and waste:

- *Rapport annuel SIE-Congo* 2014.
- IEA Secretariat estimates based on 1991 data from *Forests and Biomass Sub-sector in Africa*, African Energy Programme of the African Development Bank, Abidjan, 1996.

## Costa Rica

### Sources

#### Sources up to 2016:

- Direct communication with the Ministerio del Ambiente y Energía, San José.
- *Energy-Economic Information System (SIEE)*, Latin American Energy Organization (OLADE), Quito, accessed April 2018: <http://sier.olade.org/>.
- IEA Secretariat estimates.

## Côte d'Ivoire

### Sources

#### Sources 2013 to 2016:

- AFREC Energy questionnaire, African Energy Commission, 2017-2018, submitted by Direction de l'Energie, Abidjan.
- Direct communication with Direction de l'Energie, Abidjan.
- IEA Secretariat estimates.

**Sources 2009 to 2012:**

- Direct communication with Direction de l'Énergie, Abidjan.
- IEA Secretariat estimates.

**Sources 2005 to 2008:**

- WEC-IEA Joint Energy Reporting Format for Africa, questionnaire submitted by Direction de l'Énergie, Abidjan.
- Direct communication with Direction de l'Énergie, Abidjan.
- IEA Secretariat estimates.

**Sources 2002 to 2004:**

- Direct communication with the Ministry of Mines and Energy, Abidjan, 2005-2006, and IEA Secretariat estimates.

**Sources 1992 to 2001:**

- Direct communication with oil industry and the Ministry of Energy, Abidjan, July 2003.
- Direct communication with Société Ivoirienne de Raffinage, 2004.
- *La Côte d'Ivoire en chiffres*, Ministère de l'Économie et des Finances, Abidjan, 1996-97 edition.
- *L'Énergie en Afrique*, IEPE/ENDA, Paris, 1995, in turn sourced from Ministère des Mines et de l'Énergie, Abidjan.
- The UN Energy Statistics Database.

**Sources up to 1991:**

- *Études & Conjoncture 1982-1986*, Ministère de l'Économie et des Finances, Direction de la Planification et de la Prévision, Abidjan, 1987.

**Sources for biofuels and waste:**

- IEA Secretariat estimates based on 1991 data from *Forests and Biomass Sub-sector in Africa*, African Energy Programme of the African Development Bank, Abidjan, 1996.

## Croatia

**General notes**

Data for Croatia are available starting in 1990. Prior to that, they are included in Former Yugoslavia.

Non-specified transformation of natural gas reported from 2007 refers to natural gas used by refineries for hydrogen production.

Breaks in time series may appear between 2007 and 2008 as transit data of electricity trade are not available for years prior to 2008.

Data on international marine bunkers were revised for 2012 to 2015 as a result of new information on the oil exportation figures.

Due to a change in the calculation made by Croatia, solar thermal direct use was revised for 1998 to 2015.

**Sources****Sources 1990 to 2016:**

- Direct communication with the Energy Institute "Hrvoje Požar", Zagreb.
- Direct communication with the Central Bureau of Statistics, Zagreb.
- Joint IEA/Eurostat/UNECE annual energy questionnaires.
- IEA Secretariat estimates.

## Cuba

**General notes**

In the 2018 edition, new information became available that led to revisions of the wind and solar PV data from 2000 to 2015.

Breaks in time series in the early 90s are assumed to be due to the codification into law of the embargo imposed on Cuba in 1992.

Figures for crude oil include additives added to reduce viscosity.

**Sources****Sources up to 2016:**

- *Energy-Economic Information System (SIEE)*, Latin American Energy Organization (OLADE), Quito, accessed April 2018: <http://sier.olade.org/>.
- *Anuario Estadístico de Cuba*, Oficina Nacional de Estadísticas, Havana, various editions from 1998 to 2017.
- *Renewable energy statistics 2018*, International Renewable Energy Agency (IRENA).

- *Estadísticas Energéticas en la Revolución*, Oficina Nacional de Estadísticas, Havana, September 2009 edition.
- *Compendio estadístico de energía de Cuba 1989*, Comité Estatal de Estadísticas, Havana, 1989.
- *Anuario Estadístico de Cuba*, Comité Estatal de Estadísticas, Havana, various editions from 1978 to 1987.
- *Anuario Estadístico de Cuba*, Oficina Nacional de Estadísticas, Havana, various editions from 1998 to 2015.
- IEA Secretariat estimates.

## Curaçao

### General notes

In the 2018 edition, new sources became available that led to revisions of the solar PV and wind data. This might lead to a break in time series between 2011 and 2012.

The Netherlands Antilles was dissolved on 10 October 2010, resulting in two new constituent countries, Curaçao and Sint Maarten, with the remaining islands joining the Netherlands as special municipalities. The methodology for accounting for the energy statistics of the Netherlands Antilles has been revised in order to follow the above-mentioned geographical changes. From 2012 onwards, data now account for the energy statistics of Curaçao Island only. Prior to 2012, data remain unchanged and still cover the entire territory of the former Netherlands Antilles.

As the Isla Refinery in Curaçao did not operate to its maximum capacity in 2010, a break in time series might occur in that year for crude oil and oil products.

### Sources

#### Sources 1997 to 2016:

- *Informe de Gestión Anual*, PDVSA - Petróleos de Venezuela, S.A., various editions up to 2016.
- *Statistics by subject*, Central Bureau of Statistics Curaçao, CBS, accessed April 2018: [www.cbs.cw](http://www.cbs.cw).
- *Renewable energy statistics 2018*, International Renewable Energy Agency (IRENA). *The Economy of Curaçao and Sint Maarten in Data and Charts, Yearly Overview 2007-2016*, Centrale Bank van Curaçao en Sint Maarten, Willemstad.

- *Statistical indicators 1998-2010*, Central Bank of Netherlands Antilles, Willemstad.
- Direct communication with the Isla Refinery, Emmastad, Curaçao, up to 2008.
- *Statistical Information*, Central Bureau of Statistics, Fort Amsterdam, up to 2008.
- IEA Secretariat estimates.

## Cyprus

### General notes

#### Note by Turkey:

*The information in this document with reference to “Cyprus” relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognizes the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the “Cyprus issue”.*

#### Note by all the European Union member states of the OECD and the European Union:

*The Republic of Cyprus is recognized by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the government of the Republic of Cyprus.*

Time series data from 2009-2010 for primary solid biofuels were revised based on newly available information. Breaks in time series may occur between 2008 and 2009 for these products.

### Sources

#### Sources 1994 to 2016:

- Direct communication with the statistical service of Cyprus, Nicosia.
- Joint IEA/Eurostat/UNECE annual energy questionnaires.
- *Electricity Authority of Cyprus Annual Report 1996*, Electricity Authority of Cyprus, Nicosia, 1997.

#### Sources up to 1993:

- *Electricity Authority of Cyprus Annual Report 1988, 1992*, Electricity Authority of Cyprus, Nicosia, 1989 and 1993.

- *Industrial Statistics 1988*, Ministry of Finance, Department of Statistics, Nicosia, 1989.

#### Sources for biofuels and waste:

- Joint IEA/Eurostat/UNECE annual energy questionnaires on renewables.
- IEA Secretariat estimates.

## Democratic People's Republic of Korea

### General notes

The sources cited below provide domestic supply data for DPR Korea. All other flows are estimated by the IEA Secretariat.

2011 data for primary coals were revised based on new information in the 2014 edition. This may lead to breaks in the time series between 2010 and 2011 and differences in trends compared to previous editions for some products.

### Sources

#### Sources 1971 to 2016:

- Direct communication with Korea's National Statistical Office and Korea's Energy Economics Institute.
- *North Korea Statistics*, Korean Statistical Information Service website, www.kosis.kr, Seoul.
- *World Trade Database*, prepared annually by the International Energy Agency.
- The UN Energy Statistics Database.
- IEA Secretariat estimates.

#### Sources for biofuels and waste:

- The UN Energy Statistics Database.
- *Forestry Statistics*, FAO, Rome, 2018.
- IEA Secretariat estimates.

## Democratic Republic of the Congo

### General notes

In the 2015 edition, new information and methodologies regarding biomass and charcoal became available. Breaks in time-series may occur between 2013 and 2014.

### Sources

#### Sources up to 2016:

- AFREC Energy questionnaire, African Energy Commission, 2014 to 2016.
- IEA Secretariat estimates.

#### Sources up to 2013:

- Direct communication with the Ministère de l'Énergie, Kinshasa Gombe.
- Commission Nationale de l'Énergie, Ministère de l'Énergie, Kinshasa Gombe, 2005.
- WEC-IEA Joint Energy Reporting Format for Africa, 1999 to 2000.
- The UN Energy Statistics Database.
- *L'Énergie en Afrique*, IEPE/ENDA, Paris, 1995, in turn sourced from the *Annuaire Statistique Énergétique 1990*, Communauté Economique des Pays des Grands Lacs, Bujumbura, 1990.
- IEA Secretariat estimates.

#### Sources for biofuels and waste:

- IEA Secretariat estimates based on 1991 data from *Forests and Biomass Sub-sector in Africa*, African Energy Programme of the African Development Bank, Abidjan, 1996.

## Dominican Republic

### General notes

In 2014 the national energy balance was adopted as the primary data source. This could lead to breaks in time series between 1997 and 1998 for some flows. In 2017 the breakdown of consumption data was integrated to IEA balance starting from year of 1998.

Dominican Republic revised coal import figures. This may lead to different trends compared to previous editions of this publication.

### Sources

#### Sources 1971 to 2016:

- *Energy-Economic Information System (SIEE)*, Latin American Energy Organization (OLADE), Quito, accessed Mar 2018: <http://sier.olade.org/>.
- *Balance energética neta*, Comisión nacional de energía, Santo Domingo various editions up to 2016.

- *Importación de petróleo y derivados*, Ministre de Industria y Comercio (MIC), Santo Domingo, various editions up to 2012.
- *Capacidad instalada y generación del SENI por año, según tecnología, 2000-2010*, Oficina Nacional de Estadística, Santo Domingo.
- IEA Secretariat estimates.

## Ecuador

### General notes

Crude oil production and export data do not include field condensate. Field condensate quantities are included with natural gas liquids.

Ecuador has revised historical data since 2004. This may lead to different trends compared to previous editions of this publication.

In the 2015 edition new information became available regarding production and consumption of refinery fuel. This may lead to breaks in time series between 2012 and 2013 (2011 and 2012) for some oil products.

A new hydro plant opened in northern Ecuador in 2015.

### Sources

#### Sources 1999 to 2015:

- Direct communication with the Ministerio Coordinador de Sectores Estratégicos, Quito.
- *Energy-Economic Information System (SIEE)*, Latin American Energy Organization (OLADE), Quito, accessed January 2018: <http://sier.olade.org/>.
- Direct communication with the Ministerio de Recursos Naturales No Renovables, Quito, up to 2014.
- Direct communication with the Ministerio de Minas y Petróleos, Quito, up to 2011. Balance Energético Nacional – Resumen, Ministerio Coordinador de Sectores Estratégicos, Quito, various editions up to 2015.
- *Estadística del Sector Eléctrico Ecuatoriano*, Agencia de Regulación y Control de Electricidad Arconel, Quito.
- *Informe Estadístico, & Informe Cifras Petroleras*, Petroecuador, Empresa Estatal Petróleos del Ecuador, Quito.
- *Reporte del Sector Petrolero*, Banco Central del Ecuador, Quito.
- IEA Secretariat estimates.

#### Sources 1990 to 1998:

- *Energy-Economic Information System (SIEE)*, Latin American Energy Organization (OLADE), Quito: <http://sier.olade.org/>.

#### Sources up to 1989:

- Ministerio de Energía y Minas.
- *Cuentas Nacionales*, Banco Central del Ecuador, Quito, various editions from 1982 to 1987.
- *Memoria 1980-1984*, Banco Central del Ecuador, Quito, 1985.
- *Ecuadorian Energy Balances 1974-1986*, Instituto Nacional de Energía, Quito, 1987.
- *Informacion Estadística Mensual, No. 1610*, Instituto Nacional de Energía, Quito, 1988.
- *Plan Maestro de Electrificación de Ecuador*, Ministerio de Energía y Minas, Quito, 1989.

## Egypt

### General notes

Data are reported on a fiscal year basis. Data for 2015 correspond to 1 July 2015-30 June 2016.

Data for 2016 were not submitted by Egypt and are based on IEA secretariat estimates.

Stock changes may include informal trade.

The IEA Secretariat has revised marine bunkers back to 2004. Data from 2004 are now based on data received from the Egyptian Authorities. Electricity data for 2015 are estimated by the Secretariat.

### Sources

#### Sources 1992 to 2016:

- Direct communication with the Central Agency for Public Mobilization and Statistics, Cairo, CAPMAS.
- Direct communication with the Organisation for Energy Planning, Cairo.
- WEC-IEA Joint Energy Reporting Format for Africa, 2000 to 2012.
- Direct submission to the IEA Secretariat from the Ministry of Petroleum, Cairo.
- *Annual Report 1995, 1997, 1998, 1999*, Ministry of Petroleum, Egyptian General Petroleum Corporation, Cairo, 1996, 1998 to 2000.



- *Annual Report of Electricity Statistics 1996/1997 to 2010/2011*, Ministry of Electricity and Energy, Egyptian Electricity Holding Company, Cairo, 1998 to 2012.
- *Arab Oil and Gas*, The Arab Petroleum Research Center, Paris, October 1997.
- *Middle East Economic Survey*, Middle East Petroleum and Economic Publications, Nicosia, February 1994, June 1996, March 1998.
- *A Survey of the Egyptian Oil Industry 1993*, Embassy of the United States of America in Cairo, Cairo, 1994.
- IEA Secretariat estimates.

#### Sources up to 1991:

- *Annual Report of Electricity Statistics 1990/1991*, Ministry of Electricity and Energy, Egyptian Electricity Authority, Cairo, 1992.
- *Statistical Yearbook of the Arab Republic of Egypt*, Central Agency for Public Mobilisation and Statistics, Cairo, 1977 to 1986.
- *L'Électricité, l'Énergie, et le Pétrole*, République Arabe d'Égypte, Organisme Général de l'Information, Cairo, 1990.
- *Annual Report*, The Egyptian General Petroleum Corporation, Cairo, 1985.

#### Sources for biofuels and waste:

- The UN Energy Statistics Database.
- IEA Secretariat estimates.

## El Salvador

### General notes

The only refinery in El Salvador shut down in 2012.

### Sources

#### Sources up to 2016:

- *Balances Energeticos*, Consejo Nacional de Energia (CNE), San Salvador, various editions from 2007 to 2016.
- *Boletín de Estadísticas*, Superintendencia General de Electricidad y Telecomunicaciones (SIGET), San Salvador, various editions from 1998 to 2016.
- *Energy-Economic Information System (SIEE)*, Latin American Energy Organization (OLADE), Quito, accessed April 2018: <http://sier.olade.org/>.

- *Centroamérica: estadísticas de hidrocarburos, 2016*. Comisión Económica para América Latina y el Caribe (CEPAL), various editions from 2009-2016.
- Direct communication with the Ministerio de Economía, Dirección de Hidrocarburos y Minas, San Salvador.
- Direct communication with the Consejo Nacional de Energia El Salvador (CNE), San Salvador.
- IEA Secretariat estimates.

## Eritrea

### General notes

Data for Eritrea are available from 1992. Prior to 1992, data are included in Ethiopia.

Solid biofuels consumption data have been periodically re-estimated by Eritrea. This may result in breaks in time series for this product in 1998 and 2003.

### Sources

#### Sources 2011 to 2016:

- IEA Secretariat estimates.

#### Sources 1992 to 2010:

- Direct Communication with the Ministry of Energy and Mines, Asmara.
- IEA Secretariat estimates.

## Ethiopia

### General notes

Ethiopia energy data include Eritrea from 1971 to 1991. From 1992, the two countries are reported separately.

Data are reported according to the Ethiopian financial year, which runs from 1 July to 30 June of the next year.

Electricity data were revised in the 2017 edition based on ministry reporting split between wind and geothermal production since 2011.

Data for 2016 are estimated by IEA secretariat.

The Aluto Langano pilot geothermal power plant began an expansion project in 2010. Breaks in

geothermal time series can be seen in 2010 due to the plant being out of commission.

## Sources

### Sources 2012 to 2016:

- Direct communication with the Ministry of Water, Irrigation, and Energy, Addis Ababa.
- *Existing Power Plants*, Ethiopian Electric Power Corporation, online database, 2014.
- *Biomass Energy Strategy Formulation for Ethiopia*, European Union Energy initiative, in cooperation with the Ethiopian Ministry for Water and Energy, Germany, 2013
- IEA Secretariat estimates.

### Sources 1992 to 2012:

- Direct communication with the Ministry of Mines and Energy, Addis Ababa.
- Direct communication with the Energy Development Follow-up and Expansion Department of the Ministry of Infrastructure, Addis Ababa, 2004 and 2005.
- Direct communication with the Ministry of Finance and Economic Development, Addis Ababa, 1998 to 2003.
- The UN Energy Statistics Database.
- IEA Secretariat estimates.

### Sources up to 1991:

- *Ten Years of Petroleum Imports, Refinery Products, and Exports*, Ministry of Mines & Energy, Addis Ababa, 1989.
- *Energy Balance for the Year 1984*, Ministry of Mines & Energy, Addis Ababa, 1985.
- *1983 Annual Report*, National Bank of Ethiopia, Addis Ababa, 1984.
- *Quarterly Bulletin*, National Bank of Ethiopia, Addis Ababa, various editions from 1980 to 1985.

### Sources for biofuels and waste:

- *Biomass Data 2007-2012*, Ministry of Water and Energy, Addis Ababa, 2012.
- IEA Secretariat estimates up to 2006 based on 1992 data from Eshetu and Bogale, *Power Restructuring in Ethiopia*, AFREPREN, Nairobi, 1996.

## Former Yugoslav Republic of Macedonia

### General notes

Data for FYR of Macedonia are available starting in 1990. Prior to that, they are included in Former Yugoslavia.

The FYR of Macedonia has changed the methodology for reporting autoproducer heat consumption for own use in 2010, which can lead to breaks in time series between 2009 and 2010.

The refinery OKTA in the FYR of Macedonia was shut down in 2014. This may lead to breaks in time series between 2013 and 2014.

The State Statistical Office revised the energy balances from 2005 to 2014 in accordance with the survey conducted in 2014 on household energy consumption.

### Sources

#### Sources 1990 to 2016:

- Direct communication with the State Statistical Office of Macedonia, Department for Environment, Energy and Transport, Skopje.
- Joint IEA/Eurostat/UNECE annual energy questionnaires.
- IEA Secretariat estimates.

## Gabon

### General notes

Revisions were made to the residential fuel consumption from the time period of 2010 to 2014 to take into account newly available data. This may result in a break in time series between 2009 and 2010. Revisions were made for crude oil production for the whole time series.

In the 2018 edition, revisions to natural gas production were made from 2013 to 2015. Breaks in time series can be seen from 2013 to 2014.

### Sources

#### Sources 1992 to 2016:

- AFREC Energy questionnaire, African Energy Commission, 2015.

- *Rapport annuel de la SEEG*, Société d'Énergie et d'Eau du Gabon, Libreville, various editions from 2000 to 2016.
- *Tableau historique de production de 1957 à nos jours*, Total Gabon, online database, 2015.
- *Statistiques économiques*, Banque des Etats de l'Afrique Centrale (BEAC), online database, 2011.
- *Annuaire Statistique du Gabon*, Ministère de l'économie, du commerce, de l'industrie et du tourisme, Libreville, 2001 to 2007 and 2004 to 2008, 2011.
- Direct communication with Direction Générale de L'Energie, Libreville, 2003 to 2008.
- Direct communication with Société Gabonaise de Raffinage, Port Gentil, 1997, 2000 to 2006, 2008 to 2009.
- *Tableau de Bord de l'Economie, Situation 1997, Perspectives 1998-1999*, Direction Générale de l'Economie, Ministère des Finance, de l'Economie, du Budget et des participations, chargé de la privatisation, May 1998.
- *Rapport d'Activité*, Banque Gabonaise de Développement, Libreville, 1985, 1990, 1992 and 1993.
- The UN Energy Statistics Database.
- IEA Secretariat estimates.

#### Sources up to 1991:

- *Tableau de Bord de l'Economie, Situation 1983 Perspective 1984-85*, Ministère de l'Economie et des Finances, Direction Générale de l'Economie, Libreville, 1984.

#### Sources for biofuels and waste:

- IEA Secretariat estimates based on 1991 data from *Forests and Biomass Sub-sector in Africa*, African Energy Programme of the African Development Bank, Abidjan, 1996.

## Georgia

### General notes

Data for Georgia are available starting in 1990. Prior to that, they are included in Former Soviet Union.

Georgia is one of the 11 EU4Energy focus countries.

Energy data for Georgia do not include Abkhazia and South Ossetia.

In the 2016 edition, population figures, collected from the World Bank, have been revised down compared to previous editions. This explains an increase in energy consumption per capita compared to previous editions. Georgia conducted a general population census in 2014 and revised population figures accordingly.

In 2015, a refinery started operating in Georgia.

In 2015, trade of crude oil includes a share of crude oil blended with fuel oil. This explains breaks in time series from 2014.

In 2015, trade of natural gas for the year might include re-export.

Between 2014 and 2015, a break in stock level time series appears for some oil products as the National Statistical Office (GEOSTAT) received more detailed information on stocks of oil products.

Between 2012 and 2013, breaks in time series may appear for some products, as data collection and submission to the IEA became the responsibility of the National Statistical Office (GEOSTAT), whereas it used to be done by the Energy Efficiency Centre.

Since 2011, heat production has stopped due to the shutdown of combined heat and power plants.

### Sources

#### Sources 2015 to 2016:

- Direct communication with GEOSTAT.
- Joint IEA/Eurostat/UNECE annual energy questionnaires.

#### Sources 2013 to 2014:

- Direct communication with GEOSTAT. The National Statistical Office started submitting Joint IEA/Eurostat/UNECE questionnaires in 2015 (2013 data).
- IEA Secretariat estimates.

#### Sources 2008 to 2012:

- Direct communication with the Energy Efficiency Centre Georgia, Tbilisi.
- IEA Secretariat estimates.

#### Sources 1990 to 2008:

- *Official Energy Balance of Georgia 1990-1999, 2000-2008*, Ministry of Economy and Ministry of Energy, Tbilisi.
- IEA Secretariat estimates.



## Ghana

### General notes

In 2014, Ghana started to exploit gas that was previously flared.

Primary solid biomass figures for 2000-2012 were revised in the 2015 edition, as new information became available. Breaks in time series might occur between 1999 and 2000.

In 2011, Ghana began oil production from the Jubilee fields, resulting in a change in crude production and exports between 2010 and 2011.

Data were revised for electricity, oil products and biofuels until 2000 and from 2009 to 2012 based on new information received from the Energy Commission. Breaks in time series may occur for these products.

### Sources

#### Sources up to 2016:

- *National Energy Statistics 2007-2016*, Energy Commission, Accra, 2017.
- *National Energy Statistics 2000-2015*, Energy Commission, Accra, 2015.
- AFREC Energy questionnaire, African Energy Commission, 2015.
- Direct communication with the Energy Commission, Accra.
- Detailed Statistics of Petroleum Products Consumption 1999-2008, National Petroleum Authority, Accra, 2009.
- *National Energy Statistics*, Ministry of Energy and Mines, Accra, 2000.
- *Quarterly Digest of Statistics*, Government of Ghana, Statistical Services, Accra, March 1990, March 1991, March 1992, March 1995.
- *Energy Balances*, Volta River Authority, Accra, various editions from 1970 to 1985.
- IEA Secretariat estimates.

#### Sources for biofuels and waste:

- Ministry of Mines and Energy.
- The UN Energy Statistics Database.
- IEA Secretariat estimates.

## Gibraltar

### General notes

In the 2015 edition, the time series for residual fuel oil and gas/diesel oil consumed as international marine bunkers were revised based on newly available information.

### Sources

#### Sources up to 2016:

- *Abstract of Statistics*, Government of Gibraltar, Gibraltar, various editions up to 2015.
- Gibraltar Port Authority, Gibraltar, 2017.
- Gibraltar Electricity Authority, Gibraltar, 2015.
- IEA Secretariat estimates.

## Guatemala

### General notes

In the 2018 edition, data for 2010 to 2015 were revised to take into account new information from the ministry of energy and mines. Breaks in time series may occur during this period for electricity production data as well as for the oil products and biofuels balances.

Orimulsion was imported between 2004 and 2006 for electricity generation and is reported under Other Hydrocarbons.

The Texaco refinery in Escuintla ceased operations in 2002.

### Sources

#### Sources up to 2016:

- Direct communication with the Dirección Nacional de Energía, Ministerio de Energía y Minas, Guatemala City.
- *Energy-Economic Information System (SIEE)*, Latin American Energy Organization (OLADE), Quito, accessed March 2018: <http://sier.olade.org/>.
- *Informe Balance Energético, 2010, 2011, 2012, 2013, 2014, 2015 and 2016* Ministry of Energy and Mines, Guatemala City.
- *Estadísticas Energéticas – Subsector Eléctrico*, 2010 to 2016 editions, Ministry of Energy and Mines, Guatemala City.

- Production, consumption, exports and imports of oil products, Ministry of Energy and Mines, Guatemala City, 2016.
- IEA Secretariat estimates.

## Haiti

### General notes

In the 2014 edition, data for solid biofuels and waste products were revised from 2004 to 2012 based on revisions made by OLADE. Breaks in time series may occur during this period for some products.

### Sources

#### Sources 2009 to 2016:

- *Energy-Economic Information System (SIEE)*, Latin American Energy Organization (OLADE), Quito, accessed April 2018: <http://sier.olade.org/>.
- Direct communication with Bureau des Mines et de l'Énergie, Port-au-Prince.
- *Tableau de suivi du secteur électricité*, Ministère de l'Économie et des Finances de la République d'Haïti.
- IEA Secretariat estimates.

#### Sources 2008:

- Direct communication with Ministère des Travaux Publics, Transports et Communications, Haiti.
- IEA Secretariat estimates.

#### Sources 2005 to 2007:

- *Energy-Economic Information System (SIEE)*, Latin American Energy Organization (OLADE), Quito: <http://sier.olade.org/>.

#### Sources up to 2004:

- Direct communication with Bureau des Mines et de l'Énergie, Port-au-Prince

## Honduras

### General notes

Final official data of Honduras were not available at the time of publication, so 2016 data are estimated.

In the 2018 edition, OLADE revised data for the period 2009 – 2014. Where taken into account, they might create breaks in time series.

### Sources

#### Sources 2007 to 2016:

- *Energy-Economic Information System (SIEE)*, Latin American Energy Organization (OLADE), Quito, accessed May 2018: <http://sier.olade.org/>.
- *Anuario Estadístico*, Empresa Nacional de Energía Eléctrica (ENEE), Tegucigalpa, several editions up to 2016
- *Centroamérica: Estadísticas de Hidrocarburos*, Comisión Económica para América y el Caribe (CEPAL), United Nations, Mexico, several editions up to 2013.
- *Centroamérica: Estadísticas de Producción del Subsector Eléctrico*, Comisión Económica para América y el Caribe (CEPAL), United Nations, Mexico, several editions up to 2013.
- IEA Secretariat estimates.

#### Sources up to 2006:

- Direct communication with Empresa Nacional de Energía Eléctrica, Comayagüela.
- Direct Communication with the Secretariat de Recursos Naturales y del Ambiente, Tegucigalpa.
- *Energy-Economic Information System (SIEE)*, Latin American Energy Organization (OLADE), Quito: <http://sier.olade.org/>.

## Hong Kong, China

### General notes

In the 2018 edition, data for electricity losses and own use breakdown became available for the period 2013-2017. For the period 1971-2012, electricity losses include electricity own use.

In the 2016 edition, trade data for various other petroleum products were revised based on newly available information. Breaks in time series may occur between 2000 and 2001.

### Sources

#### Sources up to 2016:

- *Hong Kong Energy Statistics - Annual Report*, Census and Statistics Department, Hong Kong Special Administrative Region, various editions up to 2016.

- *Hong Kong Merchandise Trade Statistics – Domestic Exports and Re-exports/ Imports*, Census and Statistics Department, Hong Kong Special Administrative Region, various editions up to December 2016.
- Direct communication with The Hongkong Electric Company, Ltd, Hong Kong.
- *China Light & Power - Annual Report*, China Light & Power Group, Hong Kong, several editions up to 2017.
- *China Light & Power – Facility Performance Statistics*, China Light & Power Group, Hong Kong, several editions up to 2017.
- *Hong Kong Monthly Digest of Statistics*, Census and Statistics Department, Hong Kong, various editions to 1994.
- *Towngas - Annual Report*, The Hong Kong and China Gas Company Ltd., Hong Kong, several editions up to 2013.

#### **Sources for biofuels and waste:**

- *Hong Kong Energy End-use Data*, EMSD, The Electrical & Mechanical Services Department, Government of Hong Kong, several editions up to 2016.
- The UN Energy Statistics Database.
- *Hong Kong Energy Statistics - Annual Report 2003*.
- IEA Secretariat estimates.

## India

### **General notes**

India joined the IEA as an Association country in March 2017.

Data are reported by India on a fiscal year basis. Data for 2016 correspond to 1 April 2016 – 31 March 2017.

### **Coal**

In 2015, significant revisions of the net calorific values of the different types of coal were made for the whole time series, based on official data as well as IEA and other expert estimates. As a result, there have been significant changes for the coal data when presented in energy units, as well as in the calculated efficiency of coal fired power generation. Data on the production and consumption of secondary coal products may have also been revised as a result.

The net calorific values of coking coal, sub-bituminous coal and other bituminous coal, were revised again in 2018 to take into account more detailed information on imports and IEA Secretariat experts estimates.

From 2008, due to a notable discrepancy between official coal imports from India and coal exports to India as reported by trade partners, imports of coking coal and non-coking coal are estimated by the IEA Secretariat, based on trade partners' data. The breakdown of non-coking coal imports between bituminous coal and sub-bituminous coal is estimated from 2008. This could lead to breaks in time series between 2007 and 2008.

Coking coal figures for India do not align with IEA definitions as they include production of non-metallurgical coking coal reported by India.

Due to data limitations, IEA Secretariat estimates are used for some products and flows, including supply and demand of coke oven gas and blast furnace gas. Coke oven coke production is estimated from 2006 based on growth of blast furnace iron production, as official production data do not include production from small private producers.

### **Oil**

In the 2018 edition, petroleum coke consumption by the non-metallic mineral industries was revised based on information on cement production estimated by the IEA Secretariat based on United States Geological Survey Mineral Industry Report on India. This may lead to breaks in time series as well as differences with previous editions.

Information on stock changes of crude oil and oil products, available from the JODI database from April 2011, was added to the 2014 edition. Breaks in time series may appear in stock changes between 2010 and 2011. Based on data available by the Ministry of Petroleum and Gas, refinery intake is split between crude oil and refinery feedstocks from 1999. The refinery feedstocks reported by the IEA Secretariat correspond to the quantities officially reported as “other inputs” to Reliance Refineries. They do not include additives and refinery feedstocks to other Indian refineries. These missing inputs could reach up to 2.5 million tonnes.

Data for diesel consumption from 2008 are partially based on an official survey on the end use of diesel retail sales. The IEA Secretariat classifies the diesel used in mobile phone towers and non-industry power generators as input to autoproducer electricity generation. A corresponding electricity output is estimated.

No NGL production is officially reported by India. The NGL production estimated by the IEA Secretariat corresponds to the production of oil products from gas separation plants, known in India as “fractionators”. In the IEA methodology, the output of oil products from gas separation plants comes from an input of NGL and the separation process is shown in the transfer row. Prior to 2005-06, the split of fractionator output between petroleum products is estimated by the IEA Secretariat.

No breakdown of refinery fuel by products is currently officially available. In this edition, refinery gas production has been estimated based on expected refinery output for the years 2009-2015. In addition, refinery gas may also include other oil products used, such as residual fuel oil. Due to notable breaks in official data for fuel oil, consumption of fuel oil in international marine bunkers is estimated from 1990 based on industry sources, and final consumption of fuel oil is estimated from 2004 based on 2003 data.

### Natural gas

Natural gas imports for India from 2008 are based on Indian Customs data, in order to include all LNG importers.

No data are officially available on the sectoral consumption of re-gasified LNG and city gas. The breakdown is estimated by the IEA Secretariat.

### Biofuels and waste

Due to data limitations, use of biogas produced in family biogas plants for cooking is currently not estimated by the IEA Secretariat. Data for liquid biofuels production are based on USDA-estimates for the calendar year.

In this edition, data on the 2001-2016 residential consumption of wood, charcoal and other vegetal matters and residues have been revised using data from the World Health Organisation on reliance on biomass for cooking. Breaks in time series may appear between 2000 and 2001.

In 2015, estimates of the production and consumption of charcoal have been added for the whole time series, as well as the respective inputs of fuelwood to charcoal production plants.

### Electricity and heat

Data for total electricity generation include estimates for electricity generation from diesel by non-industrial autoproducers as well as off-grid electricity generation

from renewable energy. In 2017, data on the electricity consumption by industrial sub-sector have been added for the year 2014. 2015 data have been estimated by the IEA Secretariat.

Only information on total on-grid generation from renewables is officially available. The breakdown between sources was estimated by the IEA Secretariat from 2007 using official data on capacities from MNRE. Total off-grid generation and split by sources are estimated based on capacities from 2007 onward.

According to newly available information, estimates of solar thermal output up to 2012 may include systems that were out of operation. For this reason, a break in time series might occur between 2012 and 2013.

### Sources

#### *Sources 1992 to 2016:*

- Direct communication with the Central Statistical Office, Ministry of Statistics and Programme Implementation, Government of India, New Delhi.
- *Energy Statistics*, Central Statistical Office, Ministry of Statistics and Programme Implementation, New Delhi, various editions up to 2016-17.
- *Monthly Abstract of Statistics*, Ministry of Planning, Central Statistics Organisation, Department of Statistics, New Delhi, various editions from 1984 to 2000.

#### *Coal*

- Direct communication with the Coal Controller’s Organization, Ministry of Coal, Government of India, Kolkata.
- *Coal Directory of India*, Coal Controller’s Organization, Ministry of Coal, Kolkata, various editions up to 2015-2016.
- *Provisional Coal Statistics*, Coal Controller’s Organization, Ministry of Coal, Kolkata, various editions up to 2016-2017.
- *Annual Review of Coal Statistics*, Coal Controller’s Organization, Ministry of Coal, Kolkata, various editions from 1993-1994 to 1998-1999.

#### *Oil and natural gas*

- Direct communication with the Economic Division and Petroleum Planning and Analysis Cell, Ministry of Petroleum and Natural Gas, Government of India, New Delhi.



- *Indian Petroleum and Natural Gas Statistics*, Ministry of Petroleum and Natural Gas, New Delhi, various editions from 2000-01 to 2016-17.
- *Petroleum and Natural Gas data*, website of Petroleum Planning and Analysis Cell, Ministry of Petroleum and Natural Gas, New Delhi, [http://ppac.org.in/content/3\\_1\\_Petroleum.aspx](http://ppac.org.in/content/3_1_Petroleum.aspx), last accessed on April 24, 2018.
- *Annual Report 1993-1994, 1998-1999*, Ministry of Petroleum and Natural Gas, New Delhi, 1995, 2000.
- *All India Study on Sectoral Demand of Diesel and Petrol*, Petroleum Planning and Analysis Cell, Ministry of Petroleum and Gas, New Delhi, January 2014.
- *Report of the Working Group on Fertilizer Industry for the Twelfth Plan (2012-12 to 2016-17)*, Department of Fertilizers, Ministry of Chemical & Fertilizers, Government of India, New Delhi, 2012.
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- *Report of the Inter-Ministerial Committee on Policy for Pooling of Natural Gas Prices and Pool Operating Guidelines*, Planning Commission, Government of India, New Delhi, August 2011.
- *LNG imports*, website of the Department of Commerce, Ministry of Commerce and Industry, New Delhi, <http://commerce.nic.in/>.
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- *India – On the Move*, World Bunkering, The International Bunker Industry Association, London, Spring 2012.
- *Physical Targets and Achievements During the 11<sup>th</sup> Plan*, Ministry of New and Renewable Energy, Open Government Data Platform India, [data.gov.in](http://data.gov.in), accessed 8.4.2014
- *Renewable Energy in India: Progress, Vision and Strategy*, Ministry of New and Renewable Energy, 2010.
- *Annual Report 1994-1996, 1998-1999*, Ministry of Energy, Department of Non-Conventional Energy, New Delhi, 1996 and 1999.
- *India – Biofuels Annual*, Global Agriculture Information Network (GAIN) Report, USDA Foreign Agriculture Service, New Delhi, several editions from 2014 to 2017.
- *Energy Data Directory, Yearbook "TEDDY", and Annual Report*, The Energy and Resources Institute "TERI", New Delhi, 1994-2000, 2014-15.
- *India's Energy Sector, July 1995*, Center for Monitoring Indian Economy PVT Ltd., Bombay, 1995.
- *Monthly Review of the Indian Economy*, Center for Monitoring Indian Economy PVT Ltd., New Delhi, various issues from 1994 to June 1999.
- The UN Energy Statistics Database.
- Forestry Statistics, FAO, Rome, 2017.
- IEA Secretariat estimates, based on a per capita average consumption from various surveys and direct communication with the former Ministry of Non-conventional Energy Sources.

### **Electricity and heat**

- Direct communication with the Central Electricity Authority, Ministry of Power, Government of India, New Delhi.
- *Growth of Electricity Sector in India from 1947-2017*, Central Electricity Authority, Ministry of Power, New Delhi, May 2017.
- *All India Electricity Statistics General Review 1999, to 2016*, Central Electricity Authority, Ministry of Power, New Delhi.
- *Monthly Generation Review, March 2016*, Central Electricity Authority, Ministry of Power, New Delhi, 2016.
- *Annual Survey of Industries Volume-I 2008-2009 to 2015-16*. Ministry of Statistics and Programme Implementation, Central Statistics Office, Kolkata.
- Direct communication with the Ministry of New and Renewable Energy, Government of India, New Delhi.
- *Annual Report*, Ministry of New and Renewable Energy, Government of India, New Delhi, various editions from 2008-2009 to 2017-2018.

### **Biofuels and waste**

- Direct communication with the Ministry of New and Renewable Energy, Government of India, New Delhi.
- *Annual Report*, Ministry of New and Renewable Energy, Government of India, New Delhi, various editions from 2008-2009 to 2017-2018.

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#### Sources up to 1991:

- *Indian Oil Corporation Limited 1987-88 Annual Report*, Indian Oil Corporation Limited, New Delhi, 1989-1992.
- *Report 1986-87*, Ministry of Energy, Department of Coal, New Delhi, 1981 to 1987.
- *Annual Report 1986-1987*, Ministry of Energy, Department of Non-Conventional Energy, New Delhi, 1987.
- *Economic Survey*, Ministry of Finance, New Delhi, various editions from 1975 to 1986.
- *Statistical Outline of India*, Ministry of Finance, New Delhi, 1983, 1984, 1986, 1987.
- *Monthly Coal Bulletin, vol xxxvi no.2.*, Ministry of Labour, Directorate General of Mines Safety, New Delhi, February 1986.
- *General Review*, Public Electricity Supply, India Statistics, Central Electricity Authority, New Delhi, 1982 to 1985.
- *Energy Data Directory, Yearbook "TEDDY", and Annual Report*, The Energy and Resources Institute "TERI", New Delhi, 1986-1988, 1990.

## Indonesia

### General notes

Indonesia joined the IEA as an Association country in November 2015.

For 2012-2016 coal exports data from BPS are used. This results in breaks in time series for 2011-2012.

Non-specified industry consumption is re-estimated by the IEA Secretariat.

The production and allocation of coal among the various coal types and products between 2000 and 2016 are estimated by the IEA Secretariat due to data collection limitations.

In 2015, data reported for coal consumption in pulp and paper industry might also include coal consumed in the textile and fertilizers sectors. This may create breaks in time series.

Electricity consumption for the agricultural sector is estimated by the IEA Secretariat for 2000-2016. This may lead to breaks in time series between 1999 and 2000.

In this edition the IEA Secretariat estimated coking coal production for the period 2014-2016. Breaks in time series may appear between 2013 and 2014.

### Sources

#### Sources 2008 to 2016:

- Direct communication with the Data Centre and Information Technology (PUSDATIN), Ministry of Energy and Mineral Resources, Jakarta.
- *Handbook of Energy & Economic Statistics of Indonesia*, PUSDATIN, Ministry of Energy and Mineral Resources (ESDM), Jakarta, various editions up to 2017.
- *Statistik, Minyak & Gas Bumi*, Directorate General of Oil and Gas, Ministry of Energy and Mineral Resources (ESDM), Jakarta, various editions up to 2017.
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- IEA Secretariat estimates.

#### Sources 1992 to 2007:

- *Indonesia Mineral and Coal Statistics*, Directorate of Coal and Mineral Resources, Jakarta, 1998 to 2007.

- *Statistics on Electricity and Energy*, 1998 to 2004, Directorate General of Electricity and Energy Utilisation, Jakarta, 1999 to 2005.
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- *The Petroleum Report Indonesia*, various editions, US Embassy in Jakarta, Jakarta, 1986 to 2008.
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- *Neraca energy 2000*, Energy Balance of Indonesia 2000, Asean Center for Energy.
- *Mining and Energy Yearbook*, 1998, Ministry of Mines and Energy, Jakarta, 1998.
- APEC annual energy statistics questionnaires.
- Direct communication with Directorate General of Coal and Mineral Resources, Directorate General Oil and Gas, and Directorate General of Electricity and Energy Utilisation of the Ministry of Energy and Mineral Resources.
- Direct communication with the Indonesian Institute for Energy Economics, 2004 and 2005.
- Direct communication with the ASEAN Centre for Energy, 2005.

#### **Sources up to 1991:**

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- *Indikator Ekonomi 1980-1985*, Biro Pusat Statistik, Jakarta, 1986.
- *Statistical Yearbook of Indonesia*, Biro Pusat Statistik, Jakarta, 1978 to 1984 and 1992.
- *Statistik Pertambangan Umum*, 1973-1985, Biro Pusat Statistik, Jakarta, 1986.
- *Energy Planning for Development in Indonesia*, Directorate General for Power, Ministry of Mines and Energy, Jakarta, 1981.
- *Commercial Information*, Electric Power Corporation, Perusahaan Umum Listrik Negara, Jakarta, 1984, 1985.

#### **Sources for Biofuels and waste:**

- *GAIN Report - Indonesia biofuels Annual*, United States Department of Agriculture, various editions up to 2015.

- The UN Energy Statistics Database
- IEA Secretariat estimates.
- Direct communication with Indonesian Biofuel Producer Association (APROBI), Jakarta.

## Islamic Republic of Iran

### General notes

Data are reported according to the Iranian calendar year. Data for 2015 correspond to 20 March 2015 – 19 March 2016, which is Iranian year 1394.

Some flows in the oil and natural gas commodity balances for 2016, corresponding to April 2016–March 2017, were not available for publication. These flows are estimated for 2016.

Crude oil production and export data do not include field condensate. Field condensate quantities are included with natural gas liquids.

Statistical differences in the Islamic Republic of Iran statistics and balances can include stock change for some coal and oil products.

More detailed information for the consumption of coke oven coke became available for 2009-2012. Breaks in time series may occur between 2008 and 2009.

### Sources

#### **Sources 1999 to 2016:**

- Direct communication with the Ministry of Energy, Teheran.
- *Energy Balance of Iran*, Department of Energy, Teheran, various editions up to the Iranian year 1393, Teheran.
- *Statistical Report on 49 Years of Activities of Iran Electric Power Industry (1967-2015)*, Tavanir Holding Company, Tehran, 2016.
- *Annual Statistical Bulletin*, Organization of Petroleum Exporting Countries (OPEC), Vienna, various editions up to 2017.
- *Natural Gas in the World*, Cedigaz, Paris, various editions up to 2017.
- *World Development Indicators*, The World Bank, Washington, various editions up to 2016.
- IEA Secretariat estimates.

**Sources 1992 to 1998:**

- Direct communication with the Ministry of Energy, Office of Deputy Minister for Energy, Teheran, 1998.
- Direct communication with the Ministry of Petroleum, Teheran, 1999.
- *Electric Power in Iran*, Ministry of Energy, Power Planning Bureau, Statistics Section, Teheran, 1992.

**Sources up to 1991:**

- *Electric Power in Iran*, Ministry of Energy, Power Planning Bureau, Statistics Section, Teheran, 1967 to 1977, 1988, 1990, 1991.
- Direct communication with the Ministry of Energy, Office of Deputy Minister for Energy, Teheran, 1971 to 1991.

**Sources for biofuels and waste:**

- The UN Energy Statistics Database.
- *Forestry Statistics*, FAO, Rome, 2000.
- IEA Secretariat estimates.
- Direct communication with the Ministry of Energy, Teheran.

**Iraq****General notes**

New data for electricity generation became available for 2010-2013. Breaks in time series may occur between 2009 and 2010.

Destruction of Iraq's largest refinery occurred in 2015, resulting in large decreases in oil products output in 2015.

Crude oil production and export data do not include field condensate. Field condensate quantities are included with natural gas liquids.

Crude oil export data include back-blending of fuel oil.

**Sources****Sources 1998 to 2016:**

- *Annual Statistical Bulletin*, Organization of Petroleum Exporting Countries (OPEC), Vienna, various editions up to 2017.

- *Annual Statistical Report*, Organization of Arab Petroleum Exporting Countries (OAPEC), Kuwait, various editions up to 2017.
- JODI- Oil World database, Joint Organisations Data Initiative (JODI), accessed April 2018: <https://www.jodidata.org/oil/>.
- *Statistical Bulletin*, Arab Union of Producers, Transporters and Distributors of Electricity (AUPTDE), Amman, various editions up to 2016.
- *Natural Gas in the World*, Cedigaz, Paris, various editions up to 2017.
- Direct communication with the Ministry of Electricity, Baghdad.
- *Reconciliation Report*, Extractive Industries Transparency Initiative (EITI) for Iraq, various editions up to 2015.
- Direct communication with the Ministry of Oil, Baghdad.
- Direct communication with the Ministry of Planning and Development Cooperation and with the Central Organization for Statistics and Information Technology, Baghdad.
- *Online Statistics*, Iraq Ministry of Oil, Baghdad.
- *Oil Production, Export, and Consumption Report*, Ministry of Natural Resources Kurdistan Regional Government, various editions up to 2015.
- *Iraq Weekly Status Report*, US Department of State, 2003 to 2004.
- IEA Secretariat estimates.

**Sources up to 1997:**

- The UN Energy Statistics Database.
- IEA Secretariat estimates.

**Jamaica****General notes**

In the 2018 edition, new information became available on charcoal and wood production. This may lead to breaks in time series between 1989 and 1990 data as well as differences with previous editions.

In 2016 edition new information became available on industrial consumption of oil products and electricity. This may lead to breaks in time series between 2007 and 2008 data as well as differences with previous editions.



## Sources

### Sources 2007 to 2016:

- *Energy-Economic Information System (SIEE)*, Latin American Energy Organization (OLADE), Quito, accessed June 2018: <http://sier.olade.org/>.
- *National energy balance & various statistics*, Ministry of Science, Technology, Energy and Mining of Jamaica, Kingston, 2012-2016.
- *Annual report*, Jamaica Public Service Company, Kingston, 2012-2015.
- *Petroleum Industry Consumption Statistics Jamaica 2003-2008*, Petroleum Corporation of Jamaica, Kingston.
- *Import Statistics 2006-2007*, Petrojam limited, Kingston
- Direct communication with the Office of Utilities Regulation, Kingston, 2008.
- IEA Secretariat estimates.

### Sources 1991 to 2006:

- *Energy-Economic Information System (SIEE)*, Latin American Energy Organization (OLADE), Quito, <http://sier.olade.org/>.
- IEA Secretariat estimates.

### Sources up to 1990:

- *National Energy Outlook 1985-1989*, Petroleum Corporation of Jamaica, Economics and Planning Division, Kingston, 1985.
- *Energy and Economic Review*, Petroleum Corporation of Jamaica, Energy Economics Department, Kingston, September 1986, December 1986 and March 1987.
- *Production Statistics 1988*, Planning Institute of Jamaica, Kingston, 1989.
- *Statistical Digest*, Research and Development Division, Bank of Jamaica, Kingston, 1984, 1985, 1986, 1989, 1990.

## Jordan

### General notes

Due to an attack on a major natural gas pipeline between Egypt and Jordan during the 2011 revolution in Egypt, Jordan relied much more on fuel oil and diesel for power generation between 2011 and 2014.

Jordan started importing coal products in 2012.

In 2018 edition, new information from Jordan became available on solid biofuels. Breaks in time series between 2015 and 2016 may occur for solid biofuels.

In 2018 edition, revisions in commercial and public services electricity consumption lead to break in time series between 1992 and 1993.

## Sources

### Sources 2005 to 2016:

- Direct communication with the Ministry of Energy and Mineral Resources, Amman.
- *Annual Report*, National Electric Power Company, Amman, various editions up to 2017.
- IEA Secretariat estimates.

### Sources 1992 to 2004:

- Direct communication with the National Electric Power Company, Amman.
- *Annual Report*, National Electric Power Company, Amman, 1996, 1997, 1999 to 2004.
- *Annual Report 1992, 1993*, Jordan Electricity Authority, Amman, 1993, 1994.
- *Energy and Electricity in Jordan 1992, 1993, 1994, 1995*, Jordan Electricity Authority, Amman, 1993 to 1996.
- *Statistical Yearbook, 1994*, Department of Statistics, Amman, 1995.
- *44<sup>th</sup> Annual Report* for the year ending 31 December 1999, Jordan Petroleum Refinery Company, Amman, 2000.
- IEA Secretariat estimates.

### Sources up to 1991:

- *Monthly Statistical Bulletin*, Central Bank of Jordan, Department of Research Studies, Amman, various issues.
- *Statistical Yearbook*, Department of Statistics, Amman, 1985, 1986 and 1988.
- *1986 Annual Report*, Ministry of Energy and Mineral Resources, Amman, 1987.
- *1989 Annual Report*, Ministry of Energy and Mineral Resources, Amman, 1990.

### Sources for biofuels and waste:

- *Forestry Statistics*, FAO, Rome, 2000.
- IEA Secretariat estimates.

## Kazakhstan

### General notes

Data for Kazakhstan are available starting in 1990. Prior to that, they are included in Former Soviet Union.

Kazakhstan is one of the 11 EU4Energy focus countries.

In 2016, the Committee on Statistics of Kazakhstan introduced changes in the forms used to collect energy data to align more closely with the International Recommendations for Energy Statistics. In order to reduce burden on enterprises, questions on supply were removed and supply data are now taken from administrative sources. As a consequence, breaks in the time series appear for many product and flows, both for supply and demand between 2014 and 2015 data.

From 2012 onwards, as a result of important work carried out jointly by the Committee on Statistics and the Ministry of National Economy of the Republic of Kazakhstan, the IEA Secretariat was able to switch to the Joint IEA/Eurostat/UNECE questionnaires as a primary source for Kazakhstan's data. Breaks in time series appear between 2011 and 2012 as a result of this change.

Some data for fuel inputs to CHP plants are estimated by IEA secretariat.

Kazakhstan's coal data are normally not disaggregated by coal type. The disaggregation presented in the IEA energy balances is achieved by considering the typical end uses for different types of coals. This may lead to large statistical differences for some types of coal.

In 2010, Kazakhstan became a member of a Customs Union with Russia and Belarus. Breaks in trade time series appear from 2009 to 2012 as the Customs shifted from one accounting system to another.

Natural gas production excludes re-injection but, due to data limitations, may include gas vented or flared. As a consequence, the data for natural gas use in oil and gas extraction may also include these amounts.

In order to be consistent with the Customs Union agreements between Russia and Kazakhstan, natural gas production and exports data include raw gas production from the Karachaganak field (not marketable gas as per IEA definition).

Natural gas trade data have been revised by Kazakhstan leading to large statistical differences for 2012 and 2013.

Revisions in aviation gasoline cause breaks in time series between 2014 and 2015.

### Sources

#### Sources 2012 to 2016:

- Direct communication with the Committee on Statistics of the Ministry of National Economy (formerly: Agency on Statistics) of the Republic of Kazakhstan, Astana.
- Joint IEA/Eurostat/UNECE annual energy questionnaires.
- IEA Secretariat estimates.

#### Sources 1993 to 2011:

- Direct communication with the Agency on Statistics of the Republic of Kazakhstan, Astana.
- *Fuel and Energy Balance of Kazakhstan Republic*, Agency on Statistics of the Republic of Kazakhstan, Astana, various editions up to 2010.
- Joint IEA/Eurostat/UNECE annual energy questionnaires, 1993, 1995, 1997 to 2009.
- *Statistical Yearbook "Kazakhstan in 2009"*, Agency on Statistics of the Republic of Kazakhstan, Astana, 2010.
- IEA Secretariat estimates.

#### Sources 1990 to 1992:

- IEA Secretariat estimates.

#### Sources for biofuels and waste:

- Joint IEA/Eurostat/UNECE annual energy questionnaire on renewables (2012-2016).
- Before 2012: *Fuel and Energy Balance of Kazakhstan Republic*, Agency on Statistics of the Republic of Kazakhstan, Astana, various editions up to 2010; *Forestry Statistics*, FAO, Rome, 2000; IEA Secretariat estimates.

## Kenya

### General notes

Electricity data are reported on a fiscal year basis, beginning on 1 July and ending on 30 June of the subsequent year.

Refinery data have been estimated by the IEA Secretariat since 2014 as official data are no longer available.

In 2014, the Olkaria geothermal plant came online, significantly increasing the country's geothermal electricity production capacity. Breaks in time series can be observed between 2013-2014 in electricity output from geothermal energy.

Stock changes for lubricants may include informal trade.

## Sources

### Sources 2005 to 2016:

- *Economic Survey*, Central Bureau of Statistics, Nairobi, various editions up to 2017.
- *Annual Report and Financial Statements*, Kenya Power, various editions up to 2017.
- Direct communication with AFREPREN and Petroleum Institute of East Africa, Nairobi, up to 2008.
- *Kenya, Facts and figures*, 2006 Edition, Central Bureau of Statistics, Nairobi.
- *Annual Report and Accounts*, 2006/07 to 2013/14 the Kenya Power & Lighting Company Limited, Nairobi.
- IEA Secretariat estimates.

### Sources 1992 to 2004:

- Direct communication with the Ministry of Energy, Nairobi.
- *Economic Survey, 1995 to 2004*, Central Bureau of Statistics, Nairobi.
- *Annual Report and Accounts*, 2001/02, 2002/03, 2003/2004, 2004, 2005, the Kenya Power & Lighting Company Limited, Nairobi.
- The UN Energy Statistics Database.

### Sources up to 1991:

- *Economic Survey*, Government of Kenya, Nairobi, 1989.
- *Economic Survey 1991*, Ministry of Planning and National Development, Central Bureau of Statistics, Nairobi, 1992.
- *Kenya Statistical Digest*, Ministry of Planning and National Development, Central Bureau of Statistics, Nairobi, 1988.

### Sources for biofuels and waste:

- Data for 2000 are based on research carried out by the Ministry of Energy on consumption of solid biofuels. The results of this research were published as part of a National Energy Policy initiative.

- IEA Secretariat estimates based on 1991 data from *Forests and Biomass Sub-sector in Africa*, African Energy Programme of the African Development Bank, Abidjan, 1996.

## Kosovo

### General notes

Data for Kosovo are available starting in 2000. Prior to that, they are included in Serbia.

2011 is the first year when electricity transit trade data are available. As a result, a break in time series occurs between 2010 and 2011.

In 2011, a desulphurization unit operated in Kosovo for a few months only. As a result, breaks in time series occur between 2010-2011 and 2011-2012.

A break in time series between 2015 and 2016 may be observed in biofuels and waste due to a survey conducted on household consumption.

## Sources

### Sources 2011 to 2016:

- Direct communication with the Kosovo Agency of Statistics, Pristina, Kosovo.
- Direct communication with the Ministry of Energy and Mining, Pristina, Kosovo.
- Joint IEA/Eurostat/UNECE annual energy questionnaires.

### Sources 2003 to 2010:

- Kosovo National Energy Balances, Ministry of Energy and Mining Department of Strategy, Standards and Statistics from 2003 to 2010.
- IEA Secretariat estimates

### Sources 2000 to 2002:

- IEA Secretariat estimates.

## Kuwait

### General notes

Crude oil production and export data do not include field condensate. Field condensate quantities are included with natural gas liquids.

Data for crude oil production include 50 per cent of the output of the Neutral Zone shared with Saudi Arabia.

Information for the use of ethane in the petrochemical sector is available from 2008 onward. This may lead to breaks in time series for ethane and naphtha production and consumption between 2007 and 2008.

Electricity outputs from crude oil are not separated from other oil products electricity output.

New data became available for oil products consumption. Revisions in oil products may be seen between 2012 and 2015.

## Sources

### Sources 1992 to 2016:

- *Annual Statistical Abstract*, Central Statistical Bureau, State of Kuwait various editions up to 2016.
- *Statistical Bulletin*, Arab Union of Producers, Transporters and Distributors of Electricity (AUPTE), Amman, 2011 to 2017.
- Direct communication with the Ministry of Oil, Kuwait City.
- Direct communication with Central Statistical Bureau, Kuwait City.
- *Electrical Energy Statistical Year Book*, Ministry of Electricity and Water, edition 2017.
- *Annual Report*, Kuwait National Petroleum Company, 2015-2016
- *Natural Gas in the World*, Cedigaz, Paris, various editions up to 2017.
- *Annual Electrical Statistics*, Ministry of Electricity and Water, Safat, various editions up to 2009.
- *Annual Statistical Bulletin*, Organization of Petroleum Exporting Countries (OPEC), Vienna, various editions up to 2017.
- *Annual Statistical Report*, Organization of Arab Petroleum Exporting Countries (OAPEC), Kuwait, various editions up to 2017.
- Direct communication with the Ministry of Planning and the Ministry of Electricity & Water, Kuwait City.
- *Monthly Digest of Statistics*, Ministry of Planning, Central Statistical Office, Kuwait, 1999.
- *A Survey of the Kuwait Oil Industry*, Embassy of the United States of America in Kuwait City, Kuwait, 1993.

- *Twelfth Annual Report 1991-1992*, Kuwait Petroleum Corporation, Kuwait, 1993.
- The UN Energy Statistics Database.
- IEA Secretariat estimates.

### Sources up to 1991:

- *Quarterly Statistical Bulletin*, Central Bank of Kuwait, Kuwait, various editions from 1986 and 1987.
- *The Kuwaiti Economy*, Central Bank of Kuwait, Kuwait, various editions from 1980 to 1985.
- *Annual Statistical Abstract*, Ministry of Planning, Central Statistical Office, Kuwait, 1986 and 1989.
- *Monthly Digest of Statistics*, Ministry of Planning, Central Statistical Office, Kuwait, various editions from 1986 to 1990.
- *Economic and Financial Bulletin Monthly*, Central Bank of Kuwait, Kuwait, various editions from 1983 to 1986.
- *Kuwait in Figures*, National Bank of Kuwait, Kuwait, 1986, 1987.

### Sources for Biofuels and waste:

- *Forestry Statistics*, FAO, Rome, 2001.
- IEA Secretariat estimates.

## Kyrgyzstan

### General notes

Data for Kyrgyzstan are available starting in 1990. Prior to that, they are included in Former Soviet Union.

Kyrgyzstan is one of the 11 EU4Energy focus countries.

From the year 2013, the main data sources for Kyrgyzstan are the set of annual IEA/Eurostat/UNECE joint questionnaires sent by the National Statistical Committee of Kyrgyzstan.

The following data are not available and estimated by the IEA Secretariat: biofuels and waste, and output of electricity and heat by product.

For the year 2015, new information became available on the consumption of motorgasoline and gas/diesel by product. All motorgasoline use was allocated by the IEA to road transport. Gas/diesel consumption reported in other sectors than road might include road transport.

In the 2014 edition, time series data for electricity, oil products, and coal products for 2005 to 2011 were revised based on newly available information. This may lead to breaks in the time series for some products.

## Sources

### Sources 2013 to 2016:

- Direct communication with the National Statistical Committee of Kyrgyzstan, Bishkek.
- Joint IEA/Eurostat/UNECE annual energy questionnaires.
- *Fuel & Energy Balances*, National Statistical Committee of Kyrgyzstan, Bishkek.
- *CIS and East European Energy Databook*, Eastern Bloc Research Ltd, Tolsta Chaolais, 2013 to 2014.
- IEA Secretariat estimates.

### Sources 2007 to 2012:

- Direct communication with the National Statistical Committee of Kyrgyzstan, Bishkek.
- Direct communication with the Interstate Statistical Committee of the Commonwealth of Independent States, Moscow.
- *Fuel & Energy Balances*, National Statistical Committee of Kyrgyzstan, Bishkek.
- Joint IEA/Eurostat/UNECE annual energy questionnaires for 2012.
- *CIS and East European Energy Databook*, Eastern Bloc Research Ltd, Tolsta Chaolais, 2008 to 2012.
- *Natural Gas Vehicles Statistics*, International Association for Natural Gas Vehicles, online database: [www.iangv.org](http://www.iangv.org).
- The UN Energy Statistics Database.
- IEA Secretariat estimates.

### Sources 1993 to 2006:

- *CIS and East European Energy Databook*, Eastern Bloc Research Ltd, Tolsta Chaolais, various editions up to 2007.
- Joint IEA/Eurostat/UNECE annual energy questionnaires, 1993 to 2006.
- Asian Development Bank.
- IEA Secretariat estimates.

### Sources 1990 to 1992:

- IEA Secretariat estimates.

### Sources for biofuels and waste:

- Joint IEA/Eurostat/UNECE annual energy questionnaires on renewables (2013-2016).
- Before 2013: The UN Energy Statistics Database; IEA Secretariat estimates.

## Latvia

### General notes

Data for Latvia are available starting in 1990. Prior to that, they are included in Former Soviet Union.

On 1 July 2016, Latvia became a full member of the OECD.

### Sources

#### Sources 1990 to 2015:

- Direct communication with Statistics Latvia, Riga.
- Joint IEA/Eurostat/UNECE annual energy questionnaires.
- Balance of Latvian Energy, EC PHARE Project Implementation Unit, Ministry of Economics, Department of Energy, Riga, 1994.
- IEA Secretariat estimates.

## Lebanon

### General notes

In 2015 and 2016, no official data were available for Lebanon. Data in this year's edition are primarily based on secondary sources and IEA Secretariat estimates.

A significant share of electricity generated in Lebanon is produced using private generators. The corresponding electricity outputs and inputs were estimated by the IEA Secretariat based on ALMEE-figures (Association Libanaise pour la Maîtrise de l'Énergie et l'Environnement) until 2014.

Customs data for trade of oil products may be misleading due to the existence of informal trade with neighbouring countries.

### Sources

#### Sources up to 2016:

- Direct communication with Association Libanaise pour la Maîtrise de l'Énergie et l'Environnement, (ALMEE), Beirut.



- Direct communication with Lebanese Center for Energy Conservation, Beirut.
- *Les bilans énergétiques au Liban*, Association Libanaise pour la Maîtrise de l'Énergie et de l'Environnement, Beirut, 2007 to 2015.
- *L'Énergie au Liban*, Association Libanaise pour la Maîtrise de l'Énergie et de l'Environnement, Beirut, 1994 to 2006.
- *L'Énergie au Liban, le Défi*, Association Libanaise pour la Maîtrise de l'Énergie, Beirut, December 1996.
- *Solar Heat Worldwide*, AEE - Institute for Sustainable Technologies, Gleisdorf, IEA Solar Heating & Cooling Programme various editions up to 2018.
- *Renewable Energy in Lebanon in 2015*, Association Libanaise pour la Maîtrise de l'Énergie et de l'Environnement, Beirut.
- IEA Secretariat estimates.

#### **Sources for biofuels and waste:**

- *Le marché du solaire thermique au Liban*, Association Libanaise pour la Maîtrise de l'Énergie et de l'Environnement, Beirut, 2010.
- *Forestry Statistics*, FAO, Rome, 2017.
- IEA Secretariat estimates.

## Libya

### General notes

Crude oil production and export data do not include field condensate. Field condensate quantities are included with natural gas liquids.

Due to new information on oil and electricity becoming available from 2006, breaks in time series may occur between 2005 and 2006.

Non-technical losses and data uncertainty result in break in time series for electricity losses and statistical differences between 2011 and 2012.

Due to lack of official country data, oil products trade and solid biofuels data have been estimated by the IEA secretariat. Data for natural gas inputs to electricity are unavailable in 2015 and 2016.

### Sources

#### **Sources 1971 to 2016:**

- *Statistical Bulletin*, Central Bank of Libya, Tripoli, various editions up to 2017.

- *Annual Statistical Report*, Organization of Arab Petroleum Exporting Countries (OAPEC), Kuwait, various editions up to 2016.
- *Annual Statistical Bulletin*, Organization of Petroleum Exporting Countries (OPEC), Vienna, various editions up to 2017.
- *Statistical Bulletin*, Arab Union of Producers, Transporters and Distributors of Electricity (AUPTDE), Amman, various editions up to 2016.
- *Natural Gas in the World*, Cedigaz, Paris, various editions up to 2017.
- *Renewable energy statistics 2018*, International Renewable Energy Agency (IRENA).
- *Bulletin Statistique Annuel, Comité Maghrebin d'électricité (COMELEC)*, various editions up to 2014.
- Direct communication with the Ministry of Electricity and Renewable Energy, Tripoli.
- *Annual Report*, 2008, General Electricity Company (GECOL), Tripoli.
- *Statistical Abstract of Libya*, 19th vol., Government of Libya, Tripoli, 1983.
- IEA Secretariat estimates.

#### **Sources for biofuels and waste:**

- The UN Energy Statistics Database.
- IEA Secretariat estimates.

## Lithuania

### General notes

Data for Lithuania are available starting in 1990. Prior to that, they are included in Former Soviet Union.

Lithuania shut down its only nuclear power plant in 2009 (Ignalina nuclear power plant).

In 2013 Lithuania started an industrial and municipal waste incinerator, which may lead to breaks in time series for these products.

Since December 2014, Lithuania has a new floating LNG terminal. LNG is imported, re-gasified and exported as pipeline gas.

### Sources

#### **Sources up to 2016:**

- Direct communication with Statistics Lithuania, Vilnius.
- Joint IEA/Eurostat/UNECE annual energy questionnaires.

## Malaysia

### General notes

For natural gas production from the Joint-Development Areas (JDA) with Thailand and with Indonesia, Malaysia reports only the production that corresponds to Malaysia. The rest is reported as imports. For the JDA with Viet Nam, the production reported includes all the gas produced.

Due to new information available in 2012, the solid biofuels data was revised. This may lead to breaks in time series between 2008 and 2009.

Detailed information on the non-energy use by oil product is only available from 2007 to 2009. From 2010, these quantities are presented in aggregate form under the category other non-specified oil products.

From 2009, electricity generation from co-generators, small renewable power producers and self-generators is available. As a consequence, breaks in time series may appear for electricity between 2008 and 2009.

LPG data may include ethane.

### Sources

#### Sources 2000 to 2016:

- Direct communication with the Energy Commission, Putrajaya.
- *National Energy Balance*, Malaysia, Energy Commission, Putrajaya, 2009 to 2016.
- *Electricity Supply Industry in Malaysia*, Performance and Statistical Information, Malaysia Energy Commission, Putrajaya, 2009 to 2016.
- *Electricity Supply Statistics, Malaysia Energy Information Hub*, website: meih.st.gov.my, 2018.
- *Monthly exports of oil palm products*, Malaysia Palm Oil Board, Kuala Lumpur.
- APEC annual energy questionnaires, 2009, 2011.
- *National Energy Balance Malaysia*, Ministry of Energy, Water and Communication, Kuala Lumpur, 2002 to 2008.

#### Sources up to 2000:

- Direct communication with Petroliaam Nasional Berhad, Kuala Lumpur, April 2001.

#### Sources for biofuels and waste:

- *Monthly exports of oil palm products*, Malaysia Palm Oil Board, Kuala Lumpur.

- The UN Energy Statistics Database.
- *Forestry Statistics*, FAO, Rome, 2016.
- IEA Secretariat estimates.

## Malta

### General notes

2016 saw the phase out of oil products for electricity production continue as the country switched part of its power generation engines to operate on natural gas. 2015's trend of decreasing electricity production and increasing imports of electricity continued in 2016. Malta imported its electricity from Italy via an interconnector.

In 2011, a new power generation station fuelled by biogas became operational in Malta. This may lead to breaks in time series for some products and flows.

### Sources

#### Sources up to 2016:

- Direct communication with the Central Office of Statistics, Valletta.
- Joint IEA/Eurostat/UNECE annual energy questionnaire on oil, 1995 to 1998, 2000, 2001, 2005 to 2016.
- Joint IEA/Eurostat/UNECE annual energy questionnaire on electricity and heat, 1994 to 1998, 2000, 2001, 2003, and 2005 to 2016.
- Joint IEA/Eurostat/UNECE annual energy questionnaire on renewables, 2011 to 2016.
- Joint IEA/Eurostat/UNECE annual questionnaire on coal, 1994, 1995.
- *Solar Heat Worldwide*, AEE - Institute for Sustainable Technologies, Gleisdorf, IEA Solar Heating & Cooling Programme, various editions up to 2010.
- IEA Secretariat estimates.

## Mauritius

### Sources

#### Sources 1971 to 2016:

- Direct communication with the Ministry of Public Utilities, Statistics Unit, Port Louis.

- Website of the Statistics Mauritius under the Ministry of Public Utilities accessed in February 2018: statsmauritius.gov.mu.
- *Energy and Water Statistics, various editions up to 2016*, Statistics Mauritius, Port Louis.

## Moldova

### General notes

Data for Moldova are available starting in 1990. Prior to that, they are included in Former Soviet Union.

Moldova is one of the 11 EU4Energy focus countries.

Official figures on natural gas imports, natural gas inputs to power plants, electricity production and consumption are modified by the IEA Secretariat to include estimates for supply and demand for the autonomous region of Sînga Nistrului (also known as the Pridnestrovian Moldavian Republic or Transnistria). Other energy production or consumption from this region is not included in the Moldovan data. This may lead to breaks in the time series for some products.

Due to the inclusion of estimated data in the Moldova energy balance, indicators for per capita energy consumption or energy intensity may appear inconsistent with expected trends.

The National Bureau of Statistics has put a great effort has been put to follow the International Recommendations for Energy Statistics and revise time series when possible. As a consequence, breaks in time series in 1993 for heat, in 2012 for aviation bunkers and in 2005 for other products. More survey data on solid biomass, including wood, animal waste and other plant residues are available since 2010.

### Sources

#### *Sources 2008 to 2016:*

#### *For Moldova, excluding Transnistria:*

- Direct communication with the National Bureau of Statistics of the Republic of Moldova, Chisinau.
- Joint IEA/Eurostat/UNECE annual energy questionnaires.

#### *For natural gas imports:*

- Direct communication with State Statistics Service of Ukraine.

#### *For Transnistria electricity production:*

- Website of Ministry of Economic Development of Transnistrian Moldovian Republic, accessed February 2018 mer.gospmr.org.
- IEA Secretariat estimates.

#### *Sources 1992 to 2008:*

- Joint IEA/Eurostat/UNECE annual energy questionnaire on electricity and heat, 1991 to 2008.
- Joint IEA/Eurostat/UNECE annual energy questionnaire on natural gas, 1991 to 2008.
- Joint IEA/Eurostat/UNECE annual energy questionnaire on coal, 1992 to 2008.
- Joint IEA/Eurostat/UNECE annual energy questionnaire on oil, 1993 to 1998, 2001 to 2008.
- Direct communication with the Ministry of Industry and Energy.
- *CIS and East European Energy Databook*, Eastern Bloc Research Ltd, Tolsta Chaolais, various editions up to 2011.
- IEA Secretariat estimates.

#### *Sources 1990 to 1991:*

- IEA Secretariat estimates.

#### *Sources for biofuels and waste:*

- Joint IEA/Eurostat/UNECE questionnaire on renewables.
- The UN Energy Statistics Database.
- IEA Secretariat estimates.

## Mongolia

### General notes

Data for Mongolia are available starting in 1985. Prior to that, they are included in Other Asia.

Data allowing a disaggregation of coal by type became available in 2015. In addition time series were revised from 2005 forward. Breaks in time series between 2004 and 2005 may result as well as differences in trends from previous editions.

In this edition, new data for renewable electricity production became available. This might create breaks in time series between 2002 and 2003.



## Sources

### Sources 1985 to 2016:

- *Mongolian Statistical Yearbook*, National Statistical Office, Ulaanbaatar, various editions up to 2017.
- *Balance of Coal & Coal Exports*, Mongolian Statistical Information Service, National Statistical Office, Ulaanbaatar, online statistical service, accessed May 2018: [www.1212.mn](http://www.1212.mn).
- *Renewable energy statistics 2018*, International Renewable Energy Agency (IRENA). *Mongolian Statistical Bulletin, December 2009*, National Statistical Office, Ulaanbaatar, 2009.
- Asian Development Bank online database.
- IEA Secretariat estimates.

### Sources for biofuels and waste:

- *FAO, Forestry Statistics*, online database.
- IEA Secretariat estimates.

## Montenegro

### General notes

Data for Montenegro are available starting in 2005. Between 1990 and 2004, they are included in Serbia. Prior to 1990, they are included in Former Yugoslavia.

Breaks in time series appearing in solid biofuels between 2010 and 2011 can be explained by a new survey carried out by Montenegro in 2013.

A new survey on energy consumption in industry was conducted by Montenegro in 2014. Due to this newly available data some breaks in time series may occur between 2004 and 2005.

### Sources

#### Sources 2005 to 2016:

- Direct communication with the Statistical Office of Montenegro (MONSTAT), Podgorica.
- Joint IEA/Eurostat/UNECE annual energy questionnaires.

## Morocco

### General notes

Morocco joined the IEA as an Association country in November 2016.

Morocco started filling the five Joint IEA/Eurostat/UNECE questionnaires for the year 2015. This may lead to breaks in time series between 2014 and 2015.

In the 2018 edition, revisions in biofuels were made for the period 2004-2014. This may lead to breaks in time series between 2003 and 2004.

In the 2018 edition, revisions in auto producer electricity from combustible fuels and electricity production from heat from chemical sources were made and a break in time series may be observed between 2012 and 2013.

The Samir-Mohammedia refinery expansion was completed in 2009, accommodating new feedstocks and additives. This may lead to breaks in time series between 2009 and 2010.

In August 2015, refinery activity stopped, causing significant decreases in refined oil products production and breaks in time series between 2014, 2015, and 2016.

### Sources

#### Sources 2015 to 2016 :

- Joint IEA/Eurostat/UNECE annual energy questionnaires.

#### Sources 1992 to 2014:

- Direct communication with Ministère de l'Energie et des Mines, Direction des Mines, Rabat.
- *Annuaire Statistique du Maroc*, Haut-Commissariat au Plan, Direction de la Statistique, Rabat, 1980, 1984, 1986 to 2011.
- Electricity consumption by economic sector from direct communication with Office National de l'Electricité, Casablanca.

#### Sources up to 1991:

- *Rapport d'Activité 1992*, Office National de l'Electricité, Casablanca, 1993.
- *Le Maroc en Chiffres 1986*, Ministère du Plan, Direction de la Statistique, Rabat, 1987.
- *Rapport Annuel*, Office National de Recherches et d'Exploitations Pétrolières, Maroc, 1984.
- *Rapport d'Activité du Secteur Pétrolier 1983*, Ministère de l'Energie et des Mines, Direction de l'Energie, Rabat, 1984.

- *Rapport sur les Données Énergétiques Nationales 1979-1981*, Ministère de l'Énergie et des Mines, Rabat, 1982.

#### Sources for biofuels and waste:

- Joint IEA/Eurostat/UNECE annual energy questionnaire on renewables (2015-2016).
- Before 2015: Direct communication with Ministère de l'Énergie et des Mines, Direction des Mines, Rabat; The UN Energy Statistics Database; IEA Secretariat estimates.

## Mozambique

### Sources

#### Sources 1992 to 2016:

- Direct communication with Ministério da Energia, Maputo and the National Petroleum Institute.
- *Annual Statistical Yearbook 1993, 1994, 1995*, Eskom, Johannesburg, 1994, 1995, 1996, citing Electricidade de Mozambique, Maputo, as source.
- The UN Energy Statistics Database.
- IEA Secretariat estimates.

#### Sources up to 1991:

- IEA Secretariat estimates.

#### Sources for biofuels and waste:

- Direct communication with Ministério da Energia, Maputo.
- IEA Secretariat estimates.

## Myanmar

### General notes

Data from the Myanmar Central Statistical Organisation are reported on a fiscal year basis, beginning on 1 April and ending on 31 March of the subsequent year.

In the 2018 edition, demand data for all energy products became available for 2016. This might result in breaks in time series from 2015 to 2016.

In the 2018 edition, trade data for coal became available in 2016. This might result in breaks in time series from 2015 to 2016.

### Sources

#### Sources 1992 to 2016:

- Direct communication with the Ministry of electricity and Energy, Oil and Gas Planning Department.
- Direct communication with the Institute of Energy Economics, Japan (IEEJ), Tokyo, 2010-2014.
- *Selected Indicators*, Myanmar Central Statistical Organisation website: [www.csostatat.gov.mm](http://www.csostatat.gov.mm).
- JODI- Oil World database, Joint Organisations Data Initiative (JODI), accessed April 2018: <https://www.jodidata.org/oil/>.
- *Oil and Thailand*, Ministry of Energy, Department of Alternative Energy Development and Efficiency, Bangkok, 2007 to 2013.
- Direct communication with the Ministry of Energy, Planning Department, Rangoon, 2006-2007.
- *Review of the Financial Economic and Social Conditions*, Ministry of National Planning and Economic Development, Central Statistical Organization, Rangoon, 1995, 1996.
- *Statistical Yearbook*, Ministry of National Planning and Economic Development, Central Statistical Organization, Rangoon, 1995, 1996.
- The UN Energy Statistics Database.
- *The ASEAN Energy Statistics Database*.
- Asian Development Bank online database.
- *Natural Gas in the World*, Cedigaz, Paris, various editions up to 2017.
- IEA Secretariat estimates.

#### Sources up to 1991:

- *Sectoral Energy Demand in Myanmar*, UNDP Economic and Social Commission for Asia and the Pacific, Bangkok, 1992.
- *Selected Monthly Economic Indicators, paper no. 3*, Ministry of Planning and Finance, Central Statistical Organization, Rangoon, 1989.

#### Sources for biofuels and waste:

- Wood data have been submitted by the Ministry of Energy, from 1985 to 2003.
- IEA Secretariat estimates based on 1990 data from *UNDP Sixth Country Programme Union of Myanmar*, World Bank, Programme Sectoral Review of Energy, by Sousing et. al., Washington, D.C., 1991.

## Namibia

### General notes

Data for Namibia are available starting in 1991. Prior to that, data are included in Other Africa.

Charcoal exports data are revised back to 2000 based on FAO data. This may create break in time series between 1999 and 2000.

### Sources

#### Sources 1991 to 2016:

- *Namibia Energy Balance 2000-2014*. Electricity Control Board, Windhoek.
- Direct communication with the Ministry of Mines and Energy, Windhoek.
- *NamPower Annual Report*, Namibia Power Corporation, Windhoek, various editions up to 2017. Note: NamPower data are published on a fiscal year basis (July to June)
- *Solar Heat Worldwide*, AEE - Institute for Sustainable Technologies, Gleisdorf, IEA Solar Heating & Cooling Programme, various editions up to 2018.
- IEA Secretariat estimates.

#### Sources for biofuels and waste:

- The UN Energy Statistics Database and *Forestry Statistics*, FAO, Rome, various editions up to 2017.
- IEA Secretariat estimates.

## Nepal

### General notes

Data are reported on a fiscal year basis, beginning on 1 July and ending on 30 June of the subsequent year 2016/17 is treated as 2016.

### Sources

#### Sources up to 2016:

- Direct communication with the Water and Energy Commission Secretariat (WECS), Ministry of Water Resources, Kathmandu.

- *A Year in Review*, Nepal Electricity Authority, Durbar Marg, Kathmandu, various editions up to fiscal year 2016/17.
- *Imports and Sales of Petroleum Products*, Nepal Oil Corporation Limited, Kathmandu, various editions up to 2018.
- *Energy Sector Synopsis Report*, Water and Energy Commission Secretariat (WECS), Kathmandu, July 2010.
- IEA Secretariat estimates.

#### Sources up to 1996:

- The UN Energy Statistics Database.
- IEA Secretariat estimates.

#### Sources for biofuels and waste:

- Water and Energy Commission Secretariat (WECS), Ministry of Water Resources, Kathmandu.
- IEA Secretariat estimates.

## Nicaragua

### General notes

Nicaragua changed their methodology for the reporting of solid biofuels following a survey held in 2006-2007. Revisions and additional estimations necessary to take resulting new data into account might result in breaks in some flow's time series between 2005 and 2006.

### Sources

#### Sources up to 2016:

- *Energy-Economic Information System (SIEE)*, Latin American Energy Organization (OLADE), Quito, accessed April 2018: <http://sier.olade.org/>.
- *Estadísticas de los Hidrocarburos*, Ministerio de Energía y Minas, Managua, 2008 to 2016.
- *Generación Bruta por Tipo de Planta*, Instituto Nicaragüense de Energía, Managua, 2017.
- *Consumo de Combustible por Tipo de Planta*, Instituto Nicaragüense de Energía, Managua, 2017.
- *Traffic Data*, Empresa Administradora de Aeropuertos Internacionales, Nicaragua, accessed June 2018: <https://www.eaai.com.ni/>.
- *Balance Energético Nacional*, Ministerio de Energía y Minas, Managua, 1999 to 2007.

- *Balance Energético Nacional*, Comisión Nacional de Energía (CNE), Dirección de Políticas Energéticas, Managua, 2000 to 2005.
- *Estadísticas de Suministro de los Hidrocarburos*, Instituto Nicaragüense de Energía, Managua, 1999 to 2004.
- *Informe Anual 1996: Datos Estadísticos del Sector Eléctrico*, INE, Managua, 1999.
- *Balance Energético Nacional*, Comisión Nacional de Energía (CNE), Managua, 1999 to 2007.

## Niger

### General notes

Data for Niger are available starting in 2000. Prior to 2000, data for Niger are presented in Other Africa.

### Sources

#### Sources up to 2016:

- Direct communication with the Ministry of Energy and Oil.
- IEA Secretariat estimates.

#### Sources for biofuels and waste:

- Ministry of Energy and Oil.
- IEA Secretariat estimates.

## Nigeria

### General notes

Crude oil production and export data may include field condensate.

Statistical differences may include stocks and un-official trade flows.

Inputs of motor gasoline and gas/diesel to back-up electricity generation, as well as the associated electricity outputs, which may be substantial in Nigeria, may not be captured.

In the 2015 edition, new information became available indicating that on-grid power generation has been fuelled by natural gas for many years. This may lead to breaks in time series between 1996 and 1997 as well as differences in trends compared to previous editions for some oil products.

In the 2017 edition, new information became available through the Nigerian National Petroleum Corporation for Natural Gas Liquids. Break in time series can be observed between 2012 and 2013.

In the 2017 edition, naphtha data are added. Breaks in time series can be observed in Other Oil Products and Naphtha in 2003 and 2015.

In the 2018 edition, new information became available through the department of Petroleum Resources. Breaks in time series can be observed between 2009 and 2010 for motor gasoline, jet kerosene, diesel, and fuel oil; and between 2013 and 2014 for lubricants.

### Sources

#### Sources 1992 to 2016:

- Direct communication with the Energy Commission of Nigeria, Abuja.
- Direct communication with the African Energy Commission, Algiers, Algeria.
- *Natural Gas in the World*, Cedigaz, Paris, various editions up to 2017.
- *Annual Petroleum Bulletin*, Nigerian National Petroleum Corporation (NNPC), Abuja, various editions from 1998 to 2016.
- *2016 Oil and Gas Annual Report*, Department of Petroleum Resources, Lagos.
- *Annual Statistical Bulletin*, Organization of Petroleum Exporting Countries (OPEC), Vienna, various editions up to 2017.
- *Statistical Bulletin*, Central Bank of Nigeria, Abuja, various editions from 2003 to 2015.
- *Monthly Petroleum Bulletin* for 2000, Nigerian National Petroleum Corporation (NNPC), Abuja.
- *Annual Report and Statement of Accounts 1995*, Central Bank of Nigeria, Lagos, 1996.
- *Nigerian Petroleum News*, Energy Publications, monthly reports, various issues up to May 1998.
- IEA Secretariat estimates.

#### Sources up to 1991:

- *Annual Report and Statement of Accounts*, Central Bank of Nigeria, Lagos, various editions from 1981 to 1987.
- *Basic Energy Statistics for Nigeria*, Nigerian National Petroleum Corporation, Lagos, 1984.
- *NNPC Annual Statistical Bulletin*, Nigerian National Petroleum Corporation, Lagos, 1983 to 1987.

- *The Economic and Financial Review*, Central Bank of Nigeria, Lagos, various editions.

### Sources for biofuels and waste:

- IEA Secretariat estimates based on 1991 data from *Forests and Biomass Sub-sector in Africa*, African Energy Programme of the African Development Bank, Abidjan, 1996.

## Oman

### General notes

The interconnected nature of the Mina-Al-Fahal and Suhar oil refineries is reflected in the fuel oil data leading to breaks in time series for some products between 2007 and 2008.

Natural gas shows a break in time series for some flows between 2006 and 2007 due to a new methodology applied in both supply and demand.

Electricity output shows a break in time series between 2004 and 2005 as a national data source became available.

In 2006, the Suhar Refinery came online with 166 kbd capacity. Breaks in time series can be observed in oil products between 2005 and 2006.

### Sources

#### Sources 2005 to 2016:

- *Statistical Yearbook*, National Centre for Statistics and Information (NSCI), various editions from 1999 to 2017 (Formerly Ministry of National Economy).
- *Annual report*, Authority for Electricity Regulation, Oman, various editions from 2005 to 2017.
- *Annual report*, Oman LNG Company, various editions from 2009 to 2017.
- *Annual Report*, Central Bank of Oman, Muscat, various editions up to 2017.
- *Natural Gas in the World*, Cedigaz, Paris, various editions up to 2017.
- *Online statistics*, Sultanate of Oman, Ministry of Oil and Gas.
- *Annual Statistical Report*, Organization of Arab Petroleum Exporting Countries (OAPEC), Kuwait, various editions up to 2016.
- The LNG Industry, International Group of Liquefied Natural Gas Importers (GIIGNL), Levallois, 2005-2016.

- IEA Secretariat estimates.

#### Sources 1992 to 2004:

- Direct communication with the Ministry of National Economy, Muscat.
- Direct communication with the Ministry of Oil and Gas, Muscat.
- Direct communication with the Ministry of Petroleum and Minerals, Muscat, 1997, 1998, and 1999.
- Direct communication with the Ministry of Electricity & Water, Office of the Under Secretary, Ruwi, 1998 to 2001.
- *Quarterly Bulletin December 1994*, Central Bank of Oman, Muscat, 1995.
- *Annual Report*, Central Bank of Oman, Muscat, 1993.
- *Statistical Yearbook*, 1994, 1995, 1996, 1997, Ministry of Development, Muscat, 1995 to 1998.
- IEA Secretariat estimates.

#### Sources up to 1991:

- *Quarterly Bulletin*, Central Bank of Oman, Muscat, 1986, 1987, 1989 and 1995.
- *Annual Report to His Majesty the Sultan of Oman*, Department of Information and Public Affairs, Petroleum Development, Muscat, 1981, 1982, and 1984.
- *Oman Facts and Figures 1986*, Directorate General of National Statistics, Development Council, Technical Secretariat, Muscat, 1987.
- *Quarterly Bulletin on Main Economic Indicators*, Directorate General of National Statistics, Muscat, 1989.
- *Statistical Yearbook*, Directorate General of National Statistics, Development Council, Muscat, 1985, 1986, 1988 and 1992.

## Pakistan

### General notes

The IEA Secretariat could not obtain data for 2016 from Pakistan in time. As a consequence, most data points for 2016 have been estimated based on developments in population and GDP in Pakistan. Specific information on new installed capacity has been incorporated into these estimations.



Time series data for natural gas for the years 2004-2007 were revised in 2009 due to the inclusion of the North-West Frontier Province data (now called KPK) and Pakistan Steel Mills. Breaks in time series may occur between 2003 and 2004.

Own use of electricity by industries with autoproducer electricity plants may not be captured.

For bitumen and lubricants, data for stock variations may include unreported trade or consumption.

## Sources

### Sources 1992 to 2016:

- *Energy Yearbook*, Hydrocarbon Development Institute of Pakistan, Ministry of Petroleum and Natural Resources, Islamabad, various editions from 1979 to 2016.
- *Pakistan Economic Survey 1994-1995, 1996, 1997*, Government of Pakistan, Finance Division, Islamabad, 1995, 1997, 1998.
- *Statistical Supplement 1993/1994*, Finance Division, Economic Adviser's Wing, Government of Pakistan, Islamabad, 1995.
- *Natural Gas in the World*, Cedigaz, Paris, various editions up to 2017.
- IEA Secretariat estimates.

### Sources up to 1991:

- *Monthly Statistical Bulletin, no. 12*, Federal Bureau of Statistics, Islamabad, December 1989.
- *1986 Bulletin*, State Bank of Pakistan, Islamabad, 1987.

### Sources for biofuels and waste:

- IEA Secretariat estimates based on 1991 data from *Household Energy Strategy Study (HESS)* of 1991.

## Panama

### General notes

International aviation bunkers figures for jet kerosene may include exports.

From 2003 onwards there has been no output of oil products due to refinery closure.

In 2016, time series for fuelwood data were revised according to data from OLADE. Break in time series can be observed in 2010.

## Sources

### Sources up to 2016:

- *Energy-Economic Information System (SIEE)*, Latin American Energy Organization (OLADE), Quito, accessed Apr 2018: <http://sier.olade.org/>.
- *Compendio Estadístico Energético 1970-2016*, Ministerio de Economía y Finanzas, Comisión de Política Energética, Panama.
- *Boletín Estadístico Marítimo Portuario*, Autoridad Marítima de Panamá (AMP), Panama, 2007 to 2016, [www.amp.gob.pa](http://www.amp.gob.pa).
- *Annual Report*, Canal de Panamá, Panama, 2012.
- US Energy Information Administration (EIA), website, marine bunkers data from 2001 to 2006.

## Paraguay

### General notes

The Itaipu hydroelectric plant, operating since 1984 and located on the Paraná River (which forms the border of Brazil and Paraguay) was formed as a joint venture between Eletrobrás and the Paraguayan government.

From 2006 onwards, there has been no output of oil products, due to refinery closure.

## Sources

### Sources up to 2016:

- *Balance Energético Nacional, 1971-2016*, Vice-ministerio de Energía y Minas, Ministerio de Obras Públicas y Comunicaciones, San Lorenzo.
- Direct communication with Ministerio de Obras Públicas y Comunicaciones, San Lorenzo.

## Peru

### General notes

Liquid biofuels are included in the energy balances from 2010 onwards.

Between 2015 and 2016, there is a break in time series due to a restructuring of energy balance for demand side of energy products.

In the 2018 edition, crude oil and NGL figures were revised for the years 2004-2015 due to change of the

of methodology. This may lead to different trends compared to previous editions of this publication.

## Sources

### Sources up to 2016:

- Direct communication with Ministerio de Energía y Minas, Oficina Técnica de Energía, Lima.
- *Energy-Economic Information System (SIEE)*, Latin American Energy Organization (OLADE), Quito, accessed April 2018: <http://sier.olade.org/>.
- *Balance Nacional de Energía*, Ministerio de Energía y Minas, Lima, various editions up to 2017.
- *Hidrocarburos Estadísticas*, Organismo Supervisor de la Inversión en Energía y Minería, 2012.
- IEA Secretariat estimates.

## Philippines

### General notes

In the 2018 edition, data for 2012-2016 for bagasse has been revised. This may lead to breaks in time series between 2011 and 2012.

## Sources

### Sources 1990 to 2016:

- Direct communication with the Department of Energy, Manila.
- *Energy Commodity Account (ECA) and Overall Energy Balance (OEB)*, 1990-2008, 2010-2016 submitted by the Department of Energy, Manila.
- APEC annual energy statistics questionnaires.
- *Annual Report*, Semirara Mining Corporation, 2006-2017.
- IHS McCloskey, 2011-2016.
- *Annual steel production 1980-2017*, World Steel Association, [www.worldsteel.org/statistics/](http://www.worldsteel.org/statistics/).
- *Philippines Energy Bulletin 1996, 1997, 1998, 1999*.
- IEA Secretariat estimates.

### Sources up to 1989:

- Direct communication with the Office of Energy Affairs, Manila.

- *APEC Energy Statistics 1994*, Tokyo, October 1996.
- *1990 Power Development Program (1990-2005)*, National Power Corporation, Manila, 1990.
- *Philippine Medium-term Energy Plan 1988-1992*, Office of Energy Affairs, Manila, 1989.
- *Philippine Statistical Yearbook 1977-1983*, National Economic and Development Authority, Manila.
- *1985 and 1989 Annual Report*, National Power Corporation, Manila, 1986, 1990.
- *Philippine Economic Indicators*, National Economic and Development Authority, Manila, various editions of 1985.
- *Accomplishment Report: Energy Self-Reliance 1973-1983*, Ministry of Energy, Manila, 1984.
- *Industrial Energy Profiles 1972-1979*, vol. 1-4, Ministry of Energy, Manila, 1980.
- *National Energy Program*, Ministry of Energy, Manila, 1982-1987 and 1986-1990.
- *Philippine Statistics 1974-1981*, Ministry of Energy, Manila, 1982.
- *Energy Statistics*, National Economic and Development Authority, Manila, 1983.
- *Quarterly Review*, Office of Energy Affairs, Manila, various editions.
- The UN Energy Statistics Database.
- IEA Secretariat estimates.

## Qatar

### General notes

Crude oil production and export data do not include field condensate.

Natural gas liquids (NGL) include field condensates, propane, butane and ethane production from natural gas processing plants. NGL produced from liquefied natural gas production plants and gas-to-liquids plants may be excluded.

Propane and butane from natural gas processing plants are transferred to LPG. Ethane from natural gas processing plants is transferred to ethane.

Information on the use of LPG and ethane in the petrochemical sector is from 2005 onward. This may lead to breaks in time series for these products between 2004 and 2005.

In 2010, a new ethane cracker began operations in Ras Laffan, Qatar, with production capacity of 1.3 million tonnes per year. Breaks in time series in LPG and ethane production can be seen between 2009 and 2010.

Electricity production from autoproducers includes generation by desalination plants since 1988. Own use of electricity includes use by desalination plants since a breakdown is not available. Electricity consumption in industry includes electricity consumption by the energy sector.

Three satellite power stations located outside of Doha are included as main electricity producers up to 2014. In 2015, these power stations are not reported and are likely included as part of RAF-A station as auto production.

Revisions were made in 2014 for refinery intake of crude oil production based on Qatar Petroleum reports.

## Sources

### Sources 1992 to 2016:

- Direct communication with Qatar Statistical Authority, Doha.
- Direct communication with Qatar Petroleum, Doha.
- Direct communication with Kahramaa, Qatar General Electricity and Water Cooperation, Doha.
- Direct communication with National Minerals Information Center, U.S Geological Survey.
- *Statistics Report*, Kahramaa, Qatar General Electricity and Water Corporation, Doha, editions 2005 to 2008, 2010 to 2016.
- *Qatar in Figures*, Qatar Statistics Authority. Doha, 2011-2016 editions.
- *2016 Integrated Report*, Qatar Petrochemical Company, Doha.
- *Annual Report 2016*, Qatar Fertilizer Company, Doha.
- JODI- Oil World database, Joint Organisations Data Initiative (JODI), accessed April 2018: <https://www.jodidata.org/oil/>.
- *Statistical Bulletin*, Arab Union of Electricity, 2011-2015.
- *Annual Report 2004-2015*, Qatar Petroleum, Doha.
- *Natural Gas in the World*, Cedigaz, Paris, various editions up to 2017.

- *The LNG Industry*, International Group of Liquefied Natural Gas Importers (GIIGNL), various editions up to 2017.
- *Statistics Archives*, World Steel Association, [www.worldsteel.org](http://www.worldsteel.org).
- *Annual Statistical Abstract, Qatar Statistics Authority, 1994 to 2012*.
- The UN Energy Statistics Database.
- IEA Secretariat estimates.

### Sources up to 1991:

- *Qatar General Petroleum Corporation 1981-1985*, General Petroleum Corporation, Doha, 1986.
- *Economic Survey of Qatar 1990*, Ministry of Economy and Commerce, Department of Economic Affairs, Doha, 1991.
- *Statistical Report 1987 Electricity & Water*, Ministry of Electricity, Doha, 1988.
- *State of Qatar Seventh Annual Report 1983*, Qatar Monetary Agency, Department of Research and Statistics, Doha, 1984.

### Sources for biofuels and waste:

- *Forestry Statistics*, FAO, Rome, 2000.
- IEA Secretariat estimates.

## Romania

### General notes

Romania's methodology for estimating indigenous production of geothermal energy differs from the one that IEA has adopted. Therefore, data comparisons between Romania and other countries might be misleading.

Data on quantities of coke oven coke used in blast furnaces do not correspond to the official submission of the national administration, as they have been estimated by the IEA Secretariat to ensure a carbon balance in the blast furnace transformation.

### Sources

#### Sources 1992 to 2016:

- Direct communication with the National Institute of Statistics, Bucharest.
- Joint IEA/Eurostat/UNECE annual energy questionnaires.



- *Buletin Statistic de Informare Publica*, Comisia Nationala Pentru Statistica, Bucharest, various editions up to June 1995.
- *Renel Information Bulletin*, Romanian Electricity Authority, Bucharest, 1990, 1991, 1992, 1993, 1994. *Anuarul Statistic al Republicii Socialiste Romania*, Comisia Nationala Pentru Statistica, Bucharest, 1984, 1985, 1986, 1990, 1991.
- IEA Secretariat estimates.

## Russian Federation

### General notes

Data for the Russian Federation are available starting in 1990. Prior to that, they are included in Former Soviet Union.

Annual statistics are based on annual joint IEA/Eurostat/UNECE questionnaires submissions received from Rosstat, the official data provider to the IEA. Data may differ from secondary sources, and discrepancies are being investigated.

In 2007, the Federal State Statistics Service introduced a new classification, the Russian Classification of Economic Activities (OKVED), oriented towards harmonization with the Statistical Classification of Economic Activities in the European Community (NACE Rev.1). Data for the years prior to 2005 were submitted to the IEA Secretariat according to the Russian Classification of the Industries of the Economy (OKONKH). Therefore, breaks in time series for final consumption sectors may occur between 2004 and 2005.

### Coal

Coal statistics provided by Rosstat may differ from those collected by Rosinformugol. Blast furnace gas values since 2012 utilise a different methodology to that of prior years (where heat from other sources than blast furnace gas had been attributed to blast furnace gas). Some coal trade from partners of the Customs Union has been estimated by the IEA Secretariat and additionally removed from indigenous production where it may be reported in data of other organisations.

### Oil

2015 data were estimated by the IEA Secretariat for refinery output and observed deliveries of jet kerosene, exports of fuel oil and gas-diesel, residential consumption of LPG, and all consumption flows of fuel oil.

Condensate data provided by Rosstat are published separately from Crude Oil under NGL.

Jet kerosene output is confidential and estimated based on historical refinery throughput growth rate. No information on Vacuum Gas Oil is available.

LPG refinery output may include output from gas separation plants.

Naphtha exports are reported by Rosstat from 2011, and are significantly lower than in secondary sources. As a consequence domestic consumption of naphtha calculated as residual in the Russian balance is likely to be overestimated.

Information on international marine bunker consumption is submitted from 2010 with high fluctuation in time series.

Jet kerosene consumption split between international and domestic aviation is unknown so consumption is equally split between the two flows.

### Natural gas

In the 2017 edition, the Russian Federation revised natural gas data back to 2013.

From 2009, all data concerning LNG trade and LNG production have been estimated by the Secretariat.

Oil and gas extraction includes natural gas consumed by oil refineries.

### Biofuels and waste

Charcoal data are reported with solid biofuels since 2010. The time series of charcoal is expected to be reported in the 2018 edition.

The geothermal input to main activity electricity plant was estimated by IEA Secretariat for 2013 and 2014.

### Electricity and heat

The 2015 data for electricity and Heat show a substantial drop in heat production on autoproducer plants fuelled by natural gas. These figures have been confirmed by the Russian authorities.

The 2013 data for electricity and heat show a substantial drop in the efficiency of autoproducer heat plants fuelled by natural gas as well as a decrease in production and consumption of heat. These figures have been confirmed by the Russian authorities.

Heat from other sources is produced from recovered waste heat.

## Sources

### Sources 1990 to 2015:

- Direct communication with the Department of Foreign Statistics and International Cooperation from the Federal State Statistics Service (Rosstat), Moscow, Russian Federation.
- Joint IEA/Eurostat/UNECE annual energy questionnaires.
- Energy trade: direct communication with the Federal State Statistics Service, July 1994.
- *Statistical Yearbook of Russia 1994*. The State Committee of Statistics, Moscow, 1994.
- The Russian Federation in 1992, *Statistical Yearbook*, The Federal State Statistics Service, Moscow, 1993.
- *Russian Federation External Trade*, annual and quarterly various editions, the Federal State Statistics Service, Moscow.
- *Statistical Bulletin*, various editions, The State Committee of Statistics of the CIS, Moscow, 1993, 1994.
- *Statistical Bulletin N° 3*, The Federal State Statistics Service, Moscow, 1992.
- *Fuel and Energy Balance of Russia 1990*, The Federal State Statistics Service, Moscow, 1991.
- *Energetika*, Energo-Atomisdat, Moscow, 1981 to 1987.
- IEA Secretariat estimates.

### Sources for biofuels and waste:

- The Federal State Statistics Service.
- IEA Secretariat estimates.

## Saudi Arabia

### General notes

Crude oil production and export data do not include field condensate. Field condensate quantities are included with natural gas liquids.

Data for crude oil production include 50 per cent of the output of the Neutral Zone, shared with Kuwait. Similarly, crude oil production includes 50% of the output of the Abu Safa field shared with Bahrain.

Natural gas consumption for oil and gas extraction may include quantities used in oil refineries.

New data became available in 2015 allowing the estimation of natural gas consumption as a feedstock in ammonia and methanol manufacture from 1990 to 2013. The remaining natural gas consumption has been allocated to the non-specified Industry sector. Breaks in time series may occur between 1989 and 1990 for this reason.

Electricity production from autoproducers includes generation by desalination plants since 1979.

Electricity end use specific to Agriculture/forestry was not reported for 2015-2016.

New Yasref refinery in Yanbu came online in 2015 with 400kbd refining capacity. Breaks in time series for oil industry consumption of oil products and diesel output from refineries may be observed between 2014-2015.

## Sources

### Sources 1992 to 2016:

- *Annual Reports*, Saudi ARAMCO, Dhahran, various editions up to 2016.
- *Annual Report*, Saudi Arabian Monetary Agency, Research and Statistics Department, Riyadh, various editions up to 2017.
- JODI- Oil World database, Joint Organisations Data Initiative (JODI), accessed April 2018: <https://www.jodidata.org/oil/>.
- *Statistical Yearbook of 2016*, General Authority for Statistics- Kingdom of Saudi Arabia, Issue Number: 52.
- *Annual Statistical Booklet*, Electricity and Co-generation Regulatory Authority, various editions up to 2016.
- *Statistical Bulletin*, Arab Union of Producers, Transporters and Distributors of Electricity (AUPTDE), Amman, various editions up to 2016.
- *Annual Statistical Bulletin*, Organization of Petroleum Exporting Countries (OPEC), Vienna, various editions up to 2017.
- *Nitrogen statistics and information*, US Geological Survey, [www.usgs.gov](http://www.usgs.gov).
- Ministry of Petroleum and Mineral Resources, 2009.

- *Middle East Petroleum Databook*, FACTS Global Energy Group, Singapore, 2009 and 2010.
- *Electricity Growth and Development in the Kingdom of Saudi Arabia up to the year from 1416H. (1996G.), 1420 H (1999/2000G) and 1423/1424 H (2003G)*, Ministry of Industry and Electricity, Riyadh, 1997, 1998, 1999, 2004.
- *Annual Statistical Report*, Organization of Arab Petroleum Exporting Countries (OAPEC), Kuwait, various editions up to 2017.
- Direct communication from the Central Department of Statistics of the Ministry of Planning and oil industry sources.
- *A Survey of the Saudi Arabian Oil Industry 1993*, Embassy of the United States of America in Riyadh, Riyadh, January 1994.
- IEA Secretariat estimates.

#### Sources up to 1991:

- *Annual Reports*, Saudi ARAMCO, various editions.
- *Petroleum Statistical Bulletin 1983*, Ministry of Petroleum and Mineral Resources, Riyadh, 1984.
- *Achievement of the Development Plans 1970-1984*, Ministry of Planning, Riyadh, 1985.
- *The 1st, 2nd, 3rd and 4th Development Plans*, Ministry of Planning, Riyadh, 1970, 1975, 1980 and 1985.
- *Annual Report*, Saudi Arabian Monetary Agency, Research and Statistics Department, Riyadh, 1984, 1985, 1986, 1988, 1989.
- *Statistical Summary*, Saudi Arabian Monetary Agency, Research and Statistics Department, Riyadh, 1986.

#### Sources for biofuels and waste:

- *Forestry Statistics*, FAO, Rome, 2000.
- IEA Secretariat estimates.

## Senegal

### General notes

In the 2018 edition, data for 2014 and 2015 are revised based on information sent from Senegal Ministère de l'Énergie et des Mines.

In the 2014 edition, the time series for solid biofuels were revised from 2009 based on newly available information. Breaks in time series may occur between 2008 and 2009.

### Sources

#### Sources 2009 to 2016:

- Direct communication with Ministère de l'Énergie et des Mines, Dakar.
- *Bilans énergétiques du Sénégal 2009 to 2016*, Direction de l'Énergie, Dakar.
- IEA Secretariat estimates.

#### Sources 2008:

- *Bulletin mensuel des statistiques économiques*, Agence national de la Statistique et de la Démographie (ANSD), Dakar, March 2009.
- Direct communication with Ministère de l'Énergie, Dakar.

#### Sources 2000 to 2007:

- *Bilans énergétiques du Sénégal 2003, 2004, 2005, 2006*, Direction de l'Énergie, Dakar.
- IEA Secretariat estimates.

#### Sources 1992 to 1999:

- Direct communication with Ministère de l'Énergie, des Mines et de l'Industrie, Direction de l'Énergie, Dakar, 1997 to 2002.
- Direct communication with Ministère de l'Énergie, des Mines et de l'Hydraulique, Comité National des Hydrocarbures, Dakar, 2002.
- Direct communication from oil industry sources, Société Africaine de raffinage.
- Direct communication from electricity industry sources, SENELEC.
- *Report of Senegal on the Inventory of Greenhouse Gases Sources*, Ministère de l'Environnement et de la Protection de la Nature, Dakar, 1994.
- Direct communication to the IEA Secretariat from ENDA - Energy Program, Dakar, 1997.
- The UN Energy Statistics Database.

#### Sources up to 1991:

- *Situation Economique 1985*, Ministère de l'Économie et des Finances, Direction de la Statistique, Senegal, 1986.

## Serbia

### General notes

Data for Serbia are available starting in 1990. Prior to that, they are included in Former Yugoslavia.

Serbia energy data include Montenegro until 2004 and The United Nations Interim Administration Mission in Kosovo until 1999. Breaks in time series for oil products and natural gas may appear between 2006 and 2007 due to newly available data for 2007.

### Sources

#### *Sources 1990 to 2016:*

- Direct communication with the Ministry of Mining and Energy, Belgrade.
- Direct communication with the Statistical Office of the Republic of Serbia, Belgrade.
- Joint IEA/Eurostat/UNECE annual energy questionnaires.
- *Pilot study: Energy Balances (2007 and 2008) - Oil and Derivates of Oil, Natural Gas, Geothermal Energy and Energy Balance of the Republic of Serbia*, Statistical Office of the Republic of Serbia, Belgrade, 2009.
- Direct communication with the Federal Ministry of Economy, Belgrade.
- IEA Secretariat estimates.

#### *Sources for biofuels and waste:*

- Joint IEA/Eurostat/UNECE annual energy questionnaire on renewables (1990-2016).
- Direct communication with the Ministry of Mining and Energy, Belgrade.
- IEA Secretariat estimates.

## Singapore

### General notes

Singapore joined the IEA as an Association country in October 2016.

Some key oil products and flows are aggregated by Singapore, to avoid breach of confidentiality. Detailed breakdown is then estimated by the IEA Secretariat.

At the time of publication, refinery input and output figures for 2016 were not available and they have

been therefore estimated by IEA Secretariat. These values may differ significantly from actual figures published later in Singapore's official sources.

The IEA Secretariat, the Energy Market Authority and the National Climate Change Secretariat (NCCS) are working closely together on improving data quality for Singapore. Therefore, breaks in time series between 2008 and 2009 and differences in trends when compared to previous publications may occur for some products.

From 2009, Singapore publishes splits of refinery output between light, middle and heavy distillates and residuum only. Further breakdown between products is estimated by the IEA Secretariat. Singapore aggregates petrochemical and refinery consumption. The split between refining and petrochemical consumption is estimated by the IEA Secretariat.

Refinery input is broken down between crude oil and feedstocks. Splits of feedstock by product are not provided by Singapore. By default, IEA estimates that feedstocks come from naphtha, gas/diesel and fuel oil in equal proportions.

Other data remain aggregated due to lack of data availability. Electricity consumption in the industry sector from 2005 includes electricity consumption by refineries. Electricity consumption in transport includes all electricity consumption at airport terminals. Municipal waste production and consumption may include biogas.

Refinery gas production and consumption may include syngas produced by the petrochemical sector.

Due to Singapore's large trade volume in comparison to its final consumption, slight misalignment of trade figures can have a significant impact on the energy balance of Singapore. The IEA Secretariat has adjusted total imports of crude oil, gas/diesel and fuel oil from 2009 to match demand.

A coal-fired power plant started operations in 2013. This might lead to breaks in time series between 2012 and 2013.

### Sources

#### *Sources 1992 to 2016:*

- Direct communication with the Energy Market Authority, Singapore.
- Direct communication with the National Climate Change Secretariat (NCCS), Singapore, from 2013.
- Direct communication with the Solar Energy Research Institute of Singapore, 2011.



- *Singapore Energy Statistics*, Energy Market Authority, Singapore, various editions up to 2017.
- *Monthly oil statistics*, IE Singapore, 2011-2016.
- *Yearbook of Statistics Singapore*, Department of Statistics, Singapore, various editions up to 2017.
- *Bunker sales*, website of The Maritime and Port Authority of Singapore: [www.mpa.gov.sg](http://www.mpa.gov.sg).
- *Motor Vehicle Population by Type of Fuel Used*, website of the Land Transport Authority: [www.lta.gov.sg](http://www.lta.gov.sg).
- *Solid Waste Management Statistics*, website of The Ministry of the Environment and Water Resources: <http://app.mewr.gov.sg/>.
- *Singapore Trade Statistics*, International Enterprise Singapore, Singapore, various CD-ROM editions up to 2011.
- *Argus Fundamentals*, Argus Media, various editions up to 2012.
- *Asia Pacific Databook*, FACTS Global Energy, Singapore, various editions up to 2013.
- *The Strategist Oil Report*, Singapore, various issues up to March 1999.
- *Petroleum in Singapore 1993/1994*, Petroleum Intelligence Weekly, Singapore, 1994.
- AEMTRC, 1996.
- Direct submissions from oil industry sources up to 1996.
- *The UN Energy Statistics Database*.
- IEA Secretariat estimates.

#### **Sources up to 1991:**

- *Monthly Digest of Statistics*, Department of Statistics, Singapore, various editions from 1987 to 1989.
- *Yearbook of Statistics Singapore 1975/1985*, Department of Statistics, Singapore, 1986.
- *ASEAN Oil Movements and Factors Affecting Intra-ASEAN Oil Trade*, Institute of Southeast Asian Studies, Singapore, 1988.
- *The Changing Structure of the Oil Market and Its Implications for Singapore's Oil Industry*, Institute of Southeast Asian Studies, Singapore, 1988.
- *Public Utilities Board Annual Report (1986 and 1989)*, Public Utilities Board, Singapore, 1987 and 1990.

#### **Sources for biofuels and waste:**

- *Singapore Energy Statistics*, Energy Market Authority, Singapore, various editions up to 2017.

- The UN Energy Statistics Database.
- IEA Secretariat estimates.

## South Africa

### General notes

#### Coal

Outputs from gas-to-liquids and coal-to-liquids plants are presented in the “Transfers” flow.

New information became available in 2015 which allowed the separation of non-energy use of coal in Coal to Liquids (CTL) plants from the coal used for energy purposes in these same plants. Non-energy conversion efficiencies for CTL plants in South Africa are assumed to be 60%. This new methodology may lead to breaks in time series between 2010 and 2011 for these products and flows.

Breaks in time series may occur for anthracite and coking coal between 2009 and 2010 as new information became available. Prior to 2010, coking coal data may include anthracite.

Coking coal, coke oven coke, coke oven gas, gas works gas and blast furnace gas production and consumption have been estimated using reported crude steel production figures.

#### Oil

New information became available in 2015 on refinery output of lubricants. Data have been revised from 1998. This may lead to breaks in time series between 1997 and 1998. Reported quantities of synthetic fuels output may not include quantities from PetroSA.

#### Natural gas

Breaks in time series may occur for consumption of natural gas in industrial sectors between 2009 and 2010 as new information became available.

### Sources

#### **Sources 2010 to 2016:**

- Direct communication with the Department of Energy, Pretoria, South Africa.
- *Energy statistics: Supply and demand of petroleum products*, Department of Energy, Pretoria, South Africa.

- *Statistical release on electricity generated and available for distribution*, Statistics South Africa, Pretoria.
- *South African Statistics*, Statistics South Africa, Pretoria, various editions up to 2017.
- JODI- Oil World database, Joint Organisations Data Initiative (JODI), accessed April 2018: <https://www.jodidata.org/oil/>.
- *Annual Reports*, South Africa Petroleum Industry Association (SAPIA), Sandton.
- *Integrated Annual Reports*, Electricity Supply Commission (ESKOM), South Africa.
- *Analyst Book*, SASOL Limited Group, Johannesburg, various editions up to 2016.
- *Integrated Annual Reports*, PetroSA, Parow, various editions up to 2016.
- *Steel statistical Yearbook*, World Steel Association, Brussel, accessed March 2018, <http://www.worldsteel.org/statistics/>
- *Natural Gas in the World*, Cedigaz, Paris, various editions up to 2017.
- *Solar Heat Worldwide*, AEE - Institute for Sustainable Technologies, Gleisdorf, IEA Solar Heating & Cooling Programme, various editions up to 2018.
- IEA Secretariat estimates.

#### Sources 1992 to 2009:

- Energy balances submitted to the IEA Secretariat from the Department of Minerals and Energy, 2003 to 2009.
- *Electricity generated and available for distribution*, Statistics South Africa, Pretoria, various editions up to 2009.
- Direct submission from the Institute for Energy Studies, Rand Afrikaans University, Pretoria, 1998 to 2001.
- *Digest of South African Energy Statistics 1998*.
- Direct submissions from the Energy Research Institute, University of Cape Town.
- *ESKOM Annual Report*, Electricity Supply Commission (ESKOM), South Africa, 1992 to 1994.
- *Statistical Yearbook*, Electricity Supply Commission (ESKOM), South Africa, 1992 to 1994.
- *South Africa's Mineral Industry*, Department of Mineral and Energy Affairs, Braamfontein, 1995.
- *South African Energy Statistics, 1950-1993*, Department of Mineral and Energy Affairs, Pretoria, 1995.

- *Wholesale Trade Sales of Petroleum Products*, Central Statistical Service, Pretoria, 1995.
- *South African Coal Statistics 1994*, South African Coal Report, Randburg, 1995.
- *Energy Balances in South Africa 1970-1993*, Energy Research Institute, Plumstead, 1995.

#### Sources up to 1991:

- *ESKOM Annual Report*, Electricity Supply Commission (ESKOM), South Africa, 1989 to 1991.
- *Statistical Yearbook*, Electricity Supply Commission (ESKOM), South Africa, 1983 to 1991.
- *Statistical News Release 1981-1985*, Central Statistical Service, South Africa, various editions from 1986 to 1989.
- *Annual Report Energy Affairs 1985*, Department of Mineral and Energy Affairs, Pretoria, 1986.
- *Energy Projections for South Africa (1985 Balance)*, Institute for Energy Studies, Rand Afrikaans University, South Africa, 1986.

#### Sources for biofuels and waste:

- *South African Energy Statistics 1950-1989, No. 1*, National Energy Council, Pretoria, 1989.
- IEA Secretariat estimates.

## South Sudan

### General notes

In the 2018 edition, revisions in 2015 data are due to new information available through AFREC questionnaires.

Data for South Sudan are available from 2012. Prior to 2012, they are included in Sudan.

Crude oil production and exports were halted for most of 2012, and only continued in April 2013. Both production and exports have been estimated by the IEA Secretariat for 2014.

### Sources

#### Sources 2012 to 2016:

- AFREC Energy questionnaire, African Energy Commission, 2015, 2016.
- IEA Secretariat estimates.

## Former Soviet Union

### General notes

Data for individual countries of the Former Soviet Union are available starting in 1990, and most of the information on 1990 and 1991 was estimated by the IEA Secretariat. Because of large breaks in reporting occurring in the early 1990's, breaks in time series may occur in 1990 for all regional totals.

Coal production statistics refer to unwashed and unscreened coal up to 1990. IEA coal statistics normally refer to coal after washing and screening for the removal of inorganic matter. Also, see notes under "Classification of Fuel Uses" and "Heat", in section on Notes on data quality.

The commodity balances presented for the Former Soviet Union include IEA Secretariat estimates of fuel consumption in the main categories of transformation. These estimates are based on secondary sources and on isolated references in FSU literature.

In older editions of this publication, intra-FSU trade was excluded.

### Sources

#### Sources up to 1989:

- *Statistical Yearbook*, The State Committee for Statistics of the USSR, Moscow, various editions from 1980 to 1989.
- *External Trade of the Independent Republics and the Baltic States*, 1990 and 1991, the State Committee of Statistics of the CIS, Moscow, 1992.
- *External Trade of the USSR*, annual and quarterly, various editions, The State Committee of Statistics of the USSR, Moscow, 1986 to 1990.
- *CIR Staff Paper no. 14, 28, 29, 30, 32 and 36*, Center for International Research, US Bureau of the Census, Washington, 1986, 1987 and 1988.
- *Yearbook on Foreign Trade*, Ministry of Foreign Trade, Moscow, 1986.

## Sri Lanka

### General notes

Breaks in time series may occur between 1999 and 2000 due to newly available energy balances provided by the Sri Lanka Sustainable Energy Authority in 2009.

Stock change may include statistical difference for certain secondary oil products.

Refinery losses may include own use of refinery fuel.

### Sources

#### Sources 1992 to 2016:

- Direct communication with the Sri Lanka Sustainable Energy Authority, Colombo.
- *Sri Lanka Energy Balances 2000-2016*, Sri Lanka Sustainable Energy Authority, Colombo.
- *Economic and Social Statistics of Sri Lanka 2011-2016*, Central Bank of Sri Lanka, Colombo.
- *Statistical Digest 2014*, Ceylon Electricity Board, Colombo.
- Direct communication with the Department of Census and Statistics, 2003 to 2006.
- *Annual Report 1993*, Central Bank of Sri Lanka, Colombo, July 1994.
- Direct communication with the Ceylon Electricity Board.
- *Sri Lanka Energy Balances, 1994*.
- The UN Energy Statistics Database.
- IEA Secretariat estimates.

#### Sources up to 1991:

- *Energy Balance Sheet 1991, 1992*, Energy Unit, Ceylon Electricity Board, Colombo, 1992, 1993.
- *Bulletin 1989*, Central Bank of Sri Lanka, Colombo, July 1989.
- *Bulletin (monthly)*, Central Bank of Sri Lanka, Colombo, May 1992.
- *Sectoral Energy Demand in Sri Lanka*, UNDP Economic and Social Commission for Asia and the Pacific, Bangkok, 1992.
- *External Trade Statistics 1992*, Government of Sri Lanka, Colombo, 1993.

#### Sources for biofuels and waste:

- Energy Conservation Fund and Ceylon Electricity Board.
- IEA Secretariat estimates.

## Sudan

### General notes

South Sudan became an independent country on 9 July 2011. From 2012 data for South Sudan are reported

separately and therefore, breaks in the time series may occur between 2011 and 2012 for Sudan data.

The IEA Secretariat could not obtain data for 2014 or 2015 from Sudan. As a consequence, some data points for 2014 and 2015 have been estimated based on macroeconomic indicators.

In 2015, the Kosti power plant began operation in Sudan, with 500 MW capacity. The plant uses crude oil for fuel, and break in time series can be seen for crude oil imports and input into main activity power plants in 2015.

In 2016, new information on refinery activity became available. Breaks in time series for oil products can be seen between 2015 and 2016.

## Sources

### Sources 1992 to 2016:

- Direct communication with the Ministry of Petroleum, Khartoum.
- *Annual Statistical Report*, Organization of Arab Petroleum Exporting Countries (OAPEC), Kuwait, various editions up to 2017.
- *Statistical Bulletin*, Arab Union of Producers, Transporters and Distributors of Electricity (AUPTDE), Amman, various editions up to 2016.
- *Sudanese Petroleum Corporation Statistics*, Ministry of Petroleum, Khartoum, May 2012.
- AFREC energy questionnaire, African Energy Commission, 2013.
- *Sudan Energy Handbook 2006*, Ministry of Energy and Mines, Khartoum.
- IEA Secretariat estimates.

### Sources up to 1991:

- *Foreign Trade Statistical Digest 1990*, Government of Sudan, Khartoum, 1991.

### Sources for biofuels and waste:

- IEA Secretariat estimates based on 1990 data from Bhagavan (ed.) *Energy Utilities and Institutions in Africa*, AFREPREN, Nairobi, 1996.

## Suriname

### General notes

The data are available from 2000 to 2016. Prior to 2000, data for Suriname are included in Other Non-OECD Americas.

## Sources

### Sources up to 2016:

- *Energy-Economic Information System (SIEE)*, Latin American Energy Organization (OLADE), Quito, accessed April 2018, <http://sier.olade.org/>.
- IEA Secretariat estimates

## Syrian Arab Republic

### General notes

Due to the on-going conflict in Syria, no official government data sources were available for 2012 to 2016. Data in this year's edition are primarily based on secondary sources, media reports and IEA Secretariat estimates.

Imports of crude oil and secondary oil products may include informal imports.

In this edition, refinery flows are revised from 2013 based on information from OPEC.

## Sources

### Sources 1992 to 2016:

- *Annual Statistical Report*, Organization of Arab Petroleum Exporting Countries (OAPEC), Kuwait, various editions up to 2017.
- *Natural Gas in the World*, Cedigaz, Paris, various editions up to 2017.
- Direct Communication with the Ministry of Petroleum and Mineral Resources, 2012.
- *Statistical Abstract*, Office of the Prime Minister, Central Bureau of Statistics, Damascus, various editions up to 2011.
- *Statistical Bulletin*, Arab Union of Producers, Transporters and Distributors of Electricity (AUPTDE), Amman, various editions up to 2016.
- The UN Energy Statistics Database (until 2007).
- *Quarterly Bulletin*, Central Bank of Syria, Research Department, Damascus, 2001.
- IEA Secretariat estimates.

### Sources up to 1991:

- *Quarterly Bulletin*, Central Bank of Syria, Research Department, Damascus, 1984.



**Sources for biofuels and waste:**

- *Forestry Statistics*, FAO, Rome, 2000.
- IEA Secretariat estimates.

**Chinese Taipei****General notes**

Data for the period 1982-2009 were revised in 2012 based on new balances submitted by the Bureau of Energy. Breaks in time series may occur between 1981 and 1982.

Breaks in time series may also occur between 2010 and 2011 as more detailed information became available for refinery feedstocks and oil products.

In 2018 data were revised for the period 2002-2015 based on new balances submitted by the Bureau of Energy and changes in methodology, breaks in time series might occur.

**Sources****Sources 1982 to 2016:**

- *Energy Balances in Taiwan*, Bureau of Energy, Ministry of Economic Affairs, Taipei, various editions up to 2016.
- Direct communication with the electricity utilities.
- *Yearbook of Energy Statistics*, Ministry of Trade, Industry and Energy, Taipei, 1996.
- *The Energy Situation in Taiwan*, Ministry of Economic Affairs, Energy Committee, Taipei, 1986, 1987, 1988 and 1992.
- *Industry of Free China 1975-1985*, Council for Economic Planning and Development, Taipei, 1986.
- *Taiwan Statistical Data Book 1954-1985*, Council for Economic Planning and Development, Taipei, 1986.
- *Energy Policy for the Taiwan Area*, Ministry of Economic Affairs, Energy Committee, Taipei, 1984.
- IEA Secretariat estimates.

**Sources up to 1981:**

- *The Energy Situation in Taiwan*, Ministry of Economic Affairs, Energy Committee, Taipei, 1986, 1987, 1988 and 1992.

- *Industry of Free China 1975-1985*, Council for Economic Planning and Development, Taipei, 1986.
- *Taiwan Statistical Data Book 1954-1985*, Council for Economic Planning and Development, Taipei, 1986.
- *Energy Policy for the Taiwan Area*, Ministry of Economic Affairs, Energy Committee, Taipei, 1984.
- *Energy Balances in Taiwan*, Ministry of Economic Affairs, Taipei, 1980 to 1981.

**Sources for biofuels and waste:**

- Energy Balances in Taiwan, Bureau of Energy, Ministry of Economic Affairs, Taipei.
- The UN Energy Statistics Database.
- IEA Secretariat estimates.

**Tajikistan****General notes**

Data for Tajikistan are available starting in 1990. Prior to that, they are included in Former Soviet Union.

Tajikistan is one of the 11 EU4Energy focus countries.

Breaks in time series occur between 2011 and 2012 and between 2013 and 2014, as new information became available in 2016 to the statistics office.

Data for 2015 has been revised this year to accommodate new information received from the statistics office.

**Sources****Sources 2015 and 2016:**

- Direct communication with the Statistical Agency under President of the Republic of Tajikistan, Dushanbe.
- Joint IEA/Eurostat/UNECE annual energy questionnaires, 2016.
- IEA Secretariat estimates

**Sources 1990 to 2014:**

- Direct communication with the Statistical Agency under President of the Republic of Tajikistan, Dushanbe.
- Joint IEA/Eurostat/UNECE annual energy questionnaires, 1991 to 2007 and 2014.

- *Online statistics*, Statistical Agency under the President of the Republic of Tajikistan.
- *Tajikistan in Figures*, Statistical Agency under the President of Tajikistan, various editions up to 2014.
- *Energy and Communal Services in Kyrgyzstan and Tajikistan: A Poverty and Social Impact Assessment*, UNDP Bratislava Regional Centre 2011.
- *CIS and East European Energy Databook*, Eastern Bloc Research Ltd, Tolsta Chaolais, various editions up to 2013.
- Asian Development Bank Statistics, various editions up to 2014.
- *Natural Gas Vehicles Statistics*, International Association for Natural Gas Vehicles, online database: [www.iangv.org](http://www.iangv.org).
- *Industry of Tajikistan, Statistics*, the State Committee on Statistics of the Republic of Tajikistan, 2004.
- IEA Secretariat estimates.

## Tanzania

### General notes

Some of oil data (EWURA) are reported on a fiscal year basis. Data for 2016 correspond to 1 July 2016 – 30 June 2017.

### Sources

#### *Sources up to 2016:*

- *Annual Report*, Bank of Tanzania, Dar es Salaam, various editions up to 2017.
- *EWURA Annual Report*, Energy and Water Utilities Regulatory Authority of the United Republic of Tanzania, Dar es Salaam, various editions up to 2017.
- *Annual Report*, Orca Exploration Group Inc., various editions up to 2017.
- *Tanzania in figures 2016*, Tanzania National Bureau of Statistics, 2016 edition.
- *The Economic Survey*, Tanzania National Bureau of Statistics, 2016 edition.
- *Statistical abstract*, Tanzania National Bureau of Statistics, various editions up to 2015.
- *The Economic Survey*, the Ministry of Finance, Dar Es Salaam, various editions up to 2015.
- *SAPP Annual Report 2008*, Southern African Power Pool, online statistics, 2010-2011.
- *The Economic Survey*, The President's Office – Planning and Privatization, Dar es Salaam, 2003-2007.
- Direct communication with the Ministry of Energy and Minerals and the electricity utility.
- *Tanzanian Economic Trends*, Economic Research Bureau, University of Dar es Salaam, 1991.
- IEA Secretariat estimates.

#### *Sources for biofuels and waste:*

- IEA Secretariat estimates based on 2000 data provided by World Energy Council, London, 2003.

## Thailand

### General notes

Thailand joined the IEA as an Association country in November 2015.

Data for lubricants, refinery gas and non-specified oil products are not published by the Ministry of Energy and are estimated by the IEA Secretariat. Up to 2014, IEA Secretariat also estimated naphtha.

Data for production, own use and non-energy use of natural gas may include propane, butane and ethane produced in gas separation plants.

Stock changes may include statistical difference for certain products.

In the 2014 edition, new information became available for the consumption of anthracite and lignite coal in industry. Breaks in time series may occur between 2011 and 2012.

### Sources

#### *Sources 2012 to 2016:*

- Direct communication with the Ministry of Energy, Thailand, Bangkok.
- Direct communication with the Petroleum Institute of Thailand, Bangkok.
- *Thailand Energy Statistics*, Ministry of Energy, Department of Alternative Energy Development and Efficiency, Bangkok, various editions up to 2016.

- *Thailand Energy Balance Table*, Ministry of Energy, Department of Alternative Energy Development and Efficiency, Bangkok, various editions up to 2016.
- *Thailand Alternative Energy Situation*, Ministry of Energy, Department of Alternative Energy Development and Efficiency, Bangkok, various editions up to 2016.
- *Thailand Energy Efficiency Situation*, Ministry of Energy, Department of Alternative Energy Development and Efficiency, Bangkok, various editions up to 2016.
- *Energy Statistics of Thailand*, Ministry of Energy, Energy Policy & Planning Office, Bangkok, various editions up to 2016.
- *Key Statistical Data*, Electricity Generation Authority of Thailand, online database: [www.egat.co.th](http://www.egat.co.th) accessed March 2018.
- *Thailand's Petroleum & Petrochemical Statistics*, Petroleum Institute of Thailand, Bangkok, various editions up to 2016.
- IEA Secretariat estimates.

#### Sources 2002 to 2012:

- Direct communication with the Petroleum Institute of Thailand, Bangkok, 2008 to 2012.
- *Thailand Energy Situation*, Ministry of Energy, Department of Alternative Energy Development and Efficiency, various editions up to 2012.
- *Key Statistical Data*, Electricity Generation Authority of Thailand, online database: [www.egat.co.th](http://www.egat.co.th).
- *Thailand Alternative Energy Situation*, Ministry of Energy, Department of Alternative Energy Development and Efficiency, various editions up to 2012.
- *Electric Power in Thailand*, Ministry of Energy, Department of Alternative Energy Development and Efficiency, various editions up to 2012.
- *Oil in Thailand*, Ministry of Energy, Department of Alternative Energy Development and Efficiency, various editions up to 2012.
- IEA Secretariat estimates.

#### Sources up to 2001:

- *Electric Power in Thailand*, Ministry of Science, Technology and Energy, National Energy Administration, Bangkok, 1985, 1986, 1988 to 2001.
- *Oil in Thailand*, Ministry of Science, Technology and Energy, National Energy Administration, Bangkok, 1979 to 2001.

- *Thailand Energy Situation*, Ministry of Science, Technology and Energy, National Energy Administration, Bangkok, 1978 to 2001.

#### Sources for biofuels and waste:

- *Thailand Energy Situation*, Ministry of Energy, Department of Alternative Energy Development and Efficiency, 2002 to 2010.
- *Thailand Alternative Energy Situation*, Ministry of Energy, Department of Alternative Energy Development and Efficiency, 2009-2010.
- IEA Secretariat estimates.

## Togo

### General notes

The IEA Secretariat could not obtain data from 2013 to 2016 from Togo in time. As a consequence, data for these years have been estimated based on population growth for biomass and household consumption, and GDP growth for other products than hydro.

Official data were submitted by Togo in 2014 for the years 2009-2012. Breaks in time series between 2008 and 2009 or differences in trends compared to previous publications may occur for this reason.

### Sources

#### Sources 1999 to 2016:

- Direct communication with Ministère de l'Équipement, des Mines, de l'Énergie et des Postes et Télécommunications, Lomé.
- *Bilans Énergétiques du Togo*, 1999 to 2012.
- Autorité de Réglementation du Secteur de l'Électricité (ARSE), 2015 and 2016.
- IEA Secretariat estimates.

#### Sources up to 1998:

- IEA Secretariat estimates.

## Trinidad and Tobago

### General notes

In the 2014 edition, natural gas time series from 2000 were revised based on newly available information on the definition of production of natural gas used by Trinidad and Tobago (gross versus marketed production).

## Sources

### Sources 1992 to 2016:

- Direct communication with the Ministry of Energy and Energy Affairs, Port of Spain.
- *Energy-Economic Information System (SIEE)*, Latin American Energy Organization (OLADE), Quito, accessed April 2018: <http://sier.olade.org/>.
- *Energy Industry Consolidated Monthly Bulletins*, Ministry of Energy and Energy Affairs, Government of the Republic of Trinidad and Tobago, Port of Spain, various editions up to 2016.
- *Downstream Gas Industry Annual Report*, Ministry of Energy and Energy Affairs, Government of the Republic of Trinidad and Tobago, Port of Spain, various editions up to 2015.
- *Annual Economic Survey*, Central Bank of Trinidad and Tobago, Port of Spain, 1995 to 2016.
- *Natural Gas in the World*, Cedigaz, Paris, various editions up to 2016.
- *The LNG Industry*, GIIGNL – International Group of Liquefied Natural Gas Importers, Paris, various editions up to 2014.
- *Petroleum Industry Monthly Bulletin*, Ministry of Energy and Natural Resources, Port of Spain, various issues up to 1999.

### Sources up to 1991:

- *Annual Statistical Digest*, Central Statistical Office, Port of Spain, 1983, 1984.
- *History and Forecast*, Electricity Commission, Port of Spain, 1987.
- *Annual Report*, Ministry of Energy and Natural Resources, Port of Spain, 1985, 1986.
- *The National Energy Balances 1979-1983*, Ministry of Energy and Natural Resources, Port of Spain, 1984.
- *Trinidad and Tobago Electricity Commission Annual Report*, Trinidad and Tobago Electricity Commission, Port of Spain, 1984, 1985.

### Sources for biofuels and waste:

- *Energy-Economic Information System (SIEE)*, Latin American Energy Organization (OLADE), Quito, accessed April 2018: <http://sier.olade.org/>.
- *Forestry Statistics*, FAO, Rome.

## Tunisia

### General notes

New information for lubricants and bitumen became available in 2015. Breaks in the time series may occur between 2009 and 2010 because of this.

A significant increase in crude oil production was reported for 2007 due to the start-up of several new development wells and the beginning of production of the Oudna field.

A shutdown of the Bizerte refinery occurred between March 2010 and June 2011, resulting in breaks in time series for crude oil and oil products for the years 2009 to 2011.

In 2009, new data on charcoal production became available. A break in time series for wood inputs and charcoal outputs can be observed between 2008 and 2009.

Revisions in heat data between 2013 and 2014 from the 2017 edition are based on a survey of autoproducers.

### Sources

#### Sources 1992 to 2016:

- Direct communication with the Observatoire National de l'Énergie et des Mines, Ministère de l'Énergie, des Mines et des Énergies Renouvelables, Tunis.
- Joint IEA/Eurostat/UNECE annual energy questionnaires.
- *Rapport Annuel 2011*, Société Tunisienne de l'Électricité et du Gaz, Tunis.
- Société Tunisienne des Industries de Raffinage, 2009 online statistics, 2008 to 2009.
- Statistiques d'Électricité du COMELEC, 2006, 2007, Comité Maghrébin de l'Électricité.

#### Sources up to 1991:

- *Bilan Énergétique de l'Année 1991*, Banque Centrale de Tunisie, Tunis, 1992.
- *Rapport d'Activité 1990*, Observatoire National de l'Énergie, Agence pour la Maîtrise de l'Énergie, Tunis, 1991.
- *Rapport Annuel 1990*, Banque Centrale de Tunisie, Tunis, 1991.



- *Activités du Secteur Pétrolier en Tunisie*, Banque Centrale de Tunisie, Tunis, 1987.
- *Statistiques Financières*, Banque Centrale de Tunisie, Tunis, 1986.
- *Entreprise Tunisienne d'Activités Pétrolières (ETAP)*, Tunis, 1987.
- *Annuaire Statistique de la Tunisie*, Institut National de la Statistique, Ministère du Plan, Tunis, 1985, 1986.
- *L'Economie de la Tunisie en Chiffres*, Institut National de la Statistique, Tunis, 1984, 1985.
- *Activités et Comptes de Gestion*, Société Tunisienne de l'Electricité et du Gaz, Tunis, 1987.

#### Sources for biofuels and waste:

- Joint IEA/Eurostat/UNECE annual energy questionnaire on renewables (2013-2016).
- Before 2013 : IEA Secretariat estimates based on 1991 data from *Analyse du Bilan de Bois d'Énergie et Identification d'un Plan d'Action*, Ministry of Agriculture, Tunis, 1998.

## Turkmenistan

### General notes

Data for Turkmenistan are available starting in 1990. Prior to that, they are included in Former Soviet Union.

Turkmenistan is one of the 11 EU4Energy focus countries.

Very little data for Turkmenistan are currently available. Supply data are available from secondary sources and consumption is estimated. To indicate the lack of data, certain figures for 2015 and 2016 have deliberately been kept equal to the previous year's figures.

### Sources

#### Sources 2016:

- *Natural Gas in the World*, Cedigaz, Paris, various editions up to 2017.
- *Forestry Statistics*, FAO, Rome, 2017.
- IEA Secretariat estimates.

#### Sources 2015:

- Turkmenistan Country Report, Turkmenenergo, 2016.

- *Natural Gas in the World*, Cedigaz, Paris, various editions up to 2016.
- *Forestry Statistics*, FAO, Rome, 2016.
- The UN Energy Statistics Database, 2015.
- IEA Secretariat estimates.
- Sources up to 2014: *CIS and East European Energy Databook*, Eastern Bloc Research Ltd, Tolsta Chaolais, various editions up to 2015.
- Asian Development Bank online database.
- *Natural Gas in the World*, Cedigaz, Paris, various editions up to 2015.
- *Forestry Statistics*, FAO, Rome, various editions up to 2015.
- The UN Energy Statistics Database.
- Direct communication with the National Institute on Statistics and Forecasting of Turkmenistan, November 1999 and January 2001.
- IEA Secretariat estimates.

## Ukraine

### General notes

Data for Ukraine are available starting in 1990. Prior to that, they are included in Former Soviet Union.

Ukraine is one of the 11 EU4Energy focus countries.

Due to limited information being available to the State Statistics Service of Ukraine from part of the Donetsk and Luhansk regions of Ukraine and from the Autonomous Republic of Crimea, breaks in the time series occur after 2013. New breaks appear in 2016, for example with diesel energy industry own use.

In 2016, power plants have been reclassified due to the implementation of more detailed survey forms.

The IEA Secretariat and State Statistics Service of Ukraine are working closely on the improvement of data quality, and in particular revision of historical data. Therefore, breaks in time series may occur between 2006 and 2007.

For the period 2007 to 2016 the transparency of data may be reduced because of confidentiality issues. For instance: peat includes lignite and patent fuel; other kerosene includes aviation fuels (aviation gasoline, gasoline-type jet fuel and kerosene-type jet fuel); other products include petroleum coke, and in 2016

aviation fuels and kerosene are included in other products.

## Coal

IEA statistics refer to coal after washing and screening for the removal of inorganic matter. Official Ukrainian coal statistics refer to unwashed and un-screened coal prior to 1995.

Bituminous coal “From other sources” refers to coal mined in informal sector.

Due to a plant closure in 2008, a stock of lignite/peat became available, without details about its consumption. This may lead to breaks in time series and high statistical difference for 2008.

Quantities of other sub-bituminous coal reported under patent fuel transformation are used to make briquettes from dust and due to confidentiality and calorific value of this output, it is reported in peat products and not in patent fuel production. No information was available for 2016.

## Oil

Large statistical differences exist for some oil products such as transport fuels and LPG. These are due to identified reporting issues in Ukraine. The State Statistics Service of Ukraine continues to work with data providers to resolve these issues.

Due to limited refinery information being available from 2015 onwards, refinery inputs have been estimated by the IEA Secretariat based on supply; discrepancies may appear in the refinery balance.

In 2016, refinery gas is reported in the transformation sector. A break in time series and statistical difference appears as more information on the supply side remains unavailable.

Quantities of other hydrocarbons reported until 2015 correspond to petroleum coke produced from coal tar. From 2016, this information is no longer available.

## Natural gas

The data for the stock draw and statistical difference of natural gas in 2010 are a consequence of the accounting method chosen by the Ukrainian administration to reflect the ruling of the Stockholm Arbitration Tribunal of March 30, 2010.

Gas stocks include stocks supplied to the Autonomous republic of Crimea.

Due to the new annual survey form, there was re-classification between main activity producers and autoproducers in 2016.

## Biofuels and waste

Charcoal production has included pyrolysis and calculated amounts of traditional production since 2008.

## Electricity and heat

Statistical difference for electricity includes electricity supplied to the Autonomous Republic of Crimea and the Donetsk and Luhansk regions of Ukraine.

Information on electricity used for pumped hydro has been available since 2012.

## Sources

### *Sources 2007 to 2016:*

- Direct communication with the State Statistics Service of Ukraine, Kiev.
- Joint IEA/Eurostat/UNECE annual energy questionnaires.

### *Sources 1992 to 2006:*

- Joint IEA/Eurostat/UNECE annual energy questionnaires.
- Direct communication with the Ministry of Statistics, the Coal Ministry, the National Dispatching Company, 1995.
- Coal: Direct communication with the State Mining University of Ukraine, 1995, 1996.
- Natural gas: direct communication with Ukgazprom, February 1995.
- Direct communication with the Ministry of Statistics of the Ukraine, July 1994.
- *Ukraine in 1992, Statistical Handbook*, Ministry of Statistics of the Ukraine, Kiev, 1993.
- *Ukraine Power Demand and Supply Options*, The World Bank, Washington, 1993.
- *Power Industry in Ukraine*, Ministry of Power and Electrification, Kiev, 1994.
- *Energy Issues Paper*, Ministry of Economy, March 1995.
- *Ukraine Energy Sector Statistical Review 1993, 1994, 1995, 1996, 1997*, The World Bank Regional Office, Kiev, 1994, 1995, 1996, 1997, 1998.

- *Global Energy Saving Strategy for Ukraine*, Commission of the European Communities, TACIS, Madrid, July 1995.
- IEA Secretariat estimates.

#### **Sources 1990 to 1991:**

- IEA Secretariat estimates.

#### **Sources for biofuels and waste:**

- Joint IEA/Eurostat/UNECE annual energy questionnaire on renewables (2007-2016).
- Before 2007: State Statistics Service of Ukraine, Kiev, The World Bank and IEA Secretariat estimates.

## United Arab Emirates

### **General notes**

In 2016, information on asphalt, lubricants, and other oil products were made available. Breaks in time series for these products can be seen between 2015 and 2016.

Sources for electricity data in 2016 show reclassification from other non-specified consumption to commercial and public services. A break in time series can be observed between 2015 and 2016.

In the 2018 edition, revisions in oil products supply and stocks can be observed since 2009 due to newly available data.

In 2015, time series for oil, gas, and coal data were revised according to data from Federal Competitiveness and Statistical Authority. Time series breaks can be observed in 2009 for coal, crude oil production and trade.

In 2015, Ruwais refining complex expansion was completed, significantly increasing refined oil product production and oil industry own use for refinery inputs.

Crude oil production and export data do not include field condensate. Field condensate quantities are included with natural gas liquids.

In 2013, time series on electricity imports and exports were revised due to new information available on international trade at the interconnectors for the United Arab Emirates. This may lead to revisions to these time series from 2007.

Time series revisions in NGL production were advised by the Federal Competitiveness and Statistical Authority. Breaks in time series can be observed in 2011 for NGLs.

### **Sources**

#### **Sources 1993 to 2016:**

- Direct communication with Federal Competitiveness and Statistics Authority, Dubai.
- Direct communication with United Arab Emirates Ministry of Energy, Dubai.
- *Annual Statistical Report*, Organization of Arab Petroleum Exporting Countries (OAPEC), Kuwait, various editions up to 2017.
- *Natural Gas in the World*, Cedigaz, Paris, various editions up to 2017.
- *Statistical Bulletin*, Arab Union of Producers, Transporters and Distributors of Electricity (AUPTDE), Amman, various editions up to 2017.
- *Annual Statistical Bulletin*, Organization of Petroleum Exporting Countries (OPEC), Vienna, various editions up to 2017.
- *Statistical Data for Electricity and Water 2015-2014*, United Arab Emirates Ministry of Energy, Dubai.
- *Statistical Report 1999-2016*, Abu Dhabi Water & Electric Company (ADWEC), Abu Dhabi, 2015.
- *Annual Report, Regulation & Supervision Bureau of Abu Dhabi*, Abu Dhabi, various editions up to 2012.
- *Statistical Yearbook 1995, 1996, 1998*, Department of Planning, Abu Dhabi, 1998, 2001.
- Direct communication with the National Bureau of Statistics of the United Arab Emirates, Abu Dhabi.
- Direct communication with the Ministry of Electricity and Water, Abu Dhabi, March 2001.
- The UN Energy Statistics Database.
- IEA Secretariat estimates.

#### **Sources up to 1992:**

- Annual Report 1998, Ministry of Electricity & Water, Dubai.
- *Abu Dhabi National Oil Company, 1985 Annual Report*, Abu Dhabi National Oil Company, Abu Dhabi, 1986.
- *United Arab Emirates Statistical Review 1981*, Ministry of Petroleum and Mineral Resources, Abu Dhabi, 1982.



- *Annual Statistical Abstract*, Ministry of Planning, Central Statistical Department, Abu Dhabi, various editions from 1980 to 1993.

#### Sources for biofuels and waste:

- *Forestry Statistics*, FAO, Rome, 2001.
- IEA Secretariat estimates.
- *Initial National Communication to the United Nations Framework Convention on Climate Change*, Ministry of Energy, United Arab Emirates, 2006.

## Uruguay

### General notes

The pronounced growth in production of biofuels and waste from 2007 to 2010 results from the development of the pulp and paper industry.

The power produced from the Salto Grande hydro-electric plant, located on the Uruguay River between Concordia in Argentina and Salto in Uruguay is equally shared between the two countries. Exports include power produced in Salto Grande and exported to Argentina.

The refinery was shut down for maintenance in 1993-1994. This explains the low refinery output observed in 1993 and the absence of output in 1994.

### Sources

#### Sources 1990 to 2016:

- Direct communication with Dirección Nacional de Energía, Ministerio de Industria, Energía y Minería, Montevideo.
- *Balance Energético Nacional*, Ministerio de Industria, Energía y Minería, Dirección Nacional de Energía, Montevideo, 1971 to 2016.
- *Energy-Economic Information System (SIEE)*, Latin American Energy Organization (OLADE), Quito, accessed Mar 2018: <http://sier.olade.org/>.
- IEA Secretariat estimates.

## Uzbekistan

### General notes

Data for Uzbekistan are available starting in 1990. Prior to that, they are included in Former Soviet Union.

Uzbekistan is one of the 11 EU4Energy focus countries.

Very little data for Uzbekistan are currently available. Supply data are available from secondary sources and consumption is estimated. To indicate the lack of data certain figures for 2015 and 2016 have deliberately been kept equal to 2014.

Due to new data from the State Committee of the Republic of Uzbekistan on Heat, breaks in time series may occur in 2008.

### Sources

#### Sources 2016

- Publications of State Committee of the Republic of Uzbekistan on Statistics.
- Asian Development Bank online database.
- Cedigaz online database.
- OMR estimation of oil production for 2016 and 2017.
- IEA Secretariat estimates.

#### Sources 2015:

- Asian Development Bank online database.
- Cedigaz online database.
- IEA Secretariat estimates.

#### Sources 1990 to 2014:

- Asian Development Bank online database.
- *CIS and East European Energy Databook*, Eastern Bloc Research Ltd, Tolsta Chaolais, various editions up to 2014.
- Direct communication with the Interstate Statistical Committee of the Commonwealth of Independent States.
- Direct communications to the IEA Secretariat from the Institute of Power Engineering and Automation, Academy of Sciences of Uzbekistan 1994, 1996, 1998 to 2003.
- Joint IEA/Eurostat/UNECE annual energy questionnaires, 1995 to 1997.
- IEA Secretariat estimates.

## Venezuela

### General notes

In 2015, new information on the production and consumption of refinery gas since 2007 became available. For this reason, breaks in time series may occur between 2006 and 2007.

Data for crude oil production are obtained from Petróleos de Venezuela S.A. (PDVSA) with an estimate of lease condensate removed. Crude oil production data are comparable to data reported by the Organization of the Petroleum Exporting Countries (OPEC) and the Organización Latino Americana de Energia (OLADE); however, some other sources of information report lower crude oil production, noting other components may be included in the crude oil production data reported in the above sources.

Lease condensate quantities are included in NGL from 2000. This may lead to breaks in time series between 1999 and 2000.

Revised data for the years 2005-2011 were provided by OLADE for Venezuela. These revisions may lead to breaks in time series between 2004 and 2005 and differences in trends in comparison to previous editions.

## Sources

### Sources up to 2016:

- Energy-Economic Information System (SIEE), Latin American Energy Organization (OLADE), Quito, accessed April 2018: <http://sier.olade.org/>.
- *Natural Gas in the World*, Cedigaz, Paris, various editions up to 2017.
- *Petróleos de Venezuela S.A. (PDVSA)* various editions up to 2016 Annual Report, Petróleos de Venezuela, Caracas.
- *Estadísticas consolidadas*, Cámara Venezolana de la Industria Eléctrica, 1996 to 2007.
- *Oficina de operación de sistemas interconectados Venezuela*, 2008.
- *Petróleo y Otros Datos Estadísticos*, Dirección General Sectorial de Hidrocarburos, Caracas, 1983 to 1991, 1993 to 2004, 2007 to 2008.
- *Balance Energético de Venezuela*, Dirección de Planificación Energética, Ministerio de Energía y Minas, Caracas, 1971 to 2005.
- *Transformando la energía en desarrollo social*, CVG EDELCA Informe Anual 2006.
- *Compendio Estadístico del Sector Eléctrico*, Ministerio de Energía y Minas, Dirección de Electricidad, Carbón y Otras Energías, Caracas, 1984, 1989, 1990, 1991.
- *Memoria y Cuenta*, Ministerio de Energía y Minas, Caracas, 1991.
- IEA Secretariat estimates.

### Sources for biofuels and waste:

- The UN Energy Statistics Database.
- IEA Secretariat estimates.

## Viet Nam

### General notes

Data for stock changes may contain statistical differences for some energy products.

### Sources

#### Sources 1992 to 2016:

- Direct communication with the Institute of Energy and the Ministry of Industry and Trade, Hanoi.
- *Vietnam Energy Balance Tables*, General Directorate of Energy, Ministry of Industry and Trade, Hanoi, various editions up to 2016.
- *Statistical Yearbook of Vietnam & Statistical Handbook*, General Statistics Office of Vietnam (GSO), Hanoi, various editions up to 2015.
- *Yearbook*, Vietnam Energy ( NĂng Lượng Việt Nam), Hanoi, 2012.
- *Annual Report 2006*, Petrovietnam, Vietnam National Oil and Gas Group.
- Direct communication with the Center for Energy-Environment Research and Development, Pathumthami, 1997 to 1999.
- *Sectoral Energy Demand in Vietnam*, UNDP Economic and Social Commission for Asia and the Pacific, Bangkok, 1992.
- *Energy Commodity Account of Vietnam 1992*, Asian Development Bank, Manila, 1994.
- *World Economic Problems (20)*, National Centre for Social Sciences of the S.R. Vietnam, Institute of World Economy, Hanoi, 1993.
- *Vietnam Energy Review*, Institute of Energy, Hanoi, 1995, 1997, 1998.
- IEA Secretariat estimates.

### Sources for biofuels and waste:

- IEA Secretariat estimates based on 1992 data from *Vietnam Rural and Household Energy Issues and Options: Report No. 161/94*, The World Bank, ESMAP, Washington, D.C., 1994.

## Yemen

### General notes

Oil and gas pipeline sabotage was reported in 2012 due to unrest in Yemen. Breaks in time series between 2011 and 2012 as well as between 2012 and 2013 may be observed because of this.

Oil and gas activity was halted in 2015 due to military conflict, affecting oil and oil products data from 2015-2016. In 2016, no exports occurred.

Some revisions to 2014 oil data are due to receipt of Ministry of Planning reports.

In the 2018 edition, revisions to electricity inputs and consumption from 2014-2015 are based on IEA Secretariat estimates.

### Sources

#### Sources 2011 to 2016:

- Direct communication with the Ministry of Planning and International Cooperation, Sana'a.
- Direct communication with Aden Refinery, Aden.
- *Statistical Bulletin*, Arab Union of Producers, Transporters and Distributors of Electricity (AUPTE), Amman, various editions up to 2016.
- *Natural Gas in the World*, Cedigaz, Paris, various editions up to 2017.
- *Renewable energy statistics 2018*, International Renewable Energy Agency (IRENA).
- *Statistical Yearbook*, Central Statistical Organization, Sana'a, various editions up to 2013.
- *Petroleum Subsidies in Yemen*, IFPRI, 2011.
- IEA Secretariat estimates.

#### Sources 1991 to 2010:

- Yemen Petroleum Company, online statistics, 2010.
- *Oil & Gas in Figures 2001 – 2007*, Ministry of Oil & Minerals, Statistics Technical Committee, Yemen, 2008.
- *Oil, Gas and Minerals Statistics*, Annual Bulletin 2001, 2002, 2003, 2004, 2005 and 2006, Ministry of Oil & Minerals, Statistics Technical Committee, Yemen, 2001 to 2007.
- Household Budget Survey 2005/2006, Central Statistical Organization, Sana'a.

- Direct communications with the Yemen General Oil and Gas Corporation, the Public Electricity Corporation, and the National Information Center, Sana'a, 2001.
- *Statistical Indicators in the Electricity Sector*, Ministry of Planning and Development, Central Statistical Organization, Yemen, 1993.
- IEA Secretariat estimates.

#### Sources up to 1991:

- *Statistical Yearbook*, Government of Yemen Arab Republic, Yemen, 1988.

#### Sources for biofuels and waste:

- The UN Energy Statistics Database.
- Forestry Statistics, FAO, Rome, 2000.
- IEA Secretariat estimates.

## Former Yugoslavia

### General notes

Data for individual countries of the Former Yugoslavia are available starting in 1990, and most of the information on 1990 and 1991 was estimated by the IEA Secretariat. Because of large breaks in reporting which occurred in the early 1990's, breaks in time series may occur in 1990 for all regional totals.

### Sources

#### Sources up to 1989:

- *Statisticki Godisnjak Jugoslavije*, Socijalisticka Federativna Reublika Jugoslavija, Savezni Zavod Za Statistiku, Beograd, 1985 to 1991.
- Indeks, Socijalisticka Federativna Reublika Jugoslavija, Beograd, 1990, 1991, 1992.

## Zambia

### General notes

In August 2016, a coal thermal power plant with an installed capacity of 300 MW was commissioned in Maamba, Sinazongwe District.

Crude oil imports reported by Zambia's Energy Regulation Board include petroleum feedstocks comprised of crude oil, naphtha, condensate, and gasoil.

A fire damaged the sole oil refinery (Indeni) in Zambia in 2000. Therefore, breaks in time series may occur between 1999 and 2000, as well as between 2000 and 2001.

In 2015, information on refinery yields was obtained and applied to the refinery production from 2001. Therefore, breaks in time series may occur between 2000 and 2001.

## Sources

### Sources 1971 to 2016:

- *Statistical Bulletin*. Energy Regulation Board, Lusaka, 2016.
- *Energy Sector Report*. Energy Regulation Board, Lusaka, various editions up to 2016.
- *Petroleum Industry Statistics*, Energy Regulation Board, Lusaka. Various editions up to 2016.
- *Institutional Framework and Storage and Transportation Infrastructure of the Zambian Petroleum Supply Chain (DRAFT)*, Government of the Republic of Zambia, 2007.
- *Economic Report 2003*, Ministry of Finance, Lusaka.
- *Energy Statistics Bulletin 1980-1999*, Department of Energy, Lusaka, 2000.
- AFREPREN, 2002.
- *Annual Statistical Yearbook 1993, 1994, 1995 (Consumption in Zambia 1978-1983)*, Eskom, Lusaka, 1984.
- IEA Secretariat estimates.

### Sources for biofuels and waste:

- IEA Secretariat estimates based on 1991 data from *Forests and Biomass Sub-sector in Africa*, African Energy Programme of the African Development Bank, Abidjan, 1996.

## Zimbabwe

### General notes

A new mining company was commissioned in 2011, leading to a rapid increase in coal production. Due to limited availability of coal consumption data, the IEA Secretariat has estimated coal stocks for Zimbabwe. Breaks in time series may occur between 2013 and 2014 because of this.

More detailed data on energy consumption is available from the Census of Industrial Production (ZimStat) since 2009. Breaks in time series may occur between 2008 and 2009 because of this.

More detailed data on road fuel imports is available since 2011. Breaks in time series may occur between 2010 and 2011 because of this.

## Sources

### Sources 2006 to 2016:

- Direct communication with the Ministry of Energy and Power Development, Harare.
- *Census of Industrial Production (CIP)*, Zimbabwe National Statistics Agency (ZimStat), Harare, Various editions up to 2016.
- Direct communication with the Zimbabwe National Statistical Agency (ZimStat), Harare.
- *Annual Report*, Zimbabwe Power Company (ZPC), Harare, various editions from 2010 up to 2012.
- IEA Secretariat estimates.

### Sources 1996 to 2005:

- Direct communication with the Ministry of Energy and Power Development.
- Direct communication with the Zimbabwe Electricity Supply Authority (ZESA), 2003, 2005, 2006.
- *African Economic Outlook 2004*, OECD, Paris, 2004.
- Direct communication with the Department of Energy Resources and Development, February 2002, AFREPREN, 2002.
- Direct communication with the Ministry of Environment and Tourism, Harare, 1999, 2000.
- Direct communication with the electricity utility.
- *Electricity Statistics Information*, Central Statistical Office, Causeway, February 1998.
- IEA Secretariat estimates.

### Sources 1992 to 1995:

- *Eskom Annual Statistical Yearbook 1993, 1994, 1995*, Johannesburg, 1994, 1995, 1996, citing Zimbabwe Electricity Supply Authority, Harare as source.
- The UN Energy Statistics Database.

**Sources up to 1991:**

- *Zimbabwe Statistical Yearbook 1986*, Central Statistical Office, Harare, 1990.
- *Quarterly Digest of Statistics*, Central Statistical Office, Harare, 1990.
- *Zimbabwe Electricity Supply Authority Annual Report*, Zimbabwe Electricity Supply Authority, Harare, 1986 to 1991.

**Sources for biofuels and waste:**

- IEA Secretariat estimates based on 1991 data from *Forests and Biomass* Sub-sector in Africa, African Energy Programme of the African Development Bank, Abidjan, 1996.

**Other Africa****General notes**

Time series for this region are obtained by summing data corresponding to individual countries (see lists in section I.5, Geographical coverage). As a consequence, intra-regional trade is included as part of total trade. Therefore, trade is likely to be overstated.

The UN Statistics Division database is the main data source for the countries not listed individually and included in the region. At the time when this edition was prepared only 2015 data were available. As a consequence, all data points for 2016 have been estimated based on developments in population and GDP in the region.

In 2015 data for bagasse use in the transformation sector in autoproducer electricity plants, main activity producer CHP plants and autoproducer CHP plants became available for the years 2011-2013. This may lead to breaks in time series between 2010 and 2011.

Since 2015 edition, data for Niger are no longer included in Other Africa for the period 2000-2015. This may lead to breaks in time series between 1999 and 2000.

**Sources****Sources up to 2016:**

- The UN Energy Statistics Database.
- *Natural Gas in the World*, Cedigaz, Paris, various editions up to 2017.

- *The LNG Industry*, International Group of Liquefied Natural Gas Importers (GIIGNL), Levallois, various editions up to 2016.
- *International Monetary Fund Country Reports* on Chad, various editions up to 2016.
- *Annual Statistical Bulletin*, Organization of Petroleum Exporting Countries (OPEC), Vienna, various editions up to 2017.
- IEA Secretariat estimates.

**Other non-OECD Asia****General notes**

Time series for this region are obtained by summing data corresponding to individual countries (see lists in section I.5, Geographical coverage). As a consequence, intra-regional trade is included as part of total trade. Therefore, trade is likely to be overstated.

The UN Statistics Division database is the main data source for the countries not listed individually and included in the region. At the time when this edition was prepared only 2015 data were available. As a consequence, all data points for 2016 have been estimated based on developments in population and GDP in the region. In the 2018 edition only 2015 data were uploaded.

The opening of a new LNG terminal in Papua New Guinea in 2014 may lead to breaks in time series for Natural Gas supply data.

**Sources****Sources up to 2016:**

- The UN Energy Statistics Database.
- *The LNG Industry*, International Group of Liquefied Natural Gas Importers (GIIGNL), Levallois, various editions up to 2016.
- IEA Secretariat estimates.

**Other non-OECD Americas****General notes**

Time series for this region are obtained by summing data corresponding to individual countries (see lists in section I.5, Geographical coverage). As a consequence, intra-regional trade is included as part of total trade. Therefore, trade is likely to be overstated.



The UN Statistics Division database is the main data source for the countries not listed individually and included in the region. At the time when this edition was prepared only 2015 data were available. As a consequence, all data points for 2016 have been estimated based on developments in population and GDP in the region.

The refinery in Aruba was shut down in September 2012. This may lead to breaks in time series for the period 2011-2013.

Energy data for Bonaire, Saba, Saint Eustratius and Sint Maarten are included in Other non-OECD Americas since 2012.

Data for Suriname are no longer included in Other non-OECD Americas from 2000 on. This may lead to breaks in time series between 1999 and 2000.

## Sources

### *Sources up to 2016:*

- Annual Statistical Digest of the Central Bank of Aruba.
- The economy of Curacao and Sint Maarten in Data and Charts Yearly Overview.
- The UN Energy Statistics Database.
- IEA Secretariat estimates.





# PART III

## SUMMARY TIME SERIES

## Production of coal (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>1 474.00</b>	<b>1 799.65</b>	<b>2 223.30</b>	<b>2 278.40</b>	<b>2 997.73</b>	<b>3 663.20</b>	<b>3 886.39</b>	<b>3 657.19</b>	<b>3 764.82</b>
<b>Non-OECD Total</b>	<b>654.90</b>	<b>830.64</b>	<b>1 151.35</b>	<b>1 311.25</b>	<b>1 986.09</b>	<b>2 665.62</b>	<b>2 967.05</b>	<b>2 836.65</b>	<b>2 925.80</b>
<b>OECD Total</b>	<b>819.10</b>	<b>969.02</b>	<b>1 071.95</b>	<b>967.15</b>	<b>1 011.64</b>	<b>997.58</b>	<b>919.33</b>	<b>820.54</b>	<b>844.67</b>
Canada	11.70	20.25	37.93	34.41	34.55	33.95	30.77	30.02	30.37
Chile	0.96	0.78	1.45	0.24	0.27	0.25	1.26	1.01	1.00
Mexico	1.50	1.73	3.74	5.68	7.08	8.01	5.77	6.96	6.62
United States	333.36	447.92	542.32	536.86	565.28	531.84	431.28	348.46	373.14
<b>OECD Americas</b>	<b>347.52</b>	<b>470.68</b>	<b>585.44</b>	<b>577.19</b>	<b>607.18</b>	<b>574.04</b>	<b>469.09</b>	<b>386.46</b>	<b>411.14</b>
Australia	40.25	51.90	106.10	164.58	201.58	246.56	298.58	292.03	293.89
Israel <sup>1</sup>	-	-	0.02	0.03	0.03	0.03	0.04	0.04	0.04
Japan	17.90	10.90	4.31	1.52	0.67	0.61	0.65	0.66	0.68
Korea	6.65	8.20	7.58	3.64	1.26	0.96	0.78	0.77	0.66
New Zealand	1.15	1.14	1.42	2.07	3.16	3.14	1.94	1.63	1.67
<b>OECD Asia Oceania</b>	<b>65.96</b>	<b>72.14</b>	<b>119.44</b>	<b>171.84</b>	<b>206.70</b>	<b>251.30</b>	<b>301.99</b>	<b>295.13</b>	<b>296.94</b>
Austria	1.02	0.84	0.64	0.29	0.00	0.00	0.00	-	-
Belgium	6.42	4.71	1.18	0.21	0.06	0.01	0.01	0.01	0.01
Czech Republic	38.01	40.45	36.31	25.05	23.57	20.83	16.91	16.12	15.50
Denmark	-	-	-	-	-	-	-	-	-
Estonia	..	..	5.04	2.67	3.18	3.94	4.25	3.15	4.00
Finland	0.06	0.73	1.81	1.09	2.14	1.81	0.84	0.72	0.73
France	18.04	13.38	8.27	2.48	0.38	0.16	-	-	-
Germany	141.40	143.14	121.77	60.63	56.48	45.91	43.00	39.72	39.50
Greece	1.69	2.95	7.12	8.22	8.54	7.32	5.68	3.97	4.55
Hungary	6.05	6.34	4.22	2.89	1.75	1.59	1.52	1.46	1.26
Iceland	-	-	-	-	-	-	-	-	-
Ireland	1.06	1.08	1.43	0.97	0.82	1.00	0.77	0.68	0.77
Italy	0.30	0.32	0.28	0.00	0.06	0.06	0.05	-	-
Latvia	..	..	0.06	0.02	0.00	0.00	-	0.00	0.00
Luxembourg	-	-	-	-	-	-	-	-	-
Netherlands	1.14	-	-	-	-	-	-	-	-
Norway	0.29	0.20	0.20	0.42	0.99	1.30	0.74	0.55	0.09
Poland	100.73	120.35	98.97	71.30	68.86	55.38	53.87	52.31	49.69
Portugal	0.13	0.07	0.12	-	-	-	-	-	-
Slovak Republic	1.70	1.70	1.40	1.02	0.64	0.61	0.50	0.45	0.45
Slovenia	..	..	1.35	1.06	1.18	1.20	0.86	0.94	0.94
Spain	6.48	9.82	11.75	7.97	6.26	3.30	1.25	0.74	1.03
Sweden	0.01	0.01	0.17	0.16	0.21	0.24	0.11	0.13	0.11
Switzerland	-	-	-	-	-	-	-	-	-
Turkey	5.21	6.15	11.39	13.02	10.57	16.74	12.80	15.50	16.15
United Kingdom	75.89	73.96	53.61	18.66	12.07	10.84	5.11	2.50	1.82
<b>OECD Europe</b>	<b>405.62</b>	<b>426.20</b>	<b>367.08</b>	<b>218.13</b>	<b>197.76</b>	<b>172.23</b>	<b>148.26</b>	<b>138.95</b>	<b>136.60</b>
IEA	818.14	968.24	1 069.07	965.80	1 010.16	996.10	917.17	818.54	842.69
IEA/Accession/Association	1 060.04	1 331.08	1 693.93	1 863.42	2 507.54	3 125.45	3 316.68	3 065.46	3 155.51
European Union - 28	..	..	369.63	214.59	196.19	165.04	145.30	132.24	125.07
G7	598.59	709.87	768.49	654.56	669.50	623.37	510.87	421.37	445.51
G8	..	..	960.87	783.09	826.92	789.73	711.14	630.53	667.06
G20	..	..	1 995.21	2 122.13	2 804.04	3 437.83	3 665.15	3 421.97	3 527.14
<i>OPEC</i>	1.02	0.76	2.21	6.52	6.27	2.74	1.36	1.31	1.31

Where applicable, this table includes peat and oil shale except for 2017 provisional figures for non-OECD countries.

1. Please refer to section 'Geographical coverage'.

## Production of coal (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>654.90</b>	<b>830.64</b>	<b>1 151.35</b>	<b>1 311.25</b>	<b>1 986.09</b>	<b>2 665.62</b>	<b>2 967.05</b>	<b>2 836.65</b>	<b>2 925.80</b>
Albania	0.28	0.50	0.49	0.01	0.01	0.00	0.03	0.00	0.04
Armenia	..	..	-	-	-	-	0.00	0.00	..
Azerbaijan	..	..	-	-	-	-	-	-	..
Belarus	..	..	0.84	0.49	0.56	0.57	0.24	0.33	..
Bosnia and Herzegovina	..	..	4.18	2.46	2.95	3.50	3.17	3.52	3.62
Bulgaria	4.65	5.19	5.38	4.29	4.18	4.94	5.85	5.10	5.59
Croatia	..	..	0.10	-	-	-	-	-	..
Cyprus <sup>1</sup>	-	-	-	-	-	-	-	-	..
FYR of Macedonia	..	..	1.21	1.21	1.23	1.19	0.88	0.75	0.73
Georgia	..	..	0.66	0.00	0.00	0.04	0.12	0.12	0.11
Gibraltar	-	-	-	-	-	-	-	-	..
Kazakhstan	..	..	58.01	34.13	38.28	48.55	47.11	45.20	46.49
Kosovo	..	..	..	0.93	1.22	1.61	1.54	1.64	1.41
Kyrgyzstan	..	..	1.41	0.16	0.12	0.21	0.71	0.67	0.67
Lithuania	..	..	0.01	0.01	0.02	0.01	0.02	0.00	..
Malta	-	-	-	-	-	-	-	-	..
Republic of Moldova	..	..	-	-	-	-	-	-	..
Montenegro	..	..	..	..	0.29	0.43	0.39	0.31	0.32
Romania	6.05	8.10	8.65	5.60	5.79	5.90	4.71	4.24	4.73
Russian Federation	..	..	192.38	128.54	157.43	166.36	200.27	209.16	221.77
Serbia	..	..	10.17	8.35	7.46	7.23	7.20	7.20	7.45
Tajikistan	..	..	0.37	0.01	0.04	0.09	0.46	0.60	0.78
Turkmenistan	..	..	-	-	-	-	-	-	..
Ukraine	..	..	86.81	36.35	34.68	33.71	20.29	22.87	15.82
Uzbekistan	..	..	2.26	0.91	1.08	1.28	1.56	1.56	1.44
Former Soviet Union	331.53	339.56	x	x	x	x	x	x	x
Former Yugoslavia	7.65	9.62	x	x	x	x	x	x	x
<b>Non-OECD Europe and Eurasia</b>	<b>350.17</b>	<b>362.97</b>	<b>372.94</b>	<b>223.44</b>	<b>255.34</b>	<b>275.62</b>	<b>294.55</b>	<b>303.26</b>	<b>310.76</b>
Algeria	0.21	0.00	-	-	-	-	-	-	..
Angola	-	-	-	-	-	-	-	-	..
Benin	-	-	-	-	-	-	-	-	..
Botswana	..	..	0.45	0.53	0.56	0.56	1.18	1.06	1.25
Cameroon	-	-	-	-	-	-	-	-	..
Congo	-	-	-	-	-	-	-	-	..
Côte d'Ivoire	-	-	-	-	-	-	-	-	..
Dem. Rep. of the Congo	0.08	0.08	0.08	-	-	-	-	-	..
Egypt	-	-	-	0.04	0.02	-	-	-	..
Eritrea	..	..	..	-	-	-	-	-	..
Ethiopia	-	-	-	-	-	0.02	-	-	..
Gabon	-	-	-	-	-	-	-	-	..
Ghana	-	-	-	-	-	-	-	-	..
Kenya	-	-	-	-	-	-	-	-	..
Libya	-	-	-	-	-	-	-	-	..
Mauritius	-	-	-	-	-	-	-	-	..
Morocco	0.35	0.42	0.29	0.02	0.01	-	-	-	..
Mozambique	0.24	0.12	0.02	0.01	0.00	0.02	4.31	3.92	7.25
Namibia	..	..	..	-	-	-	-	-	..
Niger	..	..	..	0.04	0.05	0.08	0.06	0.07	0.07
Nigeria	0.21	0.11	0.06	0.00	0.00	0.02	0.03	0.03	0.03
Senegal	-	-	-	-	-	-	-	-	..
South Africa	35.14	66.76	100.16	126.93	138.37	143.94	144.53	144.55	145.69
South Sudan	..	..	..	..	..	..	-	-	..
Sudan	-	-	-	-	-	-	-	-	..
United Rep. of Tanzania	-	0.00	0.00	0.05	0.02	-	0.16	0.17	0.35
Togo	-	-	-	-	-	-	-	-	..
Tunisia	-	-	-	-	-	-	-	-	..
Zambia	0.55	0.34	0.22	0.12	0.09	0.00	0.10	0.19	0.19
Zimbabwe	1.81	1.78	3.45	2.89	2.33	1.85	2.80	1.05	1.89
Other Africa	0.10	0.35	0.20	0.26	0.31	0.34	0.12	0.12	0.12
<b>Africa</b>	<b>38.69</b>	<b>69.96</b>	<b>104.93</b>	<b>130.89</b>	<b>141.75</b>	<b>146.84</b>	<b>153.28</b>	<b>151.17</b>	<b>156.84</b>

Where applicable, this table includes peat and oil shale except for 2017 provisional figures for non-OECD countries.

1. Please refer to section 'Geographical coverage'.

## Production of coal (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	-	-	-	-	0.09	0.35	0.34	0.51	0.58
Brunei Darussalam	-	-	-	-	-	-	-	-	..
Cambodia	..	..	..	-	-	-	-	-	..
DPR of Korea	17.51	25.44	26.62	16.91	19.87	14.51	16.87	19.08	11.31
India	32.74	47.84	93.34	130.64	163.31	212.87	263.52	271.21	276.57
Indonesia	0.09	0.17	5.85	45.45	98.23	186.31	245.07	248.85	261.97
Malaysia	-	-	0.07	0.24	0.50	1.51	1.61	1.42	1.82
Mongolia	..	..	2.66	1.81	3.65	15.19	13.13	19.52	30.34
Myanmar	0.01	0.01	0.04	0.32	0.32	0.41	0.44	0.26	0.26
Nepal	-	-	-	0.01	0.01	0.01	0.01	0.01	0.01
Pakistan	0.51	0.63	1.10	1.24	1.86	1.37	1.74	1.75	1.80
Philippines	0.01	0.17	0.65	0.72	1.52	3.51	3.89	5.92	6.11
Singapore	-	-	-	-	-	-	-	-	..
Sri Lanka	-	-	-	-	-	-	-	-	..
Chinese Taipei	2.10	1.60	0.29	0.05	-	-	-	-	..
Thailand	0.08	0.41	3.60	5.14	6.05	5.32	3.86	4.31	4.13
Viet Nam	1.67	2.91	2.60	6.50	19.00	25.11	23.23	21.58	22.61
Other Non-OECD Asia	0.91	1.69	0.07	0.23	0.37	0.94	2.58	5.94	6.28
<b>Non-OECD Asia excl. China</b>	<b>55.64</b>	<b>80.87</b>	<b>136.88</b>	<b>209.24</b>	<b>314.77</b>	<b>467.42</b>	<b>576.29</b>	<b>600.36</b>	<b>623.80</b>
People's Rep. of China	206.79	310.72	518.39	713.50	1 227.03	1 722.49	1 882.74	1 718.90	1 772.82
Hong Kong, China	-	-	-	-	-	-	-	-	..
<b>China</b>	<b>206.79</b>	<b>310.72</b>	<b>518.39</b>	<b>713.50</b>	<b>1 227.03</b>	<b>1 722.49</b>	<b>1 882.74</b>	<b>1 718.90</b>	<b>1 772.82</b>
Argentina	0.27	0.23	0.16	0.15	0.01	0.04	0.02	0.01	0.01
Bolivia	-	-	-	-	-	-	-	-	..
Brazil	0.88	2.49	1.93	2.63	2.48	2.10	3.07	2.64	1.93
Colombia	1.84	2.71	13.89	24.86	38.39	48.33	55.61	58.83	58.13
Costa Rica	-	-	-	-	-	-	-	-	..
Cuba	-	-	-	-	-	-	-	-	..
Curaçao	-	-	-	-	-	-	-	-	..
Dominican Republic	-	-	-	-	-	-	-	-	..
Ecuador	-	-	-	-	-	-	-	-	..
El Salvador	-	-	-	-	-	-	-	-	..
Guatemala	-	-	-	-	-	-	-	-	..
Haiti	-	-	-	-	-	-	-	-	..
Honduras	-	-	-	-	-	-	-	-	..
Jamaica	-	-	-	-	-	-	-	-	..
Nicaragua	-	-	-	-	-	-	-	-	..
Panama	-	-	-	-	-	-	-	-	..
Paraguay	-	-	-	-	-	-	-	-	..
Peru	0.02	0.03	0.07	0.01	0.03	0.06	0.17	0.18	0.21
Suriname	..	..	..	-	-	-	-	-	..
Trinidad and Tobago	-	-	-	-	-	-	-	-	..
Uruguay	-	-	-	-	-	-	-	-	..
Venezuela	0.04	0.03	1.60	5.76	5.25	1.99	0.61	0.55	0.55
Other Non-OECD Americas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	..
<b>Non-OECD Americas</b>	<b>3.05</b>	<b>5.49</b>	<b>17.66</b>	<b>33.41</b>	<b>46.17</b>	<b>52.53</b>	<b>59.47</b>	<b>62.21</b>	<b>60.84</b>
Bahrain	-	-	-	-	-	-	-	-	..
Islamic Republic of Iran	0.57	0.62	0.56	0.76	1.01	0.73	0.73	0.74	0.74
Iraq	-	-	-	-	-	-	-	-	..
Jordan	-	-	-	-	-	-	-	-	..
Kuwait	-	-	-	-	-	-	-	-	..
Lebanon	-	-	-	-	-	-	-	-	..
Oman	-	-	-	-	-	-	-	-	..
Qatar	-	-	-	-	-	-	-	-	..
Saudi Arabia	-	-	-	-	-	-	-	-	..
Syrian Arab Republic	-	-	-	-	-	-	-	-	..
United Arab Emirates	-	-	-	-	-	-	-	-	..
Yemen	-	-	-	-	-	-	-	-	..
<b>Middle East</b>	<b>0.57</b>	<b>0.62</b>	<b>0.56</b>	<b>0.76</b>	<b>1.01</b>	<b>0.73</b>	<b>0.73</b>	<b>0.74</b>	<b>0.74</b>

Where applicable, this table includes peat and oil shale except for 2017 provisional figures for non-OECD countries.

## Production of crude oil and NGL (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>2 938.39</b>	<b>3 173.56</b>	<b>3 241.41</b>	<b>3 702.74</b>	<b>4 050.25</b>	<b>4 083.96</b>	<b>4 411.17</b>	<b>4 473.27</b>	<b>4 463.44</b>
<b>Non-OECD Total</b>	<b>2 227.87</b>	<b>2 325.61</b>	<b>2 317.21</b>	<b>2 661.76</b>	<b>3 094.01</b>	<b>3 192.05</b>	<b>3 289.56</b>	<b>3 379.30</b>	<b>3 341.64</b>
<b>OECD Total</b>	<b>710.51</b>	<b>847.95</b>	<b>924.21</b>	<b>1 040.98</b>	<b>956.24</b>	<b>891.91</b>	<b>1 121.61</b>	<b>1 093.97</b>	<b>1 121.80</b>
Canada	96.53	83.64	94.15	128.43	142.94	167.16	226.27	224.02	242.34
Chile	1.79	1.83	1.17	0.43	0.36	0.61	0.30	0.26	0.29
Mexico	27.49	114.64	153.28	171.19	197.52	155.26	130.95	124.69	112.77
United States	534.59	498.35	432.54	365.61	322.55	347.60	582.41	560.15	585.57
<b>OECD Americas</b>	<b>660.41</b>	<b>698.45</b>	<b>681.14</b>	<b>665.65</b>	<b>663.36</b>	<b>670.63</b>	<b>939.92</b>	<b>909.11</b>	<b>940.97</b>
Australia	19.85	21.30	29.03	33.91	25.67	25.54	18.09	17.57	15.31
Israel <sup>1</sup>	6.10	0.02	0.01	0.00	0.00	0.00	0.08	0.12	0.12
Japan	0.81	0.56	0.69	0.77	0.75	0.69	0.47	0.44	0.44
Korea	-	-	-	0.67	0.53	0.70	0.66	0.69	0.72
New Zealand	0.18	0.37	1.97	1.94	1.08	2.75	2.16	1.83	1.68
<b>OECD Asia Oceania</b>	<b>26.94</b>	<b>22.25</b>	<b>31.69</b>	<b>37.30</b>	<b>28.04</b>	<b>29.68</b>	<b>21.45</b>	<b>20.65</b>	<b>18.27</b>
Austria	2.64	1.52	1.21	1.09	0.98	1.03	0.89	0.80	0.75
Belgium	-	-	-	-	-	-	-	-	-
Czech Republic	0.04	0.24	0.22	0.38	0.59	0.27	0.21	0.19	0.23
Denmark	0.07	0.30	6.11	18.26	19.02	12.49	7.90	7.11	6.92
Estonia	..	..	-	-	-	-	-	-	-
Finland	-	-	-	0.10	0.15	0.07	0.07	0.07	0.07
France	2.07	2.26	3.47	1.81	1.38	1.09	0.99	0.94	0.89
Germany	6.85	5.66	4.71	3.94	5.10	3.67	3.54	3.60	3.52
Greece	-	-	0.84	0.26	0.09	0.10	0.06	0.16	0.13
Hungary	2.02	2.52	2.27	1.68	1.42	1.09	0.87	0.99	1.03
Iceland	-	-	-	-	-	-	-	-	-
Ireland	-	-	-	-	-	-	-	-	-
Italy	1.05	1.73	4.47	4.69	6.26	5.62	5.79	4.03	4.42
Latvia	..	..	-	-	-	-	-	-	-
Luxembourg	-	-	-	-	-	-	-	-	-
Netherlands	1.59	1.61	4.13	2.65	2.55	1.64	2.05	1.62	1.50
Norway	1.51	24.34	83.66	167.75	135.28	95.35	86.74	91.28	90.68
Poland	0.39	0.34	0.18	0.72	0.89	0.75	0.95	1.03	1.01
Portugal	-	-	-	-	-	-	-	0.01	-
Slovak Republic	0.13	0.04	0.08	0.06	0.26	0.21	0.24	0.23	0.31
Slovenia	..	..	0.00	0.00	-	-	-	-	-
Spain	0.67	1.79	1.17	0.23	0.17	0.13	0.24	0.14	0.12
Sweden	-	0.03	0.00	-	-	-	-	-	-
Switzerland	-	-	-	-	-	0.00	-	-	-
Turkey	3.59	2.27	3.61	2.73	2.23	2.65	2.66	2.72	2.70
United Kingdom	0.55	82.59	95.25	131.67	88.47	65.45	47.05	49.29	48.30
<b>OECD Europe</b>	<b>23.17</b>	<b>127.24</b>	<b>211.37</b>	<b>338.03</b>	<b>264.84</b>	<b>191.60</b>	<b>160.23</b>	<b>164.21</b>	<b>162.56</b>
IEA	702.62	846.10	923.02	1 040.55	955.88	891.29	1 121.23	1 093.60	1 121.39
IEA/Accession/Association	842.41	1 055.52	1 208.68	1 386.30	1 328.71	1 313.73	1 568.30	1 532.11	1 555.38
European Union - 28	..	..	134.65	175.46	134.51	98.69	75.55	74.79	73.61
G7	642.47	674.79	635.27	636.92	567.45	591.29	866.51	842.47	885.47
G8	..	..	1 161.53	960.17	1 036.15	1 097.83	1 402.80	1 392.83	1 436.60
G20	..	..	2 030.86	2 026.66	2 218.49	2 216.56	2 608.89	2 599.73	2 599.90
<b>OPEC</b>	<b>1 529.68</b>	<b>1 332.20</b>	<b>1 180.28</b>	<b>1 562.27</b>	<b>1 771.60</b>	<b>1 736.47</b>	<b>1 814.04</b>	<b>1 919.02</b>	<b>1 896.89</b>

1. Please refer to section 'Geographical coverage'.

## Production of crude oil and NGL (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>2 227.87</b>	<b>2 325.61</b>	<b>2 317.21</b>	<b>2 661.76</b>	<b>3 094.01</b>	<b>3 192.05</b>	<b>3 289.56</b>	<b>3 379.30</b>	<b>3 341.64</b>
Albania	2.11	2.00	1.16	0.31	0.42	0.74	1.28	1.06	0.96
Armenia	..	..	-	-	-	-	-	-	-
Azerbaijan	..	..	12.57	14.09	22.33	51.14	41.87	41.28	41.72
Belarus	..	..	2.11	1.91	1.84	1.78	1.72	1.72	1.67
Bosnia and Herzegovina	..	..	-	-	-	-	-	-	-
Bulgaria	0.19	0.28	0.06	0.04	0.03	0.02	0.02	0.02	0.02
Croatia	..	..	2.78	1.35	1.03	0.76	0.69	0.76	0.77
Cyprus <sup>1</sup>	-	-	-	-	-	-	-	-	-
FYR of Macedonia	..	..	-	-	-	-	-	-	-
Georgia	..	..	0.19	0.11	0.07	0.05	0.04	0.04	0.04
Gibraltar	-	-	-	-	-	-	-	-	-
Kazakhstan	..	..	26.45	36.10	63.85	82.99	82.73	81.30	76.04
Kosovo	..	..	..	-	-	-	-	-	-
Kyrgyzstan	..	..	0.16	0.08	0.08	0.08	0.11	0.15	0.15
Lithuania	..	..	0.01	0.32	0.22	0.12	0.08	0.06	0.06
Malta	-	-	-	-	-	-	-	-	-
Republic of Moldova	..	..	-	-	0.01	0.01	0.01	0.01	0.01
Montenegro	..	..	..	..	-	-	-	-	-
Romania	13.87	11.17	7.70	6.20	5.90	4.19	3.93	3.73	3.58
Russian Federation	..	..	526.25	323.26	468.71	506.54	536.28	550.36	551.13
Serbia	..	..	1.09	1.00	0.66	0.94	1.12	1.03	0.98
Tajikistan	..	..	0.15	0.02	0.02	0.03	0.03	0.03	0.03
Turkmenistan	..	..	4.18	7.77	10.30	10.36	13.09	12.07	11.31
Ukraine	..	..	5.27	3.71	4.39	3.59	2.62	2.30	2.19
Uzbekistan	..	..	2.81	7.74	5.61	3.98	2.76	2.55	2.45
Former Soviet Union	431.21	606.16	x	x	x	x	x	x	x
Former Yugoslavia	3.40	4.32	x	x	x	x	x	x	x
<b>Non-OECD Europe and Eurasia</b>	<b>450.78</b>	<b>623.94</b>	<b>592.94</b>	<b>404.00</b>	<b>585.46</b>	<b>667.33</b>	<b>688.38</b>	<b>698.47</b>	<b>693.09</b>
Algeria	52.57	54.22	61.24	72.32	90.94	78.50	71.33	72.68	69.20
Angola	8.33	7.58	23.83	37.60	63.75	90.26	91.33	86.92	83.78
Benin	-	-	0.21	-	-	-	-	-	-
Botswana	..	..	-	-	-	-	-	-	-
Cameroon	-	3.62	6.93	5.86	4.59	3.35	4.79	4.74	3.95
Congo	2.11	3.43	8.23	13.97	12.93	16.49	12.96	13.12	15.33
Côte d'Ivoire	-	0.08	0.09	0.37	2.08	2.01	1.38	2.05	1.66
Dem. Rep. of the Congo	-	0.91	1.46	1.18	1.28	1.12	1.06	1.00	0.96
Egypt	8.64	30.26	46.23	36.11	32.76	35.23	35.11	34.71	33.40
Eritrea	..	..	..	-	-	-	-	-	-
Ethiopia	-	-	-	-	-	-	-	-	-
Gabon	7.74	8.91	13.53	13.54	13.53	12.64	11.71	11.57	10.19
Ghana	-	-	-	-	0.01	0.20	5.45	4.70	8.53
Kenya	-	-	-	-	-	-	-	-	-
Libya	109.04	92.20	67.98	71.01	88.41	89.90	22.03	20.87	42.32
Mauritius	-	-	-	-	-	-	-	-	-
Morocco	0.04	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Mozambique	-	-	-	-	0.02	0.03	-	-	-
Namibia	..	..	..	-	-	-	-	-	-
Niger	..	..	..	-	-	-	0.75	0.74	0.83
Nigeria	103.54	103.93	90.18	117.60	131.35	129.17	106.49	92.26	96.03
Senegal	-	-	0.00	-	-	-	-	-	-
South Africa	-	-	-	0.94	0.85	0.49	0.31	0.26	0.21
South Sudan	..	..	..	..	..	..	7.52	6.00	5.59
Sudan	-	-	-	9.02	15.52	23.52	5.34	5.19	4.29
United Rep. of Tanzania	-	-	-	-	-	-	-	-	-
Togo	-	-	-	-	-	-	-	-	-
Tunisia	3.99	5.82	4.75	3.81	3.55	3.99	2.63	2.51	2.15
Zambia	-	-	-	-	-	-	-	-	-
Zimbabwe	-	-	-	-	-	-	-	-	-
Other Africa	-	-	-	5.90	27.00	20.49	20.69	18.03	18.03
<b>Africa</b>	<b>295.99</b>	<b>310.97</b>	<b>324.67</b>	<b>389.23</b>	<b>488.59</b>	<b>507.39</b>	<b>400.88</b>	<b>377.35</b>	<b>396.45</b>

1. Please refer to section 'Geographical coverage'.

## Production of crude oil and NGL (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	0.01	-	0.09	0.10	0.11	0.24	0.30	0.33	0.33
Brunei Darussalam	11.61	12.19	7.70	10.22	11.06	8.31	6.69	6.07	5.66
Cambodia	..	..	..	-	-	-	-	-	-
DPR of Korea	-	-	-	-	-	-	-	-	-
India	7.35	10.74	35.32	37.24	37.68	43.14	41.88	41.21	41.51
Indonesia	67.43	79.50	74.59	71.60	53.45	48.44	40.44	42.63	41.14
Malaysia	4.43	13.71	30.63	32.28	37.41	34.40	33.57	35.18	34.53
Mongolia	..	..	-	0.01	0.03	0.30	1.21	1.14	1.05
Myanmar	0.99	1.57	0.73	0.57	1.14	0.94	0.58	0.61	0.61
Nepal	-	-	-	-	-	-	-	-	-
Pakistan	0.43	0.49	2.70	2.99	3.58	3.50	4.76	4.67	4.39
Philippines	-	0.49	0.23	0.06	0.78	0.98	0.76	0.75	0.66
Singapore	-	-	-	-	-	-	-	-	-
Sri Lanka	-	-	-	-	-	-	-	-	-
Chinese Taipei	0.15	0.25	0.18	0.03	0.03	0.01	0.01	0.01	0.01
Thailand	0.01	0.01	2.86	8.06	12.98	17.49	19.67	20.15	18.95
Viet Nam	-	-	2.75	16.86	19.52	16.08	19.27	16.31	14.68
Other Non-OECD Asia	0.00	0.01	4.54	3.23	10.71	8.82	8.28	7.65	7.65
<b>Non-OECD Asia excl. China</b>	<b>92.39</b>	<b>118.96</b>	<b>162.33</b>	<b>183.25</b>	<b>188.47</b>	<b>182.65</b>	<b>177.42</b>	<b>176.70</b>	<b>171.16</b>
People's Rep. of China	54.58	107.85	138.31	163.08	181.43	203.16	214.76	199.89	191.71
Hong Kong, China	-	-	-	-	-	-	-	-	-
<b>China</b>	<b>54.58</b>	<b>107.85</b>	<b>138.31</b>	<b>163.08</b>	<b>181.43</b>	<b>203.16</b>	<b>214.76</b>	<b>199.89</b>	<b>191.71</b>
Argentina	22.16	25.97	26.09	41.38	37.76	35.35	30.80	29.55	27.87
Bolivia	2.57	1.40	1.30	1.84	2.82	2.39	3.37	3.29	3.15
Brazil	8.60	9.47	33.39	65.34	86.94	109.59	130.01	134.38	140.37
Colombia	9.84	6.65	23.03	35.83	27.42	40.92	52.57	46.47	45.05
Costa Rica	-	-	-	-	-	-	-	-	-
Cuba	0.24	0.55	0.86	2.86	3.06	3.15	3.02	2.68	2.48
Curaçao	-	-	-	-	-	-	-	-	-
Dominican Republic	-	-	-	-	-	-	-	-	-
Ecuador	10.77	10.65	15.02	21.02	25.99	24.47	27.72	28.08	26.86
El Salvador	-	-	-	-	-	-	-	-	-
Guatemala	-	0.21	0.20	1.15	1.02	0.66	0.55	0.50	0.53
Haiti	-	-	-	-	-	-	-	-	-
Honduras	-	-	-	-	-	-	-	-	-
Jamaica	-	-	-	-	-	-	-	-	-
Nicaragua	-	-	-	-	-	-	-	-	-
Panama	-	-	-	-	-	-	-	-	-
Paraguay	-	-	-	-	-	-	-	-	-
Peru	3.63	9.96	6.55	5.18	5.38	8.82	7.95	6.45	6.41
Suriname	..	..	..	0.61	0.60	0.80	0.85	0.76	0.76
Trinidad and Tobago	8.37	10.69	7.87	6.83	8.39	6.71	5.12	4.59	4.71
Uruguay	-	-	-	-	-	-	-	-	-
Venezuela	191.53	124.47	122.72	182.20	191.12	169.36	155.56	140.01	122.95
Other Non-OECD Americas	0.00	0.07	0.38	0.08	0.06	0.26	0.11	0.11	0.11
<b>Non-OECD Americas</b>	<b>257.70</b>	<b>200.09</b>	<b>237.40</b>	<b>364.29</b>	<b>390.56</b>	<b>402.49</b>	<b>417.64</b>	<b>396.87</b>	<b>381.27</b>
Bahrain	9.49	9.56	9.88	9.89	9.89	9.64	10.63	10.69	10.41
Islamic Republic of Iran	298.72	75.86	167.42	202.58	224.22	218.37	163.67	217.62	233.40
Iraq	101.83	134.37	106.85	132.26	95.80	119.97	176.89	227.05	229.95
Jordan	-	-	-	0.00	0.00	0.00	-	-	-
Kuwait	155.28	87.97	47.08	106.39	136.71	124.97	154.04	160.39	150.97
Lebanon	-	-	-	-	-	-	-	-	-
Oman	15.20	14.77	35.87	51.27	41.67	43.34	49.27	50.66	49.00
Qatar	28.24	23.63	22.14	37.69	49.47	71.08	75.09	78.07	77.68
Saudi Arabia	387.01	524.49	348.96	445.06	524.97	471.56	577.35	596.39	572.50
Syrian Arab Republic	5.57	9.23	20.71	27.79	21.09	20.20	1.15	1.10	1.10
United Arab Emirates	75.09	83.91	93.34	123.01	135.34	136.22	180.83	187.10	181.05
Yemen	-	-	9.31	21.95	20.36	13.69	1.56	0.96	1.90
<b>Middle East</b>	<b>1 076.42</b>	<b>963.80</b>	<b>861.56</b>	<b>1 157.90</b>	<b>1 259.50</b>	<b>1 229.04</b>	<b>1 390.49</b>	<b>1 530.02</b>	<b>1 507.96</b>



## Production of oil products (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>2 762.10</b>	<b>3 004.14</b>	<b>3 115.77</b>	<b>3 553.93</b>	<b>3 855.19</b>	<b>3 942.69</b>	<b>4 131.70</b>	<b>4 165.65</b>	..
<b>Non-OECD Total</b>	<b>893.68</b>	<b>1 117.53</b>	<b>1 274.25</b>	<b>1 418.53</b>	<b>1 683.39</b>	<b>1 900.64</b>	<b>2 112.53</b>	<b>2 147.69</b>	..
<b>OECD Total</b>	<b>1 868.42</b>	<b>1 886.61</b>	<b>1 841.52</b>	<b>2 135.40</b>	<b>2 171.80</b>	<b>2 042.05</b>	<b>2 019.17</b>	<b>2 017.96</b>	..
Canada	84.42	95.39	86.65	96.31	103.36	99.23	90.64	91.84	..
Chile	4.75	4.99	6.28	9.74	11.09	8.87	9.91	9.68	..
Mexico	26.17	51.09	68.37	66.41	71.24	64.66	57.80	51.52	..
United States	691.12	744.65	753.82	843.82	861.39	840.75	839.43	848.91	..
<b>OECD Americas</b>	<b>806.47</b>	<b>896.12</b>	<b>915.11</b>	<b>1 016.28</b>	<b>1 047.08</b>	<b>1 013.51</b>	<b>997.78</b>	<b>1 001.95</b>	..
Australia	26.15	30.26	32.06	38.26	34.38	32.17	25.56	22.38	..
Israel <sup>1</sup>	6.13	6.33	8.19	10.84	12.03	12.85	15.36	14.52	..
Japan	228.28	206.63	183.92	214.01	212.04	185.10	169.20	169.79	..
Korea	15.35	26.22	43.54	125.63	123.42	123.46	144.51	150.98	..
New Zealand	3.38	3.02	4.97	5.27	5.43	5.37	5.85	5.76	..
<b>OECD Asia Oceania</b>	<b>279.28</b>	<b>272.46</b>	<b>272.68</b>	<b>394.00</b>	<b>387.30</b>	<b>358.96</b>	<b>360.47</b>	<b>363.42</b>	..
Austria	8.80	10.24	9.07	8.92	9.40	8.22	9.35	8.75	..
Belgium	35.46	33.60	29.60	38.40	37.28	35.25	35.47	33.91	..
Czech Republic	7.47	9.60	8.00	6.18	8.23	8.31	7.64	5.71	..
Denmark	9.76	6.67	7.96	8.41	7.67	7.15	9.12	9.27	..
Estonia	..	..	-	-	-	-	-	-	..
Finland	9.11	12.61	10.60	12.89	12.90	14.25	13.13	14.69	..
France	134.20	116.73	79.67	90.19	87.67	72.43	60.67	59.90	..
Germany	140.16	138.14	107.99	118.45	125.30	103.63	101.35	102.58	..
Greece	12.35	14.09	16.56	22.39	21.41	22.45	28.67	30.50	..
Hungary	7.95	10.28	8.46	7.59	8.34	8.56	7.52	7.39	..
Iceland	-	-	-	-	-	-	-	-	..
Ireland	2.68	2.02	1.74	3.31	3.16	2.91	3.39	3.21	..
Italy	129.92	98.07	91.55	95.86	101.94	91.40	75.14	72.54	..
Latvia	..	..	-	-	-	-	-	-	..
Luxembourg	-	-	-	-	-	-	-	-	..
Netherlands	73.12	57.92	49.99	59.83	60.13	59.20	61.47	61.27	..
Norway	6.11	7.86	13.40	15.61	16.04	14.83	16.79	13.31	..
Poland	10.78	15.45	12.89	18.80	18.81	23.98	27.86	27.42	..
Portugal	4.23	7.57	11.53	12.41	13.73	12.07	15.28	15.26	..
Slovak Republic	6.00	8.03	7.06	5.97	6.39	6.25	6.67	6.44	..
Slovenia	..	..	0.56	0.17	-	-	-	-	..
Spain	42.23	48.21	53.24	60.31	60.91	58.12	65.51	65.33	..
Sweden	10.44	17.50	18.10	22.78	19.92	20.89	20.95	20.66	..
Switzerland	6.16	4.64	3.11	4.75	4.98	4.65	2.91	3.09	..
Turkey	12.52	12.68	22.96	23.82	25.81	20.23	29.67	30.00	..
United Kingdom	113.23	86.10	89.68	88.07	87.41	74.78	62.36	61.35	..
<b>OECD Europe</b>	<b>782.67</b>	<b>718.03</b>	<b>653.73</b>	<b>725.11</b>	<b>737.43</b>	<b>669.58</b>	<b>660.92</b>	<b>652.59</b>	..
IEA	1 857.54	1 875.29	1 826.50	2 114.65	2 148.69	2 020.32	1 993.91	1 993.76	..
IEA/Accession/Association	2 006.33	2 102.48	2 152.08	2 651.11	2 832.40	2 894.05	3 033.81	3 063.89	..
European Union - 28	..	..	661.73	708.84	726.75	660.78	642.66	639.52	..
G7	1 521.33	1 485.71	1 393.29	1 546.72	1 579.10	1 467.33	1 398.80	1 406.91	..
G8	..	..	1 663.01	1 726.63	1 787.95	1 717.37	1 682.42	1 682.90	..
G20	..	..	2 497.51	2 869.43	3 079.10	3 175.45	3 374.43	3 414.40	..
<b>OPEC</b>	<b>168.20</b>	<b>176.57</b>	<b>270.01</b>	<b>351.52</b>	<b>381.52</b>	<b>409.18</b>	<b>423.31</b>	<b>435.91</b>	..

In this table production refers to refinery output.

1. Please refer to section 'Geographical coverage'.

## Production of oil products (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>893.68</b>	<b>1 117.53</b>	<b>1 274.25</b>	<b>1 418.53</b>	<b>1 683.39</b>	<b>1 900.64</b>	<b>2 112.53</b>	<b>2 147.69</b>	..
Albania	1.59	1.86	1.10	0.29	0.37	0.14	0.26	0.17	..
Armenia	..	..	-	-	-	-	-	-	..
Azerbaijan	..	..	16.21	8.24	8.07	6.26	6.44	5.88	..
Belarus	..	..	38.64	13.30	19.49	16.32	23.30	18.83	..
Bosnia and Herzegovina	..	..	1.90	0.51	0.14	1.16	0.92	0.83	..
Bulgaria	9.26	13.13	7.78	5.27	6.40	6.05	6.79	7.09	..
Croatia	..	..	6.88	5.30	5.22	4.29	3.43	3.79	..
Cyprus <sup>1</sup>	0.66	0.58	0.63	1.17	-	-	-	-	..
FYR of Macedonia	..	..	1.19	0.94	1.16	0.83	-	-	..
Georgia	..	..	2.19	0.02	0.01	-	0.01	0.03	..
Gibraltar	-	-	-	-	-	-	-	-	..
Kazakhstan	..	..	18.42	6.30	11.02	13.29	13.45	12.98	..
Kosovo	..	..	..	-	-	-	-	-	..
Kyrgyzstan	..	..	-	0.14	0.09	0.10	0.32	0.39	..
Lithuania	..	..	9.42	5.01	9.39	9.38	9.10	9.98	..
Malta	-	-	-	-	-	-	-	-	..
Republic of Moldova	..	..	-	-	0.01	0.02	0.01	0.02	..
Montenegro	..	..	..	..	-	-	-	-	..
Romania	18.13	26.37	22.76	11.16	15.14	11.19	11.79	12.47	..
Russian Federation	..	..	269.72	179.91	208.85	250.04	283.62	275.98	..
Serbia	..	..	4.70	1.22	3.34	2.90	3.43	3.48	..
Tajikistan	..	..	0.06	0.01	0.01	0.02	0.01	0.02	..
Turkmenistan	..	..	3.62	5.22	7.04	8.69	8.72	8.70	..
Ukraine	..	..	61.14	9.32	19.43	12.14	2.86	3.20	..
Uzbekistan	..	..	7.92	6.93	5.15	3.96	2.73	2.52	..
Former Soviet Union	332.22	447.46	x	x	x	x	x	x	..
Former Yugoslavia	9.02	14.20	x	x	x	x	x	x	..
<b>Non-OECD Europe and Eurasia</b>	<b>370.89</b>	<b>503.61</b>	<b>474.27</b>	<b>260.28</b>	<b>320.33</b>	<b>346.80</b>	<b>377.19</b>	<b>366.36</b>	..
Algeria	6.30	11.40	21.47	21.00	18.58	27.41	30.87	30.62	..
Angola	0.74	1.25	1.63	1.88	1.86	1.90	2.64	2.68	..
Benin	-	-	-	-	-	-	-	-	..
Botswana	..	..	-	-	-	-	-	-	..
Cameroon	-	0.20	0.86	1.58	1.87	2.12	1.66	1.64	..
Congo	-	-	0.53	0.40	0.52	0.67	0.74	0.75	..
Côte d'Ivoire	1.17	1.79	2.10	3.08	4.06	3.15	3.30	3.31	..
Dem. Rep. of the Congo	0.70	0.40	0.32	-	-	-	-	-	..
Egypt	7.12	14.08	23.91	25.61	31.59	29.81	26.45	25.65	..
Eritrea	..	..	..	-	-	-	-	-	..
Ethiopia	0.62	0.59	0.66	-	-	-	-	-	..
Gabon	1.07	1.26	0.32	0.62	0.72	0.95	0.80	0.81	..
Ghana	0.99	1.08	0.77	1.10	1.69	1.00	0.10	0.81	..
Kenya	2.65	3.05	2.25	2.06	1.67	1.52	0.68	0.71	..
Libya	1.63	5.69	12.26	16.90	17.02	17.03	4.40	4.08	..
Mauritius	-	-	-	-	-	-	-	-	..
Morocco	2.26	4.25	5.66	6.69	6.95	6.54	3.19	-	..
Mozambique	0.74	0.70	-	-	-	-	-	-	..
Namibia	..	..	..	-	-	-	-	-	..
Niger	..	..	..	-	-	-	0.70	0.65	..
Nigeria	2.82	7.21	13.30	5.07	10.31	5.33	1.63	3.50	..
Senegal	0.68	0.76	0.68	0.92	0.89	0.59	1.04	1.16	..
South Africa	13.16	12.32	13.44	17.68	23.76	19.14	20.67	22.87	..
South Sudan	..	..	..	..	..	..	-	-	..
Sudan	1.15	0.91	0.82	1.92	3.42	4.97	3.33	4.46	..
United Rep. of Tanzania	0.79	0.55	0.59	-	-	-	-	-	..
Togo	-	0.21	-	-	-	-	-	-	..
Tunisia	1.05	1.58	1.70	1.98	1.81	0.27	1.33	1.21	..
Zambia	0.41	0.76	0.69	0.02	0.39	0.60	0.62	0.46	..
Zimbabwe	-	-	-	-	-	-	-	-	..
Other Africa	1.53	1.45	1.16	0.45	0.15	-	-	-	..
<b>Africa</b>	<b>47.58</b>	<b>71.46</b>	<b>105.14</b>	<b>108.95</b>	<b>127.25</b>	<b>123.00</b>	<b>104.15</b>	<b>105.37</b>	..

In this table production refers to refinery output.

1. Please refer to section 'Geographical coverage'.

## Production of oil products (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	0.61	1.22	1.03	1.38	1.15	1.30	1.27	1.19	..
Brunei Darussalam	-	0.00	0.34	0.57	0.63	0.65	0.49	0.33	..
Cambodia	..	..	..	-	-	-	-	-	..
DPR of Korea	-	1.89	2.06	0.38	0.47	0.53	0.53	0.53	..
India	21.24	26.11	52.87	105.94	133.54	207.01	245.86	259.21	..
Indonesia	10.18	18.08	37.76	50.32	48.32	46.12	46.51	47.65	..
Malaysia	3.96	5.69	10.42	20.97	21.45	21.22	24.29	24.90	..
Mongolia	..	..	-	-	-	-	-	-	..
Myanmar	1.00	1.33	0.71	1.01	0.77	0.86	0.61	0.44	..
Nepal	-	-	-	-	-	-	-	-	..
Pakistan	3.43	4.49	5.85	9.12	11.47	9.69	12.09	13.01	..
Philippines	8.70	9.17	10.57	14.97	10.01	8.39	9.81	10.09	..
Singapore	22.92	31.94	41.38	41.73	59.26	50.63	49.35	53.00	..
Sri Lanka	1.73	1.83	1.72	2.34	1.87	1.70	1.67	1.71	..
Chinese Taipei	8.98	17.92	21.43	37.22	53.55	46.44	44.88	45.25	..
Thailand	7.64	7.75	11.72	36.92	47.35	53.58	60.90	60.29	..
Viet Nam	-	-	-	-	-	5.72	6.82	7.30	..
Other Non-OECD Asia	-	-	-	-	0.96	0.89	1.04	1.05	..
<b>Non-OECD Asia excl. China</b>	<b>90.39</b>	<b>127.44</b>	<b>197.84</b>	<b>322.88</b>	<b>390.81</b>	<b>454.72</b>	<b>506.13</b>	<b>525.96</b>	..
People's Rep. of China	41.77	78.36	108.18	199.97	285.34	404.53	517.38	541.16	..
Hong Kong, China	-	-	-	-	-	-	-	-	..
<b>China</b>	<b>41.77</b>	<b>78.36</b>	<b>108.18</b>	<b>199.97</b>	<b>285.34</b>	<b>404.53</b>	<b>517.38</b>	<b>541.16</b>	..
Argentina	23.65	25.72	22.36	29.67	28.67	29.39	30.86	29.70	..
Bolivia	0.80	1.25	1.24	1.54	2.05	2.10	2.96	2.98	..
Brazil	38.01	55.70	61.73	85.14	91.87	96.44	106.80	99.13	..
Colombia	8.29	7.65	11.26	15.51	15.22	14.10	14.05	15.54	..
Costa Rica	0.39	0.51	0.44	0.01	0.49	0.51	-	-	..
Cuba	5.14	5.85	6.45	2.17	2.24	4.96	4.39	2.61	..
Curaçao	42.89	27.36	10.00	11.34	11.89	4.29	9.17	8.32	..
Dominican Republic	1.20	1.56	1.06	2.13	1.98	1.33	0.77	1.11	..
Ecuador	1.61	4.73	6.06	7.77	8.22	7.66	6.68	8.22	..
El Salvador	0.62	0.66	0.69	0.95	1.03	0.81	-	-	..
Guatemala	0.94	0.75	0.43	0.85	0.07	0.07	0.06	0.06	..
Haiti	-	-	-	-	-	-	-	-	..
Honduras	0.62	0.50	0.41	-	-	-	-	-	..
Jamaica	1.76	0.92	1.35	0.96	0.45	1.18	1.19	1.07	..
Nicaragua	0.57	0.54	0.61	0.84	0.76	0.78	0.73	0.66	..
Panama	3.32	1.90	1.17	2.14	-	-	-	-	..
Paraguay	0.20	0.26	0.31	0.10	0.03	-	-	-	..
Peru	4.89	7.32	7.34	7.70	8.99	9.45	8.51	8.34	..
Suriname	..	..	..	0.27	0.39	0.37	0.41	0.37	..
Trinidad and Tobago	19.51	11.36	4.30	8.05	8.47	6.31	6.42	7.60	..
Uruguay	1.66	1.83	1.19	1.87	2.08	1.92	1.93	2.16	..
Venezuela	73.83	50.40	52.62	57.13	53.15	59.03	46.52	40.41	..
Other Non-OECD Americas	12.74	8.81	0.97	12.35	11.62	0.87	0.91	0.92	..
<b>Non-OECD Americas</b>	<b>242.65</b>	<b>215.60</b>	<b>192.01</b>	<b>248.49</b>	<b>249.69</b>	<b>241.57</b>	<b>242.37</b>	<b>229.20</b>	..
Bahrain	12.21	12.36	12.67	13.08	13.60	13.47	13.74	13.29	..
Islamic Republic of Iran	29.13	34.27	41.37	78.02	82.58	85.27	87.00	86.63	..
Iraq	4.06	9.32	18.08	24.94	22.65	24.93	20.01	20.29	..
Jordan	0.68	1.76	2.63	3.81	4.30	3.30	3.15	2.68	..
Kuwait	18.78	16.93	12.05	36.74	42.93	43.80	43.37	38.90	..
Lebanon	2.46	2.27	0.10	-	-	-	-	-	..
Oman	-	-	3.25	4.05	4.40	8.09	11.18	11.21	..
Qatar	0.02	0.40	2.97	3.22	5.64	14.31	12.59	13.60	..
Saudi Arabia	28.22	33.14	78.42	83.69	100.35	96.38	123.27	133.75	..
Syrian Arab Republic	1.99	6.58	11.23	12.13	12.42	11.82	6.54	6.07	..
United Arab Emirates	-	0.58	9.48	14.55	17.51	25.19	43.51	52.43	..
Yemen	2.86	3.46	4.58	3.72	3.57	3.48	0.94	0.80	..
<b>Middle East</b>	<b>100.40</b>	<b>121.07</b>	<b>196.81</b>	<b>277.95</b>	<b>309.97</b>	<b>330.03</b>	<b>365.30</b>	<b>379.64</b>	..

In this table production refers to refinery output.

## Production of natural gas (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>991.26</b>	<b>1 240.61</b>	<b>1 688.73</b>	<b>2 065.38</b>	<b>2 369.25</b>	<b>2 714.68</b>	<b>2 989.36</b>	<b>3 032.41</b>	<b>3 142.31</b>
<b>Non-OECD Total</b>	<b>284.85</b>	<b>521.25</b>	<b>971.04</b>	<b>1 154.94</b>	<b>1 459.93</b>	<b>1 744.97</b>	<b>1 908.46</b>	<b>1 940.05</b>	<b>2 025.04</b>
<b>OECD Total</b>	<b>706.42</b>	<b>719.37</b>	<b>717.69</b>	<b>910.44</b>	<b>909.31</b>	<b>969.72</b>	<b>1 080.91</b>	<b>1 092.36</b>	<b>1 117.27</b>
Canada	61.38	63.64	88.58	148.36	154.14	132.43	139.15	146.03	154.60
Chile	0.53	0.72	1.41	1.60	1.61	1.55	0.85	1.01	1.03
Mexico	10.55	21.56	22.76	33.39	38.46	42.58	34.37	30.43	25.89
United States	502.76	454.69	418.21	446.95	421.56	494.79	636.67	627.32	631.61
<b>OECD Americas</b>	<b>575.21</b>	<b>540.61</b>	<b>530.95</b>	<b>630.29</b>	<b>615.77</b>	<b>671.34</b>	<b>811.03</b>	<b>804.80</b>	<b>813.12</b>
Australia	3.38	7.47	17.14	28.54	31.35	44.48	56.38	72.51	87.85
Israel <sup>1</sup>	0.05	0.13	0.03	0.01	1.31	2.67	6.75	7.58	7.83
Japan	2.29	1.94	1.92	2.29	2.89	3.21	2.38	2.45	2.56
Korea	-	-	-	-	0.44	0.49	0.17	0.14	0.31
New Zealand	0.28	0.79	3.87	5.06	3.23	3.86	4.04	4.23	4.19
<b>OECD Asia Oceania</b>	<b>6.00</b>	<b>10.33</b>	<b>22.96</b>	<b>35.89</b>	<b>39.23</b>	<b>54.70</b>	<b>69.72</b>	<b>86.91</b>	<b>102.73</b>
Austria	1.96	1.67	1.11	1.55	1.33	1.40	1.04	0.97	1.04
Belgium	0.04	0.03	0.01	0.00	-	-	-	-	-
Czech Republic	0.36	0.32	0.20	0.17	0.15	0.20	0.20	0.18	0.19
Denmark	0.00	0.00	2.77	7.41	9.38	7.34	4.14	4.05	4.34
Estonia	..	..	-	-	-	-	-	-	-
Finland	-	-	-	-	-	-	-	-	-
France	6.29	6.33	2.52	1.50	0.91	0.65	0.02	0.02	0.01
Germany	16.44	16.27	13.53	15.80	14.33	11.11	6.34	6.55	5.72
Greece	-	-	0.14	0.04	0.02	0.01	0.00	0.01	0.01
Hungary	4.03	5.09	3.81	2.48	2.33	2.23	1.37	1.43	1.41
Iceland	-	-	-	-	-	-	-	-	-
Ireland	-	0.74	1.87	0.96	0.46	0.22	0.11	2.48	2.85
Italy	12.62	10.26	14.03	13.62	9.89	6.88	5.55	4.74	4.54
Latvia	..	..	-	-	-	-	-	-	-
Luxembourg	-	-	-	-	-	-	-	-	-
Netherlands	53.76	68.91	54.53	52.76	56.18	64.72	39.44	38.08	33.21
Norway	-	22.77	24.15	46.28	75.04	94.72	102.85	102.34	108.24
Poland	4.87	4.54	2.38	3.31	3.88	3.69	3.68	3.55	3.47
Portugal	-	-	-	-	-	-	-	-	-
Slovak Republic	0.39	0.17	0.34	0.13	0.13	0.09	0.08	0.08	0.09
Slovenia	..	..	0.02	0.01	0.00	0.01	0.00	0.00	0.01
Spain	0.00	-	1.27	0.15	0.14	0.04	0.05	0.05	0.03
Sweden	-	-	-	-	-	-	-	-	-
Switzerland	-	-	0.00	-	-	-	-	-	-
Turkey	-	-	0.17	0.53	0.74	0.56	0.31	0.30	0.29
United Kingdom	24.45	31.32	40.93	97.55	79.40	49.79	34.96	35.81	35.98
<b>OECD Europe</b>	<b>125.21</b>	<b>168.43</b>	<b>163.78</b>	<b>244.26</b>	<b>254.32</b>	<b>243.67</b>	<b>200.15</b>	<b>200.65</b>	<b>201.42</b>
IEA	705.85	718.52	716.23	908.83	906.39	965.49	1 073.30	1 083.76	1 108.41
IEA/Accession/Association	712.57	748.31	791.43	1 039.17	1 068.56	1 202.24	1 324.22	1 335.22	1 366.92
European Union - 28	..	..	163.99	209.79	190.49	159.28	107.33	107.24	103.05
G7	626.23	584.46	579.71	726.08	683.12	698.85	825.06	822.92	835.01
G8	..	..	1 096.53	1 196.82	1 198.96	1 239.01	1 349.39	1 361.32	1 415.01
G20	..	..	1 336.35	1 520.14	1 585.62	1 724.93	1 831.15	1 860.97	1 933.90
<b>OPEC</b>	<b>36.41</b>	<b>56.94</b>	<b>132.03</b>	<b>250.96</b>	<b>345.81</b>	<b>476.97</b>	<b>581.87</b>	<b>608.71</b>	<b>626.02</b>

1. Please refer to section 'Geographical coverage'.

## Production of natural gas (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>284.85</b>	<b>521.25</b>	<b>971.04</b>	<b>1 154.94</b>	<b>1 459.93</b>	<b>1 744.97</b>	<b>1 908.46</b>	<b>1 940.05</b>	<b>2 025.04</b>
Albania	0.16	0.32	0.20	0.01	0.01	0.01	0.03	0.03	0.04
Armenia	..	..	-	-	-	-	-	-	-
Azerbaijan	..	..	8.04	4.57	4.65	13.99	16.15	15.72	15.27
Belarus	..	..	0.21	0.18	0.16	0.13	0.15	0.14	0.17
Bosnia and Herzegovina	..	..	-	-	-	-	-	-	-
Bulgaria	0.17	0.15	0.01	0.01	0.38	0.06	0.08	0.08	0.07
Croatia	..	..	1.62	1.35	1.87	2.21	1.47	1.37	1.22
Cyprus <sup>1</sup>	-	-	-	-	-	-	-	-	-
FYR of Macedonia	..	..	-	-	-	-	-	-	-
Georgia	..	..	0.05	0.06	0.02	0.01	0.01	0.01	0.01
Gibraltar	-	-	-	-	-	-	-	-	-
Kazakhstan	..	..	5.77	7.62	15.83	24.61	33.36	35.06	35.27
Kosovo	..	..	..	-	-	-	-	-	-
Kyrgyzstan	..	..	0.07	0.03	0.02	0.02	0.02	0.02	0.02
Lithuania	..	..	-	-	-	-	-	-	-
Malta	-	-	-	-	-	-	-	-	-
Republic of Moldova	..	..	-	-	-	0.00	0.00	0.00	-
Montenegro	..	..	..	..	-	-	-	-	-
Romania	24.31	31.28	22.91	10.97	9.70	8.62	8.79	7.78	8.87
Russian Federation	..	..	516.82	470.74	515.84	540.16	524.33	538.40	580.00
Serbia	..	..	0.53	0.62	0.23	0.31	0.46	0.42	0.39
Tajikistan	..	..	0.09	0.03	0.02	0.02	0.00	0.00	0.00
Turkmenistan	..	..	68.79	38.21	51.31	36.90	68.17	64.97	64.97
Ukraine	..	..	22.60	15.00	15.64	15.44	14.84	15.17	15.09
Uzbekistan	..	..	33.01	45.94	49.11	48.96	50.66	45.85	46.08
Former Soviet Union	195.46	359.70	x	x	x	x	x	x	x
Former Yugoslavia	1.33	1.74	x	x	x	x	x	x	x
<b>Non-OECD Europe and Eurasia</b>	<b>221.42</b>	<b>393.19</b>	<b>680.71</b>	<b>595.35</b>	<b>664.79</b>	<b>691.43</b>	<b>718.51</b>	<b>725.02</b>	<b>767.46</b>
Algeria	3.64	11.48	38.85	69.85	75.61	71.97	71.42	80.56	80.30
Angola	0.05	0.06	0.44	0.47	0.53	0.60	0.63	1.40	2.53
Benin	-	-	-	-	-	-	-	-	-
Botswana	..	..	-	-	-	-	-	-	-
Cameroon	-	-	-	-	-	0.26	0.41	0.45	0.45
Congo	0.00	-	-	-	0.02	0.08	0.23	0.21	0.21
Côte d'Ivoire	-	-	-	1.27	1.25	1.33	1.69	1.88	1.88
Dem. Rep. of the Congo	-	-	-	-	-	0.02	0.00	0.00	-
Egypt	0.07	1.59	6.73	14.44	42.63	46.41	31.29	29.70	36.61
Eritrea	..	..	..	-	-	-	-	-	-
Ethiopia	-	-	-	-	-	-	-	-	-
Gabon	0.40	0.01	0.09	0.10	0.12	0.27	0.45	0.45	0.45
Ghana	-	-	-	-	-	-	0.60	0.53	0.53
Kenya	-	-	-	-	-	-	-	-	-
Libya	3.42	4.22	5.06	4.80	9.23	13.73	9.48	8.09	7.43
Mauritius	-	-	-	-	-	-	-	-	-
Morocco	0.06	0.06	0.04	0.04	0.03	0.04	0.07	0.06	0.06
Mozambique	-	-	-	0.00	1.87	2.68	4.09	4.18	4.36
Namibia	..	..	..	-	-	-	-	-	-
Niger	..	..	..	-	-	-	-	-	-
Nigeria	0.35	1.24	3.27	10.18	19.78	26.58	35.69	32.92	35.13
Senegal	-	-	0.01	0.00	0.01	0.02	0.02	0.02	0.02
South Africa	-	-	1.50	1.40	1.78	1.26	1.02	0.92	0.92
South Sudan	..	..	..	..	..	..	-	-	-
Sudan	-	-	-	-	-	-	-	-	-
United Rep. of Tanzania	-	-	-	-	0.33	0.64	0.73	0.70	0.70
Togo	-	-	-	-	-	-	-	-	-
Tunisia	0.11	0.35	0.33	1.89	1.99	3.08	2.52	2.28	2.16
Zambia	-	-	-	-	-	-	-	-	-
Zimbabwe	-	-	-	-	-	-	-	-	-
Other Africa	0.00	0.00	0.00	0.00	0.97	5.51	5.06	5.24	5.76
<b>Africa</b>	<b>8.11</b>	<b>19.02</b>	<b>56.33</b>	<b>104.43</b>	<b>156.17</b>	<b>174.49</b>	<b>165.39</b>	<b>169.58</b>	<b>179.49</b>

1. Please refer to section 'Geographical coverage'.

## Production of natural gas (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	0.52	1.04	3.73	7.38	10.81	16.63	21.13	23.10	23.10
Brunei Darussalam	1.54	8.94	7.94	9.47	10.00	10.27	9.41	9.08	10.04
Cambodia	..	..	..	-	-	-	-	-	-
DPR of Korea	-	-	-	-	-	-	-	-	-
India	0.63	1.26	10.57	23.07	25.94	42.96	26.19	25.92	26.44
Indonesia	0.33	14.97	42.14	61.16	65.58	74.81	65.49	64.56	64.86
Malaysia	0.10	2.24	15.49	42.56	55.37	51.01	57.84	57.23	62.93
Mongolia	..	..	-	-	-	-	-	-	-
Myanmar	0.09	0.29	0.76	5.18	10.30	10.17	14.77	16.01	15.52
Nepal	-	-	-	-	-	-	-	-	-
Pakistan	2.86	5.03	10.08	16.67	25.64	26.99	25.22	25.05	25.04
Philippines	-	-	-	0.01	2.70	3.05	2.88	3.29	3.26
Singapore	-	-	-	-	-	-	-	-	-
Sri Lanka	-	-	-	-	-	-	-	-	-
Chinese Taipei	1.22	1.59	1.04	0.60	0.44	0.24	0.27	0.23	0.19
Thailand	-	-	4.99	15.64	18.50	24.73	25.79	25.30	24.83
Viet Nam	-	-	0.00	1.12	5.99	8.12	9.55	9.49	8.73
Other Non-OECD Asia	2.20	2.21	0.24	0.20	0.22	5.09	14.98	14.99	16.17
<b>Non-OECD Asia excl. China</b>	<b>9.49</b>	<b>37.57</b>	<b>96.99</b>	<b>183.06</b>	<b>231.49</b>	<b>274.07</b>	<b>273.54</b>	<b>274.25</b>	<b>281.10</b>
People's Rep. of China	5.01	11.96	12.80	22.76	41.27	80.16	112.65	114.54	118.56
Hong Kong, China	-	-	-	-	-	-	-	-	-
<b>China</b>	<b>5.01</b>	<b>11.96</b>	<b>12.80</b>	<b>22.76</b>	<b>41.27</b>	<b>80.16</b>	<b>112.65</b>	<b>114.54</b>	<b>118.56</b>
Argentina	5.75	8.55	17.02	34.32	39.93	35.37	33.56	35.96	37.33
Bolivia	1.69	2.14	2.76	4.02	10.26	12.29	18.17	17.31	16.83
Brazil	0.16	0.82	3.24	6.07	9.23	12.49	19.88	20.08	22.71
Colombia	1.42	2.39	3.37	5.46	6.12	9.43	10.38	9.58	9.58
Costa Rica	-	-	-	-	-	-	-	-	-
Cuba	0.01	0.01	0.03	0.46	0.59	0.85	0.99	0.94	0.94
Curaçao	-	-	-	-	-	-	-	-	-
Dominican Republic	-	-	-	-	-	-	-	-	-
Ecuador	-	-	-	-	0.28	0.43	0.56	0.60	0.52
El Salvador	-	-	-	-	-	-	-	-	-
Guatemala	-	-	-	-	-	-	-	-	-
Haiti	-	-	-	-	-	-	-	-	-
Honduras	-	-	-	-	-	-	-	-	-
Jamaica	-	-	-	-	-	-	-	-	-
Nicaragua	-	-	-	-	-	-	-	-	-
Panama	-	-	-	-	-	-	-	-	-
Paraguay	-	-	-	-	-	-	-	-	-
Peru	0.30	0.45	0.41	0.49	1.63	7.63	12.69	14.05	15.73
Suriname	..	..	..	-	-	-	-	-	-
Trinidad and Tobago	1.59	2.44	4.70	12.19	26.50	35.83	31.99	28.96	29.64
Uruguay	-	-	-	-	-	-	-	-	-
Venezuela	8.68	11.27	16.75	21.85	19.37	19.16	19.98	21.31	20.92
Other Non-OECD Americas	0.00	0.01	0.02	0.03	0.02	0.02	0.02	0.02	0.02
<b>Non-OECD Americas</b>	<b>19.60</b>	<b>28.09</b>	<b>48.30</b>	<b>84.89</b>	<b>113.92</b>	<b>133.50</b>	<b>148.22</b>	<b>148.81</b>	<b>154.22</b>
Bahrain	1.34	2.43	4.43	6.85	8.35	10.57	12.16	12.03	12.35
Islamic Republic of Iran	10.05	3.66	19.12	49.85	83.46	121.72	155.73	169.07	180.85
Iraq	0.99	1.05	3.25	2.57	1.49	4.19	5.67	6.24	6.38
Jordan	-	-	0.10	0.21	0.18	0.14	0.10	0.09	0.08
Kuwait	4.96	5.63	3.29	7.84	10.05	9.58	13.81	14.12	13.97
Lebanon	-	-	-	-	-	-	-	-	-
Oman	-	0.31	2.44	9.06	17.92	23.76	28.28	28.87	29.56
Qatar	1.29	2.85	5.56	21.78	39.86	107.30	148.43	150.33	150.43
Saudi Arabia	1.54	9.15	19.49	30.78	45.97	59.90	71.27	74.17	76.91
Syrian Arab Republic	-	0.04	1.37	4.62	4.94	7.25	3.48	3.04	3.04
United Arab Emirates	1.05	6.30	16.86	30.88	40.06	41.54	48.74	49.47	50.20
Yemen	-	-	-	-	-	5.38	2.46	0.43	0.43
<b>Middle East</b>	<b>21.22</b>	<b>31.42</b>	<b>75.90</b>	<b>164.44</b>	<b>252.29</b>	<b>391.32</b>	<b>490.15</b>	<b>507.86</b>	<b>524.21</b>

## Production of nuclear energy (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>53.04</b>	<b>186.38</b>	<b>525.52</b>	<b>675.47</b>	<b>721.71</b>	<b>718.83</b>	<b>670.30</b>	<b>679.65</b>	<b>..</b>
<b>Non-OECD Total</b>	<b>3.83</b>	<b>24.16</b>	<b>74.39</b>	<b>89.39</b>	<b>108.85</b>	<b>122.45</b>	<b>156.63</b>	<b>167.41</b>	<b>..</b>
<b>OECD Total</b>	<b>49.21</b>	<b>162.22</b>	<b>451.13</b>	<b>586.07</b>	<b>612.85</b>	<b>596.38</b>	<b>513.67</b>	<b>512.24</b>	<b>508.47</b>
Canada	4.07	10.40	19.40	18.97	23.98	23.62	26.53	26.35	25.89
Chile	-	-	-	-	-	-	-	-	-
Mexico	-	-	0.77	2.14	2.82	1.53	3.02	2.75	2.84
United States	23.23	69.36	159.36	207.85	211.24	218.59	216.34	218.85	218.57
<b>OECD Americas</b>	<b>27.30</b>	<b>79.76</b>	<b>179.52</b>	<b>228.96</b>	<b>238.04</b>	<b>243.74</b>	<b>245.88</b>	<b>247.96</b>	<b>247.30</b>
Australia	-	-	-	-	-	-	-	-	-
Israel <sup>1</sup>	-	-	-	-	-	-	-	-	-
Japan	2.53	21.52	52.70	83.91	79.41	75.10	2.46	4.71	8.58
Korea	-	0.91	13.78	28.39	38.24	38.72	42.93	42.21	38.67
New Zealand	-	-	-	-	-	-	-	-	-
<b>OECD Asia Oceania</b>	<b>2.53</b>	<b>22.43</b>	<b>66.48</b>	<b>112.30</b>	<b>117.65</b>	<b>113.82</b>	<b>45.39</b>	<b>46.91</b>	<b>47.25</b>
Austria	-	-	-	-	-	-	-	-	-
Belgium	0.02	3.27	11.13	12.55	12.40	12.49	6.80	11.34	11.00
Czech Republic	-	-	3.28	3.54	6.47	7.32	7.02	6.30	7.41
Denmark	-	-	-	-	-	-	-	-	-
Estonia	..	..	-	-	-	-	-	-	-
Finland	-	1.83	5.01	5.86	6.06	5.94	6.06	6.05	5.85
France	3.84	15.96	81.84	108.17	117.65	111.66	113.98	105.06	103.80
Germany	3.15	14.49	39.83	44.19	42.49	36.62	23.92	22.05	19.89
Greece	-	-	-	-	-	-	-	-	-
Hungary	-	-	3.58	3.71	3.62	4.12	4.14	4.20	4.21
Iceland	-	-	-	-	-	-	-	-	-
Ireland	-	-	-	-	-	-	-	-	-
Italy	0.82	0.58	-	-	-	-	-	-	-
Latvia	..	..	-	-	-	-	-	-	-
Luxembourg	-	-	-	-	-	-	-	-	-
Netherlands	0.29	1.09	0.91	1.02	1.04	1.03	1.06	1.03	0.89
Norway	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
Portugal	-	-	-	-	-	-	-	-	-
Slovak Republic	0.06	1.18	3.14	4.30	4.67	3.86	3.99	3.90	4.01
Slovenia	..	..	1.20	1.24	1.53	1.47	1.47	1.49	1.64
Spain	1.71	1.35	14.14	16.21	14.99	16.15	14.90	15.28	15.14
Sweden	0.55	6.90	17.77	14.93	18.86	15.07	14.68	16.44	16.42
Switzerland	1.64	3.74	6.18	6.92	6.11	6.89	6.04	5.54	5.34
Turkey	-	-	-	-	-	-	-	-	-
United Kingdom	7.29	9.65	17.13	22.16	21.27	16.19	18.33	18.69	18.33
<b>OECD Europe</b>	<b>19.38</b>	<b>60.04</b>	<b>205.13</b>	<b>244.81</b>	<b>257.16</b>	<b>238.82</b>	<b>222.39</b>	<b>217.37</b>	<b>213.92</b>
IEA	49.21	162.22	449.93	584.83	611.32	594.91	512.19	510.75	506.84
IEA/Accession/Association	49.83	163.00	452.11	595.17	632.23	624.79	570.28	580.33	..
European Union - 28	..	..	207.28	246.30	260.12	238.95	223.41	218.89	..
G7	44.94	141.95	370.25	485.26	496.03	481.78	401.55	395.70	395.05
G8	..	..	401.55	519.68	535.28	526.54	452.82	447.28	..
G20	..	..	490.85	637.32	680.70	676.17	629.09	641.00	..
OPEC	-	-	-	-	-	-	0.76	1.72	..

1. Please refer to section 'Geographical coverage'.



## Production of nuclear energy (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>3.83</b>	<b>24.16</b>	<b>74.39</b>	<b>89.39</b>	<b>108.85</b>	<b>122.45</b>	<b>156.63</b>	<b>167.41</b>	<b>..</b>
Albania	-	-	-	-	-	-	-	-	-
Armenia	..	..	-	0.52	0.71	0.65	0.73	0.62	0.66
Azerbaijan	..	..	-	-	-	-	-	-	-
Belarus	..	..	-	-	-	-	-	-	-
Bosnia and Herzegovina	..	..	-	-	-	-	-	-	-
Bulgaria	-	1.61	3.82	4.75	4.87	4.00	4.02	4.13	4.07
Croatia	..	..	-	-	-	-	-	-	-
Cyprus <sup>1</sup>	-	-	-	-	-	-	-	-	-
FYR of Macedonia	..	..	-	-	-	-	-	-	-
Georgia	..	..	-	-	-	-	-	-	-
Gibraltar	-	-	-	-	-	-	-	-	..
Kazakhstan	..	..	-	-	-	-	-	-	..
Kosovo	..	..	..	-	-	-	-	-	..
Kyrgyzstan	..	..	-	-	-	-	-	-	..
Lithuania	..	..	4.50	2.25	2.74	-	-	-	..
Malta	-	-	-	-	-	-	-	-	-
Republic of Moldova	..	..	-	-	-	-	-	-	-
Montenegro	..	..	..	..	..	..	..	..	..
Romania	-	-	-	1.42	1.45	3.03	3.03	2.94	3.00
Russian Federation	..	..	31.29	34.41	39.25	44.75	51.27	51.58	53.28
Serbia	..	..	-	-	-	-	-	-	-
Tajikistan	..	..	-	-	-	-	-	-	-
Turkmenistan	..	..	-	-	-	-	-	-	..
Ukraine	..	..	19.85	20.15	23.13	23.38	22.98	21.24	22.30
Uzbekistan	..	..	-	-	-	-	-	-	..
Former Soviet Union	3.13	19.02	x	x	x	x	x	x	..
Former Yugoslavia	-	-	x	x	x	x	x	x	..
<b>Non-OECD Europe and Eurasia</b>	<b>3.13</b>	<b>20.63</b>	<b>59.47</b>	<b>63.50</b>	<b>72.14</b>	<b>75.81</b>	<b>82.03</b>	<b>80.51</b>	<b>..</b>
Algeria	-	-	-	-	-	-	-	-	..
Angola	-	-	-	-	-	-	-	-	..
Benin	-	-	-	-	-	-	-	-	..
Botswana	..	..	-	-	-	-	-	-	..
Cameroon	-	-	-	-	-	-	-	-	..
Congo	-	-	-	-	-	-	-	-	..
Côte d'Ivoire	-	-	-	-	-	-	-	-	..
Dem. Rep. of the Congo	-	-	-	-	-	-	-	-	..
Egypt	-	-	-	-	-	-	-	-	..
Eritrea	..	..	..	..	..	..	..	..	..
Ethiopia	-	-	-	-	-	-	-	-	..
Gabon	-	-	-	-	-	-	-	-	..
Ghana	-	-	-	-	-	-	-	-	..
Kenya	-	-	-	-	-	-	-	-	..
Libya	-	-	-	-	-	-	-	-	..
Mauritius	-	-	-	-	-	-	-	-	..
Morocco	-	-	-	-	-	-	-	-	..
Mozambique	-	-	-	-	-	-	-	-	..
Namibia	..	..	..	..	..	..	..	..	..
Niger	..	..	..	..	..	..	..	..	..
Nigeria	-	-	-	-	-	-	-	-	..
Senegal	-	-	-	-	-	-	-	-	..
South Africa	-	-	2.20	3.39	2.94	3.15	3.19	3.92	..
South Sudan	..	..	..	..	..	..	..	..	..
Sudan	-	-	-	-	-	-	-	-	..
United Rep. of Tanzania	-	-	-	-	-	-	-	-	..
Togo	-	-	-	-	-	-	-	-	..
Tunisia	-	-	-	-	-	-	-	-	..
Zambia	-	-	-	-	-	-	-	-	..
Zimbabwe	-	-	-	-	-	-	-	-	..
Other Africa	-	-	-	-	-	-	-	-	..
<b>Africa</b>	<b>-</b>	<b>-</b>	<b>2.20</b>	<b>3.39</b>	<b>2.94</b>	<b>3.15</b>	<b>3.19</b>	<b>3.92</b>	<b>..</b>

1. Please refer to section 'Geographical coverage'.

## Production of nuclear energy (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	-	-	-	-	-	-	-	-	..
Brunei Darussalam	-	-	-	-	-	-	-	-	..
Cambodia	..	..	..	-	-	-	-	-	..
DPR of Korea	-	-	-	-	-	-	-	-	..
India	0.62	0.78	1.60	4.40	4.51	6.84	9.75	9.88	..
Indonesia	-	-	-	-	-	-	-	-	..
Malaysia	-	-	-	-	-	-	-	-	..
Mongolia	..	..	-	-	-	-	-	-	..
Myanmar	-	-	-	-	-	-	-	-	..
Nepal	-	-	-	-	-	-	-	-	..
Pakistan	0.08	0.00	0.08	0.52	0.65	0.89	1.20	1.27	..
Philippines	-	-	-	-	-	-	-	-	..
Singapore	-	-	-	-	-	-	-	-	..
Sri Lanka	-	-	-	-	-	-	-	-	..
Chinese Taipei	-	2.14	8.56	10.03	10.42	10.85	9.50	8.25	..
Thailand	-	-	-	-	-	-	-	-	..
Viet Nam	-	-	-	-	-	-	-	-	..
Other Non-OECD Asia	-	-	-	-	-	-	-	-	..
<b>Non-OECD Asia excl. China</b>	<b>0.70</b>	<b>2.92</b>	<b>10.24</b>	<b>14.96</b>	<b>15.58</b>	<b>18.58</b>	<b>20.45</b>	<b>19.40</b>	..
People's Rep. of China	-	-	-	4.36	13.83	19.25	44.50	55.57	64.64
Hong Kong, China	-	-	-	-	-	-	-	-	..
<b>China</b>	-	-	-	<b>4.36</b>	<b>13.83</b>	<b>19.25</b>	<b>44.50</b>	<b>55.57</b>	..
Argentina	-	0.61	1.90	1.61	1.79	1.87	1.86	2.16	..
Bolivia	-	-	-	-	-	-	-	-	..
Brazil	-	-	0.58	1.58	2.57	3.78	3.84	4.13	4.10
Colombia	-	-	-	-	-	-	-	-	..
Costa Rica	-	-	-	-	-	-	-	-	..
Cuba	-	-	-	-	-	-	-	-	..
Curaçao	-	-	-	-	-	-	-	-	..
Dominican Republic	-	-	-	-	-	-	-	-	..
Ecuador	-	-	-	-	-	-	-	-	..
El Salvador	-	-	-	-	-	-	-	-	..
Guatemala	-	-	-	-	-	-	-	-	..
Haiti	-	-	-	-	-	-	-	-	..
Honduras	-	-	-	-	-	-	-	-	..
Jamaica	-	-	-	-	-	-	-	-	..
Nicaragua	-	-	-	-	-	-	-	-	..
Panama	-	-	-	-	-	-	-	-	..
Paraguay	-	-	-	-	-	-	-	-	..
Peru	-	-	-	-	-	-	-	-	..
Suriname	..	..	..	-	-	-	-	-	..
Trinidad and Tobago	-	-	-	-	-	-	-	-	..
Uruguay	-	-	-	-	-	-	-	-	..
Venezuela	-	-	-	-	-	-	-	-	..
Other Non-OECD Americas	-	-	-	-	-	-	-	-	..
<b>Non-OECD Americas</b>	-	<b>0.61</b>	<b>2.48</b>	<b>3.18</b>	<b>4.36</b>	<b>5.65</b>	<b>5.70</b>	<b>6.29</b>	..
Bahrain	-	-	-	-	-	-	-	-	..
Islamic Republic of Iran	-	-	-	-	-	-	0.76	1.72	..
Iraq	-	-	-	-	-	-	-	-	..
Jordan	-	-	-	-	-	-	-	-	..
Kuwait	-	-	-	-	-	-	-	-	..
Lebanon	-	-	-	-	-	-	-	-	..
Oman	-	-	-	-	-	-	-	-	..
Qatar	-	-	-	-	-	-	-	-	..
Saudi Arabia	-	-	-	-	-	-	-	-	..
Syrian Arab Republic	-	-	-	-	-	-	-	-	..
United Arab Emirates	-	-	-	-	-	-	-	-	..
Yemen	-	-	-	-	-	-	-	-	..
<b>Middle East</b>	-	-	-	-	-	-	<b>0.76</b>	<b>1.72</b>	..

## Production of hydro energy (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>110.29</b>	<b>147.62</b>	<b>184.32</b>	<b>225.13</b>	<b>252.35</b>	<b>296.25</b>	<b>335.75</b>	<b>349.22</b>	<b>..</b>
<b>Non-OECD Total</b>	<b>31.36</b>	<b>53.68</b>	<b>82.43</b>	<b>109.81</b>	<b>140.36</b>	<b>179.52</b>	<b>216.79</b>	<b>227.77</b>	<b>..</b>
<b>OECD Total</b>	<b>78.93</b>	<b>93.94</b>	<b>101.89</b>	<b>115.32</b>	<b>111.98</b>	<b>116.72</b>	<b>118.95</b>	<b>121.45</b>	<b>120.22</b>
Canada	16.74	21.59	25.51	30.83	31.12	30.21	32.86	33.28	33.91
Chile	0.48	0.68	0.77	1.59	2.28	1.87	2.05	2.00	1.89
Mexico	1.39	1.45	2.02	2.85	2.38	3.19	2.65	2.64	2.59
United States	22.82	23.97	23.49	21.77	23.43	22.55	21.58	23.19	26.00
<b>OECD Americas</b>	<b>41.43</b>	<b>47.69</b>	<b>51.79</b>	<b>57.04</b>	<b>59.21</b>	<b>57.82</b>	<b>59.15</b>	<b>61.11</b>	<b>64.39</b>
Australia	0.98	1.11	1.22	1.41	1.32	1.16	1.15	1.30	1.41
Israel <sup>1</sup>	-	-	0.00	0.00	0.00	0.00	0.00	c	c
Japan	5.74	7.59	7.57	7.26	6.61	7.21	7.49	6.78	6.91
Korea	0.11	0.17	0.55	0.34	0.32	0.32	0.18	0.24	0.24
New Zealand	1.23	1.63	1.99	2.10	1.99	2.10	2.09	2.21	2.15
<b>OECD Asia Oceania</b>	<b>8.06</b>	<b>10.50</b>	<b>11.33</b>	<b>11.12</b>	<b>10.23</b>	<b>10.79</b>	<b>10.92</b>	<b>10.54</b>	<b>10.70</b>
Austria	1.61	2.47	2.71	3.60	3.19	3.30	3.19	3.43	3.33
Belgium	0.01	0.02	0.02	0.04	0.02	0.03	0.03	0.03	0.02
Czech Republic	0.09	0.21	0.10	0.15	0.20	0.24	0.15	0.17	0.16
Denmark	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Estonia	..	..	-	0.00	0.00	0.00	0.00	0.00	0.00
Finland	0.90	0.88	0.93	1.26	1.19	1.11	1.44	1.36	1.27
France	4.10	5.98	4.63	5.71	4.43	5.39	4.68	5.16	4.23
Germany	1.31	1.64	1.50	1.87	1.69	1.80	1.63	1.77	1.73
Greece	0.19	0.29	0.15	0.32	0.43	0.64	0.52	0.48	0.34
Hungary	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Iceland	0.19	0.27	0.36	0.55	0.60	1.08	1.18	1.16	1.21
Ireland	0.06	0.07	0.06	0.07	0.05	0.05	0.07	0.06	0.06
Italy	3.23	3.89	2.72	3.80	3.10	4.40	3.92	3.65	3.11
Latvia	..	..	0.39	0.24	0.29	0.30	0.16	0.22	0.38
Luxembourg	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Netherlands	-	-	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Norway	6.27	7.19	10.42	12.19	11.67	10.04	11.81	12.30	12.21
Poland	0.13	0.20	0.12	0.18	0.19	0.25	0.16	0.18	0.22
Portugal	0.63	0.69	0.79	0.97	0.41	1.39	0.74	1.35	0.50
Slovak Republic	0.11	0.19	0.16	0.40	0.40	0.45	0.33	0.37	0.38
Slovenia	..	..	0.25	0.33	0.30	0.39	0.33	0.39	0.33
Spain	2.49	2.54	2.19	2.43	1.58	3.64	2.42	3.13	1.61
Sweden	5.15	5.06	6.23	6.76	6.26	5.71	6.48	5.33	5.55
Switzerland	2.40	2.82	2.56	3.17	2.68	3.10	3.29	2.98	2.93
Turkey	0.22	0.98	1.99	2.66	3.40	4.45	5.77	5.78	5.01
United Kingdom	0.33	0.33	0.45	0.44	0.42	0.31	0.54	0.46	0.51
<b>OECD Europe</b>	<b>29.43</b>	<b>35.74</b>	<b>38.77</b>	<b>47.17</b>	<b>42.54</b>	<b>48.11</b>	<b>48.89</b>	<b>49.80</b>	<b>45.12</b>
IEA	78.26	93.00	100.12	112.61	108.52	113.08	115.23	117.69	116.40
IEA/Accession/Association	89.83	114.12	136.74	167.34	184.73	223.73	257.45	266.60	..
European Union - 28	..	..	24.97	30.69	26.94	32.41	29.33	30.10	..
G7	54.27	65.00	65.87	71.67	70.80	71.87	72.71	74.30	76.41
G8	..	..	80.14	85.78	85.65	86.18	87.15	90.17	..
G20	..	..	138.53	167.04	186.76	226.90	258.41	268.67	..
<b>OPEC</b>	<b>1.14</b>	<b>2.21</b>	<b>4.87</b>	<b>7.07</b>	<b>10.11</b>	<b>9.53</b>	<b>10.03</b>	<b>9.96</b>	<b>..</b>

Excludes hydro pumped storage.

1. Please refer to section 'Geographical coverage'.

## Production of hydro energy (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>31.36</b>	<b>53.68</b>	<b>82.43</b>	<b>109.81</b>	<b>140.36</b>	<b>179.52</b>	<b>216.79</b>	<b>227.77</b>	<b>..</b>
Albania	0.10	0.25	0.24	0.40	0.46	0.65	0.51	0.67	0.39
Armenia	..	..	0.13	0.11	0.15	0.22	0.19	0.20	0.21
Azerbaijan	..	..	0.14	0.13	0.26	0.30	0.14	0.17	0.15
Belarus	..	..	0.00	0.00	0.00	0.00	0.01	0.01	0.01
Bosnia and Herzegovina	..	..	0.26	0.44	0.52	0.69	0.48	0.49	0.33
Bulgaria	0.22	0.32	0.16	0.23	0.37	0.43	0.49	0.34	0.24
Croatia	..	..	0.35	0.55	0.60	0.78	0.55	0.59	0.46
Cyprus <sup>1</sup>	-	-	-	-	-	-	-	-	-
FYR of Macedonia	..	..	0.04	0.10	0.13	0.21	0.16	0.16	0.10
Georgia	..	..	0.65	0.50	0.54	0.81	0.73	0.80	0.79
Gibraltar	-	-	-	-	-	-	-	-	..
Kazakhstan	..	..	0.63	0.65	0.68	0.69	0.80	1.00	..
Kosovo	..	..	..	0.00	0.01	0.01	0.01	0.02	0.02
Kyrgyzstan	..	..	0.86	1.10	1.10	0.96	0.95	0.99	..
Lithuania	..	..	0.04	0.03	0.04	0.05	0.03	0.04	..
Malta	-	-	-	-	-	-	-	-	-
Republic of Moldova	..	..	0.02	0.03	0.03	0.03	0.03	0.02	0.02
Montenegro	..	..	..	..	0.16	0.24	0.13	0.16	0.08
Romania	0.65	1.09	0.98	1.27	1.74	1.71	1.43	1.55	1.26
Russian Federation	..	..	14.27	14.11	14.85	14.31	14.44	15.87	15.92
Serbia	..	..	0.81	1.03	1.03	1.02	0.87	0.93	0.75
Tajikistan	..	..	1.42	1.21	1.46	1.41	1.46	1.43	1.47
Turkmenistan	..	..	0.06	-	-	-	-	-	..
Ukraine	..	..	0.90	0.97	1.06	1.13	0.46	0.66	0.90
Uzbekistan	..	..	0.57	0.51	0.74	0.93	1.02	1.02	..
Former Soviet Union	10.52	15.88	x	x	x	x	x	x	..
Former Yugoslavia	1.41	2.42	x	x	x	x	x	x	..
<b>Non-OECD Europe and Eurasia</b>	<b>12.89</b>	<b>19.96</b>	<b>22.56</b>	<b>23.37</b>	<b>25.93</b>	<b>26.59</b>	<b>24.88</b>	<b>27.11</b>	<b>..</b>
Algeria	0.06	0.02	0.01	0.00	0.05	0.01	0.01	0.02	..
Angola	0.07	0.05	0.06	0.08	0.19	0.32	0.45	0.50	..
Benin	-	-	-	0.00	0.00	-	0.00	0.00	..
Botswana	..	..	-	-	-	-	-	-	..
Cameroon	0.09	0.12	0.23	0.30	0.32	0.37	0.37	0.40	..
Congo	0.00	0.01	0.04	0.03	0.03	0.04	0.08	0.08	..
Côte d'Ivoire	0.01	0.12	0.11	0.15	0.12	0.14	0.12	0.13	..
Dem. Rep. of the Congo	0.32	0.36	0.48	0.51	0.63	0.67	0.77	0.78	..
Egypt	0.44	0.84	0.85	1.18	1.09	1.12	1.16	1.16	..
Eritrea	..	..	..	-	-	-	-	-	..
Ethiopia	0.03	0.04	0.09	0.14	0.24	0.42	0.83	0.89	..
Gabon	0.00	0.02	0.06	0.07	0.07	0.08	0.08	0.08	..
Ghana	0.33	0.45	0.49	0.57	0.48	0.60	0.50	0.48	..
Kenya	0.04	0.09	0.21	0.11	0.26	0.29	0.33	0.29	..
Libya	-	-	-	-	-	-	-	-	..
Mauritius	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	..
Morocco	0.10	0.13	0.10	0.06	0.08	0.30	0.16	0.11	0.10
Mozambique	0.02	0.03	0.02	0.83	1.14	1.43	1.48	1.34	..
Namibia	..	..	..	0.12	0.14	0.11	0.13	0.12	..
Niger	..	..	..	-	-	-	-	-	..
Nigeria	0.16	0.24	0.38	0.48	0.67	0.55	0.49	0.48	..
Senegal	-	-	-	-	0.02	0.02	0.03	0.03	..
South Africa	0.08	0.09	0.09	0.09	0.11	0.18	0.07	0.06	..
South Sudan	..	..	..	..	..	..	-	-	..
Sudan	0.04	0.05	0.08	0.10	0.11	0.53	0.72	0.69	..
United Rep. of Tanzania	0.03	0.06	0.13	0.18	0.15	0.23	0.18	0.20	..
Togo	0.00	0.00	0.01	0.01	0.01	0.01	0.00	0.02	..
Tunisia	0.01	0.00	0.00	0.01	0.01	0.00	0.01	0.00	..
Zambia	0.27	0.79	0.68	0.67	0.76	0.90	1.12	0.95	..
Zimbabwe	0.30	0.34	0.38	0.27	0.42	0.50	0.43	0.26	..
Other Africa	0.17	0.21	0.30	0.46	0.52	0.61	0.89	0.91	..
<b>Africa</b>	<b>2.59</b>	<b>4.08</b>	<b>4.84</b>	<b>6.44</b>	<b>7.67</b>	<b>9.45</b>	<b>10.43</b>	<b>9.99</b>	<b>..</b>

Excludes hydro pumped storage.

1. Please refer to section 'Geographical coverage'.

## Production of hydro energy (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	0.03	0.05	0.08	0.06	0.06	0.06	0.05	0.05	..
Brunei Darussalam	-	-	-	-	-	-	-	-	..
Cambodia	..	..	..	..	0.00	0.00	0.17	0.23	..
DPR of Korea	0.82	0.91	1.34	0.88	1.13	1.15	0.86	1.10	..
India	2.49	4.00	6.16	6.40	9.28	10.67	11.66	11.83	..
Indonesia	0.09	0.12	0.49	0.86	0.92	1.50	1.18	1.67	..
Malaysia	0.10	0.12	0.34	0.60	0.45	0.56	1.20	1.72	..
Mongolia	..	..	-	0.00	0.00	0.00	0.01	0.01	..
Myanmar	0.05	0.07	0.10	0.16	0.26	0.44	0.81	0.84	..
Nepal	0.01	0.02	0.08	0.14	0.22	0.28	0.30	0.36	..
Pakistan	0.37	0.75	1.46	1.48	2.65	2.74	2.98	3.15	..
Philippines	0.16	0.30	0.52	0.67	0.72	0.67	0.75	0.70	..
Singapore	-	-	-	-	-	-	-	-	..
Sri Lanka	0.06	0.13	0.27	0.27	0.30	0.48	0.51	0.36	..
Chinese Taipei	0.29	0.25	0.55	0.39	0.34	0.36	0.38	0.56	..
Thailand	0.16	0.11	0.43	0.52	0.50	0.48	0.41	0.60	0.41
Viet Nam	0.04	0.13	0.46	1.25	1.46	2.37	4.83	5.51	..
Other Non-OECD Asia	0.09	0.20	0.39	0.69	0.74	1.14	2.14	2.17	..
<b>Non-OECD Asia excl. China</b>	<b>4.76</b>	<b>7.15</b>	<b>12.67</b>	<b>14.38</b>	<b>19.03</b>	<b>22.90</b>	<b>28.23</b>	<b>30.85</b>	..
People's Rep. of China	3.27	5.01	10.90	19.12	34.14	61.17	95.83	99.96	102.31
Hong Kong, China	-	-	-	-	-	-	-	-	..
<b>China</b>	<b>3.27</b>	<b>5.01</b>	<b>10.90</b>	<b>19.12</b>	<b>34.14</b>	<b>61.17</b>	<b>95.83</b>	<b>99.96</b>	..
Argentina	0.26	1.30	1.54	2.47	2.92	2.89	3.27	3.21	..
Bolivia	0.08	0.09	0.10	0.17	0.17	0.19	0.21	0.15	..
Brazil	4.98	11.08	17.77	26.17	29.02	34.68	30.93	32.75	31.89
Colombia	0.68	1.23	2.36	2.76	3.42	3.47	4.18	4.21	..
Costa Rica	0.10	0.18	0.29	0.49	0.56	0.62	0.69	0.69	..
Cuba	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.01	..
Curaçao	-	-	-	-	-	-	-	-	..
Dominican Republic	0.05	0.05	0.03	0.10	0.20	0.15	0.10	0.16	..
Ecuador	0.04	0.07	0.43	0.65	0.59	0.74	1.13	1.36	..
El Salvador	0.04	0.08	0.14	0.10	0.14	0.18	0.12	0.11	..
Guatemala	0.02	0.02	0.15	0.22	0.25	0.33	0.34	0.35	..
Haiti	0.01	0.02	0.04	0.02	0.02	0.02	0.01	0.01	..
Honduras	0.03	0.07	0.20	0.19	0.15	0.26	0.20	0.20	..
Jamaica	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	..
Nicaragua	0.03	0.04	0.03	0.02	0.04	0.04	0.03	0.04	..
Panama	0.01	0.08	0.19	0.29	0.32	0.36	0.54	0.56	..
Paraguay	0.03	0.06	2.34	4.60	4.40	4.65	4.79	5.48	..
Peru	0.41	0.60	0.90	1.39	1.55	1.72	2.04	2.08	..
Suriname	..	..	..	0.09	0.07	0.10	0.12	0.10	..
Trinidad and Tobago	-	-	-	-	-	-	-	-	..
Uruguay	0.13	0.30	0.60	0.61	0.57	0.75	0.71	0.67	..
Venezuela	0.54	1.25	3.18	5.41	6.64	6.60	6.44	5.82	..
Other Non-OECD Americas	0.10	0.09	0.13	0.03	0.15	0.11	0.07	0.07	..
<b>Non-OECD Americas</b>	<b>7.54</b>	<b>16.65</b>	<b>30.44</b>	<b>45.80</b>	<b>51.22</b>	<b>57.89</b>	<b>55.92</b>	<b>58.03</b>	..
Bahrain	-	-	-	-	-	-	-	-	..
Islamic Republic of Iran	0.24	0.48	0.52	0.32	1.38	0.82	1.21	1.41	..
Iraq	0.02	0.06	0.22	0.05	0.52	0.41	0.22	0.29	..
Jordan	-	-	0.00	0.00	0.00	0.01	0.00	0.00	..
Kuwait	-	-	-	-	-	-	-	-	..
Lebanon	0.04	0.07	0.04	0.04	0.09	0.07	0.04	0.03	..
Oman	-	-	-	-	-	-	-	-	..
Qatar	-	-	-	-	-	-	-	-	..
Saudi Arabia	-	-	-	-	-	-	-	-	..
Syrian Arab Republic	0.00	0.22	0.23	0.28	0.37	0.22	0.04	0.08	..
United Arab Emirates	-	-	-	-	-	-	-	-	..
Yemen	-	-	-	-	-	-	-	-	..
<b>Middle East</b>	<b>0.31</b>	<b>0.84</b>	<b>1.03</b>	<b>0.69</b>	<b>2.37</b>	<b>1.53</b>	<b>1.51</b>	<b>1.82</b>	..

Excludes hydro pumped storage.

## Production of geothermal energy (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>6.08</b>	<b>12.40</b>	<b>34.14</b>	<b>52.21</b>	<b>53.69</b>	<b>62.41</b>	<b>77.49</b>	<b>80.58</b>	<b>..</b>
<b>Non-OECD Total</b>	<b>-</b>	<b>2.21</b>	<b>7.63</b>	<b>21.76</b>	<b>25.62</b>	<b>32.83</b>	<b>42.58</b>	<b>44.51</b>	<b>..</b>
<b>OECD Total</b>	<b>6.08</b>	<b>10.19</b>	<b>26.51</b>	<b>30.45</b>	<b>28.07</b>	<b>29.57</b>	<b>34.91</b>	<b>36.07</b>	<b>36.97</b>
Canada	-	-	-	-	-	-	-	-	-
Chile	-	-	-	-	-	-	-	-	0.06
Mexico	0.14	0.79	4.41	5.07	6.28	3.63	3.21	3.17	3.00
United States	2.11	4.60	14.10	13.09	8.63	8.44	8.99	9.16	8.93
<b>OECD Americas</b>	<b>2.25</b>	<b>5.39</b>	<b>18.51</b>	<b>18.16</b>	<b>14.91</b>	<b>12.07</b>	<b>12.21</b>	<b>12.33</b>	<b>11.98</b>
Australia	-	-	-	-	-	0.00	0.00	0.00	-
Israel <sup>1</sup>	-	-	-	-	-	-	-	-	-
Japan	0.23	0.77	1.58	3.10	2.99	2.45	2.40	2.34	2.28
Korea	-	-	-	-	0.00	0.03	0.14	0.16	0.19
New Zealand	1.07	1.02	1.48	1.95	1.98	3.64	4.87	4.82	4.48
<b>OECD Asia Oceania</b>	<b>1.30</b>	<b>1.79</b>	<b>3.05</b>	<b>5.05</b>	<b>4.98</b>	<b>6.12</b>	<b>7.41</b>	<b>7.32</b>	<b>6.96</b>
Austria	-	-	0.00	0.02	0.03	0.03	0.03	0.03	0.03
Belgium	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Czech Republic	-	-	-	-	-	-	-	-	-
Denmark	-	-	0.00	0.00	0.00	0.01	0.00	0.01	0.01
Estonia	..	..	-	-	-	-	-	-	-
Finland	-	-	-	-	-	-	-	-	-
France	0.00	0.01	0.11	0.13	0.19	0.17	0.21	0.24	0.28
Germany	-	-	..	..	0.05	0.09	0.21	0.27	0.28
Greece	-	-	0.00	0.00	0.01	0.02	0.01	0.01	0.01
Hungary	-	-	0.09	0.09	0.09	0.10	0.11	0.12	0.13
Iceland	0.35	0.64	1.26	1.87	1.78	3.71	3.73	3.43	3.88
Ireland	-	-	-	-	-	-	-	-	-
Italy	2.13	2.30	2.97	4.26	4.79	4.78	5.47	5.57	5.50
Latvia	..	..	-	-	-	-	-	-	-
Luxembourg	-	-	-	-	-	-	-	-	-
Netherlands	-	-	-	-	-	0.01	0.06	0.07	0.07
Norway	-	-	-	-	-	-	-	-	-
Poland	-	-	-	0.00	0.01	0.01	0.02	0.02	0.02
Portugal	-	0.00	0.00	0.07	0.07	0.18	0.19	0.16	0.18
Slovak Republic	-	-	-	-	0.01	0.01	0.01	0.01	0.01
Slovenia	..	..	-	-	-	0.03	0.04	0.04	0.04
Spain	-	-	0.00	0.01	0.01	0.02	0.02	0.02	0.02
Sweden	-	-	-	-	-	-	-	-	-
Switzerland	-	-	0.07	0.10	0.15	0.26	0.34	0.38	0.40
Turkey	0.05	0.06	0.43	0.68	1.01	1.97	4.83	6.03	7.16
United Kingdom	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>OECD Europe</b>	<b>2.53</b>	<b>3.01</b>	<b>4.94</b>	<b>7.23</b>	<b>8.19</b>	<b>11.38</b>	<b>15.30</b>	<b>16.42</b>	<b>18.03</b>
IEA	5.73	9.55	25.25	28.58	26.29	25.84	31.14	32.59	32.99
IEA/Accession/Association	5.73	9.55	27.18	38.62	40.00	45.52	56.85	60.32	..
European Union - 28	..	..	3.18	4.59	5.31	5.52	6.46	6.66	..
G7	4.47	7.68	18.76	20.58	16.65	15.93	17.29	17.58	17.27
G8	..	..	18.79	20.63	17.00	16.36	17.41	17.69	..
G20	..	..	25.66	36.62	38.27	42.15	51.87	55.36	..
<i>OPEC</i>	-	-	-	0.00	0.00	0.00	0.00	0.00	..

1. Please refer to section 'Geographical coverage'.

## Production of geothermal energy (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	-	2.21	7.63	21.76	25.62	32.83	42.58	44.51	..
Albania	-	-	-	-	-	-	-	-	..
Armenia	..	..	-	-	-	-	-	-	..
Azerbaijan	..	..	-	-	-	-	-	-	..
Belarus	..	..	-	-	-	-	-	-	..
Bosnia and Herzegovina	..	..	-	-	-	-	-	-	..
Bulgaria	-	-	-	-	0.03	0.03	0.03	0.03	..
Croatia	..	..	-	-	-	0.01	0.01	0.01	..
Cyprus <sup>1</sup>	-	-	-	-	-	0.00	0.00	0.00	..
FYR of Macedonia	..	..	-	0.02	0.01	0.01	0.01	0.01	..
Georgia	..	..	-	0.01	0.01	0.05	0.02	0.02	..
Gibraltar	-	-	-	-	-	-	-	-	..
Kazakhstan	-	..	-	-	-	-	-	-	..
Kosovo	..	..	..	-	-	-	-	-	..
Kyrgyzstan	..	..	-	-	-	-	-	-	..
Lithuania	..	..	-	-	0.00	0.00	0.00	0.00	..
Malta	-	-	-	-	-	-	-	-	..
Republic of Moldova	..	..	-	-	-	-	-	-	..
Montenegro	..	..	..	..	-	-	-	-	..
Romania	-	-	-	0.01	0.02	0.02	0.03	0.04	..
Russian Federation	..	..	0.02	0.05	0.35	0.43	0.12	0.11	0.37
Serbia	..	..	-	-	-	0.01	0.01	0.01	..
Tajikistan	..	..	-	-	-	-	-	-	..
Turkmenistan	..	..	-	-	-	-	-	-	..
Ukraine	..	..	-	-	-	-	-	-	..
Uzbekistan	..	..	-	-	-	-	-	-	..
Former Soviet Union	-	-	x	x	x	x	x	x	..
Former Yugoslavia	-	-	x	x	x	x	x	x	..
<b>Non-OECD Europe and Eurasia</b>	-	-	0.02	0.08	0.43	0.56	0.22	0.22	..
Algeria	-	-	-	-	-	-	-	-	..
Angola	-	-	-	-	-	-	-	-	..
Benin	-	-	-	-	-	-	-	-	..
Botswana	..	..	-	-	-	-	-	-	..
Cameroon	-	-	-	-	-	-	-	-	..
Congo	-	-	-	-	-	-	-	-	..
Côte d'Ivoire	-	-	-	-	-	-	-	-	..
Dem. Rep. of the Congo	-	-	-	-	-	-	-	-	..
Egypt	-	-	-	-	-	-	-	-	..
Eritrea	..	..	..	-	-	-	-	-	..
Ethiopia	-	-	-	0.00	-	0.02	-	-	..
Gabon	-	-	-	-	-	-	-	-	..
Ghana	-	-	-	-	-	-	-	-	..
Kenya	-	-	0.28	0.37	0.86	1.25	3.85	3.61	..
Libya	-	-	-	-	-	-	-	-	..
Mauritius	-	-	-	-	-	-	-	-	..
Morocco	-	-	-	-	-	-	-	-	..
Mozambique	-	-	-	-	-	-	-	-	..
Namibia	..	..	..	-	-	-	-	-	..
Niger	..	..	..	-	-	-	-	-	..
Nigeria	-	-	-	-	-	-	-	-	..
Senegal	-	-	-	-	-	-	-	-	..
South Africa	-	-	-	-	-	-	-	-	..
South Sudan	..	..	..	..	..	..	-	-	..
Sudan	-	-	-	-	-	-	-	-	..
United Rep. of Tanzania	-	-	-	-	-	-	-	-	..
Togo	-	-	-	-	-	-	-	-	..
Tunisia	-	-	-	-	-	-	-	-	..
Zambia	-	-	-	-	-	-	-	-	..
Zimbabwe	-	-	-	-	-	-	-	-	..
Other Africa	-	-	-	-	-	-	-	-	..
<b>Africa</b>	-	-	0.28	0.37	0.86	1.26	3.85	3.61	..

1. Please refer to section 'Geographical coverage'.



## Production of geothermal energy (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	-	-	-	-	-	-	-	-	..
Brunei Darussalam	-	-	-	-	-	-	-	-	..
Cambodia	..	..	..	-	-	-	-	-	..
DPR of Korea	-	-	-	-	-	-	-	-	..
India	-	-	-	-	-	-	-	-	..
Indonesia	-	-	1.93	8.37	11.36	16.09	17.28	18.33	..
Malaysia	-	-	-	-	-	-	-	-	..
Mongolia	..	..	-	-	-	-	-	-	..
Myanmar	-	-	-	-	-	-	-	-	..
Nepal	-	-	-	-	-	-	-	-	..
Pakistan	-	-	-	-	-	-	-	-	..
Philippines	-	1.79	4.70	10.00	8.51	8.54	9.50	9.52	..
Singapore	-	-	-	-	-	-	-	-	..
Sri Lanka	-	-	-	-	-	-	-	-	..
Chinese Taipei	-	-	0.00	-	-	-	-	-	..
Thailand	-	-	0.00	0.00	0.00	0.00	0.00	0.00	..
Viet Nam	-	-	-	-	-	-	-	-	..
Other Non-OECD Asia	-	-	-	-	-	-	-	-	..
<b>Non-OECD Asia excl. China</b>	-	<b>1.79</b>	<b>6.64</b>	<b>18.37</b>	<b>19.87</b>	<b>24.63</b>	<b>26.78</b>	<b>27.84</b>	..
People's Rep. of China	-	-	-	1.66	2.34	3.59	8.44	9.41	..
Hong Kong, China	-	-	-	-	-	-	-	-	..
<b>China</b>	-	-	-	<b>1.66</b>	<b>2.34</b>	<b>3.59</b>	<b>8.44</b>	<b>9.41</b>	..
Argentina	-	-	-	-	-	-	-	-	..
Bolivia	-	-	-	-	-	-	-	-	..
Brazil	-	-	-	-	-	-	-	-	..
Colombia	-	-	-	-	-	-	-	-	..
Costa Rica	-	-	-	0.47	0.83	0.98	1.16	1.16	..
Cuba	-	-	-	-	-	-	-	-	..
Curaçao	-	-	-	-	-	-	-	-	..
Dominican Republic	-	-	-	-	-	-	-	-	..
Ecuador	-	-	-	0.00	0.00	0.00	0.00	0.00	..
El Salvador	-	0.42	0.36	0.68	0.90	1.31	1.32	1.36	..
Guatemala	-	-	-	0.02	0.14	0.23	0.23	0.29	..
Haiti	-	-	-	-	-	-	-	-	..
Honduras	-	-	-	-	-	-	-	-	..
Jamaica	-	-	-	-	-	-	-	-	..
Nicaragua	-	-	0.33	0.12	0.23	0.26	0.58	0.61	..
Panama	-	-	-	-	-	-	-	-	..
Paraguay	-	-	-	-	-	-	-	-	..
Peru	-	-	-	-	-	-	-	-	..
Suriname	..	..	..	-	-	-	-	-	..
Trinidad and Tobago	-	-	-	-	-	-	-	-	..
Uruguay	-	-	-	-	-	-	-	-	..
Venezuela	-	-	-	-	-	-	-	-	..
Other Non-OECD Americas	-	-	-	-	-	-	-	-	..
<b>Non-OECD Americas</b>	-	<b>0.42</b>	<b>0.69</b>	<b>1.28</b>	<b>2.11</b>	<b>2.79</b>	<b>3.30</b>	<b>3.42</b>	..
Bahrain	-	-	-	-	-	-	-	-	..
Islamic Republic of Iran	-	-	-	-	-	-	-	-	..
Iraq	-	-	-	-	-	-	-	-	..
Jordan	-	-	-	-	-	-	-	-	..
Kuwait	-	-	-	-	-	-	-	-	..
Lebanon	-	-	-	-	-	-	-	-	..
Oman	-	-	-	-	-	-	-	-	..
Qatar	-	-	-	-	-	-	-	-	..
Saudi Arabia	-	-	-	-	-	-	-	-	..
Syrian Arab Republic	-	-	-	-	-	-	-	-	..
United Arab Emirates	-	-	-	-	-	-	-	-	..
Yemen	-	-	-	-	-	-	-	-	..
<b>Middle East</b>	-	-	-	-	-	-	-	-	..

## Production of energy from solar, wind, tide, etc. (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>0.048</b>	<b>0.071</b>	<b>2.462</b>	<b>7.952</b>	<b>16.575</b>	<b>48.015</b>	<b>126.851</b>	<b>145.051</b>	<b>..</b>
<b>Non-OECD Total</b>	-	-	<b>0.120</b>	<b>1.497</b>	<b>4.139</b>	<b>15.873</b>	<b>53.529</b>	<b>64.192</b>	<b>..</b>
<b>OECD Total</b>	<b>0.048</b>	<b>0.071</b>	<b>2.341</b>	<b>6.456</b>	<b>12.436</b>	<b>32.141</b>	<b>73.322</b>	<b>80.859</b>	<b>94.355</b>
Canada	-	-	0.002	0.027	0.139	0.811	2.566	2.950	3.030
Chile	-	-	-	-	0.001	0.032	0.321	0.471	0.671
Mexico	-	-	0.018	0.046	0.087	0.225	0.990	1.157	1.192
United States	-	-	0.321	2.075	2.951	10.527	22.363	26.458	31.866
<b>OECD Americas</b>	-	-	<b>0.341</b>	<b>2.147</b>	<b>3.177</b>	<b>11.595</b>	<b>26.240</b>	<b>31.036</b>	<b>36.758</b>
Australia	-	0.019	0.081	0.090	0.146	0.719	1.773	1.939	2.141
Israel <sup>1</sup>	-	-	0.358	0.596	0.725	1.129	0.476	0.512	0.513
Japan	-	-	1.174	0.848	0.841	1.056	3.739	5.141	6.059
Korea	-	-	0.010	0.044	0.047	0.183	0.622	0.755	0.990
New Zealand	-	-	0.044	0.055	0.112	0.190	0.252	0.250	0.232
<b>OECD Asia Oceania</b>	-	<b>0.019</b>	<b>1.667</b>	<b>1.632</b>	<b>1.871</b>	<b>3.276</b>	<b>6.862</b>	<b>8.597</b>	<b>9.935</b>
Austria	-	-	0.015	0.068	0.205	0.350	0.682	0.729	0.827
Belgium	-	-	0.001	0.002	0.022	0.171	0.764	0.756	0.859
Czech Republic	-	-	-	0.000	0.004	0.091	0.262	0.245	0.259
Denmark	-	0.002	0.055	0.373	0.579	0.688	1.304	1.212	1.393
Estonia	..	..	-	-	0.005	0.024	0.061	0.051	0.063
Finland	-	-	0.000	0.007	0.015	0.027	0.202	0.267	0.417
France	0.048	0.050	0.067	0.069	0.150	1.014	2.592	2.686	3.017
Germany	-	-	0.017	0.920	2.712	4.742	10.811	10.705	13.282
Greece	-	-	0.057	0.138	0.210	0.430	0.929	0.981	1.026
Hungary	-	-	-	-	0.003	0.051	0.126	0.149	0.175
Iceland	-	-	-	-	-	-	0.001	0.001	0.001
Ireland	-	-	0.000	0.021	0.096	0.250	0.578	0.543	0.655
Italy	-	-	0.005	0.061	0.232	1.083	3.439	3.622	3.895
Latvia	..	..	0.035	0.000	0.004	0.013	0.011	0.011	0.013
Luxembourg	-	-	-	0.002	0.006	0.007	0.020	0.019	0.031
Netherlands	-	-	0.022	0.104	0.220	0.385	0.786	0.881	1.128
Norway	-	-	-	0.003	0.043	0.076	0.216	0.182	0.245
Poland	-	-	-	0.000	0.012	0.153	0.984	1.145	1.350
Portugal	-	-	0.011	0.033	0.175	0.856	1.147	1.227	1.224
Slovak Republic	-	-	-	-	0.001	0.006	0.050	0.052	0.057
Slovenia	..	..	-	-	-	0.009	0.035	0.034	0.036
Spain	-	-	0.002	0.439	1.886	4.841	7.425	7.383	7.562
Sweden	-	-	0.004	0.045	0.087	0.312	1.418	1.354	1.536
Switzerland	-	-	0.003	0.014	0.021	0.046	0.162	0.183	0.209
Turkey	-	-	0.028	0.283	0.421	0.728	2.046	2.648	3.098
United Kingdom	-	-	0.011	0.093	0.280	0.926	4.166	4.160	5.304
<b>OECD Europe</b>	<b>0.048</b>	<b>0.052</b>	<b>0.333</b>	<b>2.677</b>	<b>7.388</b>	<b>17.270</b>	<b>40.220</b>	<b>41.227</b>	<b>47.662</b>
IEA	0.048	0.071	1.948	5.860	11.706	30.967	72.476	79.830	93.122
IEA/Accession/Association	0.048	0.071	1.992	7.062	15.402	45.903	122.098	139.532	..
European Union - 28	..	..	0.303	2.413	6.948	16.622	39.108	39.525	..
G7	0.048	0.050	1.598	4.092	7.303	20.159	49.677	55.721	66.452
G8	..	..	1.598	4.092	7.304	20.159	49.719	55.774	..
G20	..	..	1.980	7.025	15.283	45.787	122.709	140.106	..
<b>OPEC</b>	-	-	-	0.003	0.006	0.015	0.106	0.120	..

1. Please refer to section 'Geographical coverage'.

## Production of energy from solar, wind, tide, etc. (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	-	-	0.120	1.497	4.139	15.873	53.529	64.192	..
Albania	-	-	-	0.001	0.002	0.007	0.012	0.013	..
Armenia	..	..	-	-	-	0.001	0.000	0.000	..
Azerbaijan	..	..	-	-	-	0.000	0.001	0.005	..
Belarus	..	..	-	-	0.000	0.000	0.003	0.009	..
Bosnia and Herzegovina	..	..	-	-	-	-	-	0.002	..
Bulgaria	-	-	-	-	0.000	0.070	0.266	0.264	..
Croatia	..	..	-	0.001	0.003	0.017	0.084	0.104	..
Cyprus <sup>1</sup>	-	-	-	0.035	0.041	0.064	0.098	0.101	..
FYR of Macedonia	..	..	-	-	-	-	0.012	0.011	..
Georgia	..	..	-	-	-	-	0.002	0.004	..
Gibraltar	-	-	-	-	-	-	-	-	..
Kazakhstan	..	..	-	-	-	-	0.015	0.031	..
Kosovo	..	..	..	0.000	0.000	0.000	0.000	0.000	..
Kyrgyzstan	..	..	-	-	-	-	-	-	..
Lithuania	..	..	-	-	0.000	0.019	0.076	0.103	..
Malta	-	-	-	-	0.001	0.004	0.012	0.015	..
Republic of Moldova	..	..	-	-	-	-	0.000	0.000	..
Montenegro	..	..	..	..	-	-	0.000	0.000	..
Romania	-	-	-	-	-	0.026	0.778	0.724	..
Russian Federation	..	..	-	0.000	0.001	0.000	0.042	0.052	0.059
Serbia	..	..	-	-	-	-	0.001	0.003	..
Tajikistan	..	..	-	-	-	-	-	-	..
Turkmenistan	..	..	-	-	-	-	-	-	..
Ukraine	..	..	-	0.001	0.003	0.004	0.134	0.124	..
Uzbekistan	..	..	-	-	-	-	-	-	..
Former Soviet Union	-	-	x	x	x	x	x	x	..
Former Yugoslavia	-	-	x	x	x	x	x	x	..
<b>Non-OECD Europe and Eurasia</b>	-	-	-	0.039	0.052	0.213	1.538	1.568	..
Algeria	-	-	-	-	-	-	0.007	0.010	..
Angola	-	-	-	-	-	-	-	-	..
Benin	-	-	-	-	-	-	0.000	0.000	..
Botswana	..	..	0.001	0.001	0.000	-	0.000	0.000	..
Cameroon	-	-	-	-	-	-	-	-	..
Congo	-	-	-	-	-	-	-	-	..
Côte d'Ivoire	-	-	-	-	-	-	-	-	..
Dem. Rep. of the Congo	-	-	-	-	-	-	-	-	..
Egypt	-	-	-	0.012	0.047	0.147	0.191	0.191	..
Eritrea	..	..	..	0.000	0.000	0.000	0.000	0.000	..
Ethiopia	-	-	-	-	-	-	0.065	0.070	..
Gabon	-	-	-	-	-	-	0.000	0.000	..
Ghana	-	-	-	-	-	-	0.000	0.002	..
Kenya	-	-	-	-	-	0.002	0.005	0.006	..
Libya	-	-	-	-	0.000	0.001	0.001	0.001	..
Mauritius	-	-	-	-	-	0.000	0.002	0.004	..
Morocco	-	-	-	0.006	0.018	0.057	0.217	0.258	..
Mozambique	-	-	-	-	-	-	-	-	..
Namibia	..	..	..	-	0.000	0.002	0.002	0.003	..
Niger	..	..	..	-	0.000	0.000	0.000	0.000	..
Nigeria	-	-	-	-	-	-	-	-	..
Senegal	-	-	-	0.000	0.000	0.000	0.000	0.001	..
South Africa	-	-	-	-	0.019	0.069	0.561	0.790	..
South Sudan	..	..	..	..	..	..	0.000	0.000	..
Sudan	-	-	-	-	-	-	-	-	..
United Rep. of Tanzania	-	-	-	-	-	0.001	0.002	0.002	..
Togo	-	-	-	-	-	-	-	-	..
Tunisia	-	-	-	0.002	0.004	0.039	0.089	0.096	..
Zambia	-	-	-	-	-	-	-	-	..
Zimbabwe	-	-	-	-	-	-	-	-	..
Other Africa	-	-	-	0.001	0.001	0.008	0.032	0.032	..
<b>Africa</b>	-	-	0.001	0.021	0.089	0.325	1.176	1.468	..

1. Please refer to section 'Geographical coverage'.

## Production of energy from solar, wind, tide, etc. (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	-	-	-	-	-	-	0.014	0.015	..
Brunei Darussalam	-	-	-	-	-	-	0.000	0.000	..
Cambodia	..	..	..	0.000	0.000	0.000	0.000	0.000	..
DPR of Korea	-	-	-	-	-	-	-	-	..
India	-	-	0.010	0.180	0.631	1.992	5.146	5.780	..
Indonesia	-	-	-	-	-	0.000	0.001	0.002	..
Malaysia	-	-	-	-	0.000	-	0.023	0.027	..
Mongolia	..	..	-	-	-	0.001	0.014	0.014	..
Myanmar	-	-	-	-	-	-	-	-	..
Nepal	-	-	-	-	-	-	0.001	0.001	..
Pakistan	-	-	-	-	-	-	0.085	0.090	..
Philippines	-	-	-	-	0.002	0.005	0.076	0.178	..
Singapore	-	-	-	-	-	0.000	0.006	0.012	..
Sri Lanka	-	-	-	0.001	0.001	0.006	0.031	0.032	..
Chinese Taipei	-	-	0.018	0.071	0.098	0.191	0.311	0.326	..
Thailand	-	-	-	-	-	0.002	0.233	0.320	..
Viet Nam	-	-	-	-	-	0.004	0.011	0.017	..
Other Non-OECD Asia	-	-	-	0.017	0.018	0.023	0.010	0.010	..
<b>Non-OECD Asia excl. China</b>	-	-	<b>0.028</b>	<b>0.270</b>	<b>0.750</b>	<b>2.225</b>	<b>5.961</b>	<b>6.824</b>	..
People's Rep. of China	-	-	0.033	0.986	2.937	12.297	41.139	49.207	..
Hong Kong, China	-	-	-	-	-	0.000	0.000	0.000	..
<b>China</b>	-	-	<b>0.033</b>	<b>0.986</b>	<b>2.937</b>	<b>12.297</b>	<b>41.140</b>	<b>49.207</b>	..
Argentina	-	-	-	0.003	0.006	0.002	0.053	0.049	..
Bolivia	-	-	-	-	-	0.000	0.002	0.004	..
Brazil	-	-	-	0.031	0.110	0.556	2.559	3.653	4.559
Colombia	-	-	-	-	0.004	0.003	0.006	0.004	..
Costa Rica	-	-	-	0.016	0.018	0.031	0.093	0.099	..
Cuba	-	-	-	0.000	0.000	0.001	0.004	0.005	..
Curaçao	-	-	-	0.001	0.006	0.005	0.020	0.020	..
Dominican Republic	-	-	-	0.004	0.005	0.007	0.086	0.105	..
Ecuador	-	-	-	-	-	0.000	0.012	0.011	..
El Salvador	-	-	-	-	-	-	-	-	..
Guatemala	-	-	-	-	-	-	0.022	0.035	..
Haiti	-	-	-	-	-	-	-	-	..
Honduras	-	-	-	-	-	-	0.093	0.125	..
Jamaica	-	-	-	-	0.004	0.005	0.011	0.017	..
Nicaragua	-	-	-	-	-	0.014	0.074	0.063	..
Panama	-	-	-	-	-	-	0.037	0.060	..
Paraguay	-	-	-	-	-	-	-	-	..
Peru	-	-	-	0.053	0.056	0.006	0.097	0.145	..
Suriname	..	..	..	-	-	-	-	-	..
Trinidad and Tobago	-	-	-	-	-	-	-	-	..
Uruguay	-	-	-	-	-	0.006	0.182	0.271	..
Venezuela	-	-	-	-	-	-	-	-	..
Other Non-OECD Americas	-	-	-	0.002	0.021	0.024	0.035	0.036	..
<b>Non-OECD Americas</b>	-	-	-	<b>0.110</b>	<b>0.230</b>	<b>0.659</b>	<b>3.386</b>	<b>4.701</b>	..
Bahrain	-	-	-	-	-	-	-	-	..
Islamic Republic of Iran	-	-	-	0.003	0.006	0.014	0.019	0.022	..
Iraq	-	-	-	-	-	-	-	-	..
Jordan	-	-	0.058	0.065	0.067	0.124	0.170	0.238	..
Kuwait	-	-	-	-	-	-	-	0.000	..
Lebanon	-	-	-	0.004	0.008	0.015	0.024	0.024	..
Oman	-	-	-	-	-	-	-	-	..
Qatar	-	-	-	-	-	-	-	-	..
Saudi Arabia	-	-	-	-	-	-	0.000	0.000	..
Syrian Arab Republic	-	-	-	-	-	-	-	-	..
United Arab Emirates	-	-	-	-	-	-	0.068	0.076	..
Yemen	-	-	-	-	-	0.000	0.047	0.063	..
<b>Middle East</b>	-	-	<b>0.058</b>	<b>0.072</b>	<b>0.081</b>	<b>0.154</b>	<b>0.328</b>	<b>0.424</b>	..

## Production of biofuels and waste (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>640.86</b>	<b>741.64</b>	<b>908.64</b>	<b>1 021.20</b>	<b>1 095.63</b>	<b>1 219.71</b>	<b>1 312.01</b>	<b>1 344.87</b>	<b>..</b>
<b>Non-OECD Total</b>	<b>553.56</b>	<b>631.02</b>	<b>758.86</b>	<b>836.98</b>	<b>884.05</b>	<b>957.34</b>	<b>1 011.70</b>	<b>1 039.53</b>	<b>..</b>
<b>OECD Total</b>	<b>..</b>	<b>110.62</b>	<b>149.77</b>	<b>184.22</b>	<b>211.59</b>	<b>262.37</b>	<b>300.31</b>	<b>305.34</b>	<b>311.48</b>
Canada	7.82	7.65	10.89	13.88	14.61	13.22	13.89	13.05	13.58
Chile	1.33	1.79	3.13	4.72	4.83	4.90	7.30	7.78	7.48
Mexico	6.21	6.88	8.55	8.94	8.88	8.12	8.63	8.67	8.84
United States	37.50	54.50	62.27	73.19	75.50	90.13	102.91	102.11	102.64
<b>OECD Americas</b>	<b>..</b>	<b>70.82</b>	<b>84.85</b>	<b>100.73</b>	<b>103.82</b>	<b>116.37</b>	<b>132.72</b>	<b>131.61</b>	<b>132.54</b>
Australia	3.53	3.61	3.96	5.04	5.10	4.90	5.18	5.15	5.47
Israel <sup>1</sup>	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.02	0.02
Japan	-	-	4.54	4.78	7.74	9.63	12.25	12.89	12.94
Korea	-	-	0.71	1.35	2.12	3.46	5.85	6.41	7.85
New Zealand	..	0.52	0.75	1.12	1.30	1.21	1.18	1.47	1.54
<b>OECD Asia Oceania</b>	<b>..</b>	<b>4.14</b>	<b>9.97</b>	<b>12.30</b>	<b>16.27</b>	<b>19.22</b>	<b>24.47</b>	<b>25.95</b>	<b>27.82</b>
Austria	0.70	1.13	2.46	3.17	4.02	5.55	6.19	6.40	6.39
Belgium	0.01	0.06	0.75	0.93	1.33	2.80	2.87	2.95	3.08
Czech Republic	-	-	1.05	1.55	2.24	3.12	4.14	4.17	4.31
Denmark	0.35	0.64	1.14	1.69	2.33	2.82	2.62	2.65	3.13
Estonia	..	..	0.19	0.51	0.69	0.96	1.29	1.48	1.56
Finland	3.92	3.48	4.33	6.55	7.07	8.44	8.99	9.16	9.69
France	9.79	8.64	10.99	10.76	12.08	15.96	16.11	17.46	17.41
Germany	2.50	4.42	4.80	7.88	14.25	24.99	30.48	31.25	31.80
Greece	0.45	0.45	0.89	1.01	1.01	0.92	1.27	1.10	1.14
Hungary	0.59	0.53	0.70	0.76	1.65	2.67	3.15	3.09	2.99
Iceland	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00
Ireland	-	-	0.11	0.14	0.22	0.33	0.41	0.44	0.52
Italy	0.24	0.82	0.85	1.74	5.88	10.18	11.89	12.16	12.42
Latvia	..	..	0.68	1.15	1.57	1.67	2.17	2.22	2.20
Luxembourg	..	0.02	0.02	0.05	0.09	0.10	0.12	0.13	0.14
Netherlands	..	0.23	0.97	1.94	2.48	3.40	4.56	4.45	4.85
Norway	..	0.58	1.03	1.36	1.35	1.51	1.33	1.31	1.75
Poland	1.29	1.22	2.23	3.73	4.49	6.83	8.20	8.42	7.92
Portugal	0.64	0.72	2.48	2.77	2.97	3.38	3.23	3.26	3.28
Slovak Republic	0.18	0.18	0.17	0.42	0.50	0.97	1.39	1.37	1.36
Slovenia	..	..	0.24	0.46	0.49	0.69	0.66	0.68	0.67
Spain	0.01	0.27	4.07	4.13	5.11	6.31	7.26	7.39	7.81
Sweden	3.54	4.13	5.51	8.26	8.86	11.32	11.05	11.47	10.99
Switzerland	0.24	0.47	1.48	1.82	2.05	2.33	2.38	2.52	2.53
Turkey	6.45	7.68	7.21	6.50	5.33	4.53	3.22	3.12	3.26
United Kingdom	-	-	0.63	1.92	3.44	5.00	8.15	9.15	9.93
<b>OECD Europe</b>	<b>..</b>	<b>35.66</b>	<b>54.96</b>	<b>71.19</b>	<b>91.50</b>	<b>126.77</b>	<b>143.12</b>	<b>147.79</b>	<b>151.12</b>
IEA	..	108.82	145.73	177.88	204.70	255.09	290.16	294.63	301.12
IEA/Accession/Association	421.45	489.29	589.34	641.46	671.28	737.63	761.32	781.12	..
European Union - 28	..	..	47.17	66.59	88.97	125.87	144.23	149.03	..
G7	57.85	76.03	94.96	114.15	133.50	169.11	195.67	198.07	200.72
G8	..	..	107.15	121.16	140.45	176.07	203.36	206.21	..
G20	..	..	594.56	645.48	671.88	736.18	757.17	774.45	..
<b>OPEC</b>	<b>38.12</b>	<b>45.20</b>	<b>59.33</b>	<b>77.61</b>	<b>92.19</b>	<b>111.26</b>	<b>125.75</b>	<b>128.51</b>	<b>..</b>

1. Please refer to section 'Geographical coverage'.

## Production of biofuels and waste (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>553.56</b>	<b>631.02</b>	<b>758.86</b>	<b>836.98</b>	<b>884.05</b>	<b>957.34</b>	<b>1 011.70</b>	<b>1 039.53</b>	<b>..</b>
Albania	0.38	0.38	0.36	0.26	0.23	0.21	0.21	0.19	..
Armenia	..	..	0.02	0.01	0.01	0.01	0.19	0.14	..
Azerbaijan	..	..	0.02	0.02	0.03	0.09	0.15	0.10	..
Belarus	..	..	0.23	0.94	1.26	1.54	1.45	1.44	..
Bosnia and Herzegovina	..	..	0.16	0.18	0.18	0.18	0.72	0.73	..
Bulgaria	0.24	0.20	0.17	0.56	0.78	0.98	1.28	1.31	..
Croatia	..	..	0.86	1.00	1.25	1.37	1.59	1.59	..
Cyprus <sup>1</sup>	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.03	..
FYR of Macedonia	..	..	-	0.21	0.20	0.19	0.21	0.19	..
Georgia	..	..	0.47	0.65	0.35	0.36	0.40	0.39	..
Gibraltar	-	-	-	-	-	-	-	-	..
Kazakhstan	..	..	0.11	0.07	0.01	0.05	0.07	0.10	..
Kosovo	..	..	..	0.16	0.17	0.24	0.26	0.35	..
Kyrgyzstan	..	..	0.01	0.00	0.00	0.00	0.00	0.00	..
Lithuania	..	..	0.28	0.65	0.86	1.11	1.38	1.41	..
Malta	-	-	-	-	-	0.00	0.00	0.00	..
Republic of Moldova	..	..	0.06	0.06	0.07	0.51	0.64	0.70	..
Montenegro	..	..	..	..	0.15	0.16	0.20	0.19	..
Romania	1.37	0.96	0.60	2.85	3.31	3.98	3.77	3.86	..
Russian Federation	..	..	12.18	7.01	6.95	6.96	7.69	8.13	8.48
Serbia	..	..	1.17	0.87	0.90	1.05	1.11	1.11	..
Tajikistan	..	..	-	-	-	-	-	-	..
Turkmenistan	..	..	-	0.00	0.00	0.00	0.00	0.00	..
Ukraine	..	..	0.36	0.26	0.26	1.67	2.61	3.35	..
Uzbekistan	..	..	0.00	0.00	0.00	0.00	0.00	0.00	..
Former Soviet Union	19.48	18.41	x	x	x	x	x	x	..
Former Yugoslavia	0.89	0.72	x	x	x	x	x	x	..
<b>Non-OECD Europe and Eurasia</b>	<b>22.36</b>	<b>20.66</b>	<b>17.08</b>	<b>15.79</b>	<b>16.99</b>	<b>20.67</b>	<b>23.97</b>	<b>25.33</b>	<b>..</b>
Algeria	0.01	0.01	0.01	0.05	0.07	0.05	0.01	0.01	..
Angola	3.23	3.60	4.32	5.30	5.95	7.29	8.12	8.28	..
Benin	1.04	1.21	1.56	1.45	1.67	2.10	2.42	2.49	..
Botswana	..	..	0.42	0.54	0.46	0.49	0.54	0.55	..
Cameroon	2.46	2.97	3.82	4.99	5.87	4.43	6.21	6.37	..
Congo	0.33	0.38	0.47	0.48	0.66	0.91	1.52	1.56	..
Côte d'Ivoire	1.74	2.23	3.18	4.22	7.17	7.69	9.40	9.36	..
Dem. Rep. of the Congo	5.88	7.22	10.00	13.22	15.75	18.63	27.26	28.21	..
Egypt	0.68	0.79	1.06	1.33	1.45	1.59	1.82	1.86	..
Eritrea	..	..	..	0.51	0.50	0.58	0.70	0.72	..
Ethiopia	14.20	16.14	22.01	30.46	35.12	40.24	45.87	47.05	..
Gabon	0.51	0.59	0.74	0.92	2.32	4.04	3.82	3.92	..
Ghana	2.29	2.85	3.90	3.89	3.18	3.21	3.62	3.60	..
Kenya	4.38	5.69	8.18	10.95	12.55	14.41	16.43	16.85	..
Libya	0.11	0.13	0.13	0.14	0.15	0.16	0.15	0.15	..
Mauritius	0.27	0.24	0.29	0.26	0.25	0.23	0.24	0.22	..
Morocco	0.68	0.80	0.99	1.22	2.15	1.51	1.37	1.35	..
Mozambique	5.88	5.94	5.56	6.42	7.05	8.08	9.34	9.62	..
Namibia	..	..	..	0.26	0.28	0.30	0.36	0.36	..
Niger	..	..	..	1.24	1.46	1.71	2.21	2.29	..
Nigeria	32.66	39.37	52.43	69.67	81.75	97.66	111.48	114.08	..
Senegal	0.84	0.89	0.96	1.16	1.19	2.02	1.63	1.54	..
South Africa	5.14	6.33	10.58	12.35	12.30	12.29	12.36	12.39	..
South Sudan	..	..	..	..	..	..	0.19	0.19	..
Sudan	5.88	7.04	8.69	10.87	11.38	11.04	11.45	11.54	..
United Rep. of Tanzania	6.89	7.24	8.93	12.46	15.39	18.30	21.84	22.63	..
Togo	0.64	0.75	1.05	1.76	1.99	2.36	2.70	2.77	..
Tunisia	0.43	0.50	0.64	0.93	1.12	1.06	1.08	1.08	..
Zambia	2.32	2.96	4.03	5.18	6.05	7.24	8.56	8.83	..
Zimbabwe	3.17	3.66	4.73	5.59	6.02	6.69	7.50	7.77	..
Other Africa	20.28	23.98	37.29	41.59	46.40	52.16	61.13	62.86	..
<b>Africa</b>	<b>121.92</b>	<b>143.50</b>	<b>195.96</b>	<b>249.41</b>	<b>287.65</b>	<b>328.48</b>	<b>381.31</b>	<b>390.49</b>	<b>..</b>

1. Please refer to section 'Geographical coverage'.

## Production of biofuels and waste (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	4.79	5.65	6.86	7.62	8.30	8.81	9.33	9.43	..
Brunei Darussalam	0.01	0.01	0.00	-	-	-	-	-	..
Cambodia	..	..	..	2.72	2.49	3.62	4.22	4.33	..
DPR of Korea	0.72	0.86	0.95	1.00	1.04	1.07	1.10	1.11	..
India	100.24	116.48	133.48	148.85	159.34	185.12	179.80	191.65	..
Indonesia	26.94	30.29	43.57	50.06	50.11	51.20	56.96	58.30	..
Malaysia	1.47	1.59	1.84	1.88	1.86	1.84	2.26	2.09	..
Mongolia	..	..	0.08	0.13	0.17	0.18	0.14	0.14	..
Myanmar	6.68	7.57	9.02	9.19	10.13	10.11	10.15	10.16	..
Nepal	3.75	4.39	5.43	6.99	7.93	8.59	9.53	9.62	..
Pakistan	11.33	14.03	18.77	24.01	26.67	29.56	33.06	33.74	..
Philippines	7.87	9.43	11.12	8.10	7.16	6.80	7.84	8.10	..
Singapore	-	-	0.07	0.20	0.39	0.59	0.61	0.66	..
Sri Lanka	2.79	3.08	3.92	4.47	4.62	5.05	4.83	4.69	..
Chinese Taipei	-	-	-	0.61	1.16	1.31	1.84	1.48	..
Thailand	7.91	10.65	14.69	14.60	17.16	22.57	25.21	28.13	..
Viet Nam	8.66	10.14	12.47	14.19	14.79	14.71	15.52	15.69	..
Other Non-OECD Asia	2.47	2.75	3.28	4.17	4.31	4.31	4.49	4.59	..
<b>Non-OECD Asia excl. China</b>	<b>185.63</b>	<b>216.92</b>	<b>265.58</b>	<b>298.79</b>	<b>317.65</b>	<b>355.45</b>	<b>366.89</b>	<b>383.91</b>	..
People's Rep. of China	161.76	179.97	200.45	198.17	168.40	133.30	113.66	113.00	..
Hong Kong, China	0.03	0.04	0.04	0.05	0.05	0.10	0.10	0.10	..
<b>China</b>	<b>161.79</b>	<b>180.01</b>	<b>200.49</b>	<b>198.22</b>	<b>168.45</b>	<b>133.40</b>	<b>113.76</b>	<b>113.11</b>	..
Argentina	2.10	2.15	1.72	2.96	2.27	4.00	4.21	4.83	..
Bolivia	0.23	0.74	0.75	0.70	0.72	0.89	1.08	1.13	..
Brazil	36.62	40.48	47.23	45.75	64.20	83.36	86.24	85.62	86.97
Colombia	3.40	4.73	5.52	3.43	3.24	3.78	5.37	5.45	..
Costa Rica	0.27	0.31	0.39	0.25	0.64	0.80	0.65	0.62	..
Cuba	3.59	4.26	6.66	3.70	2.02	1.24	1.70	1.32	..
Curaçao	-	-	-	-	-	-	-	-	..
Dominican Republic	1.16	1.28	0.91	0.84	0.83	0.83	0.80	0.84	..
Ecuador	1.05	0.98	0.95	0.74	0.67	0.61	0.87	0.78	..
El Salvador	1.29	1.41	1.19	1.34	1.44	0.89	0.61	0.56	..
Guatemala	2.02	2.35	3.03	3.89	3.99	7.11	7.33	8.41	..
Haiti	1.46	1.86	1.21	1.52	2.72	3.11	3.31	3.35	..
Honduras	1.03	1.25	1.50	1.34	1.72	1.96	2.53	2.57	..
Jamaica	0.24	0.21	0.31	0.26	0.26	0.27	0.31	0.31	..
Nicaragua	0.73	0.86	1.05	1.21	1.24	1.26	1.52	1.45	..
Panama	0.33	0.44	0.42	0.46	0.45	0.31	0.32	0.32	..
Paraguay	1.25	1.55	2.24	2.24	2.18	2.47	2.32	2.50	..
Peru	3.51	3.43	2.67	2.23	2.27	3.04	2.55	2.48	..
Suriname	..	..	..	0.04	0.02	0.03	0.03	0.03	..
Trinidad and Tobago	0.02	0.03	0.07	0.02	0.04	0.01	0.01	0.01	..
Uruguay	0.40	0.47	0.55	0.42	0.45	1.32	2.05	2.13	..
Venezuela	0.41	0.36	0.51	0.59	0.65	0.78	0.76	0.73	..
Other Non-OECD Americas	0.42	0.43	0.42	0.41	0.41	0.37	0.42	0.43	..
<b>Non-OECD Americas</b>	<b>61.54</b>	<b>69.60</b>	<b>79.33</b>	<b>74.37</b>	<b>92.43</b>	<b>118.44</b>	<b>124.96</b>	<b>125.86</b>	..
Bahrain	-	-	-	-	-	-	-	-	..
Islamic Republic of Iran	0.15	0.14	0.22	0.15	0.58	0.62	0.51	0.51	..
Iraq	0.01	0.02	0.02	0.03	0.04	0.04	0.05	0.05	..
Jordan	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.03	..
Kuwait	0.00	0.00	0.00	-	-	-	-	-	..
Lebanon	0.10	0.10	0.10	0.13	0.16	0.12	0.12	0.12	..
Oman	-	-	-	-	-	-	-	-	..
Qatar	-	-	-	-	-	-	-	-	..
Saudi Arabia	-	-	-	-	-	-	-	-	..
Syrian Arab Republic	0.00	0.01	0.00	0.01	0.01	0.01	0.01	0.01	..
United Arab Emirates	-	-	-	-	-	-	-	-	..
Yemen	0.05	0.06	0.08	0.08	0.09	0.10	0.12	0.12	..
<b>Middle East</b>	<b>0.32</b>	<b>0.33</b>	<b>0.42</b>	<b>0.40</b>	<b>0.88</b>	<b>0.90</b>	<b>0.80</b>	<b>0.83</b>	..



## Total production of energy (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>6 213.97</b>	<b>7 301.93</b>	<b>8 808.63</b>	<b>10 029.16</b>	<b>11 558.05</b>	<b>12 808.14</b>	<b>13 811.05</b>	<b>13 763.99</b>	<b>..</b>
<b>Non-OECD Total</b>	<b>3 756.37</b>	<b>4 388.56</b>	<b>5 363.13</b>	<b>6 187.62</b>	<b>7 703.41</b>	<b>8 911.17</b>	<b>9 647.30</b>	<b>9 700.45</b>	<b>..</b>
<b>OECD Total</b>	<b>2 457.60</b>	<b>2 913.38</b>	<b>3 445.51</b>	<b>3 841.54</b>	<b>3 854.64</b>	<b>3 896.97</b>	<b>4 163.76</b>	<b>4 063.54</b>	<b>4 155.94</b>
Canada	198.24	207.17	276.46	374.90	401.49	401.39	472.03	475.71	503.72
Chile	5.08	5.80	7.93	8.58	9.34	9.21	12.08	12.54	12.42
Mexico	47.28	147.04	195.54	229.31	263.50	222.54	189.59	180.46	163.74
United States	1 456.38	1 553.39	1 652.61	1 667.39	1 631.14	1 724.48	2 022.55	1 915.69	1 978.33
<b>OECD Americas</b>	<b>1 706.97</b>	<b>1 913.40</b>	<b>2 132.54</b>	<b>2 280.17</b>	<b>2 305.46</b>	<b>2 357.62</b>	<b>2 696.24</b>	<b>2 584.40</b>	<b>2 658.20</b>
Australia	67.99	85.41	157.53	233.56	265.17	323.36	381.15	390.49	406.07
Israel <sup>1</sup>	6.15	0.15	0.42	0.64	2.08	3.86	7.37	8.27	8.52
Japan	29.51	43.29	74.49	104.49	101.90	99.96	31.83	35.42	40.44
Korea	6.76	9.27	22.62	34.44	42.98	44.95	51.40	51.43	49.69
New Zealand	3.91	5.47	11.53	14.30	12.86	16.88	16.53	16.45	15.93
<b>OECD Asia Oceania</b>	<b>114.32</b>	<b>143.60</b>	<b>266.59</b>	<b>387.43</b>	<b>424.98</b>	<b>489.01</b>	<b>488.28</b>	<b>502.06</b>	<b>520.65</b>
Austria	7.92	7.63	8.14	9.80	9.75	11.66	12.02	12.37	12.37
Belgium	6.51	8.09	13.10	13.73	13.90	15.57	10.72	15.34	15.21
Czech Republic	38.51	41.21	41.17	30.84	33.23	32.07	28.90	27.38	28.06
Denmark	0.43	0.95	10.08	27.74	31.32	23.35	15.97	15.04	15.79
Estonia	..	..	5.23	3.18	3.87	4.93	5.60	4.68	5.62
Finland	4.88	6.91	12.08	14.94	16.71	17.49	17.76	17.81	18.23
France	44.18	52.60	111.89	130.64	137.17	136.09	138.58	131.56	129.64
Germany	171.66	185.63	186.16	135.22	137.10	128.93	119.93	115.92	115.71
Greece	2.33	3.70	9.20	9.99	10.32	9.43	8.47	6.71	7.21
Hungary	12.70	14.49	14.69	11.62	10.87	11.87	11.30	11.47	11.23
Iceland	0.54	0.90	1.62	2.41	2.38	4.79	4.92	4.59	5.09
Ireland	1.12	1.89	3.47	2.16	1.64	1.85	1.93	4.20	4.85
Italy	20.39	19.90	25.32	28.17	30.21	33.01	36.10	33.77	33.87
Latvia	..	..	1.16	1.41	1.86	1.98	2.34	2.45	2.59
Luxembourg	0.00	0.03	0.03	0.06	0.11	0.12	0.15	0.16	0.18
Netherlands	56.78	71.84	60.57	58.49	62.48	71.19	47.97	46.14	41.65
Norway	8.06	55.09	119.48	228.03	224.40	203.03	203.72	208.00	213.24
Poland	107.41	126.64	103.87	79.24	78.35	67.08	67.89	66.67	63.70
Portugal	1.40	1.48	3.39	3.85	3.61	5.80	5.31	6.00	5.18
Slovak Republic	2.57	3.47	5.28	6.33	6.61	6.21	6.59	6.45	6.67
Slovenia	..	..	3.07	3.10	3.51	3.79	3.40	3.59	3.67
Spain	11.35	15.77	34.59	31.56	30.16	34.43	33.56	34.13	33.32
Sweden	9.25	16.13	29.68	30.52	34.57	32.91	33.94	34.89	34.75
Switzerland	4.28	7.03	10.29	12.02	11.01	12.63	12.22	11.60	11.41
Turkey	15.53	17.14	24.83	26.40	23.71	31.63	31.65	36.10	37.67
United Kingdom	108.52	197.86	208.01	272.50	205.34	148.50	118.31	120.07	120.17
<b>OECD Europe</b>	<b>636.32</b>	<b>856.38</b>	<b>1 046.38</b>	<b>1 173.94</b>	<b>1 124.19</b>	<b>1 050.35</b>	<b>979.24</b>	<b>977.08</b>	<b>977.09</b>
IEA	2 445.83	2 906.52	3 431.31	3 825.40	3 835.47	3 873.34	4 133.65	4 032.10	4 123.66
IEA/Accession/Association	3 181.91	3 910.94	4 901.42	5 739.08	6 449.13	7 319.65	7 978.03	7 761.52	..
European Union - 28	..	..	951.27	950.98	910.10	843.10	771.63	759.38	..
G7	2 028.87	2 259.83	2 534.92	2 713.30	2 644.35	2 672.37	2 939.34	2 828.14	2 921.88
G8	..	..	3 828.14	3 691.41	3 847.72	3 951.88	4 273.78	4 201.81	..
G20	..	..	6 614.09	7 163.05	8 201.85	9 107.39	9 925.50	9 763.30	..
<b>OPEC</b>	<b>1 606.36</b>	<b>1 437.30</b>	<b>1 378.72</b>	<b>1 904.43</b>	<b>2 225.98</b>	<b>2 336.99</b>	<b>2 533.91</b>	<b>2 669.36</b>	<b>..</b>

1. Please refer to section 'Geographical coverage'.

## Total production of energy (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>3 756.37</b>	<b>4 388.56</b>	<b>5 363.13</b>	<b>6 187.62</b>	<b>7 703.41</b>	<b>8 911.17</b>	<b>9 647.30</b>	<b>9 700.45</b>	..
Albania	3.02	3.45	2.46	0.99	1.13	1.62	2.07	1.96	..
Armenia	..	..	0.15	0.64	0.87	0.88	1.11	0.96	..
Azerbaijan	..	..	20.78	18.81	27.25	65.52	58.31	57.27	..
Belarus	..	..	3.39	3.52	3.83	4.02	3.57	3.65	..
Bosnia and Herzegovina	..	..	4.60	3.08	3.64	4.37	4.37	4.74	..
Bulgaria	5.47	7.74	9.61	9.89	10.65	10.59	12.08	11.32	..
Croatia	..	..	5.71	4.26	4.76	5.15	4.40	4.42	..
Cyprus <sup>1</sup>	0.01	0.01	0.01	0.04	0.05	0.09	0.12	0.13	..
FYR of Macedonia	..	..	1.26	1.53	1.57	1.61	1.27	1.11	..
Georgia	..	..	2.02	1.32	0.98	1.31	1.32	1.38	..
Gibraltar	-	-	-	-	-	-	-	-	..
Kazakhstan	..	..	90.98	78.58	118.65	156.88	164.09	162.69	..
Kosovo	..	..	..	1.10	1.40	1.86	1.80	2.02	..
Kyrgyzstan	..	..	2.50	1.37	1.32	1.27	1.80	1.83	..
Lithuania	..	..	4.93	3.39	4.05	1.52	1.81	1.85	..
Malta	-	-	-	-	0.00	0.00	0.01	0.02	..
Republic of Moldova	..	..	0.08	0.09	0.11	0.55	0.68	0.72	..
Montenegro	..	..	..	..	0.59	0.83	0.72	0.66	..
Romania	46.25	52.60	40.84	28.33	27.91	27.48	26.47	24.87	..
Russian Federation	..	..	1 293.22	978.11	1 203.37	1 279.51	1 334.44	1 373.68	1 431.01
Serbia	..	..	13.77	11.87	10.29	10.55	10.76	10.70	..
Tajikistan	..	..	2.03	1.26	1.55	1.54	1.95	2.06	..
Turkmenistan	..	..	73.02	45.98	61.62	47.26	81.26	77.04	..
Ukraine	..	..	135.79	76.44	79.16	78.92	64.50	66.32	..
Uzbekistan	..	..	38.66	55.10	56.55	55.15	56.00	50.98	..
Former Soviet Union	991.32	1 358.73	x	x	x	x	x	x	..
Former Yugoslavia	14.68	18.82	x	x	x	x	x	x	..
<b>Non-OECD Europe and Eurasia</b>	<b>1 060.76</b>	<b>1 441.34</b>	<b>1 745.81</b>	<b>1 325.70</b>	<b>1 621.30</b>	<b>1 758.49</b>	<b>1 834.92</b>	<b>1 862.37</b>	..
Algeria	56.49	65.74	100.11	142.23	166.67	150.53	142.78	153.28	..
Angola	11.68	11.30	28.65	43.44	70.43	98.47	100.52	97.10	..
Benin	1.04	1.21	1.77	1.45	1.67	2.10	2.43	2.49	..
Botswana	..	..	0.87	1.08	1.01	1.05	1.72	1.61	..
Cameroon	2.55	6.71	10.98	11.15	10.78	8.41	11.79	11.95	..
Congo	2.44	3.82	8.75	14.47	13.63	17.52	14.79	14.98	..
Côte d'Ivoire	1.76	2.42	3.38	6.01	10.63	11.17	12.58	13.42	..
Dem. Rep. of the Congo	6.28	8.58	12.02	14.91	17.66	20.44	29.08	30.00	..
Egypt	9.84	33.48	54.87	53.09	77.99	84.50	69.58	67.62	..
Eritrea	..	..	..	0.51	0.50	0.58	0.70	0.72	..
Ethiopia	14.23	16.18	22.10	30.60	35.36	40.70	46.77	48.01	..
Gabon	8.64	9.53	14.42	14.63	16.05	17.03	16.06	16.02	..
Ghana	2.63	3.31	4.39	4.46	3.67	4.01	10.17	9.31	..
Kenya	4.41	5.78	8.67	11.43	13.67	15.95	20.61	20.76	..
Libya	112.56	96.55	73.17	75.96	97.79	103.78	31.66	29.11	..
Mauritius	0.27	0.25	0.30	0.26	0.26	0.24	0.26	0.23	..
Morocco	1.24	1.41	1.45	1.35	2.30	1.92	1.82	1.78	..
Mozambique	6.13	6.09	5.61	7.26	10.08	12.25	19.22	19.05	..
Namibia	..	..	..	0.38	0.42	0.41	0.49	0.47	..
Niger	..	..	..	1.29	1.51	1.79	3.02	3.10	..
Nigeria	136.92	144.89	146.30	197.93	233.55	253.98	254.18	239.77	..
Senegal	0.84	0.89	0.96	1.19	1.27	2.09	1.69	1.61	..
South Africa	40.36	73.17	114.54	145.11	156.37	161.40	162.04	162.88	..
South Sudan	..	..	..	..	..	..	7.71	6.19	..
Sudan	5.91	7.09	8.78	19.99	27.01	35.09	17.51	17.42	..
United Rep. of Tanzania	6.91	7.30	9.07	12.69	15.90	19.17	22.91	23.70	..
Togo	0.64	0.75	1.05	1.77	2.00	2.37	2.70	2.78	..
Tunisia	4.54	6.67	5.73	6.63	6.68	8.33	6.39	6.04	..
Zambia	3.15	4.08	4.94	5.96	6.90	8.14	9.78	9.97	..
Zimbabwe	5.28	5.79	8.55	8.76	8.78	9.04	10.72	9.08	..
Other Africa	20.56	24.54	37.79	48.22	75.19	79.11	87.93	87.21	..
<b>Africa</b>	<b>467.31</b>	<b>547.53</b>	<b>689.22</b>	<b>884.21</b>	<b>1 085.76</b>	<b>1 171.57</b>	<b>1 119.58</b>	<b>1 107.67</b>	..

1. Please refer to section 'Geographical coverage'.

## Total production of energy (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	5.34	6.75	10.76	15.16	19.38	26.10	31.17	33.44	..
Brunei Darussalam	13.16	21.14	15.64	19.69	21.06	18.58	16.11	15.15	..
Cambodia	..	..	..	2.72	2.50	3.62	4.39	4.56	..
DPR of Korea	19.05	27.21	28.91	18.79	22.04	16.73	18.83	21.29	..
India	144.07	181.11	280.49	350.79	400.69	503.60	537.94	557.48	..
Indonesia	94.89	125.05	168.57	237.51	279.64	378.36	426.42	434.33	..
Malaysia	6.09	17.66	48.37	77.56	95.58	89.32	96.50	97.67	..
Mongolia	..	..	2.74	1.95	3.85	15.68	14.50	20.82	..
Myanmar	7.81	9.52	10.66	15.42	22.14	22.07	26.75	27.87	..
Nepal	3.76	4.40	5.50	7.14	8.15	8.88	9.84	10.00	..
Pakistan	15.59	20.93	34.18	46.90	61.05	65.04	69.04	69.71	..
Philippines	8.04	12.18	17.23	19.55	21.40	23.55	25.68	28.46	..
Singapore	-	-	0.07	0.20	0.39	0.59	0.62	0.67	..
Sri Lanka	2.85	3.21	4.19	4.75	4.92	5.54	5.38	5.08	..
Chinese Taipei	3.76	5.82	10.65	11.79	12.48	12.95	12.31	10.86	..
Thailand	8.16	11.18	26.58	43.95	55.20	70.59	75.18	78.80	..
Viet Nam	10.37	13.18	18.28	39.92	60.76	66.39	72.40	68.58	..
Other Non-OECD Asia	5.67	6.85	8.53	8.54	16.37	20.33	32.48	35.36	..
<b>Non-OECD Asia excl. China</b>	<b>348.61</b>	<b>466.18</b>	<b>691.36</b>	<b>922.33</b>	<b>1 107.61</b>	<b>1 347.91</b>	<b>1 475.55</b>	<b>1 520.14</b>	..
People's Rep. of China	431.39	615.51	880.88	1 123.65	1 671.38	2 235.42	2 513.71	2 360.49	..
Hong Kong, China	0.03	0.04	0.04	0.05	0.05	0.10	0.10	0.10	..
<b>China</b>	<b>431.43</b>	<b>615.55</b>	<b>880.92</b>	<b>1 123.70</b>	<b>1 671.43</b>	<b>2 235.52</b>	<b>2 513.81</b>	<b>2 360.59</b>	..
Argentina	30.53	38.82	48.42	82.90	84.70	79.52	73.78	75.76	..
Bolivia	4.57	4.37	4.92	6.73	13.96	15.76	22.83	21.88	..
Brazil	51.25	64.35	104.15	147.65	194.71	246.63	276.61	283.33	292.63
Colombia	17.19	17.71	48.18	72.33	78.60	105.93	128.10	124.54	..
Costa Rica	0.37	0.50	0.68	1.22	2.05	2.44	2.60	2.57	..
Cuba	3.85	4.83	7.56	7.02	5.68	5.25	5.71	4.96	..
Curaçao	-	-	-	0.00	0.01	0.01	0.02	0.02	..
Dominican Republic	1.21	1.33	0.94	0.95	1.04	0.98	0.99	1.11	..
Ecuador	11.85	11.71	16.40	22.42	27.54	26.25	30.29	30.83	..
El Salvador	1.33	1.91	1.69	2.12	2.49	2.38	2.05	2.02	..
Guatemala	2.04	2.58	3.38	5.27	5.40	8.33	8.47	9.58	..
Haiti	1.47	1.88	1.25	1.54	2.74	3.12	3.31	3.36	..
Honduras	1.06	1.31	1.69	1.53	1.87	2.23	2.82	2.90	..
Jamaica	0.25	0.22	0.32	0.27	0.27	0.29	0.33	0.34	..
Nicaragua	0.76	0.91	1.42	1.35	1.51	1.57	2.20	2.15	..
Panama	0.34	0.53	0.61	0.76	0.77	0.67	0.90	0.94	..
Paraguay	1.27	1.61	4.58	6.84	6.58	7.12	7.11	7.98	..
Peru	7.87	14.47	10.60	9.36	10.92	21.28	25.50	25.38	..
Suriname	..	..	..	0.74	0.70	0.93	1.00	0.89	..
Trinidad and Tobago	9.98	13.16	12.63	19.04	34.93	42.56	37.13	33.56	..
Uruguay	0.54	0.77	1.15	1.03	1.02	2.07	2.94	3.07	..
Venezuela	201.18	137.39	144.75	215.81	223.03	197.90	183.34	168.42	..
Other Non-OECD Americas	0.53	0.61	0.95	0.56	0.67	0.79	0.66	0.67	..
<b>Non-OECD Americas</b>	<b>349.43</b>	<b>320.95</b>	<b>416.30</b>	<b>607.42</b>	<b>701.17</b>	<b>774.01</b>	<b>818.68</b>	<b>806.26</b>	..
Bahrain	10.83	11.99	14.31	16.74	18.24	20.21	22.79	22.72	..
Islamic Republic of Iran	309.73	80.76	187.84	253.67	310.67	342.27	322.62	391.09	..
Iraq	102.86	135.49	110.34	134.92	97.84	124.61	182.83	233.64	..
Jordan	0.00	0.00	0.16	0.29	0.26	0.27	0.28	0.35	..
Kuwait	160.23	93.60	50.37	114.23	146.76	134.56	167.85	174.51	..
Lebanon	0.14	0.18	0.14	0.17	0.26	0.21	0.18	0.18	..
Oman	15.20	15.09	38.31	60.33	59.59	67.10	77.55	79.53	..
Qatar	29.53	26.48	27.70	59.48	89.33	178.38	223.52	228.39	..
Saudi Arabia	388.54	533.64	368.44	475.84	570.93	531.46	648.63	670.56	..
Syrian Arab Republic	5.57	9.50	22.32	32.69	26.41	27.67	4.68	4.22	..
United Arab Emirates	76.14	90.22	110.20	153.89	175.40	177.75	229.64	236.65	..
Yemen	0.05	0.06	9.38	22.03	20.45	19.17	4.18	1.57	..
<b>Middle East</b>	<b>1 098.84</b>	<b>997.00</b>	<b>939.52</b>	<b>1 324.26</b>	<b>1 516.13</b>	<b>1 623.67</b>	<b>1 884.76</b>	<b>2 043.41</b>	..

## Net imports of coal (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>9.71</b>	<b>2.46</b>	<b>- 8.24</b>	<b>- 3.03</b>	<b>- 12.70</b>	<b>- 6.61</b>	<b>- 27.33</b>	<b>- 38.20</b>	<b>- 24.12</b>
<b>Non-OECD Total</b>	<b>- 1.11</b>	<b>- 12.51</b>	<b>- 29.78</b>	<b>- 96.74</b>	<b>- 148.69</b>	<b>- 90.98</b>	<b>- 68.13</b>	<b>- 71.31</b>	<b>- 56.63</b>
<b>OECD Total</b>	<b>10.82</b>	<b>14.97</b>	<b>21.54</b>	<b>93.72</b>	<b>136.00</b>	<b>84.38</b>	<b>40.79</b>	<b>33.11</b>	<b>32.53</b>
Canada	2.83	- 0.04	- 11.90	- 4.22	- 4.23	- 12.21	- 12.91	- 13.53	- 13.27
Chile	0.20	0.63	1.13	2.92	2.41	3.81	5.31	6.17	5.97
Mexico	0.27	0.59	0.23	1.99	4.85	5.12	5.29	5.64	6.57
United States	- 30.32	- 57.01	- 65.87	- 28.30	- 9.86	- 36.80	- 37.92	- 31.00	- 53.38
<b>OECD Americas</b>	<b>- 27.01</b>	<b>- 55.83</b>	<b>- 76.40</b>	<b>- 27.62</b>	<b>- 6.82</b>	<b>- 40.09</b>	<b>- 40.23</b>	<b>- 32.72</b>	<b>- 54.11</b>
Australia	- 17.65	- 27.81	- 67.27	- 121.43	- 150.98	- 190.35	- 253.83	- 251.85	- 244.68
Israel <sup>1</sup>	0.00	0.00	2.43	6.04	7.72	7.38	6.58	5.23	5.06
Japan	40.89	47.55	71.72	95.31	109.79	114.00	117.00	113.77	113.92
Korea	0.34	3.47	15.73	39.14	46.93	72.95	81.13	81.37	89.51
New Zealand	- 0.02	- 0.05	- 0.24	- 1.11	- 1.10	- 1.58	- 0.76	- 0.63	- 0.61
<b>OECD Asia Oceania</b>	<b>23.55</b>	<b>23.16</b>	<b>22.37</b>	<b>17.96</b>	<b>12.36</b>	<b>2.41</b>	<b>- 49.88</b>	<b>- 52.12</b>	<b>- 36.81</b>
Austria	3.01	2.80	3.17	3.02	3.99	3.38	2.71	2.83	2.99
Belgium	4.55	7.18	9.61	7.32	5.24	3.69	3.10	2.81	2.88
Czech Republic	- 2.41	- 6.78	- 5.69	- 4.74	- 3.28	- 2.86	- 0.26	- 0.17	0.37
Denmark	1.87	6.05	6.22	3.78	3.51	2.64	1.48	1.60	1.72
Estonia	..	..	0.68	0.27	0.03	- 0.02	- 0.01	0.00	0.02
Finland	2.43	3.79	4.39	3.52	3.32	3.96	2.51	2.73	2.76
France	9.49	20.23	12.82	12.84	13.36	12.08	8.67	8.01	9.53
Germany	- 3.07	- 1.34	3.34	21.66	25.95	31.64	36.07	38.26	31.75
Greece	0.45	0.38	0.92	0.77	0.37	0.40	0.16	0.19	0.25
Hungary	1.63	2.20	1.63	1.08	1.30	1.13	0.79	0.77	1.03
Iceland	0.00	0.02	0.06	0.10	0.10	0.09	0.09	0.10	0.09
Ireland	0.50	0.81	1.99	1.68	1.89	0.95	1.46	1.14	1.18
Italy	7.73	11.65	13.74	13.14	16.37	13.79	12.32	10.70	9.69
Latvia	..	..	0.63	0.06	0.08	0.11	0.04	0.03	0.03
Luxembourg	2.44	1.84	1.11	0.11	0.08	0.07	0.05	0.05	0.05
Netherlands	1.54	3.72	8.65	7.92	8.22	9.18	12.29	9.29	9.76
Norway	0.58	0.79	0.67	0.60	- 0.41	- 0.38	0.00	0.12	0.75
Poland	- 26.17	- 20.56	- 20.12	- 16.31	- 12.99	- 2.74	- 5.53	- 5.80	- 1.21
Portugal	0.27	0.35	2.99	3.91	3.23	1.63	3.21	2.91	3.36
Slovak Republic	6.26	6.28	6.12	3.43	3.74	2.95	2.77	2.68	2.91
Slovenia	..	..	0.14	0.25	0.32	0.28	0.20	0.20	0.20
Spain	2.13	4.11	7.07	12.84	14.42	6.73	10.23	7.75	10.88
Sweden	1.68	1.68	2.64	2.41	2.55	2.55	1.95	2.22	1.96
Switzerland	0.22	0.51	0.34	0.19	0.10	0.13	0.13	0.11	0.11
Turkey	0.01	0.53	3.92	9.07	11.72	14.65	21.86	23.38	24.60
United Kingdom	- 0.87	1.40	8.53	14.46	27.26	16.05	14.59	6.02	5.79
<b>OECD Europe</b>	<b>14.28</b>	<b>47.63</b>	<b>75.56</b>	<b>103.38</b>	<b>130.46</b>	<b>122.06</b>	<b>130.90</b>	<b>117.95</b>	<b>123.45</b>
IEA	10.62	14.32	17.14	84.36	125.37	72.71	28.56	21.38	21.17
IEA/Accession/Association	9.89	15.79	18.00	39.48	55.73	101.29	82.90	88.46	100.93
European Union - 28	..	..	80.17	98.16	125.25	111.35	111.33	96.67	99.54
G7	26.68	22.44	32.39	124.90	178.65	138.54	137.83	132.24	104.04
G8	..	..	27.05	114.79	136.54	67.90	52.38	37.20	0.65
G20	..	..	- 7.21	- 15.34	- 28.20	- 16.82	- 66.76	- 67.57	- 66.53
<i>OPEC</i>	0.52	0.83	- 0.30	- 4.68	- 3.81	- 0.04	1.73	1.64	0.83

A negative number shows net exports. World shows the discrepancy between total exports and total imports.

Where applicable, includes quantities of peat and oil shale except for 2017 provisional figures for non-OECD countries.

1. Please refer to section 'Geographical coverage'.

## Net imports of coal (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>- 1.11</b>	<b>- 12.51</b>	<b>- 29.78</b>	<b>- 96.74</b>	<b>- 148.69</b>	<b>- 90.98</b>	<b>- 68.13</b>	<b>- 71.31</b>	<b>- 56.63</b>
Albania	0.07	0.11	0.14	0.01	0.00	0.11	0.06	0.05	0.05
Armenia	..	..	0.24	-	-	0.00	0.00	0.00	..
Azerbaijan	..	..	0.09	-	-	-	-	-	..
Belarus	..	..	1.38	0.40	0.05	-0.06	0.39	0.42	0.35
Bosnia and Herzegovina	..	..	-	-0.02	0.07	0.44	0.64	0.61	0.91
Bulgaria	3.71	4.27	3.46	2.26	2.55	1.70	0.74	0.57	0.60
Croatia	..	..	0.61	0.48	0.62	0.70	0.62	0.66	0.38
Cyprus <sup>1</sup>	-	-	0.06	0.03	0.04	0.01	0.00	-	0.01
FYR of Macedonia	..	..	0.10	0.09	0.11	0.12	0.08	0.11	0.09
Georgia	..	..	0.25	0.01	0.01	0.00	0.15	0.16	0.10
Gibraltar	-	-	-	-	-	-	-	-	..
Kazakhstan	..	..	- 18.06	- 14.61	- 9.96	- 13.18	- 13.06	- 10.82	- 11.77
Kosovo	..	..	..	0.01	0.02	0.03	- 0.00	- 0.00	- 0.00
Kyrgyzstan	..	..	1.12	0.31	0.43	0.49	0.58	0.25	0.58
Lithuania	..	..	0.76	0.08	0.17	0.19	0.16	0.16	0.16
Malta	-	-	0.18	-	-	-	-	-	..
Republic of Moldova	..	..	2.01	0.06	0.10	0.09	0.09	0.06	0.12
Montenegro	..	..	..	..	- 0.01	- 0.01	- 0.01	- 0.01	- 0.02
Romania	2.64	4.45	4.51	1.88	2.91	1.18	0.99	1.04	0.51
Russian Federation	..	..	- 5.33	- 10.10	- 42.12	- 70.64	- 85.45	- 95.03	- 103.40
Serbia	..	..	-	0.29	0.66	0.73	0.62	0.62	0.17
Tajikistan	..	..	0.26	0.00	0.00	0.00	0.01	0.00	0.00
Turkmenistan	..	..	0.30	-	-	-	-	-	..
Ukraine	..	..	- 4.33	2.20	2.62	2.97	9.37	10.12	11.92
Uzbekistan	..	..	1.13	0.34	0.04	0.03	- 0.01	- 0.01	..
Former Soviet Union	- 9.46	- 11.05	x	x	x	x	x	x	x
Former Yugoslavia	1.66	2.33	x	x	x	x	x	x	x
<b>Non-OECD Europe and Eurasia</b>	<b>- 1.38</b>	<b>0.12</b>	<b>- 11.12</b>	<b>- 16.26</b>	<b>- 41.68</b>	<b>- 75.09</b>	<b>- 84.01</b>	<b>- 91.02</b>	<b>- 99.24</b>
Algeria	0.28	0.12	0.70	0.44	0.63	0.34	0.14	0.05	..
Angola	-	-	-	-	-	-	-	-	..
Benin	-	-	-	-	-	-	0.03	0.07	..
Botswana	..	..	0.01	0.05	0.01	- 0.03	- 0.14	- 0.12	- 0.05
Cameroon	-	-	-	-	-	-	-	-	..
Congo	-	-	-	-	-	-	-	-	..
Côte d'Ivoire	-	-	-	-	-	-	-	-	..
Dem. Rep. of the Congo	0.13	0.13	0.15	-	-	-	-	-	..
Egypt	0.24	0.48	0.76	0.79	0.79	0.44	0.35	0.35	0.37
Eritrea	..	..	..	-	-	-	-	-	..
Ethiopia	-	-	-	-	-	0.02	0.25	0.27	0.30
Gabon	-	-	-	-	-	-	-	-	..
Ghana	-	-	-	-	-	-	-	-	..
Kenya	0.04	0.01	0.09	0.07	0.09	0.17	0.35	0.34	0.33
Libya	-	-	-	-	-	-	-	-	..
Mauritius	-	-	0.03	0.14	0.23	0.41	0.50	0.57	0.88
Morocco	0.00	- 0.04	0.81	2.61	3.19	2.81	4.26	4.44	4.49
Mozambique	0.12	0.05	0.01	- 0.01	- 0.00	- 0.02	- 3.18	- 5.81	- 7.56
Namibia	..	..	..	0.00	0.01	-	-	-	0.00
Niger	..	..	..	-	-	-	-	-	..
Nigeria	- 0.02	0.00	- 0.02	-	-	-	-	-	0.05
Senegal	-	-	-	-	0.09	0.18	0.38	0.46	0.38
South Africa	- 1.30	- 19.07	- 33.62	- 46.05	- 46.43	- 43.45	- 50.35	- 46.45	- 47.53
South Sudan	..	..	..	..	..	..	-	-	..
Sudan	-	0.00	-	-	-	-	-	-	..
United Rep. of Tanzania	-	0.00	0.00	-	-	-	-	-	..
Togo	-	-	-	-	-	-	-	-	..
Tunisia	0.07	0.06	0.08	0.08	-	-	-	-	..
Zambia	0.00	-	- 0.04	- 0.00	- 0.01	-	-	-	..
Zimbabwe	- 0.09	- 0.16	- 0.01	- 0.13	- 0.10	- 0.11	- 0.13	- 0.13	0.02
Other Africa	0.05	0.06	0.02	0.11	0.11	0.22	0.35	0.36	0.36
<b>Africa</b>	<b>- 0.48</b>	<b>- 18.35</b>	<b>- 31.02</b>	<b>- 41.89</b>	<b>- 41.38</b>	<b>- 39.02</b>	<b>- 47.19</b>	<b>- 45.59</b>	<b>- 47.98</b>

A negative number shows net exports.

Where applicable, includes quantities of peat and oil shale except for 2017 provisional figures for non-OECD countries.

1. Please refer to section 'Geographical coverage'.

## Net imports of coal (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	0.12	0.12	0.28	0.33	0.35	0.40	1.83	1.09	1.32
Brunei Darussalam	-	-	-	-	-	-	-	-	..
Cambodia	..	..	..	..	..	0.01	0.59	0.68	1.13
DPR of Korea	0.33	0.44	1.65	-0.09	-1.63	-2.76	-11.96	-13.50	-1.27
India	-0.26	0.32	4.13	14.22	25.19	69.33	119.30	109.75	115.34
Indonesia	0.00	-0.04	-2.30	-33.45	-76.10	-154.47	-204.04	-205.53	-215.69
Malaysia	0.01	0.05	1.40	1.92	6.57	13.01	15.89	17.16	19.34
Mongolia	..	..	-0.14	0.01	-1.43	-11.32	-9.84	-16.08	-22.43
Myanmar	0.04	0.14	0.03	-	-	-	-	0.12	0.08
Nepal	0.05	0.05	0.05	0.25	0.24	0.29	0.55	0.68	0.55
Pakistan	0.02	0.06	0.59	0.63	1.88	2.82	3.23	3.41	6.63
Philippines	0.01	0.35	0.88	4.45	4.31	4.23	8.50	8.18	9.22
Singapore	0.00	0.00	0.02	-	0.00	0.01	0.41	0.43	0.45
Sri Lanka	0.00	0.00	0.00	0.00	0.07	0.08	1.32	1.68	1.59
Chinese Taipei	0.10	3.12	12.23	28.99	38.60	40.56	40.22	40.57	41.77
Thailand	0.01	0.06	0.21	2.57	5.40	10.71	15.09	14.24	14.75
Viet Nam	-0.12	-0.35	-0.43	-1.82	-9.72	-10.55	2.79	6.45	7.58
Other Non-OECD Asia	0.07	0.17	0.12	0.12	0.05	0.16	0.47	0.47	0.60
<b>Non-OECD Asia excl. China</b>	<b>0.38</b>	<b>4.50</b>	<b>18.71</b>	<b>18.13</b>	<b>-6.24</b>	<b>-37.51</b>	<b>-15.66</b>	<b>-30.21</b>	<b>-19.03</b>
People's Rep. of China	-2.11	-3.17	-11.04	-44.09	-40.35	84.26	99.15	123.91	140.05
Hong Kong, China	0.01	0.01	5.50	3.73	6.67	6.36	6.89	6.88	6.47
<b>China</b>	<b>-2.10</b>	<b>-3.16</b>	<b>-5.54</b>	<b>-40.36</b>	<b>-33.68</b>	<b>90.62</b>	<b>106.04</b>	<b>130.79</b>	<b>146.52</b>
Argentina	0.56	0.67	0.82	0.34	0.84	0.96	0.93	0.78	1.01
Bolivia	-	-	-	-	-	-	-	-	..
Brazil	1.41	3.70	7.90	10.33	10.61	12.11	14.85	13.67	14.40
Colombia	-0.05	-0.96	-8.84	-23.12	-34.85	-45.11	-48.23	-55.01	-55.98
Costa Rica	0.00	0.00	-	0.00	0.04	0.06	0.08	0.08	0.00
Cuba	0.08	0.10	0.14	0.03	0.02	0.02	0.01	0.00	0.00
Curaçao	-	-	-	-	-	-	-	-	..
Dominican Republic	-	-	0.01	0.10	0.59	0.83	1.06	1.01	0.64
Ecuador	-	-	-	-	-	-	-	-	..
El Salvador	-	0.00	-	0.00	0.00	-	-	-	..
Guatemala	-	0.01	-	0.13	0.25	0.35	1.38	1.26	0.92
Haiti	-	-	0.01	-	-	-	-	-	..
Honduras	-	-	0.00	0.08	0.15	0.16	0.07	0.10	0.11
Jamaica	-	-	0.03	0.03	0.04	0.03	0.07	0.06	0.08
Nicaragua	-	-	-	-	-	-	-	-	..
Panama	0.01	-	0.02	0.04	-	-	0.21	0.18	0.05
Paraguay	-	-	-	-	-	-	-	-	..
Peru	0.14	0.12	0.07	0.59	0.81	0.63	0.13	0.39	0.09
Suriname	..	..	..	-	-	-	-	-	..
Trinidad and Tobago	-	-	-	-	-	-	-	-	..
Uruguay	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Venezuela	0.24	0.13	-1.14	-5.79	-5.21	-1.79	-0.47	-0.42	-0.23
Other Non-OECD Americas	0.03	0.02	0.00	0.08	0.09	0.10	0.13	0.13	0.46
<b>Non-OECD Americas</b>	<b>2.43</b>	<b>3.80</b>	<b>-0.96</b>	<b>-17.15</b>	<b>-26.63</b>	<b>-31.65</b>	<b>-29.80</b>	<b>-37.75</b>	<b>-38.44</b>
Bahrain	-	-	-	-	-	-	-	-	..
Islamic Republic of Iran	0.03	0.58	0.15	0.66	0.64	0.76	0.35	0.17	0.01
Iraq	-	-	-	-	-	-	-	-	..
Jordan	-	-	-	-	-	-	0.17	0.22	0.10
Kuwait	-	-	-	-	-	-	-	-	..
Lebanon	0.01	0.00	-	0.13	0.13	0.15	0.17	0.17	0.17
Oman	-	-	-	-	-	-	-	-	..
Qatar	-	-	-	-	-	-	-	-	..
Saudi Arabia	-	-	-	-	-	-	-	-	..
Syrian Arab Republic	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	..
United Arab Emirates	-	-	-	-	0.15	0.66	1.71	1.84	1.00
Yemen	-	-	-	-	-	0.10	0.08	0.07	0.25
<b>Middle East</b>	<b>0.04</b>	<b>0.58</b>	<b>0.15</b>	<b>0.80</b>	<b>0.92</b>	<b>1.68</b>	<b>2.49</b>	<b>2.48</b>	<b>1.53</b>

A negative number shows net exports.

Where applicable, includes quantities of peat and oil shale except for 2017 provisional figures for non-OECD countries.

## Net imports of oil (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>- 84.49</b>	<b>- 24.68</b>	<b>- 0.82</b>	<b>- 24.54</b>	<b>- 51.82</b>	<b>68.87</b>	<b>- 36.41</b>	<b>- 60.54</b>	<b>..</b>
<b>Non-OECD Total</b>	<b>-1 461.89</b>	<b>-1 253.19</b>	<b>-1 091.01</b>	<b>-1 271.00</b>	<b>-1 482.03</b>	<b>-1 187.07</b>	<b>-1 013.27</b>	<b>-1 040.00</b>	<b>..</b>
<b>OECD Total</b>	<b>1 377.40</b>	<b>1 228.51</b>	<b>1 090.18</b>	<b>1 246.45</b>	<b>1 430.21</b>	<b>1 255.94</b>	<b>976.86</b>	<b>979.46</b>	<b>937.46</b>
Canada	- 14.49	8.44	- 14.86	- 39.04	- 43.87	- 69.08	- 121.20	- 125.13	- 139.62
Chile	3.50	3.40	5.89	11.05	12.61	15.37	15.77	16.62	17.07
Mexico	5.72	- 47.58	- 70.41	- 76.60	- 91.78	- 57.24	- 36.94	- 31.74	- 24.43
United States	303.36	340.08	374.40	549.54	659.40	508.20	266.23	273.75	220.48
<b>OECD Americas</b>	<b>298.09</b>	<b>304.33</b>	<b>295.03</b>	<b>444.96</b>	<b>536.36</b>	<b>397.25</b>	<b>123.86</b>	<b>133.50</b>	<b>73.50</b>
Australia	9.21	11.25	5.10	3.55	14.61	20.45	28.42	30.13	32.46
Israel <sup>1</sup>	2.44	8.47	9.01	12.25	10.24	11.71	10.54	10.03	11.00
Japan	273.08	251.70	263.30	270.02	257.69	212.06	192.51	185.77	185.19
Korea	13.22	27.28	51.72	109.50	102.49	108.80	116.94	125.54	127.28
New Zealand	4.56	4.26	2.35	4.46	6.02	4.48	5.63	6.46	6.73
<b>OECD Asia Oceania</b>	<b>302.52</b>	<b>302.97</b>	<b>331.48</b>	<b>399.78</b>	<b>391.06</b>	<b>357.50</b>	<b>354.03</b>	<b>357.93</b>	<b>362.67</b>
Austria	9.67	11.00	9.68	10.96	13.27	11.68	11.46	11.46	11.53
Belgium	31.46	26.41	22.26	29.56	32.78	32.82	31.36	30.27	29.63
Czech Republic	8.85	10.89	8.58	7.52	9.74	8.97	8.71	8.06	9.36
Denmark	18.57	13.24	2.75	- 8.49	- 9.43	- 3.78	0.39	0.19	- 0.52
Estonia	..	..	3.15	0.79	0.92	0.79	0.62	0.74	0.53
Finland	13.61	13.67	10.34	10.53	10.90	9.42	9.66	9.33	9.76
France	128.66	112.32	85.91	89.84	95.79	83.20	78.80	75.20	78.95
Germany	160.84	148.86	122.12	126.89	123.65	112.11	108.26	109.24	110.52
Greece	11.58	13.22	14.34	19.32	20.11	17.02	14.59	13.95	13.79
Hungary	6.47	8.31	6.43	5.21	5.99	5.78	6.57	6.30	6.63
Iceland	0.69	0.58	0.69	0.85	0.86	0.68	0.85	0.94	0.97
Ireland	5.45	5.83	5.06	8.15	8.79	7.66	7.43	7.41	7.25
Italy	98.34	92.76	85.14	87.96	78.55	66.80	52.43	51.88	53.52
Latvia	..	..	3.97	1.23	1.79	1.67	1.79	1.97	2.17
Luxembourg	1.65	1.10	1.62	2.38	3.16	2.86	2.63	2.65	2.78
Netherlands	41.73	38.15	33.54	43.36	49.58	45.98	44.85	42.65	41.72
Norway	6.58	- 14.70	- 72.83	- 157.13	- 123.77	- 84.85	- 76.54	- 82.20	- 81.37
Poland	11.76	17.74	14.31	19.83	21.90	25.67	24.09	25.35	29.56
Portugal	6.19	9.44	11.92	16.03	16.83	12.53	11.22	11.19	11.75
Slovak Republic	5.27	7.47	4.50	2.63	3.18	3.41	3.10	3.37	3.33
Slovenia	..	..	1.81	2.43	2.61	2.60	2.34	2.53	2.57
Spain	41.01	49.92	49.66	71.50	79.97	69.47	61.80	61.76	62.72
Sweden	28.60	25.91	15.28	15.73	17.47	15.51	13.04	13.94	11.42
Switzerland	15.01	13.40	13.19	12.11	12.84	11.74	10.59	10.52	10.46
Turkey	8.84	13.74	21.24	29.25	28.07	30.55	42.06	44.26	46.58
United Kingdom	115.95	1.93	- 11.00	- 46.72	- 2.74	10.89	26.87	25.06	25.68
<b>OECD Europe</b>	<b>776.78</b>	<b>621.21</b>	<b>463.67</b>	<b>401.72</b>	<b>502.79</b>	<b>501.19</b>	<b>498.98</b>	<b>488.02</b>	<b>501.29</b>
IEA	1 370.77	1 216.07	1 068.81	1 218.64	1 402.10	1 223.91	945.58	947.37	903.69
IEA/Accession/Association	1 395.47	1 236.71	1 113.79	1 471.08	1 754.44	1 743.14	1 622.86	1 660.54	..
European Union - 28	..	..	532.20	532.68	604.48	562.92	541.34	534.72	..
G7	1 065.74	956.08	905.02	1 038.49	1 168.47	924.19	603.90	595.78	534.73
G8	..	..	643.76	846.28	833.55	567.86	244.03	235.42	..
G20	..	..	599.36	989.19	1 019.08	1 050.87	835.69	851.99	..
<b>OPEC</b>	<b>-1 463.85</b>	<b>-1 199.14</b>	<b>- 989.51</b>	<b>-1 302.34</b>	<b>-1 463.30</b>	<b>-1 324.29</b>	<b>-1 374.89</b>	<b>-1 473.51</b>	<b>..</b>

A negative number shows net exports. World shows the discrepancy between total exports and total imports.

1. Please refer to section 'Geographical coverage'.



## Net imports of oil (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>-1 461.89</b>	<b>-1 253.19</b>	<b>-1 091.01</b>	<b>-1 271.00</b>	<b>-1 482.03</b>	<b>-1 187.07</b>	<b>-1 013.27</b>	<b>-1 040.00</b>	..
Albania	- 1.32	- 0.44	0.01	0.74	1.06	0.58	0.07	0.32	..
Armenia	..	..	3.84	0.35	0.42	0.43	0.34	0.36	..
Azerbaijan	..	..	- 3.68	- 7.72	- 16.52	- 47.42	- 37.30	- 36.54	..
Belarus	..	..	27.37	5.90	5.88	5.31	5.30	4.78	..
Bosnia and Herzegovina	..	..	2.04	1.17	1.13	1.72	1.61	1.82	..
Bulgaria	11.27	13.40	8.64	4.12	5.23	4.22	4.59	4.52	..
Croatia	..	..	2.10	2.43	3.62	3.04	2.67	2.60	..
Cyprus <sup>1</sup>	0.85	0.97	1.57	2.53	2.77	2.89	2.40	2.55	..
FYR of Macedonia	..	..	1.10	0.94	0.94	0.93	0.96	1.10	..
Georgia	..	..	5.52	0.63	0.73	0.94	1.24	1.45	..
Gibraltar	1.25	1.34	1.77	2.74	4.09	4.30	3.85	3.93	..
Kazakhstan	..	..	- 4.97	- 27.67	- 54.69	- 70.07	- 67.69	- 64.60	..
Kosovo	..	..	..	0.33	0.45	0.54	0.68	0.67	..
Kyrgyzstan	..	..	2.88	0.33	0.59	1.21	1.75	1.55	..
Lithuania	..	..	7.23	2.20	2.66	2.72	2.70	2.97	..
Malta	0.34	0.42	0.61	1.45	1.59	2.36	2.13	2.36	..
Republic of Moldova	..	..	4.87	0.47	0.66	0.73	0.84	0.91	..
Montenegro	..	..	..	..	0.29	0.31	0.29	0.35	..
Romania	- 0.55	7.05	10.67	3.31	3.81	4.63	4.83	5.22	..
Russian Federation	..	..	- 261.26	- 192.21	- 334.92	- 356.33	- 359.87	- 360.36	..
Serbia	..	..	4.20	0.49	3.77	2.94	2.23	2.75	..
Tajikistan	..	..	1.64	0.17	0.27	0.51	0.96	0.97	..
Turkmenistan	..	..	1.41	- 3.40	- 4.82	- 4.27	- 6.06	- 5.08	..
Ukraine	..	..	54.24	8.50	9.58	9.81	8.01	9.63	..
Uzbekistan	..	..	7.30	- 0.40	- 0.29	- 0.23	- 0.18	- 0.16	..
Former Soviet Union	- 104.22	- 156.33	x	x	x	x	x	x	..
Former Yugoslavia	9.26	11.77	x	x	x	x	x	x	..
<b>Non-OECD Europe and Eurasia</b>	<b>- 83.11</b>	<b>- 121.83</b>	<b>- 120.88</b>	<b>- 192.60</b>	<b>- 361.70</b>	<b>- 428.22</b>	<b>- 423.63</b>	<b>- 415.94</b>	..
Algeria	- 49.08	- 45.75	- 51.35	- 62.39	- 79.28	- 61.10	- 51.92	- 53.00	..
Angola	- 7.27	- 6.40	- 22.46	- 37.91	- 61.51	- 84.75	- 83.32	- 79.74	..
Benin	0.14	0.14	- 0.11	0.52	0.84	1.68	1.76	1.83	..
Botswana	..	..	0.34	0.59	0.69	0.89	1.02	0.98	..
Cameroon	0.33	- 2.96	- 6.08	- 4.78	- 3.55	- 1.63	- 2.58	- 2.59	..
Congo	- 1.28	- 3.16	- 7.89	- 13.76	- 12.55	- 15.68	- 12.07	- 12.24	..
Côte d'Ivoire	1.08	1.51	1.06	1.10	- 0.58	- 0.82	0.53	- 0.56	..
Dem. Rep. of the Congo	0.90	- 0.08	- 0.24	- 0.83	- 0.68	- 0.37	- 0.02	- 0.22	..
Egypt	- 1.87	- 17.64	- 21.52	- 10.43	- 2.27	- 1.27	4.75	3.94	..
Eritrea	..	..	..	0.21	0.23	0.16	0.20	0.20	..
Ethiopia	0.57	0.61	1.00	1.10	1.58	2.24	3.47	3.73	..
Gabon	- 7.14	- 8.21	- 12.16	- 13.49	- 12.85	- 12.37	- 10.61	- 10.47	..
Ghana	0.92	0.85	1.03	2.00	2.37	3.46	- 1.05	0.09	..
Kenya	1.75	2.19	2.14	3.45	3.17	4.19	5.08	5.58	..
Libya	- 109.39	- 87.37	- 60.60	- 58.76	- 74.94	- 73.72	- 10.54	- 10.57	..
Mauritius	0.13	0.28	0.40	0.94	1.09	1.11	1.30	1.34	..
Morocco	2.40	4.00	5.68	7.12	9.17	12.71	13.14	12.74	..
Mozambique	0.78	0.68	0.34	0.57	0.51	0.76	1.23	2.03	..
Namibia	..	..	..	0.67	0.84	1.05	1.32	1.38	..
Niger	..	..	..	0.18	0.20	0.40	- 0.08	- 0.19	..
Nigeria	- 101.01	- 95.52	- 79.40	- 105.64	- 117.14	- 108.46	- 89.05	- 69.26	..
Senegal	1.55	1.24	0.85	1.53	1.87	1.90	2.58	2.46	..
South Africa	13.01	15.13	11.31	13.41	15.70	23.01	25.51	25.54	..
South Sudan	..	..	..	..	..	..	- 6.80	- 5.35	..
Sudan	1.60	1.32	1.92	- 6.66	- 11.69	- 18.03	1.15	1.38	..
United Rep. of Tanzania	1.00	0.87	0.77	0.85	1.50	1.71	3.31	3.02	..
Togo	0.10	0.13	0.22	0.33	0.36	0.74	0.68	0.71	..
Tunisia	- 2.31	- 2.56	- 1.85	- 0.11	0.67	0.05	2.39	2.28	..
Zambia	0.95	0.74	0.77	0.52	0.70	0.67	1.11	1.09	..
Zimbabwe	0.71	0.68	0.81	1.08	0.70	0.65	1.28	1.15	..
Other Africa	3.75	4.46	4.98	- 0.03	- 20.36	- 12.47	- 10.17	- 7.32	..
<b>Africa</b>	<b>- 247.70</b>	<b>- 234.84</b>	<b>- 230.02</b>	<b>- 278.62</b>	<b>- 355.20</b>	<b>- 333.31</b>	<b>- 206.41</b>	<b>- 180.04</b>	..

A negative number shows net exports.

1. Please refer to section 'Geographical coverage'.

## Net imports of oil (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	0.90	1.66	1.88	3.14	3.79	3.90	5.20	5.31	..
Brunei Darussalam	- 11.77	- 11.79	- 7.56	- 9.68	- 10.46	- 7.71	- 6.03	- 5.37	..
Cambodia	..	..	..	0.71	0.96	1.62	2.02	2.29	..
DPR of Korea	1.21	2.71	2.66	1.06	0.93	0.83	0.97	1.03	..
India	17.54	23.27	27.39	77.10	90.32	123.52	172.43	183.89	..
Indonesia	- 50.82	- 58.05	- 40.38	- 13.21	12.66	20.46	32.18	28.32	..
Malaysia	0.18	- 5.06	- 18.59	- 11.46	- 11.29	- 7.23	- 3.68	- 2.64	..
Mongolia	..	..	0.83	0.44	0.55	0.56	0.05	- 0.10	..
Myanmar	0.05	- 0.07	- 0.02	1.35	0.67	0.24	2.73	3.68	..
Nepal	0.07	0.12	0.26	0.77	0.79	1.06	1.26	2.12	..
Pakistan	3.18	4.68	8.65	16.63	13.79	17.83	22.01	23.42	..
Philippines	9.02	11.03	11.45	16.58	13.70	14.01	18.28	19.48	..
Singapore	12.24	8.00	24.50	39.71	44.63	62.15	69.24	71.95	..
Sri Lanka	1.68	1.65	1.70	3.83	4.18	4.01	4.66	5.47	..
Chinese Taipei	10.35	21.38	28.68	45.08	48.37	47.96	46.13	46.66	..
Thailand	8.28	12.16	17.59	27.51	34.70	31.99	36.74	38.30	..
Viet Nam	5.80	1.85	0.26	- 7.95	- 6.24	2.76	3.04	7.56	..
Other Non-OECD Asia	2.71	3.15	- 1.34	0.19	- 6.17	- 3.01	- 0.14	0.66	..
<b>Non-OECD Asia excl. China</b>	<b>10.61</b>	<b>16.70</b>	<b>57.98</b>	<b>191.82</b>	<b>235.86</b>	<b>314.95</b>	<b>407.10</b>	<b>432.05</b>	..
People's Rep. of China	- 1.84	- 17.44	- 24.15	74.68	143.52	252.86	344.97	380.23	..
Hong Kong, China	4.83	6.39	6.45	12.86	13.58	21.25	18.44	19.42	..
<b>China</b>	<b>2.99</b>	<b>- 11.06</b>	<b>- 17.70</b>	<b>87.54</b>	<b>157.10</b>	<b>274.11</b>	<b>363.41</b>	<b>399.65</b>	..
Argentina	3.84	1.32	- 4.12	- 16.89	- 13.26	- 1.72	2.98	3.39	..
Bolivia	- 1.74	- 0.05	- 0.19	- 0.13	- 0.41	0.36	0.30	0.50	..
Brazil	33.41	45.31	28.46	28.48	4.74	0.17	- 7.19	- 18.89	- 24.41
Colombia	- 2.88	1.32	- 12.42	- 23.31	- 15.15	- 26.79	- 40.75	- 31.33	..
Costa Rica	0.59	0.81	1.03	1.81	2.09	2.35	2.44	2.60	..
Cuba	7.09	9.67	10.06	5.92	5.17	6.93	6.04	5.36	..
Curaçao	8.02	8.27	3.14	4.16	4.27	4.38	3.63	3.36	..
Dominican Republic	1.68	2.12	3.09	6.54	5.77	5.59	5.83	6.30	..
Ecuador	- 9.15	- 6.31	- 10.08	- 13.68	- 17.60	- 13.63	- 14.62	- 15.87	..
El Salvador	0.69	0.62	0.79	1.84	2.00	2.03	2.30	2.45	..
Guatemala	1.04	1.35	1.16	1.86	2.66	2.67	3.76	3.93	..
Haiti	0.13	0.22	0.32	0.50	0.69	0.70	0.98	1.00	..
Honduras	0.40	0.56	0.73	1.40	2.04	2.22	2.30	2.76	..
Jamaica	2.93	2.18	2.48	3.58	3.53	2.41	2.69	2.91	..
Nicaragua	0.63	0.64	0.63	1.15	1.35	1.33	1.68	1.72	..
Panama	2.40	2.12	2.48	4.45	4.61	5.86	6.82	7.66	..
Paraguay	0.28	0.50	0.67	1.14	1.14	1.49	1.95	2.10	..
Peru	1.92	- 3.09	- 0.64	2.77	2.26	1.73	4.22	5.17	..
Suriname	..	..	..	- 0.11	- 0.05	- 0.18	- 0.30	- 0.25	..
Trinidad and Tobago	- 5.06	- 9.03	- 6.39	- 4.91	- 5.89	- 4.69	- 2.59	- 1.90	..
Uruguay	1.87	2.13	1.39	2.24	2.05	2.51	2.47	2.32	..
Venezuela	- 181.43	- 103.51	- 100.78	- 157.45	- 169.27	- 125.27	- 121.57	- 110.62	..
Other Non-OECD Americas	8.32	6.53	4.88	5.01	4.55	5.38	6.31	6.42	..
<b>Non-OECD Americas</b>	<b>- 125.01</b>	<b>- 36.29</b>	<b>- 73.30</b>	<b>- 143.65</b>	<b>- 172.70</b>	<b>- 124.18</b>	<b>- 130.31</b>	<b>- 118.91</b>	..
Bahrain	- 7.59	- 8.38	- 8.55	- 8.15	- 6.62	- 6.82	- 8.21	- 8.15	..
Islamic Republic of Iran	- 279.48	- 42.16	- 116.13	- 133.63	- 139.47	- 131.87	- 82.26	- 137.96	..
Iraq	- 97.64	- 125.45	- 88.21	- 108.25	- 70.74	- 86.70	- 137.63	- 174.88	..
Jordan	0.68	1.78	3.51	4.76	5.72	5.12	6.69	5.45	..
Kuwait	- 151.56	- 79.06	- 42.90	- 95.07	- 118.43	- 104.01	- 136.60	- 141.41	..
Lebanon	2.38	2.48	1.86	4.63	4.78	5.96	7.55	7.70	..
Oman	- 13.92	- 13.58	- 33.66	- 48.84	- 38.93	- 38.14	- 43.39	- 45.28	..
Qatar	- 28.11	- 23.21	- 20.54	- 38.06	- 46.13	- 65.12	- 70.75	- 73.08	..
Saudi Arabia	- 367.79	- 497.39	- 307.04	- 373.94	- 444.33	- 349.01	- 423.12	- 446.87	..
Syrian Arab Republic	- 3.11	- 4.05	- 11.14	- 17.81	- 6.98	- 4.90	6.07	5.90	..
United Arab Emirates	- 74.79	- 78.80	- 77.86	- 104.05	- 111.60	- 108.27	- 142.91	- 149.77	..
Yemen	1.27	1.94	- 6.42	- 17.07	- 12.64	- 6.68	1.12	1.56	..
<b>Middle East</b>	<b>- 1 019.67</b>	<b>- 865.87</b>	<b>- 707.08</b>	<b>- 935.49</b>	<b>- 985.38</b>	<b>- 890.43</b>	<b>- 1 023.43</b>	<b>- 1 156.81</b>	..

A negative number shows net exports.

## Net imports of natural gas (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>0.85</b>	<b>- 7.13</b>	<b>1.38</b>	<b>- 5.34</b>	<b>- 15.72</b>	<b>3.05</b>	<b>- 29.38</b>	<b>- 17.00</b>	<b>- 11.87</b>
<b>Non-OECD Total</b>	<b>- 11.33</b>	<b>- 66.57</b>	<b>- 143.48</b>	<b>- 240.77</b>	<b>- 312.99</b>	<b>- 337.96</b>	<b>- 335.57</b>	<b>- 329.12</b>	<b>- 327.43</b>
<b>OECD Total</b>	<b>12.18</b>	<b>59.45</b>	<b>144.86</b>	<b>235.42</b>	<b>297.27</b>	<b>341.01</b>	<b>306.18</b>	<b>312.12</b>	<b>315.56</b>
Canada	- 22.78	- 18.38	- 32.52	- 81.35	- 79.57	- 60.38	- 49.46	- 51.77	- 50.76
Chile	-	-	-	3.67	5.28	3.01	3.13	3.35	3.50
Mexico	- 0.05	- 2.42	0.37	2.20	7.47	11.85	30.15	35.53	41.43
United States	22.12	21.68	33.19	82.21	84.18	60.76	22.46	16.87	- 2.48
<b>OECD Americas</b>	<b>- 0.71</b>	<b>0.89</b>	<b>1.04</b>	<b>6.73</b>	<b>17.36</b>	<b>15.25</b>	<b>6.29</b>	<b>3.98</b>	<b>- 8.31</b>
Australia	-	-	- 2.35	- 9.27	- 12.38	- 16.04	- 24.15	- 37.97	- 53.31
Israel <sup>1</sup>	-	-	-	-	-	1.73	0.13	0.29	0.42
Japan	2.79	19.54	42.29	63.47	67.86	82.65	97.84	99.22	98.21
Korea	-	-	2.68	17.07	26.11	39.29	38.94	39.61	43.63
New Zealand	-	-	-	-	-	-	-	-	-
<b>OECD Asia Oceania</b>	<b>2.79</b>	<b>19.54</b>	<b>42.62</b>	<b>71.27</b>	<b>81.59</b>	<b>107.64</b>	<b>112.76</b>	<b>101.15</b>	<b>88.94</b>
Austria	1.34	2.66	4.49	5.31	7.15	6.12	4.99	6.16	7.03
Belgium	7.11	8.89	8.22	13.28	14.82	16.79	13.87	14.38	14.15
Czech Republic	0.72	2.41	4.79	7.48	7.53	6.85	6.16	6.72	7.33
Denmark	-	-	- 0.93	- 2.88	- 5.01	- 3.02	- 1.38	- 1.28	- 1.54
Estonia	..	..	1.22	0.66	0.80	0.56	0.39	0.43	0.41
Finland	-	0.77	2.18	3.43	3.61	3.84	2.24	2.06	1.91
France	7.56	16.18	24.37	35.78	40.72	39.55	34.52	37.90	37.73
Germany	12.30	35.32	41.75	56.87	61.94	61.64	58.68	62.28	71.15
Greece	-	-	-	1.69	2.33	3.23	2.67	3.46	4.23
Hungary	0.15	3.19	5.17	7.28	9.81	7.73	5.22	6.33	8.22
Iceland	-	-	-	-	-	-	-	-	-
Ireland	-	-	-	2.48	3.01	4.48	3.62	1.70	1.41
Italy	1.65	11.77	25.31	47.01	59.84	61.60	50.00	53.29	56.82
Latvia	..	..	2.56	1.11	1.43	0.90	1.08	0.92	1.01
Luxembourg	0.22	0.42	0.43	0.67	1.18	1.20	0.77	0.71	0.69
Netherlands	- 25.26	- 38.48	- 23.80	- 17.19	- 20.94	- 24.21	- 10.49	- 9.85	- 1.30
Norway	-	- 21.90	- 22.17	- 42.14	- 70.97	- 88.48	- 96.74	- 96.76	- 104.14
Poland	1.39	4.31	6.77	6.61	8.53	8.87	9.95	11.47	12.01
Portugal	-	-	-	2.04	3.89	4.50	4.07	4.26	5.64
Slovak Republic	1.17	2.21	5.35	5.71	5.74	5.00	3.69	3.62	4.15
Slovenia	..	..	0.72	0.82	0.93	0.86	0.66	0.70	0.73
Spain	0.93	1.41	3.69	15.47	30.25	30.95	23.77	24.72	27.62
Sweden	-	-	0.58	0.78	0.84	1.47	0.72	0.82	0.67
Switzerland	0.15	0.87	1.63	2.43	2.78	3.01	2.85	3.00	3.01
Turkey	-	-	2.68	12.05	22.13	30.79	39.36	37.61	44.86
United Kingdom	0.67	9.00	6.18	- 9.31	5.97	33.90	26.47	32.34	31.13
<b>OECD Europe</b>	<b>10.10</b>	<b>39.02</b>	<b>101.20</b>	<b>157.43</b>	<b>198.32</b>	<b>218.13</b>	<b>187.14</b>	<b>206.98</b>	<b>234.93</b>
IEA	12.18	59.45	141.58	229.82	289.63	334.51	301.18	306.85	309.90
IEA/Accession/Association	12.18	49.43	115.26	201.58	282.82	348.70	376.40	393.18	414.28
European Union - 28	..	..	135.67	193.50	254.07	279.72	246.97	269.49	298.52
G7	24.30	95.11	140.58	194.66	240.95	279.74	240.50	250.13	241.80
G8	..	..	- 4.71	48.59	79.72	129.06	82.76	82.35	63.72
G20	..	..	12.24	97.62	182.29	281.54	310.42	317.38	334.98
<b>OPEC</b>	<b>- 11.50</b>	<b>- 9.42</b>	<b>- 32.01</b>	<b>- 73.45</b>	<b>- 100.88</b>	<b>- 146.53</b>	<b>- 154.75</b>	<b>- 165.55</b>	<b>- 175.99</b>

A negative number shows net exports. World shows the discrepancy between total exports and total imports.

1. Please refer to section 'Geographical coverage'.

## Net imports of natural gas (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>- 11.33</b>	<b>- 66.57</b>	<b>- 143.48</b>	<b>- 240.77</b>	<b>- 312.99</b>	<b>- 337.96</b>	<b>- 335.57</b>	<b>- 329.12</b>	<b>- 327.43</b>
Albania	-	-	-	-	-	-	-	-	-
Armenia	..	..	3.59	1.12	1.34	1.37	1.79	1.83	1.95
Azerbaijan	..	..	6.50	0.24	3.80	- 5.20	- 6.84	- 6.51	- 5.84
Belarus	..	..	12.69	14.21	16.70	17.91	15.60	15.48	15.79
Bosnia and Herzegovina	..	..	0.40	0.20	0.30	0.20	0.18	0.18	0.20
Bulgaria	-	3.03	5.43	2.74	2.46	2.13	2.52	2.59	2.70
Croatia	..	..	0.58	0.91	0.56	0.48	0.56	0.73	1.34
Cyprus <sup>1</sup>	-	-	-	-	-	-	-	-	-
FYR of Macedonia	..	..	-	0.05	0.06	0.10	0.11	0.18	0.23
Georgia	..	..	4.50	0.90	1.04	1.01	2.01	1.89	1.92
Gibraltar	-	-	-	-	-	-	-	-	-
Kazakhstan	..	..	4.92	- 0.83	- 3.52	- 2.28	- 5.77	- 6.66	- 6.43
Kosovo	..	..	..	-	-	-	-	-	-
Kyrgyzstan	..	..	1.45	0.55	0.60	0.23	0.20	0.22	0.22
Lithuania	..	..	4.68	2.06	2.49	2.48	2.06	1.85	2.07
Malta	-	-	-	-	-	-	-	-	0.25
Republic of Moldova	..	..	3.28	2.12	2.39	2.31	2.13	2.15	1.97
Montenegro	..	..	..	..	-	-	-	-	-
Romania	- 0.16	1.10	5.93	2.71	4.19	1.82	0.16	1.18	0.97
Russian Federation	..	..	- 145.28	- 146.07	- 161.22	- 150.68	- 157.74	- 167.78	- 178.07
Serbia	..	..	2.06	0.91	1.72	1.57	1.39	1.43	1.73
Tajikistan	..	..	1.30	0.60	0.51	0.14	-	-	-
Turkmenistan	..	..	- 56.53	- 27.31	- 37.06	- 19.55	- 46.82	- 43.62	- 45.06
Ukraine	..	..	73.48	47.27	48.26	29.55	13.29	8.81	11.26
Uzbekistan	..	..	- 0.52	- 4.26	- 9.20	- 11.73	- 16.76	- 13.10	- 13.10
Former Soviet Union	3.80	- 42.60	x	x	x	x	x	x	x
Former Yugoslavia	-	1.23	x	x	x	x	x	x	x
<b>Non-OECD Europe and Eurasia</b>	<b>3.64</b>	<b>- 37.24</b>	<b>- 71.56</b>	<b>- 101.89</b>	<b>- 124.57</b>	<b>- 128.14</b>	<b>- 191.93</b>	<b>- 199.16</b>	<b>- 205.92</b>
Algeria	- 2.09	- 5.65	- 26.68	- 53.01	- 55.09	- 48.65	- 37.00	- 45.90	- 45.88
Angola	-	-	-	-	-	-	-	- 0.74	- 3.27
Benin	-	-	-	-	-	-	-	-	-
Botswana	..	..	-	-	-	-	-	-	-
Cameroon	-	-	-	-	-	-	-	-	-
Congo	-	-	-	-	-	-	-	-	-
Côte d'Ivoire	-	-	-	-	-	-	-	-	-
Dem. Rep. of the Congo	-	-	-	-	-	-	-	-	-
Egypt	-	-	-	-	- 12.64	- 10.60	5.49	15.12	12.52
Eritrea	..	..	..	-	-	-	-	-	-
Ethiopia	-	-	-	-	-	-	-	-	-
Gabon	-	-	-	-	-	-	-	-	-
Ghana	-	-	-	-	-	0.35	0.47	0.09	0.09
Kenya	-	-	-	-	-	-	-	-	-
Libya	- 2.58	- 1.58	- 1.01	- 0.65	- 4.47	- 7.96	- 5.81	- 3.92	- 3.96
Mauritius	-	-	-	-	-	-	-	-	-
Morocco	-	-	-	-	0.34	0.52	0.95	0.97	0.96
Mozambique	-	-	-	-	- 1.85	- 2.61	- 3.33	- 3.50	- 3.60
Namibia	..	..	..	-	-	-	-	-	-
Niger	..	..	..	-	-	-	-	-	-
Nigeria	-	-	-	- 4.42	- 10.76	- 17.75	- 21.51	- 19.01	- 22.23
Senegal	-	-	-	-	-	-	-	-	-
South Africa	-	-	-	-	0.98	2.61	3.33	3.50	3.63
South Sudan	..	..	..	..	..	..	-	-	-
Sudan	-	-	-	-	-	-	-	-	-
United Rep. of Tanzania	-	-	-	-	-	-	-	-	-
Togo	-	-	-	-	-	-	-	-	-
Tunisia	-	-	0.90	0.85	1.10	2.01	2.54	2.94	3.29
Zambia	-	-	-	-	-	-	-	-	-
Zimbabwe	-	-	-	-	-	-	-	-	-
Other Africa	-	-	-	-	0.00	- 4.21	- 3.85	- 3.66	- 4.16
<b>Africa</b>	<b>- 4.66</b>	<b>- 7.24</b>	<b>- 26.79</b>	<b>- 57.24</b>	<b>- 82.39</b>	<b>- 86.29</b>	<b>- 58.72</b>	<b>- 54.11</b>	<b>- 62.62</b>

A negative number shows net exports.

1. Please refer to section 'Geographical coverage'.

## Net imports of natural gas (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	-	-	-	-	-	-	-	-	-
Brunei Darussalam	- 1.27	- 7.77	- 6.26	- 7.63	- 8.16	- 7.59	- 7.19	- 6.77	- 6.97
Cambodia	..	..	..	-	-	-	-	-	-
DPR of Korea	-	-	-	-	-	-	-	-	-
India	-	-	-	-	5.87	11.44	17.03	21.11	21.75
Indonesia	-	- 10.02	- 26.32	- 34.60	- 36.31	- 35.98	- 27.62	- 25.47	- 24.95
Malaysia	-	- 0.01	- 8.69	- 17.83	- 23.50	- 19.81	- 20.30	- 21.47	- 23.43
Mongolia	..	..	-	-	-	-	-	-	-
Myanmar	-	-	-	- 3.98	- 8.01	- 8.89	- 11.74	- 12.48	- 11.89
Nepal	-	-	-	-	-	-	-	-	-
Pakistan	-	-	-	-	-	-	-	-	4.16
Philippines	-	-	-	-	-	-	-	-	-
Singapore	-	-	-	1.12	5.57	7.21	8.51	8.71	9.19
Sri Lanka	-	-	-	-	-	-	-	-	-
Chinese Taipei	-	-	0.76	5.17	8.35	12.94	15.35	15.99	17.79
Thailand	-	-	-	1.73	7.43	8.24	11.96	11.64	12.80
Viet Nam	-	-	-	-	- 1.30	-	-	-	-
Other Non-OECD Asia	- 2.05	- 2.12	-	-	-	- 4.72	- 14.71	- 14.72	- 15.89
<b>Non-OECD Asia excl. China</b>	<b>- 3.32</b>	<b>- 19.91</b>	<b>- 40.50</b>	<b>- 56.02</b>	<b>- 50.06</b>	<b>- 37.17</b>	<b>- 28.72</b>	<b>- 23.43</b>	<b>- 17.43</b>
People's Rep. of China	-	-	-	- 2.01	- 2.48	9.22	45.94	56.24	72.19
Hong Kong, China	-	-	-	2.45	2.19	3.13	2.65	2.72	2.72
<b>China</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.44</b>	<b>- 0.30</b>	<b>12.35</b>	<b>48.59</b>	<b>58.96</b>	<b>74.91</b>
Argentina	1.45	1.89	1.82	- 3.89	- 4.11	2.61	9.38	8.69	8.69
Bolivia	- 1.60	- 1.90	- 2.13	- 1.68	- 8.29	- 9.79	- 14.74	- 13.53	- 12.94
Brazil	-	-	-	1.84	7.50	10.54	15.33	9.77	8.93
Colombia	-	-	-	-	-	- 1.20	- 0.28	0.01	0.01
Costa Rica	-	-	-	-	-	-	-	-	-
Cuba	-	-	-	-	-	-	-	-	-
Curaçao	-	-	-	-	-	-	-	-	-
Dominican Republic	-	-	-	-	0.20	0.68	0.96	0.88	0.97
Ecuador	-	-	-	-	-	-	-	-	-
El Salvador	-	-	-	-	-	-	-	-	-
Guatemala	-	-	-	-	-	-	-	-	-
Haiti	-	-	-	-	-	-	-	-	-
Honduras	-	-	-	-	-	-	-	-	-
Jamaica	-	-	-	-	-	-	-	-	0.17
Nicaragua	-	-	-	-	-	-	-	-	-
Panama	-	-	-	-	-	-	-	-	-
Paraguay	-	-	-	-	-	-	-	-	-
Peru	-	-	-	-	-	- 2.13	- 4.80	- 5.76	- 5.47
Suriname	..	..	..	-	-	-	-	-	-
Trinidad and Tobago	-	-	-	- 3.63	- 11.80	- 17.48	- 14.66	- 12.45	- 12.32
Uruguay	-	-	-	0.03	0.09	0.06	0.05	0.05	0.05
Venezuela	-	-	-	-	-	1.68	0.31	-	-
Other Non-OECD Americas	-	-	-	0.29	0.57	0.64	1.39	1.42	1.09
<b>Non-OECD Americas</b>	<b>- 0.15</b>	<b>- 0.01</b>	<b>- 0.31</b>	<b>- 7.03</b>	<b>- 15.83</b>	<b>- 14.37</b>	<b>- 7.06</b>	<b>- 10.92</b>	<b>- 10.82</b>
Bahrain	-	-	-	-	-	-	-	-	-
Islamic Republic of Iran	- 6.83	-	- 1.64	2.78	0.37	0.43	- 0.42	- 2.71	- 7.89
Iraq	-	-	- 1.63	-	-	-	-	-	-
Jordan	-	-	-	-	1.21	2.15	1.84	3.30	3.43
Kuwait	-	-	1.63	-	-	2.28	3.26	4.05	4.17
Lebanon	-	-	-	-	-	0.21	-	-	-
Oman	-	-	-	- 3.67	- 10.48	- 8.86	- 7.19	- 7.78	- 8.33
Qatar	-	-	-	- 12.31	- 26.09	- 84.36	- 104.97	- 108.35	- 107.23
Saudi Arabia	-	-	-	-	-	-	-	-	-
Syrian Arab Republic	-	-	-	-	-	0.56	-	-	-
United Arab Emirates	-	- 2.18	- 2.68	- 5.83	- 4.84	7.81	11.39	11.03	10.30
Yemen	-	-	-	-	-	- 4.56	- 1.63	-	-
<b>Middle East</b>	<b>- 6.83</b>	<b>- 2.18</b>	<b>- 4.32</b>	<b>- 19.03</b>	<b>- 39.84</b>	<b>- 84.34</b>	<b>- 97.72</b>	<b>- 100.46</b>	<b>- 105.56</b>

A negative number shows net exports.

## Net imports of electricity (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>- 0.16</b>	<b>0.68</b>	<b>0.20</b>	<b>0.87</b>	<b>- 0.23</b>	<b>0.41</b>	<b>1.48</b>	<b>- 0.14</b>	<b>..</b>
<b>Non-OECD Total</b>	<b>- 0.70</b>	<b>- 0.66</b>	<b>- 1.39</b>	<b>0.66</b>	<b>- 1.77</b>	<b>- 0.63</b>	<b>0.98</b>	<b>0.08</b>	<b>..</b>
<b>OECD Total</b>	<b>0.54</b>	<b>1.34</b>	<b>1.60</b>	<b>0.20</b>	<b>1.54</b>	<b>1.04</b>	<b>0.50</b>	<b>- 0.22</b>	<b>- 1.83</b>
Canada	- 1.21	- 2.34	- 0.03	- 3.06	- 2.02	- 2.19	- 5.14	- 5.52	- 5.40
Chile	0.00	-	-	0.10	0.19	0.08	-	- 0.00	- 0.00
Mexico	0.03	0.05	- 0.12	0.08	- 0.14	- 0.08	- 0.06	0.02	0.03
United States	1.23	2.30	0.17	2.92	2.13	2.23	5.73	5.18	4.71
<b>OECD Americas</b>	<b>0.05</b>	<b>0.01</b>	<b>0.02</b>	<b>0.03</b>	<b>0.15</b>	<b>0.05</b>	<b>0.54</b>	<b>- 0.31</b>	<b>- 0.66</b>
Australia	-	-	-	-	-	-	-	-	-
Israel <sup>1</sup>	- 0.00	- 0.01	- 0.04	- 0.13	- 0.14	- 0.34	- 0.45	- 0.48	- 0.48
Japan	-	-	-	-	-	-	-	-	-
Korea	-	-	-	-	-	-	-	-	-
New Zealand	-	-	-	-	-	-	-	-	-
<b>OECD Asia Oceania</b>	<b>- 0.00</b>	<b>- 0.01</b>	<b>- 0.04</b>	<b>- 0.13</b>	<b>- 0.14</b>	<b>- 0.34</b>	<b>- 0.45</b>	<b>- 0.48</b>	<b>- 0.48</b>
Austria	- 0.13	- 0.34	- 0.04	- 0.12	0.23	0.20	0.86	0.62	0.56
Belgium	- 0.06	- 0.23	- 0.32	0.37	0.54	0.05	1.81	0.53	0.52
Czech Republic	- 0.19	- 0.13	- 0.06	- 0.86	- 1.09	- 1.29	- 1.08	- 0.94	- 1.12
Denmark	- 0.02	- 0.11	0.61	0.06	0.12	- 0.10	0.51	0.43	0.39
Estonia	..	..	- 0.60	- 0.08	- 0.14	- 0.28	- 0.08	- 0.18	- 0.24
Finland	0.37	0.10	0.92	1.02	1.46	0.90	1.40	1.63	1.76
France	- 0.25	0.28	- 3.91	- 5.97	- 5.19	- 2.64	- 5.51	- 3.57	- 3.45
Germany	0.99	0.61	0.08	0.26	- 0.39	- 1.29	- 4.15	- 4.34	- 4.51
Greece	0.00	0.05	0.06	- 0.00	0.33	0.49	0.83	0.76	0.54
Hungary	0.40	0.64	0.96	0.30	0.54	0.45	1.18	1.09	1.11
Iceland	-	-	-	-	-	-	-	-	-
Ireland	0.00	-	-	0.01	0.18	0.04	0.06	- 0.06	- 0.06
Italy	0.08	0.52	2.98	3.81	4.23	3.80	3.99	3.18	3.25
Latvia	..	..	0.31	0.15	0.18	0.08	0.16	0.09	- 0.01
Luxembourg	0.18	0.24	0.34	0.49	0.28	0.35	0.48	0.54	0.53
Netherlands	- 0.12	- 0.03	0.79	1.63	1.57	0.24	0.75	0.42	0.30
Norway	- 0.45	- 0.04	- 1.37	- 1.64	- 1.04	0.65	- 1.26	- 1.41	- 1.30
Poland	- 0.15	- 0.02	- 0.09	- 0.55	- 0.96	- 0.12	- 0.03	0.17	0.20
Portugal	- 0.00	0.16	0.00	0.08	0.59	0.23	0.19	- 0.44	- 0.23
Slovak Republic	0.24	0.29	0.45	- 0.23	- 0.28	0.09	0.21	0.23	0.26
Slovenia	..	..	- 0.08	- 0.11	- 0.03	- 0.18	- 0.00	- 0.10	- 0.04
Spain	- 0.17	- 0.12	- 0.04	0.38	- 0.12	- 0.72	- 0.01	0.66	0.79
Sweden	0.06	0.05	- 0.15	0.40	- 0.64	0.18	- 1.94	- 1.01	- 1.63
Switzerland	- 0.30	- 0.70	- 0.18	- 0.61	0.55	0.04	- 0.09	0.34	0.48
Turkey	-	0.12	- 0.06	0.29	- 0.10	- 0.07	0.34	0.42	- 0.05
United Kingdom	0.01	0.00	1.03	1.22	0.72	0.23	1.80	1.51	1.27
<b>OECD Europe</b>	<b>0.49</b>	<b>1.34</b>	<b>1.61</b>	<b>0.30</b>	<b>1.54</b>	<b>1.33</b>	<b>0.41</b>	<b>0.57</b>	<b>- 0.69</b>
IEA	0.54	1.35	1.41	0.19	1.34	1.41	0.80	0.27	- 1.30
IEA/Accession/Association	0.55	1.39	4.03	3.93	4.88	4.61	4.17	4.62	..
European Union - 28	..	..	3.91	1.98	1.35	0.64	1.23	1.56	..
G7	0.85	1.37	0.32	- 0.83	- 0.53	0.15	- 3.27	- 3.55	- 4.12
G8	..	..	- 0.39	- 2.04	- 1.60	- 1.35	- 4.28	- 4.80	..
G20	..	..	5.52	6.14	3.80	2.59	4.55	3.94	..
<i>OPEC</i>	- 0.00	- 0.01	- 0.01	- 0.07	0.16	0.21	0.86	0.88	..

A negative number shows net exports. World shows the discrepancy between total exports and total imports.

1. Please refer to section 'Geographical coverage'.

## Net imports of electricity (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>- 0.70</b>	<b>- 0.66</b>	<b>- 1.39</b>	<b>0.66</b>	<b>- 1.77</b>	<b>- 0.63</b>	<b>0.98</b>	<b>0.08</b>	<b>..</b>
Albania	- 0.02	- 0.04	0.02	0.09	0.03	- 0.08	0.12	- 0.00	0.25
Armenia	..	..	0.08	- 0.04	- 0.07	- 0.07	- 0.11	- 0.08	- 0.10
Azerbaijan	..	..	- 0.14	0.04	0.10	- 0.03	- 0.01	- 0.08	- 0.10
Belarus	..	..	0.81	0.62	0.35	0.23	0.23	0.26	0.22
Bosnia and Herzegovina	..	..	-	- 0.09	- 0.12	- 0.33	- 0.18	- 0.32	- 0.16
Bulgaria	0.28	0.33	0.33	- 0.40	- 0.65	- 0.73	- 0.91	- 0.55	- 0.47
Croatia	..	..	0.58	0.29	0.38	0.34	0.58	0.48	0.60
Cyprus <sup>1</sup>	-	-	-	-	-	-	-	-	-
FYR of Macedonia	..	..	0.01	0.01	0.14	0.12	0.22	0.17	0.17
Georgia	..	..	0.28	0.02	0.12	- 0.11	0.00	- 0.01	0.07
Gibraltar	-	-	-	-	-	-	-	-	..
Kazakhstan	..	..	1.49	0.26	- 0.01	0.10	0.00	- 0.11	..
Kosovo	..	..	..	0.03	0.02	0.04	0.01	- 0.04	- 0.01
Kyrgyzstan	..	..	- 0.38	- 0.24	- 0.23	- 0.15	0.05	0.01	..
Lithuania	..	..	- 1.03	- 0.11	- 0.26	0.52	0.62	0.71	..
Malta	-	-	-	-	-	-	0.09	0.13	0.07
Republic of Moldova	..	..	- 0.26	0.15	0.27	0.13	0.00	0.00	0.00
Montenegro	..	..	..	..	0.15	0.00	0.04	0.03	0.07
Romania	- 0.31	0.04	0.81	- 0.06	- 0.25	- 0.20	- 0.58	- 0.43	- 0.25
Russian Federation	..	..	- 0.71	- 1.21	- 1.06	- 1.50	- 1.00	- 1.25	- 0.91
Serbia	..	..	- 0.17	0.26	- 0.17	- 0.03	- 0.08	- 0.17	0.06
Tajikistan	..	..	0.10	0.11	0.02	0.01	- 0.11	- 0.11	-
Turkmenistan	..	..	- 0.43	- 0.07	- 0.11	- 0.21	- 0.28	- 0.28	..
Ukraine	..	..	- 2.45	- 0.33	- 0.72	- 0.35	- 0.12	- 0.32	- 0.45
Uzbekistan	..	..	- 0.19	0.11	0.01	0.01	- 0.09	- 0.13	..
Former Soviet Union	- 0.83	- 1.64	x	x	x	x	x	x	..
Former Yugoslavia	- 0.00	- 0.04	x	x	x	x	x	x	..
<b>Non-OECD Europe and Eurasia</b>	<b>- 0.89</b>	<b>- 1.35</b>	<b>- 1.26</b>	<b>- 0.55</b>	<b>- 2.05</b>	<b>- 2.27</b>	<b>- 1.51</b>	<b>- 2.09</b>	<b>..</b>
Algeria	- 0.00	0.00	- 0.01	- 0.01	0.01	- 0.01	- 0.00	- 0.02	..
Angola	-	-	-	-	-	-	-	-	..
Benin	0.00	0.01	0.02	0.03	0.05	0.08	0.09	0.09	..
Botswana	..	..	0.01	0.08	0.16	0.26	0.13	0.14	..
Cameroon	-	-	-	-	-	-	0.01	0.00	..
Congo	0.00	0.00	0.00	0.02	0.04	0.02	- 0.00	- 0.00	..
Côte d'Ivoire	-	-	0.03	- 0.11	- 0.12	- 0.03	- 0.07	- 0.16	..
Dem. Rep. of the Congo	- 0.00	- 0.01	- 0.00	- 0.11	- 0.14	- 0.06	- 0.03	- 0.03	..
Egypt	-	-	-	- 0.01	- 0.07	- 0.12	- 0.06	- 0.06	..
Eritrea	..	..	..	-	-	-	-	-	..
Ethiopia	-	-	-	-	-	-	- 0.01	- 0.02	..
Gabon	-	-	-	-	-	-	0.03	0.03	..
Ghana	- 0.01	- 0.04	- 0.07	0.04	0.02	- 0.08	- 0.03	0.03	..
Kenya	0.03	0.03	0.02	0.02	- 0.00	-	0.00	0.01	..
Libya	-	-	-	-	0.00	- 0.01	-	0.03	..
Mauritius	-	-	-	-	-	-	-	-	..
Morocco	-	-	0.01	0.20	0.07	0.34	0.43	0.44	0.51
Mozambique	0.01	0.01	0.01	- 0.56	- 0.21	- 0.30	- 0.20	- 0.37	..
Namibia	..	..	..	0.06	0.14	0.21	0.22	0.26	..
Niger	..	..	..	0.02	0.03	0.05	0.07	0.07	..
Nigeria	-	- 0.01	-	-	-	-	-	-	..
Senegal	-	-	-	-	-	-	-	-	..
South Africa	- 0.02	0.78	- 0.11	1.06	- 0.20	- 0.21	- 0.13	- 0.52	..
South Sudan	..	..	..	..	..	..	-	-	..
Sudan	-	-	-	-	-	-	-	-	..
United Rep. of Tanzania	-	-	-	0.00	0.00	0.00	0.01	0.01	..
Togo	0.00	0.01	0.02	0.03	0.04	0.06	0.11	0.10	..
Tunisia	-	-	- 0.00	0.00	- 0.00	0.00	- 0.01	- 0.01	..
Zambia	0.17	- 0.22	- 0.14	- 0.11	- 0.02	- 0.05	- 0.03	0.12	..
Zimbabwe	0.01	0.25	0.03	0.44	0.26	0.06	- 0.01	0.16	..
Other Africa	- 0.02	- 0.01	0.02	0.05	0.10	0.15	0.12	0.12	..
<b>Africa</b>	<b>0.18</b>	<b>0.81</b>	<b>- 0.17</b>	<b>1.15</b>	<b>0.16</b>	<b>0.36</b>	<b>0.60</b>	<b>0.43</b>	<b>..</b>

A negative number shows net exports.

1. Please refer to section 'Geographical coverage'.



## Net imports of electricity (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	-	-	-	-	-	-	-	-	..
Brunei Darussalam	-	-	-	-	-	-	-	-	..
Cambodia	..	..	..	-	0.00	0.12	0.13	0.14	..
DPR of Korea	-	-	-	-	-	-	-	-	..
India	-0.00	-0.00	0.12	0.11	0.13	0.48	0.01	-0.09	..
Indonesia	-	-	-	-	-	0.00	0.00	0.00	..
Malaysia	-	0.01	-0.00	0.00	-0.19	-0.01	0.00	-0.06	..
Mongolia	..	..	0.02	0.01	0.01	0.02	0.12	0.12	..
Myanmar	-	-	-	-	-	-	-	-	..
Nepal	-	0.00	-0.00	0.01	0.01	0.06	0.15	0.19	..
Pakistan	-	-	-	-	0.01	0.02	0.04	0.04	..
Philippines	-	-	-	-	-	-	-	-	..
Singapore	-	-0.01	-	-	-	-	-	-	..
Sri Lanka	-	-	-	-	-	-	-	-	..
Chinese Taipei	-	-	-	-	-	-	-	-	..
Thailand	0.01	0.07	0.05	0.24	0.32	0.49	1.04	1.59	1.98
Viet Nam	-	-	-	-	0.03	0.40	0.14	0.17	..
Other Non-OECD Asia	-0.01	-0.04	-0.16	-0.33	-0.31	-0.14	-0.56	-1.22	..
<b>Non-OECD Asia excl. China</b>	<b>-0.00</b>	<b>0.02</b>	<b>0.02</b>	<b>0.04</b>	<b>0.03</b>	<b>1.43</b>	<b>1.07</b>	<b>0.87</b>	..
People's Rep. of China	-	-	0.16	-0.72	-0.53	-1.16	-1.07	-1.09	-
Hong Kong, China	-	-0.03	-0.15	0.78	0.56	0.73	0.91	0.90	..
<b>China</b>	<b>-</b>	<b>-0.03</b>	<b>0.00</b>	<b>0.06</b>	<b>0.03</b>	<b>-0.44</b>	<b>-0.16</b>	<b>-0.20</b>	..
Argentina	0.00	0.00	0.07	0.11	0.33	0.74	0.77	0.82	..
Bolivia	-	-	0.00	0.00	-	-	-	-	..
Brazil	-0.00	-0.02	2.28	3.81	3.36	2.98	2.96	3.51	3.13
Colombia	-	-	0.02	0.00	-0.15	-0.07	-0.04	0.03	..
Costa Rica	-	-	0.01	-0.04	0.00	0.00	-0.01	0.01	..
Cuba	-	-	-	-	-	-	-	-	..
Curaçao	-	-	-	-	-	-	-	-	..
Dominican Republic	-	-	-	-	-	-	-	-	..
Ecuador	-	-	-	-	0.15	0.07	0.04	-0.03	..
El Salvador	-	-	0.00	0.06	0.02	0.01	0.08	0.08	..
Guatemala	-	-	-0.00	-0.06	-0.03	0.02	-0.04	-0.05	..
Haiti	-	-	-	-	-	-	-	-	..
Honduras	-	0.00	-0.03	0.02	0.00	0.00	0.01	0.02	..
Jamaica	-	-	-	-	-	-	-	-	..
Nicaragua	-	-0.00	0.01	0.01	0.00	-0.00	0.00	0.02	..
Panama	0.00	0.00	0.01	0.01	-0.00	0.00	-0.01	-0.03	..
Paraguay	-0.01	0.00	-2.15	-4.07	-3.77	-3.73	-3.54	-4.16	..
Peru	-	-	-	-	-	-0.01	-0.00	-0.00	..
Suriname	..	..	..	-	-	-	-	-	..
Trinidad and Tobago	-	-	-	-	-	-	-	-	..
Uruguay	0.00	-0.10	-0.22	0.05	0.07	-0.03	-0.11	-0.06	..
Venezuela	-	-	-	-0.00	-0.05	-	-0.08	-	..
Other Non-OECD Americas	-	-	0.00	0.01	0.02	0.01	0.02	0.02	..
<b>Non-OECD Americas</b>	<b>0.00</b>	<b>-0.11</b>	<b>0.00</b>	<b>-0.09</b>	<b>-0.04</b>	<b>0.00</b>	<b>0.05</b>	<b>0.17</b>	..
Bahrain	-	-	-	-	-	0.01	-0.00	-0.00	..
Islamic Republic of Iran	-	-	-	-0.06	-0.06	-0.32	-0.23	-0.21	..
Iraq	-	-	-	-	0.11	0.47	1.13	1.03	..
Jordan	0.00	-	-	0.00	0.06	0.05	0.05	0.02	..
Kuwait	-	-	-	-	-	-	-	-	..
Lebanon	-	0.01	-	0.12	0.04	0.11	0.02	0.01	..
Oman	-	-	-	-	-	-	-	-	..
Qatar	-	-	-	-	-	-	-	-	..
Saudi Arabia	-	-	-	-	-	-	-	-	..
Syrian Arab Republic	-	-0.01	-	-	-0.06	-0.03	-0.02	-0.01	..
United Arab Emirates	-	-	-	-	-	-	-0.02	0.05	..
Yemen	-	-	-	-	-	-	-	-	..
<b>Middle East</b>	<b>0.00</b>	<b>-</b>	<b>-</b>	<b>0.07</b>	<b>0.09</b>	<b>0.29</b>	<b>0.93</b>	<b>0.89</b>	..

A negative number shows net exports.

## Total net imports of energy (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>- 74.17</b>	<b>- 28.88</b>	<b>- 6.84</b>	<b>- 31.93</b>	<b>- 80.27</b>	<b>68.44</b>	<b>- 86.79</b>	<b>- 111.40</b>	<b>..</b>
<b>Non-OECD Total</b>	<b>-1 475.12</b>	<b>-1 333.19</b>	<b>-1 265.22</b>	<b>-1 608.19</b>	<b>-1 947.15</b>	<b>-1 619.91</b>	<b>-1 418.95</b>	<b>-1 443.63</b>	<b>..</b>
<b>OECD Total</b>	<b>1 400.95</b>	<b>1 304.31</b>	<b>1 258.38</b>	<b>1 576.26</b>	<b>1 866.88</b>	<b>1 688.35</b>	<b>1 332.15</b>	<b>1 332.23</b>	<b>1 290.18</b>
Canada	- 35.64	- 12.33	- 59.32	- 127.71	- 129.88	- 143.94	- 188.53	- 196.23	- 209.09
Chile	3.70	4.03	7.03	17.74	20.49	22.30	24.21	26.14	26.54
Mexico	5.97	- 49.35	- 69.92	- 72.34	- 79.60	- 40.35	- 1.56	9.45	23.60
United States	296.39	307.05	341.90	606.38	736.10	533.70	256.59	265.04	168.03
<b>OECD Americas</b>	<b>270.41</b>	<b>249.40</b>	<b>219.68</b>	<b>424.07</b>	<b>547.11</b>	<b>371.70</b>	<b>90.71</b>	<b>104.41</b>	<b>9.08</b>
Australia	- 8.44	- 16.55	- 64.52	- 127.14	- 148.75	- 185.94	- 249.57	- 259.69	- 265.53
Israel <sup>1</sup>	2.44	8.46	11.40	18.17	17.83	20.49	16.82	15.09	16.02
Japan	316.76	318.78	377.34	428.90	435.46	409.06	408.07	399.68	398.45
Korea	13.56	30.75	70.15	165.74	175.56	221.06	237.02	246.51	260.41
New Zealand	4.54	4.22	2.12	3.35	4.92	2.91	4.87	5.83	6.12
<b>OECD Asia Oceania</b>	<b>328.86</b>	<b>345.66</b>	<b>396.49</b>	<b>489.02</b>	<b>485.02</b>	<b>467.57</b>	<b>417.22</b>	<b>407.43</b>	<b>415.47</b>
Austria	13.90	16.12	17.36	19.14	24.59	21.77	20.43	21.35	22.37
Belgium	43.06	42.26	39.76	50.63	53.66	53.93	50.82	48.85	47.97
Czech Republic	6.97	6.39	7.61	9.39	12.72	11.55	13.52	13.69	16.00
Denmark	20.42	19.19	8.65	- 7.47	- 10.49	- 3.45	2.33	2.51	1.92
Estonia	..	..	4.46	1.64	1.51	0.90	0.55	0.50	0.12
Finland	16.42	18.33	17.83	18.50	19.21	18.02	15.90	15.84	16.27
France	145.46	149.01	119.20	132.49	144.63	132.34	116.92	118.25	123.49
Germany	171.07	183.39	167.29	205.67	211.50	203.96	198.32	204.87	208.51
Greece	12.04	13.65	15.32	21.78	23.14	21.30	18.38	18.50	18.93
Hungary	8.65	14.34	14.16	13.87	17.64	15.12	13.56	14.32	16.82
Iceland	0.69	0.60	0.75	0.95	0.96	0.77	0.95	1.06	1.07
Ireland	5.96	6.64	7.05	12.32	13.87	13.17	12.66	10.33	9.94
Italy	107.79	116.81	127.27	152.44	159.77	148.48	121.42	121.26	125.64
Latvia	..	..	7.47	2.36	3.10	2.22	2.37	2.22	2.46
Luxembourg	4.49	3.62	3.50	3.66	4.69	4.52	4.02	4.04	4.17
Netherlands	17.90	3.36	19.19	35.63	38.72	31.29	46.49	41.78	49.44
Norway	6.72	- 35.85	- 95.70	- 200.30	- 196.17	- 172.81	- 174.34	- 179.86	- 185.80
Poland	- 13.18	1.47	0.87	9.58	16.41	32.12	28.62	30.94	40.22
Portugal	6.46	9.94	14.91	22.06	24.54	18.68	18.52	17.76	20.32
Slovak Republic	12.96	16.24	16.42	11.53	12.34	11.38	9.75	9.88	10.65
Slovenia	..	..	2.62	3.38	3.83	3.58	3.24	3.35	3.50
Spain	43.90	55.33	60.38	100.19	124.52	106.85	95.39	94.50	101.41
Sweden	30.34	27.64	18.34	19.32	20.34	19.88	14.59	16.88	13.55
Switzerland	15.08	14.08	14.98	14.12	16.27	14.94	13.57	14.07	14.22
Turkey	8.85	14.38	27.78	50.66	61.82	75.92	103.62	105.67	115.99
United Kingdom	115.75	12.33	4.73	- 40.36	31.63	62.64	72.63	67.83	66.45
<b>OECD Europe</b>	<b>801.68</b>	<b>709.26</b>	<b>642.21</b>	<b>663.17</b>	<b>834.75</b>	<b>849.08</b>	<b>824.22</b>	<b>820.39</b>	<b>865.63</b>
IEA	1 394.13	1 291.23	1 229.11	1 533.67	1 820.68	1 639.00	1 284.56	1 284.37	1 240.58
IEA/Accession/Association	1 418.05	1 303.16	1 251.80	1 716.62	2 098.78	2 202.71	2 093.60	2 154.22	..
European Union - 28	..	..	752.10	826.66	986.74	960.59	907.10	908.66	..
G7	1 117.56	1 075.03	1 078.40	1 357.82	1 589.21	1 346.24	985.42	980.71	881.48
G8	..	..	665.81	1 008.24	1 049.89	767.09	381.33	356.27	..
G20	..	..	610.51	1 077.70	1 177.19	1 320.69	1 088.85	1 109.96	..
OPEC	-1 474.79	-1 207.72	-1 021.82	-1 380.52	-1 567.79	-1 470.59	-1 526.99	-1 636.48	..

A negative number shows net exports. World shows the discrepancy between total exports and total imports.

1. Please refer to section 'Geographical coverage'.

## Total net imports of energy (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>-1 475.12</b>	<b>-1 333.19</b>	<b>-1 265.22</b>	<b>-1 608.19</b>	<b>-1 947.15</b>	<b>-1 619.91</b>	<b>-1 418.95</b>	<b>-1 443.63</b>	..
Albania	- 1.27	- 0.38	0.17	0.83	1.09	0.61	0.27	0.45	..
Armenia	..	..	7.76	1.43	1.69	1.73	2.02	2.11	..
Azerbaijan	..	..	2.77	- 7.44	- 12.62	- 52.65	- 44.15	- 43.13	..
Belarus	..	..	42.25	21.13	22.98	23.39	21.45	20.88	..
Bosnia and Herzegovina	..	..	2.44	1.26	1.38	2.02	2.08	2.13	..
Bulgaria	15.26	21.03	17.85	8.72	9.56	7.27	6.92	7.16	..
Croatia	..	..	3.87	4.11	5.19	4.45	4.17	4.19	..
Cyprus <sup>1</sup>	0.85	0.97	1.64	2.56	2.82	2.92	2.44	2.60	..
FYR of Macedonia	..	..	1.21	1.10	1.25	1.27	1.39	1.57	..
Georgia	..	..	10.57	1.56	1.90	1.85	3.40	3.49	..
Gibraltar	1.25	1.34	1.77	2.74	4.09	4.30	3.85	3.93	..
Kazakhstan	..	..	- 16.62	- 42.85	- 68.18	- 85.43	- 86.51	- 82.18	..
Kosovo	..	..	..	0.42	0.55	0.61	0.69	0.63	..
Kyrgyzstan	..	..	5.07	0.94	1.39	1.78	2.58	2.04	..
Lithuania	..	..	11.63	4.22	5.06	5.78	5.48	5.66	..
Malta	0.34	0.42	0.80	1.45	1.59	2.36	2.23	2.50	..
Republic of Moldova	..	..	9.89	2.82	3.42	3.26	3.06	3.11	..
Montenegro	..	..	..	..	0.44	0.30	0.31	0.34	..
Romania	1.62	12.64	21.93	7.85	10.65	7.56	5.44	7.11	..
Russian Federation	..	..	- 412.59	- 349.59	- 539.33	- 579.14	- 604.10	- 624.44	..
Serbia	..	..	6.09	1.88	5.88	5.20	4.10	4.58	..
Tajikistan	..	..	3.30	0.89	0.81	0.66	0.85	0.86	..
Turkmenistan	..	..	- 55.25	- 30.77	- 41.99	- 24.02	- 53.14	- 48.97	..
Ukraine	..	..	120.94	57.63	59.75	41.90	30.05	27.72	..
Uzbekistan	..	..	7.72	- 4.22	- 9.45	- 11.93	- 17.03	- 13.39	..
Former Soviet Union	- 110.71	- 211.62	x	x	x	x	x	x	..
Former Yugoslavia	10.84	15.23	x	x	x	x	x	x	..
<b>Non-OECD Europe and Eurasia</b>	<b>- 81.82</b>	<b>- 160.37</b>	<b>- 204.80</b>	<b>- 311.32</b>	<b>- 530.08</b>	<b>- 633.94</b>	<b>- 702.14</b>	<b>- 709.05</b>	..
Algeria	- 50.89	- 51.27	- 77.34	- 114.97	- 133.73	- 109.42	- 88.78	- 98.87	..
Angola	- 7.27	- 6.40	- 22.46	- 37.91	- 61.51	- 84.75	- 83.32	- 80.49	..
Benin	0.14	0.15	- 0.09	0.56	0.90	1.76	1.87	1.99	..
Botswana	..	..	0.36	0.72	0.87	1.11	1.00	1.01	..
Cameroon	0.33	- 2.96	- 6.08	- 4.78	- 3.55	- 1.63	- 2.58	- 2.58	..
Congo	- 1.28	- 3.16	- 7.89	- 13.74	- 12.51	- 15.66	- 12.07	- 12.24	..
Côte d'Ivoire	1.08	1.51	1.09	0.99	- 0.70	- 0.85	0.46	- 0.72	..
Dem. Rep. of the Congo	1.02	0.03	- 0.09	- 0.94	- 0.83	- 0.43	- 0.06	- 0.26	..
Egypt	- 1.63	- 17.16	- 20.76	- 9.67	- 14.22	- 11.57	10.51	19.32	..
Eritrea	..	..	..	0.21	0.23	0.16	0.20	0.20	..
Ethiopia	0.57	0.61	1.00	1.10	1.58	2.26	3.71	3.99	..
Gabon	- 7.14	- 8.21	- 12.16	- 13.49	- 12.85	- 12.37	- 10.58	- 10.44	..
Ghana	0.91	0.81	0.97	2.04	2.38	3.73	- 0.62	0.21	..
Kenya	1.82	2.23	2.25	3.54	3.26	4.35	5.43	5.94	..
Libya	- 111.97	- 88.96	- 61.61	- 59.42	- 79.40	- 81.69	- 16.35	- 14.46	..
Mauritius	0.13	0.28	0.44	1.08	1.33	1.51	1.80	1.91	..
Morocco	2.40	3.96	6.50	9.93	12.78	16.39	18.78	18.59	..
Mozambique	0.91	0.75	0.37	- 0.00	- 1.55	- 2.18	- 5.49	- 7.66	..
Namibia	..	..	..	0.72	0.95	1.20	1.47	1.56	..
Niger	..	..	..	0.20	0.23	0.45	- 0.01	- 0.13	..
Nigeria	- 101.03	- 95.53	- 79.42	- 110.06	- 127.91	- 126.21	- 110.56	- 88.27	..
Senegal	1.55	1.24	0.85	1.53	1.97	2.08	2.96	2.92	..
South Africa	11.69	- 3.19	- 22.59	- 31.80	- 30.18	- 18.26	- 21.86	- 18.15	..
South Sudan	..	..	..	..	..	..	- 6.80	- 5.35	..
Sudan	1.60	1.32	1.92	- 6.66	- 11.69	- 18.03	1.15	1.38	..
United Rep. of Tanzania	1.00	0.87	0.77	0.86	1.51	1.71	3.31	3.03	..
Togo	0.10	0.14	0.24	0.36	0.41	0.80	0.78	0.81	..
Tunisia	- 2.24	- 2.49	- 0.87	0.81	1.77	2.06	4.92	5.20	..
Zambia	1.13	0.52	0.59	0.41	0.67	0.62	1.08	1.21	..
Zimbabwe	0.63	0.76	0.83	1.39	0.86	0.61	1.15	1.18	..
Other Africa	3.77	4.51	5.02	0.12	- 20.15	- 16.31	- 13.55	- 10.49	..
<b>Africa</b>	<b>- 252.66</b>	<b>- 259.64</b>	<b>- 288.17</b>	<b>- 376.87</b>	<b>- 479.10</b>	<b>- 458.58</b>	<b>- 312.04</b>	<b>- 279.63</b>	..

A negative number shows net exports.

1. Please refer to section 'Geographical coverage'.

## Total net imports of energy (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	1.02	1.79	2.16	3.47	4.14	4.30	7.03	6.40	..
Brunei Darussalam	- 13.04	- 19.55	- 13.82	- 17.31	- 18.62	- 15.31	- 13.21	- 12.14	..
Cambodia	..	..	..	0.71	0.96	1.75	2.74	3.11	..
DPR of Korea	1.54	3.15	4.31	0.96	- 0.70	- 1.93	- 11.00	- 12.47	..
India	17.28	23.59	31.64	91.43	121.52	204.77	308.73	314.63	..
Indonesia	- 50.84	- 68.14	- 69.05	- 81.31	- 99.87	- 170.59	- 200.08	- 203.33	..
Malaysia	0.18	- 5.00	- 25.86	- 27.38	- 28.44	- 14.15	- 8.30	- 7.12	..
Mongolia	..	..	0.70	0.47	- 0.87	- 10.74	- 9.67	- 16.06	..
Myanmar	0.09	0.07	0.01	- 2.63	- 7.34	- 8.65	- 9.01	- 8.68	..
Nepal	0.12	0.17	0.31	1.03	1.04	1.42	1.96	2.98	..
Pakistan	3.20	4.75	9.25	17.26	15.67	20.67	25.28	26.87	..
Philippines	9.02	11.38	12.33	21.03	18.01	18.31	26.96	27.81	..
Singapore	12.25	8.00	24.52	40.83	50.20	69.37	78.22	81.16	..
Sri Lanka	1.69	1.65	1.70	3.83	4.26	4.09	5.98	7.15	..
Chinese Taipei	10.45	24.50	41.67	79.23	95.32	101.46	101.70	103.22	..
Thailand	8.30	12.29	17.85	32.06	47.87	51.46	64.91	65.80	..
Viet Nam	5.67	1.50	- 0.17	- 9.77	- 17.22	- 7.40	5.96	14.18	..
Other Non-OECD Asia	0.73	1.17	- 1.38	0.01	- 6.43	- 7.65	- 14.93	- 14.79	..
<b>Non-OECD Asia excl. China</b>	<b>7.65</b>	<b>1.32</b>	<b>36.17</b>	<b>153.93</b>	<b>179.48</b>	<b>241.18</b>	<b>363.26</b>	<b>378.73</b>	..
People's Rep. of China	- 3.95	- 20.61	- 35.04	27.87	100.16	345.18	488.99	559.29	..
Hong Kong, China	4.85	6.38	11.81	19.82	23.00	31.47	28.90	29.92	..
<b>China</b>	<b>0.91</b>	<b>- 14.23</b>	<b>- 23.22</b>	<b>47.69</b>	<b>123.16</b>	<b>376.65</b>	<b>517.89</b>	<b>589.21</b>	..
Argentina	5.85	3.88	- 1.40	- 20.33	- 16.20	1.33	13.36	12.24	..
Bolivia	- 3.35	- 1.95	- 2.32	- 1.81	- 8.70	- 9.43	- 14.43	- 13.03	..
Brazil	34.78	48.80	39.24	44.38	24.96	24.85	25.27	7.56	2.29
Colombia	- 2.93	0.36	- 21.24	- 46.43	- 50.16	- 73.16	- 89.31	- 86.32	..
Costa Rica	0.59	0.81	1.04	1.76	2.13	2.42	2.51	2.69	..
Cuba	7.17	9.76	10.20	5.95	5.19	6.95	6.05	5.36	..
Curaçao	8.02	8.27	3.14	4.16	4.27	4.38	3.63	3.36	..
Dominican Republic	1.68	2.12	3.10	6.64	6.56	7.10	7.84	8.19	..
Ecuador	- 9.15	- 6.31	- 10.08	- 13.68	- 17.46	- 13.56	- 14.58	- 15.90	..
El Salvador	0.69	0.62	0.79	1.91	2.03	2.04	2.38	2.54	..
Guatemala	1.04	1.37	1.16	1.94	2.89	3.04	5.09	5.14	..
Haiti	0.13	0.22	0.32	0.50	0.69	0.70	0.98	1.00	..
Honduras	0.40	0.57	0.71	1.51	2.19	2.38	2.38	2.88	..
Jamaica	2.93	2.18	2.51	3.61	3.57	2.44	2.79	3.00	..
Nicaragua	0.63	0.64	0.64	1.16	1.35	1.32	1.68	1.74	..
Panama	2.41	2.12	2.51	4.50	4.61	5.86	7.02	7.82	..
Paraguay	0.27	0.50	- 1.48	- 2.93	- 2.63	- 2.38	- 1.66	- 2.13	..
Peru	2.06	- 2.96	- 0.56	3.36	3.07	0.28	- 0.15	0.14	..
Suriname	..	..	..	- 0.11	- 0.05	- 0.18	- 0.30	- 0.25	..
Trinidad and Tobago	- 5.06	- 9.03	- 6.39	- 8.54	- 17.69	- 22.16	- 17.25	- 14.35	..
Uruguay	1.90	2.03	1.18	2.32	2.21	2.55	2.41	2.31	..
Venezuela	- 181.20	- 103.39	- 101.92	- 163.25	- 174.53	- 125.39	- 121.81	- 111.05	..
Other Non-OECD Americas	8.35	6.55	4.88	5.38	5.24	6.14	7.85	7.99	..
<b>Non-OECD Americas</b>	<b>- 122.77</b>	<b>- 32.81</b>	<b>- 73.97</b>	<b>- 168.00</b>	<b>- 216.44</b>	<b>- 172.48</b>	<b>- 168.25</b>	<b>- 169.06</b>	..
Bahrain	- 7.59	- 8.38	- 8.55	- 8.15	- 6.62	- 6.81	- 8.21	- 8.15	..
Islamic Republic of Iran	- 286.28	- 41.58	- 117.61	- 130.25	- 138.52	- 131.00	- 82.57	- 140.71	..
Iraq	- 97.64	- 125.44	- 89.84	- 108.25	- 70.64	- 86.23	- 136.50	- 173.85	..
Jordan	0.69	1.78	3.51	4.77	6.99	7.33	8.75	8.99	..
Kuwait	- 151.54	- 79.06	- 41.26	- 95.07	- 118.43	- 101.73	- 133.34	- 137.36	..
Lebanon	2.39	2.49	1.86	4.88	4.96	6.43	7.75	7.88	..
Oman	- 13.92	- 13.58	- 33.66	- 52.51	- 49.41	- 47.00	- 50.58	- 53.07	..
Qatar	- 28.11	- 23.21	- 20.54	- 50.37	- 72.22	- 149.48	- 175.71	- 181.43	..
Saudi Arabia	- 367.79	- 497.39	- 307.03	- 373.94	- 444.32	- 349.01	- 423.11	- 446.86	..
Syrian Arab Republic	- 3.11	- 4.06	- 11.14	- 17.81	- 7.03	- 4.37	6.05	5.89	..
United Arab Emirates	- 74.79	- 80.98	- 80.54	- 109.86	- 116.27	- 99.75	- 129.77	- 136.80	..
Yemen	1.27	1.94	- 6.42	- 17.07	- 12.64	- 11.13	- 0.42	1.64	..
<b>Middle East</b>	<b>- 1 026.43</b>	<b>- 867.46</b>	<b>- 711.23</b>	<b>- 953.63</b>	<b>- 1 024.16</b>	<b>- 972.74</b>	<b>- 1 117.67</b>	<b>- 1 253.82</b>	..

A negative number shows net exports.

## Primary supply of coal (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>1 496.20</b>	<b>1 782.73</b>	<b>2 220.18</b>	<b>2 316.12</b>	<b>2 993.75</b>	<b>3 652.30</b>	<b>3 850.53</b>	<b>3 730.89</b>	<b>3 749.79</b>
<b>Non-OECD Total</b>	<b>651.73</b>	<b>817.10</b>	<b>1 141.65</b>	<b>1 215.37</b>	<b>1 845.60</b>	<b>2 561.60</b>	<b>2 905.91</b>	<b>2 837.98</b>	<b>2 869.87</b>
<b>OECD Total</b>	<b>844.47</b>	<b>965.63</b>	<b>1 078.53</b>	<b>1 100.76</b>	<b>1 148.14</b>	<b>1 090.70</b>	<b>944.62</b>	<b>892.90</b>	<b>886.07</b>
Canada	15.26	20.58	24.26	31.61	29.66	22.48	18.07	16.96	16.73
Chile	1.20	1.22	2.50	3.07	2.70	4.46	6.56	7.09	6.88
Mexico	1.82	2.37	4.13	6.88	12.16	13.26	11.44	12.38	12.46
United States	311.05	376.23	460.12	533.94	558.36	502.61	374.04	341.57	330.41
<b>OECD Americas</b>	<b>329.33</b>	<b>400.40</b>	<b>491.00</b>	<b>575.50</b>	<b>602.88</b>	<b>542.81</b>	<b>410.11</b>	<b>378.00</b>	<b>366.49</b>
Australia	22.58	27.32	34.89	48.15	51.03	50.47	42.92	43.75	45.86
Israel <sup>1</sup>	0.00	0.00	2.29	6.47	7.41	7.41	6.62	5.50	4.96
Japan	57.86	59.56	76.12	96.72	110.07	114.71	117.65	114.38	114.65
Korea	8.15	13.53	25.38	41.95	49.66	73.45	80.84	81.47	90.61
New Zealand	1.13	1.02	1.18	1.11	2.19	1.31	1.37	1.15	1.15
<b>OECD Asia Oceania</b>	<b>89.72</b>	<b>101.43</b>	<b>139.86</b>	<b>194.40</b>	<b>220.36</b>	<b>247.35</b>	<b>249.40</b>	<b>246.25</b>	<b>257.23</b>
Austria	3.87	3.65	4.10	3.60	3.96	3.40	3.18	2.97	2.91
Belgium	11.18	11.39	10.57	8.02	5.17	3.79	3.20	2.97	3.02
Czech Republic	35.58	33.45	31.45	21.64	20.24	18.74	16.45	16.59	15.63
Denmark	1.93	5.88	6.09	3.99	3.71	3.81	1.74	1.89	1.49
Estonia	..	..	5.95	2.97	3.19	3.92	3.89	3.80	4.00
Finland	2.55	4.95	5.32	5.10	4.91	6.88	4.08	4.53	4.12
France	29.30	32.89	20.05	14.89	14.15	11.96	8.81	8.57	9.27
Germany	139.40	141.02	128.59	84.82	81.90	78.95	79.41	77.23	70.76
Greece	2.10	3.26	8.07	9.04	8.95	7.86	5.61	4.37	4.81
Hungary	7.91	8.42	6.23	3.85	3.04	2.72	2.36	2.25	2.26
Iceland	0.00	0.02	0.06	0.10	0.10	0.09	0.09	0.10	0.09
Ireland	1.59	1.91	3.40	2.60	2.64	1.94	2.20	2.09	1.79
Italy	8.10	11.68	14.63	12.56	16.47	13.67	12.30	10.98	9.70
Latvia	..	..	0.71	0.13	0.08	0.11	0.05	0.04	0.04
Luxembourg	2.44	1.82	1.11	0.11	0.08	0.07	0.05	0.05	0.05
Netherlands	2.87	3.79	8.17	7.77	8.09	7.54	10.93	10.20	9.18
Norway	0.91	1.01	0.86	1.05	0.78	0.77	0.82	0.76	0.85
Poland	74.70	99.80	78.87	56.35	54.66	54.74	48.33	49.19	49.83
Portugal	0.51	0.43	2.76	3.81	3.35	1.66	3.26	2.85	3.23
Slovak Republic	7.96	8.19	7.83	4.27	4.24	3.90	3.28	3.22	3.32
Slovenia	..	..	1.58	1.31	1.54	1.45	1.07	1.15	1.15
Spain	9.00	12.43	19.27	20.94	20.57	7.75	13.34	10.50	12.37
Sweden	1.63	1.70	2.96	2.45	2.63	2.49	2.12	2.05	2.04
Switzerland	0.33	0.33	0.36	0.14	0.15	0.15	0.13	0.11	0.11
Turkey	5.15	6.99	15.58	22.83	22.39	31.21	34.50	38.34	40.66
United Kingdom	76.43	68.80	63.11	36.53	37.91	30.97	23.91	11.85	9.66
<b>OECD Europe</b>	<b>425.41</b>	<b>463.81</b>	<b>447.67</b>	<b>330.86</b>	<b>324.90</b>	<b>300.53</b>	<b>285.12</b>	<b>268.66</b>	<b>262.35</b>
IEA	843.27	964.39	1 071.40	1 089.68	1 136.31	1 077.17	930.23	879.03	872.94
IEA/Accession/Association	1 083.52	1 329.41	1 715.30	1 938.74	2 576.70	3 216.56	3 393.52	3 261.24	3 271.10
European Union - 28	..	..	454.48	321.14	318.07	283.08	262.83	241.16	226.28
G7	637.39	710.75	786.89	811.07	848.53	775.36	634.19	581.54	561.19
G8	..	..	978.00	931.06	961.11	876.80	750.67	694.82	679.73
G20	..	..	1 995.48	2 144.90	2 786.45	3 416.32	3 595.91	3 464.11	3 478.79
OPEC	1.29	1.58	1.90	2.11	2.64	2.71	3.09	2.90	2.14

Where applicable, includes quantities of peat and oil shale except for 2017 provisional figures for non-OECD countries.

1. Please refer to section 'Geographical coverage'.

## Primary supply of coal (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>651.73</b>	<b>817.10</b>	<b>1 141.65</b>	<b>1 215.37</b>	<b>1 845.60</b>	<b>2 561.60</b>	<b>2 905.91</b>	<b>2 837.98</b>	<b>2 869.87</b>
Albania	0.35	0.61	0.63	0.02	0.01	0.11	0.10	0.05	0.10
Armenia	..	..	0.24	-	-	0.00	0.00	0.00	..
Azerbaijan	..	..	0.09	-	-	-	-	-	..
Belarus	..	..	2.38	0.97	0.61	0.56	0.76	0.81	0.39
Bosnia and Herzegovina	..	..	4.18	2.46	3.03	4.03	3.62	4.11	4.56
Bulgaria	8.34	9.39	8.89	6.40	6.91	6.90	6.60	5.70	6.15
Croatia	..	..	0.81	0.43	0.68	0.68	0.61	0.65	0.38
Cyprus <sup>1</sup>	-	-	0.06	0.03	0.04	0.02	0.00	-	0.00
FYR of Macedonia	..	..	1.33	1.34	1.40	1.30	0.96	0.87	0.86
Georgia	..	..	0.89	0.01	0.01	0.05	0.27	0.26	0.21
Gibraltar	-	-	-	-	-	-	-	-	..
Kazakhstan	..	..	39.95	19.76	28.49	34.51	34.24	35.36	34.72
Kosovo	..	..	..	0.97	1.24	1.67	1.56	1.69	1.44
Kyrgyzstan	..	..	2.53	0.47	0.55	0.70	1.13	0.91	1.25
Lithuania	..	..	0.80	0.09	0.18	0.21	0.18	0.18	0.15
Malta	-	-	0.18	-	-	-	-	-	..
Republic of Moldova	..	..	2.00	0.08	0.11	0.10	0.10	0.07	0.13
Montenegro	..	..	..	..	0.29	0.42	0.38	0.30	0.30
Romania	8.68	12.56	12.93	7.45	8.76	6.95	5.87	5.29	5.07
Russian Federation	..	..	191.11	119.99	112.58	101.44	116.48	113.29	118.76
Serbia	..	..	10.17	8.64	8.07	7.83	7.76	7.89	7.61
Tajikistan	..	..	0.63	0.01	0.04	0.09	0.46	0.60	0.78
Turkmenistan	..	..	0.30	-	-	-	-	-	..
Ukraine	..	..	83.06	38.55	37.30	38.25	30.11	32.45	27.24
Uzbekistan	..	..	3.39	1.25	1.12	1.31	1.55	1.55	1.44
Former Soviet Union	321.16	327.61	x	x	x	x	x	x	x
Former Yugoslavia	9.31	11.96	x	x	x	x	x	x	x
<b>Non-OECD Europe and Eurasia</b>	<b>347.84</b>	<b>362.12</b>	<b>366.56</b>	<b>208.93</b>	<b>211.44</b>	<b>207.14</b>	<b>212.73</b>	<b>212.03</b>	<b>211.31</b>
Algeria	0.24	0.13	0.69	0.52	0.77	0.34	0.14	-	..
Angola	-	-	-	-	-	-	-	-	..
Benin	-	-	-	-	-	-	0.03	0.07	..
Botswana	..	..	0.46	0.59	0.56	0.53	1.03	0.94	1.20
Cameroon	-	-	-	-	-	-	-	-	..
Congo	-	-	-	-	-	-	-	-	..
Côte d'Ivoire	-	-	-	-	-	-	-	-	..
Dem. Rep. of the Congo	0.21	0.21	0.22	-	-	-	-	-	..
Egypt	0.28	0.54	0.76	0.83	0.80	0.44	0.35	0.35	0.37
Eritrea	..	..	..	-	-	-	-	-	..
Ethiopia	-	-	-	-	-	0.03	0.25	0.27	0.30
Gabon	-	-	-	-	-	-	-	-	..
Ghana	-	-	-	-	-	-	-	-	..
Kenya	0.04	0.01	0.09	0.07	0.09	0.17	0.35	0.34	0.33
Libya	-	-	-	-	-	-	-	-	..
Mauritius	-	-	0.03	0.14	0.23	0.41	0.50	0.57	0.88
Morocco	0.37	0.40	1.13	2.65	3.14	2.79	4.44	4.28	4.45
Mozambique	0.35	0.17	0.03	-	-	0.01	0.50	0.01	0.01
Namibia	..	..	..	0.00	0.01	0.01	0.00	0.02	0.00
Niger	..	..	..	0.04	0.05	0.08	0.07	0.07	0.07
Nigeria	0.18	0.10	0.04	0.00	0.00	0.02	0.03	0.03	0.08
Senegal	-	-	-	-	0.09	0.18	0.38	0.46	0.38
South Africa	33.84	47.68	66.54	81.78	91.94	100.50	94.19	98.11	98.16
South Sudan	..	..	..	..	..	..	-	-	..
Sudan	-	0.00	-	-	-	-	-	-	..
United Rep. of Tanzania	-	0.00	0.00	0.05	0.02	-	0.16	0.17	0.35
Togo	-	-	-	-	-	-	-	-	..
Tunisia	0.07	0.06	0.08	0.08	-	-	-	-	..
Zambia	0.56	0.36	0.22	0.08	0.08	0.00	0.10	0.19	0.19
Zimbabwe	1.72	1.63	3.44	2.69	2.22	1.74	2.10	1.85	1.71
Other Africa	0.15	0.41	0.22	0.37	0.39	0.56	0.49	0.50	0.48
<b>Africa</b>	<b>38.01</b>	<b>51.71</b>	<b>73.96</b>	<b>89.88</b>	<b>100.42</b>	<b>107.79</b>	<b>105.11</b>	<b>108.24</b>	<b>108.95</b>

Where applicable, includes quantities of peat and oil shale except for 2017 provisional figures for non-OECD countries.

1. Please refer to section 'Geographical coverage'.

## Primary supply of coal (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	0.12	0.12	0.28	0.33	0.42	0.81	2.27	1.70	1.90
Brunei Darussalam	-	-	-	-	-	-	-	-	..
Cambodia	..	..	..	..	..	0.01	0.59	0.68	1.13
DPR of Korea	17.84	25.88	28.26	16.81	18.23	11.74	4.91	5.58	5.45
India	31.51	44.31	92.70	145.92	184.22	279.03	379.67	379.56	394.02
Indonesia	0.08	0.16	3.55	12.01	22.13	31.84	41.03	43.31	46.29
Malaysia	0.01	0.05	1.36	2.31	6.89	14.60	17.52	18.82	21.16
Mongolia	..	..	2.49	1.82	2.25	2.91	3.13	3.66	3.88
Myanmar	0.05	0.15	0.07	0.32	0.32	0.41	0.44	0.38	0.34
Nepal	0.05	0.05	0.05	0.26	0.25	0.30	0.56	0.69	0.56
Pakistan	0.58	0.69	2.00	1.86	3.73	4.19	4.96	5.16	8.42
Philippines	0.02	0.51	1.53	5.16	5.83	7.63	12.64	14.30	15.51
Singapore	0.00	0.00	0.02	-	0.00	0.01	0.41	0.43	0.45
Sri Lanka	0.00	0.00	0.00	0.00	0.07	0.07	1.38	1.46	1.59
Chinese Taipei	2.28	3.88	11.36	29.91	38.13	40.64	39.68	40.67	41.77
Thailand	0.10	0.47	3.82	7.67	11.50	16.36	16.86	15.42	15.35
Viet Nam	1.55	2.27	2.22	4.37	8.26	14.65	24.95	27.64	30.20
Other Non-OECD Asia	0.97	1.85	0.19	0.34	0.42	1.10	3.06	6.43	6.88
<b>Non-OECD Asia excl. China</b>	<b>55.16</b>	<b>80.41</b>	<b>149.89</b>	<b>229.10</b>	<b>302.67</b>	<b>426.30</b>	<b>554.07</b>	<b>565.89</b>	<b>594.89</b>
People's Rep. of China	204.68	312.53	530.52	664.72	1 203.69	1 790.42	1 996.62	1 916.21	1 920.27
Hong Kong, China	0.01	0.01	5.50	3.73	6.67	6.36	6.89	6.88	6.47
<b>China</b>	<b>204.69</b>	<b>312.53</b>	<b>536.02</b>	<b>668.45</b>	<b>1 210.36</b>	<b>1 796.78</b>	<b>2 003.51</b>	<b>1 923.09</b>	<b>1 926.74</b>
Argentina	0.70	0.96	0.94	0.51	0.84	0.99	1.05	0.82	0.82
Bolivia	-	-	-	-	-	-	-	-	..
Brazil	2.31	5.93	9.67	13.01	12.99	14.47	17.68	15.92	16.56
Colombia	1.85	1.79	3.08	2.63	2.70	3.22	5.05	5.13	4.61
Costa Rica	0.00	0.00	-	0.00	0.04	0.06	0.08	0.08	0.00
Cuba	0.08	0.10	0.14	0.03	0.02	0.02	0.01	0.00	0.00
Curaçao	-	-	-	-	-	-	-	-	..
Dominican Republic	-	-	0.01	0.10	0.64	0.78	1.06	0.99	0.64
Ecuador	-	-	-	-	-	-	-	-	..
El Salvador	-	0.00	-	0.00	0.00	-	-	-	..
Guatemala	-	0.01	-	0.13	0.25	0.30	0.95	1.11	1.23
Haiti	-	-	0.01	-	-	-	-	-	..
Honduras	-	-	0.00	0.08	0.15	0.14	0.07	0.10	0.11
Jamaica	-	-	0.03	0.03	0.04	0.03	0.06	0.04	0.08
Nicaragua	-	-	-	-	-	-	-	-	..
Panama	0.01	-	0.02	0.04	-	-	0.21	0.18	0.05
Paraguay	-	-	-	-	-	-	-	-	..
Peru	0.15	0.14	0.15	0.63	0.96	0.87	0.81	0.86	0.83
Suriname	..	..	..	-	-	-	-	-	..
Trinidad and Tobago	-	-	-	-	-	-	-	-	..
Uruguay	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Venezuela	0.27	0.16	0.46	0.13	0.04	0.20	0.14	0.12	0.32
Other Non-OECD Americas	0.03	0.02	0.00	0.08	0.10	0.10	0.13	0.13	0.46
<b>Non-OECD Americas</b>	<b>5.42</b>	<b>9.11</b>	<b>14.51</b>	<b>17.42</b>	<b>18.75</b>	<b>21.19</b>	<b>27.29</b>	<b>25.52</b>	<b>25.71</b>
Bahrain	-	-	-	-	-	-	-	-	..
Islamic Republic of Iran	0.60	1.20	0.71	1.46	1.68	1.49	1.07	0.91	0.75
Iraq	-	-	-	-	-	-	-	-	..
Jordan	-	-	-	-	-	-	0.17	0.22	0.10
Kuwait	-	-	-	-	-	-	-	-	..
Lebanon	0.01	0.00	-	0.13	0.13	0.15	0.17	0.17	0.17
Oman	-	-	-	-	-	-	-	-	..
Qatar	-	-	-	-	-	-	-	-	..
Saudi Arabia	-	-	-	-	-	-	-	-	..
Syrian Arab Republic	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	..
United Arab Emirates	-	-	-	-	0.15	0.66	1.71	1.84	1.00
Yemen	-	-	-	-	-	0.10	0.08	0.07	0.25
<b>Middle East</b>	<b>0.61</b>	<b>1.20</b>	<b>0.71</b>	<b>1.59</b>	<b>1.96</b>	<b>2.40</b>	<b>3.21</b>	<b>3.22</b>	<b>2.27</b>

Where applicable, includes quantities of peat and oil shale except for 2017 provisional figures for non-OECD countries.



## Primary supply of oil (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>2 817.70</b>	<b>3 104.51</b>	<b>3 233.90</b>	<b>3 662.92</b>	<b>4 000.75</b>	<b>4 139.70</b>	<b>4 347.26</b>	<b>4 390.20</b>	..
<b>Non-OECD Total</b>	<b>666.15</b>	<b>980.59</b>	<b>1 156.01</b>	<b>1 272.42</b>	<b>1 488.78</b>	<b>1 810.17</b>	<b>2 064.78</b>	<b>2 095.49</b>	..
<b>OECD Total</b>	<b>1 967.47</b>	<b>1 945.54</b>	<b>1 875.63</b>	<b>2 116.69</b>	<b>2 193.26</b>	<b>1 970.95</b>	<b>1 898.69</b>	<b>1 896.25</b>	<b>1 903.07</b>
Canada	79.39	88.52	76.51	87.10	95.02	96.28	104.55	98.55	101.05
Chile	4.97	5.07	6.47	10.48	11.56	15.01	15.29	16.12	16.71
Mexico	32.47	64.45	80.79	89.33	102.03	94.43	90.35	88.19	83.93
United States	817.49	796.93	756.84	871.15	929.18	806.52	789.54	787.29	779.49
<b>OECD Americas</b>	<b>934.32</b>	<b>954.97</b>	<b>920.62</b>	<b>1 058.05</b>	<b>1 137.79</b>	<b>1 012.24</b>	<b>999.72</b>	<b>990.14</b>	<b>981.18</b>
Australia	26.58	30.07	31.20	34.15	36.91	41.61	41.89	43.07	43.27
Israel <sup>1</sup>	7.72	7.70	8.83	11.27	9.13	10.57	9.12	9.49	9.99
Japan	248.93	233.68	250.39	255.17	243.14	202.69	183.59	176.75	175.69
Korea	13.31	26.65	49.73	99.04	92.49	95.11	102.68	109.80	112.96
New Zealand	4.17	4.01	3.51	5.71	6.12	6.18	6.77	6.89	7.37
<b>OECD Asia Oceania</b>	<b>300.71</b>	<b>302.12</b>	<b>343.66</b>	<b>405.34</b>	<b>387.80</b>	<b>356.18</b>	<b>344.05</b>	<b>346.01</b>	<b>349.29</b>
Austria	12.11	12.08	10.35	11.71	13.80	12.29	11.50	11.68	11.73
Belgium	27.69	23.34	17.61	22.70	23.61	23.41	22.95	22.53	21.64
Czech Republic	8.66	10.84	8.73	7.72	9.67	8.97	8.60	7.96	9.28
Denmark	16.72	12.72	7.65	8.03	7.41	7.02	5.82	5.88	5.95
Estonia	..	..	2.84	0.65	0.77	0.57	0.29	0.43	0.22
Finland	13.26	12.60	9.46	9.09	10.06	9.45	7.95	8.69	9.05
France	119.81	106.32	84.03	82.22	88.23	77.02	72.27	69.68	71.55
Germany	158.70	143.86	121.44	124.81	116.76	104.70	101.24	101.43	103.34
Greece	9.06	10.92	12.07	14.88	16.95	13.85	11.21	11.36	10.99
Hungary	8.15	10.79	8.35	6.63	7.01	6.55	6.83	6.83	7.36
Iceland	0.58	0.58	0.59	0.61	0.64	0.53	0.56	0.58	0.58
Ireland	5.26	5.52	4.47	7.52	7.90	7.04	6.13	6.49	6.26
Italy	90.30	88.23	83.32	86.85	80.25	65.30	53.56	51.53	51.69
Latvia	..	..	3.41	1.26	1.42	1.40	1.37	1.35	1.75
Luxembourg	1.60	1.04	1.48	2.01	2.74	2.45	2.19	2.13	2.21
Netherlands	30.46	28.86	25.61	28.07	32.37	31.48	27.72	28.21	28.64
Norway	7.56	8.74	8.13	9.02	9.90	9.81	9.17	8.12	8.84
Poland	10.68	16.65	13.04	19.16	21.56	25.40	23.32	25.79	28.87
Portugal	5.12	8.00	10.74	14.83	15.16	11.51	9.34	9.59	9.64
Slovak Republic	5.39	7.49	4.49	2.82	3.46	3.62	3.27	3.47	3.70
Slovenia	..	..	1.73	2.37	2.53	2.57	2.27	2.38	2.31
Spain	37.60	49.77	45.47	62.10	68.07	58.16	49.26	50.70	52.66
Sweden	27.91	22.64	14.30	13.57	14.27	13.92	9.98	11.69	10.37
Switzerland	14.45	12.51	12.26	11.02	11.46	10.35	9.33	8.75	8.87
Turkey	12.48	15.62	23.40	30.40	28.74	31.50	38.70	42.11	44.48
United Kingdom	108.90	79.34	76.37	73.22	72.92	63.65	60.10	60.73	60.61
<b>OECD Europe</b>	<b>732.44</b>	<b>688.46</b>	<b>611.35</b>	<b>653.29</b>	<b>667.68</b>	<b>602.53</b>	<b>554.91</b>	<b>560.10</b>	<b>572.60</b>
International marine bunkers	121.53	110.85	115.75	155.02	177.49	205.73	206.15	212.15	..
International aviation bunkers	62.54	67.53	86.51	118.79	141.22	152.85	177.65	186.31	..
IEA	1 954.21	1 932.20	1 854.60	2 090.70	2 167.97	1 940.87	1 870.08	1 866.33	1 871.72
IEA/Accession/Association	2 097.55	2 154.79	2 167.93	2 636.15	2 842.67	2 792.15	2 895.48	2 908.68	..
European Union - 28	..	..	607.71	624.65	641.51	572.15	518.01	521.75	..
G7	1 623.51	1 536.88	1 448.91	1 580.52	1 625.51	1 416.17	1 364.85	1 345.97	1 343.42
G8	..	..	1 712.69	1 706.63	1 754.70	1 555.25	1 521.58	1 519.23	..
G20	..	..	2 484.36	2 803.87	3 008.44	3 020.25	3 161.53	3 174.95	..
<b>OPEC</b>	<b>47.18</b>	<b>114.06</b>	<b>170.03</b>	<b>242.33</b>	<b>289.82</b>	<b>384.00</b>	<b>402.67</b>	<b>389.70</b>	..

World includes international marine bunkers and international aviation bunkers.

1. Please refer to section 'Geographical coverage'.

## Primary supply of oil (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>666.15</b>	<b>980.59</b>	<b>1 156.01</b>	<b>1 272.42</b>	<b>1 488.78</b>	<b>1 810.17</b>	<b>2 064.78</b>	<b>2 095.49</b>	<b>..</b>
Albania	0.79	1.56	1.21	1.03	1.42	1.22	1.19	1.22	..
Armenia	..	..	3.64	0.29	0.37	0.38	0.31	0.30	..
Azerbaijan	..	..	8.09	6.28	4.94	3.38	4.49	4.63	..
Belarus	..	..	29.61	7.94	7.75	7.06	7.01	6.82	..
Bosnia and Herzegovina	..	..	2.02	1.16	1.13	1.71	1.53	1.73	..
Bulgaria	11.26	13.37	9.46	4.14	4.80	3.87	4.24	4.19	..
Croatia	..	..	4.67	3.89	4.46	3.66	3.16	3.16	..
Cyprus <sup>1</sup>	0.77	0.86	1.29	2.06	2.13	2.31	1.85	1.98	..
FYR of Macedonia	..	..	1.10	0.94	0.91	0.94	0.95	1.06	..
Georgia	..	..	5.58	0.73	0.76	0.96	1.20	1.44	..
Gibraltar	0.03	0.03	0.06	0.13	0.15	0.17	0.21	0.23	..
Kazakhstan	..	..	20.58	8.36	9.25	11.46	15.51	16.53	..
Kosovo	..	..	..	0.33	0.45	0.53	0.67	0.66	..
Kyrgyzstan	..	..	2.95	0.41	0.53	0.99	1.62	1.71	..
Lithuania	..	..	6.71	2.04	2.65	2.56	2.52	2.76	..
Malta	0.26	0.32	0.51	0.68	0.85	0.83	0.53	0.45	..
Republic of Moldova	..	..	4.79	0.43	0.66	0.76	0.81	0.86	..
Montenegro	..	..	..	..	0.28	0.31	0.28	0.31	..
Romania	13.30	18.22	18.10	9.60	9.70	8.57	8.55	8.66	..
Russian Federation	..	..	263.78	126.11	129.20	139.08	156.74	173.26	..
Serbia	..	..	5.15	1.46	4.38	3.89	3.40	3.66	..
Tajikistan	..	..	1.77	0.19	0.28	0.50	0.94	0.96	..
Turkmenistan	..	..	5.34	4.04	5.03	5.55	6.55	6.51	..
Ukraine	..	..	58.47	11.94	14.38	13.18	10.55	11.19	..
Uzbekistan	..	..	10.11	7.34	5.31	3.74	2.59	2.39	..
Former Soviet Union	298.98	414.32	x	x	x	x	x	x	..
Former Yugoslavia	10.38	15.74	x	x	x	x	x	x	..
<b>Non-OECD Europe and Eurasia</b>	<b>335.76</b>	<b>464.41</b>	<b>464.99</b>	<b>201.51</b>	<b>211.76</b>	<b>217.62</b>	<b>237.39</b>	<b>256.68</b>	<b>..</b>
Algeria	2.97	5.22	9.32	9.59	11.00	16.37	19.71	19.07	..
Angola	0.78	0.85	1.06	1.35	1.62	4.63	7.91	6.90	..
Benin	0.14	0.13	0.08	0.51	0.78	1.52	1.72	1.79	..
Botswana	..	..	0.33	0.58	0.68	0.87	1.00	0.97	..
Cameroon	0.26	0.57	0.93	1.03	1.08	1.91	2.12	2.05	..
Congo	0.20	0.23	0.27	0.19	0.34	0.62	0.85	0.84	..
Côte d'Ivoire	0.93	1.23	1.03	1.25	1.19	1.03	1.86	1.29	..
Dem. Rep. of the Congo	0.68	0.68	1.10	0.28	0.42	0.59	0.90	0.66	..
Egypt	6.53	11.33	22.85	22.37	28.28	34.04	39.14	37.88	..
Eritrea	..	..	..	0.20	0.26	0.16	0.20	0.20	..
Ethiopia	0.47	0.50	0.81	1.09	1.51	1.92	3.04	3.27	..
Gabon	0.54	0.75	0.29	0.37	0.49	0.69	0.85	0.85	..
Ghana	0.75	0.76	0.96	1.84	2.21	3.50	4.27	4.64	..
Kenya	1.14	1.49	1.82	2.49	2.38	3.62	4.36	4.88	..
Libya	1.65	4.29	6.99	11.53	12.94	14.54	10.73	10.72	..
Mauritius	0.11	0.18	0.34	0.59	0.67	0.66	0.73	0.74	..
Morocco	2.31	4.02	5.34	6.85	8.99	11.52	11.90	12.02	..
Mozambique	0.54	0.57	0.29	0.48	0.49	0.72	1.16	1.91	..
Namibia	..	..	..	0.63	0.83	1.02	1.28	1.34	..
Niger	..	..	..	0.17	0.19	0.39	0.62	0.49	..
Nigeria	2.55	7.93	10.32	11.15	13.81	20.53	18.84	21.46	..
Senegal	0.48	0.68	0.72	1.21	1.43	1.70	2.27	2.25	..
South Africa	10.14	13.19	9.08	10.75	12.61	18.26	21.63	21.51	..
South Sudan	..	..	..	..	..	..	0.66	0.58	..
Sudan	1.45	1.28	1.85	2.34	3.49	5.18	6.23	6.25	..
United Rep. of Tanzania	0.78	0.72	0.67	0.77	1.38	1.55	3.09	2.79	..
Togo	0.10	0.13	0.19	0.31	0.33	0.69	0.60	0.62	..
Tunisia	1.27	2.35	2.99	3.55	4.09	3.93	4.57	4.54	..
Zambia	0.67	0.66	0.62	0.48	0.66	0.64	1.07	1.05	..
Zimbabwe	0.66	0.60	0.73	1.01	0.69	0.64	1.26	1.10	..
Other Africa	2.62	3.45	4.25	5.20	5.98	7.34	9.59	9.77	..
<b>Africa</b>	<b>40.72</b>	<b>63.77</b>	<b>85.23</b>	<b>100.14</b>	<b>120.83</b>	<b>160.79</b>	<b>184.14</b>	<b>184.43</b>	<b>..</b>

1. Please refer to section 'Geographical coverage'.

## Primary supply of oil (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	0.91	1.53	1.80	3.12	3.65	3.74	4.98	5.25	..
Brunei Darussalam	0.06	0.18	0.05	0.53	0.38	0.56	0.58	0.63	..
Cambodia	..	..	..	0.69	0.93	1.58	1.93	2.20	..
DPR of Korea	1.21	2.71	2.66	1.02	0.93	0.83	0.97	1.03	..
India	24.28	33.20	61.10	111.99	124.59	161.55	207.31	216.79	..
Indonesia	10.73	20.23	33.35	57.87	65.45	67.97	71.45	70.23	..
Malaysia	4.40	7.88	11.48	19.40	24.89	25.32	27.65	30.70	..
Mongolia	..	..	0.82	0.43	0.56	0.83	1.23	1.01	..
Myanmar	1.05	1.34	0.73	1.97	1.76	1.28	3.34	4.40	..
Nepal	0.07	0.11	0.24	0.71	0.72	0.98	1.19	1.97	..
Pakistan	3.15	4.27	10.52	19.00	16.60	20.10	26.04	27.21	..
Philippines	9.13	10.39	10.84	16.05	13.93	13.60	17.68	18.55	..
Singapore	3.75	5.13	11.43	17.35	15.60	17.61	17.10	17.44	..
Sri Lanka	1.28	1.32	1.33	3.58	4.01	4.13	4.68	5.16	..
Chinese Taipei	9.32	20.04	25.86	38.27	43.27	44.17	42.59	42.93	..
Thailand	7.42	10.71	17.96	31.88	43.57	44.95	53.14	55.44	..
Viet Nam	3.71	1.85	2.71	7.81	12.02	18.66	21.17	22.48	..
Other Non-OECD Asia	2.38	2.88	2.95	3.11	4.11	5.41	7.72	7.77	..
<b>Non-OECD Asia excl. China</b>	<b>82.87</b>	<b>123.78</b>	<b>195.83</b>	<b>334.80</b>	<b>376.98</b>	<b>433.26</b>	<b>510.77</b>	<b>531.21</b>	..
People's Rep. of China	51.93	88.59	118.79	220.81	317.82	427.96	533.73	544.96	..
Hong Kong, China	3.11	4.60	3.21	6.58	3.09	3.36	3.34	3.92	..
<b>China</b>	<b>55.05</b>	<b>93.19</b>	<b>122.00</b>	<b>227.39</b>	<b>320.91</b>	<b>431.31</b>	<b>537.07</b>	<b>548.89</b>	..
Argentina	25.33	26.35	21.07	23.47	22.95	31.44	32.13	31.16	..
Bolivia	0.80	1.37	1.13	1.71	2.36	2.73	3.59	3.76	..
Brazil	37.94	55.64	58.89	88.23	87.11	104.73	115.48	109.34	110.35
Colombia	6.60	7.56	9.87	11.53	11.74	12.57	13.76	15.64	..
Costa Rica	0.57	0.76	0.98	1.70	1.78	2.13	2.26	2.42	..
Cuba	7.12	10.23	10.57	8.55	8.04	9.19	8.31	7.32	..
Curaçao	5.98	3.93	1.46	2.11	2.08	2.03	2.00	1.74	..
Dominican Republic	1.66	2.11	3.06	6.31	5.35	5.13	5.33	5.79	..
Ecuador	1.27	3.94	4.95	7.41	7.65	9.91	12.47	11.59	..
El Salvador	0.65	0.61	0.78	1.78	1.99	1.97	2.17	2.27	..
Guatemala	0.90	1.41	1.23	2.84	3.19	3.02	3.80	3.94	..
Haiti	0.12	0.21	0.30	0.47	0.66	0.67	0.96	0.97	..
Honduras	0.42	0.56	0.71	1.36	2.11	2.23	2.94	2.83	..
Jamaica	2.67	2.05	2.27	3.19	3.27	2.17	2.30	2.51	..
Nicaragua	0.59	0.63	0.59	1.16	1.37	1.39	1.66	1.75	..
Panama	1.68	0.88	0.85	1.77	2.15	2.94	3.16	3.38	..
Paraguay	0.25	0.48	0.66	1.09	1.15	1.57	1.91	2.15	..
Peru	5.14	6.63	5.61	7.42	7.18	8.15	9.84	9.89	..
Suriname	..	..	..	0.48	0.52	0.57	0.50	0.46	..
Trinidad and Tobago	1.02	1.36	1.23	1.26	1.38	1.70	1.57	1.73	..
Uruguay	1.82	1.97	1.32	1.98	1.78	1.98	2.14	2.16	..
Venezuela	9.14	19.57	18.61	23.20	27.94	43.96	32.43	28.19	..
Other Non-OECD Americas	5.20	5.22	4.53	4.29	3.95	4.94	5.59	5.57	..
<b>Non-OECD Americas</b>	<b>116.87</b>	<b>153.47</b>	<b>150.66</b>	<b>203.30</b>	<b>207.69</b>	<b>257.12</b>	<b>266.29</b>	<b>256.57</b>	..
Bahrain	0.69	0.37	0.80	1.12	1.97	2.11	2.15	2.22	..
Islamic Republic of Iran	16.43	32.58	50.40	68.53	85.26	79.55	76.52	76.93	..
Iraq	3.62	8.60	18.18	23.31	24.29	32.34	40.79	47.99	..
Jordan	0.61	1.52	3.11	4.58	5.15	4.63	6.28	5.07	..
Kuwait	2.15	4.82	4.18	10.88	16.24	20.23	16.60	17.66	..
Lebanon	2.23	2.28	1.81	4.48	4.61	5.70	7.28	7.42	..
Oman	0.10	0.84	1.78	2.18	2.47	3.82	4.06	3.02	..
Qatar	0.14	0.47	0.97	1.45	2.90	4.71	0.41	0.32	..
Saudi Arabia	5.70	21.95	38.51	67.08	76.59	125.60	150.43	136.25	..
Syrian Arab Republic	2.05	4.20	8.86	10.54	15.53	13.66	7.03	6.82	..
United Arab Emirates	0.26	3.11	6.25	6.46	9.11	10.94	14.99	11.76	..
Yemen	0.92	1.21	2.44	4.67	6.50	6.78	2.60	2.26	..
<b>Middle East</b>	<b>34.89</b>	<b>81.96</b>	<b>137.29</b>	<b>205.29</b>	<b>250.60</b>	<b>310.06</b>	<b>329.13</b>	<b>317.71</b>	..

## Primary supply of natural gas (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>977.01</b>	<b>1 231.86</b>	<b>1 663.52</b>	<b>2 072.07</b>	<b>2 359.23</b>	<b>2 735.49</b>	<b>2 943.69</b>	<b>3 034.95</b>	<b>..</b>
<b>Non-OECD Total</b>	<b>270.49</b>	<b>453.56</b>	<b>818.26</b>	<b>908.08</b>	<b>1 143.71</b>	<b>1 410.85</b>	<b>1 567.76</b>	<b>1 613.34</b>	<b>..</b>
<b>OECD Total</b>	<b>706.52</b>	<b>778.30</b>	<b>845.26</b>	<b>1 163.99</b>	<b>1 215.52</b>	<b>1 324.64</b>	<b>1 375.89</b>	<b>1 421.57</b>	<b>1 435.17</b>
Canada	37.29	45.57	54.74	74.26	80.69	78.70	87.30	94.76	102.57
Chile	0.53	0.72	1.14	5.21	6.80	4.47	3.98	4.35	4.49
Mexico	10.50	19.14	23.13	35.48	46.11	54.24	64.66	66.18	67.26
United States	514.66	476.92	438.36	547.74	507.22	556.08	646.77	652.88	635.35
<b>OECD Americas</b>	<b>562.97</b>	<b>542.34</b>	<b>517.37</b>	<b>662.69</b>	<b>640.81</b>	<b>693.48</b>	<b>802.71</b>	<b>818.17</b>	<b>809.68</b>
Australia	3.38	7.47	14.79	19.27	18.97	28.44	32.23	34.55	34.54
Israel <sup>1</sup>	0.05	0.13	0.03	0.01	1.31	4.40	6.89	7.88	8.24
Japan	5.07	21.40	44.12	65.63	70.65	85.88	100.21	101.70	100.89
Korea	-	-	2.73	17.01	27.38	38.64	39.35	41.31	43.21
New Zealand	0.28	0.79	3.87	5.06	3.23	3.73	4.09	4.21	4.25
<b>OECD Asia Oceania</b>	<b>8.78</b>	<b>29.79</b>	<b>65.54</b>	<b>106.98</b>	<b>121.54</b>	<b>161.09</b>	<b>182.76</b>	<b>189.64</b>	<b>191.15</b>
Austria	3.30	4.15	5.24	6.58	8.09	8.12	6.88	7.18	7.80
Belgium	7.14	8.91	8.17	13.37	14.74	16.75	13.97	14.30	14.38
Czech Republic	1.02	2.59	5.25	7.50	7.70	8.07	6.48	7.02	7.20
Denmark	0.00	0.00	1.82	4.45	4.40	4.42	2.85	2.88	2.74
Estonia	..	..	1.22	0.66	0.80	0.56	0.39	0.43	0.41
Finland	-	0.77	2.18	3.43	3.61	3.84	2.24	2.06	1.91
France	13.50	21.64	26.03	35.77	41.03	42.62	35.04	38.29	38.46
Germany	28.65	51.21	54.98	71.85	77.78	75.90	65.15	70.33	77.37
Greece	-	-	0.14	1.70	2.35	3.23	2.68	3.49	4.20
Hungary	4.17	7.97	8.91	9.66	12.09	9.82	7.49	8.03	8.54
Iceland	-	-	-	-	-	-	-	-	-
Ireland	-	0.74	1.87	3.44	3.47	4.69	3.75	4.24	4.31
Italy	14.23	22.73	39.00	57.94	70.65	68.06	55.30	58.08	61.55
Latvia	..	..	2.38	1.09	1.36	1.46	1.10	1.11	0.99
Luxembourg	0.22	0.42	0.43	0.67	1.18	1.20	0.77	0.71	0.69
Netherlands	28.51	30.43	30.73	35.01	35.33	40.07	28.63	30.03	31.05
Norway	-	0.87	1.98	4.14	4.07	6.28	6.11	5.54	4.05
Poland	6.26	8.77	8.94	9.96	12.23	12.80	13.78	14.63	15.41
Portugal	-	-	-	2.03	3.75	4.49	4.07	4.30	5.61
Slovak Republic	1.56	2.32	5.09	5.78	5.88	5.01	3.88	3.90	3.89
Slovenia	..	..	0.76	0.83	0.93	0.86	0.66	0.71	0.74
Spain	0.94	1.45	4.97	15.22	29.84	31.13	24.54	25.04	27.27
Sweden	-	-	0.58	0.78	0.84	1.47	0.72	0.82	0.67
Switzerland	0.15	0.87	1.63	2.43	2.78	3.01	2.85	3.00	3.01
Turkey	-	-	2.86	12.64	22.79	31.39	39.38	38.26	44.13
United Kingdom	25.11	40.32	47.20	87.40	85.47	84.82	61.70	69.41	67.97
<b>OECD Europe</b>	<b>134.77</b>	<b>206.17</b>	<b>262.35</b>	<b>394.33</b>	<b>453.17</b>	<b>470.07</b>	<b>390.42</b>	<b>413.76</b>	<b>434.35</b>
International marine bunkers	-	-	-	-	-	-	0.03	0.05	..
IEA	705.95	777.45	840.95	1 156.86	1 205.13	1 313.44	1 363.26	1 407.53	1 420.72
IEA/Accession/Association	712.67	797.22	889.56	1 258.90	1 360.40	1 564.29	1 689.44	1 745.35	..
European Union - 28	..	..	297.00	396.00	445.10	447.59	357.73	382.67	..
G7	638.52	679.79	704.44	940.58	933.49	992.05	1 051.48	1 085.44	1 084.18
G8	..	..	1 071.83	1 259.59	1 283.16	1 375.60	1 415.74	1 456.75	..
G20	..	..	1 327.37	1 630.40	1 771.91	2 015.03	2 128.01	2 196.34	..
<b>OPEC</b>	<b>24.92</b>	<b>47.52</b>	<b>100.02</b>	<b>177.51</b>	<b>244.94</b>	<b>330.44</b>	<b>427.12</b>	<b>443.17</b>	<b>..</b>

1. Please refer to section 'Geographical coverage'.

## Primary supply of natural gas (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>270.49</b>	<b>453.56</b>	<b>818.26</b>	<b>908.08</b>	<b>1 143.71</b>	<b>1 410.85</b>	<b>1 567.76</b>	<b>1 613.34</b>	..
Albania	0.16	0.32	0.20	0.01	0.01	0.01	0.03	0.03	..
Armenia	..	..	3.59	1.12	1.34	1.29	1.76	1.83	..
Azerbaijan	..	..	14.46	4.83	8.10	7.85	9.58	9.40	..
Belarus	..	..	12.51	14.23	16.92	18.11	15.83	15.74	..
Bosnia and Herzegovina	..	..	0.40	0.20	0.30	0.20	0.18	0.18	..
Bulgaria	0.17	3.18	5.40	2.93	2.80	2.30	2.59	2.69	..
Croatia	..	..	2.19	2.21	2.37	2.63	2.08	2.17	..
Cyprus <sup>1</sup>	-	-	-	-	-	-	-	-	..
FYR of Macedonia	..	..	-	0.05	0.06	0.10	0.11	0.18	..
Georgia	..	..	4.55	0.95	1.06	1.02	2.02	1.89	..
Gibraltar	..	..	-	-	-	-	-	-	..
Kazakhstan	..	..	10.68	6.57	12.46	22.32	27.46	28.73	..
Kosovo	..	..	..	-	-	-	-	-	..
Kyrgyzstan	..	..	1.52	0.57	0.62	0.25	0.23	0.24	..
Lithuania	..	..	4.68	2.06	2.48	2.49	2.07	1.84	..
Malta	-	-	-	-	-	-	-	-	..
Republic of Moldova	..	..	3.28	2.13	2.39	2.31	2.13	2.15	..
Montenegro	..	..	..	..	-	-	-	-	..
Romania	24.15	32.38	28.84	13.68	13.92	10.79	8.92	9.01	..
Russian Federation	..	..	367.39	319.01	349.67	383.54	364.25	371.31	404.96
Serbia	..	..	2.59	1.53	1.95	1.85	1.75	1.89	..
Tajikistan	..	..	1.39	0.63	0.54	0.16	0.00	0.00	..
Turkmenistan	..	..	12.25	10.90	14.25	17.34	21.35	21.35	..
Ukraine	..	..	91.85	62.27	65.67	55.25	26.08	25.60	..
Uzbekistan	..	..	32.49	41.67	39.91	37.23	33.89	32.75	..
Former Soviet Union	196.26	316.00	x	x	x	x	x	x	..
Former Yugoslavia	1.33	2.97	x	x	x	x	x	x	..
<b>Non-OECD Europe and Eurasia</b>	<b>222.06</b>	<b>354.85</b>	<b>600.27</b>	<b>487.56</b>	<b>536.81</b>	<b>567.04</b>	<b>522.32</b>	<b>528.99</b>	..
Algeria	1.55	5.83	12.17	16.84	20.52	23.32	34.42	34.66	..
Angola	0.05	0.06	0.44	0.47	0.53	0.60	0.63	0.65	..
Benin	-	-	-	-	-	-	-	-	..
Botswana	..	..	-	-	-	-	-	-	..
Cameroon	-	-	-	-	-	0.26	0.41	0.45	..
Congo	0.00	-	-	-	0.02	0.08	0.23	0.21	..
Côte d'Ivoire	-	-	-	1.27	1.25	1.33	1.69	1.88	..
Dem. Rep. of the Congo	-	-	-	-	-	0.02	0.00	0.00	..
Egypt	0.07	1.59	6.73	14.44	29.99	35.81	36.77	44.82	..
Eritrea	..	..	..	-	-	-	-	-	..
Ethiopia	-	-	-	-	-	-	-	-	..
Gabon	0.40	0.01	0.09	0.10	0.12	0.27	0.45	0.45	..
Ghana	-	-	-	-	-	0.35	1.07	0.62	..
Kenya	-	-	-	-	-	-	-	-	..
Libya	0.84	2.64	4.05	4.15	4.76	5.77	3.67	4.17	..
Mauritius	-	-	-	-	-	-	-	-	..
Morocco	0.06	0.06	0.04	0.04	0.37	0.57	1.02	1.03	..
Mozambique	..	-	-	0.00	0.02	0.07	0.76	0.67	..
Namibia	..	..	..	-	-	-	-	-	..
Niger	..	..	..	-	-	-	-	-	..
Nigeria	0.35	1.24	3.27	5.76	9.02	8.83	14.18	13.91	..
Senegal	-	-	0.01	0.00	0.01	0.02	0.02	0.02	..
South Africa	-	-	1.50	1.40	2.76	3.87	4.35	4.42	..
South Sudan	..	..	..	..	..	..	-	-	..
Sudan	-	-	-	-	-	-	-	-	..
United Rep. of Tanzania	-	-	-	-	0.33	0.64	0.73	0.70	..
Togo	-	-	-	-	-	-	-	-	..
Tunisia	0.11	0.35	1.23	2.73	3.09	5.08	5.06	5.22	..
Zambia	-	-	-	-	-	-	-	-	..
Zimbabwe	-	-	-	-	-	-	-	-	..
Other Africa	0.00	0.00	0.00	0.00	0.97	1.29	1.22	1.59	..
<b>Africa</b>	<b>3.45</b>	<b>11.78</b>	<b>29.54</b>	<b>47.19</b>	<b>73.77</b>	<b>88.19</b>	<b>106.67</b>	<b>115.47</b>	..

1. Please refer to section 'Geographical coverage'.

## Primary supply of natural gas (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	0.50	1.04	3.73	7.38	10.81	16.63	21.13	23.10	..
Brunei Darussalam	0.27	1.16	1.68	1.85	1.84	2.68	2.14	2.33	..
Cambodia	..	..	..	-	-	-	-	-	..
DPR of Korea	-	-	-	-	-	-	-	-	..
India	0.63	1.26	10.57	23.07	31.81	54.40	43.22	47.03	..
Indonesia	0.33	4.95	15.82	26.57	29.27	38.82	37.87	39.09	..
Malaysia	0.10	2.24	6.80	24.73	31.87	31.20	37.54	35.76	..
Mongolia	..	..	-	-	-	-	-	-	..
Myanmar	0.09	0.29	0.76	1.20	2.29	1.28	3.03	3.53	..
Nepal	-	-	-	-	-	-	-	-	..
Pakistan	2.86	5.03	10.08	16.67	25.65	26.97	25.21	25.05	..
Philippines	-	-	-	0.01	2.70	3.05	2.88	3.29	..
Singapore	-	-	-	1.12	5.57	7.21	8.55	8.75	..
Sri Lanka	-	-	-	-	-	-	-	-	..
Chinese Taipei	1.22	1.59	1.40	5.56	8.86	13.29	14.79	15.45	..
Thailand	-	-	4.99	17.37	25.93	32.97	37.75	36.94	..
Viet Nam	-	-	0.00	1.12	4.69	8.12	9.55	9.49	..
Other Non-OECD Asia	0.15	0.09	0.24	0.20	0.22	0.37	0.27	0.28	..
<b>Non-OECD Asia excl. China</b>	<b>6.14</b>	<b>17.64</b>	<b>56.07</b>	<b>126.84</b>	<b>181.51</b>	<b>236.99</b>	<b>243.92</b>	<b>250.10</b>	..
People's Rep. of China	5.01	11.96	12.80	20.76	38.79	89.38	158.59	170.78	..
Hong Kong, China	-	-	-	2.45	2.19	3.13	2.65	2.72	..
<b>China</b>	<b>5.01</b>	<b>11.96</b>	<b>12.80</b>	<b>23.21</b>	<b>40.98</b>	<b>92.51</b>	<b>161.24</b>	<b>173.50</b>	..
Argentina	7.20	10.43	18.84	30.44	35.82	37.99	42.95	44.65	..
Bolivia	0.09	0.24	0.63	2.34	1.97	2.50	3.44	3.78	..
Brazil	0.16	0.82	3.24	7.91	16.73	23.03	35.21	29.85	31.64
Colombia	1.42	2.39	3.37	5.46	6.12	8.23	10.09	9.59	..
Costa Rica	-	-	-	-	-	-	-	-	..
Cuba	0.01	0.01	0.03	0.46	0.59	0.85	0.99	0.94	..
Curaçao	-	-	-	-	-	-	-	-	..
Dominican Republic	-	-	-	-	0.23	0.69	0.97	0.87	..
Ecuador	-	-	-	-	0.28	0.43	0.56	0.60	..
El Salvador	-	-	-	-	-	-	-	-	..
Guatemala	-	-	-	-	-	-	-	-	..
Haiti	-	-	-	-	-	-	-	-	..
Honduras	-	-	-	-	-	-	-	-	..
Jamaica	-	-	-	-	-	-	-	-	..
Nicaragua	-	-	-	-	-	-	-	-	..
Panama	-	-	-	-	-	-	-	-	..
Paraguay	-	-	-	-	-	-	-	-	..
Peru	0.30	0.45	0.41	0.49	1.63	5.50	7.89	8.30	..
Suriname	..	..	..	-	-	-	-	-	..
Trinidad and Tobago	1.59	2.44	4.70	8.57	14.70	18.36	17.33	16.51	..
Uruguay	-	-	-	0.03	0.09	0.06	0.05	0.05	..
Venezuela	8.68	11.27	16.75	21.85	19.37	20.84	20.29	21.31	..
Other Non-OECD Americas	0.00	0.01	0.02	0.32	0.59	0.67	1.41	1.43	..
<b>Non-OECD Americas</b>	<b>19.45</b>	<b>28.08</b>	<b>47.99</b>	<b>77.86</b>	<b>98.12</b>	<b>119.13</b>	<b>141.17</b>	<b>137.88</b>	..
Bahrain	1.34	2.43	4.43	6.85	8.42	10.57	12.16	12.03	..
Islamic Republic of Iran	3.22	3.66	17.48	52.63	83.84	122.15	155.31	166.36	..
Iraq	0.99	1.05	1.62	2.57	1.49	4.19	5.67	6.24	..
Jordan	-	-	0.10	0.21	1.38	2.29	1.94	3.39	..
Kuwait	4.96	5.63	4.92	7.84	10.05	11.86	17.07	18.18	..
Lebanon	-	-	-	-	-	0.21	-	-	..
Oman	-	0.31	2.44	5.39	7.44	14.90	21.09	21.09	..
Qatar	1.29	2.85	5.56	9.47	13.77	22.93	43.46	41.98	..
Saudi Arabia	1.54	9.15	19.49	30.78	45.97	59.90	71.27	74.17	..
Syrian Arab Republic	-	0.04	1.37	4.62	4.94	7.80	3.48	3.04	..
United Arab Emirates	1.05	4.12	14.18	25.05	35.22	49.35	60.13	60.50	..
Yemen	-	-	-	-	-	0.82	0.83	0.43	..
<b>Middle East</b>	<b>14.39</b>	<b>29.24</b>	<b>71.58</b>	<b>145.42</b>	<b>212.52</b>	<b>306.98</b>	<b>392.43</b>	<b>407.40</b>	..

## Total primary energy supply (TPES) (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>6 101.05</b>	<b>7 207.79</b>	<b>8 773.72</b>	<b>10 035.63</b>	<b>11 494.80</b>	<b>12 876.24</b>	<b>13 672.31</b>	<b>13 761.45</b>	..
<b>Non-OECD Total</b>	<b>2 176.34</b>	<b>2 961.53</b>	<b>4 038.39</b>	<b>4 456.70</b>	<b>5 638.28</b>	<b>7 086.60</b>	<b>8 019.52</b>	<b>8 088.17</b>	..
<b>OECD Total</b>	<b>3 740.65</b>	<b>4 067.88</b>	<b>4 533.07</b>	<b>5 305.11</b>	<b>5 537.81</b>	<b>5 431.06</b>	<b>5 268.79</b>	<b>5 274.78</b>	<b>5 301.42</b>
Canada	159.35	191.96	211.28	253.57	273.01	263.06	280.79	280.10	291.33
Chile	8.50	9.48	14.01	25.17	28.37	30.85	35.51	37.80	38.18
Mexico	52.56	95.12	123.69	150.82	180.59	178.54	184.89	185.16	182.14
United States	1 730.09	1 804.81	1 915.02	2 273.78	2 318.92	2 216.89	2 187.66	2 166.62	2 136.79
<b>OECD Americas</b>	<b>1 950.50</b>	<b>2 101.37</b>	<b>2 264.00</b>	<b>2 703.34</b>	<b>2 800.89</b>	<b>2 689.34</b>	<b>2 688.84</b>	<b>2 669.68</b>	<b>2 648.44</b>
Australia	57.06	69.61	86.14	108.11	113.48	127.30	125.13	129.75	132.68
Israel <sup>1</sup>	7.76	7.82	11.47	18.23	18.45	23.20	22.69	22.94	23.28
Japan	320.37	344.52	438.22	517.53	521.58	499.06	430.53	425.61	429.12
Korea	21.56	41.26	92.91	188.16	210.29	250.03	272.68	282.41	294.79
New Zealand	7.88	8.99	12.84	17.10	16.93	18.36	20.61	21.01	21.18
<b>OECD Asia Oceania</b>	<b>414.64</b>	<b>472.19</b>	<b>641.57</b>	<b>849.13</b>	<b>880.73</b>	<b>917.96</b>	<b>871.64</b>	<b>881.73</b>	<b>901.05</b>
Austria	21.48	23.16	24.88	28.61	33.46	33.65	32.93	33.32	33.79
Belgium	45.99	46.77	47.94	58.09	58.20	60.12	53.31	56.52	55.56
Czech Republic	45.16	46.95	49.80	41.24	45.25	45.15	42.03	41.55	43.19
Denmark	18.99	19.14	17.36	18.65	18.89	19.49	16.17	16.54	16.98
Estonia	..	..	9.59	4.72	5.21	5.62	5.47	5.52	5.41
Finland	21.03	24.60	28.38	32.39	34.39	36.60	32.61	34.02	34.36
France	180.14	191.77	223.84	251.74	272.66	263.31	248.59	244.26	245.28
Germany	334.70	357.19	351.23	336.60	337.59	326.36	308.17	310.12	313.54
Greece	11.81	14.98	21.44	27.09	30.25	27.61	23.19	22.67	23.19
Hungary	21.28	28.35	28.78	25.00	28.05	26.51	25.19	25.62	26.64
Iceland	1.12	1.50	2.27	3.12	3.12	5.41	5.58	5.29	5.78
Ireland	6.91	8.24	9.91	13.80	14.55	14.39	13.28	13.93	13.71
Italy	119.12	130.84	146.57	171.54	186.37	173.74	152.56	150.98	153.50
Latvia	..	..	7.89	3.83	4.53	4.51	4.26	4.25	4.73
Luxembourg	4.43	3.56	3.39	3.35	4.39	4.22	3.73	3.69	3.78
Netherlands	62.01	64.37	67.21	75.45	81.40	84.32	73.60	74.54	74.98
Norway	14.29	18.35	21.07	26.16	26.83	29.41	28.43	27.24	26.92
Poland	92.89	126.62	103.12	88.83	92.14	100.51	94.92	99.31	103.48
Portugal	6.90	9.99	16.78	24.59	26.46	23.50	21.99	22.12	23.25
Slovak Republic	15.52	19.84	21.33	17.74	18.83	17.83	16.39	16.50	17.00
Slovenia	..	..	5.71	6.41	7.29	7.33	6.56	6.79	6.91
Spain	51.57	67.69	90.07	121.86	141.94	127.69	118.90	119.85	124.76
Sweden	38.84	40.48	47.20	47.55	51.59	50.91	45.48	49.23	47.23
Switzerland	18.91	20.04	24.36	25.00	25.94	26.20	24.52	23.90	24.04
Turkey	24.36	31.45	51.44	76.29	83.99	105.72	128.80	136.72	147.74
United Kingdom	218.08	198.44	205.94	222.99	222.85	203.67	181.61	178.89	176.18
<b>OECD Europe</b>	<b>1 375.51</b>	<b>1 494.31</b>	<b>1 627.50</b>	<b>1 752.64</b>	<b>1 856.19</b>	<b>1 823.76</b>	<b>1 708.30</b>	<b>1 723.37</b>	<b>1 751.94</b>
International marine bunkers	121.53	110.85	115.75	155.02	177.49	205.73	206.36	212.19	..
International aviation bunkers	62.54	67.53	86.51	118.79	141.22	152.85	177.65	186.31	..
IEA	3 723.27	4 049.08	4 491.72	5 248.35	5 476.05	5 359.76	5 194.18	5 197.71	5 222.55
IEA/Accession/Association	4 461.22	5 058.77	5 985.08	7 289.43	8 330.23	9 260.00	9 759.04	9 755.94	..
European Union - 28	..	..	1 646.44	1 695.24	1 796.47	1 729.65	1 589.52	1 598.59	..
G7	3 061.85	3 219.54	3 492.10	4 027.74	4 132.99	3 946.08	3 789.90	3 756.60	3 745.74
G8	..	..	4 371.44	4 647.11	4 784.74	4 635.09	4 499.91	4 488.95	..
G20	..	..	7 065.14	8 080.41	9 164.81	10 184.03	10 715.53	10 724.04	..
<b>OPEC</b>	<b>112.68</b>	<b>210.56</b>	<b>336.16</b>	<b>506.59</b>	<b>639.89</b>	<b>838.22</b>	<b>970.44</b>	<b>977.03</b>	..

World includes international marine bunkers and international aviation bunkers.

1. Please refer to section 'Geographical coverage'.



## Total primary energy supply (TPES) (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>2 176.34</b>	<b>2 961.53</b>	<b>4 038.39</b>	<b>4 456.70</b>	<b>5 638.28</b>	<b>7 086.60</b>	<b>8 019.52</b>	<b>8 088.17</b>	..
Albania	1.75	3.07	2.67	1.79	2.17	2.12	2.19	2.25	..
Armenia	..	..	7.71	2.01	2.51	2.48	3.07	3.03	..
Azerbaijan	..	..	22.67	11.30	13.43	11.59	14.36	14.22	..
Belarus	..	..	45.55	24.70	26.89	27.50	25.23	25.04	..
Bosnia and Herzegovina	..	..	7.02	4.35	5.04	6.48	6.18	6.75	..
Bulgaria	20.50	28.39	28.22	18.61	19.90	17.87	18.61	18.17	..
Croatia	..	..	9.47	8.39	9.75	9.39	8.40	8.47	..
Cyprus <sup>1</sup>	0.78	0.86	1.37	2.14	2.22	2.44	2.01	2.15	..
FYR of Macedonia	..	..	2.48	2.67	2.85	2.87	2.65	2.66	..
Georgia	..	..	12.42	2.87	2.84	3.12	4.63	4.79	..
Gibraltar	0.03	0.03	0.06	0.13	0.15	0.17	0.21	0.23	..
Kazakhstan	..	..	73.45	35.68	50.88	69.13	78.10	81.64	..
Kosovo	..	..	..	1.54	1.95	2.49	2.52	2.69	..
Kyrgyzstan	..	..	7.49	2.32	2.57	2.75	3.98	3.86	..
Lithuania	..	..	16.06	7.13	8.85	7.05	7.05	7.24	..
Malta	0.26	0.32	0.69	0.68	0.85	0.84	0.64	0.60	..
Republic of Moldova	..	..	9.89	2.88	3.52	3.84	3.71	3.80	..
Montenegro	..	..	..	..	1.02	1.13	1.01	0.97	..
Romania	47.84	65.24	62.26	36.23	38.60	35.03	31.84	31.74	..
Russian Federation	..	..	879.33	619.37	651.75	689.00	710.00	732.36	..
Serbia	..	..	19.72	13.73	16.07	15.61	14.76	15.28	..
Tajikistan	..	..	5.31	2.15	2.34	2.18	2.75	2.88	..
Turkmenistan	..	..	17.52	14.88	19.18	22.69	27.64	27.59	..
Ukraine	..	..	252.04	133.81	141.08	132.44	92.88	94.38	..
Uzbekistan	..	..	46.38	50.88	47.10	43.22	38.96	37.59	..
Former Soviet Union	848.69	1 109.59	x	x	x	x	x	x	..
Former Yugoslavia	23.24	33.71	x	x	x	x	x	x	..
<b>Non-OECD Europe and Eurasia</b>	<b>943.08</b>	<b>1 241.22</b>	<b>1 529.77</b>	<b>1 000.23</b>	<b>1 073.51</b>	<b>1 113.46</b>	<b>1 103.38</b>	<b>1 130.39</b>	..
Algeria	4.82	11.21	22.19	27.00	32.42	40.09	54.29	53.75	..
Angola	4.13	4.56	5.88	7.19	8.30	12.84	17.10	16.33	..
Benin	1.18	1.35	1.66	1.98	2.50	3.70	4.26	4.45	..
Botswana	..	..	1.22	1.80	1.87	2.15	2.71	2.61	..
Cameroon	2.82	3.66	4.98	6.31	7.27	6.97	9.12	9.27	..
Congo	0.53	0.62	0.79	0.71	1.09	1.68	2.68	2.69	..
Côte d'Ivoire	2.69	3.57	4.35	6.79	9.62	10.16	12.99	12.51	..
Dem. Rep. of the Congo	7.09	8.47	11.80	13.91	16.67	19.85	28.89	29.62	..
Egypt	8.01	15.10	32.25	40.11	61.57	73.00	79.35	86.17	..
Eritrea	..	..	..	0.71	0.76	0.74	0.90	0.93	..
Ethiopia	14.70	16.68	22.92	31.69	36.87	42.63	50.05	51.54	..
Gabon	1.44	1.37	1.18	1.47	3.00	5.08	5.22	5.33	..
Ghana	3.37	4.02	5.29	6.33	5.88	7.58	9.42	9.37	..
Kenya	5.63	7.31	10.60	14.00	16.14	19.74	25.32	25.99	..
Libya	2.60	7.05	11.17	15.82	17.85	20.46	14.55	15.07	..
Mauritius	0.38	0.43	0.67	0.99	1.17	1.31	1.49	1.54	..
Morocco	3.52	5.41	7.62	11.02	14.83	17.08	19.54	19.50	..
Mozambique	6.80	6.72	5.92	7.17	8.49	10.00	13.05	13.18	..
Namibia	..	..	..	1.06	1.37	1.58	1.92	2.02	..
Niger	..	..	..	1.47	1.73	2.23	2.96	2.92	..
Nigeria	35.90	48.87	66.43	87.07	105.24	127.59	145.01	149.96	..
Senegal	1.32	1.56	1.69	2.40	2.79	3.96	4.33	4.32	..
South Africa	49.18	68.04	89.72	110.60	122.25	137.89	135.99	140.45	..
South Sudan	..	..	..	..	..	..	0.85	0.78	..
Sudan	7.37	8.37	10.63	13.31	14.98	16.76	18.40	18.48	..
United Rep. of Tanzania	7.69	8.02	9.73	13.46	17.28	20.73	26.00	26.50	..
Togo	0.75	0.89	1.26	2.11	2.37	3.12	3.41	3.51	..
Tunisia	1.89	3.27	4.95	7.31	8.32	10.28	10.87	11.00	..
Zambia	3.99	4.55	5.42	6.28	7.53	8.72	10.82	11.13	..
Zimbabwe	5.87	6.49	9.30	10.01	9.62	9.64	11.28	11.14	..
Other Africa	23.20	28.04	42.08	47.67	54.36	62.11	73.47	75.79	..
<b>Africa</b>	<b>206.87</b>	<b>275.63</b>	<b>391.69</b>	<b>497.75</b>	<b>594.15</b>	<b>699.68</b>	<b>796.22</b>	<b>817.82</b>	..

1. Please refer to section 'Geographical coverage'.

## Total primary energy supply (TPES) (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	6.34	8.40	12.75	18.52	23.25	30.05	37.78	39.55	..
Brunei Darussalam	0.34	1.35	1.73	2.39	2.22	3.24	2.72	2.96	..
Cambodia	..	..	..	3.41	3.43	5.33	7.04	7.58	..
DPR of Korea	20.59	30.36	33.22	19.72	21.34	14.80	7.84	8.82	..
India	159.78	200.04	305.74	440.93	514.52	700.07	836.53	862.39	..
Indonesia	38.16	55.71	98.66	155.68	179.12	206.86	225.18	230.15	..
Malaysia	6.07	11.89	21.84	48.90	65.74	73.39	85.87	88.92	..
Mongolia	..	..	3.41	2.40	3.00	3.95	4.65	4.96	..
Myanmar	7.92	9.42	10.68	12.84	14.75	13.53	17.78	19.31	..
Nepal	3.87	4.56	5.79	8.11	9.13	10.21	11.73	12.84	..
Pakistan	18.37	24.76	42.91	63.53	75.96	84.46	93.57	95.70	..
Philippines	17.17	22.42	28.71	39.99	38.86	40.40	51.52	54.81	..
Singapore	3.75	5.13	11.53	18.67	21.57	25.42	26.74	27.35	..
Sri Lanka	4.13	4.54	5.52	8.33	9.00	9.74	11.43	11.70	..
Chinese Taipei	13.11	27.90	47.75	84.84	102.27	110.80	109.10	109.67	..
Thailand	15.61	22.00	41.95	72.29	99.02	117.85	134.73	138.53	..
Viet Nam	13.96	14.39	17.87	28.74	41.26	58.92	76.17	80.99	..
Other Non-OECD Asia	6.06	7.75	6.90	8.24	9.51	12.28	17.15	20.04	..
<b>Non-OECD Asia excl. China</b>	<b>335.25</b>	<b>450.64</b>	<b>696.94</b>	<b>1 037.52</b>	<b>1 233.95</b>	<b>1 521.30</b>	<b>1 757.52</b>	<b>1 816.27</b>	..
People's Rep. of China	426.64	598.06	873.64	1 129.88	1 781.42	2 536.21	2 991.43	2 958.01	..
Hong Kong, China	3.17	4.63	8.62	13.59	12.57	13.67	13.90	14.53	..
<b>China</b>	<b>429.81</b>	<b>602.68</b>	<b>882.26</b>	<b>1 143.47</b>	<b>1 793.99</b>	<b>2 549.88</b>	<b>3 005.33</b>	<b>2 972.53</b>	..
Argentina	35.59	41.81	46.07	61.57	66.93	78.68	85.58	86.25	..
Bolivia	1.19	2.44	2.61	4.92	5.21	6.30	8.32	8.82	..
Brazil	81.99	113.86	140.21	187.45	215.34	265.89	295.21	284.52	289.33
Colombia	13.95	17.71	24.22	25.82	27.09	31.21	38.41	40.04	..
Costa Rica	0.94	1.26	1.68	2.87	3.87	4.64	4.93	5.09	..
Cuba	10.79	14.64	17.41	12.74	10.67	11.31	11.01	9.60	..
Curaçao	5.98	3.93	1.46	2.11	2.09	2.04	2.02	1.76	..
Dominican Republic	2.87	3.43	4.01	7.37	7.27	7.58	8.35	8.75	..
Ecuador	2.35	5.00	6.33	8.82	9.34	11.77	15.08	14.31	..
El Salvador	1.98	2.52	2.47	3.97	4.51	4.36	4.29	4.38	..
Guatemala	2.95	3.79	4.41	7.04	7.80	11.01	12.62	14.08	..
Haiti	1.59	2.08	1.56	2.01	3.41	3.80	4.27	4.33	..
Honduras	1.48	1.87	2.38	3.00	4.13	4.60	5.84	5.85	..
Jamaica	2.92	2.28	2.62	3.49	3.58	2.49	2.71	2.92	..
Nicaragua	1.35	1.53	2.02	2.52	2.88	2.96	3.86	3.92	..
Panama	2.03	1.41	1.49	2.57	2.91	3.61	4.26	4.48	..
Paraguay	1.52	2.08	3.07	3.85	3.96	4.81	5.42	5.91	..
Peru	9.51	11.26	9.73	12.22	13.65	19.38	23.51	24.12	..
Suriname	..	..	..	0.61	0.61	0.70	0.65	0.59	..
Trinidad and Tobago	2.64	3.83	5.99	9.84	16.12	20.07	18.92	18.25	..
Uruguay	2.39	2.64	2.25	3.09	2.96	4.09	5.01	5.22	..
Venezuela	19.03	32.61	39.52	51.19	54.59	72.38	59.97	56.17	..
Other Non-OECD Americas	5.75	5.77	5.11	5.14	5.23	6.23	7.68	7.69	..
<b>Non-OECD Americas</b>	<b>210.78</b>	<b>277.77</b>	<b>326.63</b>	<b>424.19</b>	<b>474.14</b>	<b>579.90</b>	<b>627.90</b>	<b>617.06</b>	..
Bahrain	2.04	2.81	5.23	7.97	10.39	12.70	14.32	14.25	..
Islamic Republic of Iran	20.64	38.06	69.33	123.04	172.69	204.32	235.17	247.66	..
Iraq	4.65	9.72	20.04	25.96	26.43	37.45	47.86	55.60	..
Jordan	0.61	1.52	3.27	4.87	6.68	7.10	8.63	8.98	..
Kuwait	7.13	10.46	9.11	18.72	26.28	32.09	33.67	35.84	..
Lebanon	2.38	2.47	1.95	4.91	5.04	6.38	7.66	7.78	..
Oman	0.10	1.15	4.22	7.57	9.91	18.72	25.14	24.11	..
Qatar	1.43	3.31	6.53	10.92	16.67	27.65	43.87	42.30	..
Saudi Arabia	7.23	31.10	58.01	97.87	122.56	185.51	221.71	210.43	..
Syrian Arab Republic	2.06	4.47	10.47	15.44	20.79	21.66	10.53	9.94	..
United Arab Emirates	1.31	7.23	20.43	31.53	44.51	61.00	76.94	74.28	..
Yemen	0.97	1.27	2.51	4.75	6.59	7.81	3.67	2.94	..
<b>Middle East</b>	<b>50.55</b>	<b>113.58</b>	<b>211.11</b>	<b>353.54</b>	<b>468.54</b>	<b>622.38</b>	<b>729.17</b>	<b>734.09</b>	..

## Primary supply of renewables (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>756.98</b>	<b>900.48</b>	<b>1 121.28</b>	<b>1 287.52</b>	<b>1 396.86</b>	<b>1 597.51</b>	<b>1 818.72</b>	<b>1 881.79</b>	<b>..</b>
<b>Non-OECD Total</b>	<b>584.83</b>	<b>686.79</b>	<b>849.36</b>	<b>967.09</b>	<b>1 048.37</b>	<b>1 172.73</b>	<b>1 311.27</b>	<b>1 360.84</b>	<b>..</b>
<b>OECD Total</b>	<b>172.15</b>	<b>213.70</b>	<b>271.92</b>	<b>320.44</b>	<b>348.49</b>	<b>424.78</b>	<b>507.28</b>	<b>520.95</b>	<b>539.35</b>
Canada	24.55	29.24	36.33	44.58	45.55	44.00	49.28	48.79	50.28
Chile	1.81	2.47	3.90	6.31	7.12	6.83	9.68	10.24	10.10
Mexico	7.74	9.12	15.00	16.91	17.63	15.15	15.47	15.62	15.60
United States	62.43	83.07	96.17	101.97	105.20	125.88	150.58	156.23	164.10
<b>OECD Americas</b>	<b>96.53</b>	<b>123.90</b>	<b>151.40</b>	<b>169.78</b>	<b>175.50</b>	<b>191.86</b>	<b>225.01</b>	<b>230.88</b>	<b>240.08</b>
Australia	4.51	4.75	5.07	6.35	6.46	6.68	8.01	8.29	8.91
Israel <sup>1</sup>	0.00	0.00	0.36	0.61	0.74	1.16	0.51	0.56	0.56
Japan	5.97	8.37	14.86	15.89	16.77	18.38	21.82	22.28	23.48
Korea	0.11	0.17	1.01	0.76	1.08	1.81	4.02	4.30	5.91
New Zealand	2.30	3.17	4.22	5.19	5.33	7.10	8.35	8.72	8.36
<b>OECD Asia Oceania</b>	<b>12.90</b>	<b>16.45</b>	<b>25.53</b>	<b>28.79</b>	<b>30.38</b>	<b>35.13</b>	<b>42.72</b>	<b>44.14</b>	<b>47.22</b>
Austria	2.33	3.61	5.04	6.57	6.95	9.02	9.74	10.05	10.04
Belgium	0.02	0.08	0.48	0.64	1.16	2.83	3.66	3.92	4.13
Czech Republic	0.09	0.21	1.14	1.61	2.09	3.13	4.28	4.31	4.47
Denmark	0.31	0.59	1.03	1.80	2.84	3.92	4.82	5.01	5.93
Estonia	..	..	0.19	0.51	0.59	0.85	0.91	0.97	0.91
Finland	4.85	4.34	5.49	7.75	8.09	9.34	10.49	10.61	11.19
France	13.94	14.68	15.22	15.74	15.73	21.22	22.36	24.58	23.93
Germany	3.81	5.41	5.31	8.98	17.21	27.57	38.35	38.92	42.18
Greece	0.64	0.74	1.10	1.40	1.64	2.13	2.78	2.64	2.59
Hungary	0.65	0.53	0.75	0.83	1.69	2.78	3.02	3.00	2.89
Iceland	0.54	0.90	1.62	2.41	2.38	4.79	4.93	4.61	5.11
Ireland	0.06	0.07	0.17	0.23	0.37	0.66	1.07	1.11	1.29
Italy	5.60	7.10	6.47	10.11	14.11	21.87	26.27	26.02	26.15
Latvia	..	..	1.05	1.19	1.48	1.43	1.54	1.62	1.91
Luxembourg	0.00	0.02	0.02	0.04	0.07	0.13	0.21	0.22	0.26
Netherlands	-	0.23	0.76	1.35	2.26	3.23	3.70	3.77	4.06
Norway	6.27	7.77	11.39	13.49	12.98	11.72	13.29	13.94	14.22
Poland	1.16	1.04	1.58	3.80	4.49	7.27	8.97	8.77	8.27
Portugal	1.27	1.41	3.28	3.76	3.47	5.46	4.97	5.62	4.78
Slovak Republic	0.30	0.36	0.33	0.49	0.81	1.32	1.58	1.58	1.61
Slovenia	..	..	0.52	0.79	0.77	1.12	1.05	1.12	1.08
Spain	2.50	2.81	6.20	6.82	8.40	15.05	16.62	17.43	16.27
Sweden	8.69	9.11	11.53	14.74	14.85	17.00	19.09	18.28	18.43
Switzerland	2.64	3.29	3.63	4.43	4.16	4.98	5.46	5.33	5.38
Turkey	6.73	8.72	9.66	10.10	10.13	11.63	15.65	17.14	17.99
United Kingdom	0.33	0.33	1.03	2.26	3.90	7.35	14.76	15.36	16.99
<b>OECD Europe</b>	<b>62.72</b>	<b>73.34</b>	<b>94.99</b>	<b>121.86</b>	<b>142.61</b>	<b>197.79</b>	<b>239.55</b>	<b>245.93</b>	<b>252.05</b>
International marine bunkers	-	-	-	-	-	-	0.18	-	..
IEA	169.79	210.32	264.47	309.12	336.00	409.44	489.57	502.79	520.59
IEA/Accession/Association	516.80	611.80	747.14	839.40	894.93	1 030.71	1 172.49	1 218.77	..
European Union - 28	..	..	72.15	98.52	121.79	175.24	211.73	216.69	..
G7	116.64	148.21	175.41	199.55	218.47	266.26	323.42	332.18	347.11
G8	..	..	201.88	217.60	237.17	283.96	340.93	351.13	..
G20	..	..	753.06	838.31	892.50	1 023.79	1 159.04	1 202.58	..
<b>OPEC</b>	<b>39.29</b>	<b>47.41</b>	<b>64.21</b>	<b>84.71</b>	<b>102.34</b>	<b>120.86</b>	<b>135.94</b>	<b>138.65</b>	<b>..</b>

Includes hydro, geothermal, solar, wind, tide, wave, biofuels and the renewable fraction of municipal waste.

Excludes hydro pumped storage.

World includes international marine bunkers and international aviation bunkers.

1. Please refer to section 'Geographical coverage'.

## Primary supply of renewables (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>584.83</b>	<b>686.79</b>	<b>849.36</b>	<b>967.09</b>	<b>1 048.37</b>	<b>1 172.73</b>	<b>1 311.27</b>	<b>1 360.84</b>	<b>..</b>
Albania	0.47	0.63	0.61	0.65	0.69	0.86	0.75	0.95	..
Armenia	..	..	0.15	0.12	0.16	0.23	0.38	0.35	..
Azerbaijan	..	..	0.16	0.15	0.28	0.39	0.26	0.24	..
Belarus	..	..	0.23	0.92	1.25	1.51	1.37	1.38	..
Bosnia and Herzegovina	..	..	0.43	0.62	0.70	0.87	1.04	1.05	..
Bulgaria	0.46	0.52	0.33	0.78	1.10	1.46	1.99	1.94	..
Croatia	..	..	1.22	1.56	1.86	2.06	1.96	2.00	..
Cyprus <sup>1</sup>	0.01	0.01	0.01	0.05	0.05	0.11	0.15	0.15	..
FYR of Macedonia	..	..	0.04	0.33	0.34	0.41	0.41	0.38	..
Georgia	..	..	1.11	1.16	0.90	1.21	1.14	1.21	..
Gibraltar	-	-	-	-	-	-	-	-	..
Kazakhstan	..	..	0.75	0.72	0.69	0.74	0.89	1.14	..
Kosovo	..	..	..	0.22	0.23	0.25	0.28	0.39	..
Kyrgyzstan	..	..	0.86	1.11	1.10	0.96	0.96	0.99	..
Lithuania	..	..	0.32	0.67	0.88	1.06	1.42	1.46	..
Malta	-	-	-	-	0.00	0.01	0.02	0.03	..
Republic of Moldova	..	..	0.08	0.09	0.10	0.55	0.68	0.72	..
Montenegro	..	..	..	..	0.30	0.40	0.31	0.33	..
Romania	2.02	2.04	1.58	4.04	4.94	5.86	5.97	6.19	..
Russian Federation	..	..	26.47	18.05	18.69	17.69	17.51	18.95	19.32
Serbia	..	..	1.98	1.83	1.84	2.05	1.93	2.00	..
Tajikistan	..	..	1.42	1.21	1.46	1.41	1.46	1.43	..
Turkmenistan	..	..	0.06	0.01	0.01	0.01	0.01	0.01	..
Ukraine	..	..	1.26	1.23	1.33	2.73	2.70	3.62	..
Uzbekistan	..	..	0.58	0.51	0.75	0.94	1.02	1.02	..
Former Soviet Union	29.99	34.29	x	x	x	x	x	x	..
Former Yugoslavia	2.23	3.08	x	x	x	x	x	x	..
<b>Non-OECD Europe and Eurasia</b>	<b>35.18</b>	<b>40.56</b>	<b>39.66</b>	<b>36.03</b>	<b>39.65</b>	<b>43.78</b>	<b>44.61</b>	<b>47.93</b>	<b>..</b>
Algeria	0.07	0.03	0.02	0.06	0.12	0.07	0.03	0.03	..
Angola	3.30	3.65	4.38	5.38	6.14	7.61	8.56	8.78	..
Benin	1.04	1.21	1.56	1.45	1.67	2.10	2.43	2.49	..
Botswana	..	..	0.42	0.54	0.46	0.49	0.54	0.55	..
Cameroon	2.55	3.09	4.05	5.28	6.19	4.80	6.58	6.77	..
Congo	0.33	0.39	0.52	0.50	0.69	0.95	1.60	1.64	..
Côte d'Ivoire	1.76	2.34	3.29	4.38	7.30	7.83	9.51	9.49	..
Dem. Rep. of the Congo	6.20	7.59	10.48	13.74	16.38	19.31	28.02	28.99	..
Egypt	1.12	1.64	1.91	2.50	2.57	2.84	3.15	3.18	..
Eritrea	..	..	..	0.51	0.50	0.58	0.70	0.72	..
Ethiopia	14.23	16.18	22.10	30.60	35.36	40.68	46.77	48.01	..
Gabon	0.51	0.61	0.80	0.99	2.39	4.12	3.90	4.00	..
Ghana	2.63	3.31	4.39	4.46	3.66	3.81	4.12	4.08	..
Kenya	4.41	5.78	8.67	11.43	13.67	15.95	20.61	20.76	..
Libya	0.11	0.13	0.13	0.14	0.15	0.16	0.15	0.15	..
Mauritius	0.27	0.25	0.30	0.26	0.26	0.24	0.26	0.23	..
Morocco	0.78	0.93	1.10	1.28	2.20	1.79	1.67	1.65	..
Mozambique	5.90	5.96	5.59	7.25	8.19	9.51	10.82	10.96	..
Namibia	..	..	..	0.37	0.39	0.35	0.41	0.40	..
Niger	..	..	..	1.24	1.46	1.71	2.21	2.29	..
Nigeria	32.82	39.61	52.80	70.16	82.42	98.21	111.97	114.56	..
Senegal	0.84	0.89	0.96	1.16	1.22	2.04	1.66	1.58	..
South Africa	5.22	6.39	10.50	12.22	12.20	12.32	12.76	13.01	..
South Sudan	..	..	..	..	..	..	0.19	0.19	..
Sudan	5.91	7.09	8.78	10.97	11.49	11.57	12.17	12.23	..
United Rep. of Tanzania	6.91	7.30	9.06	12.64	15.54	18.53	22.02	22.83	..
Togo	0.64	0.75	1.05	1.77	2.00	2.37	2.70	2.78	..
Tunisia	0.43	0.50	0.64	0.94	1.14	1.10	1.17	1.18	..
Zambia	2.59	3.75	4.71	5.85	6.81	8.14	9.68	9.77	..
Zimbabwe	3.47	4.01	5.10	5.87	6.45	7.19	7.93	8.03	..
Other Africa	20.46	24.19	37.59	42.05	46.92	52.78	62.05	63.81	..
<b>Africa</b>	<b>124.51</b>	<b>147.55</b>	<b>200.92</b>	<b>255.98</b>	<b>295.93</b>	<b>339.14</b>	<b>396.36</b>	<b>405.17</b>	<b>..</b>

Includes hydro, geothermal, solar, wind, tide, wave, biofuels and the renewable fraction of municipal waste.

Excludes hydro pumped storage.

1. Please refer to section 'Geographical coverage'.

## Primary supply of renewables (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	4.82	5.70	6.94	7.68	8.37	8.87	9.40	9.50	..
Brunei Darussalam	0.01	0.01	0.00	-	-	-	0.00	0.00	..
Cambodia	..	..	..	2.72	2.50	3.62	4.39	4.56	..
DPR of Korea	1.54	1.77	2.30	1.88	2.17	2.23	1.96	2.21	..
India	102.73	120.49	139.66	155.44	169.22	197.61	196.22	208.86	..
Indonesia	27.01	30.38	45.95	59.23	62.27	68.23	74.83	77.52	..
Malaysia	1.56	1.72	2.21	2.46	2.28	2.29	3.16	3.69	..
Mongolia	..	..	0.08	0.13	0.17	0.19	0.16	0.16	..
Myanmar	6.73	7.64	9.13	9.35	10.38	10.55	10.96	11.00	..
Nepal	3.76	4.40	5.50	7.13	8.15	8.87	9.83	9.99	..
Pakistan	11.71	14.78	20.23	25.48	29.33	32.29	36.12	36.97	..
Philippines	8.02	11.51	16.34	18.77	16.39	16.11	18.32	18.67	..
Singapore	0.00	0.01	0.04	0.10	0.20	0.29	0.38	0.41	..
Sri Lanka	2.85	3.21	4.19	4.74	4.92	5.54	5.38	5.08	..
Chinese Taipei	0.29	0.25	0.57	0.85	1.10	1.33	1.85	1.70	..
Thailand	8.08	10.76	15.12	15.13	17.68	23.09	25.93	29.14	..
Viet Nam	8.69	10.27	12.93	15.44	16.25	17.08	20.36	21.22	..
Other Non-OECD Asia	2.58	2.96	3.68	4.92	5.07	5.54	6.65	6.79	..
<b>Non-OECD Asia excl. China</b>	<b>190.37</b>	<b>225.86</b>	<b>284.85</b>	<b>331.46</b>	<b>356.45</b>	<b>403.75</b>	<b>425.89</b>	<b>447.45</b>	..
People's Rep. of China	165.02	184.97	211.37	219.94	207.82	206.58	254.27	266.48	..
Hong Kong, China	0.05	0.05	0.05	0.05	0.06	0.10	0.11	0.11	..
<b>China</b>	<b>165.07</b>	<b>185.03</b>	<b>211.43</b>	<b>220.00</b>	<b>207.87</b>	<b>206.68</b>	<b>254.37</b>	<b>266.59</b>	..
Argentina	2.35	3.45	3.26	5.43	5.20	5.65	6.83	6.63	..
Bolivia	0.31	0.83	0.86	0.87	0.89	1.08	1.29	1.28	..
Brazil	41.58	51.48	65.54	72.83	92.42	116.84	119.96	121.68	123.45
Colombia	4.09	5.96	7.88	6.19	6.67	7.26	9.54	9.65	..
Costa Rica	0.37	0.50	0.68	1.22	2.05	2.44	2.60	2.57	..
Cuba	3.58	4.30	6.67	3.71	2.02	1.25	1.70	1.34	..
Curaçao	-	-	-	0.00	0.01	0.01	0.02	0.02	..
Dominican Republic	1.21	1.33	0.94	0.95	1.04	0.99	0.99	1.11	..
Ecuador	1.08	1.06	1.38	1.40	1.26	1.36	2.01	2.15	..
El Salvador	1.33	1.91	1.69	2.12	2.50	2.38	2.05	2.02	..
Guatemala	2.04	2.37	3.18	4.13	4.38	7.67	7.92	9.08	..
Haiti	1.47	1.88	1.25	1.54	2.74	3.12	3.31	3.36	..
Honduras	1.06	1.31	1.69	1.53	1.87	2.23	2.82	2.90	..
Jamaica	0.25	0.22	0.32	0.27	0.27	0.29	0.36	0.37	..
Nicaragua	0.76	0.91	1.42	1.35	1.51	1.57	2.20	2.15	..
Panama	0.34	0.53	0.61	0.76	0.77	0.67	0.90	0.94	..
Paraguay	1.27	1.61	4.56	6.84	6.58	6.97	7.04	7.92	..
Peru	3.92	4.04	3.57	3.68	3.88	4.87	4.98	5.07	..
Suriname	..	..	..	0.13	0.09	0.13	0.15	0.13	..
Trinidad and Tobago	0.02	0.03	0.07	0.02	0.04	0.01	0.01	0.01	..
Uruguay	0.54	0.77	1.15	1.03	1.02	2.07	2.94	3.07	..
Venezuela	0.94	1.61	3.69	6.00	7.29	7.39	7.20	6.55	..
Other Non-OECD Americas	0.52	0.52	0.55	0.44	0.58	0.51	0.53	0.54	..
<b>Non-OECD Americas</b>	<b>69.04</b>	<b>86.62</b>	<b>110.98</b>	<b>122.44</b>	<b>145.10</b>	<b>176.74</b>	<b>187.33</b>	<b>190.55</b>	..
Bahrain	-	-	-	-	-	-	-	-	..
Islamic Republic of Iran	0.39	0.62	0.74	0.47	1.97	1.45	1.74	1.95	..
Iraq	0.05	0.08	0.25	0.08	0.55	0.45	0.27	0.34	..
Jordan	0.00	0.00	0.06	0.07	0.08	0.14	0.18	0.27	..
Kuwait	0.02	0.00	0.01	-	-	-	-	0.00	..
Lebanon	0.14	0.18	0.15	0.17	0.26	0.21	0.19	0.19	..
Oman	-	-	-	-	-	-	-	-	..
Qatar	-	-	-	-	-	-	-	-	..
Saudi Arabia	0.00	0.00	0.01	0.00	0.01	0.01	0.01	0.01	..
Syrian Arab Republic	0.00	0.23	0.24	0.28	0.38	0.23	0.04	0.09	..
United Arab Emirates	-	-	-	0.02	0.03	0.05	0.11	0.12	..
Yemen	0.05	0.06	0.08	0.08	0.09	0.10	0.16	0.18	..
<b>Middle East</b>	<b>0.66</b>	<b>1.17</b>	<b>1.53</b>	<b>1.18</b>	<b>3.37</b>	<b>2.64</b>	<b>2.71</b>	<b>3.14</b>	..

Includes hydro, geothermal, solar, wind, tide, wave, biofuels and the renewable fraction of municipal waste.

Excludes hydro pumped storage.

## Electricity generation from coal (% of total)

	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>38.20</b>	<b>37.87</b>	<b>37.38</b>	<b>38.87</b>	<b>40.07</b>	<b>40.31</b>	<b>39.33</b>	<b>38.42</b>	<b>..</b>
<b>Non-OECD Total</b>	<b>38.97</b>	<b>31.26</b>	<b>31.76</b>	<b>38.82</b>	<b>43.27</b>	<b>46.45</b>	<b>47.02</b>	<b>46.69</b>	<b>..</b>
<b>OECD Total</b>	<b>37.91</b>	<b>40.92</b>	<b>40.46</b>	<b>38.89</b>	<b>37.70</b>	<b>34.32</b>	<b>29.83</b>	<b>27.81</b>	<b>27.46</b>
Canada	12.92	16.02	17.06	19.42	16.21	13.16	9.76	9.31	9.01
Chile	14.00	16.08	35.52	21.13	13.74	27.91	37.14	38.12	36.87
Mexico	0.56	-	6.71	9.23	13.06	11.72	10.88	10.80	9.92
United States	46.16	51.20	53.07	52.90	50.46	45.80	34.23	31.49	31.08
<b>OECD Americas</b>	<b>41.36</b>	<b>45.31</b>	<b>47.03</b>	<b>46.64</b>	<b>44.19</b>	<b>40.10</b>	<b>29.86</b>	<b>27.60</b>	<b>27.09</b>
Australia	74.88	73.25	78.74	83.03	79.53	71.34	63.11	63.64	62.28
Israel <sup>1</sup>	-	-	50.09	68.80	74.65	58.52	45.84	36.14	32.51
Japan	8.01	9.60	14.31	21.75	27.49	27.22	34.16	33.22	33.55
Korea	9.05	6.66	16.76	38.61	38.36	44.14	43.09	42.00	45.96
New Zealand	8.52	1.89	2.06	3.94	13.73	4.63	4.27	2.45	2.77
<b>OECD Asia Oceania</b>	<b>15.47</b>	<b>17.24</b>	<b>23.30</b>	<b>33.36</b>	<b>37.33</b>	<b>37.54</b>	<b>40.11</b>	<b>39.08</b>	<b>40.04</b>
Austria	10.32	7.02	14.21	11.26	13.16	9.87	8.23	6.08	5.80
Belgium	21.68	29.36	28.25	19.37	12.24	6.35	6.18	3.13	2.82
Czech Republic	85.14	84.75	76.44	75.39	63.79	58.30	53.06	54.37	51.16
Denmark	35.80	81.84	90.67	46.25	42.66	43.76	24.56	29.04	19.55
Estonia	..	..	86.05	92.13	93.27	89.29	83.18	83.80	84.52
Finland	28.07	42.63	23.56	18.77	16.56	26.54	12.81	15.29	13.99
France	19.66	27.35	8.49	5.77	5.38	4.66	2.18	1.91	2.51
Germany	69.00	62.94	58.73	53.15	48.35	43.64	44.26	42.45	38.89
Greece	35.45	44.85	72.37	64.23	59.81	53.68	42.66	34.70	35.36
Hungary	66.01	50.44	30.49	27.58	19.99	16.99	19.47	18.07	15.44
Iceland	-	-	-	-	-	-	-	-	-
Ireland	24.92	16.40	57.37	36.27	34.49	20.35	26.31	23.30	18.93
Italy	3.60	9.95	16.78	11.31	16.65	14.87	16.12	13.34	11.85
Latvia	..	..	0.93	1.89	-	0.03	-	-	-
Luxembourg	58.82	51.63	76.44	-	-	-	-	-	-
Netherlands	6.04	13.69	38.21	30.25	26.95	21.63	38.65	34.22	29.18
Norway	0.03	0.02	0.07	0.05	0.10	0.11	0.11	0.10	0.13
Poland	93.90	94.71	97.49	96.33	92.20	88.09	80.91	80.01	78.54
Portugal	3.94	2.30	32.12	33.87	32.97	13.22	28.72	21.37	25.52
Slovak Republic	64.40	37.86	31.86	19.84	19.07	14.86	12.51	12.19	11.36
Slovenia	..	..	31.26	33.84	34.87	32.53	29.59	30.89	30.18
Spain	18.87	30.01	40.12	36.60	27.90	8.82	18.97	13.80	17.19
Sweden	0.64	0.19	1.09	1.75	1.22	1.80	0.78	0.67	1.27
Switzerland	-	0.13	0.07	-	-	-	-	-	-
Turkey	26.11	25.61	35.07	30.57	26.67	26.06	29.10	33.63	32.79
United Kingdom	62.06	73.18	64.97	32.67	34.48	28.69	22.89	9.36	6.96
<b>OECD Europe</b>	<b>40.98</b>	<b>43.30</b>	<b>38.59</b>	<b>30.00</b>	<b>28.31</b>	<b>24.12</b>	<b>24.15</b>	<b>21.96</b>	<b>21.08</b>
IEA	38.05	41.08	40.51	38.89	37.70	34.31	29.75	27.75	27.43
IEA/Accession/Association	38.29	40.76	42.30	43.32	45.06	45.71	44.93	43.76	..
European Union - 28	..	..	40.76	32.20	30.27	25.89	25.79	22.79	..
G7	39.47	42.67	41.45	39.85	39.03	35.63	29.50	27.04	26.41
G8	..	..	37.36	37.76	36.69	33.37	27.75	25.66	..
G20	..	..	40.63	42.91	44.34	44.71	43.70	42.63	..
<i>OPEC</i>	0.12	0.08	0.03	0.09	0.08	0.04	0.04	0.04	..

Where applicable, this table includes peat and oil shale except for 2017 provisional figures for non-OECD countries.

1. Please refer to section 'Geographical coverage'.

## Electricity generation from coal (% of total)

	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>38.97</b>	<b>31.26</b>	<b>31.76</b>	<b>38.82</b>	<b>43.27</b>	<b>46.45</b>	<b>47.02</b>	<b>46.69</b>	<b>..</b>
Albania	-	-	-	-	-	-	-	-	-
Armenia	..	..	-	-	-	-	-	-	-
Azerbaijan	..	..	-	-	-	-	-	-	-
Belarus	..	..	-	-	0.01	0.08	0.11	0.10	0.10
Bosnia and Herzegovina	..	..	71.76	50.70	51.29	52.53	63.95	67.66	75.85
Bulgaria	77.28	49.15	50.26	42.33	42.36	49.13	46.21	43.37	46.63
Croatia	..	..	7.43	13.77	17.83	16.12	20.56	20.58	11.71
Cyprus <sup>1</sup>	-	-	-	-	-	-	-	-	-
FYR of Macedonia	..	..	89.67	76.48	78.31	65.33	58.36	51.39	60.46
Georgia	..	..	-	-	-	-	-	0.14	0.22
Gibraltar	-	-	-	-	-	-	-	-	..
Kazakhstan	..	..	71.12	69.45	73.85	80.65	71.57	66.18	..
Kosovo	..	..	..	97.60	96.88	96.54	97.47	95.65	96.71
Kyrgyzstan	..	..	13.07	4.29	10.10	4.99	13.22	11.74	..
Lithuania	..	..	-	-	-	-	-	-	-
Malta	-	-	55.91	-	-	-	-	-	-
Republic of Moldova	..	..	30.75	2.94	-	-	-	-	-
Montenegro	..	..	..	..	34.85	31.63	50.35	41.32	58.34
Romania	26.02	31.44	28.77	37.16	37.26	34.22	27.64	24.74	26.80
Russian Federation	..	..	14.51	20.04	17.39	16.03	14.88	15.74	15.63
Serbia	..	..	69.06	62.78	64.27	67.06	72.43	70.74	74.55
Tajikistan	..	..	-	-	-	-	0.94	3.48	5.42
Turkmenistan	..	..	-	-	-	-	-	-	..
Ukraine	..	..	38.19	30.08	26.90	36.94	34.58	37.57	31.89
Uzbekistan	..	..	7.38	4.09	4.08	4.09	4.09	4.08	..
Former Soviet Union	42.45	31.46	x	x	x	x	x	x	..
Former Yugoslavia	46.03	42.82	x	x	x	x	x	x	..
<b>Non-OECD Europe and Eurasia</b>	<b>42.45</b>	<b>32.23</b>	<b>22.74</b>	<b>23.69</b>	<b>22.35</b>	<b>23.39</b>	<b>22.22</b>	<b>22.40</b>	<b>..</b>
Algeria	-	-	-	-	-	-	-	-	..
Angola	-	-	-	-	-	-	-	-	..
Benin	-	-	-	-	-	-	-	-	..
Botswana	..	..	88.08	97.63	99.43	100.00	96.33	99.70	..
Cameroon	-	-	-	-	-	-	-	-	..
Congo	-	-	-	-	-	-	-	-	..
Côte d'Ivoire	-	-	-	-	-	-	-	-	..
Dem. Rep. of the Congo	-	-	-	-	-	-	-	-	..
Egypt	-	-	-	-	-	-	-	-	..
Eritrea	..	..	..	-	-	-	-	-	..
Ethiopia	-	-	-	-	-	-	-	-	..
Gabon	-	-	-	-	-	-	-	-	..
Ghana	-	-	-	-	-	-	-	-	..
Kenya	-	-	-	-	-	-	-	-	..
Libya	-	-	-	-	-	-	-	-	..
Mauritius	-	-	6.15	20.42	26.85	38.68	39.44	41.65	..
Morocco	27.51	19.48	22.97	68.28	66.00	45.90	55.53	53.52	53.93
Mozambique	-	17.53	13.88	-	-	-	-	-	..
Namibia	..	..	..	0.78	0.18	4.21	0.46	3.73	..
Niger	..	..	..	65.53	69.00	68.94	41.62	40.87	..
Nigeria	-	-	0.10	-	-	-	-	-	..
Senegal	-	-	-	-	-	-	-	-	..
South Africa	98.47	98.96	94.28	93.06	94.64	94.27	92.56	90.79	..
South Sudan	..	..	..	..	..	..	-	-	..
Sudan	-	-	-	-	-	-	-	-	..
United Rep. of Tanzania	-	-	-	2.71	1.15	-	-	-	..
Togo	-	-	-	-	-	-	-	-	..
Tunisia	-	-	-	-	-	-	-	-	..
Zambia	6.71	0.68	0.49	0.18	0.18	-	-	2.79	..
Zimbabwe	32.58	11.74	53.33	53.40	47.31	31.71	46.80	55.39	..
Other Africa	0.33	15.17	9.84	10.52	11.30	12.07	8.62	8.58	..
<b>Africa</b>	<b>59.80</b>	<b>54.58</b>	<b>52.12</b>	<b>47.27</b>	<b>44.55</b>	<b>38.61</b>	<b>32.54</b>	<b>31.65</b>	<b>..</b>

Where applicable, this table includes peat and oil shale except for 2017 provisional figures for non-OECD countries.

1. Please refer to section 'Geographical coverage'.

## Electricity generation from coal (% of total)

	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	-	-	-	-	0.62	1.89	1.69	1.71	..
Brunei Darussalam	-	-	-	-	-	-	-	-	..
Cambodia	..	..	..	-	-	3.10	48.40	45.60	..
DPR of Korea	37.00	47.99	40.05	43.31	39.04	35.52	21.29	18.81	..
India	49.39	51.04	65.46	68.50	66.86	67.11	75.18	74.77	..
Indonesia	-	-	29.90	36.43	40.61	40.32	55.78	54.45	..
Malaysia	-	-	12.74	11.11	24.18	34.33	42.28	44.14	..
Mongolia	..	..	92.11	96.88	96.84	94.88	91.84	92.71	..
Myanmar	2.56	1.95	1.61	-	9.79	8.90	1.78	0.06	..
Nepal	-	-	-	-	-	-	-	-	..
Pakistan	0.79	0.20	0.10	0.35	0.14	0.09	0.13	0.14	..
Philippines	0.09	1.01	7.35	36.79	26.97	34.40	44.51	47.69	..
Singapore	-	-	-	-	-	-	1.20	1.20	..
Sri Lanka	-	-	-	-	-	-	33.71	35.33	..
Chinese Taipei	6.94	13.96	27.70	48.91	55.45	51.35	46.69	46.75	..
Thailand	3.50	9.77	25.02	18.52	15.52	18.84	19.49	19.30	20.22
Viet Nam	82.13	39.93	23.05	11.80	22.69	20.75	34.35	32.60	..
Other Non-OECD Asia	-	-	-	1.21	2.22	1.46	9.73	21.83	..
<b>Non-OECD Asia excl. China</b>	<b>28.60</b>	<b>29.55</b>	<b>41.34</b>	<b>45.59</b>	<b>45.55</b>	<b>46.84</b>	<b>54.28</b>	<b>54.31</b>	..
People's Rep. of China	57.92	53.04	71.04	78.21	79.20	77.19	70.31	68.56	67.69
Hong Kong, China	-	-	98.21	60.44	70.30	61.97	65.33	64.74	..
<b>China</b>	<b>55.68</b>	<b>50.90</b>	<b>72.25</b>	<b>77.81</b>	<b>79.06</b>	<b>77.05</b>	<b>70.28</b>	<b>68.54</b>	..
Argentina	2.37	2.06	1.30	2.00	2.07	2.41	2.28	1.73	..
Bolivia	-	-	-	-	-	-	-	-	..
Brazil	2.16	2.47	2.13	3.15	2.67	2.20	4.72	4.45	4.31
Colombia	12.45	7.91	10.20	5.10	4.90	6.89	9.08	8.08	..
Costa Rica	-	-	-	-	-	-	-	-	..
Cuba	-	-	-	-	-	-	-	-	..
Curaçao	-	-	-	-	-	-	-	-	..
Dominican Republic	-	-	1.16	-	10.23	12.25	12.82	12.53	..
Ecuador	-	-	-	-	-	-	-	-	..
El Salvador	-	-	-	-	-	-	-	-	..
Guatemala	-	-	-	8.91	13.23	13.16	28.98	31.82	..
Haiti	-	-	-	-	-	-	-	-	..
Honduras	-	-	-	-	-	-	1.04	2.49	..
Jamaica	-	-	-	-	-	-	-	-	..
Nicaragua	-	-	-	-	-	-	-	-	..
Panama	-	-	-	-	-	-	6.92	6.05	..
Paraguay	-	-	-	-	-	-	-	-	..
Peru	-	-	-	1.74	3.15	2.37	0.84	1.59	..
Suriname	..	..	..	-	-	-	-	-	..
Trinidad and Tobago	-	-	-	-	-	-	-	-	..
Uruguay	-	-	-	-	-	-	-	-	..
Venezuela	-	-	-	-	-	-	-	-	..
Other Non-OECD Americas	-	-	-	-	-	-	-	-	..
<b>Non-OECD Americas</b>	<b>2.11</b>	<b>1.95</b>	<b>1.87</b>	<b>2.08</b>	<b>2.10</b>	<b>2.09</b>	<b>3.66</b>	<b>3.47</b>	..
Bahrain	-	-	-	-	-	-	-	-	..
Islamic Republic of Iran	0.47	0.50	0.11	0.40	0.32	0.15	0.16	0.17	..
Iraq	-	-	-	-	-	-	-	-	..
Jordan	-	-	-	-	-	-	-	-	..
Kuwait	-	-	-	-	-	-	-	-	..
Lebanon	-	-	-	-	-	-	-	-	..
Oman	-	-	-	-	-	-	-	-	..
Qatar	-	-	-	-	-	-	-	-	..
Saudi Arabia	-	-	-	-	-	-	-	-	..
Syrian Arab Republic	-	-	-	-	-	-	-	-	..
United Arab Emirates	-	-	-	-	-	-	-	-	..
Yemen	-	-	-	-	-	-	-	-	..
<b>Middle East</b>	<b>0.21</b>	<b>0.13</b>	<b>0.03</b>	<b>0.11</b>	<b>0.10</b>	<b>0.04</b>	<b>0.04</b>	<b>0.05</b>	..

Where applicable, this table includes peat and oil shale except for 2017 provisional figures for non-OECD countries.



## Electricity generation from oil (% of total)

	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>24.79</b>	<b>20.02</b>	<b>11.16</b>	<b>7.85</b>	<b>6.20</b>	<b>4.54</b>	<b>4.00</b>	<b>3.73</b>	<b>..</b>
<b>Non-OECD Total</b>	<b>23.17</b>	<b>25.46</b>	<b>14.91</b>	<b>10.79</b>	<b>7.69</b>	<b>6.28</b>	<b>5.33</b>	<b>4.91</b>	<b>..</b>
<b>OECD Total</b>	<b>25.40</b>	<b>17.52</b>	<b>9.11</b>	<b>6.13</b>	<b>5.10</b>	<b>2.83</b>	<b>2.36</b>	<b>2.22</b>	<b>2.06</b>
Canada	3.36	3.70	3.42	2.43	2.52	1.38	1.21	1.24	1.29
Chile	20.48	14.74	9.62	4.25	6.46	14.02	4.19	3.67	2.39
Mexico	41.13	57.94	53.58	45.51	27.30	16.18	10.16	10.59	11.54
United States	17.09	10.84	4.08	2.94	3.31	1.10	0.90	0.81	0.75
<b>OECD Americas</b>	<b>15.87</b>	<b>11.03</b>	<b>5.52</b>	<b>4.68</b>	<b>4.41</b>	<b>2.07</b>	<b>1.53</b>	<b>1.49</b>	<b>1.49</b>
Australia	2.61	5.43	2.30	0.85	1.24	2.41	2.71	2.18	2.42
Israel <sup>1</sup>	100.00	100.00	49.89	31.09	13.69	3.66	0.65	0.43	1.10
Japan	73.24	46.23	28.87	13.19	12.27	8.25	9.46	8.03	7.16
Korea	82.29	78.67	17.90	11.99	6.70	3.81	2.28	3.18	1.54
New Zealand	6.11	0.17	0.03	-	0.01	0.00	0.00	0.00	0.00
<b>OECD Asia Oceania</b>	<b>63.75</b>	<b>42.11</b>	<b>23.97</b>	<b>11.55</b>	<b>9.43</b>	<b>6.06</b>	<b>6.07</b>	<b>5.47</b>	<b>4.62</b>
Austria	14.06	13.96	3.81	2.84	2.54	1.88	1.39	1.52	1.22
Belgium	53.72	34.67	1.87	0.96	2.03	0.43	0.30	0.23	0.12
Czech Republic	11.30	9.55	0.87	0.51	0.40	0.23	0.11	0.11	0.14
Denmark	64.07	18.00	3.39	12.31	3.79	1.99	1.08	1.06	0.88
Estonia	..	..	8.38	0.66	0.31	0.32	0.55	2.09	0.46
Finland	31.65	10.84	3.09	0.84	0.71	0.60	0.31	0.29	0.28
France	40.17	18.83	2.08	1.34	1.39	0.98	0.38	0.46	0.66
Germany	11.98	5.73	1.90	0.84	1.95	1.40	0.97	0.91	0.90
Greece	49.54	40.12	22.27	16.63	15.49	10.61	10.93	10.23	10.21
Hungary	17.19	13.89	4.75	12.51	1.27	1.31	0.25	0.20	0.27
Iceland	3.75	1.48	0.13	0.07	0.06	0.01	0.02	0.02	0.01
Ireland	66.32	60.43	10.04	19.59	13.03	2.14	1.45	0.97	0.53
Italy	62.36	57.00	48.19	31.81	15.88	7.27	4.75	4.21	3.94
Latvia	..	..	5.37	2.59	0.12	0.03	0.02	-	0.01
Luxembourg	27.62	10.89	1.44	-	0.03	0.03	-	-	-
Netherlands	12.33	38.42	4.26	2.95	2.26	1.05	1.30	1.11	0.91
Norway	0.19	0.15	0.00	0.01	0.02	0.03	0.02	0.02	0.02
Poland	2.34	2.89	1.17	1.34	1.77	1.84	1.29	1.39	1.16
Portugal	19.21	42.89	33.16	19.42	19.03	5.60	2.56	2.20	2.23
Slovak Republic	17.71	17.94	6.41	0.66	2.36	2.18	1.44	1.75	1.57
Slovenia	..	..	7.88	0.40	0.28	0.05	0.11	0.07	0.07
Spain	33.19	35.19	5.69	10.22	8.44	5.55	6.21	6.24	5.79
Sweden	19.44	10.38	0.89	1.06	0.87	1.19	0.16	0.26	0.32
Switzerland	7.07	1.02	0.70	0.34	0.37	0.10	0.07	0.06	0.06
Turkey	51.36	25.05	6.85	7.45	3.39	1.03	0.85	0.70	0.40
United Kingdom	25.65	11.67	10.91	2.26	1.35	1.27	0.61	0.55	0.66
<b>OECD Europe</b>	<b>25.28</b>	<b>17.75</b>	<b>7.72</b>	<b>5.55</b>	<b>3.90</b>	<b>2.20</b>	<b>1.59</b>	<b>1.53</b>	<b>1.46</b>
IEA	25.27	17.35	9.01	6.04	5.07	2.78	2.37	2.23	2.07
IEA/Accession/Association	24.68	17.68	9.06	6.01	4.71	2.44	1.79	1.59	..
European Union - 28	..	..	8.70	6.03	4.34	2.61	1.90	1.84	..
G7	26.23	16.53	9.14	5.09	4.63	2.39	2.16	1.91	1.80
G8	..	..	9.56	4.95	4.37	2.21	2.02	1.80	..
G20	..	..	9.49	6.11	4.93	3.03	2.56	2.30	..
<b>OPEC</b>	<b>36.52</b>	<b>38.64</b>	<b>35.24</b>	<b>32.27</b>	<b>26.81</b>	<b>30.50</b>	<b>27.19</b>	<b>25.68</b>	<b>..</b>

1. Please refer to section 'Geographical coverage'.

## Electricity generation from oil (% of total)

	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>23.17</b>	<b>25.46</b>	<b>14.91</b>	<b>10.79</b>	<b>7.69</b>	<b>6.28</b>	<b>5.33</b>	<b>4.91</b>	<b>..</b>
Albania	33.78	20.59	13.59	3.85	1.29	0.01	-	-	-
Armenia	..	..	68.59	-	-	-	-	-	-
Azerbaijan	..	..	34.42	71.95	25.67	0.12	6.51	10.39	5.45
Belarus	..	..	47.81	6.57	3.04	2.38	1.06	1.73	1.73
Bosnia and Herzegovina	..	..	7.34	0.46	1.12	0.28	0.33	0.33	0.37
Bulgaria	11.02	22.49	2.92	1.63	1.38	0.85	0.37	0.71	0.84
Croatia	..	..	31.97	14.98	14.21	3.78	1.97	0.55	1.76
Cyprus <sup>1</sup>	100.00	100.00	100.00	100.00	99.98	98.63	91.22	91.32	91.52
FYR of Macedonia	..	..	1.81	6.33	0.20	0.84	2.46	1.79	1.59
Georgia	..	..	29.17	3.69	0.91	0.32	-	-	-
Gibraltar	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	..
Kazakhstan	..	..	9.99	5.20	3.88	0.75	1.16	1.80	..
Kosovo	..	..	..	0.64	0.61	0.43	0.25	0.25	0.25
Kyrgyzstan	..	..	-	-	0.99	1.71	0.29	0.16	..
Lithuania	..	..	14.61	5.89	2.78	12.96	6.46	6.01	..
Malta	100.00	100.00	44.09	100.00	100.00	99.95	92.33	84.46	11.87
Republic of Moldova	..	..	25.39	0.57	0.17	0.47	0.15	0.29	0.31
Montenegro	..	..	..	..	-	-	-	-	-
Romania	9.56	9.63	18.38	6.54	3.19	1.14	0.72	1.09	0.32
Russian Federation	..	..	11.89	3.78	2.23	0.90	0.95	1.01	0.99
Serbia	..	..	4.60	0.92	1.87	0.30	0.07	0.13	0.14
Tajikistan	..	..	-	-	-	-	-	-	-
Turkmenistan	..	..	-	-	-	-	-	-	-
Ukraine	..	..	16.08	0.69	0.32	0.44	0.46	0.99	0.84
Uzbekistan	..	..	4.42	10.05	6.63	1.45	0.26	0.63	..
Former Soviet Union	21.92	25.95	x	x	x	x	x	x	..
Former Yugoslavia	5.34	7.97	x	x	x	x	x	x	..
<b>Non-OECD Europe and Eurasia</b>	<b>20.67</b>	<b>24.45</b>	<b>13.57</b>	<b>4.90</b>	<b>2.99</b>	<b>1.34</b>	<b>1.22</b>	<b>1.42</b>	<b>..</b>
Algeria	18.25	12.24	5.43	3.04	2.11	2.11	1.32	1.37	..
Angola	17.28	11.85	13.79	36.89	20.35	32.04	46.82	43.88	..
Benin	100.00	100.00	100.00	97.62	99.07	99.13	94.44	94.37	..
Botswana	..	..	11.92	2.37	0.57	-	3.61	0.22	..
Cameroon	4.47	6.06	1.52	1.09	5.79	19.72	26.38	25.67	..
Congo	39.58	35.48	0.61	0.34	-	1.53	-	-	..
Côte d'Ivoire	78.89	22.70	33.33	0.27	0.12	1.42	5.22	0.72	..
Dem. Rep. of the Congo	2.08	4.54	0.44	0.05	0.09	0.08	0.13	0.13	..
Egypt	36.39	27.75	31.69	28.55	13.55	13.48	20.52	19.69	..
Eritrea	..	..	..	99.52	99.65	99.36	99.51	99.52	..
Ethiopia	43.65	29.75	11.65	1.37	0.42	0.62	0.04	0.04	..
Gabon	96.97	50.94	11.25	20.53	27.19	10.65	10.24	8.99	..
Ghana	0.97	0.77	-	8.50	17.07	20.41	10.26	17.60	..
Kenya	42.73	26.38	7.14	53.02	28.34	30.93	12.49	20.71	..
Libya	100.00	100.00	100.00	78.06	72.04	52.85	45.96	37.39	..
Mauritius	47.59	69.01	62.69	49.94	48.15	37.00	37.84	36.52	..
Morocco	31.03	51.65	64.35	25.64	17.48	24.15	7.17	9.08	9.15
Mozambique	70.20	17.32	23.57	0.43	0.11	0.01	0.76	0.10	..
Namibia	..	..	..	-	0.06	0.23	1.76	0.63	..
Niger	..	..	..	34.47	30.13	30.03	57.63	58.17	..
Nigeria	17.68	17.69	13.67	-	-	-	-	-	..
Senegal	91.40	94.08	93.02	89.84	79.25	83.65	87.30	87.61	..
South Africa	-	0.03	-	-	0.03	0.08	0.07	0.07	..
South Sudan	..	..	..	..	..	..	99.65	99.54	..
Sudan	30.00	29.99	36.77	53.95	67.04	17.30	35.46	44.20	..
United Rep. of Tanzania	49.14	13.64	4.85	10.92	16.51	3.74	21.60	6.99	..
Togo	62.38	25.49	39.87	42.86	59.79	45.81	24.69	9.91	..
Tunisia	61.07	64.50	35.54	11.60	1.65	0.02	4.64	0.21	..
Zambia	1.34	0.46	0.29	0.44	0.41	0.12	3.01	2.94	..
Zimbabwe	-	-	-	0.94	0.26	0.28	0.46	0.55	..
Other Africa	48.16	38.06	36.63	34.91	37.73	40.74	27.44	27.29	..
<b>Africa</b>	<b>10.77</b>	<b>11.92</b>	<b>12.86</b>	<b>11.65</b>	<b>9.14</b>	<b>9.50</b>	<b>11.14</b>	<b>10.76</b>	<b>..</b>

1. Please refer to section 'Geographical coverage'.

## Electricity generation from oil (% of total)

	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	41.74	26.60	4.31	6.47	5.77	3.62	16.38	15.03	..
Brunei Darussalam	-	1.17	0.94	0.90	0.89	1.00	1.00	1.05	..
Cambodia	..	..	..	99.78	93.88	91.40	5.19	6.78	..
DPR of Korea	5.82	2.01	3.63	4.11	3.64	2.63	5.92	5.57	..
India	7.02	7.28	4.55	5.12	3.54	2.49	1.68	1.59	..
Indonesia	56.54	82.07	46.93	19.65	30.82	20.12	8.40	6.32	..
Malaysia	76.79	84.77	45.86	5.20	2.66	2.94	1.16	0.76	..
Mongolia	..	..	7.89	2.99	3.04	4.15	4.17	3.41	..
Myanmar	20.71	31.34	10.94	13.50	0.57	0.44	0.34	0.34	..
Nepal	22.12	6.45	0.11	1.63	0.63	0.09	-	-	..
Pakistan	3.21	1.11	20.57	39.50	20.15	35.16	31.77	32.80	..
Philippines	85.69	67.90	47.23	20.28	10.86	10.48	7.14	6.23	..
Singapore	100.00	100.00	98.92	79.95	23.10	20.20	0.70	0.70	..
Sri Lanka	31.33	11.33	0.16	54.20	62.77	46.88	17.82	32.04	..
Chinese Taipei	76.66	59.92	26.49	16.61	6.84	4.45	4.98	4.33	..
Thailand	69.53	81.40	23.49	10.45	6.60	0.74	0.57	0.30	0.19
Viet Nam	-	18.26	15.03	17.01	4.04	3.59	0.48	0.67	..
Other Non-OECD Asia	76.36	67.50	45.19	35.59	41.70	28.79	19.18	16.61	..
<b>Non-OECD Asia excl. China</b>	<b>32.34</b>	<b>31.99</b>	<b>18.54</b>	<b>13.52</b>	<b>8.86</b>	<b>6.75</b>	<b>4.40</b>	<b>4.08</b>	..
People's Rep. of China	19.55	27.37	8.11	3.49	2.02	0.35	0.17	0.17	0.17
Hong Kong, China	100.00	100.00	1.79	0.49	0.39	0.28	0.60	0.95	..
<b>China</b>	<b>22.67</b>	<b>30.30</b>	<b>7.83</b>	<b>3.42</b>	<b>2.00</b>	<b>0.35</b>	<b>0.17</b>	<b>0.17</b>	..
Argentina	61.65	31.64	9.74	3.24	5.45	13.30	15.42	14.29	..
Bolivia	11.61	12.72	8.61	0.77	1.31	1.93	2.10	2.04	..
Brazil	7.24	3.75	2.22	4.35	2.90	3.11	5.04	2.64	2.71
Colombia	10.58	1.83	1.04	0.23	0.23	0.84	3.91	5.30	..
Costa Rica	15.52	4.31	2.48	0.85	3.28	6.69	1.00	1.77	..
Cuba	86.32	89.01	89.59	84.43	84.18	83.72	81.51	81.74	..
Curaçao	100.00	100.00	100.00	99.29	94.31	95.24	72.07	73.76	..
Dominican Republic	73.06	80.57	88.72	90.85	63.64	53.44	52.59	52.07	..
Ecuador	65.37	74.14	21.45	28.30	33.54	43.28	34.53	29.68	..
El Salvador	46.35	1.51	6.81	41.93	41.76	34.96	42.18	41.86	..
Guatemala	69.60	85.35	8.37	39.37	39.28	23.00	13.06	8.39	..
Haiti	21.31	26.11	20.60	48.26	52.34	69.85	92.00	93.45	..
Honduras	26.13	13.69	1.72	38.03	65.06	50.98	56.71	46.67	..
Jamaica	86.10	76.01	92.43	95.16	96.31	92.31	89.74	87.35	..
Nicaragua	44.10	47.06	38.64	78.60	65.39	63.00	49.93	47.82	..
Panama	91.18	45.58	14.73	29.57	35.70	42.90	27.76	27.33	..
Paraguay	9.52	8.74	0.03	-	-	0.00	0.00	0.00	..
Peru	24.47	27.38	21.49	12.31	6.74	5.84	1.40	2.31	..
Suriname	..	..	..	11.60	47.30	29.81	39.95	43.08	..
Trinidad and Tobago	1.99	2.26	0.08	0.05	0.17	0.28	0.23	2.54	..
Uruguay	38.65	24.17	5.05	6.62	12.46	11.65	7.17	3.35	..
Venezuela	19.06	32.36	11.50	9.27	13.11	15.84	16.18	15.93	..
Other Non-OECD Americas	92.53	94.02	92.81	94.20	87.13	87.08	76.83	76.83	..
<b>Non-OECD Americas</b>	<b>33.63</b>	<b>23.28</b>	<b>13.08</b>	<b>13.40</b>	<b>12.95</b>	<b>12.84</b>	<b>12.95</b>	<b>11.51</b>	..
Bahrain	-	-	-	-	-	-	0.03	0.01	..
Islamic Republic of Iran	58.96	49.58	37.15	20.89	15.77	19.76	14.43	11.08	..
Iraq	26.43	72.56	73.49	79.32	47.37	59.45	66.47	70.30	..
Jordan	100.00	100.00	87.77	89.37	44.45	28.33	50.59	10.97	..
Kuwait	9.75	43.85	55.43	67.06	74.91	65.37	63.78	63.91	..
Lebanon	73.31	69.11	66.67	95.36	91.52	88.38	97.41	97.96	..
Oman	100.00	21.52	18.37	17.17	2.09	2.25	2.63	2.75	..
Qatar	9.52	2.69	-	-	-	-	-	-	..
Saudi Arabia	100.00	28.35	49.01	53.97	43.51	53.86	44.20	40.65	..
Syrian Arab Republic	98.81	31.94	55.96	50.09	50.51	39.45	29.46	35.78	..
United Arab Emirates	-	3.71	3.71	3.09	2.14	1.48	1.24	1.23	..
Yemen	100.00	100.00	100.00	100.00	100.00	73.43	53.27	54.23	..
<b>Middle East</b>	<b>53.17</b>	<b>41.50</b>	<b>43.64</b>	<b>40.77</b>	<b>32.05</b>	<b>34.29</b>	<b>30.34</b>	<b>28.28</b>	..

## Electricity generation from natural gas (% of total)

	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>12.14</b>	<b>12.06</b>	<b>14.77</b>	<b>17.79</b>	<b>20.23</b>	<b>22.39</b>	<b>22.86</b>	<b>23.20</b>	<b>..</b>
<b>Non-OECD Total</b>	<b>13.48</b>	<b>14.58</b>	<b>23.31</b>	<b>21.21</b>	<b>21.78</b>	<b>21.22</b>	<b>20.24</b>	<b>19.89</b>	<b>..</b>
<b>OECD Total</b>	<b>11.64</b>	<b>10.90</b>	<b>10.09</b>	<b>15.79</b>	<b>19.08</b>	<b>23.53</b>	<b>26.10</b>	<b>27.45</b>	<b>26.96</b>
Canada	6.00	2.46	2.00	5.53	6.39	8.59	10.26	9.29	9.22
Chile	1.12	1.30	1.02	26.07	25.91	17.69	15.06	14.94	16.34
Mexico	14.25	15.48	12.48	21.46	40.13	53.35	59.94	60.01	60.01
United States	18.56	15.26	11.92	15.76	18.34	23.38	31.94	32.98	30.99
<b>OECD Americas</b>	<b>16.94</b>	<b>13.55</b>	<b>10.63</b>	<b>14.81</b>	<b>18.04</b>	<b>23.18</b>	<b>30.62</b>	<b>31.38</b>	<b>29.75</b>
Australia	4.27	7.33	9.31	7.74	10.42	17.65	20.87	19.67	19.72
Israel <sup>1</sup>	-	-	-	0.03	11.58	37.47	51.61	60.95	63.93
Japan	2.26	14.17	19.56	23.41	22.06	26.81	37.92	38.65	37.11
Korea	-	-	9.11	10.21	16.02	20.77	22.38	22.65	22.12
New Zealand	1.41	7.54	17.70	24.39	22.04	22.22	15.59	13.47	15.28
<b>OECD Asia Oceania</b>	<b>2.36</b>	<b>12.13</b>	<b>16.87</b>	<b>18.49</b>	<b>19.02</b>	<b>24.33</b>	<b>31.30</b>	<b>31.87</b>	<b>31.11</b>
Austria	14.32	9.19	15.66	13.11	20.20	21.12	12.60	13.16	16.44
Belgium	23.70	11.24	7.69	19.30	26.66	33.49	32.04	26.20	27.11
Czech Republic	0.93	1.14	0.62	2.32	1.79	1.60	2.74	4.52	4.27
Denmark	-	-	2.67	24.34	24.22	20.34	6.24	7.10	6.57
Estonia	..	..	5.57	7.00	5.33	2.34	0.60	0.61	0.70
Finland	-	4.22	8.56	14.48	15.91	13.96	7.57	5.44	5.04
France	5.53	2.72	0.73	2.15	4.04	4.21	3.74	6.32	7.22
Germany	10.94	14.15	7.39	9.17	12.02	14.42	9.83	12.79	13.40
Greece	-	-	0.26	11.08	13.75	17.14	17.54	27.32	30.02
Hungary	16.22	35.21	15.73	18.76	34.62	31.03	16.83	20.34	23.79
Iceland	-	-	-	-	-	-	-	-	-
Ireland	-	15.24	27.70	39.13	45.17	64.28	44.01	50.55	51.09
Italy	3.11	5.03	18.63	37.55	50.28	51.12	39.37	43.81	47.52
Latvia	..	..	26.07	27.27	30.29	45.09	49.81	45.82	27.47
Luxembourg	10.19	23.53	5.45	50.95	92.80	90.28	62.77	32.95	25.23
Netherlands	79.53	39.83	50.76	57.48	57.64	63.16	42.28	46.78	50.60
Norway	-	-	-	0.15	0.27	3.95	1.81	1.75	1.70
Poland	1.68	0.12	0.09	0.65	3.32	3.05	3.89	4.71	5.95
Portugal	-	-	-	16.46	29.46	27.75	20.60	21.29	32.66
Slovak Republic	5.26	10.24	7.15	10.86	6.97	8.03	6.02	5.68	4.35
Slovenia	..	..	0.02	2.15	2.24	3.37	2.73	2.59	2.66
Spain	1.01	2.67	1.00	9.13	27.30	31.80	18.91	19.47	23.00
Sweden	-	-	0.27	0.32	0.37	1.94	0.26	0.40	0.24
Switzerland	-	0.61	0.60	1.30	1.51	1.56	1.00	1.42	1.40
Turkey	-	-	17.71	37.00	45.35	46.47	37.90	32.52	37.17
United Kingdom	0.97	0.75	1.57	39.55	38.60	46.36	29.71	42.61	40.04
<b>OECD Europe</b>	<b>7.44</b>	<b>6.73</b>	<b>6.34</b>	<b>15.89</b>	<b>20.65</b>	<b>23.60</b>	<b>16.44</b>	<b>19.15</b>	<b>20.63</b>
IEA	11.69	10.95	10.15	15.84	19.12	23.54	26.09	27.40	26.89
IEA/Accession/Association	10.89	9.91	9.07	13.92	15.66	17.54	17.47	17.87	..
European Union - 28	..	..	7.47	15.95	20.31	22.94	15.51	18.92	..
G7	12.21	11.94	10.72	16.51	18.61	22.81	27.21	29.00	27.83
G8	..	..	16.28	19.23	21.58	25.97	29.91	31.31	..
G20	..	..	13.65	15.97	17.50	19.24	19.30	19.67	..
<i>OPEC</i>	36.26	41.75	45.86	51.67	56.43	57.75	62.90	64.35	..

1. Please refer to section 'Geographical coverage'.

## Electricity generation from natural gas (% of total)

	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>13.48</b>	<b>14.58</b>	<b>23.31</b>	<b>21.21</b>	<b>21.78</b>	<b>21.22</b>	<b>20.24</b>	<b>19.89</b>	<b>..</b>
Albania	-	-	-	-	-	-	-	-	-
Armenia	..	..	16.41	45.18	28.94	22.15	35.91	35.28	35.28
Azerbaijan	..	..	58.42	19.85	61.17	81.45	86.08	80.83	86.43
Belarus	..	..	52.14	93.33	96.83	97.15	97.87	96.91	96.91
Bosnia and Herzegovina	..	..	-	-	-	0.32	0.21	0.12	0.14
Bulgaria	-	-	7.57	4.70	3.93	4.27	3.82	4.60	4.29
Croatia	..	..	15.05	13.95	13.89	17.25	10.65	12.57	26.30
Cyprus <sup>1</sup>	-	-	-	-	-	-	-	-	-
FYR of Macedonia	..	..	-	0.01	-	0.34	3.24	10.11	14.80
Georgia	..	..	15.62	17.38	13.28	7.16	21.96	19.18	19.15
Gibraltar	-	-	-	-	-	-	-	-	..
Kazakhstan	..	..	10.46	10.68	10.69	8.89	18.39	20.78	..
Kosovo	..	..	..	-	-	-	-	-	-
Kyrgyzstan	..	..	23.46	9.81	3.04	1.50	1.30	1.43	..
Lithuania	..	..	23.83	14.53	20.93	63.80	46.48	26.82	..
Malta	-	-	-	-	-	-	-	-	78.17
Republic of Moldova	..	..	42.28	89.76	93.54	92.87	94.48	95.49	95.11
Montenegro	..	..	..	..	-	-	-	-	-
Romania	48.29	40.20	35.10	17.33	16.18	11.98	14.24	14.95	16.32
Russian Federation	..	..	47.33	42.26	46.19	50.24	49.71	47.92	47.74
Serbia	..	..	3.21	1.15	0.87	0.87	0.58	0.97	1.30
Tajikistan	..	..	9.07	1.56	0.72	0.21	-	-	-
Turkmenistan	..	..	95.21	100.00	100.00	100.00	100.00	100.00	..
Ukraine	..	..	16.71	17.49	18.37	8.32	6.23	6.03	5.12
Uzbekistan	..	..	76.39	73.31	71.74	73.49	75.01	75.00	..
Former Soviet Union	18.45	20.59	x	x	x	x	x	x	..
Former Yugoslavia	1.87	2.05	x	x	x	x	x	x	..
<b>Non-OECD Europe and Eurasia</b>	<b>18.80</b>	<b>20.17</b>	<b>37.80</b>	<b>35.24</b>	<b>37.90</b>	<b>39.61</b>	<b>40.60</b>	<b>39.61</b>	<b>..</b>
Algeria	54.95	84.15	93.73	96.75	96.25	97.51	98.36	98.16	..
Angola	-	-	-	-	-	-	-	-	..
Benin	-	-	-	-	-	-	-	-	..
Botswana	..	..	-	-	-	-	-	-	..
Cameroon	-	-	-	-	-	7.07	18.71	19.18	..
Congo	8.33	-	-	-	18.01	43.75	46.66	45.29	..
Côte d'Ivoire	-	-	-	62.98	72.65	70.29	78.05	82.68	..
Dem. Rep. of the Congo	-	-	-	-	-	1.01	0.04	0.02	..
Egypt	-	20.50	44.80	53.74	74.31	76.48	71.01	72.23	..
Eritrea	..	..	..	-	-	-	-	-	..
Ethiopia	-	-	-	-	-	-	-	-	..
Gabon	-	-	16.36	17.87	20.71	42.02	46.01	49.66	..
Ghana	-	-	-	-	-	10.78	38.85	39.49	..
Kenya	-	-	-	-	-	-	-	-	..
Libya	-	-	-	21.94	27.95	47.13	54.02	62.59	..
Mauritius	-	-	-	-	-	-	-	-	..
Morocco	-	-	-	-	10.38	12.52	18.77	18.62	18.76
Mozambique	-	-	-	0.02	0.05	0.11	12.83	16.57	..
Namibia	..	..	..	-	-	-	-	-	..
Niger	..	..	..	-	-	-	-	-	..
Nigeria	11.54	43.49	53.65	61.78	67.00	75.60	81.80	81.92	..
Senegal	-	-	2.33	0.19	2.56	2.73	1.98	1.71	..
South Africa	-	-	-	-	-	-	-	-	..
South Sudan	..	..	..	..	..	..	-	-	..
Sudan	-	-	-	-	-	-	-	-	..
United Rep. of Tanzania	-	-	-	-	32.32	44.58	44.78	58.55	..
Togo	-	-	-	-	-	-	-	-	..
Tunisia	32.74	34.68	63.67	87.58	96.87	95.91	91.44	95.72	..
Zambia	-	-	-	-	-	-	-	-	..
Zimbabwe	-	-	-	-	-	-	-	-	..
Other Africa	-	-	-	-	0.82	0.74	2.05	2.04	..
<b>Africa</b>	<b>2.03</b>	<b>7.62</b>	<b>14.28</b>	<b>20.75</b>	<b>27.78</b>	<b>32.78</b>	<b>36.89</b>	<b>38.43</b>	<b>..</b>

1. Please refer to section 'Geographical coverage'.

## Electricity generation from natural gas (% of total)

	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	34.69	48.62	84.26	88.78	90.78	92.70	80.70	82.12	..
Brunei Darussalam	100.00	98.83	99.06	99.10	99.11	99.00	98.95	98.92	..
Cambodia	..	..	..	-	-	-	-	-	..
DPR of Korea	-	-	-	-	-	-	-	-	..
India	0.49	0.52	3.40	9.82	10.55	11.56	4.79	4.82	..
Indonesia	-	-	2.25	27.96	14.97	23.71	25.17	26.43	..
Malaysia	-	1.33	24.07	73.64	66.87	56.73	46.60	41.64	..
Mongolia	..	..	-	-	-	-	-	-	..
Myanmar	6.58	13.18	39.31	49.53	39.83	22.99	39.02	45.07	..
Nepal	-	-	-	-	-	-	-	-	..
Pakistan	40.38	40.48	33.63	31.97	44.10	27.42	31.45	29.23	..
Philippines	-	-	-	0.04	29.81	28.81	22.91	21.87	..
Singapore	-	-	-	18.50	74.40	77.20	95.03	95.05	..
Sri Lanka	-	-	-	-	-	-	-	-	..
Chinese Taipei	-	-	1.41	9.68	16.54	23.51	29.85	31.92	..
Thailand	-	-	40.22	64.22	72.33	74.82	71.55	65.21	67.95
Viet Nam	-	-	0.07	16.40	41.60	46.52	29.17	27.68	..
Other Non-OECD Asia	-	-	-	3.62	3.11	5.25	1.93	1.67	..
<b>Non-OECD Asia excl. China</b>	<b>2.83</b>	<b>3.11</b>	<b>9.06</b>	<b>21.11</b>	<b>26.09</b>	<b>27.21</b>	<b>22.00</b>	<b>21.28</b>	..
People's Rep. of China	-	0.23	0.45	0.43	0.49	1.86	2.49	2.76	2.72
Hong Kong, China	-	-	-	39.07	29.31	37.50	33.79	34.04	..
<b>China</b>	<b>-</b>	<b>0.22</b>	<b>0.43</b>	<b>1.30</b>	<b>0.92</b>	<b>2.18</b>	<b>2.69</b>	<b>2.95</b>	..
Argentina	24.54	22.02	39.16	54.65	52.45	49.98	49.23	51.36	..
Bolivia	4.36	19.64	38.94	47.71	57.43	64.11	68.54	76.07	..
Brazil	-	-	0.15	1.17	4.67	7.07	13.67	9.76	11.15
Colombia	8.70	19.28	12.37	19.14	14.70	20.14	22.99	20.72	..
Costa Rica	-	-	-	-	-	-	-	-	..
Cuba	-	0.47	0.16	8.69	12.62	13.04	14.54	14.30	..
Curaçao	-	-	-	-	-	-	-	-	..
Dominican Republic	-	-	-	-	8.28	22.38	23.17	19.71	..
Ecuador	-	-	-	-	11.35	11.23	12.67	10.11	..
El Salvador	-	-	-	-	-	-	-	-	..
Guatemala	-	-	-	-	-	-	-	-	..
Haiti	-	-	-	-	-	-	-	-	..
Honduras	-	-	-	-	-	-	-	-	..
Jamaica	-	-	-	-	-	-	-	-	..
Nicaragua	-	-	-	-	-	-	-	-	..
Panama	-	-	-	-	-	-	-	-	..
Paraguay	-	-	-	-	-	-	-	-	..
Peru	0.47	1.89	1.70	3.96	17.84	34.07	45.03	45.83	..
Suriname	..	..	..	-	-	-	-	-	..
Trinidad and Tobago	95.38	96.46	99.05	99.58	99.52	99.72	99.77	97.46	..
Uruguay	-	-	-	-	0.04	0.73	-	-	..
Venezuela	43.08	26.90	26.15	16.99	13.60	16.67	22.79	24.00	..
Other Non-OECD Americas	-	-	0.14	4.38	7.21	8.39	18.98	18.98	..
<b>Non-OECD Americas</b>	<b>9.59</b>	<b>8.25</b>	<b>9.19</b>	<b>11.29</b>	<b>13.26</b>	<b>15.53</b>	<b>20.60</b>	<b>18.92</b>	..
Bahrain	100.00	100.00	100.00	100.00	100.00	100.00	99.97	99.99	..
Islamic Republic of Iran	17.07	24.81	52.45	75.66	74.83	75.92	79.27	80.68	..
Iraq	65.33	21.38	15.68	18.76	32.89	30.81	29.82	25.49	..
Jordan	-	-	11.90	10.06	54.88	71.17	48.44	84.33	..
Kuwait	90.25	56.15	44.57	32.94	25.09	34.63	36.22	36.08	..
Lebanon	-	-	-	-	-	6.28	-	-	..
Oman	-	78.48	81.63	82.83	97.91	97.75	97.37	97.25	..
Qatar	90.48	97.31	100.00	100.00	100.00	100.00	100.00	100.00	..
Saudi Arabia	-	71.65	50.99	46.03	56.49	46.14	55.80	59.35	..
Syrian Arab Republic	-	3.38	20.54	37.10	37.11	54.97	68.24	59.09	..
United Arab Emirates	100.00	96.29	96.29	96.91	97.86	98.52	98.53	98.49	..
Yemen	-	-	-	-	-	26.54	37.61	31.26	..
<b>Middle East</b>	<b>33.50</b>	<b>46.62</b>	<b>51.00</b>	<b>57.25</b>	<b>63.23</b>	<b>63.51</b>	<b>67.55</b>	<b>68.90</b>	..

## Electricity generation from nuclear energy (% of total)

	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>3.31</b>	<b>8.61</b>	<b>16.98</b>	<b>16.78</b>	<b>15.13</b>	<b>12.83</b>	<b>10.58</b>	<b>10.44</b>	<b>..</b>
<b>Non-OECD Total</b>	<b>0.89</b>	<b>3.54</b>	<b>6.76</b>	<b>5.99</b>	<b>5.35</b>	<b>4.42</b>	<b>4.46</b>	<b>4.57</b>	<b>..</b>
<b>OECD Total</b>	<b>4.22</b>	<b>10.95</b>	<b>22.58</b>	<b>23.09</b>	<b>22.35</b>	<b>21.02</b>	<b>18.15</b>	<b>17.96</b>	<b>17.79</b>
Canada	5.65	10.19	15.14	12.02	14.83	15.00	15.24	15.16	14.74
Chile	-	-	-	-	-	-	-	-	-
Mexico	-	-	2.54	4.00	4.31	2.13	3.73	3.30	3.41
United States	4.54	10.97	19.10	19.81	18.99	19.27	19.32	19.53	19.81
<b>OECD Americas</b>	<b>4.58</b>	<b>10.57</b>	<b>18.00</b>	<b>18.02</b>	<b>17.59</b>	<b>17.67</b>	<b>17.63</b>	<b>17.73</b>	<b>17.88</b>
Australia	-	-	-	-	-	-	-	-	-
Israel <sup>1</sup>	-	-	-	-	-	-	-	-	-
Japan	2.09	14.43	23.50	30.44	27.65	25.72	0.90	1.72	3.06
Korea	-	9.34	50.19	37.77	37.84	29.92	30.01	28.99	26.44
New Zealand	-	-	-	-	-	-	-	-	-
<b>OECD Asia Oceania</b>	<b>1.70</b>	<b>11.63</b>	<b>21.75</b>	<b>26.31</b>	<b>24.95</b>	<b>22.14</b>	<b>8.93</b>	<b>9.11</b>	<b>9.02</b>
Austria	-	-	-	-	-	-	-	-	-
Belgium	0.19	23.64	60.78	58.18	55.53	51.10	37.97	51.57	49.63
Czech Republic	-	-	20.21	18.64	30.18	32.82	32.49	29.36	33.01
Denmark	-	-	-	-	-	-	-	-	-
Estonia	..	..	-	-	-	-	-	-	-
Finland	-	17.23	35.34	32.12	32.97	28.26	33.89	33.75	33.32
France	8.08	23.80	75.28	77.57	79.05	75.91	77.37	73.13	72.57
Germany	3.23	11.92	27.84	29.64	26.48	22.43	14.32	13.15	11.76
Greece	-	-	-	-	-	-	-	-	-
Hungary	-	-	48.29	40.29	38.69	42.17	52.19	50.39	49.08
Iceland	-	-	-	-	-	-	-	-	-
Ireland	-	-	-	-	-	-	-	-	-
Italy	2.18	1.20	-	-	-	-	-	-	-
Latvia	..	..	-	-	-	-	-	-	-
Luxembourg	-	-	-	-	-	-	-	-	-
Netherlands	2.11	6.48	4.87	4.38	4.00	3.33	3.70	3.44	2.92
Norway	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-
Portugal	-	-	-	-	-	-	-	-	-
Slovak Republic	1.89	22.65	47.21	53.56	56.54	53.07	56.87	55.09	57.40
Slovenia	..	..	37.14	34.95	38.92	34.80	38.12	35.23	39.32
Spain	8.65	4.75	35.89	28.16	19.88	20.78	20.60	21.61	21.33
Sweden	2.70	27.50	46.71	39.47	45.70	38.95	34.80	40.48	39.35
Switzerland	17.14	29.78	42.98	39.99	40.39	39.88	34.93	34.60	33.98
Turkey	-	-	-	-	-	-	-	-	-
United Kingdom	9.95	13.03	20.69	22.72	20.64	16.40	20.92	21.32	21.12
<b>OECD Europe</b>	<b>4.60</b>	<b>11.24</b>	<b>29.49</b>	<b>29.11</b>	<b>28.03</b>	<b>25.31</b>	<b>23.97</b>	<b>23.16</b>	<b>22.49</b>
IEA	4.23	11.00	22.70	23.30	22.57	21.28	18.40	18.22	18.05
IEA/Accession/Association	3.99	9.98	19.57	18.75	16.87	14.20	11.49	11.36	..
European Union - 28	..	..	30.85	31.44	30.32	27.48	26.74	26.01	..
G7	4.67	11.89	23.49	25.03	24.19	23.26	19.68	19.38	19.41
G8	..	..	21.58	23.96	23.27	22.48	19.52	19.21	..
G20	..	..	18.57	18.49	16.77	14.24	11.80	11.70	..
<i>OPEC</i>	-	-	-	-	-	-	0.24	0.53	..

1. Please refer to section 'Geographical coverage'.

## Electricity generation from nuclear energy (% of total)

	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>0.89</b>	<b>3.54</b>	<b>6.76</b>	<b>5.99</b>	<b>5.35</b>	<b>4.42</b>	<b>4.46</b>	<b>4.57</b>	<b>..</b>
Albania	-	-	-	-	-	-	-	-	-
Armenia	..	..	-	33.65	43.00	38.36	35.75	32.54	32.54
Azerbaijan	..	..	-	-	-	-	-	-	-
Belarus	..	..	-	-	-	-	-	-	-
Bosnia and Herzegovina	..	..	-	-	-	-	-	-	-
Bulgaria	-	17.70	34.80	44.72	42.42	33.14	31.56	35.33	34.61
Croatia	..	..	-	-	-	-	-	-	-
Cyprus <sup>1</sup>	-	-	-	-	-	-	-	-	-
FYR of Macedonia	..	..	-	-	-	-	-	-	-
Georgia	..	..	-	-	-	-	-	-	-
Gibraltar	-	-	-	-	-	-	-	-	..
Kazakhstan	..	..	-	-	-	-	-	-	..
Kosovo	..	..	..	-	-	-	-	-	-
Kyrgyzstan	..	..	-	-	-	-	-	-	..
Lithuania	..	..	59.96	75.70	71.71	-	-	-	..
Malta	-	-	-	-	-	-	-	-	-
Republic of Moldova	..	..	-	-	-	-	-	-	-
Montenegro	..	..	..	..	-	-	-	-	-
Romania	-	-	-	10.51	9.35	19.17	17.66	17.47	18.08
Russian Federation	..	..	10.93	14.91	15.71	16.45	18.34	18.06	18.47
Serbia	..	..	-	-	-	-	-	-	-
Tajikistan	..	..	-	-	-	-	-	-	-
Turkmenistan	..	..	-	-	-	-	-	-	..
Ukraine	..	..	25.51	45.16	47.74	47.21	54.05	49.68	54.46
Uzbekistan	..	..	-	-	-	-	-	-	..
Former Soviet Union	1.31	5.64	x	x	x	x	x	x	..
Former Yugoslavia	-	-	x	x	x	x	x	x	..
<b>Non-OECD Europe and Eurasia</b>	<b>1.17</b>	<b>5.42</b>	<b>11.98</b>	<b>16.95</b>	<b>17.45</b>	<b>17.06</b>	<b>18.01</b>	<b>17.41</b>	<b>..</b>
Algeria	-	-	-	-	-	-	-	-	..
Angola	-	-	-	-	-	-	-	-	..
Benin	-	-	-	-	-	-	-	-	..
Botswana	..	..	-	-	-	-	-	-	..
Cameroon	-	-	-	-	-	-	-	-	..
Congo	-	-	-	-	-	-	-	-	..
Côte d'Ivoire	-	-	-	-	-	-	-	-	..
Dem. Rep. of the Congo	-	-	-	-	-	-	-	-	..
Egypt	-	-	-	-	-	-	-	-	..
Eritrea	..	..	..	..	..	..	..	..	..
Ethiopia	-	-	-	-	-	-	-	-	..
Gabon	-	-	-	-	-	-	-	-	..
Ghana	-	-	-	-	-	-	-	-	..
Kenya	-	-	-	-	-	-	-	-	..
Libya	-	-	-	-	-	-	-	-	..
Mauritius	-	-	-	-	-	-	-	-	..
Morocco	-	-	-	-	-	-	-	-	..
Mozambique	..	..	..	..	..	..	..	..	..
Namibia	..	..	..	..	..	..	..	..	..
Niger	..	..	..	..	..	..	..	..	..
Nigeria	-	-	-	-	-	-	-	-	..
Senegal	-	-	-	-	-	-	-	-	..
South Africa	-	-	5.11	6.26	4.67	4.71	4.96	6.02	..
South Sudan	..	..	..	..	..	..	..	..	..
Sudan	-	-	-	-	-	-	-	-	..
United Rep. of Tanzania	-	-	-	-	-	-	-	-	..
Togo	-	-	-	-	-	-	-	-	..
Tunisia	-	-	-	-	-	-	-	-	..
Zambia	-	-	-	-	-	-	-	-	..
Zimbabwe	-	-	-	-	-	-	-	-	..
Other Africa	-	-	-	-	-	-	-	-	..
<b>Africa</b>	<b>-</b>	<b>-</b>	<b>2.67</b>	<b>2.95</b>	<b>2.02</b>	<b>1.80</b>	<b>1.56</b>	<b>1.88</b>	<b>..</b>

1. Please refer to section 'Geographical coverage'.



## Electricity generation from nuclear energy (% of total)

	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	-	-	-	-	-	-	-	-	..
Brunei Darussalam	-	-	-	-	-	-	-	-	..
Cambodia	..	..	..	-	-	-	-	-	..
DPR of Korea	-	-	-	-	-	-	-	-	..
India	3.29	2.49	2.10	2.97	2.42	2.68	2.73	2.57	..
Indonesia	-	-	-	-	-	-	-	-	..
Malaysia	-	-	-	-	-	-	-	-	..
Mongolia	..	..	-	-	-	-	-	-	..
Myanmar	-	-	-	-	-	-	-	-	..
Nepal	-	-	-	-	-	-	-	-	..
Pakistan	3.63	0.01	0.78	2.93	2.65	3.62	4.14	4.27	..
Philippines	-	-	-	-	-	-	-	-	..
Singapore	-	-	-	-	-	-	-	-	..
Sri Lanka	-	-	-	-	-	-	-	-	..
Chinese Taipei	-	19.24	37.18	21.33	17.88	17.07	14.30	12.14	..
Thailand	-	-	-	-	-	-	-	-	..
Viet Nam	-	-	-	-	-	-	-	-	..
Other Non-OECD Asia	-	-	-	-	-	-	-	-	..
<b>Non-OECD Asia excl. China</b>	<b>1.69</b>	<b>4.10</b>	<b>6.30</b>	<b>4.60</b>	<b>3.70</b>	<b>3.40</b>	<b>2.86</b>	<b>2.54</b>	..
People's Rep. of China	-	-	-	1.23	2.12	1.76	2.92	3.45	3.82
Hong Kong, China	-	-	-	-	-	-	-	-	..
<b>China</b>	-	-	-	<b>1.21</b>	<b>2.09</b>	<b>1.74</b>	<b>2.90</b>	<b>3.43</b>	..
Argentina	-	5.89	14.35	6.95	6.52	5.72	4.92	5.65	..
Bolivia	-	-	-	-	-	-	-	-	..
Brazil	-	-	1.00	1.73	2.45	2.82	2.53	2.74	2.68
Colombia	-	-	-	-	-	-	-	-	..
Costa Rica	-	-	-	-	-	-	-	-	..
Cuba	-	-	-	-	-	-	-	-	..
Curaçao	-	-	-	-	-	-	-	-	..
Dominican Republic	-	-	-	-	-	-	-	-	..
Ecuador	-	-	-	-	-	-	-	-	..
El Salvador	-	-	-	-	-	-	-	-	..
Guatemala	-	-	-	-	-	-	-	-	..
Haiti	-	-	-	-	-	-	-	-	..
Honduras	-	-	-	-	-	-	-	-	..
Jamaica	-	-	-	-	-	-	-	-	..
Nicaragua	-	-	-	-	-	-	-	-	..
Panama	-	-	-	-	-	-	-	-	..
Paraguay	-	-	-	-	-	-	-	-	..
Peru	-	-	-	-	-	-	-	-	..
Suriname	..	..	..	-	-	-	-	-	..
Trinidad and Tobago	-	-	-	-	-	-	-	-	..
Uruguay	-	-	-	-	-	-	-	-	..
Venezuela	-	-	-	-	-	-	-	-	..
Other Non-OECD Americas	-	-	-	-	-	-	-	-	..
<b>Non-OECD Americas</b>	-	<b>0.78</b>	<b>1.95</b>	<b>1.60</b>	<b>1.89</b>	<b>2.03</b>	<b>1.79</b>	<b>1.97</b>	..
Bahrain	-	-	-	-	-	-	-	-	..
Islamic Republic of Iran	-	-	-	-	-	-	1.04	2.29	..
Iraq	-	-	-	-	-	-	-	-	..
Jordan	-	-	-	-	-	-	-	-	..
Kuwait	-	-	-	-	-	-	-	-	..
Lebanon	-	-	-	-	-	-	-	-	..
Oman	-	-	-	-	-	-	-	-	..
Qatar	-	-	-	-	-	-	-	-	..
Saudi Arabia	-	-	-	-	-	-	-	-	..
Syrian Arab Republic	-	-	-	-	-	-	-	-	..
United Arab Emirates	-	-	-	-	-	-	-	-	..
Yemen	-	-	-	-	-	-	-	-	..
<b>Middle East</b>	-	-	-	-	-	-	<b>0.28</b>	<b>0.61</b>	..

## Electricity generation from hydro energy (% of total)

	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>20.92</b>	<b>20.73</b>	<b>18.09</b>	<b>16.96</b>	<b>16.04</b>	<b>16.04</b>	<b>16.08</b>	<b>16.26</b>	<b>..</b>
<b>Non-OECD Total</b>	<b>21.98</b>	<b>23.87</b>	<b>22.88</b>	<b>22.41</b>	<b>20.99</b>	<b>19.70</b>	<b>18.78</b>	<b>18.88</b>	<b>..</b>
<b>OECD Total</b>	<b>20.53</b>	<b>19.27</b>	<b>15.47</b>	<b>13.77</b>	<b>12.38</b>	<b>12.47</b>	<b>12.74</b>	<b>12.91</b>	<b>12.75</b>
Canada	72.07	67.28	61.56	59.20	58.33	58.15	57.21	58.01	58.49
Chile	63.83	66.98	48.60	46.20	50.46	35.94	31.68	29.35	27.91
Mexico	43.64	25.22	20.27	16.11	11.05	13.48	9.92	9.58	9.42
United States	13.50	11.49	8.53	6.29	6.38	6.02	5.84	6.27	7.14
<b>OECD Americas</b>	<b>21.12</b>	<b>19.26</b>	<b>15.77</b>	<b>13.60</b>	<b>13.26</b>	<b>12.70</b>	<b>12.86</b>	<b>13.24</b>	<b>14.11</b>
Australia	17.72	13.59	9.17	7.80	6.70	5.34	5.32	5.88	6.29
Israel <sup>1</sup>	-	-	0.01	0.07	0.06	0.05	0.04	c	c
Japan	14.35	15.42	10.24	7.98	6.98	7.48	8.35	7.50	7.46
Korea	8.66	5.33	6.04	1.39	0.95	0.74	0.39	0.51	0.50
New Zealand	77.25	83.77	71.85	62.25	54.07	54.86	55.30	59.79	57.98
<b>OECD Asia Oceania</b>	<b>16.40</b>	<b>16.51</b>	<b>11.23</b>	<b>7.89</b>	<b>6.58</b>	<b>6.36</b>	<b>6.51</b>	<b>6.20</b>	<b>6.19</b>
Austria	60.65	69.05	63.92	69.87	57.52	56.47	60.00	61.04	57.35
Belgium	0.42	0.52	0.38	0.56	0.34	0.33	0.46	0.44	0.32
Czech Republic	2.63	4.56	1.86	2.41	2.90	3.27	2.17	2.44	2.18
Denmark	0.13	0.11	0.11	0.08	0.06	0.05	0.06	0.06	0.05
Estonia	..	..	-	0.06	0.22	0.21	0.26	0.29	0.23
Finland	40.28	25.07	19.97	20.95	19.53	16.02	24.45	22.98	21.94
France	26.13	27.02	12.91	12.40	9.01	11.11	9.63	10.89	8.97
Germany	4.07	4.09	3.18	3.80	3.19	3.34	2.96	3.19	3.10
Greece	15.00	15.03	5.09	6.91	8.44	13.00	11.77	10.19	6.75
Hungary	0.57	0.47	0.63	0.51	0.56	0.50	0.77	0.81	0.67
Iceland	95.13	96.95	93.22	82.72	80.81	73.81	73.31	72.61	73.08
Ireland	8.76	7.93	4.90	3.57	2.46	2.13	2.87	2.26	2.25
Italy	26.07	24.66	14.84	16.37	12.15	17.11	16.17	14.74	12.32
Latvia	..	..	67.63	68.16	67.79	53.12	33.62	39.38	58.17
Luxembourg	3.37	10.68	11.22	29.38	2.81	3.34	7.42	14.69	9.68
Netherlands	-	-	0.12	0.16	0.09	0.09	0.08	0.09	0.05
Norway	99.78	99.84	99.62	99.51	98.87	94.74	95.75	96.22	95.78
Poland	1.74	1.94	1.05	1.47	1.42	1.86	1.11	1.29	1.50
Portugal	74.81	52.71	32.26	26.11	10.24	30.08	16.89	26.61	10.01
Slovak Republic	10.75	11.30	7.37	14.98	14.79	19.13	14.52	16.25	16.98
Slovenia	..	..	23.71	28.14	22.89	27.79	25.70	27.76	24.20
Spain	38.21	27.05	16.84	12.79	6.35	14.18	10.13	13.41	6.86
Sweden	76.70	61.12	49.67	54.11	45.97	44.72	46.51	39.78	40.28
Switzerland	75.79	68.10	54.18	55.70	54.03	54.59	57.88	56.66	56.85
Turkey	20.95	48.76	40.23	24.72	24.43	24.52	25.65	24.50	19.58
United Kingdom	1.37	1.37	1.64	1.36	1.24	0.95	1.87	1.60	1.78
<b>OECD Europe</b>	<b>21.15</b>	<b>20.29</b>	<b>16.90</b>	<b>17.00</b>	<b>14.06</b>	<b>15.46</b>	<b>15.97</b>	<b>16.09</b>	<b>14.38</b>
IEA	20.44	19.17	15.33	13.59	12.15	12.26	12.54	12.73	12.56
IEA/Accession/Association	21.84	21.25	17.96	15.98	14.94	15.41	15.72	15.82	..
European Union - 28	..	..	11.27	11.87	9.52	11.30	10.64	10.85	..
G7	17.14	16.56	12.68	11.20	10.46	10.52	10.80	11.02	11.38
G8	..	..	13.08	11.99	11.29	11.16	11.39	11.75	..
G20	..	..	15.92	14.69	13.95	14.49	14.69	14.87	..
<i>OPEC</i>	27.10	19.53	18.87	15.95	16.65	11.67	9.53	9.29	..

Excludes hydro pumped storage.

1. Please refer to section 'Geographical coverage'.

## Electricity generation from hydro energy (% of total)

	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>21.98</b>	<b>23.87</b>	<b>22.88</b>	<b>22.41</b>	<b>20.99</b>	<b>19.70</b>	<b>18.78</b>	<b>18.88</b>	..
Albania	66.22	79.41	86.41	96.15	98.71	99.99	100.00	100.00	100.00
Armenia	..	..	15.01	21.16	28.07	39.38	28.29	32.14	32.14
Azerbaijan	..	..	7.16	8.20	13.16	18.42	6.63	7.85	7.18
Belarus	..	..	0.05	0.10	0.12	0.13	0.31	0.42	0.42
Bosnia and Herzegovina	..	..	20.90	48.84	47.60	46.87	35.52	31.75	23.49
Bulgaria	11.71	10.66	4.46	6.58	9.86	10.99	11.61	8.83	6.23
Croatia	..	..	45.43	57.29	53.89	61.68	56.87	54.32	45.35
Cyprus <sup>1</sup>	-	-	-	-	-	-	-	-	-
FYR of Macedonia	..	..	8.53	17.18	21.49	33.48	33.03	33.70	19.82
Georgia	..	..	55.21	78.93	85.81	92.52	78.04	80.60	79.87
Gibraltar	-	-	-	-	-	-	-	-	-
Kazakhstan	..	..	8.43	14.67	11.58	9.71	8.71	10.90	..
Kosovo	..	..	..	1.76	2.51	3.02	2.29	4.10	3.04
Kyrgyzstan	..	..	63.48	85.90	85.88	91.80	85.19	86.67	..
Lithuania	..	..	1.46	3.06	3.13	10.81	8.20	12.35	..
Malta	-	-	-	-	-	-	-	-	-
Republic of Moldova	..	..	1.58	6.72	6.29	6.66	5.06	3.90	4.06
Montenegro	..	..	..	..	65.15	68.37	49.65	58.68	41.66
Romania	16.13	18.73	17.74	28.46	34.01	32.80	25.23	27.91	23.11
Russian Federation	..	..	15.33	18.72	18.15	16.07	15.76	16.95	16.84
Serbia	..	..	23.13	35.15	32.99	31.77	26.81	27.95	23.66
Tajikistan	..	..	90.93	98.44	99.28	99.79	99.06	96.52	94.58
Turkmenistan	..	..	4.79	-	-	-	-	-	..
Ukraine	..	..	3.52	6.58	6.65	6.97	3.33	4.71	6.68
Uzbekistan	..	..	11.80	12.54	17.54	20.98	20.65	20.28	..
Former Soviet Union	13.37	14.27	x	x	x	x	x	x	..
Former Yugoslavia	46.76	47.16	x	x	x	x	x	x	..
<b>Non-OECD Europe and Eurasia</b>	<b>14.68</b>	<b>15.89</b>	<b>13.90</b>	<b>19.03</b>	<b>19.10</b>	<b>18.26</b>	<b>16.65</b>	<b>17.88</b>	..
Algeria	26.80	3.61	0.84	0.21	1.64	0.38	0.21	0.31	..
Angola	82.72	88.15	86.21	63.11	79.65	67.96	53.18	56.12	..
Benin	-	-	-	2.38	0.93	-	4.09	4.23	..
Botswana	..	..	-	-	-	-	-	-	..
Cameroon	95.53	93.94	98.48	98.91	94.21	72.22	54.88	55.11	..
Congo	52.08	64.52	99.39	99.66	81.99	54.72	53.34	54.71	..
Côte d'Ivoire	21.11	77.30	66.67	36.75	25.29	27.12	15.52	14.91	..
Dem. Rep. of the Congo	97.92	95.46	99.56	99.95	99.91	98.91	99.59	99.61	..
Egypt	63.61	51.75	23.50	17.53	11.63	8.89	7.27	6.93	..
Eritrea	..	..	..	-	-	-	-	-	..
Ethiopia	56.35	70.25	88.35	98.33	99.58	99.02	92.69	92.70	..
Gabon	3.03	49.06	72.09	61.06	51.59	46.87	43.14	40.80	..
Ghana	99.03	99.23	100.00	91.50	82.93	68.81	50.87	42.70	..
Kenya	45.28	65.03	76.57	33.08	52.13	46.35	39.24	34.26	..
Libya	-	-	-	-	-	-	-	-	..
Mauritius	39.57	23.38	10.90	5.40	5.06	3.76	4.07	3.29	..
Morocco	41.46	28.87	12.67	5.58	5.08	14.65	6.12	3.95	3.63
Mozambique	29.80	65.15	62.56	99.55	99.84	99.89	86.41	83.33	..
Namibia	..	..	..	99.22	99.76	95.56	97.79	95.64	..
Niger	..	..	..	-	-	-	-	-	..
Nigeria	70.78	38.82	32.59	38.22	33.00	24.40	18.20	18.08	..
Senegal	-	-	-	-	10.50	8.22	8.02	8.08	..
South Africa	1.53	1.00	0.61	0.53	0.55	0.82	0.32	0.28	..
South Sudan	..	..	..	..	..	..	-	-	..
Sudan	70.00	70.01	63.23	46.05	32.96	82.70	64.54	55.80	..
United Rep. of Tanzania	50.86	86.36	95.15	86.37	50.01	51.21	32.97	33.81	..
Togo	37.62	74.51	60.13	57.14	39.15	51.96	69.14	87.93	..
Tunisia	6.19	0.82	0.79	0.60	1.15	0.31	0.35	0.23	..
Zambia	91.95	98.86	99.23	99.38	99.41	99.88	96.99	94.27	..
Zimbabwe	67.42	88.26	46.67	45.66	52.43	66.92	51.41	42.34	..
Other Africa	51.51	46.76	52.71	52.99	47.86	43.58	56.52	56.76	..
<b>Africa</b>	<b>27.25</b>	<b>25.77</b>	<b>17.82</b>	<b>16.96</b>	<b>15.92</b>	<b>16.36</b>	<b>15.42</b>	<b>14.51</b>	..

Excludes hydro pumped storage.

1. Please refer to section 'Geographical coverage'.

## Electricity generation from hydro energy (% of total)

	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	23.58	24.78	11.43	4.75	2.83	1.79	0.96	0.88	..
Brunei Darussalam	-	-	-	-	-	-	-	-	..
Cambodia	..	..	..	..	4.56	3.20	45.49	46.82	..
DPR of Korea	57.18	50.00	56.32	52.58	57.31	61.85	72.80	75.62	..
India	39.81	38.67	24.48	13.07	15.08	12.66	9.88	9.31	..
Indonesia	43.46	17.93	17.47	10.73	8.41	10.28	5.87	7.79	..
Malaysia	23.21	13.89	17.33	10.06	6.28	5.19	9.28	12.78	..
Mongolia	..	..	-	0.14	0.12	0.81	1.07	1.04	..
Myanmar	70.16	53.53	48.14	36.97	49.82	67.68	58.85	54.54	..
Nepal	77.88	93.55	99.89	98.37	99.37	99.91	99.80	99.84	..
Pakistan	51.99	58.19	44.93	25.24	32.96	33.70	31.12	32.12	..
Philippines	14.22	19.56	23.03	17.22	14.83	11.52	10.51	8.93	..
Singapore	-	-	-	-	-	-	-	-	..
Sri Lanka	68.67	88.67	99.84	45.65	37.01	52.16	45.28	29.55	..
Chinese Taipei	16.39	6.87	7.22	2.53	1.78	1.72	1.75	2.52	..
Thailand	26.97	8.82	11.26	6.28	4.39	3.47	2.67	3.65	2.73
Viet Nam	17.87	41.81	61.85	54.78	31.58	29.03	35.88	38.89	..
Other Non-OECD Asia	23.53	32.13	54.47	58.12	51.71	63.26	68.82	59.60	..
<b>Non-OECD Asia excl. China</b>	<b>34.55</b>	<b>30.47</b>	<b>23.60</b>	<b>13.39</b>	<b>13.70</b>	<b>12.71</b>	<b>11.96</b>	<b>12.24</b>	..
People's Rep. of China	22.53	19.36	20.40	16.41	15.88	16.95	19.07	18.79	18.32
Hong Kong, China	-	-	-	-	-	-	-	-	..
<b>China</b>	<b>21.65</b>	<b>18.58</b>	<b>19.49</b>	<b>16.03</b>	<b>15.64</b>	<b>16.80</b>	<b>18.95</b>	<b>18.67</b>	..
Argentina	11.23	38.14	35.23	32.36	32.23	26.81	26.24	25.42	..
Bolivia	83.01	65.66	51.06	50.13	40.11	32.20	27.00	18.28	..
Brazil	89.44	92.49	92.77	87.24	83.73	78.20	61.85	65.80	63.08
Colombia	68.28	69.87	75.63	74.37	79.07	67.99	62.18	63.67	..
Costa Rica	83.96	95.24	97.52	82.15	79.49	75.78	74.61	73.76	..
Cuba	1.09	0.97	0.61	0.59	0.44	0.56	0.24	0.31	..
Curaçao	-	-	-	-	-	-	-	-	..
Dominican Republic	23.60	17.13	9.44	8.91	17.64	11.75	6.39	9.78	..
Ecuador	34.63	25.86	78.55	71.70	54.30	44.27	50.70	57.97	..
El Salvador	53.65	64.79	74.30	34.79	34.61	34.83	22.59	21.07	..
Guatemala	25.66	11.99	78.59	41.70	36.51	43.28	33.49	32.39	..
Haiti	68.85	70.06	76.55	51.74	47.66	30.15	8.00	6.55	..
Honduras	73.87	86.31	98.28	61.78	29.75	44.39	26.10	26.76	..
Jamaica	4.53	7.16	3.58	1.74	2.05	3.52	3.13	2.81	..
Nicaragua	54.72	51.14	27.66	8.93	14.19	13.77	6.44	9.28	..
Panama	8.65	53.20	83.16	69.94	63.91	56.81	60.77	59.92	..
Paraguay	79.89	85.92	99.90	100.00	100.00	100.00	100.00	100.00	..
Peru	71.61	69.88	75.82	81.19	70.90	55.84	49.14	46.53	..
Suriname	..	..	..	88.40	52.70	70.19	60.05	56.92	..
Trinidad and Tobago	-	-	-	-	-	-	-	-	..
Uruguay	61.00	75.63	94.16	92.92	87.00	78.82	63.06	59.24	..
Venezuela	37.85	40.74	62.34	73.75	73.28	67.49	61.03	60.08	..
Other Non-OECD Americas	7.47	5.98	6.80	1.01	4.77	3.54	2.36	2.36	..
<b>Non-OECD Americas</b>	<b>53.33</b>	<b>64.33</b>	<b>72.40</b>	<b>69.81</b>	<b>67.28</b>	<b>62.99</b>	<b>53.16</b>	<b>54.96</b>	..
Bahrain	-	-	-	-	-	-	-	-	..
Islamic Republic of Iran	23.50	25.11	10.29	3.02	9.04	4.09	5.02	5.68	..
Iraq	8.24	6.06	10.83	1.92	19.74	9.75	3.71	4.21	..
Jordan	-	-	0.30	0.53	0.59	0.41	0.28	0.21	..
Kuwait	-	-	-	-	-	-	-	-	..
Lebanon	26.69	30.89	33.33	4.64	8.48	5.34	2.59	2.04	..
Oman	-	-	-	-	-	-	-	-	..
Qatar	-	-	-	-	-	-	-	-	..
Saudi Arabia	-	-	-	-	-	-	-	-	..
Syrian Arab Republic	1.19	64.67	23.49	12.81	12.38	5.58	2.30	5.13	..
United Arab Emirates	-	-	-	-	-	-	-	-	..
Yemen	-	-	-	-	-	-	-	-	..
<b>Middle East</b>	<b>13.13</b>	<b>11.75</b>	<b>5.33</b>	<b>1.86</b>	<b>4.61</b>	<b>2.13</b>	<b>1.68</b>	<b>1.96</b>	..

Excludes hydro pumped storage.

## Electricity generation from non-hydro renewables and waste (% of total)

	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>0.64</b>	<b>0.71</b>	<b>1.62</b>	<b>1.76</b>	<b>2.33</b>	<b>3.90</b>	<b>7.14</b>	<b>7.95</b>	<b>..</b>
<b>Non-OECD Total</b>	<b>1.52</b>	<b>1.28</b>	<b>0.37</b>	<b>0.77</b>	<b>0.90</b>	<b>1.93</b>	<b>4.15</b>	<b>5.07</b>	<b>..</b>
<b>OECD Total</b>	<b>0.31</b>	<b>0.44</b>	<b>2.29</b>	<b>2.34</b>	<b>3.39</b>	<b>5.82</b>	<b>10.82</b>	<b>11.65</b>	<b>12.97</b>
Canada	-	0.35	0.83	1.41	1.72	3.72	6.33	7.00	7.25
Chile	0.58	0.89	5.24	2.35	3.42	4.45	11.93	13.93	16.49
Mexico	0.43	1.37	4.43	3.69	4.15	3.14	5.37	5.72	5.71
United States	0.14	0.24	3.31	2.30	2.52	4.43	7.76	8.91	10.23
<b>OECD Americas</b>	<b>0.13</b>	<b>0.28</b>	<b>3.04</b>	<b>2.25</b>	<b>2.51</b>	<b>4.28</b>	<b>7.50</b>	<b>8.56</b>	<b>9.67</b>
Australia	0.52	0.40	0.49	0.59	2.10	3.25	8.00	8.63	9.30
Israel <sup>1</sup>	-	-	-	-	0.02	0.29	1.85	2.48	2.46
Japan	0.06	0.16	3.52	3.23	3.55	4.52	9.20	10.88	11.66
Korea	-	-	0.00	0.04	0.13	0.61	1.85	2.68	3.44
New Zealand	6.71	6.63	8.36	9.42	10.15	18.28	24.83	24.28	23.96
<b>OECD Asia Oceania</b>	<b>0.32</b>	<b>0.38</b>	<b>2.88</b>	<b>2.39</b>	<b>2.70</b>	<b>3.56</b>	<b>7.09</b>	<b>8.28</b>	<b>9.01</b>
Austria	0.65	0.78	2.39	2.92	6.57	10.66	17.78	18.20	19.18
Belgium	0.29	0.57	1.04	1.63	3.20	8.31	23.04	18.45	20.00
Czech Republic	-	-	-	0.73	0.93	3.78	9.42	9.21	9.25
Denmark	-	0.04	3.16	17.02	29.26	33.85	68.06	62.74	72.95
Estonia	..	..	-	0.15	0.87	7.84	15.42	13.21	14.09
Finland	-	-	9.48	12.84	14.32	14.62	20.98	22.26	25.42
France	0.44	0.28	0.51	0.77	1.14	3.13	6.71	7.29	8.06
Germany	0.78	1.17	0.96	3.41	8.02	14.77	27.66	27.51	31.94
Greece	-	-	0.01	1.15	2.51	5.56	17.10	17.56	17.66
Hungary	-	-	0.12	0.34	4.87	7.98	10.48	10.19	10.75
Iceland	1.12	1.57	6.65	17.22	19.13	26.17	26.67	27.37	26.91
Ireland	-	-	-	1.43	4.85	11.11	25.36	22.92	27.20
Italy	2.67	2.16	1.56	2.96	5.04	9.63	23.58	23.90	24.37
Latvia	..	..	-	0.10	1.79	1.74	16.56	14.80	14.34
Luxembourg	-	3.27	5.45	19.67	4.36	6.35	29.81	52.36	65.09
Netherlands	-	1.58	1.79	4.78	9.05	10.74	13.98	14.36	16.34
Norway	-	-	0.31	0.28	0.75	1.17	2.32	1.92	2.38
Poland	0.35	0.34	0.19	0.21	1.28	5.15	12.80	12.61	12.86
Portugal	2.04	2.10	2.45	4.15	8.30	23.35	31.24	28.53	29.58
Slovak Republic	-	-	-	0.10	0.26	2.73	8.64	9.03	8.35
Slovenia	..	..	-	0.51	0.79	1.45	3.75	3.46	3.57
Spain	0.07	0.33	0.46	3.10	10.13	18.87	25.18	25.46	25.84
Sweden	0.51	0.81	1.38	3.31	5.87	11.39	17.50	18.41	18.54
Switzerland	-	0.36	1.46	2.66	3.70	3.87	6.12	7.25	7.71
Turkey	1.59	0.58	0.14	0.26	0.17	1.91	6.51	8.66	10.06
United Kingdom	-	-	0.22	1.44	3.68	6.33	23.99	24.56	29.43
<b>OECD Europe</b>	<b>0.56</b>	<b>0.68</b>	<b>0.97</b>	<b>2.45</b>	<b>5.04</b>	<b>9.31</b>	<b>17.87</b>	<b>18.11</b>	<b>19.96</b>
IEA	0.31	0.44	2.30	2.34	3.40	5.84	10.85	11.67	13.00
IEA/Accession/Association	0.30	0.43	2.04	2.03	2.76	4.69	8.60	9.61	..
European Union - 28	..	..	0.95	2.50	5.24	9.79	19.42	19.58	..
G7	0.29	0.40	2.51	2.32	3.09	5.40	10.65	11.65	13.17
G8	..	..	2.13	2.10	2.79	4.81	9.41	10.27	..
G20	..	..	1.74	1.84	2.51	4.28	7.95	8.83	..
<i>OPEC</i>	-	-	0.00	0.01	0.03	0.04	0.10	0.11	..

Includes geothermal, solar, biofuels, waste, tide, wave, ocean, wind and other fuel sources.

1. Please refer to section 'Geographical coverage'.

## Electricity generation from non-hydro renewables and waste (% of total)

	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>1.52</b>	<b>1.28</b>	<b>0.37</b>	<b>0.77</b>	<b>0.90</b>	<b>1.93</b>	<b>4.15</b>	<b>5.07</b>	<b>..</b>
Albania	-	-	-	-	-	-	-	-	-
Armenia	..	..	-	-	-	0.11	0.05	0.04	0.04
Azerbaijan	..	..	-	-	-	0.01	0.78	0.93	0.94
Belarus	..	..	-	-	0.00	0.27	0.65	0.83	0.83
Bosnia and Herzegovina	..	..	-	-	-	-	-	0.14	0.15
Bulgaria	-	-	-	0.04	0.05	1.62	6.42	7.16	7.40
Croatia	..	..	0.12	0.01	0.18	1.16	9.96	11.98	14.88
Cyprus <sup>1</sup>	-	-	-	-	0.02	1.37	8.78	8.68	8.48
FYR of Macedonia	..	..	-	-	-	-	2.90	3.00	3.32
Georgia	..	..	-	-	-	-	-	0.08	0.76
Gibraltar	-	-	-	-	-	-	-	-	..
Kazakhstan	..	..	-	-	-	-	0.17	0.34	..
Kosovo	..	..	..	-	-	0.02	-	-	-
Kyrgyzstan	..	..	-	-	-	-	-	-	..
Lithuania	..	..	0.13	0.82	1.45	12.43	38.87	54.82	..
Malta	-	-	-	-	-	0.05	7.67	15.54	9.97
Republic of Moldova	..	..	-	-	-	-	0.31	0.33	0.52
Montenegro	..	..	..	..	-	-	-	-	-
Romania	-	-	-	-	0.01	0.69	14.52	13.84	15.38
Russian Federation	..	..	0.01	0.30	0.32	0.32	0.35	0.32	0.34
Serbia	..	..	-	-	-	-	0.10	0.20	0.34
Tajikistan	..	..	-	-	-	-	-	-	-
Turkmenistan	..	..	-	-	-	-	-	-	..
Ukraine	..	..	-	0.00	0.02	0.13	1.34	1.02	1.00
Uzbekistan	..	..	-	-	-	-	-	-	..
Former Soviet Union	2.49	2.09	x	x	x	x	x	x	..
Former Yugoslavia	-	-	x	x	x	x	x	x	..
<b>Non-OECD Europe and Eurasia</b>	<b>2.23</b>	<b>1.85</b>	<b>0.01</b>	<b>0.19</b>	<b>0.21</b>	<b>0.33</b>	<b>1.31</b>	<b>1.28</b>	<b>..</b>
Algeria	-	-	-	-	-	-	0.11	0.16	..
Angola	-	-	-	-	-	-	-	-	..
Benin	-	-	-	-	-	0.87	1.46	1.41	..
Botswana	..	..	-	-	-	-	0.07	0.07	..
Cameroon	-	-	-	-	-	1.00	0.04	0.04	..
Congo	-	-	-	-	-	-	-	-	..
Côte d'Ivoire	-	-	-	-	1.94	1.16	1.21	1.69	..
Dem. Rep. of the Congo	-	-	-	-	-	-	0.23	0.24	..
Egypt	-	-	-	0.18	0.51	1.16	1.19	1.15	..
Eritrea	..	..	..	0.48	0.35	0.64	0.49	0.48	..
Ethiopia	-	-	-	0.30	-	0.36	7.27	7.27	..
Gabon	-	-	0.31	0.53	0.51	0.47	0.61	0.56	..
Ghana	-	-	-	-	-	-	0.03	0.21	..
Kenya	11.99	8.59	16.29	13.90	19.53	22.72	48.27	45.03	..
Libya	-	-	-	-	0.01	0.02	0.02	0.02	..
Mauritius	12.83	7.61	20.26	24.24	19.94	20.57	18.65	18.54	..
Morocco	-	-	-	0.50	1.07	2.78	12.41	14.82	14.54
Mozambique	-	-	-	-	-	-	-	-	..
Namibia	..	..	..	-	-	-	-	-	..
Niger	..	..	..	-	0.87	1.02	0.75	0.95	..
Nigeria	-	-	-	-	-	-	-	-	..
Senegal	8.60	5.92	4.66	9.98	7.70	5.40	2.70	2.60	..
South Africa	-	-	-	0.15	0.11	0.11	2.08	2.83	..
South Sudan	..	..	..	..	..	..	0.35	0.46	..
Sudan	-	-	-	-	-	-	-	-	..
United Rep. of Tanzania	-	-	-	-	-	0.47	0.66	0.66	..
Togo	-	-	-	-	1.06	2.23	6.17	2.16	..
Tunisia	-	-	-	0.22	0.33	3.76	3.57	3.84	..
Zambia	-	-	-	-	-	-	-	-	..
Zimbabwe	-	-	-	-	-	1.08	1.33	1.72	..
Other Africa	-	-	0.81	1.58	2.29	2.87	5.37	5.34	..
<b>Africa</b>	<b>0.15</b>	<b>0.11</b>	<b>0.25</b>	<b>0.42</b>	<b>0.58</b>	<b>0.96</b>	<b>2.46</b>	<b>2.77</b>	<b>..</b>

Includes geothermal, solar, biofuels, waste, tide, wave, ocean, wind and other fuel sources.

1. Please refer to section 'Geographical coverage'.

## Electricity generation from non-hydro renewables and waste (% of total)

	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	-	-	-	-	-	-	0.27	0.26	..
Brunei Darussalam	-	-	-	-	-	-	0.05	0.02	..
Cambodia	..	..	..	0.22	1.56	2.30	0.93	0.80	..
DPR of Korea	-	-	-	-	-	-	-	-	..
India	-	-	0.01	0.52	1.55	3.51	5.74	6.95	..
Indonesia	-	-	3.44	5.22	5.20	5.57	4.78	5.02	..
Malaysia	-	-	-	-	0.00	0.81	0.68	0.68	..
Mongolia	..	..	-	-	-	0.16	2.92	2.84	..
Myanmar	-	-	-	-	-	-	-	-	..
Nepal	-	-	-	-	-	-	0.20	0.16	..
Pakistan	-	-	-	-	-	-	1.39	1.44	..
Philippines	-	11.53	22.40	25.67	17.54	14.79	14.92	15.27	..
Singapore	-	-	1.08	1.55	2.50	2.60	3.08	3.05	..
Sri Lanka	-	-	-	0.16	0.21	0.95	3.19	3.08	..
Chinese Taipei	-	-	0.00	0.94	1.51	1.91	2.43	2.35	..
Thailand	-	-	0.00	0.53	1.16	2.14	5.72	11.54	8.92
Viet Nam	-	-	-	-	0.09	0.11	0.12	0.16	..
Other Non-OECD Asia	0.11	0.38	0.34	1.46	1.26	1.25	0.33	0.29	..
<b>Non-OECD Asia excl. China</b>	<b>0.00</b>	<b>0.77</b>	<b>1.16</b>	<b>1.79</b>	<b>2.09</b>	<b>3.09</b>	<b>4.51</b>	<b>5.55</b>	..
People's Rep. of China	-	-	0.01	0.23	0.30	1.89	5.04	6.28	7.29
Hong Kong, China	-	-	-	-	-	0.24	0.27	0.27	..
<b>China</b>	<b>-</b>	<b>-</b>	<b>0.01</b>	<b>0.23</b>	<b>0.29</b>	<b>1.87</b>	<b>5.01</b>	<b>6.24</b>	..
Argentina	0.21	0.24	0.21	0.80	1.29	1.77	1.90	1.55	..
Bolivia	1.02	1.98	1.38	1.39	1.14	1.76	2.36	3.61	..
Brazil	1.16	1.30	1.73	2.36	3.59	6.60	12.19	14.62	16.08
Colombia	-	1.11	0.75	1.15	1.10	4.13	1.84	2.23	..
Costa Rica	0.52	0.45	-	17.00	17.23	17.53	24.39	24.46	..
Cuba	12.60	9.55	9.64	6.29	2.75	2.68	3.71	3.65	..
Curaçao	-	-	-	0.71	5.69	4.76	27.93	26.24	..
Dominican Republic	3.34	2.30	0.68	0.24	0.22	0.19	5.04	5.91	..
Ecuador	-	-	-	-	0.81	1.23	2.10	2.24	..
El Salvador	-	33.70	18.89	23.28	23.64	30.21	35.23	37.07	..
Guatemala	4.74	2.66	13.04	10.02	10.97	20.57	24.48	27.41	..
Haiti	9.84	3.82	2.85	-	-	-	-	-	..
Honduras	-	-	-	0.19	5.19	4.63	16.15	24.08	..
Jamaica	9.37	16.83	3.99	3.10	1.64	4.17	7.13	9.83	..
Nicaragua	1.18	1.79	33.70	12.46	20.42	23.23	43.62	42.90	..
Panama	0.17	1.21	2.10	0.49	0.39	0.30	4.56	6.70	..
Paraguay	10.58	5.35	0.07	-	-	-	-	-	..
Peru	3.45	0.85	0.98	0.80	1.37	1.88	3.59	3.75	..
Suriname	..	..	..	-	-	-	-	-	..
Trinidad and Tobago	2.62	1.28	0.87	0.37	0.31	-	-	-	..
Uruguay	0.35	0.20	0.79	0.46	0.51	8.80	29.77	37.42	..
Venezuela	-	-	-	-	-	-	-	-	..
Other Non-OECD Americas	0.01	0.01	0.25	0.42	0.89	0.99	1.83	1.83	..
<b>Non-OECD Americas</b>	<b>1.34</b>	<b>1.41</b>	<b>1.52</b>	<b>1.82</b>	<b>2.52</b>	<b>4.52</b>	<b>7.83</b>	<b>9.18</b>	..
Bahrain	-	-	-	-	-	-	-	-	..
Islamic Republic of Iran	-	-	-	0.03	0.04	0.07	0.08	0.10	..
Iraq	-	-	-	-	-	-	-	-	..
Jordan	-	-	0.03	0.04	0.08	0.08	0.69	4.49	..
Kuwait	-	-	-	-	-	-	-	0.00	..
Lebanon	-	-	-	-	-	-	-	-	..
Oman	-	-	-	-	-	-	-	-	..
Qatar	-	-	-	-	-	-	-	-	..
Saudi Arabia	-	-	-	-	-	-	0.00	0.00	..
Syrian Arab Republic	-	-	-	-	-	-	-	-	..
United Arab Emirates	-	-	-	-	-	-	0.23	0.27	..
Yemen	-	-	-	-	-	0.03	9.12	14.51	..
<b>Middle East</b>	<b>-</b>	<b>-</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.02</b>	<b>0.12</b>	<b>0.21</b>	..

Includes geothermal, solar, biofuels, waste, tide, wave, ocean, wind and other fuel sources.

## Total electricity generation (GWh)

	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>6 131 143</b>	<b>8 283 485</b>	<b>11 851 614</b>	<b>15 440 737</b>	<b>18 296 932</b>	<b>21 484 396</b>	<b>24 284 203</b>	<b>24 973 021</b>	..
<b>Non-OECD Total</b>	<b>1 659 619</b>	<b>2 615 259</b>	<b>4 190 775</b>	<b>5 698 525</b>	<b>7 775 690</b>	<b>10 597 518</b>	<b>13 422 467</b>	<b>14 030 056</b>	..
<b>OECD Total</b>	<b>4 471 524</b>	<b>5 668 226</b>	<b>7 660 839</b>	<b>9 742 212</b>	<b>10 521 242</b>	<b>10 886 878</b>	<b>10 861 736</b>	<b>10 942 965</b>	<b>10 964 655</b>
Canada	270 081	373 278	482 041	605 596	620 461	604 249	668 035	667 327	674 321
Chile	8 766	11 751	18 372	40 078	52 484	60 434	75 387	79 308	78 946
Mexico	37 100	66 962	115 837	205 675	250 768	275 537	310 719	320 353	319 451
United States	1 965 509	2 427 320	3 202 813	4 025 885	4 268 887	4 354 363	4 297 048	4 299 595	4 234 400
<b>OECD Americas</b>	<b>2 281 456</b>	<b>2 879 311</b>	<b>3 819 063</b>	<b>4 877 234</b>	<b>5 192 600</b>	<b>5 294 583</b>	<b>5 351 189</b>	<b>5 366 583</b>	<b>5 307 118</b>
Australia	64 411	95 234	154 287	209 864	228 347	252 614	251 331	256 319	259 970
Israel <sup>1</sup>	8 720	12 404	20 898	42 661	48 602	58 591	64 226	66 976	67 863
Japan	465 387	572 531	860 581	1 057 928	1 102 176	1 120 560	1 042 792	1 051 795	1 077 232
Korea	14 825	37 239	105 371	288 526	387 874	496 718	549 047	558 816	561 340
New Zealand	18 531	22 596	32 265	39 247	42 720	44 622	44 040	43 033	43 068
<b>OECD Asia Oceania</b>	<b>571 874</b>	<b>740 004</b>	<b>1 173 402</b>	<b>1 638 226</b>	<b>1 809 719</b>	<b>1 973 105</b>	<b>1 951 436</b>	<b>1 976 939</b>	<b>2 009 473</b>
Austria	30 916	41 600	49 296	59 874	64 488	67 934	61 763	65 270	67 461
Belgium	40 615	53 091	70 292	82 773	85 709	93 833	68 749	84 401	85 082
Czech Republic	41 174	52 656	62 271	72 911	81 931	85 312	82 616	82 107	85 862
Denmark	19 120	26 765	25 982	36 053	36 246	38 862	28 946	30 522	30 426
Estonia	..	..	17 181	8 513	10 205	12 964	10 398	12 176	13 150
Finland	26 102	40 747	54 377	69 976	70 582	80 674	68 597	68 752	67 425
France	182 508	257 308	417 199	535 184	571 210	564 478	565 366	551 338	548 940
Germany	374 352	466 340	547 650	572 313	615 800	626 583	640 967	643 531	648 989
Greece	14 817	22 653	34 775	53 425	59 427	57 367	51 822	54 416	58 742
Hungary	17 643	23 876	28 436	35 191	35 756	37 371	30 342	31 859	32 802
Iceland	2 320	3 184	4 510	7 684	8 686	17 059	18 799	18 550	19 239
Ireland	7 348	10 566	14 229	23 673	25 626	28 176	28 099	30 126	30 691
Italy	143 916	183 474	213 147	269 941	296 840	298 773	281 562	287 943	293 333
Latvia	..	..	6 648	4 136	4 906	6 627	5 533	6 425	7 531
Luxembourg	1 394	918	624	422	3 348	3 230	1 335	783	888
Netherlands	52 627	64 806	71 968	89 631	99 921	119 270	110 070	115 170	116 585
Norway	73 029	83 750	121 611	142 511	137 245	123 217	143 398	148 631	148 253
Poland	83 908	120 941	134 415	143 174	155 359	157 089	164 341	166 153	169 865
Portugal	9 792	15 206	28 342	43 372	46 188	53 691	51 280	59 094	57 600
Slovak Republic	12 299	19 967	25 497	30 798	31 352	27 464	26 632	26 817	26 350
Slovenia	..	..	12 444	13 624	15 117	16 255	14 817	16 221	15 984
Spain	75 660	109 226	151 206	220 921	289 445	298 320	277 683	271 309	272 487
Sweden	78 060	96 316	145 984	145 231	158 365	148 460	161 931	155 891	160 141
Switzerland	36 817	48 175	54 992	66 124	57 789	66 052	66 097	61 110	59 969
Turkey	12 425	23 275	57 543	124 922	161 956	211 208	261 783	274 408	297 278
United Kingdom	281 352	284 071	317 755	374 375	395 426	378 921	336 185	336 440	332 991
<b>OECD Europe</b>	<b>1 618 194</b>	<b>2 048 911</b>	<b>2 668 374</b>	<b>3 226 752</b>	<b>3 518 923</b>	<b>3 619 190</b>	<b>3 559 111</b>	<b>3 599 443</b>	<b>3 648 064</b>
IEA	4 451 718	5 640 887	7 597 967	9 634 029	10 391 447	10 727 912	10 682 974	10 755 485	10 775 092
IEA/Accession/Association	4 782 630	6 247 223	8 855 345	12 182 273	14 380 315	16 880 028	19 049 195	19 601 688	..
European Union - 28	..	..	2 576 709	3 005 762	3 290 721	3 335 516	3 205 030	3 228 024	..
G7	3 683 105	4 564 322	6 041 186	7 441 222	7 870 800	7 947 927	7 831 955	7 837 969	7 810 206
G8	..	..	7 123 338	8 317 690	8 821 959	8 984 043	8 897 578	8 926 914	..
G20	..	..	10 121 093	13 222 556	15 571 154	18 210 373	20 451 592	21 017 001	..
OPEC	48 780	131 432	299 910	515 153	705 985	949 906	1 222 995	1 246 842	..

Excludes hydro pumped storage.

1. Please refer to section 'Geographical coverage'.



## Total electricity generation (GWh)

	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>1 659 619</b>	<b>2 615 259</b>	<b>4 190 775</b>	<b>5 698 525</b>	<b>7 775 690</b>	<b>10 597 518</b>	<b>13 422 467</b>	<b>14 030 056</b>	..
Albania	1 702	3 715	3 296	4 778	5 443	7 568	5 895	7 782	4 525
Armenia	..	..	10 362	5 958	6 317	6 491	7 799	7 315	7 763
Azerbaijan	..	..	23 152	18 699	22 872	18 710	24 688	24 953	24 320
Belarus	..	..	39 526	26 101	30 961	34 895	34 082	33 566	33 045
Bosnia and Herzegovina	..	..	14 632	10 429	12 602	17 124	15 629	17 767	16 308
Bulgaria	21 956	34 835	42 141	40 646	43 972	46 017	48 742	44 651	44 912
Croatia	..	..	9 062	11 263	13 057	14 796	11 238	12 615	11 715
Cyprus <sup>1</sup>	830	1 034	1 974	3 370	4 377	5 322	4 533	4 887	4 990
FYR of Macedonia	..	..	5 758	6 811	6 942	7 260	5 646	5 629	5 600
Georgia	..	..	13 724	7 424	7 267	10 124	10 833	11 574	11 531
Gibraltar	49	54	79	125	145	177	224	254	..
Kazakhstan	..	..	87 379	51 324	67 847	82 646	106 468	106 627	..
Kosovo	..	..	..	2 957	4 458	5 168	6 119	5 981	5 921
Kyrgyzstan	..	..	15 732	14 931	14 891	12 100	13 030	13 262	..
Lithuania	..	..	28 405	11 121	14 415	4 994	4 258	3 676	..
Malta	365	527	1 100	1 917	2 240	2 114	1 303	856	1 635
Republic of Moldova	..	..	16 221	5 606	5 990	6 113	6 091	5 827	5 806
Montenegro	..	..	..	..	2 864	4 022	3 003	3 141	2 309
Romania	46 779	67 486	64 309	51 934	59 413	60 619	65 922	64 595	63 645
Russian Federation	..	..	1 082 152	876 468	951 159	1 036 116	1 065 623	1 088 945	1 099 795
Serbia	..	..	40 948	34 140	36 474	37 423	37 595	38 614	36 662
Tajikistan	..	..	18 146	14 247	17 090	16 435	17 162	17 232	18 114
Turkmenistan	..	..	14 610	9 845	12 820	16 660	22 534	22 534	..
Ukraine	..	..	298 626	171 269	185 913	188 828	162 108	162 940	157 127
Uzbekistan	..	..	56 325	46 864	49 200	51 700	57 280	58 319	..
Former Soviet Union	914 600	1 294 000	x	x	x	x	x	x	..
Former Yugoslavia	35 062	59 716	x	x	x	x	x	x	..
<b>Non-OECD Europe and Eurasia</b>	<b>1 021 343</b>	<b>1 461 367</b>	<b>1 887 659</b>	<b>1 428 227</b>	<b>1 578 729</b>	<b>1 693 422</b>	<b>1 737 805</b>	<b>1 763 542</b>	..
Algeria	2 806	7 123	16 104	25 412	33 915	45 734	68 798	70 997	..
Angola	984	675	841	1 445	2 786	5 449	9 765	10 361	..
Benin	9	10	21	84	107	115	342	355	..
Botswana	..	..	906	1 140	1 052	532	2 968	2 688	..
Cameroon	1 118	1 453	2 697	3 480	4 004	5 899	7 943	8 367	..
Congo	96	155	493	296	433	784	1 734	1 753	..
Côte d'Ivoire	796	1 749	1 983	4 800	5 681	5 965	8 711	10 253	..
Dem. Rep. of the Congo	3 848	4 445	5 650	5 982	7 374	7 905	8 953	9 135	..
Egypt	8 106	18 939	42 256	78 143	108 690	146 796	186 320	194 327	..
Eritrea	..	..	..	210	288	311	406	421	..
Ethiopia	591	689	1 202	1 674	2 845	4 980	10 437	11 226	..
Gabon	165	530	978	1 315	1 574	1 935	2 128	2 336	..
Ghana	3 910	5 317	5 721	7 223	6 788	10 167	11 491	13 023	..
Kenya	901	1 630	3 235	4 006	5 805	7 394	9 652	9 752	..
Libya	1 147	4 800	10 169	15 496	22 672	32 558	37 511	36 430	..
Mauritius	187	355	780	1 778	2 272	2 689	2 997	3 042	..
Morocco	2 875	5 247	9 628	12 863	19 290	23 672	30 819	31 734	32 682
Mozambique	641	462	454	9 696	13 285	16 666	19 913	18 732	..
Namibia	..	..	..	1 407	1 660	1 305	1 536	1 421	..
Niger	..	..	..	206	229	293	531	526	..
Nigeria	2 625	7 169	13 463	14 727	23 539	26 121	31 426	30 897	..
Senegal	442	676	945	1 604	2 544	3 076	4 151	4 457	..
South Africa	64 390	98 951	165 385	207 837	242 055	256 648	246 736	249 453	..
South Sudan	..	..	..	..	..	..	578	439	..
Sudan	610	817	1 515	2 569	3 826	7 499	13 047	14 429	..
United Rep. of Tanzania	582	792	1 628	2 472	3 555	5 274	6 394	6 998	..
Togo	101	51	158	175	189	179	81	232	..
Tunisia	1 179	2 924	5 811	10 596	12 661	16 372	19 676	19 808	..
Zambia	3 368	9 300	8 013	7 798	8 936	10 448	13 441	11 695	..
Zimbabwe	5 172	4 541	9 362	6 995	9 374	8 665	9 706	7 055	..
Other Africa	3 912	5 160	6 674	10 115	12 747	16 193	18 273	18 712	..
<b>Africa</b>	<b>110 561</b>	<b>183 960</b>	<b>316 072</b>	<b>441 544</b>	<b>560 176</b>	<b>671 624</b>	<b>786 464</b>	<b>801 054</b>	..

Excludes hydro pumped storage.

1. Please refer to section 'Geographical coverage'.

## Total electricity generation (GWh)

	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	1 404	2 353	7 732	15 771	26 447	40 790	59 011	64 327	..
Brunei Darussalam	246	343	1 172	2 543	3 264	3 792	4 200	4 270	..
Cambodia	..	..	..	448	964	1 000	4 397	5 594	..
DPR of Korea	16 580	21 200	27 700	19 400	22 912	21 664	13 737	16 926	..
India	72 796	120 409	292 732	569 688	715 656	980 423	1 372 770	1 477 564	..
Indonesia	2 370	7 502	32 667	93 325	127 529	169 755	233 984	248 613	..
Malaysia	4 773	10 049	23 016	69 255	82 673	124 786	150 123	156 660	..
Mongolia	..	..	3 348	2 946	3 419	4 313	5 513	5 667	..
Myanmar	821	1 487	2 478	5 118	6 016	7 543	15 970	17 867	..
Nepal	104	217	878	1 659	2 533	3 208	3 460	4 244	..
Pakistan	8 377	14 974	37 673	68 116	93 629	94 384	111 298	114 003	..
Philippines	13 186	18 009	26 327	45 290	56 567	67 742	82 413	90 797	..
Singapore	3 719	6 991	15 714	31 665	38 213	45 361	50 415	51 667	..
Sri Lanka	1 031	1 668	3 150	7 004	9 324	10 801	13 182	14 284	..
Chinese Taipei	20 735	42 607	88 398	180 552	223 523	243 935	254 990	260 842	..
Thailand	6 971	14 426	44 176	95 977	132 197	159 522	177 479	191 321	176 988
Viet Nam	2 350	3 559	8 681	26 561	53 656	94 903	156 408	164 832	..
Other Non-OECD Asia	4 691	7 175	8 431	13 769	16 702	20 941	36 199	42 412	..
<b>Non-OECD Asia excl. China</b>	<b>160 154</b>	<b>272 969</b>	<b>624 273</b>	<b>1 249 087</b>	<b>1 615 224</b>	<b>2 094 863</b>	<b>2 745 549</b>	<b>2 931 890</b>	..
People's Rep. of China	168 689	300 630	621 268	1 355 738	2 500 466	4 197 204	5 843 715	6 187 107	6 495 140
Hong Kong, China	6 799	12 634	28 938	31 331	38 451	38 387	38 028	38 258	..
<b>China</b>	<b>175 488</b>	<b>313 264</b>	<b>650 206</b>	<b>1 387 069</b>	<b>2 538 917</b>	<b>4 235 591</b>	<b>5 881 743</b>	<b>6 225 365</b>	..
Argentina	26 661	39 706	50 740	88 910	105 491	125 263	144 957	146 726	..
Bolivia	1 171	1 619	2 311	3 880	4 896	6 777	9 123	9 409	..
Brazil	64 726	139 380	222 821	348 910	403 033	515 745	581 652	578 889	588 035
Colombia	11 627	20 446	36 357	43 125	50 337	59 424	78 109	76 904	..
Costa Rica	1 347	2 226	3 468	6 919	8 260	9 583	10 812	10 881	..
Cuba	5 708	9 989	15 024	15 033	15 344	17 397	20 288	20 458	..
Curaçao	775	850	790	1 121	1 248	1 323	820	884	..
Dominican Republic	2 246	3 258	3 698	13 100	13 444	15 074	18 505	19 414	..
Ecuador	1 256	3 372	6 349	10 612	12 675	19 509	25 830	27 314	..
El Salvador	917	1 460	2 218	3 377	4 823	5 984	5 989	5 984	..
Guatemala	908	1 952	2 186	6 048	8 049	8 893	11 679	12 450	..
Haiti	122	314	597	547	556	587	1 038	1 084	..
Honduras	486	906	2 319	3 658	5 775	6 938	8 965	8 783	..
Jamaica	2 187	1 676	2 458	6 606	7 422	4 320	4 122	4 230	..
Nicaragua	678	1 005	1 457	2 351	3 051	3 659	4 578	4 590	..
Panama	1 179	1 812	2 661	4 887	5 827	7 383	10 296	10 886	..
Paraguay	378	767	27 185	53 492	51 166	54 066	55 744	63 771	..
Peru	6 660	10 031	13 808	19 914	25 499	35 890	48 251	51 923	..
Suriname	..	..	..	1 172	1 518	1 724	2 258	2 022	..
Trinidad and Tobago	1 105	2 035	3 577	5 459	7 058	8 485	10 300	10 712	..
Uruguay	2 551	4 600	7 444	7 588	7 682	10 995	13 108	13 238	..
Venezuela	16 445	35 803	59 321	85 271	105 384	113 765	122 721	112 577	..
Other Non-OECD Americas	15 306	17 769	22 189	31 073	36 934	36 097	34 222	34 848	..
<b>Non-OECD Americas</b>	<b>164 439</b>	<b>300 976</b>	<b>488 978</b>	<b>763 053</b>	<b>885 472</b>	<b>1 068 881</b>	<b>1 223 367</b>	<b>1 227 977</b>	..
Bahrain	500	1 660	7 989	13 859	19 373	23 824	28 484	28 510	..
Islamic Republic of Iran	12 093	22 380	59 102	121 383	178 088	232 959	280 633	289 094	..
Iraq	3 519	11 383	24 000	31 900	30 400	48 908	68 688	80 030	..
Jordan	315	1 070	3 638	7 375	9 654	14 777	19 014	19 731	..
Kuwait	3 651	9 023	18 477	32 323	43 734	57 029	68 288	70 094	..
Lebanon	1 791	2 752	1 500	9 675	12 339	15 712	18 468	18 690	..
Oman	47	818	4 501	9 111	12 663	19 819	32 758	34 210	..
Qatar	420	2 416	4 818	9 134	14 396	28 144	41 499	42 307	..
Saudi Arabia	2 949	20 452	69 208	126 191	176 124	240 067	338 342	344 809	..
Syrian Arab Republic	1 423	3 960	11 611	25 217	34 935	46 413	17 982	18 112	..
United Arab Emirates	720	6 306	17 080	39 944	60 698	97 728	127 366	129 596	..
Yemen	206	503	1 663	3 433	4 768	7 757	6 017	5 045	..
<b>Middle East</b>	<b>27 634</b>	<b>82 723</b>	<b>223 587</b>	<b>429 545</b>	<b>597 172</b>	<b>833 137</b>	<b>1 047 539</b>	<b>1 080 228</b>	..

Excludes hydro pumped storage.

## Electricity generation from renewables (% of total)

	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>21.56</b>	<b>21.40</b>	<b>19.40</b>	<b>18.37</b>	<b>18.00</b>	<b>19.55</b>	<b>22.80</b>	<b>23.78</b>	<b>..</b>
<b>Non-OECD Total</b>	<b>23.49</b>	<b>25.15</b>	<b>23.25</b>	<b>23.11</b>	<b>21.82</b>	<b>21.49</b>	<b>22.79</b>	<b>23.81</b>	<b>..</b>
<b>OECD Total</b>	<b>20.84</b>	<b>19.67</b>	<b>17.30</b>	<b>15.59</b>	<b>15.18</b>	<b>17.66</b>	<b>22.80</b>	<b>23.74</b>	<b>24.91</b>
Canada	72.07	67.63	62.38	60.60	60.04	61.36	63.50	64.98	65.71
Chile	64.41	67.88	53.84	48.55	53.88	40.20	43.60	43.27	44.40
Mexico	44.07	26.58	24.69	19.80	15.20	16.60	15.28	15.28	15.10
United States	13.64	11.72	11.53	8.21	8.58	10.12	13.23	14.82	17.01
<b>OECD Americas</b>	<b>21.25</b>	<b>19.55</b>	<b>18.55</b>	<b>15.53</b>	<b>15.50</b>	<b>16.65</b>	<b>20.05</b>	<b>21.50</b>	<b>23.49</b>
Australia	18.24	13.99	9.66	8.38	8.80	8.60	13.31	14.51	15.59
Israel <sup>1</sup>	-	-	0.01	0.07	0.08	0.29	1.89	2.48	2.46
Japan	14.41	15.58	11.48	9.30	8.58	9.72	14.26	14.75	15.57
Korea	8.66	5.33	6.04	1.42	1.04	1.25	1.94	2.84	3.54
New Zealand	83.96	90.39	80.01	71.50	64.03	73.01	80.01	83.93	81.81
<b>OECD Asia Oceania</b>	<b>16.72</b>	<b>16.88</b>	<b>12.43</b>	<b>9.04</b>	<b>8.08</b>	<b>8.59</b>	<b>11.75</b>	<b>12.44</b>	<b>13.19</b>
Austria	61.30	69.83	66.20	72.54	63.40	66.21	76.49	77.79	75.47
Belgium	0.71	1.09	0.79	1.26	2.46	6.92	21.02	16.79	18.38
Czech Republic	2.63	4.56	1.86	3.13	3.82	6.92	11.40	11.43	11.20
Denmark	0.13	0.15	3.18	15.46	27.07	31.98	65.53	60.49	70.71
Estonia	..	..	-	0.21	1.09	8.05	14.45	12.43	13.25
Finland	40.28	25.07	29.45	33.41	33.25	29.99	44.50	44.23	46.31
France	26.57	27.30	13.37	12.97	9.86	13.85	15.81	17.64	16.48
Germany	4.85	4.70	3.49	6.20	10.15	16.73	29.23	29.27	33.63
Greece	15.00	15.03	5.09	7.76	10.78	18.34	28.66	27.37	23.53
Hungary	0.57	0.47	0.69	0.69	5.23	8.08	10.58	10.09	10.53
Iceland	96.25	98.52	99.87	99.93	99.94	99.99	99.98	99.98	99.99
Ireland	8.76	7.93	4.90	5.01	7.31	13.23	27.97	24.95	28.94
Italy	28.74	26.82	16.38	18.85	16.32	25.76	38.68	37.52	35.62
Latvia	..	..	67.63	68.25	69.59	54.85	50.17	54.18	72.51
Luxembourg	3.37	12.31	13.30	41.00	6.30	8.27	32.28	58.24	66.10
Netherlands	-	1.58	1.12	3.32	7.45	9.39	12.44	12.79	14.87
Norway	99.78	99.84	99.79	99.72	99.77	95.74	97.68	97.80	97.84
Poland	2.00	2.15	1.10	1.63	2.48	6.93	13.80	13.73	14.13
Portugal	76.85	54.81	34.72	29.67	17.88	52.81	47.53	54.59	39.03
Slovak Republic	10.75	11.30	7.37	14.98	14.91	21.63	22.68	24.72	24.98
Slovenia	..	..	23.71	28.66	23.65	29.22	29.39	31.18	27.72
Spain	38.29	27.39	17.22	15.61	14.60	32.78	34.96	38.57	32.35
Sweden	77.21	61.87	51.00	57.25	51.29	55.30	63.26	57.17	58.11
Switzerland	75.79	68.45	54.98	57.00	55.86	56.73	62.20	61.87	62.55
Turkey	22.54	49.34	40.37	24.94	24.54	26.38	31.96	32.89	29.34
United Kingdom	1.37	1.37	1.83	2.66	4.28	6.91	24.81	24.74	29.69
<b>OECD Europe</b>	<b>21.71</b>	<b>20.84</b>	<b>17.64</b>	<b>19.00</b>	<b>18.36</b>	<b>24.08</b>	<b>33.00</b>	<b>33.29</b>	<b>33.44</b>
IEA	20.75	19.56	17.15	15.41	14.95	17.46	22.62	23.57	24.74
IEA/Accession/Association	22.15	21.63	19.60	17.58	17.26	19.63	23.82	24.90	..
European Union - 28	..	..	12.00	13.93	14.01	20.38	29.19	29.47	..
G7	17.42	16.90	14.64	12.92	12.93	15.18	20.56	21.72	23.60
G8	..	..	14.74	13.53	13.50	15.29	20.00	21.15	..
G20	..	..	17.31	16.13	16.04	18.33	22.17	23.21	..
<i>OPEC</i>	27.10	19.53	18.87	15.96	16.68	11.72	9.63	9.40	..

Includes electricity from hydro, geothermal, solar, wind, tide, wave, biofuels and the renewable fraction of municipal waste.

Excludes hydro pumped storage.

1. Please refer to section 'Geographical coverage'.

## Electricity generation from renewables (% of total)

	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>23.49</b>	<b>25.15</b>	<b>23.25</b>	<b>23.11</b>	<b>21.82</b>	<b>21.49</b>	<b>22.79</b>	<b>23.81</b>	<b>..</b>
Albania	66.22	79.41	86.41	96.15	98.71	99.99	100.00	100.00	100.00
Armenia	..	..	15.01	21.16	28.07	39.49	28.34	32.18	32.18
Azerbaijan	..	..	7.16	8.20	13.16	18.42	7.04	8.43	7.77
Belarus	..	..	0.05	0.10	0.12	0.37	0.82	1.17	1.17
Bosnia and Herzegovina	..	..	20.90	48.84	47.60	46.87	35.52	31.88	23.64
Bulgaria	11.71	10.66	4.46	6.58	9.87	12.58	17.99	15.91	13.56
Croatia	..	..	45.55	57.30	54.07	62.84	66.83	66.30	60.23
Cyprus <sup>1</sup>	-	-	-	-	0.02	1.37	8.78	8.68	8.48
FYR of Macedonia	..	..	8.53	17.18	21.49	33.48	35.94	36.70	23.14
Georgia	..	..	55.21	78.93	85.81	92.52	78.04	80.68	80.63
Gibraltar	-	-	-	-	-	-	-	-	..
Kazakhstan	..	..	8.43	14.67	11.58	9.71	8.87	11.24	..
Kosovo	..	..	..	1.76	2.51	3.04	2.29	4.10	3.04
Kyrgyzstan	..	..	63.48	85.90	85.88	91.80	85.19	86.67	..
Lithuania	..	..	1.46	3.06	3.19	18.24	39.41	56.80	..
Malta	-	-	-	-	-	0.05	7.67	15.54	9.97
Republic of Moldova	..	..	1.58	6.72	6.29	6.66	5.37	4.22	4.58
Montenegro	..	..	..	..	65.15	68.37	49.65	58.68	41.66
Romania	16.13	18.73	17.74	28.46	34.02	33.49	39.75	41.75	37.71
Russian Federation	..	..	15.34	18.73	18.20	16.12	15.86	17.05	16.94
Serbia	..	..	23.13	35.15	32.99	31.77	26.91	28.14	24.00
Tajikistan	..	..	90.93	98.44	99.28	99.79	99.06	96.52	94.58
Turkmenistan	..	..	4.79	-	-	-	-	-	..
Ukraine	..	..	3.52	6.59	6.67	7.09	4.38	5.68	7.68
Uzbekistan	..	..	11.80	12.54	17.54	20.98	20.65	20.28	..
Former Soviet Union	15.86	16.36	x	x	x	x	x	x	..
Former Yugoslavia	46.76	47.16	x	x	x	x	x	x	..
<b>Non-OECD Europe and Eurasia</b>	<b>16.91</b>	<b>17.74</b>	<b>13.90</b>	<b>19.04</b>	<b>19.14</b>	<b>18.42</b>	<b>17.74</b>	<b>18.99</b>	<b>..</b>
Algeria	26.80	3.61	0.84	0.21	1.64	0.38	0.32	0.47	..
Angola	82.72	88.15	86.21	63.11	79.65	67.96	53.18	56.12	..
Benin	-	-	-	2.38	0.93	0.87	5.56	5.63	..
Botswana	..	..	-	-	-	-	0.07	0.07	..
Cameroon	95.53	93.94	98.48	98.91	94.21	73.22	54.92	55.15	..
Congo	52.08	64.52	99.39	99.66	81.99	54.72	53.34	54.71	..
Côte d'Ivoire	21.11	77.30	66.67	36.75	27.23	28.28	16.73	16.60	..
Dem. Rep. of the Congo	97.92	95.46	99.56	99.95	99.91	98.91	99.82	99.85	..
Egypt	63.61	51.75	23.50	17.70	12.14	10.05	8.46	8.07	..
Eritrea	..	..	..	0.48	0.35	0.64	0.49	0.48	..
Ethiopia	56.35	70.25	88.35	98.63	99.58	99.38	99.96	99.96	..
Gabon	3.03	49.06	72.39	61.60	52.10	47.34	43.75	41.35	..
Ghana	99.03	99.23	100.00	91.50	82.93	68.81	50.89	42.91	..
Kenya	57.27	73.62	92.86	46.98	71.66	69.07	87.51	79.29	..
Libya	-	-	-	-	0.01	0.02	0.02	0.02	..
Mauritius	52.41	30.99	31.15	29.64	25.00	24.32	22.72	21.83	..
Morocco	41.46	28.87	12.67	6.08	6.14	17.43	14.31	14.67	14.18
Mozambique	29.80	65.15	62.56	99.55	99.84	99.89	86.41	83.33	..
Namibia	..	..	..	99.22	99.76	95.56	97.79	95.64	..
Niger	..	..	..	-	0.87	1.02	0.75	0.95	..
Nigeria	70.78	38.82	32.59	38.22	33.00	24.40	18.20	18.08	..
Senegal	8.60	5.92	4.66	3.30	12.66	10.73	9.88	9.63	..
South Africa	1.53	1.00	0.61	0.68	0.66	0.94	2.40	3.11	..
South Sudan	..	..	..	..	..	..	0.35	0.46	..
Sudan	70.00	70.01	63.23	46.05	32.96	82.70	64.54	55.80	..
United Rep. of Tanzania	50.86	86.36	95.15	86.37	50.01	51.69	33.63	34.47	..
Togo	37.62	74.51	60.13	57.14	40.21	54.19	75.31	90.09	..
Tunisia	6.19	0.82	0.79	0.82	1.48	1.16	2.84	2.94	..
Zambia	91.95	98.86	99.23	99.38	99.41	99.88	96.99	94.27	..
Zimbabwe	67.42	88.26	46.67	45.66	52.43	68.01	52.74	44.05	..
Other Africa	51.51	46.76	53.52	54.57	50.15	46.45	61.89	62.09	..
<b>Africa</b>	<b>27.40</b>	<b>25.88</b>	<b>18.07</b>	<b>17.36</b>	<b>16.48</b>	<b>17.23</b>	<b>17.68</b>	<b>17.08</b>	<b>..</b>

Includes electricity from hydro, geothermal, solar, wind, tide, wave, biofuels and the renewable fraction of municipal waste.

Excludes hydro pumped storage.

1. Please refer to section 'Geographical coverage'.

## Electricity generation from renewables (% of total)

	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	23.58	24.78	11.43	4.75	2.83	1.79	1.23	1.14	..
Brunei Darussalam	-	-	-	-	-	-	0.05	0.02	..
Cambodia	..	..	..	0.22	6.12	5.50	46.42	47.62	..
DPR of Korea	57.18	50.00	56.32	52.58	57.31	61.85	72.80	75.62	..
India	39.81	38.67	24.49	13.59	16.62	16.13	15.56	16.20	..
Indonesia	43.46	17.93	20.92	15.96	13.61	15.85	10.65	12.81	..
Malaysia	23.21	13.89	17.33	10.06	6.28	5.99	9.96	13.46	..
Mongolia	..	..	-	0.14	0.12	0.97	3.99	3.88	..
Myanmar	70.16	53.53	48.14	36.97	49.82	67.68	58.85	54.54	..
Nepal	77.88	93.55	99.89	98.37	99.37	99.91	100.00	100.00	..
Pakistan	51.99	58.19	44.93	25.24	32.96	33.70	32.51	33.56	..
Philippines	14.22	31.09	45.42	42.89	32.37	26.30	25.41	24.20	..
Singapore	-	-	0.54	0.77	1.25	1.31	1.82	1.89	..
Sri Lanka	68.67	88.67	99.84	45.80	37.23	53.12	48.48	32.63	..
Chinese Taipei	16.39	6.87	7.22	3.11	2.65	3.00	3.53	4.23	..
Thailand	26.97	8.82	11.26	6.81	5.54	5.61	8.39	15.19	-
Viet Nam	17.87	41.81	61.85	54.78	31.67	29.14	36.00	39.05	..
Other Non-OECD Asia	23.64	32.50	54.81	59.58	52.97	64.51	69.15	59.89	..
<b>Non-OECD Asia excl. China</b>	<b>34.55</b>	<b>31.25</b>	<b>24.75</b>	<b>15.11</b>	<b>15.67</b>	<b>15.68</b>	<b>16.35</b>	<b>17.68</b>	..
People's Rep. of China	22.53	19.36	20.41	16.64	16.18	18.62	23.92	24.89	19.35
Hong Kong, China	-	-	-	-	-	0.24	0.27	0.27	..
<b>China</b>	<b>21.65</b>	<b>18.58</b>	<b>19.50</b>	<b>16.26</b>	<b>15.93</b>	<b>18.46</b>	<b>23.77</b>	<b>24.74</b>	..
Argentina	11.44	38.38	35.44	33.16	33.53	28.59	28.14	26.97	..
Bolivia	84.03	67.63	52.44	51.52	41.26	33.95	29.35	21.89	..
Brazil	90.60	93.78	94.50	89.49	87.12	84.72	73.97	80.35	79.08
Colombia	68.28	70.98	76.38	75.52	80.17	72.12	64.02	65.90	..
Costa Rica	84.48	95.69	97.52	99.15	96.72	93.31	99.00	98.23	..
Cuba	13.68	10.52	10.25	6.88	3.19	3.24	3.95	3.96	..
Curaçao	-	-	-	0.71	5.69	4.76	27.93	26.24	..
Dominican Republic	26.94	19.43	10.11	9.15	17.85	11.94	11.42	15.68	..
Ecuador	34.63	25.86	78.55	71.70	55.12	45.49	52.80	60.21	..
El Salvador	53.65	98.49	93.19	58.07	58.24	65.04	57.82	58.14	..
Guatemala	30.40	14.65	91.63	51.72	47.48	63.85	57.97	59.79	..
Haiti	78.69	73.89	79.40	51.74	47.66	30.15	8.00	6.55	..
Honduras	73.87	86.31	98.28	61.97	34.94	49.02	42.25	50.84	..
Jamaica	13.90	23.99	7.57	4.84	3.69	7.69	10.26	12.65	..
Nicaragua	55.90	52.94	61.36	21.40	34.61	37.00	50.07	52.18	..
Panama	8.82	54.42	85.27	70.43	64.30	57.10	65.33	66.62	..
Paraguay	90.48	91.26	99.97	100.00	100.00	100.00	100.00	100.00	..
Peru	75.06	70.73	76.80	81.99	72.27	57.72	52.73	50.28	..
Suriname	..	..	..	88.40	52.70	70.19	60.05	56.92	..
Trinidad and Tobago	2.62	1.28	0.87	0.37	0.31	-	-	-	..
Uruguay	61.35	75.83	94.95	93.38	87.50	87.62	92.83	96.65	..
Venezuela	37.85	40.74	62.34	73.75	73.28	67.49	61.03	60.08	..
Other Non-OECD Americas	7.47	5.98	7.05	1.42	5.66	4.53	4.19	4.19	..
<b>Non-OECD Americas</b>	<b>54.66</b>	<b>65.74</b>	<b>73.91</b>	<b>71.58</b>	<b>69.71</b>	<b>67.48</b>	<b>60.96</b>	<b>64.11</b>	..
Bahrain	-	-	-	-	-	-	-	-	..
Islamic Republic of Iran	23.50	25.11	10.29	3.05	9.08	4.16	5.10	5.78	..
Iraq	8.24	6.06	10.83	1.92	19.74	9.75	3.71	4.21	..
Jordan	-	-	0.33	0.57	0.67	0.49	0.97	4.70	..
Kuwait	-	-	-	-	-	-	-	0.00	..
Lebanon	26.69	30.89	33.33	4.64	8.48	5.34	2.59	2.04	..
Oman	-	-	-	-	-	-	-	-	..
Qatar	-	-	-	-	-	-	-	-	..
Saudi Arabia	-	-	-	-	-	-	0.00	0.00	..
Syrian Arab Republic	1.19	64.67	23.49	12.81	12.38	5.58	2.30	5.13	..
United Arab Emirates	-	-	-	-	-	-	0.23	0.27	..
Yemen	-	-	-	-	-	0.03	9.12	14.51	..
<b>Middle East</b>	<b>13.13</b>	<b>11.75</b>	<b>5.33</b>	<b>1.87</b>	<b>4.62</b>	<b>2.16</b>	<b>1.79</b>	<b>2.17</b>	..

Includes electricity from hydro, geothermal, solar, wind, tide, wave, biofuels and the renewable fraction of municipal waste.

Excludes hydro pumped storage.

## Final consumption of coal (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>631.45</b>	<b>702.85</b>	<b>752.28</b>	<b>541.77</b>	<b>825.09</b>	<b>1 045.90</b>	<b>1 081.18</b>	<b>1 035.50</b>	..
<b>Non-OECD Total</b>	<b>328.16</b>	<b>443.97</b>	<b>524.04</b>	<b>407.54</b>	<b>698.53</b>	<b>921.12</b>	<b>972.82</b>	<b>932.91</b>	..
<b>OECD Total</b>	<b>303.29</b>	<b>258.88</b>	<b>228.24</b>	<b>134.23</b>	<b>126.56</b>	<b>124.78</b>	<b>108.36</b>	<b>102.59</b>	..
Canada	5.41	4.33	3.21	3.59	3.65	3.12	2.58	2.47	..
Chile	0.70	0.57	0.63	0.64	0.60	0.42	0.23	0.22	..
Mexico	1.37	1.61	1.09	0.89	2.80	4.04	3.88	1.85	..
United States <sup>2</sup>	74.09	56.17	55.66	32.58	31.34	26.85	19.52	17.50	..
<b>OECD Americas</b>	<b>81.58</b>	<b>62.67</b>	<b>60.59</b>	<b>37.69</b>	<b>38.39</b>	<b>34.44</b>	<b>26.21</b>	<b>22.05</b>	..
Australia	5.20	4.51	4.56	4.20	3.90	2.54	2.34	2.47	..
Israel <sup>1</sup>	0.00	0.00	0.01	0.02	-	-	0.05	0.05	..
Japan	24.08	25.25	27.26	21.02	22.74	22.77	21.73	21.38	..
Korea	6.49	9.74	11.72	9.07	7.75	9.54	10.81	9.43	..
New Zealand	0.86	0.82	0.67	0.52	0.57	0.60	0.61	0.55	..
<b>OECD Asia Oceania</b>	<b>36.62</b>	<b>40.32</b>	<b>44.22</b>	<b>34.83</b>	<b>34.96</b>	<b>35.46</b>	<b>35.54</b>	<b>33.88</b>	..
Austria	2.35	1.97	1.41	0.91	0.59	0.48	0.43	0.43	..
Belgium	5.71	4.23	3.54	2.79	1.52	1.17	1.13	1.19	..
Czech Republic	20.25	19.63	12.32	4.78	3.63	2.59	2.33	2.32	..
Denmark	0.46	0.58	0.43	0.31	0.27	0.15	0.13	0.13	..
Estonia	..	..	0.52	0.15	0.14	0.10	0.06	0.07	..
Finland	1.07	1.11	1.56	0.98	0.81	0.81	0.54	0.58	..
France	13.96	8.61	6.27	3.38	3.02	2.70	2.28	2.14	..
Germany	55.69	49.20	39.25	8.96	6.82	7.18	7.60	7.01	..
Greece	0.52	0.47	1.22	0.88	0.44	0.30	0.22	0.20	..
Hungary	4.08	3.54	2.36	0.58	0.62	0.41	0.35	0.33	..
Iceland	0.00	0.02	0.06	0.10	0.10	0.09	0.09	0.10	..
Ireland	1.03	1.36	1.68	0.66	0.74	0.60	0.50	0.47	..
Italy	3.68	3.82	3.57	2.68	2.68	1.89	0.96	1.02	..
Latvia	..	..	0.31	0.06	0.07	0.09	0.04	0.04	..
Luxembourg	0.98	1.04	0.52	0.11	0.08	0.07	0.05	0.05	..
Netherlands	1.08	0.78	1.49	0.83	0.83	0.71	0.68	0.74	..
Norway	0.82	0.87	0.78	0.95	0.67	0.58	0.58	0.62	..
Poland	29.02	31.96	17.34	13.18	12.52	13.81	11.31	11.62	..
Portugal	0.24	0.25	0.65	0.48	0.02	0.05	0.01	0.01	..
Slovak Republic	3.84	4.09	4.11	1.41	1.14	1.18	0.89	0.85	..
Slovenia	..	..	0.23	0.09	0.11	0.05	0.05	0.04	..
Spain	4.16	2.78	3.39	1.37	1.47	1.02	0.67	0.92	..
Sweden	1.03	0.92	1.07	0.77	0.95	0.85	0.74	0.71	..
Switzerland	0.42	0.33	0.35	0.14	0.15	0.15	0.13	0.11	..
Turkey	2.97	4.20	7.85	10.84	10.69	14.83	12.01	12.63	..
United Kingdom	31.72	14.14	11.11	4.33	3.12	3.03	2.81	2.30	..
<b>OECD Europe</b>	<b>185.09</b>	<b>155.89</b>	<b>123.43</b>	<b>61.71</b>	<b>53.21</b>	<b>54.88</b>	<b>46.61</b>	<b>46.66</b>	..
IEA	302.58	258.30	226.99	133.32	125.68	124.12	107.89	102.14	..
IEA/Accession/Association	469.68	499.70	584.87	456.01	729.02	942.95	982.02	933.17	..
European Union - 28	..	..	120.36	51.39	43.89	40.79	35.17	34.47	..
G7	208.64	161.52	146.33	76.53	73.37	67.55	57.47	53.83	..
G8	..	..	201.05	94.50	86.61	81.79	69.45	65.47	..
G20	..	..	658.54	485.84	755.72	965.66	1 004.15	956.66	..
<i>OPEC</i>	<i>0.57</i>	<i>0.50</i>	<i>0.82</i>	<i>0.54</i>	<i>0.96</i>	<i>1.26</i>	<i>2.52</i>	<i>2.58</i>	..

Where applicable, this table includes peat and oil shale except for 2017 provisional figures for non-OECD countries.

1. Please refer to section 'Geographical coverage'.

2. For the United States, coal used by autoproducers of electricity and heat has been included in final consumption prior to 1992.

## Final consumption of coal (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>328.16</b>	<b>443.97</b>	<b>524.04</b>	<b>407.54</b>	<b>698.53</b>	<b>921.12</b>	<b>972.82</b>	<b>932.91</b>	<b>..</b>
Albania	0.31	0.52	0.58	0.01	0.01	0.11	0.10	0.05	..
Armenia	..	..	0.24	-	-	0.00	-	0.00	..
Azerbaijan	..	..	0.09	-	-	-	-	-	..
Belarus	..	..	1.67	0.60	0.39	0.35	0.62	0.66	..
Bosnia and Herzegovina	..	..	1.91	0.33	0.42	0.35	0.39	0.38	..
Bulgaria	3.79	3.57	1.61	0.74	0.76	0.47	0.39	0.39	..
Croatia	..	..	0.53	0.08	0.16	0.15	0.08	0.07	..
Cyprus <sup>1</sup>	-	-	0.06	0.03	0.04	0.02	0.00	-	..
FYR of Macedonia	..	..	0.11	0.10	0.14	0.11	0.10	0.12	..
Georgia	..	..	0.65	0.01	0.01	0.02	0.27	0.25	..
Gibraltar	-	-	-	-	-	-	-	-	..
Kazakhstan	..	..	15.78	3.85	7.37	14.98	10.58	9.68	..
Kosovo	..	..	..	0.04	0.04	0.08	0.05	0.10	..
Kyrgyzstan	..	..	2.08	0.20	0.20	0.37	0.48	0.50	..
Lithuania	..	..	0.75	0.08	0.17	0.20	0.18	0.18	..
Malta	-	-	-	-	-	-	-	-	..
Republic of Moldova	..	..	0.87	0.06	0.10	0.09	0.10	0.07	..
Montenegro	..	..	..	..	0.02	0.01	0.01	0.01	..
Romania	2.98	5.65	3.01	0.77	1.16	0.71	0.72	0.64	..
Russian Federation	..	..	54.71	17.97	13.23	14.25	11.98	11.65	..
Serbia	..	..	0.95	1.24	0.99	0.88	0.59	0.72	..
Tajikistan	..	..	0.63	0.01	0.04	0.09	0.39	0.47	..
Turkmenistan	..	..	0.30	-	-	-	-	-	..
Ukraine	..	..	25.61	9.97	11.07	7.99	6.27	6.31	..
Uzbekistan	..	..	1.27	0.39	0.23	0.37	0.52	0.50	..
Former Soviet Union	109.75	139.89	x	x	x	x	x	x	..
Former Yugoslavia	4.20	2.62	x	x	x	x	x	x	..
<b>Non-OECD Europe and Eurasia</b>	<b>121.03</b>	<b>152.24</b>	<b>113.43</b>	<b>36.49</b>	<b>36.57</b>	<b>41.62</b>	<b>33.81</b>	<b>32.75</b>	<b>..</b>
Algeria	0.07	0.03	0.25	0.08	0.17	0.12	0.04	-	..
Angola	-	-	-	-	-	-	-	-	..
Benin	-	-	-	-	-	-	0.03	0.07	..
Botswana	..	..	0.10	0.17	0.15	0.03	0.05	0.04	..
Cameroon	-	-	-	-	-	-	-	-	..
Congo	-	-	-	-	-	-	-	-	..
Côte d'Ivoire	-	-	-	-	-	-	-	-	..
Dem. Rep. of the Congo	0.18	0.18	0.19	-	-	-	-	-	..
Egypt	0.14	0.29	0.35	0.39	0.42	0.23	0.18	0.18	..
Eritrea	..	..	..	-	-	-	-	-	..
Ethiopia	-	-	-	-	-	0.03	0.25	0.27	..
Gabon	-	-	-	-	-	-	-	-	..
Ghana	-	-	-	-	-	-	-	-	..
Kenya	0.04	0.01	0.09	0.07	0.09	0.17	0.35	0.34	..
Libya	-	-	-	-	-	-	-	-	..
Mauritius	-	-	0.01	0.01	0.01	0.02	0.02	0.02	..
Morocco	0.08	0.02	0.35	0.53	0.02	0.02	0.02	0.02	..
Mozambique	0.35	0.15	0.02	-	-	0.00	-	-	..
Namibia	..	..	..	-	-	-	-	-	..
Niger	..	..	..	-	-	-	-	-	..
Nigeria	0.17	0.10	0.04	0.00	0.00	0.02	0.03	0.03	..
Senegal	-	-	-	-	0.09	0.18	0.30	0.32	..
South Africa	16.91	18.89	16.35	15.93	18.83	16.44	17.08	16.76	..
South Sudan	..	..	..	..	..	..	-	-	..
Sudan	-	0.00	-	-	-	-	-	-	..
United Rep. of Tanzania	-	0.00	0.00	0.03	0.01	-	0.16	0.17	..
Togo	-	-	-	-	-	-	-	-	..
Tunisia	0.05	0.05	0.05	0.04	-	-	-	-	..
Zambia	0.48	0.34	0.20	0.07	0.08	0.00	0.10	0.10	..
Zimbabwe	1.18	1.24	1.60	1.21	0.52	0.65	0.26	0.25	..
Other Africa	0.03	0.20	0.05	0.11	0.09	0.09	0.11	0.11	..
<b>Africa</b>	<b>19.70</b>	<b>21.50</b>	<b>19.66</b>	<b>18.65</b>	<b>20.48</b>	<b>17.99</b>	<b>18.97</b>	<b>18.69</b>	<b>..</b>

Where applicable, this table includes peat and oil shale except for 2017 provisional figures for non-OECD countries.

1. Please refer to section 'Geographical coverage'.

## Final consumption of coal (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	0.12	0.12	0.28	0.33	0.42	0.56	2.00	1.42	..
Brunei Darussalam	-	-	-	-	-	-	-	-	..
Cambodia	..	..	..	-	-	0.00	0.01	0.02	..
DPR of Korea	14.36	20.44	22.24	14.12	15.38	9.95	4.22	4.81	..
India	20.45	24.98	38.24	33.15	44.02	87.07	98.31	98.85	..
Indonesia	0.05	0.09	2.27	4.65	8.34	7.99	9.60	9.49	..
Malaysia	0.01	0.05	0.51	0.99	1.34	1.83	1.78	1.78	..
Mongolia	..	..	1.00	0.29	0.44	0.72	0.53	0.86	..
Myanmar	0.04	0.14	0.05	0.32	0.16	0.23	0.38	0.37	..
Nepal	0.05	0.05	0.04	0.26	0.25	0.30	0.56	0.69	..
Pakistan	0.54	0.64	1.52	1.38	3.42	3.95	4.91	5.11	..
Philippines	0.00	0.22	0.61	0.77	1.12	1.88	2.29	2.84	..
Singapore	0.00	0.00	0.02	-	0.00	0.01	0.16	0.17	..
Sri Lanka	0.00	0.00	0.00	0.00	0.07	0.07	0.06	0.05	..
Chinese Taipei	2.09	2.19	3.59	4.96	5.97	7.41	8.07	8.53	..
Thailand	0.02	0.09	1.31	3.54	6.75	9.21	8.16	6.07	..
Viet Nam	1.01	1.51	1.33	3.22	5.27	9.81	11.75	14.44	..
Other Non-OECD Asia	1.00	1.88	0.21	0.30	0.33	1.02	1.42	1.44	..
<b>Non-OECD Asia excl. China</b>	<b>39.74</b>	<b>52.42</b>	<b>73.24</b>	<b>68.27</b>	<b>93.28</b>	<b>142.02</b>	<b>154.21</b>	<b>156.94</b>	..
People's Rep. of China	145.07	213.57	311.40	274.47	538.06	706.77	749.93	709.56	..
Hong Kong, China	0.01	0.00	0.00	-	0.53	0.94	1.26	1.27	..
<b>China</b>	<b>145.08</b>	<b>213.57</b>	<b>311.41</b>	<b>274.47</b>	<b>538.59</b>	<b>707.71</b>	<b>751.19</b>	<b>710.83</b>	..
Argentina	0.27	0.21	0.19	0.38	0.42	0.39	0.24	0.22	..
Bolivia	-	-	-	-	-	-	-	-	..
Brazil	0.72	2.07	3.67	5.72	5.54	7.34	7.72	6.66	..
Colombia	1.07	1.35	1.61	2.25	1.71	1.53	2.48	2.65	..
Costa Rica	0.00	0.00	-	0.00	0.02	0.03	0.04	0.04	..
Cuba	0.06	0.08	0.13	0.02	0.02	0.02	0.00	0.00	..
Curaçao	-	-	-	-	-	-	-	-	..
Dominican Republic	-	-	-	0.08	0.19	0.32	0.45	0.40	..
Ecuador	-	-	-	-	-	-	-	-	..
El Salvador	-	0.00	-	0.00	0.00	-	-	-	..
Guatemala	-	0.01	-	-	-	-	-	-	..
Haiti	-	-	0.01	-	-	-	-	-	..
Honduras	-	-	0.00	0.08	0.15	0.14	0.05	0.05	..
Jamaica	-	-	0.03	0.03	0.04	0.03	0.06	0.04	..
Nicaragua	-	-	-	-	-	-	-	-	..
Panama	0.01	-	0.02	0.04	-	-	-	-	..
Paraguay	-	-	-	-	-	-	-	-	..
Peru	0.09	0.09	0.11	0.45	0.60	0.61	0.73	0.62	..
Suriname	..	..	..	-	-	-	-	-	..
Trinidad and Tobago	-	-	-	-	-	-	-	-	..
Uruguay	0.02	0.01	0.01	0.01	0.00	0.00	0.00	0.00	..
Venezuela	0.16	0.10	0.35	0.13	0.04	0.20	0.14	0.12	..
Other Non-OECD Americas	0.03	0.02	0.00	0.00	0.01	0.00	0.00	0.00	..
<b>Non-OECD Americas</b>	<b>2.43</b>	<b>3.95</b>	<b>6.13</b>	<b>9.20</b>	<b>8.73</b>	<b>10.61</b>	<b>11.91</b>	<b>10.82</b>	..
Bahrain	-	-	-	-	-	-	-	-	..
Islamic Republic of Iran	0.17	0.28	0.18	0.33	0.61	0.26	0.60	0.59	..
Iraq	-	-	-	-	-	-	-	-	..
Jordan	-	-	-	-	-	-	0.17	0.22	..
Kuwait	-	-	-	-	-	-	-	-	..
Lebanon	0.01	0.00	-	0.13	0.13	0.15	0.17	0.17	..
Oman	-	-	-	-	-	-	-	-	..
Qatar	-	-	-	-	-	-	-	-	..
Saudi Arabia	-	-	-	-	-	-	-	-	..
Syrian Arab Republic	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	..
United Arab Emirates	-	-	-	-	0.15	0.66	1.71	1.84	..
Yemen	-	-	-	-	-	0.10	0.08	0.07	..
<b>Middle East</b>	<b>0.18</b>	<b>0.28</b>	<b>0.18</b>	<b>0.46</b>	<b>0.89</b>	<b>1.18</b>	<b>2.74</b>	<b>2.89</b>	..

Where applicable, this table includes peat and oil shale except for 2017 provisional figures for non-OECD countries.



## Final consumption of oil (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>2 252.45</b>	<b>2 445.65</b>	<b>2 605.32</b>	<b>3 122.14</b>	<b>3 444.65</b>	<b>3 592.98</b>	<b>3 846.48</b>	<b>3 907.93</b>	..
<b>Non-OECD Total</b>	<b>484.37</b>	<b>693.73</b>	<b>811.86</b>	<b>1 002.00</b>	<b>1 210.88</b>	<b>1 458.32</b>	<b>1 741.15</b>	<b>1 772.28</b>	..
<b>OECD Total</b>	<b>1 584.02</b>	<b>1 573.54</b>	<b>1 591.21</b>	<b>1 846.32</b>	<b>1 915.07</b>	<b>1 776.09</b>	<b>1 721.54</b>	<b>1 737.19</b>	..
Canada	75.65	79.99	68.79	80.46	88.30	89.50	90.71	92.17	..
Chile	3.84	4.03	5.49	9.19	9.56	12.09	13.82	14.80	..
Mexico	22.18	39.69	51.14	61.08	67.48	74.51	72.71	75.24	..
United States	693.49	689.14	683.29	793.42	842.42	761.97	741.95	744.39	..
<b>OECD Americas</b>	<b>795.17</b>	<b>812.85</b>	<b>808.71</b>	<b>944.16</b>	<b>1 007.75</b>	<b>938.08</b>	<b>919.20</b>	<b>926.60</b>	..
Australia	24.26	26.92	29.00	34.72	36.55	39.00	42.03	42.83	..
Israel <sup>1</sup>	2.91	3.44	5.00	8.03	7.56	9.45	8.41	8.63	..
Japan	171.06	156.56	177.08	201.84	191.63	164.52	153.82	150.12	..
Korea	9.90	18.73	43.66	79.88	79.64	81.87	90.30	94.08	..
New Zealand	3.49	3.62	4.03	5.31	5.96	5.90	6.21	6.37	..
<b>OECD Asia Oceania</b>	<b>211.62</b>	<b>209.26</b>	<b>258.77</b>	<b>329.77</b>	<b>321.35</b>	<b>300.73</b>	<b>300.79</b>	<b>302.01</b>	..
Austria	9.95	9.76	8.83	10.36	12.51	11.07	10.77	11.08	..
Belgium	20.16	16.85	16.20	21.08	21.87	20.93	21.58	21.20	..
Czech Republic	7.75	9.23	8.27	7.30	9.27	8.60	8.34	7.71	..
Denmark	13.31	11.32	6.85	6.58	6.73	6.20	5.20	5.31	..
Estonia	..	..	1.85	0.79	1.01	0.98	1.04	1.04	..
Finland	11.26	10.01	9.35	8.31	8.63	8.20	7.67	8.26	..
France	96.03	87.36	75.20	81.19	80.26	71.33	67.23	65.85	..
Germany	133.30	122.68	111.21	114.08	104.01	94.67	92.06	92.21	..
Greece	6.46	8.07	9.78	12.41	14.13	12.18	8.92	9.06	..
Hungary	6.46	9.00	7.12	5.20	6.53	6.06	6.51	6.49	..
Iceland	0.54	0.55	0.56	0.61	0.64	0.53	0.56	0.55	..
Ireland	3.55	3.90	3.74	6.67	7.85	6.83	5.75	6.05	..
Italy	69.94	64.20	61.45	62.30	63.46	54.43	47.14	46.12	..
Latvia	..	..	2.07	1.10	1.37	1.40	1.38	1.37	..
Luxembourg	1.46	1.01	1.48	2.01	2.72	2.45	2.19	2.13	..
Netherlands	23.47	24.35	21.69	23.67	27.95	28.19	24.49	25.33	..
Norway	7.31	8.09	7.36	7.51	8.19	8.43	7.83	7.64	..
Poland	8.96	13.00	10.94	17.51	19.75	23.24	22.20	24.43	..
Portugal	4.21	5.77	8.36	12.22	12.26	10.12	8.19	7.97	..
Slovak Republic	3.83	5.04	4.89	3.01	3.00	3.07	2.74	2.93	..
Slovenia	..	..	1.50	2.33	2.52	2.57	2.26	2.38	..
Spain	28.86	36.73	38.15	52.16	57.84	49.98	40.20	41.98	..
Sweden	24.38	20.16	14.02	14.17	12.95	11.24	9.36	9.93	..
Switzerland	13.41	12.04	11.26	11.11	11.22	10.77	9.04	9.04	..
Turkey	9.54	12.69	20.37	26.13	26.10	28.39	35.08	37.49	..
United Kingdom	73.09	59.62	61.24	62.58	63.20	55.41	53.83	55.01	..
<b>OECD Europe</b>	<b>577.22</b>	<b>551.43</b>	<b>523.73</b>	<b>572.40</b>	<b>585.97</b>	<b>537.28</b>	<b>501.56</b>	<b>508.58</b>	..
International marine bunkers	121.53	110.85	115.75	155.02	177.49	205.73	206.15	212.15	..
International aviation bunkers	62.54	67.53	86.51	118.79	141.22	152.85	177.65	186.31	..
IEA	1 576.73	1 565.53	1 576.60	1 825.06	1 893.43	1 750.05	1 695.11	1 709.47	..
IEA/Accession/Association	1 692.94	1 733.82	1 819.87	2 277.54	2 470.61	2 479.91	2 609.64	2 647.49	..
European Union - 28	..	..	506.41	542.63	558.11	505.03	466.09	471.49	..
G7	1 312.56	1 259.54	1 238.27	1 395.87	1 433.29	1 291.82	1 246.75	1 245.87	..
G8	..	..	1 383.27	1 486.43	1 525.18	1 401.52	1 381.48	1 380.37	..
G20	..	..	2 002.15	2 400.65	2 592.60	2 634.28	2 805.90	2 836.48	..
<b>OPEC</b>	<b>34.67</b>	<b>87.05</b>	<b>128.08</b>	<b>176.61</b>	<b>216.90</b>	<b>258.95</b>	<b>289.65</b>	<b>284.87</b>	..

World includes international marine bunkers and international aviation bunkers.

1. Please refer to section 'Geographical coverage'.

## Final consumption of oil (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>484.37</b>	<b>693.73</b>	<b>811.86</b>	<b>1 002.00</b>	<b>1 210.88</b>	<b>1 458.32</b>	<b>1 741.15</b>	<b>1 772.28</b>	..
Albania	0.47	1.23	0.89	0.90	1.25	1.18	1.17	1.18	..
Armenia	..	..	2.36	0.29	0.37	0.38	0.32	0.30	..
Azerbaijan	..	..	4.06	1.93	2.81	2.66	3.52	3.39	..
Belarus	..	..	15.66	5.30	5.57	5.63	5.28	5.22	..
Bosnia and Herzegovina	..	..	1.56	1.06	1.06	1.53	1.32	1.50	..
Bulgaria	9.04	8.22	5.52	3.58	4.01	3.15	3.50	3.41	..
Croatia	..	..	2.97	2.84	3.33	3.00	2.76	2.84	..
Cyprus <sup>1</sup>	0.48	0.53	0.66	1.11	1.16	1.17	0.95	1.00	..
FYR of Macedonia	..	..	0.89	0.64	0.77	0.82	0.91	1.03	..
Georgia	..	..	2.88	0.63	0.70	0.96	1.20	1.44	..
Gibraltar	0.02	0.02	0.04	0.10	0.12	0.13	0.16	0.17	..
Kazakhstan	..	..	15.08	6.38	7.79	9.12	12.34	12.96	..
Kosovo	..	..	..	0.32	0.44	0.52	0.67	0.66	..
Kyrgyzstan	..	..	2.95	0.41	0.47	0.93	1.56	1.69	..
Lithuania	..	..	4.15	1.44	1.78	1.73	1.95	2.11	..
Malta	0.12	0.12	0.19	0.18	0.24	0.25	0.27	0.27	..
Republic of Moldova	..	..	3.60	0.38	0.64	0.74	0.80	0.85	..
Montenegro	..	..	..	..	0.28	0.31	0.28	0.31	..
Romania	10.62	14.67	8.74	6.43	7.77	6.57	7.60	7.99	..
Russian Federation	..	..	145.00	90.57	91.90	109.70	134.73	134.50	..
Serbia	..	..	4.31	1.18	3.43	3.22	2.95	3.19	..
Tajikistan	..	..	1.68	0.19	0.28	0.50	0.85	0.85	..
Turkmenistan	..	..	4.73	3.62	4.77	5.25	6.23	6.19	..
Ukraine	..	..	42.66	10.59	12.94	12.56	9.46	9.64	..
Uzbekistan	..	..	7.33	4.85	3.72	3.37	2.39	2.20	..
Former Soviet Union	203.08	274.02	x	x	x	x	x	x	..
Former Yugoslavia	8.54	10.83	x	x	x	x	x	x	..
<b>Non-OECD Europe and Eurasia</b>	<b>232.36</b>	<b>309.65</b>	<b>277.92</b>	<b>144.91</b>	<b>157.58</b>	<b>175.37</b>	<b>203.15</b>	<b>204.90</b>	..
Algeria	2.26	4.61	8.04	8.36	10.37	14.28	18.39	17.81	..
Angola	0.63	0.65	0.85	1.03	1.43	3.83	4.92	4.76	..
Benin	0.13	0.13	0.08	0.46	0.87	1.50	1.65	1.71	..
Botswana	..	..	0.30	0.57	0.68	0.87	1.04	1.07	..
Cameroon	0.25	0.53	0.91	0.94	0.95	1.15	1.38	1.40	..
Congo	0.18	0.21	0.22	0.18	0.28	0.56	0.77	0.75	..
Côte d'Ivoire	0.66	0.96	0.76	0.95	0.80	0.99	1.74	1.96	..
Dem. Rep. of the Congo	0.56	0.70	0.69	0.28	0.42	0.60	0.90	0.65	..
Egypt	5.69	10.13	16.26	20.26	23.23	29.37	30.03	31.04	..
Eritrea	..	..	..	0.11	0.11	0.07	0.09	0.09	..
Ethiopia	0.35	0.38	0.65	1.08	1.51	1.93	3.04	3.24	..
Gabon	0.16	0.38	0.20	0.35	0.38	0.62	0.77	0.78	..
Ghana	0.67	0.72	0.90	1.53	1.82	2.57	3.76	3.54	..
Kenya	0.95	1.27	1.60	1.81	1.84	2.80	3.95	4.23	..
Libya	0.81	2.59	3.58	6.23	6.54	9.17	6.44	8.48	..
Mauritius	0.09	0.13	0.23	0.40	0.45	0.47	0.51	0.54	..
Morocco	2.01	3.21	3.58	5.68	7.50	9.64	11.09	11.30	..
Mozambique	0.33	0.39	0.30	0.42	0.49	0.72	1.12	1.85	..
Namibia	..	..	..	0.63	0.83	1.02	1.27	1.34	..
Niger	..	..	..	0.14	0.17	0.35	0.49	0.49	..
Nigeria	2.29	7.10	6.35	9.66	12.16	11.73	18.06	18.80	..
Senegal	0.33	0.46	0.43	0.71	0.80	0.92	1.17	1.27	..
South Africa	10.39	11.23	15.08	15.95	18.88	22.76	25.79	25.95	..
South Sudan	..	..	..	..	..	..	0.39	0.36	..
Sudan	1.42	1.12	1.67	1.49	2.51	4.55	4.00	4.43	..
United Rep. of Tanzania	0.49	0.44	0.46	0.72	1.18	1.49	2.66	2.64	..
Togo	0.08	0.12	0.17	0.28	0.31	0.66	0.61	0.64	..
Tunisia	0.95	1.62	2.33	3.34	3.99	3.87	4.35	4.33	..
Zambia	0.63	0.60	0.55	0.46	0.60	0.57	0.93	0.93	..
Zimbabwe	0.66	0.62	0.87	0.98	0.68	0.63	1.21	1.07	..
Other Africa	2.86	3.50	3.67	4.25	4.70	5.72	7.86	8.01	..
<b>Africa</b>	<b>35.84</b>	<b>53.80</b>	<b>70.70</b>	<b>89.29</b>	<b>106.49</b>	<b>135.41</b>	<b>160.37</b>	<b>165.47</b>	..

1. Please refer to section 'Geographical coverage'.

## Final consumption of oil (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	0.59	1.24	1.57	2.71	3.17	3.22	3.91	3.93	..
Brunei Darussalam	0.06	0.18	0.26	0.36	0.40	0.58	0.64	0.60	..
Cambodia	..	..	..	0.53	0.63	1.27	1.87	2.10	..
DPR of Korea	0.80	2.42	2.11	0.66	0.55	0.57	0.60	0.61	..
India	19.91	26.55	50.17	94.36	105.57	134.24	174.38	182.28	..
Indonesia	7.69	17.29	27.24	47.96	52.29	56.46	67.20	66.97	..
Malaysia	3.27	5.28	9.32	18.32	21.41	23.96	27.61	28.23	..
Mongolia	..	..	0.72	0.40	0.52	0.77	1.07	0.92	..
Myanmar	0.96	1.15	0.59	1.53	1.96	1.04	3.46	4.14	..
Nepal	0.06	0.10	0.24	0.69	0.72	0.99	1.18	1.95	..
Pakistan	2.85	4.15	7.75	11.80	11.55	11.56	17.37	18.35	..
Philippines	6.76	6.81	8.15	13.11	11.89	11.46	15.07	16.59	..
Singapore	1.11	1.60	3.81	5.86	9.90	10.70	12.70	12.90	..
Sri Lanka	1.04	1.07	1.18	2.50	2.84	2.96	4.12	4.05	..
Chinese Taipei	4.88	11.80	18.34	28.32	36.07	39.62	38.33	38.21	..
Thailand	5.53	7.28	14.93	29.00	39.72	43.84	51.92	53.78	..
Viet Nam	3.71	1.66	2.33	6.51	11.33	16.64	18.01	20.50	..
Other Non-OECD Asia	1.90	2.03	1.99	2.04	2.39	3.77	5.75	5.84	..
<b>Non-OECD Asia excl. China</b>	<b>61.13</b>	<b>90.62</b>	<b>150.70</b>	<b>266.67</b>	<b>312.90</b>	<b>363.64</b>	<b>445.18</b>	<b>461.95</b>	..
People's Rep. of China	42.62	58.69	84.60	180.37	273.66	369.03	480.43	494.66	..
Hong Kong, China	1.46	1.83	2.79	5.65	2.84	3.00	3.24	3.44	..
<b>China</b>	<b>44.08</b>	<b>60.52</b>	<b>87.39</b>	<b>186.02</b>	<b>276.50</b>	<b>372.03</b>	<b>483.67</b>	<b>498.10</b>	..
Argentina	17.13	19.07	15.54	22.14	22.40	24.59	25.77	25.62	..
Bolivia	0.70	1.11	1.12	1.62	1.88	2.62	3.50	3.81	..
Brazil	33.48	49.65	53.46	80.06	78.99	93.86	103.00	101.33	..
Colombia	5.76	6.51	8.74	11.13	10.71	10.12	12.80	13.25	..
Costa Rica	0.44	0.67	0.80	1.54	1.70	1.94	2.25	2.40	..
Cuba	5.16	6.74	7.00	5.26	3.93	4.51	4.03	3.65	..
Curaçao	2.15	1.04	0.58	0.79	0.85	0.91	0.64	0.64	..
Dominican Republic	0.88	1.08	1.50	2.94	2.95	3.20	3.06	3.33	..
Ecuador	1.05	2.75	4.22	5.29	6.74	8.16	9.36	9.08	..
El Salvador	0.45	0.54	0.69	1.36	1.60	1.51	1.68	1.78	..
Guatemala	0.66	0.86	1.02	2.08	2.46	2.56	3.45	3.68	..
Haiti	0.12	0.18	0.22	0.41	0.61	0.60	0.75	0.76	..
Honduras	0.36	0.48	0.69	1.03	1.40	1.51	1.86	1.85	..
Jamaica	1.90	1.69	1.65	1.38	1.90	1.31	1.37	1.42	..
Nicaragua	0.43	0.45	0.43	0.71	0.83	0.84	1.17	1.26	..
Panama	0.48	0.60	0.65	1.18	1.67	2.07	2.52	2.56	..
Paraguay	0.22	0.42	0.64	1.09	1.15	1.57	1.91	2.15	..
Peru	4.30	5.02	4.80	6.52	6.15	7.57	8.97	9.21	..
Suriname	..	..	..	0.39	0.32	0.38	0.38	0.34	..
Trinidad and Tobago	0.50	0.73	0.62	0.73	1.10	1.36	1.42	1.54	..
Uruguay	1.35	1.41	1.07	1.48	1.31	1.60	1.78	1.86	..
Venezuela	7.57	12.67	14.36	18.03	21.84	27.55	22.24	19.85	..
Other Non-OECD Americas	2.07	1.70	2.50	2.56	2.32	2.74	2.91	2.96	..
<b>Non-OECD Americas</b>	<b>87.15</b>	<b>115.34</b>	<b>122.30</b>	<b>169.72</b>	<b>174.81</b>	<b>203.08</b>	<b>216.79</b>	<b>214.34</b>	..
Bahrain	0.09	0.26	0.40	0.74	1.43	1.57	1.78	1.78	..
Islamic Republic of Iran	13.51	23.95	40.78	56.98	67.36	65.10	66.11	64.85	..
Iraq	2.22	6.31	12.46	15.13	16.37	15.93	13.15	13.80	..
Jordan	0.45	1.09	2.01	2.95	3.75	3.31	3.82	4.21	..
Kuwait	0.96	2.72	1.51	3.39	5.31	8.57	8.80	8.78	..
Lebanon	1.45	1.17	0.93	2.21	2.28	2.29	3.15	3.22	..
Oman	0.08	0.49	1.22	2.05	3.02	4.13	6.66	6.28	..
Qatar	0.12	0.43	0.98	1.48	2.90	5.68	7.58	7.32	..
Saudi Arabia	2.84	19.81	28.54	43.44	55.84	75.87	98.67	93.92	..
Syrian Arab Republic	1.36	3.58	6.14	6.67	10.05	9.11	4.79	4.79	..
United Arab Emirates	0.26	3.09	6.22	7.25	9.64	12.47	15.16	16.64	..
Yemen	0.47	0.92	1.66	3.10	4.63	4.78	2.30	1.95	..
<b>Middle East</b>	<b>23.80</b>	<b>63.82</b>	<b>102.85</b>	<b>145.40</b>	<b>182.59</b>	<b>208.80</b>	<b>231.97</b>	<b>227.53</b>	..

## Final consumption of natural gas (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>651.75</b>	<b>814.72</b>	<b>944.58</b>	<b>1 117.71</b>	<b>1 192.25</b>	<b>1 343.84</b>	<b>1 406.64</b>	<b>1 440.26</b>	..
<b>Non-OECD Total</b>	<b>153.13</b>	<b>255.83</b>	<b>354.45</b>	<b>372.30</b>	<b>475.86</b>	<b>611.37</b>	<b>681.66</b>	<b>704.30</b>	..
<b>OECD Total</b>	<b>498.62</b>	<b>558.89</b>	<b>590.12</b>	<b>745.41</b>	<b>716.38</b>	<b>732.48</b>	<b>724.94</b>	<b>735.92</b>	..
Canada	23.73	36.23	43.31	53.43	46.68	42.18	47.54	45.69	..
Chile	0.04	0.10	0.90	3.29	3.51	2.35	1.51	1.69	..
Mexico	7.27	12.84	13.91	12.57	11.56	12.94	13.94	14.26	..
United States <sup>2</sup>	367.07	337.51	303.08	359.99	309.09	321.63	333.26	336.09	..
<b>OECD Americas</b>	<b>398.11</b>	<b>386.68</b>	<b>361.20</b>	<b>429.28</b>	<b>370.84</b>	<b>379.11</b>	<b>396.24</b>	<b>397.73</b>	..
Australia	2.11	5.03	8.66	11.39	12.33	12.57	13.52	13.15	..
Israel <sup>1</sup>	0.05	0.13	0.03	0.00	-	0.06	1.33	1.24	..
Japan	3.12	5.84	14.77	22.47	28.02	34.13	32.78	32.16	..
Korea	-	-	0.67	10.93	15.99	20.59	20.50	21.53	..
New Zealand	0.12	0.35	1.80	3.01	1.33	1.78	2.69	2.91	..
<b>OECD Asia Oceania</b>	<b>5.39</b>	<b>11.35</b>	<b>25.92</b>	<b>47.80</b>	<b>57.67</b>	<b>69.13</b>	<b>70.82</b>	<b>71.00</b>	..
Austria	1.45	2.83	3.03	4.27	4.93	5.11	4.74	4.93	..
Belgium	4.60	7.08	6.82	10.15	10.38	10.99	9.92	10.29	..
Czech Republic	0.81	1.18	4.24	5.92	6.18	6.18	5.12	5.38	..
Denmark	-	-	1.12	1.65	1.69	1.73	1.44	1.48	..
Estonia	..	..	0.44	0.28	0.38	0.21	0.22	0.25	..
Finland	-	0.43	0.96	0.92	0.85	0.82	0.64	0.63	..
France	10.28	19.27	23.93	32.15	34.56	33.00	28.85	30.19	..
Germany	18.58	33.49	39.06	55.13	55.09	56.38	51.67	55.04	..
Greece	-	-	0.10	0.38	0.71	1.14	1.32	1.19	..
Hungary	2.80	4.61	6.20	6.69	8.05	6.46	5.74	6.09	..
Iceland	-	-	-	-	-	-	-	-	..
Ireland	-	0.35	1.00	1.58	1.36	1.59	1.72	1.77	..
Italy	12.36	19.73	30.40	38.59	41.58	39.07	33.56	33.89	..
Latvia	..	..	0.70	0.33	0.51	0.50	0.32	0.32	..
Luxembourg	0.18	0.36	0.42	0.60	0.63	0.68	0.60	0.63	..
Netherlands	19.30	24.26	23.71	23.09	22.27	24.69	18.79	19.35	..
Norway	-	-	-	0.59	0.74	0.78	0.98	0.86	..
Poland	4.42	6.96	7.69	8.16	9.93	10.55	10.61	11.33	..
Portugal	-	-	-	0.79	1.31	1.56	1.64	1.62	..
Slovak Republic	1.40	1.63	3.91	4.17	4.31	3.70	2.87	2.90	..
Slovenia	..	..	0.71	0.69	0.79	0.70	0.56	0.60	..
Spain	0.45	0.72	4.32	12.29	18.13	14.82	13.58	13.89	..
Sweden	-	-	0.33	0.44	0.51	0.66	0.67	0.55	..
Switzerland	0.11	0.71	1.39	2.13	2.45	2.69	2.67	2.79	..
Turkey	-	-	0.71	4.91	10.05	13.14	21.44	21.75	..
United Kingdom	18.38	37.26	41.79	52.43	50.46	47.09	38.23	39.44	..
<b>OECD Europe</b>	<b>95.12</b>	<b>160.87</b>	<b>203.00</b>	<b>268.33</b>	<b>287.87</b>	<b>284.24</b>	<b>257.88</b>	<b>267.19</b>	..
International marine bunkers	-	-	-	-	-	-	0.03	0.05	..
IEA	498.53	558.66	587.78	741.10	711.58	728.86	721.23	732.06	..
IEA/Accession/Association	501.54	569.16	611.88	784.11	782.90	853.03	894.92	913.51	..
European Union - 28	..	..	226.72	272.04	287.28	278.45	242.86	251.68	..
G7	453.52	489.33	496.33	614.19	565.47	573.48	565.89	572.50	..
G8	..	..	639.46	731.36	693.53	716.71	707.10	723.29	..
G20	..	..	794.01	931.08	949.74	1 043.82	1 076.47	1 104.15	..
<b>OPEC</b>	<b>10.35</b>	<b>16.83</b>	<b>41.67</b>	<b>79.06</b>	<b>110.17</b>	<b>162.48</b>	<b>187.92</b>	<b>188.51</b>	..

1. Please refer to section 'Geographical coverage'.

2. For the United States, gas used by autoproducers of electricity and heat has been included in final consumption prior to 1989.

## Final consumption of natural gas (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>153.13</b>	<b>255.83</b>	<b>354.45</b>	<b>372.30</b>	<b>475.86</b>	<b>611.37</b>	<b>681.66</b>	<b>704.30</b>	<b>..</b>
Albania	0.16	0.32	0.20	0.00	-	0.00	0.01	0.01	..
Armenia	..	..	2.75	0.44	0.93	1.02	1.11	1.21	..
Azerbaijan	..	..	9.29	3.07	3.23	3.06	3.48	3.91	..
Belarus	..	..	4.28	3.18	3.92	4.65	4.35	4.43	..
Bosnia and Herzegovina	..	..	0.35	0.16	0.25	0.14	0.13	0.14	..
Bulgaria	0.17	3.18	2.60	1.71	1.68	1.25	1.59	1.60	..
Croatia	..	..	1.24	1.45	1.62	1.69	1.39	1.41	..
Cyprus <sup>1</sup>	-	-	-	-	-	-	-	-	..
FYR of Macedonia	..	..	-	0.01	0.05	0.04	0.03	0.04	..
Georgia	..	..	2.59	0.46	0.57	0.61	1.36	1.34	..
Gibraltar	-	-	-	-	-	-	-	-	..
Kazakhstan	..	..	7.77	2.67	2.26	3.32	3.19	3.31	..
Kosovo	..	..	..	-	-	-	-	-	..
Kyrgyzstan	..	..	0.61	0.16	0.30	0.12	0.12	0.13	..
Lithuania	..	..	2.13	0.91	1.10	1.10	1.46	1.39	..
Malta	-	-	-	-	-	-	-	-	..
Republic of Moldova	..	..	0.98	0.47	0.74	0.71	0.55	0.61	..
Montenegro	..	..	..	..	-	-	-	-	..
Romania	13.90	27.26	19.85	7.28	8.26	6.78	5.63	5.48	..
Russian Federation	..	..	143.12	117.17	128.05	143.23	141.21	150.79	..
Serbia	..	..	2.36	1.16	1.24	1.15	0.87	1.02	..
Tajikistan	..	..	0.73	0.38	0.29	0.15	0.00	0.00	..
Turkmenistan	..	..	6.74	4.98	6.46	8.28	10.45	10.45	..
Ukraine	..	..	33.23	28.51	34.55	28.40	16.03	15.67	..
Uzbekistan	..	..	19.68	26.34	24.34	21.22	16.97	17.20	..
Former Soviet Union	116.23	181.72	x	x	x	x	x	x	..
Former Yugoslavia	0.98	2.12	x	x	x	x	x	x	..
<b>Non-OECD Europe and Eurasia</b>	<b>131.44</b>	<b>214.61</b>	<b>260.50</b>	<b>200.52</b>	<b>219.83</b>	<b>226.91</b>	<b>209.92</b>	<b>220.14</b>	<b>..</b>
Algeria	0.27	0.81	3.36	5.31	7.70	9.11	14.73	15.47	..
Angola	0.05	0.06	0.44	0.47	0.53	0.60	0.63	0.59	..
Benin	-	-	-	-	-	-	-	-	..
Botswana	..	..	-	-	-	-	-	-	..
Cameroon	-	-	-	-	-	-	-	-	..
Congo	-	-	-	-	-	-	-	-	..
Côte d'Ivoire	-	-	-	0.49	0.14	0.18	0.25	0.31	..
Dem. Rep. of the Congo	-	-	-	-	-	-	-	-	..
Egypt	-	0.75	2.42	3.95	9.08	10.95	10.03	11.05	..
Eritrea	..	..	..	-	-	-	-	-	..
Ethiopia	-	-	-	-	-	-	-	-	..
Gabon	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	..
Ghana	-	-	-	-	-	-	-	-	..
Kenya	-	-	-	-	-	-	-	-	..
Libya	0.26	1.01	1.29	2.15	2.07	2.21	0.13	0.13	..
Mauritius	-	-	-	-	-	-	-	-	..
Morocco	0.06	0.06	0.04	0.04	0.03	0.04	0.07	0.06	..
Mozambique	-	-	-	0.00	0.02	0.06	0.14	0.13	..
Namibia	..	..	..	-	-	-	-	-	..
Niger	..	..	..	-	-	-	-	-	..
Nigeria	0.03	0.04	0.72	0.97	2.81	1.21	3.76	3.41	..
Senegal	-	-	-	-	-	-	-	-	..
South Africa	-	-	-	-	-	0.82	1.74	1.69	..
South Sudan	..	..	..	..	..	..	-	-	..
Sudan	-	-	-	-	-	-	-	-	..
United Rep. of Tanzania	-	-	-	-	0.05	0.10	0.14	0.15	..
Togo	-	-	-	-	-	-	-	-	..
Tunisia	0.01	0.08	0.31	0.61	0.84	1.49	1.29	1.40	..
Zambia	-	-	-	-	-	-	-	-	..
Zimbabwe	-	-	-	-	-	-	-	-	..
Other Africa	-	-	-	0.00	0.95	0.90	0.78	1.17	..
<b>Africa</b>	<b>0.68</b>	<b>2.80</b>	<b>8.58</b>	<b>13.99</b>	<b>24.24</b>	<b>27.70</b>	<b>33.69</b>	<b>35.55</b>	<b>..</b>

1. Please refer to section 'Geographical coverage'.

## Final consumption of natural gas (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	0.33	0.66	1.85	3.57	4.67	7.42	8.80	9.61	..
Brunei Darussalam	-	-	-	-	-	0.48	0.05	0.46	..
Cambodia	..	..	..	-	-	-	-	-	..
DPR of Korea	-	-	-	-	-	-	-	-	..
India	0.29	0.68	5.64	9.67	13.27	27.21	29.33	32.14	..
Indonesia	0.12	2.36	6.02	11.56	13.63	15.86	17.05	13.50	..
Malaysia	0.01	0.04	1.09	3.86	6.98	6.25	9.57	12.30	..
Mongolia	..	..	-	-	-	-	-	-	..
Myanmar	0.03	0.08	0.22	0.32	0.42	0.60	0.71	0.55	..
Nepal	-	-	-	-	-	-	-	-	..
Pakistan	1.80	3.02	6.01	10.18	15.54	19.13	18.15	17.28	..
Philippines	-	-	-	-	0.01	0.07	0.05	0.07	..
Singapore	0.02	0.05	0.06	0.11	0.51	1.12	1.21	1.17	..
Sri Lanka	-	-	-	-	-	-	-	-	..
Chinese Taipei	0.94	1.35	0.88	1.55	1.78	2.12	2.83	3.00	..
Thailand	-	-	0.14	1.11	1.86	4.59	7.17	7.20	..
Viet Nam	-	-	-	0.02	0.54	0.49	1.67	1.60	..
Other Non-OECD Asia	0.15	0.09	0.24	0.10	0.11	0.13	0.12	0.12	..
<b>Non-OECD Asia excl. China</b>	<b>3.69</b>	<b>8.33</b>	<b>22.17</b>	<b>42.05</b>	<b>59.32</b>	<b>85.47</b>	<b>96.70</b>	<b>99.00</b>	..
People's Rep. of China	2.25	6.36	8.87	12.38	28.90	60.23	104.66	113.13	..
Hong Kong, China	0.03	0.08	0.32	0.56	0.59	0.59	0.61	0.62	..
<b>China</b>	<b>2.28</b>	<b>6.44</b>	<b>9.19</b>	<b>12.94</b>	<b>29.49</b>	<b>60.82</b>	<b>105.27</b>	<b>113.75</b>	..
Argentina	3.68	5.41	9.57	15.60	18.71	20.14	22.08	22.14	..
Bolivia	0.00	0.04	0.17	0.35	0.53	0.99	1.49	1.53	..
Brazil	0.22	0.89	2.42	4.86	9.62	12.77	12.71	12.56	..
Colombia	0.21	0.54	0.91	1.62	2.83	3.58	3.78	3.70	..
Costa Rica	-	-	-	-	-	-	-	-	..
Cuba	0.03	0.05	0.06	0.20	0.20	0.38	0.37	0.33	..
Curaçao	-	-	-	-	-	-	-	-	..
Dominican Republic	-	-	-	-	-	0.03	0.11	0.10	..
Ecuador	-	-	-	-	-	-	0.01	0.04	..
El Salvador	-	-	-	-	-	-	-	-	..
Guatemala	-	-	-	-	-	-	-	-	..
Haiti	-	-	-	-	-	-	-	-	..
Honduras	-	-	-	-	-	-	-	-	..
Jamaica	-	-	-	-	-	-	-	-	..
Nicaragua	-	-	-	-	-	-	-	-	..
Panama	-	-	-	-	-	-	-	-	..
Paraguay	-	-	-	-	-	-	-	-	..
Peru	0.04	0.07	0.07	0.00	0.15	1.14	1.92	1.90	..
Suriname	..	..	..	-	-	-	-	-	..
Trinidad and Tobago	0.52	0.86	2.82	6.06	9.69	11.97	11.03	10.46	..
Uruguay	-	-	-	0.03	0.07	0.05	0.04	0.05	..
Venezuela	3.16	6.07	6.73	8.87	12.04	13.57	7.95	6.18	..
Other Non-OECD Americas	-	0.01	0.01	0.02	0.01	0.01	0.01	0.01	..
<b>Non-OECD Americas</b>	<b>7.87</b>	<b>13.94</b>	<b>22.76</b>	<b>37.60</b>	<b>53.85</b>	<b>64.61</b>	<b>61.51</b>	<b>59.00</b>	..
Bahrain	0.59	0.87	1.05	1.19	1.21	1.63	2.12	2.20	..
Islamic Republic of Iran	1.92	1.61	9.35	29.22	46.63	75.59	95.30	101.82	..
Iraq	0.49	0.52	0.81	1.29	0.07	0.20	1.22	1.39	..
Jordan	-	-	-	-	-	-	-	-	..
Kuwait	2.77	3.16	1.61	3.03	4.44	3.28	5.62	6.47	..
Lebanon	-	-	-	-	-	-	-	-	..
Oman	-	-	0.32	0.40	1.13	6.73	11.18	11.45	..
Qatar	0.58	1.30	2.40	3.68	4.52	4.91	7.79	7.48	..
Saudi Arabia	-	0.24	6.21	11.57	15.97	27.33	21.25	21.27	..
Syrian Arab Republic	-	-	0.75	2.30	1.78	1.72	0.58	0.51	..
United Arab Emirates	0.82	2.00	8.74	12.52	13.37	24.44	29.53	24.25	..
Yemen	-	-	-	-	-	-	-	-	..
<b>Middle East</b>	<b>7.17</b>	<b>9.71</b>	<b>31.25</b>	<b>65.20</b>	<b>89.12</b>	<b>145.85</b>	<b>174.58</b>	<b>176.84</b>	..

## Final consumption of electricity (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>439.41</b>	<b>585.83</b>	<b>833.87</b>	<b>1 089.46</b>	<b>1 300.97</b>	<b>1 539.15</b>	<b>1 737.59</b>	<b>1 793.94</b>	..
<b>Non-OECD Total</b>	<b>115.04</b>	<b>176.53</b>	<b>281.05</b>	<b>373.63</b>	<b>519.27</b>	<b>729.67</b>	<b>930.99</b>	<b>976.04</b>	..
<b>OECD Total</b>	<b>324.37</b>	<b>409.29</b>	<b>552.82</b>	<b>715.83</b>	<b>781.70</b>	<b>809.47</b>	<b>806.59</b>	<b>817.89</b>	..
Canada	18.92	26.07	35.95	41.40	44.16	44.44	40.57	40.81	..
Chile	0.63	0.84	1.33	3.16	4.15	4.71	5.76	6.03	..
Mexico	2.71	4.91	8.62	12.50	16.31	18.55	22.14	23.25	..
United States	143.37	174.16	226.45	300.90	320.85	325.74	325.09	327.40	..
<b>OECD Americas</b>	<b>165.63</b>	<b>205.99</b>	<b>272.34</b>	<b>357.96</b>	<b>385.47</b>	<b>393.43</b>	<b>393.56</b>	<b>397.50</b>	..
Australia	4.51	6.81	11.11	14.85	16.27	18.06	18.18	18.22	..
Israel <sup>1</sup>	0.65	0.94	1.56	3.32	3.65	4.19	4.68	4.83	..
Japan	35.70	44.13	65.05	81.10	84.68	85.47	81.89	83.18	..
Korea	1.10	2.81	8.12	22.62	30.75	38.64	42.59	44.48	..
New Zealand	1.37	1.68	2.43	2.95	3.27	3.37	3.33	3.31	..
<b>OECD Asia Oceania</b>	<b>43.33</b>	<b>56.38</b>	<b>88.26</b>	<b>124.84</b>	<b>138.62</b>	<b>149.72</b>	<b>150.67</b>	<b>154.01</b>	..
Austria	2.18	2.84	3.62	4.32	4.93	5.15	5.25	5.32	..
Belgium	2.94	3.73	4.99	6.67	6.90	7.16	7.03	7.04	..
Czech Republic	2.54	3.26	4.14	4.25	4.75	4.66	4.70	4.82	..
Denmark	1.38	1.86	2.44	2.79	2.88	2.76	2.66	2.68	..
Estonia	..	..	0.59	0.43	0.52	0.59	0.59	0.63	..
Finland	2.32	3.20	5.07	6.51	6.94	7.18	6.75	6.95	..
France	12.78	17.98	25.99	33.10	36.35	38.18	37.37	38.04	..
Germany	26.91	33.69	39.13	41.57	44.91	45.78	44.26	44.49	..
Greece	1.09	1.71	2.45	3.71	4.38	4.57	4.37	4.59	..
Hungary	1.51	2.20	2.72	2.53	2.78	2.94	3.12	3.19	..
Iceland	0.18	0.25	0.34	0.59	0.67	1.35	1.50	1.49	..
Ireland	0.53	0.74	1.02	1.74	2.09	2.19	2.16	2.20	..
Italy	10.58	13.74	18.45	23.47	25.87	25.74	24.72	24.59	..
Latvia	..	..	0.72	0.38	0.49	0.53	0.56	0.56	..
Luxembourg	0.26	0.31	0.36	0.50	0.53	0.57	0.54	0.55	..
Netherlands	3.81	4.94	6.15	8.18	8.98	9.26	8.87	9.08	..
Norway	5.23	6.43	8.32	9.42	9.52	9.73	9.55	9.77	..
Poland	5.01	7.31	8.27	8.43	9.03	10.21	10.99	11.42	..
Portugal	0.70	1.23	2.02	3.30	3.98	4.29	3.94	3.99	..
Slovak Republic	1.06	1.64	2.01	1.89	1.96	2.08	2.10	2.15	..
Slovenia	..	..	0.79	0.90	1.10	1.03	1.10	1.12	..
Spain	5.08	7.72	10.82	16.20	20.83	21.05	19.95	19.99	..
Sweden	5.95	7.30	10.35	11.07	11.24	11.28	10.74	10.96	..
Switzerland	2.49	3.03	4.00	4.50	4.93	5.14	5.01	5.01	..
Turkey	0.85	1.68	3.87	8.24	11.06	14.62	18.47	19.64	..
United Kingdom	20.04	20.15	23.60	28.33	29.98	28.29	26.10	26.13	..
<b>OECD Europe</b>	<b>115.41</b>	<b>146.92</b>	<b>192.22</b>	<b>233.03</b>	<b>257.60</b>	<b>266.32</b>	<b>262.36</b>	<b>266.38</b>	..
IEA	322.91	407.27	548.08	707.47	771.63	797.67	793.00	803.86	..
IEA/Accession/Association	345.94	449.96	632.60	877.55	1 044.72	1 230.38	1 389.07	1 434.84	..
European Union - 28	..	..	185.79	217.22	239.39	244.02	236.62	239.40	..
G7	268.29	329.93	434.61	549.87	586.80	593.63	580.01	584.64	..
G8	..	..	505.68	602.19	642.69	656.12	642.46	648.68	..
G20	..	..	716.24	940.16	1 112.73	1 309.69	1 471.99	1 517.83	..
<b>OPEC</b>	<b>3.27</b>	<b>8.51</b>	<b>20.01</b>	<b>34.08</b>	<b>45.90</b>	<b>64.40</b>	<b>78.99</b>	<b>82.03</b>	..

1. Please refer to section 'Geographical coverage'.

## Final consumption of electricity (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>115.04</b>	<b>176.53</b>	<b>281.05</b>	<b>373.63</b>	<b>519.27</b>	<b>729.67</b>	<b>930.99</b>	<b>976.04</b>	<b>..</b>
Albania	0.11	0.25	0.14	0.37	0.44	0.49	0.51	0.47	..
Armenia	..	..	0.78	0.31	0.36	0.40	0.46	0.46	..
Azerbaijan	..	..	1.36	1.24	1.55	1.05	1.51	1.51	..
Belarus	..	..	3.41	2.30	2.38	2.53	2.52	2.53	..
Bosnia and Herzegovina	..	..	0.87	0.50	0.67	0.89	0.92	0.95	..
Bulgaria	1.78	2.55	3.03	2.09	2.21	2.33	2.44	2.48	..
Croatia	..	..	1.14	1.02	1.24	1.36	1.32	1.32	..
Cyprus <sup>1</sup>	0.06	0.08	0.15	0.26	0.34	0.42	0.35	0.38	..
FYR of Macedonia	..	..	0.40	0.45	0.54	0.58	0.57	0.53	..
Georgia	..	..	1.16	0.54	0.53	0.63	0.85	0.90	..
Gibraltar	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.02	..
Kazakhstan	..	..	8.30	3.03	5.23	4.93	5.86	5.67	..
Kosovo	..	..	..	0.20	0.27	0.35	0.40	0.33	..
Kyrgyzstan	..	..	0.85	0.69	0.58	0.61	0.91	0.87	..
Lithuania	..	..	1.03	0.53	0.69	0.72	0.80	0.84	..
Malta	0.03	0.04	0.08	0.13	0.16	0.16	0.18	0.18	..
Republic of Moldova	..	..	0.89	0.47	0.58	0.48	0.39	0.37	..
Montenegro	..	..	..	..	0.32	0.28	0.23	0.23	..
Romania	2.89	4.65	4.66	2.92	3.34	3.55	3.70	3.72	..
Russian Federation	..	..	71.08	52.32	55.89	62.48	62.45	64.03	..
Serbia	..	..	2.78	2.35	2.21	2.37	2.32	2.35	..
Tajikistan	..	..	1.53	1.14	1.25	1.21	1.19	1.12	..
Turkmenistan	..	..	0.72	0.50	0.64	0.79	1.07	1.07	..
Ukraine	..	..	17.67	9.76	10.59	11.53	10.23	10.10	..
Uzbekistan	..	..	3.69	3.42	3.50	3.68	4.00	4.04	..
Former Soviet Union	62.40	82.84	x	x	x	x	x	x	..
Former Yugoslavia	2.46	4.20	x	x	x	x	x	x	..
<b>Non-OECD Europe and Eurasia</b>	<b>69.74</b>	<b>94.61</b>	<b>125.76</b>	<b>86.54</b>	<b>95.50</b>	<b>103.84</b>	<b>105.20</b>	<b>106.49</b>	<b>..</b>
Algeria	0.17	0.43	1.06	1.60	2.29	2.88	4.31	4.50	..
Angola	0.06	0.04	0.05	0.10	0.17	0.40	0.72	0.77	..
Benin	0.00	0.01	0.01	0.03	0.05	0.07	0.10	0.10	..
Botswana	..	..	0.07	0.15	0.20	0.27	0.30	0.30	..
Cameroon	0.09	0.12	0.20	0.23	0.28	0.42	0.53	0.55	..
Congo	0.01	0.01	0.03	0.02	0.03	0.04	0.07	0.07	..
Côte d'Ivoire	0.05	0.12	0.16	0.24	0.25	0.35	0.52	0.57	..
Dem. Rep. of the Congo	0.30	0.34	0.18	0.39	0.42	0.54	0.62	0.60	..
Egypt	0.60	1.34	3.11	5.56	7.92	10.76	13.48	13.95	..
Eritrea	..	..	..	0.01	0.02	0.02	0.03	0.03	..
Ethiopia	0.05	0.05	0.08	0.12	0.20	0.33	0.72	0.76	..
Gabon	0.01	0.04	0.07	0.09	0.10	0.13	0.16	0.17	..
Ghana	0.31	0.39	0.38	0.55	0.45	0.59	0.75	0.87	..
Kenya	0.09	0.14	0.25	0.28	0.40	0.53	0.68	0.71	..
Libya	0.07	0.26	0.50	0.87	1.64	1.70	1.31	1.20	..
Mauritius	0.01	0.02	0.06	0.14	0.17	0.21	0.24	0.24	..
Morocco	0.20	0.37	0.70	1.10	1.52	2.03	2.57	2.67	..
Mozambique	0.05	0.04	0.04	0.18	0.78	0.85	1.16	0.98	..
Namibia	..	..	..	0.16	0.25	0.29	0.33	0.34	..
Niger	..	..	..	0.03	0.04	0.06	0.08	0.08	..
Nigeria	0.18	0.40	0.68	0.74	1.48	1.78	2.16	2.18	..
Senegal	0.03	0.05	0.06	0.08	0.15	0.22	0.30	0.32	..
South Africa	4.74	7.96	11.91	14.97	16.61	17.43	16.67	16.58	..
South Sudan	..	..	..	..	..	..	0.05	0.03	..
Sudan	0.04	0.06	0.11	0.19	0.26	0.52	0.96	1.08	..
United Rep. of Tanzania	0.04	0.06	0.11	0.17	0.22	0.35	0.45	0.48	..
Togo	0.01	0.01	0.03	0.04	0.05	0.07	0.10	0.11	..
Tunisia	0.08	0.21	0.42	0.77	0.97	1.17	1.33	1.34	..
Zambia	0.44	0.50	0.51	0.52	0.69	0.67	0.98	0.93	..
Zimbabwe	0.42	0.60	0.77	0.90	0.90	0.63	0.59	0.63	..
Other Africa	0.31	0.41	0.54	0.78	1.00	1.29	1.40	1.44	..
<b>Africa</b>	<b>8.36</b>	<b>13.97</b>	<b>22.10</b>	<b>31.02</b>	<b>39.51</b>	<b>46.59</b>	<b>53.67</b>	<b>54.57</b>	<b>..</b>

1. Please refer to section 'Geographical coverage'.



## Final consumption of electricity (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	0.09	0.12	0.40	1.07	1.91	2.97	4.18	4.55	..
Brunei Darussalam	0.02	0.03	0.09	0.21	0.23	0.25	0.29	0.28	..
Cambodia	..	..	..	0.03	0.07	0.18	0.43	0.52	..
DPR of Korea	1.21	1.55	2.03	1.25	1.47	1.39	0.88	1.09	..
India	4.77	7.80	18.49	32.35	42.08	62.42	88.85	95.44	..
Indonesia	0.17	0.56	2.43	6.81	9.26	12.72	17.44	18.57	..
Malaysia	0.35	0.75	1.71	5.26	6.94	9.53	11.40	12.39	..
Mongolia	..	..	0.23	0.16	0.22	0.29	0.45	0.47	..
Myanmar	0.05	0.09	0.15	0.28	0.31	0.54	1.15	1.32	..
Nepal	0.01	0.01	0.05	0.11	0.17	0.24	0.33	0.42	..
Pakistan	0.53	0.89	2.47	4.18	5.83	6.64	7.78	8.08	..
Philippines	1.03	1.46	1.82	3.14	3.88	4.75	5.83	6.38	..
Singapore	0.25	0.47	1.11	2.35	3.05	3.63	4.09	4.18	..
Sri Lanka	0.08	0.12	0.22	0.42	0.53	0.79	1.01	1.09	..
Chinese Taipei	1.50	3.17	6.59	13.76	17.10	18.77	19.84	20.33	..
Thailand	0.53	1.12	3.30	7.56	10.42	12.84	15.79	16.70	..
Viet Nam	0.16	0.23	0.53	1.93	4.05	7.47	12.34	13.65	..
Other Non-OECD Asia	0.08	0.28	0.41	0.72	0.97	1.48	2.25	2.29	..
<b>Non-OECD Asia excl. China</b>	<b>10.81</b>	<b>18.65</b>	<b>42.06</b>	<b>81.59</b>	<b>108.51</b>	<b>146.91</b>	<b>194.33</b>	<b>207.76</b>	..
People's Rep. of China	11.83	21.34	39.03	89.13	171.51	296.71	419.29	445.15	..
Hong Kong, China	0.52	0.94	2.05	3.12	3.44	3.61	3.78	3.72	..
<b>China</b>	<b>12.35</b>	<b>22.28</b>	<b>41.08</b>	<b>92.25</b>	<b>174.95</b>	<b>300.32</b>	<b>423.07</b>	<b>448.87</b>	..
Argentina	1.96	2.83	3.47	6.49	7.76	9.70	11.36	11.35	..
Bolivia	0.07	0.12	0.15	0.30	0.37	0.53	0.68	0.71	..
Brazil	4.66	10.19	18.13	27.61	31.10	37.65	42.27	42.23	..
Colombia	0.77	1.37	2.31	2.87	3.35	4.06	5.15	5.17	..
Costa Rica	0.10	0.17	0.28	0.49	0.63	0.74	0.81	0.84	..
Cuba	0.38	0.61	1.03	1.01	1.04	1.18	1.39	1.40	..
Curaçao	0.05	0.05	0.05	0.07	0.08	0.08	0.05	0.06	..
Dominican Republic	0.16	0.21	0.27	0.94	0.98	1.09	1.34	1.41	..
Ecuador	0.08	0.25	0.41	0.68	0.93	1.45	1.97	2.02	..
El Salvador	0.07	0.11	0.16	0.31	0.37	0.43	0.49	0.49	..
Guatemala	0.07	0.14	0.17	0.33	0.52	0.65	0.79	0.83	..
Haiti	0.01	0.02	0.03	0.03	0.03	0.02	0.04	0.04	..
Honduras	0.04	0.07	0.15	0.28	0.37	0.44	0.67	0.61	..
Jamaica	0.16	0.09	0.14	0.52	0.55	0.27	0.26	0.27	..
Nicaragua	0.05	0.08	0.09	0.13	0.17	0.23	0.29	0.29	..
Panama	0.08	0.13	0.18	0.33	0.41	0.54	0.73	0.74	..
Paraguay	0.02	0.07	0.17	0.38	0.41	0.59	0.91	0.95	..
Peru	0.52	0.75	1.01	1.49	1.96	2.95	3.64	3.90	..
Suriname	..	..	..	0.09	0.12	0.13	0.17	0.15	..
Trinidad and Tobago	0.07	0.15	0.27	0.41	0.55	0.68	0.83	0.87	..
Uruguay	0.16	0.24	0.33	0.57	0.56	0.80	0.91	0.96	..
Venezuela	1.00	2.37	3.87	5.22	6.12	7.02	6.46	5.84	..
Other Non-OECD Americas	1.30	1.51	1.86	2.41	2.84	2.74	2.50	2.54	..
<b>Non-OECD Americas</b>	<b>11.77</b>	<b>21.51</b>	<b>34.54</b>	<b>52.95</b>	<b>61.21</b>	<b>73.95</b>	<b>83.71</b>	<b>83.63</b>	..
Bahrain	0.04	0.14	0.65	1.12	1.58	1.91	2.39	2.38	..
Islamic Republic of Iran	0.91	1.67	4.24	8.12	11.65	16.00	18.15	20.72	..
Iraq	0.29	0.93	1.96	2.51	1.94	3.03	3.06	3.33	..
Jordan	0.01	0.07	0.26	0.52	0.76	1.10	1.39	1.44	..
Kuwait	0.18	0.37	0.83	1.72	2.42	3.20	3.72	3.93	..
Lebanon	0.13	0.20	0.12	0.83	0.96	1.30	1.43	1.46	..
Oman	0.00	0.06	0.30	0.59	0.82	1.39	2.49	2.61	..
Qatar	0.04	0.19	0.39	0.66	1.04	2.12	3.13	3.19	..
Saudi Arabia	0.23	1.09	4.72	8.51	11.61	17.44	24.31	24.39	..
Syrian Arab Republic	0.11	0.26	0.71	1.25	2.02	2.89	1.12	1.13	..
United Arab Emirates	0.05	0.48	1.23	3.26	4.52	7.26	9.53	9.80	..
Yemen	0.02	0.04	0.11	0.18	0.28	0.43	0.30	0.35	..
<b>Middle East</b>	<b>2.01</b>	<b>5.51</b>	<b>15.52</b>	<b>29.27</b>	<b>39.60</b>	<b>58.06</b>	<b>71.01</b>	<b>74.73</b>	..

## Total final consumption of energy (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>4 661.14</b>	<b>5 367.74</b>	<b>6 270.99</b>	<b>7 035.49</b>	<b>7 978.08</b>	<b>8 832.15</b>	<b>9 427.78</b>	<b>9 555.32</b>	..
<b>Non-OECD Total</b>	<b>1 661.39</b>	<b>2 247.67</b>	<b>2 959.83</b>	<b>3 124.32</b>	<b>3 902.73</b>	<b>4 770.83</b>	<b>5 412.09</b>	<b>5 487.89</b>	..
<b>OECD Total</b>	<b>2 815.68</b>	<b>2 941.69</b>	<b>3 108.90</b>	<b>3 637.36</b>	<b>3 756.65</b>	<b>3 702.74</b>	<b>3 631.69</b>	<b>3 668.93</b>	..
Canada	131.43	155.07	161.79	191.54	195.94	190.28	192.77	191.40	..
Chile	6.52	7.30	11.10	20.38	21.84	23.86	25.02	26.49	..
Mexico	39.74	65.93	83.32	95.27	105.99	117.25	119.81	121.76	..
United States <sup>2</sup>	1 315.46	1 311.37	1 293.56	1 546.29	1 563.08	1 512.99	1 507.75	1 515.03	..
<b>OECD Americas</b>	<b>1 493.16</b>	<b>1 539.66</b>	<b>1 549.77</b>	<b>1 853.49</b>	<b>1 886.85</b>	<b>1 844.38</b>	<b>1 845.35</b>	<b>1 854.69</b>	..
Australia	39.58	46.79	56.66	69.58	72.23	76.58	80.78	81.25	..
Israel <sup>1</sup>	3.61	4.51	6.97	11.98	11.95	14.84	14.87	15.16	..
Japan	233.98	231.88	288.26	330.76	333.64	313.70	297.31	294.05	..
Korea	17.49	31.29	64.91	127.11	140.45	157.69	173.22	178.71	..
New Zealand	5.83	6.91	9.72	12.95	12.55	12.93	14.05	14.62	..
<b>OECD Asia Oceania</b>	<b>300.49</b>	<b>321.38</b>	<b>426.50</b>	<b>552.38</b>	<b>570.83</b>	<b>575.75</b>	<b>580.23</b>	<b>583.79</b>	..
Austria	16.61	18.64	19.71	23.44	27.21	27.47	27.11	27.84	..
Belgium	33.73	32.29	32.14	41.71	41.86	42.55	41.92	42.25	..
Czech Republic	31.35	34.66	32.98	26.12	28.09	26.97	25.50	25.40	..
Denmark	15.31	14.74	13.17	14.24	14.93	14.97	13.38	13.75	..
Estonia	..	..	5.67	2.58	3.05	2.96	2.84	2.89	..
Finland	19.19	19.34	22.38	24.49	25.35	26.49	24.86	25.99	..
France	142.23	141.29	141.66	162.16	167.61	159.99	150.48	152.16	..
Germany	241.72	248.67	240.79	231.40	230.69	228.90	220.18	223.93	..
Greece	8.53	10.70	14.49	18.45	20.79	19.43	16.38	16.41	..
Hungary	16.53	21.57	20.69	17.22	20.47	18.97	18.94	19.39	..
Iceland	1.02	1.28	1.36	1.77	1.92	2.53	2.85	2.99	..
Ireland	5.11	6.34	7.55	10.78	12.23	11.51	10.50	10.91	..
Italy	96.56	102.23	114.95	128.84	141.29	133.75	118.86	117.90	..
Latvia	..	..	6.42	3.30	4.06	4.07	3.79	3.79	..
Luxembourg	2.87	2.71	2.78	3.25	4.09	3.94	3.58	3.57	..
Netherlands	47.66	54.32	54.57	60.00	64.53	66.87	56.56	57.86	..
Norway	13.36	15.98	17.43	19.80	20.45	21.31	20.39	20.56	..
Poland	60.55	78.01	61.44	57.77	61.86	69.98	66.50	70.66	..
Portugal	5.74	7.91	13.39	19.36	20.46	18.95	16.27	16.06	..
Slovak Republic	10.86	13.03	15.75	11.42	11.71	11.44	10.03	10.25	..
Slovenia	..	..	3.69	4.65	5.16	5.22	4.79	4.99	..
Spain	38.54	48.12	60.61	85.49	102.06	92.24	79.69	82.28	..
Sweden	34.82	34.60	32.12	35.30	34.56	34.86	32.19	33.35	..
Switzerland	16.67	16.62	18.31	19.37	20.44	20.79	18.93	19.20	..
Turkey	19.86	26.32	40.39	57.84	65.38	78.46	93.62	97.85	..
United Kingdom	143.23	131.29	138.17	150.74	148.72	137.99	125.98	128.23	..
<b>OECD Europe</b>	<b>1 022.04</b>	<b>1 080.65</b>	<b>1 132.62</b>	<b>1 231.49</b>	<b>1 298.97</b>	<b>1 282.62</b>	<b>1 206.11</b>	<b>1 230.45</b>	..
International marine bunkers	121.53	110.85	115.75	155.02	177.49	205.73	206.36	212.19	..
International aviation bunkers	62.54	67.53	86.51	118.79	141.22	152.85	177.65	186.31	..
IEA	2 804.52	2 928.60	3 079.36	3 595.28	3 711.71	3 652.21	3 580.36	3 615.51	..
IEA/Accession/Association	3 440.11	3 764.41	4 221.77	5 051.86	5 717.01	6 253.96	6 641.05	6 703.95	..
European Union - 28	..	..	1 134.21	1 178.79	1 242.24	1 207.23	1 117.61	1 137.75	..
G7	2 304.60	2 321.80	2 379.17	2 741.74	2 780.97	2 677.60	2 613.32	2 622.71	..
G8	..	..	3 004.21	3 159.62	3 192.94	3 124.24	3 070.04	3 092.48	..
G20	..	..	4 965.75	5 559.66	6 224.69	6 817.02	7 228.57	7 298.93	..
<i>OPEC</i>	85.16	155.94	247.84	363.86	459.65	589.70	673.75	675.19	..

World includes international marine bunkers and international aviation bunkers.

1. Please refer to section 'Geographical coverage'.

2. For the United States, fuels used by autoproducers of electricity and heat have been included in final consumption for some years.

## Total final consumption of energy (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>1 661.39</b>	<b>2 247.67</b>	<b>2 959.83</b>	<b>3 124.32</b>	<b>3 902.73</b>	<b>4 770.83</b>	<b>5 412.09</b>	<b>5 487.89</b>	..
Albania	1.42	2.69	2.18	1.54	1.94	2.00	2.03	2.00	..
Armenia	..	..	6.48	1.11	1.71	1.83	2.07	2.12	..
Azerbaijan	..	..	16.71	6.53	8.06	6.92	8.72	8.99	..
Belarus	..	..	34.49	18.03	19.03	19.62	18.24	18.44	..
Bosnia and Herzegovina	..	..	4.89	2.26	2.61	3.22	3.46	3.68	..
Bulgaria	15.78	19.62	17.48	9.55	10.37	9.12	9.96	9.96	..
Croatia	..	..	7.04	6.60	7.85	7.72	7.01	7.05	..
Cyprus <sup>1</sup>	0.55	0.61	0.88	1.44	1.59	1.71	1.43	1.51	..
FYR of Macedonia	..	..	1.51	1.57	1.78	1.82	1.89	1.97	..
Georgia	..	..	8.98	2.30	2.22	2.66	4.10	4.33	..
Gibraltar	0.02	0.03	0.05	0.11	0.13	0.15	0.18	0.19	..
Kazakhstan	..	..	59.63	21.61	30.60	38.78	38.44	37.66	..
Kosovo	..	..	..	0.77	0.98	1.19	1.38	1.47	..
Kyrgyzstan	..	..	6.91	1.70	1.84	2.27	3.36	3.47	..
Lithuania	..	..	10.41	4.40	5.34	5.40	5.89	6.04	..
Malta	0.15	0.16	0.27	0.32	0.39	0.41	0.46	0.47	..
Republic of Moldova	..	..	6.68	1.60	2.39	2.76	2.66	2.79	..
Montenegro	..	..	..	..	0.76	0.76	0.69	0.72	..
Romania	35.34	57.90	43.03	23.78	25.92	23.34	22.54	22.88	..
Russian Federation	..	..	625.05	417.88	411.97	446.64	456.71	469.77	..
Serbia	..	..	12.12	7.14	9.74	9.47	8.48	9.05	..
Tajikistan	..	..	4.68	1.80	1.94	1.96	2.47	2.49	..
Turkmenistan	..	..	12.49	9.22	12.02	14.52	18.00	17.96	..
Ukraine	..	..	150.17	72.35	81.93	73.95	50.80	51.65	..
Uzbekistan	..	..	34.96	37.54	34.17	31.68	26.79	26.81	..
Former Soviet Union	562.52	767.89	x	x	x	x	x	x	..
Former Yugoslavia	17.00	20.44	x	x	x	x	x	x	..
<b>Non-OECD Europe and Eurasia</b>	<b>632.79</b>	<b>869.34</b>	<b>1 067.06</b>	<b>651.14</b>	<b>677.29</b>	<b>709.89</b>	<b>697.75</b>	<b>713.46</b>	..
Algeria	2.78	5.88	12.72	15.40	20.61	26.44	37.48	37.79	..
Angola	3.13	3.42	4.53	5.54	6.57	10.27	12.33	12.29	..
Benin	1.03	1.18	1.44	1.67	2.26	3.03	3.59	3.76	..
Botswana	..	..	0.89	1.41	1.49	1.67	1.93	1.97	..
Cameroon	2.69	3.48	4.75	5.94	6.84	5.82	7.12	7.31	..
Congo	0.44	0.51	0.62	0.48	0.75	1.25	2.06	2.08	..
Côte d'Ivoire	1.80	2.48	2.91	4.33	5.04	5.71	6.78	7.23	..
Dem. Rep. of the Congo	6.65	8.11	10.60	13.67	16.33	19.09	21.51	21.94	..
Egypt	7.11	13.29	23.20	31.48	42.09	52.89	55.52	58.05	..
Eritrea	..	..	..	0.53	0.48	0.49	0.57	0.59	..
Ethiopia	11.81	13.41	18.43	25.69	29.95	34.68	40.93	42.15	..
Gabon	0.68	1.01	1.01	1.36	2.80	4.78	4.74	4.86	..
Ghana	2.92	3.42	4.32	5.39	4.77	5.37	6.93	6.83	..
Kenya	3.98	5.19	7.35	9.43	10.66	13.05	15.90	16.49	..
Libya	1.24	3.99	5.49	9.39	10.41	13.24	8.04	9.96	..
Mauritius	0.36	0.39	0.53	0.65	0.72	0.74	0.81	0.83	..
Morocco	3.02	4.44	5.65	8.54	11.21	13.22	15.09	15.37	..
Mozambique	5.37	5.27	4.76	6.53	7.78	9.11	10.51	10.68	..
Namibia	..	..	..	0.99	1.25	1.45	1.77	1.85	..
Niger	..	..	..	1.38	1.62	2.07	2.72	2.79	..
Nigeria	34.38	45.87	59.32	78.36	93.53	105.71	126.73	129.56	..
Senegal	0.88	1.05	1.08	1.47	1.72	2.56	2.89	3.01	..
South Africa	37.09	43.74	51.05	55.71	63.17	66.34	70.27	70.00	..
South Sudan	..	..	..	..	..	..	0.59	0.55	..
Sudan	4.37	4.66	6.07	7.49	9.30	11.70	11.78	12.38	..
United Rep. of Tanzania	6.83	7.12	8.75	12.08	14.88	17.89	22.50	23.23	..
Togo	0.48	0.59	0.85	1.28	1.45	2.03	2.21	2.28	..
Tunisia	1.45	2.36	3.64	5.51	6.70	7.43	7.88	8.00	..
Zambia	3.29	3.65	4.31	4.99	6.00	6.86	8.68	8.84	..
Zimbabwe	5.43	6.11	7.95	8.66	8.09	8.48	9.50	9.66	..
Other Africa	23.17	27.65	39.59	43.08	47.31	53.13	59.77	61.75	..
<b>Africa</b>	<b>172.38</b>	<b>218.28</b>	<b>291.79</b>	<b>368.42</b>	<b>435.77</b>	<b>506.49</b>	<b>579.13</b>	<b>594.07</b>	..

1. Please refer to section 'Geographical coverage'.

## Total final consumption of energy (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	5.92	7.78	10.88	15.16	18.32	22.81	28.04	28.77	..
Brunei Darussalam	0.10	0.21	0.35	0.57	0.63	1.31	0.98	1.33	..
Cambodia	..	..	..	2.95	2.87	4.56	5.92	6.36	..
DPR of Korea	16.94	25.14	27.19	16.83	18.23	12.77	6.58	7.38	..
India	143.37	173.90	242.88	313.98	357.67	483.61	552.33	572.29	..
Indonesia	34.13	49.65	79.97	120.23	132.72	142.89	166.37	164.73	..
Malaysia	4.58	7.16	13.91	29.77	38.00	42.48	51.59	55.95	..
Mongolia	..	..	2.80	1.47	2.00	2.67	3.12	3.32	..
Myanmar	7.16	8.36	9.40	11.47	12.89	12.48	15.80	16.50	..
Nepal	3.86	4.55	5.76	8.04	9.05	10.11	11.59	12.67	..
Pakistan	16.86	22.49	36.21	51.06	62.49	70.25	80.38	81.64	..
Philippines	14.34	16.31	19.65	23.92	22.79	23.71	28.99	31.64	..
Singapore	1.40	2.13	5.01	8.31	13.46	15.45	18.15	18.42	..
Sri Lanka	3.90	4.28	5.30	7.36	8.05	8.79	9.94	9.80	..
Chinese Taipei	9.41	18.52	29.42	48.69	61.03	68.07	69.38	70.28	..
Thailand	10.88	15.18	28.87	50.58	69.89	84.90	98.93	97.50	..
Viet Nam	13.12	13.06	16.06	25.09	35.15	48.24	58.36	64.93	..
Other Non-OECD Asia	5.57	6.99	5.90	7.07	7.84	10.55	13.76	13.99	..
<b>Non-OECD Asia excl. China</b>	<b>291.53</b>	<b>375.70</b>	<b>539.56</b>	<b>742.56</b>	<b>873.08</b>	<b>1 065.67</b>	<b>1 220.21</b>	<b>1 257.53</b>	..
People's Rep. of China	363.54	487.31	657.59	781.19	1 226.64	1 626.86	1 957.52	1 969.37	..
Hong Kong, China	2.06	2.91	5.22	9.38	7.46	8.20	8.96	9.11	..
<b>China</b>	<b>365.60</b>	<b>490.22</b>	<b>662.81</b>	<b>790.58</b>	<b>1 234.10</b>	<b>1 635.06</b>	<b>1 966.48</b>	<b>1 978.48</b>	..
Argentina	24.81	29.30	30.07	47.21	50.82	56.70	62.04	62.00	..
Bolivia	0.99	1.96	2.16	2.90	3.43	4.92	6.60	6.97	..
Brazil	72.72	95.90	111.34	153.35	171.86	210.94	227.28	224.27	..
Colombia	11.19	14.38	18.93	21.11	21.69	22.43	29.13	29.74	..
Costa Rica	0.81	1.14	1.47	2.27	2.97	3.49	3.71	3.87	..
Cuba	8.71	11.16	13.93	9.70	6.91	7.03	7.11	6.41	..
Curaçao	2.20	1.09	0.63	0.87	0.93	0.99	0.69	0.69	..
Dominican Republic	2.01	2.34	2.38	4.74	4.89	5.41	5.69	6.02	..
Ecuador	2.18	3.98	5.58	6.72	8.06	10.09	11.93	11.63	..
El Salvador	1.81	2.06	2.03	3.00	3.30	2.42	2.46	2.52	..
Guatemala	2.58	3.29	4.04	5.98	6.34	8.51	10.19	10.85	..
Haiti	1.33	1.70	1.23	1.71	2.68	2.91	3.27	3.31	..
Honduras	1.41	1.78	2.33	2.73	3.32	3.78	4.94	4.91	..
Jamaica	2.09	1.79	1.89	2.01	2.66	1.77	1.91	1.94	..
Nicaragua	1.18	1.34	1.47	1.91	1.99	2.05	2.50	2.58	..
Panama	0.89	1.13	1.23	1.99	2.47	2.86	3.50	3.55	..
Paraguay	1.43	1.97	2.93	3.65	3.66	4.32	4.93	5.24	..
Peru	8.19	9.16	8.56	10.60	10.98	15.10	17.79	18.23	..
Suriname	..	..	..	0.52	0.46	0.54	0.58	0.52	..
Trinidad and Tobago	1.10	1.76	3.71	7.22	11.35	14.02	13.29	12.88	..
Uruguay	1.92	2.12	1.93	2.51	2.38	3.63	4.48	4.70	..
Venezuela	12.29	21.56	25.82	32.85	40.70	49.12	37.54	32.73	..
Other Non-OECD Americas	3.83	3.66	4.76	5.34	5.53	5.81	5.70	5.81	..
<b>Non-OECD Americas</b>	<b>165.68</b>	<b>214.59</b>	<b>248.43</b>	<b>330.88</b>	<b>369.38</b>	<b>438.83</b>	<b>467.27</b>	<b>461.37</b>	..
Bahrain	0.72	1.27	2.09	3.05	4.23	5.12	6.29	6.36	..
Islamic Republic of Iran	16.60	27.58	54.71	94.79	126.82	157.57	180.66	188.48	..
Iraq	3.02	7.77	15.25	18.94	18.40	19.18	17.46	18.55	..
Jordan	0.46	1.16	2.33	3.54	4.58	4.54	5.55	6.08	..
Kuwait	3.93	6.26	3.95	8.15	12.17	15.05	18.14	19.18	..
Lebanon	1.69	1.48	1.14	3.30	3.53	3.86	4.89	4.99	..
Oman	0.09	0.55	1.84	3.04	4.98	12.25	20.33	20.34	..
Qatar	0.73	1.92	3.77	5.82	8.46	12.71	18.49	18.00	..
Saudi Arabia	3.07	21.14	39.49	63.52	83.42	120.65	144.23	139.59	..
Syrian Arab Republic	1.47	3.85	7.61	10.24	13.85	13.74	6.50	6.43	..
United Arab Emirates	1.13	5.57	16.19	23.04	27.71	44.87	55.98	52.57	..
Yemen	0.51	0.99	1.81	3.32	4.96	5.36	2.74	2.43	..
<b>Middle East</b>	<b>33.42</b>	<b>79.54</b>	<b>150.18</b>	<b>240.74</b>	<b>313.11</b>	<b>414.89</b>	<b>481.25</b>	<b>482.99</b>	..

## Industry consumption of coal (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>361.67</b>	<b>426.12</b>	<b>482.43</b>	<b>421.07</b>	<b>681.52</b>	<b>890.14</b>	<b>926.76</b>	<b>882.33</b>	..
<b>Non-OECD Total</b>	<b>175.77</b>	<b>263.51</b>	<b>325.25</b>	<b>305.17</b>	<b>573.70</b>	<b>790.69</b>	<b>836.95</b>	<b>798.13</b>	..
<b>OECD Total</b>	<b>185.90</b>	<b>162.60</b>	<b>157.17</b>	<b>115.90</b>	<b>107.82</b>	<b>99.46</b>	<b>89.81</b>	<b>84.20</b>	..
Canada	4.89	4.22	3.16	3.55	3.60	3.09	2.57	2.47	..
Chile	0.46	0.44	0.52	0.59	0.57	0.40	0.22	0.22	..
Mexico	1.37	1.61	0.94	0.76	2.68	3.90	3.77	1.77	..
United States	60.25	48.25	46.02	30.36	28.80	25.35	18.84	16.97	..
<b>OECD Americas</b>	<b>66.97</b>	<b>54.52</b>	<b>50.64</b>	<b>35.26</b>	<b>35.65</b>	<b>32.74</b>	<b>25.41</b>	<b>21.42</b>	..
Australia	4.90	4.09	4.28	4.04	3.62	2.43	2.34	2.46	..
Israel <sup>1</sup>	0.00	0.00	0.01	0.02	-	-	0.05	0.05	..
Japan	18.65	21.42	27.19	21.02	22.74	22.72	21.65	21.30	..
Korea	0.39	1.35	3.05	8.51	6.79	8.69	10.15	8.87	..
New Zealand	0.68	0.56	0.54	0.43	0.48	0.52	0.53	0.49	..
<b>OECD Asia Oceania</b>	<b>24.62</b>	<b>27.42</b>	<b>35.08</b>	<b>34.02</b>	<b>33.63</b>	<b>34.35</b>	<b>34.72</b>	<b>33.18</b>	..
Austria	0.76	0.92	0.71	0.66	0.49	0.42	0.41	0.41	..
Belgium	3.55	3.20	3.01	2.59	1.39	1.04	1.03	1.11	..
Czech Republic	11.43	11.69	7.21	3.32	2.84	1.58	1.46	1.46	..
Denmark	0.23	0.39	0.32	0.27	0.21	0.11	0.11	0.10	..
Estonia	..	..	0.37	0.11	0.11	0.09	0.06	0.07	..
Finland	0.94	1.01	1.54	0.95	0.77	0.75	0.50	0.53	..
France	7.28	5.40	4.35	2.59	2.48	2.24	2.20	2.06	..
Germany	29.51	26.48	21.08	7.66	6.12	6.09	6.82	6.46	..
Greece	0.46	0.42	1.18	0.85	0.44	0.30	0.22	0.19	..
Hungary	1.57	1.29	0.57	0.33	0.36	0.26	0.25	0.21	..
Iceland	-	0.02	0.06	0.10	0.10	0.09	0.09	0.10	..
Ireland	0.07	0.12	0.24	0.10	0.21	0.11	0.11	0.11	..
Italy	2.66	2.98	3.29	2.45	2.51	1.75	0.89	0.96	..
Latvia	..	..	0.03	0.01	0.03	0.05	0.02	0.02	..
Luxembourg	0.94	1.02	0.52	0.11	0.08	0.07	0.05	0.05	..
Netherlands	0.76	0.69	1.47	0.83	0.83	0.70	0.68	0.74	..
Norway	0.76	0.84	0.77	0.95	0.67	0.58	0.58	0.62	..
Poland	10.80	10.85	6.74	7.48	4.83	3.82	3.50	3.37	..
Portugal	0.14	0.20	0.59	0.43	0.02	0.05	0.01	0.01	..
Slovak Republic	2.66	1.79	1.93	1.16	1.06	0.84	0.76	0.76	..
Slovenia	..	..	0.12	0.09	0.11	0.05	0.05	0.04	..
Spain	3.59	2.18	2.81	1.11	1.19	0.77	0.56	0.81	..
Sweden	0.89	0.83	1.00	0.74	0.92	0.84	0.74	0.71	..
Switzerland	0.11	0.23	0.31	0.11	0.10	0.14	0.12	0.11	..
Turkey	1.14	2.17	4.54	8.90	8.26	7.37	6.24	6.88	..
United Kingdom	14.04	5.96	6.67	2.72	2.42	2.27	2.23	1.71	..
<b>OECD Europe</b>	<b>94.30</b>	<b>80.66</b>	<b>71.45</b>	<b>46.62</b>	<b>38.54</b>	<b>32.37</b>	<b>29.69</b>	<b>29.60</b>	..
IEA	185.43	162.14	156.42	115.09	107.02	98.87	89.37	83.76	..
IEA/Accession/Association	282.62	310.03	380.96	356.82	605.03	806.59	845.60	796.52	..
European Union - 28	..	..	69.22	37.90	31.31	25.40	23.70	22.85	..
G7	137.29	114.72	111.76	70.34	68.68	63.51	55.20	51.92	..
G8	..	..	126.32	78.34	76.23	73.65	63.62	60.39	..
G20	..	..	409.36	374.83	621.05	821.57	858.05	811.36	..
<b>OPEC</b>	<b>0.47</b>	<b>0.50</b>	<b>0.82</b>	<b>0.53</b>	<b>0.96</b>	<b>1.25</b>	<b>2.51</b>	<b>2.57</b>	..

Includes non-energy use for industry/transformation/energy.

1. Please refer to section 'Geographical coverage'.

## Industry consumption of coal (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>175.77</b>	<b>263.51</b>	<b>325.25</b>	<b>305.17</b>	<b>573.70</b>	<b>790.69</b>	<b>836.95</b>	<b>798.13</b>	<b>..</b>
Albania	0.20	0.34	0.17	0.01	0.01	0.11	0.09	0.05	..
Armenia	..	..	-	-	-	-	-	-	..
Azerbaijan	..	..	-	-	-	-	-	-	..
Belarus	..	..	0.07	0.07	0.07	0.08	0.47	0.51	..
Bosnia and Herzegovina	..	..	0.76	0.30	0.15	0.19	0.22	0.20	..
Bulgaria	2.43	2.55	0.87	0.49	0.51	0.27	0.24	0.23	..
Croatia	..	..	0.38	0.06	0.14	0.14	0.08	0.06	..
Cyprus <sup>1</sup>	-	-	0.06	0.03	0.04	0.02	0.00	-	..
FYR of Macedonia	..	..	0.11	0.10	0.13	0.11	0.10	0.12	..
Georgia	..	..	0.58	-	0.01	0.01	0.27	0.25	..
Gibraltar	-	-	-	-	-	-	-	-	..
Kazakhstan	..	..	15.78	3.84	7.33	10.89	7.74	8.14	..
Kosovo	..	..	..	0.03	0.03	0.05	0.02	0.03	..
Kyrgyzstan	..	..	2.08	0.20	0.06	0.07	0.21	0.12	..
Lithuania	..	..	0.05	0.01	0.09	0.09	0.10	0.09	..
Malta	-	-	-	-	-	-	-	-	..
Republic of Moldova	..	..	0.20	0.01	0.01	0.03	0.04	0.02	..
Montenegro	..	..	..	..	0.01	0.00	0.01	0.01	..
Romania	1.74	3.43	2.08	0.73	1.14	0.70	0.63	0.58	..
Russian Federation	..	..	14.56	8.00	7.56	10.14	8.42	8.47	..
Serbia	..	..	0.38	0.68	0.45	0.44	0.37	0.44	..
Tajikistan	..	..	-	-	-	-	-	-	..
Turkmenistan	..	..	-	-	-	-	-	-	..
Ukraine	..	..	17.99	7.30	9.65	7.29	5.89	5.86	..
Uzbekistan	..	..	-	0.07	0.09	0.09	0.23	0.23	..
Former Soviet Union	42.09	66.61	x	x	x	x	x	x	..
Former Yugoslavia	3.05	1.58	x	x	x	x	x	x	..
<b>Non-OECD Europe and Eurasia</b>	<b>49.50</b>	<b>74.50</b>	<b>56.13</b>	<b>21.94</b>	<b>27.44</b>	<b>30.70</b>	<b>25.12</b>	<b>25.39</b>	<b>..</b>
Algeria	0.06	0.03	0.25	0.08	0.17	0.12	0.04	-	..
Angola	-	-	-	-	-	-	-	-	..
Benin	-	-	-	-	-	-	0.03	0.07	..
Botswana	..	..	0.10	0.15	0.15	0.03	0.04	0.04	..
Cameroon	-	-	-	-	-	-	-	-	..
Congo	-	-	-	-	-	-	-	-	..
Côte d'Ivoire	-	-	-	-	-	-	-	-	..
Dem. Rep. of the Congo	0.18	0.13	0.14	-	-	-	-	-	..
Egypt	0.12	0.24	0.35	0.39	0.41	0.22	0.18	0.18	..
Eritrea	..	..	..	-	-	-	-	-	..
Ethiopia	-	-	-	-	-	0.03	0.25	0.27	..
Gabon	-	-	-	-	-	-	-	-	..
Ghana	-	-	-	-	-	-	-	-	..
Kenya	0.01	0.01	0.09	0.07	0.09	0.17	0.35	0.34	..
Libya	-	-	-	-	-	-	-	-	..
Mauritius	-	-	0.01	0.01	0.01	0.02	0.02	0.02	..
Morocco	0.07	0.02	0.35	0.53	0.02	0.02	0.02	0.02	..
Mozambique	0.35	0.15	0.02	-	-	0.00	-	-	..
Namibia	..	..	..	-	-	-	-	-	..
Niger	..	..	..	-	-	-	-	-	..
Nigeria	0.08	0.09	0.04	0.00	0.00	0.02	0.03	0.03	..
Senegal	-	-	-	-	0.09	0.18	0.30	0.32	..
South Africa	10.96	15.31	13.87	14.35	14.07	13.08	11.20	11.55	..
South Sudan	..	..	..	..	..	..	-	-	..
Sudan	-	0.00	-	-	-	-	-	-	..
United Rep. of Tanzania	-	0.00	0.00	0.03	0.01	-	0.16	0.17	..
Togo	-	-	-	-	-	-	-	-	..
Tunisia	0.05	0.04	0.05	0.04	-	-	-	-	..
Zambia	0.47	0.31	0.18	0.06	0.07	0.00	0.10	0.10	..
Zimbabwe	0.68	0.77	1.03	0.61	0.31	0.28	0.24	0.24	..
Other Africa	0.03	0.17	0.02	0.09	0.06	0.04	0.05	0.06	..
<b>Africa</b>	<b>13.06</b>	<b>17.30</b>	<b>16.50</b>	<b>16.41</b>	<b>15.47</b>	<b>14.21</b>	<b>13.01</b>	<b>13.41</b>	<b>..</b>

Includes non-energy use for industry/transformation/energy.

1. Please refer to section 'Geographical coverage'.

## Industry consumption of coal (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	0.12	0.12	0.28	0.33	0.42	0.56	2.00	1.42	..
Brunei Darussalam	-	-	-	-	-	-	-	-	..
Cambodia	..	..	..	..	..	0.00	0.01	0.02	..
DPR of Korea	11.33	16.23	18.09	10.68	11.74	7.50	3.21	3.66	..
India	9.73	13.45	26.38	25.77	35.96	74.97	87.09	87.24	..
Indonesia	0.03	0.08	2.27	4.65	8.34	7.97	9.60	9.49	..
Malaysia	0.01	0.05	0.51	0.99	1.34	1.83	1.78	1.78	..
Mongolia	..	..	0.54	0.09	0.07	0.18	0.09	0.12	..
Myanmar	0.04	0.14	0.05	0.30	0.15	0.22	0.36	0.33	..
Nepal	0.05	0.05	0.04	0.26	0.24	0.30	0.56	0.69	..
Pakistan	0.50	0.62	1.52	1.38	3.42	3.95	4.91	5.11	..
Philippines	0.00	0.22	0.61	0.77	1.12	1.88	2.29	2.84	..
Singapore	0.00	0.00	0.02	-	0.00	0.01	0.16	0.17	..
Sri Lanka	0.00	0.00	0.00	0.00	0.07	0.07	0.06	0.05	..
Chinese Taipei	1.83	2.10	3.58	4.96	5.97	7.41	8.07	8.53	..
Thailand	0.02	0.09	1.31	3.54	6.75	9.21	8.16	6.07	..
Viet Nam	0.00	0.93	1.02	2.34	3.96	8.23	10.26	12.86	..
Other Non-OECD Asia	0.97	1.85	0.19	0.30	0.33	1.02	1.14	1.15	..
<b>Non-OECD Asia excl. China</b>	<b>24.64</b>	<b>35.94</b>	<b>56.43</b>	<b>56.34</b>	<b>79.90</b>	<b>125.31</b>	<b>139.74</b>	<b>141.53</b>	..
People's Rep. of China	86.21	131.87	190.14	201.08	440.98	607.95	643.39	603.04	..
Hong Kong, China	0.01	0.00	0.00	-	0.53	0.94	1.26	1.27	..
<b>China</b>	<b>86.22</b>	<b>131.87</b>	<b>190.14</b>	<b>201.08</b>	<b>441.51</b>	<b>608.88</b>	<b>644.65</b>	<b>604.31</b>	..
Argentina	0.27	0.21	0.19	0.38	0.42	0.39	0.24	0.22	..
Bolivia	-	-	-	-	-	-	-	-	..
Brazil	0.67	1.93	3.55	5.58	5.38	7.19	7.58	6.51	..
Colombia	0.91	1.18	1.48	2.17	1.65	1.47	2.41	2.59	..
Costa Rica	0.00	0.00	-	0.00	0.02	0.03	0.04	0.04	..
Cuba	0.06	0.08	0.13	0.02	0.02	0.02	0.00	0.00	..
Curaçao	-	-	-	-	-	-	-	-	..
Dominican Republic	-	-	-	0.08	0.19	0.32	0.45	0.40	..
Ecuador	-	-	-	-	-	-	-	-	..
El Salvador	-	0.00	-	0.00	0.00	-	-	-	..
Guatemala	-	0.01	-	-	-	-	-	-	..
Haiti	-	-	0.01	-	-	-	-	-	..
Honduras	-	-	0.00	0.08	0.15	0.14	0.05	0.05	..
Jamaica	-	-	0.03	0.03	0.04	0.03	0.06	0.04	..
Nicaragua	-	-	-	-	-	-	-	-	..
Panama	0.01	-	0.02	0.04	-	-	-	-	..
Paraguay	-	-	-	-	-	-	-	-	..
Peru	0.09	0.09	0.10	0.44	0.60	0.61	0.72	0.62	..
Suriname	..	..	..	-	-	-	-	-	..
Trinidad and Tobago	-	-	-	-	-	-	-	-	..
Uruguay	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	..
Venezuela	0.16	0.10	0.35	0.13	0.04	0.20	0.14	0.12	..
Other Non-OECD Americas	-	-	-	-	-	-	-	-	..
<b>Non-OECD Americas</b>	<b>2.17</b>	<b>3.62</b>	<b>5.87</b>	<b>8.96</b>	<b>8.50</b>	<b>10.41</b>	<b>11.70</b>	<b>10.60</b>	..
Bahrain	-	-	-	-	-	-	-	-	..
Islamic Republic of Iran	0.17	0.28	0.18	0.31	0.60	0.25	0.59	0.58	..
Iraq	-	-	-	-	-	-	-	-	..
Jordan	-	-	-	-	-	-	0.17	0.22	..
Kuwait	-	-	-	-	-	-	-	-	..
Lebanon	0.01	0.00	-	0.13	0.13	0.15	0.17	0.17	..
Oman	-	-	-	-	-	-	-	-	..
Qatar	-	-	-	-	-	-	-	-	..
Saudi Arabia	-	-	-	-	-	-	-	-	..
Syrian Arab Republic	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	..
United Arab Emirates	-	-	-	-	0.15	0.66	1.71	1.84	..
Yemen	-	-	-	-	-	0.10	0.08	0.07	..
<b>Middle East</b>	<b>0.18</b>	<b>0.28</b>	<b>0.18</b>	<b>0.45</b>	<b>0.88</b>	<b>1.17</b>	<b>2.73</b>	<b>2.88</b>	..

Includes non-energy use for industry/transformation/energy.

## Industry consumption of oil (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>701.48</b>	<b>764.64</b>	<b>680.38</b>	<b>784.81</b>	<b>863.18</b>	<b>886.59</b>	<b>903.99</b>	<b>909.85</b>	..
<b>Non-OECD Total</b>	<b>184.22</b>	<b>269.34</b>	<b>265.35</b>	<b>325.48</b>	<b>381.70</b>	<b>452.57</b>	<b>506.32</b>	<b>509.52</b>	..
<b>OECD Total</b>	<b>517.26</b>	<b>495.30</b>	<b>415.04</b>	<b>459.33</b>	<b>481.48</b>	<b>434.02</b>	<b>397.66</b>	<b>400.33</b>	..
Canada	20.85	20.28	17.13	20.48	22.17	21.02	21.34	23.38	..
Chile	1.21	1.26	1.51	2.13	2.24	3.33	4.03	4.19	..
Mexico	5.34	9.10	14.12	13.81	12.51	12.66	10.98	11.87	..
United States	157.11	187.39	144.53	156.44	180.45	153.65	131.32	130.74	..
<b>OECD Americas</b>	<b>184.51</b>	<b>218.03</b>	<b>177.30</b>	<b>192.86</b>	<b>217.37</b>	<b>190.66</b>	<b>167.67</b>	<b>170.18</b>	..
Australia	7.94	7.93	6.38	7.63	7.22	6.90	7.21	7.45	..
Israel <sup>1</sup>	1.12	1.44	1.68	2.25	1.70	2.32	2.20	2.20	..
Japan	95.20	67.00	68.88	70.74	66.68	56.66	54.31	51.35	..
Korea	6.40	10.07	17.61	35.49	37.64	43.16	49.61	52.39	..
New Zealand	0.99	0.83	0.60	0.64	0.71	0.77	0.76	0.82	..
<b>OECD Asia Oceania</b>	<b>111.64</b>	<b>87.26</b>	<b>95.15</b>	<b>116.76</b>	<b>113.94</b>	<b>109.80</b>	<b>114.09</b>	<b>114.20</b>	..
Austria	3.06	1.89	1.80	1.85	2.08	2.00	2.03	2.11	..
Belgium	7.79	4.45	4.17	7.57	7.63	7.96	9.09	9.19	..
Czech Republic	5.04	5.93	4.50	2.59	3.05	2.63	2.11	1.26	..
Denmark	3.38	2.52	1.17	1.00	1.00	0.77	0.60	0.63	..
Estonia	..	..	0.76	0.13	0.18	0.13	0.14	0.12	..
Finland	5.00	3.73	2.73	2.59	2.71	2.58	2.92	3.00	..
France	34.42	29.97	17.22	18.84	18.77	15.45	14.46	13.86	..
Germany	46.05	36.06	26.40	27.39	26.04	23.56	21.20	20.49	..
Greece	2.37	3.04	2.05	2.50	2.36	2.06	1.46	1.61	..
Hungary	2.22	3.24	2.08	1.53	2.10	1.75	2.08	1.98	..
Iceland	0.13	0.15	0.11	0.14	0.17	0.05	0.06	0.06	..
Ireland	1.61	1.59	0.84	1.34	1.46	0.97	0.67	0.73	..
Italy	29.40	22.25	16.50	13.48	13.46	12.14	8.42	7.94	..
Latvia	..	..	0.48	0.21	0.16	0.14	0.13	0.11	..
Luxembourg	0.80	0.20	0.29	0.09	0.05	0.04	0.04	0.04	..
Netherlands	10.08	13.74	11.13	11.72	15.41	15.92	13.60	14.44	..
Norway	2.99	3.55	2.77	2.43	2.73	2.67	2.68	2.54	..
Poland	2.92	4.61	2.98	3.86	3.73	4.15	3.85	3.80	..
Portugal	1.74	2.54	3.80	4.55	3.87	2.70	2.02	1.72	..
Slovak Republic	1.73	2.90	2.89	1.48	1.11	0.89	0.71	0.68	..
Slovenia	..	..	0.23	0.39	0.35	0.24	0.21	0.21	..
Spain	13.32	15.83	10.93	14.30	13.01	11.22	6.38	7.05	..
Sweden	8.13	6.08	3.97	4.61	3.92	3.09	2.45	2.83	..
Switzerland	3.61	2.71	1.49	1.30	1.24	1.06	0.78	0.74	..
Turkey	2.59	4.17	6.04	7.95	7.60	7.43	7.17	7.88	..
United Kingdom	32.75	18.86	15.23	15.89	15.99	11.97	10.64	10.93	..
<b>OECD Europe</b>	<b>221.12</b>	<b>190.01</b>	<b>142.59</b>	<b>149.70</b>	<b>150.16</b>	<b>133.56</b>	<b>115.91</b>	<b>115.95</b>	..
IEA	514.80	492.46	411.02	454.21	476.85	427.94	391.04	393.56	..
IEA/Accession/Association	561.81	559.61	497.93	611.13	669.81	660.06	652.03	658.74	..
European Union - 28	..	..	139.53	143.12	143.51	125.17	108.21	107.67	..
G7	415.77	381.81	305.89	323.25	343.55	294.44	261.69	258.68	..
G8	..	..	349.51	358.89	375.99	337.66	322.41	322.40	..
G20	..	..	555.29	663.02	713.70	719.77	731.47	736.66	..
<b>OPEC</b>	<b>10.06</b>	<b>29.84</b>	<b>37.99</b>	<b>52.68</b>	<b>64.44</b>	<b>84.80</b>	<b>91.41</b>	<b>87.53</b>	..

Includes non-energy use for industry/transformation/energy.

1. Please refer to section 'Geographical coverage'.



## Industry consumption of oil (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>184.22</b>	<b>269.34</b>	<b>265.35</b>	<b>325.48</b>	<b>381.70</b>	<b>452.57</b>	<b>506.32</b>	<b>509.52</b>	<b>..</b>
Albania	0.06	0.66	0.56	0.18	0.21	0.26	0.15	0.21	..
Armenia	..	..	0.74	0.02	0.04	0.04	0.04	0.04	..
Azerbaijan	..	..	1.36	0.90	1.09	0.55	0.77	0.83	..
Belarus	..	..	9.26	2.29	2.26	1.69	1.48	1.32	..
Bosnia and Herzegovina	..	..	0.75	0.06	0.09	0.17	0.17	0.17	..
Bulgaria	0.35	0.66	1.84	1.50	1.33	0.51	0.47	0.35	..
Croatia	..	..	0.94	0.66	0.80	0.50	0.41	0.42	..
Cyprus <sup>1</sup>	0.19	0.27	0.20	0.45	0.30	0.23	0.17	0.18	..
FYR of Macedonia	..	..	0.41	0.19	0.23	0.23	0.23	0.26	..
Georgia	..	..	0.92	0.07	0.10	0.10	0.17	0.18	..
Gibraltar	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	..
Kazakhstan	..	..	7.38	2.00	3.07	2.50	4.07	4.82	..
Kosovo	..	..	..	0.08	0.10	0.12	0.21	0.19	..
Kyrgyzstan	..	..	-	0.01	0.04	0.14	0.31	0.13	..
Lithuania	..	..	1.41	0.26	0.28	0.20	0.19	0.22	..
Malta	-	0.00	0.01	-	0.03	0.02	0.02	0.02	..
Republic of Moldova	..	..	0.00	0.01	0.01	0.03	0.04	0.04	..
Montenegro	..	..	..	..	0.11	0.08	0.07	0.07	..
Romania	2.16	3.72	2.96	2.37	2.34	1.37	1.73	1.74	..
Russian Federation	..	..	43.62	35.64	32.44	43.22	60.72	63.72	..
Serbia	..	..	2.47	0.31	1.13	0.88	0.77	0.92	..
Tajikistan	..	..	-	-	-	-	0.02	0.03	..
Turkmenistan	..	..	-	-	-	-	-	-	..
Ukraine	..	..	15.44	2.42	3.43	2.22	1.43	0.70	..
Uzbekistan	..	..	1.92	0.97	0.70	0.53	0.39	0.36	..
Former Soviet Union	89.45	119.16	x	x	x	x	x	x	..
Former Yugoslavia	3.76	5.24	x	x	x	x	x	x	..
<b>Non-OECD Europe and Eurasia</b>	<b>95.98</b>	<b>129.73</b>	<b>92.23</b>	<b>50.40</b>	<b>50.17</b>	<b>55.62</b>	<b>74.04</b>	<b>76.95</b>	<b>..</b>
Algeria	0.48	0.95	1.45	1.57	1.58	1.80	1.39	1.38	..
Angola	0.10	0.10	0.29	0.33	0.28	0.45	0.45	0.56	..
Benin	0.00	0.01	0.01	0.05	0.04	0.04	0.09	0.10	..
Botswana	..	..	0.03	0.09	0.11	0.16	0.19	0.20	..
Cameroon	0.02	0.05	0.09	0.09	0.08	0.12	0.07	0.08	..
Congo	0.05	0.02	0.03	0.02	0.02	0.03	0.06	0.06	..
Côte d'Ivoire	0.26	0.26	0.19	0.27	0.14	0.20	0.31	0.35	..
Dem. Rep. of the Congo	0.00	0.00	0.10	0.02	0.04	0.05	0.02	0.03	..
Egypt	2.62	4.76	7.60	6.93	7.52	7.51	6.35	6.82	..
Eritrea	..	..	..	0.02	0.03	0.01	0.01	0.01	..
Ethiopia	0.12	0.11	0.21	0.29	0.41	0.56	0.83	0.89	..
Gabon	0.13	0.27	0.05	0.19	0.19	0.30	0.38	0.39	..
Ghana	0.16	0.16	0.17	0.28	0.39	0.53	0.75	0.72	..
Kenya	0.22	0.35	0.38	0.45	0.55	0.76	0.76	0.81	..
Libya	0.13	0.75	1.04	1.65	1.38	2.36	0.89	0.97	..
Mauritius	0.01	0.03	0.04	0.10	0.09	0.09	0.08	0.08	..
Morocco	0.91	1.57	1.43	1.36	2.13	2.48	2.47	2.29	..
Mozambique	0.04	0.00	0.02	0.03	0.08	0.10	0.14	0.13	..
Namibia	..	..	..	0.06	0.08	0.10	0.13	0.13	..
Niger	..	..	..	0.02	0.03	0.08	0.07	0.07	..
Nigeria	0.64	1.37	0.97	0.52	0.47	0.33	0.66	0.71	..
Senegal	0.13	0.18	0.09	0.18	0.13	0.08	0.14	0.15	..
South Africa	2.36	3.00	3.60	1.85	2.28	4.48	4.69	4.73	..
South Sudan	..	..	..	..	..	..	0.01	0.01	..
Sudan	0.54	0.34	0.32	0.33	0.42	1.10	0.67	0.70	..
United Rep. of Tanzania	0.14	0.12	0.12	0.13	0.11	0.10	0.20	0.15	..
Togo	-	-	0.01	0.08	0.04	0.07	0.05	0.06	..
Tunisia	0.30	0.59	0.78	0.89	1.25	0.92	1.13	1.10	..
Zambia	0.30	0.23	0.21	0.16	0.21	0.28	0.44	0.44	..
Zimbabwe	0.11	0.10	0.12	0.12	0.09	0.06	0.07	0.07	..
Other Africa	1.25	1.36	1.16	0.79	0.61	0.91	1.92	1.96	..
<b>Africa</b>	<b>11.03</b>	<b>16.65</b>	<b>20.49</b>	<b>18.84</b>	<b>20.79</b>	<b>26.06</b>	<b>25.43</b>	<b>26.10</b>	<b>..</b>

Includes non-energy use for industry/transformation/energy.

1. Please refer to section 'Geographical coverage'.

## Industry consumption of oil (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	0.27	0.41	0.27	0.72	0.19	0.22	0.45	0.36	..
Brunei Darussalam	0.03	0.06	0.06	0.07	0.06	0.16	0.15	0.12	..
Cambodia	..	..	..	0.02	0.04	0.06	0.06	0.20	..
DPR of Korea	0.09	0.36	0.37	0.07	0.08	0.09	0.09	0.09	..
India	8.26	8.61	16.54	36.06	36.67	36.73	52.34	55.80	..
Indonesia	1.81	5.37	8.82	12.25	14.60	15.71	15.21	11.36	..
Malaysia	1.53	2.70	3.71	6.02	6.18	6.29	4.86	5.39	..
Mongolia	..	..	0.22	0.09	0.15	0.28	0.36	0.30	..
Myanmar	0.27	0.43	0.14	0.20	0.22	0.24	1.09	0.92	..
Nepal	0.00	0.01	0.02	0.04	0.04	0.02	0.02	0.03	..
Pakistan	0.37	0.43	1.47	2.27	2.31	1.70	2.44	2.58	..
Philippines	2.30	2.32	2.51	2.74	1.79	1.52	2.43	2.59	..
Singapore	0.45	0.58	2.02	3.99	7.95	8.26	10.40	10.67	..
Sri Lanka	0.21	0.19	0.15	0.32	0.35	0.32	0.88	0.51	..
Chinese Taipei	2.38	6.87	8.57	13.79	20.12	25.13	23.61	23.20	..
Thailand	1.90	2.26	3.20	9.95	16.55	19.73	25.76	26.98	..
Viet Nam	0.01	0.50	0.48	1.65	2.86	4.38	5.26	5.60	..
Other Non-OECD Asia	0.11	0.18	0.19	0.57	0.71	0.34	0.88	0.89	..
<b>Non-OECD Asia excl. China</b>	<b>19.98</b>	<b>31.28</b>	<b>48.73</b>	<b>90.82</b>	<b>110.87</b>	<b>121.19</b>	<b>146.30</b>	<b>147.59</b>	..
People's Rep. of China	21.39	28.02	36.45	64.60	89.33	118.58	124.92	128.89	..
Hong Kong, China	0.76	0.75	1.09	1.68	0.65	0.69	0.73	0.78	..
<b>China</b>	<b>22.14</b>	<b>28.77</b>	<b>37.54</b>	<b>66.28</b>	<b>89.98</b>	<b>119.27</b>	<b>125.65</b>	<b>129.67</b>	..
Argentina	4.42	4.34	2.78	6.86	7.45	7.41	7.39	7.32	..
Bolivia	0.16	0.16	0.14	0.16	0.12	0.12	0.23	0.22	..
Brazil	11.09	19.48	16.93	26.59	23.48	27.29	25.86	25.00	..
Colombia	1.46	1.33	1.54	3.29	2.80	1.67	0.91	0.85	..
Costa Rica	0.13	0.19	0.22	0.33	0.31	0.28	0.31	0.32	..
Cuba	2.51	3.38	3.50	3.45	2.06	2.82	2.36	2.00	..
Curaçao	1.59	0.39	0.20	0.28	0.30	0.32	0.22	0.22	..
Dominican Republic	0.28	0.38	0.37	0.60	0.58	0.78	0.51	0.69	..
Ecuador	0.18	0.79	1.08	1.59	1.98	2.01	1.79	1.38	..
El Salvador	0.18	0.21	0.21	0.36	0.40	0.27	0.31	0.35	..
Guatemala	0.22	0.24	0.24	0.43	0.54	0.44	0.62	0.63	..
Haiti	0.05	0.07	0.06	0.09	0.13	0.17	0.20	0.20	..
Honduras	0.11	0.17	0.24	0.23	0.42	0.37	0.35	0.35	..
Jamaica	1.19	1.24	1.14	0.60	0.97	0.53	0.67	0.70	..
Nicaragua	0.08	0.08	0.12	0.15	0.22	0.17	0.23	0.24	..
Panama	0.13	0.19	0.14	0.27	0.56	0.62	0.79	0.71	..
Paraguay	0.04	0.04	0.06	0.09	0.08	0.06	0.06	0.06	..
Peru	1.30	1.71	1.15	1.83	1.79	1.49	1.48	1.08	..
Suriname	..	..	..	0.22	0.02	0.02	0.02	0.02	..
Trinidad and Tobago	0.06	0.19	0.10	0.10	0.30	0.21	0.20	0.22	..
Uruguay	0.45	0.48	0.23	0.27	0.20	0.22	0.30	0.32	..
Venezuela	1.77	2.53	3.21	5.20	5.60	9.84	5.62	5.12	..
Other Non-OECD Americas	0.04	0.07	0.20	0.33	0.26	0.25	0.32	0.33	..
<b>Non-OECD Americas</b>	<b>27.44</b>	<b>37.66</b>	<b>33.87</b>	<b>53.33</b>	<b>50.56</b>	<b>57.36</b>	<b>50.74</b>	<b>48.33</b>	..
Bahrain	-	0.02	0.02	0.16	0.51	0.44	0.48	0.46	..
Islamic Republic of Iran	4.85	7.45	12.37	12.55	15.11	16.91	17.14	17.57	..
Iraq	0.51	1.65	3.02	3.24	3.14	2.74	2.27	2.09	..
Jordan	0.09	0.26	0.53	0.82	1.04	0.79	0.39	0.58	..
Kuwait	0.13	0.82	0.48	1.21	2.38	4.16	3.78	3.67	..
Lebanon	0.47	-	0.10	0.28	0.43	0.14	0.19	0.19	..
Oman	0.01	0.06	0.51	0.92	1.29	0.69	1.32	1.15	..
Qatar	-	-	0.45	0.62	1.26	2.64	3.21	2.80	..
Saudi Arabia	1.13	12.37	11.21	21.83	29.03	39.02	49.47	46.35	..
Syrian Arab Republic	0.43	1.82	1.37	1.56	2.13	2.39	1.27	1.26	..
United Arab Emirates	-	0.79	2.39	2.20	2.03	2.21	4.35	4.55	..
Yemen	-	-	0.06	0.42	0.96	0.93	0.30	0.23	..
<b>Middle East</b>	<b>7.63</b>	<b>25.24</b>	<b>32.49</b>	<b>45.81</b>	<b>59.34</b>	<b>73.07</b>	<b>84.16</b>	<b>80.90</b>	..

Includes non-energy use for industry/transformation/energy.

## Industry consumption of natural gas (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>374.77</b>	<b>459.26</b>	<b>451.33</b>	<b>529.67</b>	<b>550.83</b>	<b>640.47</b>	<b>692.59</b>	<b>706.55</b>	..
<b>Non-OECD Total</b>	<b>118.68</b>	<b>191.08</b>	<b>188.04</b>	<b>202.63</b>	<b>271.17</b>	<b>360.74</b>	<b>399.67</b>	<b>404.66</b>	..
<b>OECD Total</b>	<b>256.09</b>	<b>268.18</b>	<b>263.29</b>	<b>327.04</b>	<b>279.66</b>	<b>279.73</b>	<b>292.92</b>	<b>301.89</b>	..
Canada	11.87	18.54	20.24	23.41	17.20	15.64	17.30	17.00	..
Chile	0.00	0.01	0.74	2.98	3.04	1.82	0.90	1.08	..
Mexico	6.88	12.37	13.10	11.97	10.64	11.95	12.88	13.25	..
United States <sup>2</sup>	177.26	151.57	123.81	155.35	111.56	121.68	133.29	141.97	..
<b>OECD Americas</b>	<b>196.01</b>	<b>182.49</b>	<b>157.89</b>	<b>193.71</b>	<b>142.45</b>	<b>151.09</b>	<b>164.37</b>	<b>173.30</b>	..
Australia	1.49	3.73	6.03	7.46	8.24	8.14	8.52	7.99	..
Israel <sup>1</sup>	0.05	0.13	0.03	0.00	-	0.06	1.26	1.16	..
Japan	1.64	2.14	5.35	7.93	11.36	11.66	11.54	11.29	..
Korea	-	-	0.07	2.88	4.17	7.09	7.41	7.51	..
New Zealand	0.03	0.26	1.53	2.68	0.98	1.47	2.32	2.57	..
<b>OECD Asia Oceania</b>	<b>3.21</b>	<b>6.26</b>	<b>13.01</b>	<b>20.95</b>	<b>24.75</b>	<b>28.43</b>	<b>31.05</b>	<b>30.51</b>	..
Austria	1.29	2.10	1.97	2.38	2.70	2.93	2.95	3.03	..
Belgium	3.15	3.63	3.30	5.31	4.86	4.78	4.72	4.72	..
Czech Republic	0.46	0.28	2.42	2.60	2.42	2.31	2.08	2.12	..
Denmark	-	-	0.53	0.78	0.71	0.71	0.64	0.64	..
Estonia	..	..	0.37	0.22	0.28	0.11	0.09	0.11	..
Finland	-	0.40	0.92	0.84	0.76	0.73	0.57	0.56	..
France	5.65	9.43	11.10	14.67	14.18	12.14	11.12	10.93	..
Germany	12.52	19.52	19.30	21.41	21.73	22.02	21.07	22.11	..
Greece	-	-	0.10	0.36	0.55	0.73	0.78	0.70	..
Hungary	2.22	3.50	3.76	1.70	1.62	1.33	1.69	1.79	..
Iceland	-	-	-	-	-	-	-	-	..
Ireland	-	0.35	0.79	0.85	0.46	0.45	0.73	0.76	..
Italy	8.64	11.10	14.65	17.60	14.85	10.92	8.85	9.01	..
Latvia	..	..	0.44	0.21	0.29	0.24	0.12	0.11	..
Luxembourg	0.14	0.25	0.28	0.30	0.33	0.31	0.28	0.28	..
Netherlands	8.15	8.41	9.05	8.40	7.77	7.22	6.75	6.82	..
Norway	-	-	-	0.59	0.70	0.68	0.81	0.70	..
Poland	4.00	5.40	4.43	4.12	4.81	4.75	5.35	5.52	..
Portugal	-	-	-	0.66	0.96	1.05	1.14	1.11	..
Slovak Republic	0.82	0.60	1.33	1.12	1.35	1.10	1.17	1.13	..
Slovenia	..	..	0.57	0.61	0.67	0.56	0.41	0.42	..
Spain	0.39	0.60	3.77	9.63	13.77	8.24	7.33	6.98	..
Sweden	-	-	0.25	0.30	0.34	0.43	0.50	0.39	..
Switzerland	0.01	0.35	0.42	0.73	0.80	0.89	0.93	0.95	..
Turkey	-	-	0.67	1.76	3.19	6.51	9.32	9.21	..
United Kingdom	9.42	13.50	11.96	15.26	12.33	9.08	8.09	7.98	..
<b>OECD Europe</b>	<b>56.87</b>	<b>79.43</b>	<b>92.38</b>	<b>112.39</b>	<b>112.46</b>	<b>100.21</b>	<b>97.49</b>	<b>98.08</b>	..
IEA	256.04	268.05	261.51	323.24	275.65	277.04	290.22	299.13	..
IEA/Accession/Association	258.75	277.94	283.25	361.41	331.99	362.23	396.96	409.84	..
European Union - 28	..	..	113.16	117.31	116.01	98.32	92.17	92.66	..
G7	227.00	225.81	206.41	255.62	203.22	203.14	211.25	220.30	..
G8	..	..	258.02	298.38	254.76	269.49	279.64	290.88	..
G20	..	..	365.39	423.04	408.75	462.83	492.70	506.57	..
<b>OPEC</b>	<b>8.28</b>	<b>13.29</b>	<b>37.23</b>	<b>56.57</b>	<b>73.25</b>	<b>111.30</b>	<b>125.23</b>	<b>121.45</b>	..

Includes non-energy use for industry/transformation/energy.

1. Please refer to section 'Geographical coverage'.

2. For the United States, gas used by autoproducers of electricity and heat has been included in final consumption prior to 1989.

## Industry consumption of natural gas (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>118.68</b>	<b>191.08</b>	<b>188.04</b>	<b>202.63</b>	<b>271.17</b>	<b>360.74</b>	<b>399.67</b>	<b>404.66</b>	<b>..</b>
Albania	-	-	0.16	0.00	-	0.00	0.01	0.01	..
Armenia	..	..	0.97	0.31	0.58	0.22	0.17	0.16	..
Azerbaijan	..	..	6.26	0.80	0.74	0.54	0.93	1.05	..
Belarus	..	..	2.89	1.78	2.42	2.76	2.30	2.19	..
Bosnia and Herzegovina	..	..	0.32	0.12	0.19	0.07	0.07	0.08	..
Bulgaria	-	-	2.58	1.52	1.36	0.89	1.19	1.21	..
Croatia	..	..	0.99	0.95	0.92	0.92	0.75	0.74	..
Cyprus <sup>1</sup>	-	-	-	-	-	-	-	-	..
FYR of Macedonia	..	..	-	0.01	0.05	0.04	0.03	0.03	..
Georgia	..	..	1.31	0.20	0.27	0.27	0.32	0.28	..
Gibraltar	-	-	-	-	-	-	-	-	..
Kazakhstan	..	..	-	-	-	1.59	2.08	2.08	..
Kosovo	..	..	..	-	-	-	-	-	..
Kyrgyzstan	..	..	-	-	0.18	0.04	0.02	0.02	..
Lithuania	..	..	1.53	0.75	0.87	0.82	1.23	1.13	..
Malta	-	-	-	-	-	-	-	-	..
Republic of Moldova	..	..	0.53	0.18	0.40	0.34	0.25	0.29	..
Montenegro	..	..	..	..	-	-	-	-	..
Romania	11.45	27.26	16.77	4.78	5.11	3.55	2.57	2.36	..
Russian Federation	..	..	51.61	42.76	51.54	66.35	68.39	70.58	..
Serbia	..	..	0.78	0.86	1.03	0.83	0.56	0.67	..
Tajikistan	..	..	-	-	-	-	-	-	..
Turkmenistan	..	..	0.31	0.28	0.36	0.65	1.00	1.00	..
Ukraine	..	..	23.30	11.95	16.30	10.55	5.05	4.27	..
Uzbekistan	..	..	-	7.66	6.46	6.14	4.91	4.97	..
Former Soviet Union	88.83	128.32	x	x	x	x	x	x	..
Former Yugoslavia	0.86	1.80	x	x	x	x	x	x	..
<b>Non-OECD Europe and Eurasia</b>	<b>101.13</b>	<b>157.39</b>	<b>110.32</b>	<b>74.91</b>	<b>88.79</b>	<b>96.57</b>	<b>91.83</b>	<b>93.11</b>	<b>..</b>
Algeria	0.18	0.45	2.02	2.60	3.14	4.27	6.54	6.98	..
Angola	0.05	0.06	0.44	0.47	0.53	0.60	0.63	0.59	..
Benin	-	-	-	-	-	-	-	-	..
Botswana	..	..	-	-	-	-	-	-	..
Cameroon	-	-	-	-	-	-	-	-	..
Congo	-	-	-	-	-	-	-	-	..
Côte d'Ivoire	-	-	-	-	-	0.18	0.25	0.31	..
Dem. Rep. of the Congo	-	-	-	-	-	-	-	-	..
Egypt	-	0.75	2.35	3.62	8.26	9.76	8.17	9.15	..
Eritrea	..	..	..	-	-	-	-	-	..
Ethiopia	-	-	-	-	-	-	-	-	..
Gabon	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	..
Ghana	-	-	-	-	-	-	-	-	..
Kenya	-	-	-	-	-	-	-	-	..
Libya	0.26	1.01	1.29	2.15	2.07	2.21	0.13	0.13	..
Mauritius	-	-	-	-	-	-	-	-	..
Morocco	0.06	0.06	0.04	0.04	0.03	0.04	0.07	0.06	..
Mozambique	-	-	-	-	0.02	0.06	0.13	0.13	..
Namibia	..	..	..	-	-	-	-	-	..
Niger	..	..	..	-	-	-	-	-	..
Nigeria	0.03	0.04	0.72	0.97	2.81	1.21	3.76	3.41	..
Senegal	-	-	-	-	-	-	-	-	..
South Africa	-	-	-	-	-	0.82	1.74	1.69	..
South Sudan	..	..	..	..	..	..	-	-	..
Sudan	-	-	-	-	-	-	-	-	..
United Rep. of Tanzania	-	-	-	-	0.05	0.10	0.14	0.15	..
Togo	-	-	-	-	-	-	-	-	..
Tunisia	0.01	0.08	0.26	0.45	0.62	0.81	0.80	0.79	..
Zambia	-	-	-	-	-	-	-	-	..
Zimbabwe	-	-	-	-	-	-	-	-	..
Other Africa	-	-	-	0.00	0.95	0.90	0.78	1.17	..
<b>Africa</b>	<b>0.59</b>	<b>2.45</b>	<b>7.12</b>	<b>10.30</b>	<b>18.49</b>	<b>20.98</b>	<b>23.15</b>	<b>24.53</b>	<b>..</b>

Includes non-energy use for industry/transformation/energy.

1. Please refer to section 'Geographical coverage'.

## Industry consumption of natural gas (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	0.33	0.56	1.56	2.78	3.23	4.34	4.78	4.95	..
Brunei Darussalam	-	-	-	-	-	0.46	0.04	0.44	..
Cambodia	..	..	..	-	-	-	-	-	..
DPR of Korea	-	-	-	-	-	-	-	-	..
India	0.27	0.63	5.52	9.19	11.92	24.62	25.43	27.87	..
Indonesia	0.12	2.36	6.01	11.50	13.58	15.70	16.80	13.27	..
Malaysia	-	0.00	1.09	3.84	6.86	5.97	9.28	12.07	..
Mongolia	..	..	-	-	-	-	-	-	..
Myanmar	0.03	0.08	0.22	0.32	0.39	0.41	0.51	0.39	..
Nepal	-	-	-	-	-	-	-	-	..
Pakistan	1.69	2.58	4.25	6.49	10.22	10.64	9.94	9.46	..
Philippines	-	-	-	-	0.01	0.07	0.05	0.07	..
Singapore	-	-	-	-	0.40	0.97	1.06	1.01	..
Sri Lanka	-	-	-	-	-	-	-	-	..
Chinese Taipei	0.87	1.09	0.34	0.74	0.81	1.01	1.59	1.69	..
Thailand	-	-	0.14	1.11	1.81	3.12	4.71	4.94	..
Viet Nam	-	-	-	0.02	0.54	0.49	1.67	1.60	..
Other Non-OECD Asia	-	-	-	-	-	-	-	-	..
<b>Non-OECD Asia excl. China</b>	<b>3.31</b>	<b>7.32</b>	<b>19.13</b>	<b>35.99</b>	<b>49.77</b>	<b>67.80</b>	<b>75.85</b>	<b>77.77</b>	<b>..</b>
People's Rep. of China	2.16	6.09	7.07	8.99	18.01	28.76	47.71	52.85	..
Hong Kong, China	0.00	0.00	0.01	0.02	0.02	0.02	0.04	0.03	..
<b>China</b>	<b>2.16</b>	<b>6.10</b>	<b>7.08</b>	<b>9.02</b>	<b>18.03</b>	<b>28.78</b>	<b>47.74</b>	<b>52.88</b>	<b>..</b>
Argentina	2.31	3.02	4.31	6.59	7.78	8.08	8.86	8.50	..
Bolivia	0.00	0.04	0.17	0.32	0.38	0.54	0.77	0.77	..
Brazil	0.09	0.74	2.22	4.36	7.55	10.15	10.06	9.64	..
Colombia	0.21	0.54	0.79	0.98	1.70	1.93	1.10	1.20	..
Costa Rica	-	-	-	-	-	-	-	-	..
Cuba	0.00	0.00	0.00	0.13	0.13	0.33	0.32	0.27	..
Curaçao	-	-	-	-	-	-	-	-	..
Dominican Republic	-	-	-	-	-	0.03	0.09	0.09	..
Ecuador	-	-	-	-	-	-	0.01	0.04	..
El Salvador	-	-	-	-	-	-	-	-	..
Guatemala	-	-	-	-	-	-	-	-	..
Haiti	-	-	-	-	-	-	-	-	..
Honduras	-	-	-	-	-	-	-	-	..
Jamaica	-	-	-	-	-	-	-	-	..
Nicaragua	-	-	-	-	-	-	-	-	..
Panama	-	-	-	-	-	-	-	-	..
Paraguay	-	-	-	-	-	-	-	-	..
Peru	0.00	0.04	0.03	-	0.14	0.70	1.07	1.14	..
Suriname	..	..	..	-	-	-	-	-	..
Trinidad and Tobago	0.52	0.86	2.82	5.94	9.60	11.88	10.95	10.39	..
Uruguay	-	-	-	0.03	0.05	0.01	0.01	0.01	..
Venezuela	2.75	5.57	6.24	7.73	10.66	12.32	6.76	5.14	..
Other Non-OECD Americas	-	0.00	0.00	0.00	0.01	0.00	0.00	0.00	..
<b>Non-OECD Americas</b>	<b>5.89</b>	<b>10.80</b>	<b>16.57</b>	<b>26.07</b>	<b>37.99</b>	<b>45.99</b>	<b>40.01</b>	<b>37.20</b>	<b>..</b>
Bahrain	0.59	0.87	1.05	1.19	1.21	1.63	2.12	2.20	..
Islamic Republic of Iran	1.91	0.94	6.74	10.57	15.66	30.50	41.98	44.31	..
Iraq	0.49	0.52	0.81	1.29	0.07	0.20	1.22	1.39	..
Jordan	-	-	-	-	-	-	-	-	..
Kuwait	1.20	1.15	1.61	3.03	4.44	3.28	5.62	6.47	..
Lebanon	-	-	-	-	-	-	-	-	..
Oman	-	-	0.25	0.19	1.08	6.59	11.01	11.29	..
Qatar	0.58	1.30	2.40	3.68	4.52	4.91	7.79	7.48	..
Saudi Arabia	-	0.24	6.21	11.57	15.97	27.33	21.25	21.27	..
Syrian Arab Republic	-	-	-	2.30	1.78	1.72	0.58	0.51	..
United Arab Emirates	0.82	2.00	8.74	12.52	13.37	24.44	29.53	24.25	..
Yemen	-	-	-	-	-	-	-	-	..
<b>Middle East</b>	<b>5.59</b>	<b>7.03</b>	<b>27.82</b>	<b>46.33</b>	<b>58.10</b>	<b>100.62</b>	<b>121.09</b>	<b>119.17</b>	<b>..</b>

Includes non-energy use for industry/transformation/energy.

## Industry consumption of electricity (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>234.90</b>	<b>297.87</b>	<b>387.78</b>	<b>462.51</b>	<b>537.35</b>	<b>637.80</b>	<b>731.34</b>	<b>746.69</b>	..
<b>Non-OECD Total</b>	<b>76.42</b>	<b>111.33</b>	<b>158.65</b>	<b>183.03</b>	<b>266.79</b>	<b>379.77</b>	<b>472.62</b>	<b>486.08</b>	..
<b>OECD Total</b>	<b>158.49</b>	<b>186.55</b>	<b>229.13</b>	<b>279.48</b>	<b>270.56</b>	<b>258.03</b>	<b>258.72</b>	<b>260.62</b>	..
Canada	9.10	11.67	14.44	17.48	18.01	15.09	14.65	14.51	..
Chile	0.41	0.55	0.87	2.21	2.80	3.08	3.63	3.75	..
Mexico	1.56	2.60	4.59	7.11	9.40	10.55	12.04	12.55	..
United States	55.53	64.16	74.51	98.20	77.23	71.06	69.32	68.52	..
<b>OECD Americas</b>	<b>66.60</b>	<b>78.97</b>	<b>94.41</b>	<b>125.00</b>	<b>107.44</b>	<b>99.78</b>	<b>99.64</b>	<b>99.33</b>	..
Australia	1.99	2.80	5.09	6.62	6.37	7.06	6.59	6.65	..
Israel <sup>1</sup>	0.20	0.30	0.45	0.90	1.01	1.07	1.16	1.28	..
Japan	25.05	28.18	35.80	34.37	33.05	30.65	29.01	29.64	..
Korea	0.76	1.95	4.97	12.93	15.82	19.61	22.56	22.82	..
New Zealand	0.48	0.66	0.96	1.21	1.32	1.27	1.18	1.20	..
<b>OECD Asia Oceania</b>	<b>28.49</b>	<b>33.90</b>	<b>47.27</b>	<b>56.03</b>	<b>57.57</b>	<b>59.66</b>	<b>60.49</b>	<b>61.59</b>	..
Austria	1.04	1.22	1.49	1.67	2.08	2.22	2.17	2.21	..
Belgium	1.93	2.06	2.62	3.43	3.39	3.28	3.27	3.26	..
Czech Republic	1.61	1.91	2.31	1.63	1.99	1.87	1.96	2.00	..
Denmark	0.40	0.50	0.72	0.86	0.88	0.73	0.72	0.72	..
Estonia	..	..	0.23	0.16	0.19	0.18	0.18	0.19	..
Finland	1.55	1.96	2.80	3.69	3.70	3.47	3.26	3.31	..
France	7.22	8.20	9.86	11.58	12.00	10.10	10.01	10.06	..
Germany	15.33	17.16	18.61	18.19	19.82	19.31	19.34	19.48	..
Greece	0.63	0.90	1.04	1.16	1.24	1.22	1.09	0.97	..
Hungary	0.92	1.19	1.18	0.76	0.80	0.84	1.32	1.37	..
Iceland	0.13	0.17	0.22	0.45	0.51	1.16	1.30	1.28	..
Ireland	0.19	0.28	0.39	0.66	0.66	0.78	0.85	0.87	..
Italy	6.63	8.08	9.54	12.20	12.45	10.99	9.69	9.74	..
Latvia	..	..	0.27	0.12	0.15	0.14	0.15	0.14	..
Luxembourg	0.20	0.21	0.24	0.28	0.29	0.31	0.26	0.29	..
Netherlands	1.95	2.41	2.87	3.48	3.57	3.37	2.94	3.07	..
Norway	3.20	3.43	3.94	4.43	4.47	3.83	3.87	3.93	..
Poland	3.28	4.48	3.68	3.43	3.52	3.56	4.25	4.40	..
Portugal	0.44	0.71	1.05	1.37	1.48	1.50	1.33	1.30	..
Slovak Republic	0.72	1.11	1.29	0.84	0.95	0.94	1.00	1.04	..
Slovenia	..	..	0.51	0.48	0.62	0.47	0.53	0.54	..
Spain	3.26	4.64	5.44	7.36	9.03	6.32	6.54	6.70	..
Sweden	3.40	3.49	4.64	4.90	4.95	4.68	4.32	4.32	..
Switzerland	0.95	1.02	1.48	1.55	1.62	1.66	1.55	1.53	..
Turkey	0.55	1.04	2.35	3.96	5.22	6.65	8.69	9.07	..
United Kingdom	7.85	7.51	8.65	9.81	9.98	9.00	8.00	7.90	..
<b>OECD Europe</b>	<b>63.40</b>	<b>73.68</b>	<b>87.44</b>	<b>98.45</b>	<b>105.55</b>	<b>98.58</b>	<b>98.59</b>	<b>99.70</b>	..
IEA	157.75	185.52	226.80	275.33	265.48	252.10	251.95	253.63	..
IEA/Accession/Association	173.72	214.38	279.62	370.92	428.42	515.43	600.07	611.09	..
European Union - 28	..	..	85.37	91.02	97.23	88.32	86.37	87.12	..
G7	126.72	144.95	171.41	201.84	182.54	166.20	160.01	159.85	..
G8	..	..	212.83	228.70	210.90	194.30	188.30	187.92	..
G20	..	..	328.37	399.89	458.95	546.96	630.54	640.52	..
<i>OPEC</i>	1.57	3.04	6.00	9.08	10.94	15.30	16.69	18.68	..

1. Please refer to section 'Geographical coverage'.

## Industry consumption of electricity (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>76.42</b>	<b>111.33</b>	<b>158.65</b>	<b>183.03</b>	<b>266.79</b>	<b>379.77</b>	<b>472.62</b>	<b>486.08</b>	<b>..</b>
Albania	-	-	0.04	0.08	0.06	0.09	0.11	0.11	..
Armenia	..	..	0.29	0.06	0.08	0.09	0.14	0.14	..
Azerbaijan	..	..	0.61	0.06	0.25	0.15	0.27	0.30	..
Belarus	..	..	1.94	1.11	1.14	1.14	1.04	1.03	..
Bosnia and Herzegovina	..	..	0.52	0.10	0.21	0.33	0.34	0.35	..
Bulgaria	1.21	1.42	1.60	0.74	0.85	0.67	0.77	0.77	..
Croatia	..	..	0.51	0.25	0.29	0.30	0.29	0.29	..
Cyprus <sup>1</sup>	0.02	0.02	0.03	0.04	0.05	0.05	0.04	0.04	..
FYR of Macedonia	..	..	0.22	0.13	0.18	0.17	0.17	0.14	..
Georgia	..	..	0.65	0.08	0.06	0.18	0.24	0.25	..
Gibraltar	-	-	-	-	-	-	-	-	..
Kazakhstan	..	..	5.50	1.82	3.79	3.45	3.88	3.80	..
Kosovo	..	..	..	0.02	0.03	0.10	0.12	0.09	..
Kyrgyzstan	..	..	0.44	0.24	0.17	0.15	0.20	0.15	..
Lithuania	..	..	0.47	0.20	0.24	0.23	0.28	0.29	..
Malta	-	-	-	0.04	0.04	0.03	0.04	0.04	..
Republic of Moldova	..	..	0.39	0.24	0.22	0.24	0.12	0.11	..
Montenegro	..	..	..	..	0.22	0.16	0.07	0.06	..
Romania	2.30	3.46	3.31	1.71	2.04	1.75	1.76	1.79	..
Russian Federation	..	..	41.42	26.86	28.36	28.10	28.29	28.06	..
Serbia	..	..	1.19	0.54	0.52	0.63	0.63	0.66	..
Tajikistan	..	..	0.99	0.46	0.57	0.64	0.33	0.35	..
Turkmenistan	..	..	0.34	0.18	0.23	0.29	0.39	0.39	..
Ukraine	..	..	12.50	5.18	5.65	5.67	4.30	4.29	..
Uzbekistan	..	..	1.87	1.31	1.34	1.41	1.53	1.55	..
Former Soviet Union	43.76	55.64	x	x	x	x	x	x	..
Former Yugoslavia	1.35	2.32	x	x	x	x	x	x	..
<b>Non-OECD Europe and Eurasia</b>	<b>48.64</b>	<b>62.87</b>	<b>74.84</b>	<b>41.47</b>	<b>46.59</b>	<b>46.02</b>	<b>45.34</b>	<b>45.05</b>	<b>..</b>
Algeria	0.08	0.24	0.51	0.59	0.76	1.09	1.50	1.60	..
Angola	0.01	0.01	0.01	0.03	0.05	0.14	0.24	0.26	..
Benin	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.03	..
Botswana	..	..	0.05	0.07	0.10	0.12	0.13	0.12	..
Cameroon	0.07	0.07	0.12	0.13	0.13	0.24	0.29	0.31	..
Congo	0.00	0.01	0.02	0.01	0.01	0.02	0.03	0.03	..
Côte d'Ivoire	0.02	0.04	0.04	0.08	0.11	0.09	0.17	0.19	..
Dem. Rep. of the Congo	-	0.22	0.09	0.16	0.27	0.34	0.34	0.33	..
Egypt	0.36	0.86	1.45	2.11	2.81	3.50	3.29	3.47	..
Eritrea	..	..	..	0.01	0.00	0.01	0.01	0.01	..
Ethiopia	0.03	0.03	0.04	0.05	0.08	0.12	0.24	0.26	..
Gabon	0.00	0.02	0.03	0.02	0.03	0.03	0.04	0.05	..
Ghana	0.28	0.34	0.31	0.37	0.22	0.27	0.36	0.39	..
Kenya	0.05	0.07	0.17	0.18	0.25	0.30	0.36	0.38	..
Libya	0.01	0.07	0.14	0.26	0.27	0.18	0.16	0.10	..
Mauritius	0.00	0.01	0.02	0.06	0.07	0.08	0.08	0.08	..
Morocco	0.10	0.20	0.35	0.52	0.62	0.76	0.93	0.96	..
Mozambique	0.02	0.02	0.02	0.13	0.72	0.74	0.81	0.74	..
Namibia	..	..	..	0.05	0.05	0.07	0.05	0.05	..
Niger	..	..	..	0.01	0.02	0.01	0.02	0.02	..
Nigeria	0.11	0.15	0.17	0.16	0.18	0.28	0.36	0.35	..
Senegal	0.02	0.03	0.04	0.03	0.05	0.06	0.08	0.09	..
South Africa	3.06	5.06	7.08	8.34	9.46	10.41	10.02	9.97	..
South Sudan	..	..	..	..	..	..	-	-	..
Sudan	0.02	0.02	0.02	0.05	0.04	0.08	0.13	0.15	..
United Rep. of Tanzania	0.02	0.02	0.03	0.03	0.06	0.09	0.12	0.13	..
Togo	0.00	0.00	0.01	0.01	0.02	0.02	0.03	0.03	..
Tunisia	0.05	0.13	0.24	0.38	0.43	0.44	0.47	0.47	..
Zambia	0.36	0.41	0.38	0.36	0.48	0.35	0.59	0.56	..
Zimbabwe	0.29	0.41	0.49	0.46	0.40	0.27	0.22	0.23	..
Other Africa	0.05	0.10	0.13	0.21	0.22	0.27	0.49	0.50	..
<b>Africa</b>	<b>5.03</b>	<b>8.55</b>	<b>11.97</b>	<b>14.88</b>	<b>17.94</b>	<b>20.39</b>	<b>21.63</b>	<b>21.86</b>	<b>..</b>

1. Please refer to section 'Geographical coverage'.

## Industry consumption of electricity (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	0.07	0.08	0.23	0.46	0.97	1.68	2.32	2.53	..
Brunei Darussalam	0.00	0.01	0.02	0.02	0.01	0.02	0.02	0.01	..
Cambodia	..	..	..	0.00	0.01	0.03	0.08	0.13	..
DPR of Korea	0.60	0.77	1.01	0.62	0.74	0.70	0.44	0.54	..
India	3.24	4.75	9.08	13.62	18.13	27.51	36.10	36.35	..
Indonesia	0.03	0.15	1.25	2.92	3.67	4.40	5.51	5.86	..
Malaysia	0.20	0.38	0.83	2.80	3.37	4.53	5.20	5.82	..
Mongolia	..	..	0.16	0.10	0.13	0.18	0.28	0.29	..
Myanmar	0.03	0.05	0.07	0.12	0.12	0.20	0.18	0.18	..
Nepal	0.00	0.00	0.02	0.04	0.07	0.09	0.10	0.15	..
Pakistan	0.31	0.35	0.89	1.23	1.72	1.83	2.15	2.28	..
Philippines	0.41	0.71	0.86	1.13	1.33	1.60	1.94	2.07	..
Singapore	0.12	0.21	0.47	0.92	1.21	1.45	1.62	1.63	..
Sri Lanka	0.04	0.06	0.08	0.19	0.21	0.27	0.33	0.36	..
Chinese Taipei	1.00	2.05	3.80	7.47	9.33	10.68	11.46	11.67	..
Thailand	0.34	0.54	1.54	3.45	4.89	5.47	7.22	7.64	..
Viet Nam	-	0.13	0.24	0.78	1.96	4.00	6.63	7.33	..
Other Non-OECD Asia	0.04	0.20	0.23	0.34	0.42	0.57	1.02	1.03	..
<b>Non-OECD Asia excl. China</b>	<b>6.44</b>	<b>10.44</b>	<b>20.79</b>	<b>36.25</b>	<b>48.30</b>	<b>65.20</b>	<b>82.61</b>	<b>85.88</b>	..
People's Rep. of China	9.20	16.59	29.61	59.33	116.53	203.17	276.20	284.47	..
Hong Kong, China	0.21	0.36	0.60	0.42	0.35	0.26	0.27	0.27	..
<b>China</b>	<b>9.41</b>	<b>16.96</b>	<b>30.20</b>	<b>59.76</b>	<b>116.88</b>	<b>203.44</b>	<b>276.47</b>	<b>284.74</b>	..
Argentina	1.06	1.49	1.84	3.00	3.72	4.16	4.62	4.42	..
Bolivia	0.05	0.07	0.06	0.11	0.11	0.15	0.18	0.18	..
Brazil	2.54	5.87	9.66	12.62	15.08	17.48	16.91	16.80	..
Colombia	0.30	0.43	0.68	0.98	1.08	1.21	1.62	1.63	..
Costa Rica	0.03	0.06	0.07	0.12	0.15	0.16	0.16	0.17	..
Cuba	0.19	0.23	0.49	0.34	0.31	0.33	0.33	0.32	..
Curaçao	0.03	0.03	0.03	0.04	0.04	0.05	0.03	0.03	..
Dominican Republic	0.06	0.08	0.05	0.34	0.38	0.45	0.49	0.53	..
Ecuador	0.03	0.10	0.13	0.19	0.26	0.62	0.77	0.81	..
El Salvador	0.03	0.04	0.05	0.15	0.18	0.19	0.18	0.15	..
Guatemala	0.03	0.07	0.06	0.13	0.23	0.26	0.30	0.31	..
Haiti	0.00	0.01	0.02	0.01	0.01	0.01	0.02	0.02	..
Honduras	0.02	0.03	0.07	0.08	0.10	0.11	0.18	0.16	..
Jamaica	0.13	0.05	0.02	0.32	0.41	0.05	0.13	0.13	..
Nicaragua	0.03	0.03	0.03	0.03	0.03	0.08	0.10	0.10	..
Panama	0.02	0.02	0.03	0.04	0.03	0.07	0.07	0.06	..
Paraguay	0.01	0.03	0.05	0.08	0.11	0.14	0.18	0.19	..
Peru	0.33	0.45	0.62	0.85	1.08	1.44	2.01	2.25	..
Suriname	..	..	..	0.05	0.06	0.07	0.08	0.07	..
Trinidad and Tobago	0.04	0.09	0.16	0.26	0.36	0.41	0.50	0.52	..
Uruguay	0.06	0.09	0.13	0.14	0.15	0.22	0.28	0.29	..
Venezuela	0.48	1.19	2.12	2.37	2.97	3.17	2.75	2.44	..
Other Non-OECD Americas	0.50	0.58	0.74	1.28	1.53	1.40	1.13	1.15	..
<b>Non-OECD Americas</b>	<b>5.96</b>	<b>11.06</b>	<b>17.10</b>	<b>23.52</b>	<b>28.37</b>	<b>32.22</b>	<b>33.03</b>	<b>32.74</b>	..
Bahrain	0.01	0.02	0.42	0.72	1.03	0.99	1.20	1.20	..
Islamic Republic of Iran	0.59	0.75	1.24	2.83	3.92	5.42	4.77	6.94	..
Iraq	0.10	0.33	0.78	1.03	0.38	0.60	0.55	0.45	..
Jordan	0.01	0.02	0.10	0.16	0.22	0.27	0.32	0.33	..
Kuwait	-	-	-	-	-	-	-	-	..
Lebanon	-	-	-	0.22	0.25	0.34	0.37	0.38	..
Oman	0.00	0.00	0.01	0.03	0.05	0.13	0.41	0.44	..
Qatar	-	0.04	0.05	0.14	0.24	0.67	1.02	1.03	..
Saudi Arabia	0.15	0.11	0.71	1.07	1.32	2.46	3.40	3.45	..
Syrian Arab Republic	0.08	0.15	0.36	0.58	0.73	0.97	0.38	0.38	..
United Arab Emirates	0.00	0.03	0.09	0.37	0.55	0.65	1.12	1.20	..
Yemen	0.00	0.00	-	-	0.03	0.00	0.01	0.01	..
<b>Middle East</b>	<b>0.94</b>	<b>1.45</b>	<b>3.76</b>	<b>7.16</b>	<b>8.71</b>	<b>12.50</b>	<b>13.54</b>	<b>15.82</b>	..



## Total industry consumption of energy (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>1 811.40</b>	<b>2 108.54</b>	<b>2 268.32</b>	<b>2 460.96</b>	<b>2 916.19</b>	<b>3 362.27</b>	<b>3 573.41</b>	<b>3 580.25</b>	..
<b>Non-OECD Total</b>	<b>640.51</b>	<b>930.83</b>	<b>1 150.45</b>	<b>1 190.69</b>	<b>1 684.64</b>	<b>2 197.90</b>	<b>2 436.66</b>	<b>2 433.60</b>	..
<b>OECD Total</b>	<b>1 170.89</b>	<b>1 177.72</b>	<b>1 117.87</b>	<b>1 270.27</b>	<b>1 231.55</b>	<b>1 164.37</b>	<b>1 136.75</b>	<b>1 146.65</b>	..
Canada	52.52	61.22	61.29	73.62	70.76	61.39	62.31	62.77	..
Chile	2.32	2.79	4.33	9.04	9.71	9.73	10.73	11.18	..
Mexico	16.47	27.21	34.71	35.03	36.62	39.97	40.57	40.37	..
United States	478.72	485.32	397.92	480.49	432.72	405.60	386.87	393.17	..
<b>OECD Americas</b>	<b>550.03</b>	<b>576.54</b>	<b>498.24</b>	<b>598.18</b>	<b>549.81</b>	<b>516.68</b>	<b>500.48</b>	<b>507.48</b>	..
Australia	17.81	20.45	23.26	28.22	27.10	27.17	27.52	27.39	..
Israel <sup>1</sup>	1.37	1.87	2.17	3.17	2.71	3.46	4.67	4.69	..
Japan	140.54	118.74	139.70	136.68	136.99	125.19	120.41	117.52	..
Korea	7.55	13.37	25.99	62.99	68.73	82.64	94.82	97.20	..
New Zealand	2.18	2.62	4.22	5.90	4.65	5.04	5.74	6.27	..
<b>OECD Asia Oceania</b>	<b>169.45</b>	<b>157.06</b>	<b>195.34</b>	<b>236.96</b>	<b>240.18</b>	<b>243.49</b>	<b>253.16</b>	<b>253.07</b>	..
Austria	6.19	6.34	6.67	7.52	8.64	9.19	9.33	9.75	..
Belgium	16.73	13.70	13.49	19.70	18.21	18.32	19.38	19.54	..
Czech Republic	18.54	19.82	17.52	11.10	11.49	9.67	8.88	8.14	..
Denmark	4.06	3.56	2.93	3.17	3.09	2.63	2.30	2.35	..
Estonia	..	..	2.76	0.75	0.94	0.66	0.62	0.54	..
Finland	7.57	7.22	10.62	12.70	12.44	12.12	12.01	12.43	..
France	55.75	54.13	44.03	49.24	49.01	42.48	40.32	39.85	..
Germany	105.02	101.22	88.59	76.00	78.45	77.56	76.21	76.73	..
Greece	3.47	4.36	4.56	5.11	4.83	4.54	3.81	3.65	..
Hungary	7.41	9.86	7.82	4.89	5.37	4.61	5.89	5.95	..
Iceland	0.28	0.36	0.40	0.70	0.79	1.31	1.47	1.45	..
Ireland	1.87	2.34	2.32	3.06	2.95	2.47	2.58	2.69	..
Italy	47.34	44.53	44.20	46.01	46.40	39.37	31.21	31.05	..
Latvia	..	..	2.02	0.63	0.77	0.83	0.87	0.81	..
Luxembourg	2.09	1.68	1.33	0.78	0.80	0.78	0.66	0.70	..
Netherlands	20.94	25.26	25.46	27.37	30.87	29.59	26.07	26.79	..
Norway	6.95	8.00	7.87	9.02	9.03	8.34	8.33	8.15	..
Poland	29.46	36.75	27.15	21.03	18.91	18.25	19.51	19.96	..
Portugal	2.64	3.77	6.65	8.40	8.01	7.13	5.75	5.44	..
Slovak Republic	6.14	6.59	7.64	4.93	4.85	4.26	4.37	4.27	..
Slovenia	..	..	1.54	1.66	1.93	1.47	1.35	1.37	..
Spain	20.57	23.42	24.81	33.70	38.36	27.69	22.15	22.91	..
Sweden	15.36	13.42	13.71	15.23	14.06	13.72	12.78	13.02	..
Switzerland	4.69	4.46	3.98	4.29	4.40	4.37	4.04	4.01	..
Turkey	4.28	7.38	13.61	23.05	25.24	29.31	32.69	34.25	..
United Kingdom	64.06	45.95	42.60	45.06	41.73	33.53	30.52	30.28	..
<b>OECD Europe</b>	<b>451.41</b>	<b>444.12</b>	<b>424.29</b>	<b>435.12</b>	<b>441.55</b>	<b>404.19</b>	<b>383.11</b>	<b>386.09</b>	..
IEA	1 166.91	1 172.70	1 107.41	1 255.07	1 215.63	1 147.57	1 117.66	1 127.16	..
IEA/Accession/Association	1 357.86	1 466.19	1 554.34	1 866.61	2 223.75	2 556.87	2 726.59	2 717.53	..
European Union - 28	..	..	441.41	416.99	422.35	375.72	351.19	352.43	..
G7	943.95	911.11	818.34	907.11	856.07	785.11	747.86	751.38	..
G8	..	..	1 067.20	1 071.24	1 023.36	977.80	951.12	966.28	..
G20	..	..	1 871.57	2 075.56	2 433.93	2 802.58	2 974.75	2 972.26	..
<b>OPEC</b>	<b>21.45</b>	<b>47.89</b>	<b>83.47</b>	<b>121.79</b>	<b>154.98</b>	<b>222.43</b>	<b>243.61</b>	<b>237.93</b>	..

Includes non-energy use for industry/transformation/energy.

1. Please refer to section 'Geographical coverage'.

## Total industry consumption of energy (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>640.51</b>	<b>930.83</b>	<b>1 150.45</b>	<b>1 190.69</b>	<b>1 684.64</b>	<b>2 197.90</b>	<b>2 436.66</b>	<b>2 433.60</b>	..
Albania	0.26	1.00	0.94	0.33	0.29	0.46	0.38	0.38	..
Armenia	..	..	2.10	0.42	0.72	0.36	0.35	0.33	..
Azerbaijan	..	..	9.56	1.98	2.46	1.24	1.98	2.18	..
Belarus	..	..	19.31	7.41	7.95	7.52	6.71	6.49	..
Bosnia and Herzegovina	..	..	2.36	0.58	0.64	0.76	0.82	0.81	..
Bulgaria	4.57	5.80	10.45	4.57	4.51	2.99	3.33	3.15	..
Croatia	..	..	2.93	2.04	2.26	1.97	1.62	1.61	..
Cyprus <sup>1</sup>	0.21	0.30	0.30	0.52	0.39	0.31	0.23	0.25	..
FYR of Macedonia	..	..	0.78	0.53	0.61	0.57	0.53	0.56	..
Georgia	..	..	4.26	0.38	0.46	0.58	1.01	0.97	..
Gibraltar	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	..
Kazakhstan	..	..	28.65	10.40	18.07	21.39	19.66	20.70	..
Kosovo	..	..	..	0.16	0.20	0.28	0.36	0.32	..
Kyrgyzstan	..	..	2.52	0.45	0.49	0.43	0.75	0.44	..
Lithuania	..	..	4.18	1.42	1.75	1.59	2.08	2.01	..
Malta	..	0.00	0.01	0.04	0.07	0.05	0.05	0.05	..
Republic of Moldova	..	..	1.12	0.50	0.74	0.70	0.49	0.50	..
Montenegro	..	..	..	..	0.35	0.24	0.15	0.14	..
Romania	17.64	37.87	25.12	10.36	11.28	7.94	7.28	7.12	..
Russian Federation	..	..	248.86	164.13	167.29	192.69	203.25	214.90	..
Serbia	..	..	5.04	2.40	3.74	3.18	2.70	3.08	..
Tajikistan	..	..	0.99	0.46	0.57	0.64	0.35	0.38	..
Turkmenistan	..	..	0.65	0.46	0.59	0.94	1.39	1.39	..
Ukraine	..	..	85.64	33.99	41.79	30.40	19.63	17.75	..
Uzbekistan	..	..	3.80	10.00	8.59	8.17	7.05	7.11	..
Former Soviet Union	304.62	405.25	x	x	x	x	x	x	..
Former Yugoslavia	9.02	10.94	x	x	x	x	x	x	..
<b>Non-OECD Europe and Eurasia</b>	<b>336.33</b>	<b>461.17</b>	<b>459.58</b>	<b>253.56</b>	<b>275.83</b>	<b>285.41</b>	<b>282.19</b>	<b>292.64</b>	..
Algeria	0.81	1.68	4.24	4.88	5.70	7.31	9.48	9.96	..
Angola	0.23	0.24	0.82	0.92	0.96	1.32	1.47	1.55	..
Benin	0.00	0.01	0.02	0.07	0.05	0.06	0.15	0.20	..
Botswana	..	..	0.19	0.31	0.36	0.31	0.36	0.35	..
Cameroon	0.10	0.15	0.25	0.22	0.21	0.35	0.37	0.38	..
Congo	0.05	0.03	0.04	0.03	0.04	0.05	0.09	0.09	..
Côte d'Ivoire	0.27	0.30	0.23	0.35	0.25	0.48	0.73	0.84	..
Dem. Rep. of the Congo	1.37	1.81	2.34	2.89	3.54	4.13	3.43	3.53	..
Egypt	3.10	6.61	11.75	13.05	19.00	20.99	17.99	19.61	..
Eritrea	..	..	..	0.02	0.03	0.01	0.02	0.02	..
Ethiopia	0.15	0.14	0.25	0.34	0.50	0.71	1.33	1.42	..
Gabon	0.24	0.41	0.23	0.39	1.69	3.39	3.08	3.16	..
Ghana	0.63	0.74	0.76	1.34	1.10	1.19	1.52	1.51	..
Kenya	0.28	0.42	0.64	0.69	0.89	1.22	1.48	1.53	..
Libya	0.40	1.84	2.47	4.06	3.73	4.76	1.19	1.20	..
Mauritius	0.25	0.24	0.26	0.25	0.25	0.23	0.22	0.21	..
Morocco	1.15	1.84	2.17	2.51	2.89	3.41	3.59	3.44	..
Mozambique	0.94	0.71	0.56	0.76	1.50	1.69	2.00	1.95	..
Namibia	..	..	..	0.11	0.13	0.17	0.21	0.21	..
Niger	..	..	..	0.03	0.04	0.09	0.09	0.09	..
Nigeria	1.36	2.29	2.48	3.54	6.78	7.76	8.96	8.58	..
Senegal	0.16	0.21	0.13	0.21	0.28	0.34	0.55	0.59	..
South Africa	17.12	24.39	25.94	26.06	27.34	30.31	29.19	29.48	..
South Sudan	..	..	..	..	..	..	0.01	0.01	..
Sudan	1.00	0.88	0.99	1.36	1.32	1.96	1.54	1.59	..
United Rep. of Tanzania	0.78	0.79	0.96	1.24	1.73	2.29	3.41	3.58	..
Togo	0.00	0.00	0.02	0.09	0.06	0.10	0.09	0.10	..
Tunisia	0.40	0.83	1.32	1.76	2.30	2.17	2.40	2.36	..
Zambia	1.39	1.29	1.23	1.19	1.58	1.87	2.72	2.74	..
Zimbabwe	1.14	1.35	1.73	1.29	0.91	0.73	0.67	0.68	..
Other Africa	2.16	2.42	4.20	3.02	2.74	3.18	5.18	5.66	..
<b>Africa</b>	<b>35.48</b>	<b>51.64</b>	<b>66.20</b>	<b>72.96</b>	<b>87.89</b>	<b>102.60</b>	<b>103.49</b>	<b>106.60</b>	..

Includes non-energy use for industry/transformation/energy.

1. Please refer to section 'Geographical coverage'.

## Total industry consumption of energy (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	0.79	1.17	2.34	4.29	4.81	6.81	9.55	9.27	..
Brunei Darussalam	0.03	0.06	0.08	0.09	0.07	0.64	0.20	0.57	..
Cambodia	..	..	..	0.61	0.70	0.75	1.04	1.29	..
DPR of Korea	12.03	17.37	19.48	11.37	12.56	8.28	3.74	4.29	..
India	38.40	47.09	80.03	110.21	129.98	193.21	232.24	238.89	..
Indonesia	1.99	7.96	25.58	39.94	46.47	50.11	53.67	46.18	..
Malaysia	1.91	3.34	6.40	14.00	18.13	18.62	21.12	25.07	..
Mongolia	..	..	1.17	0.47	0.58	0.85	0.96	0.95	..
Myanmar	0.36	0.70	0.49	1.24	1.20	1.38	2.46	2.14	..
Nepal	0.06	0.09	0.11	0.39	0.41	0.46	0.74	0.92	..
Pakistan	4.08	5.47	10.12	13.98	20.57	21.34	23.01	23.08	..
Philippines	3.03	3.64	4.88	5.62	5.41	6.53	7.87	8.74	..
Singapore	0.57	0.80	2.52	4.91	9.56	10.68	13.24	13.48	..
Sri Lanka	0.68	0.67	0.81	1.78	2.06	2.18	3.04	2.69	..
Chinese Taipei	6.10	12.11	16.29	26.99	36.25	44.27	44.93	45.20	..
Thailand	3.52	4.21	9.08	22.35	35.44	44.55	53.80	54.27	..
Viet Nam	1.97	3.85	4.57	7.99	12.30	19.68	26.53	30.14	..
Other Non-OECD Asia	1.12	2.23	0.74	1.35	1.60	2.07	3.39	3.44	..
<b>Non-OECD Asia excl. China</b>	<b>76.63</b>	<b>110.75</b>	<b>184.71</b>	<b>267.59</b>	<b>338.11</b>	<b>432.44</b>	<b>501.53</b>	<b>510.59</b>	..
People's Rep. of China	118.95	188.40	274.00	352.96	694.10	1 001.07	1 148.31	1 130.10	..
Hong Kong, China	0.98	1.12	1.70	2.12	1.56	1.91	2.29	2.35	..
<b>China</b>	<b>119.93</b>	<b>189.52</b>	<b>275.70</b>	<b>355.09</b>	<b>695.66</b>	<b>1 002.98</b>	<b>1 150.60</b>	<b>1 132.45</b>	..
Argentina	9.42	10.52	10.20	18.97	20.40	20.95	21.95	21.34	..
Bolivia	0.26	0.35	0.51	1.01	1.05	1.32	1.79	1.78	..
Brazil	24.05	40.41	49.22	69.62	79.96	96.53	93.36	92.86	..
Colombia	3.09	4.15	5.41	8.13	7.98	7.02	7.67	8.01	..
Costa Rica	0.31	0.42	0.50	0.63	0.79	0.91	0.97	0.99	..
Cuba	4.87	6.18	8.44	6.09	3.35	4.11	4.01	3.33	..
Curaçao	1.62	0.42	0.23	0.32	0.35	0.37	0.25	0.25	..
Dominican Republic	0.85	0.96	0.55	1.28	1.42	1.84	1.76	1.96	..
Ecuador	0.33	1.09	1.51	2.15	2.30	2.84	2.93	2.49	..
El Salvador	0.34	0.39	0.55	0.80	0.80	0.50	0.51	0.52	..
Guatemala	0.36	0.50	0.48	0.88	0.77	0.70	0.93	0.94	..
Haiti	0.17	0.22	0.15	0.34	0.27	0.26	0.29	0.30	..
Honduras	0.26	0.43	0.58	0.60	0.78	0.74	0.91	0.90	..
Jamaica	1.32	1.29	1.19	0.95	1.50	0.67	0.95	0.95	..
Nicaragua	0.27	0.28	0.24	0.32	0.31	0.31	0.39	0.40	..
Panama	0.20	0.32	0.26	0.43	0.68	0.77	0.94	0.85	..
Paraguay	0.42	0.63	0.96	1.31	1.24	1.30	1.34	1.36	..
Peru	2.07	2.67	1.97	3.12	3.61	4.25	5.32	5.11	..
Suriname	..	..	..	0.28	0.09	0.10	0.11	0.10	..
Trinidad and Tobago	0.62	1.15	3.09	6.31	10.26	12.50	11.66	11.14	..
Uruguay	0.58	0.70	0.58	0.54	0.54	1.29	1.92	2.03	..
Venezuela	5.45	9.59	12.24	15.80	19.67	25.96	15.74	13.29	..
Other Non-OECD Americas	0.93	1.04	1.14	1.86	2.04	1.86	1.62	1.65	..
<b>Non-OECD Americas</b>	<b>57.80</b>	<b>83.73</b>	<b>100.01</b>	<b>141.75</b>	<b>160.12</b>	<b>187.11</b>	<b>177.33</b>	<b>172.55</b>	..
Bahrain	0.60	0.91	1.48	2.07	2.75	3.06	3.80	3.86	..
Islamic Republic of Iran	7.51	9.41	20.53	26.26	35.29	53.09	64.47	69.40	..
Iraq	1.10	2.50	4.61	5.56	3.59	3.54	4.04	3.92	..
Jordan	0.10	0.29	0.63	0.97	1.26	1.06	0.88	1.13	..
Kuwait	1.33	1.98	2.09	4.24	6.82	7.45	9.40	10.14	..
Lebanon	0.49	0.00	0.10	0.63	0.82	0.63	0.73	0.74	..
Oman	0.01	0.06	0.77	1.14	2.43	7.41	12.74	12.88	..
Qatar	0.58	1.34	2.90	4.44	6.03	8.22	12.02	11.32	..
Saudi Arabia	1.28	12.71	18.14	34.47	46.32	68.82	74.12	71.07	..
Syrian Arab Republic	0.51	1.97	1.73	4.45	4.63	5.09	2.23	2.15	..
United Arab Emirates	0.83	2.82	11.21	15.08	16.10	27.97	36.70	31.84	..
Yemen	0.00	0.00	0.06	0.42	0.99	1.03	0.39	0.31	..
<b>Middle East</b>	<b>14.34</b>	<b>34.00</b>	<b>64.25</b>	<b>99.74</b>	<b>127.03</b>	<b>187.36</b>	<b>221.53</b>	<b>218.77</b>	..

Includes non-energy use for industry/transformation/energy.

## Transport consumption of oil (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>1 028.08</b>	<b>1 198.13</b>	<b>1 488.49</b>	<b>1 883.68</b>	<b>2 103.91</b>	<b>2 257.19</b>	<b>2 490.20</b>	<b>2 542.98</b>	..
<b>Non-OECD Total</b>	<b>172.05</b>	<b>256.63</b>	<b>365.21</b>	<b>489.49</b>	<b>611.72</b>	<b>772.06</b>	<b>967.29</b>	<b>990.32</b>	..
<b>OECD Total</b>	<b>671.96</b>	<b>763.11</b>	<b>921.02</b>	<b>1 120.38</b>	<b>1 173.48</b>	<b>1 126.56</b>	<b>1 139.12</b>	<b>1 154.20</b>	..
Canada	33.19	42.49	40.22	47.06	49.87	54.62	55.28	55.20	..
Chile	1.69	2.02	3.02	5.64	6.11	7.09	8.34	8.73	..
Mexico	12.38	22.76	28.24	35.74	44.13	50.98	50.98	52.82	..
United States	400.90	414.29	476.68	574.32	600.31	555.73	565.78	569.14	..
<b>OECD Americas</b>	<b>448.16</b>	<b>481.57</b>	<b>548.16</b>	<b>662.77</b>	<b>700.42</b>	<b>668.40</b>	<b>680.38</b>	<b>685.89</b>	..
Australia	12.85	16.74	20.87	25.06	26.28	29.12	31.53	31.93	..
Israel <sup>1</sup>	1.15	1.39	2.69	4.45	4.49	5.48	5.65	5.87	..
Japan	39.79	52.92	67.91	84.84	80.31	74.88	70.84	70.45	..
Korea	2.48	4.74	14.49	26.57	29.26	29.07	32.59	33.50	..
New Zealand	1.94	2.28	2.89	4.06	4.53	4.56	4.81	4.88	..
<b>OECD Asia Oceania</b>	<b>58.22</b>	<b>78.07</b>	<b>108.85</b>	<b>144.99</b>	<b>144.88</b>	<b>143.10</b>	<b>145.43</b>	<b>146.63</b>	..
Austria	3.85	4.03	4.56	6.05	7.98	7.20	7.28	7.53	..
Belgium	4.34	5.42	6.82	8.10	8.57	8.39	8.56	8.47	..
Czech Republic	2.12	2.19	2.52	4.14	5.81	5.58	5.81	6.03	..
Denmark	2.69	3.02	3.46	4.04	4.47	4.34	3.83	3.92	..
Estonia	..	..	0.80	0.55	0.71	0.74	0.75	0.78	..
Finland	2.39	2.78	3.91	3.89	4.18	4.11	3.59	4.07	..
France	24.52	30.10	38.28	44.09	43.24	40.50	40.03	39.95	..
Germany	33.97	43.41	53.77	58.27	51.50	49.02	52.05	53.14	..
Greece	2.05	3.18	5.15	6.42	7.35	7.36	5.58	5.73	..
Hungary	1.84	2.66	2.83	2.95	3.98	3.88	3.96	4.03	..
Iceland	0.13	0.16	0.21	0.21	0.23	0.28	0.28	0.31	..
Ireland	1.17	1.58	1.68	3.56	4.34	3.90	3.66	3.92	..
Italy	18.37	23.68	32.18	39.11	40.86	35.74	33.51	33.02	..
Latvia	..	..	1.04	0.73	1.02	1.06	1.03	1.05	..
Luxembourg	0.23	0.43	0.88	1.61	2.37	2.14	1.89	1.82	..
Netherlands	6.46	7.60	9.16	10.78	11.54	11.36	10.01	10.03	..
Norway	2.25	2.83	3.35	4.00	4.32	4.68	4.41	4.26	..
Poland	5.01	6.96	6.53	9.30	11.63	15.69	15.40	17.55	..
Portugal	1.60	2.30	3.28	5.89	6.32	6.10	5.18	5.29	..
Slovak Republic	1.62	1.21	1.35	1.35	1.69	2.05	1.90	2.11	..
Slovenia	..	..	0.88	1.19	1.43	1.72	1.73	1.85	..
Spain	10.71	14.90	21.23	30.08	36.16	32.31	27.88	28.92	..
Sweden	5.17	5.73	6.78	7.29	7.68	7.24	6.53	6.64	..
Switzerland	3.42	3.56	4.97	5.64	5.60	5.76	5.40	5.35	..
Turkey	3.85	5.29	9.31	11.93	12.67	15.05	24.17	26.16	..
United Kingdom	27.84	30.46	39.08	41.43	42.55	38.85	38.89	39.73	..
<b>OECD Europe</b>	<b>165.58</b>	<b>203.47</b>	<b>264.01</b>	<b>312.62</b>	<b>328.18</b>	<b>315.05</b>	<b>313.31</b>	<b>321.68</b>	..
International marine bunkers	121.53	110.85	115.75	155.02	177.49	205.73	206.15	212.15	..
International aviation bunkers	62.54	67.53	86.51	118.79	141.22	152.85	177.65	186.31	..
IEA	668.99	759.54	913.17	1 108.15	1 160.20	1 110.93	1 122.08	1 136.40	..
IEA/Accession/Association	713.18	824.21	1 007.98	1 310.09	1 429.13	1 473.45	1 608.13	1 636.99	..
European Union - 28	..	..	255.85	298.97	315.80	300.61	291.37	298.58	..
G7	578.59	637.35	748.11	889.13	908.64	849.34	856.38	860.64	..
G8	..	..	821.02	931.43	956.22	905.64	915.98	918.26	..
G20	..	..	1 103.78	1 371.60	1 497.80	1 562.55	1 713.63	1 737.93	..
<b>OPEC</b>	<b>15.95</b>	<b>40.52</b>	<b>65.68</b>	<b>93.46</b>	<b>120.03</b>	<b>145.14</b>	<b>174.35</b>	<b>173.96</b>	..

Includes non-energy use in transport.

World includes international marine bunkers and international aviation bunkers.

1. Please refer to section 'Geographical coverage'.

## Transport consumption of oil (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>172.05</b>	<b>256.63</b>	<b>365.21</b>	<b>489.49</b>	<b>611.72</b>	<b>772.06</b>	<b>967.29</b>	<b>990.32</b>	<b>..</b>
Albania	0.26	0.49	0.23	0.48	0.78	0.73	0.79	0.75	..
Armenia	..	..	1.02	0.20	0.19	0.20	0.24	0.23	..
Azerbaijan	..	..	1.99	0.80	1.37	1.70	2.39	2.23	..
Belarus	..	..	3.71	2.03	2.41	3.15	3.10	3.22	..
Bosnia and Herzegovina	..	..	0.73	0.70	0.76	1.11	1.02	1.18	..
Bulgaria	1.39	1.42	2.17	1.70	2.37	2.45	2.82	2.87	..
Croatia	..	..	1.23	1.47	1.83	1.95	1.95	2.02	..
Cyprus <sup>1</sup>	0.25	0.21	0.38	0.58	0.67	0.75	0.61	0.64	..
FYR of Macedonia	..	..	0.26	0.34	0.35	0.46	0.60	0.68	..
Georgia	..	..	1.25	0.32	0.50	0.74	0.98	1.21	..
Gibraltar	0.01	0.01	0.03	0.08	0.10	0.11	0.14	0.15	..
Kazakhstan	..	..	4.90	3.19	3.25	4.48	5.02	5.19	..
Kosovo	..	..	..	0.19	0.27	0.32	0.37	0.39	..
Kyrgyzstan	..	..	2.01	0.29	0.37	0.66	0.91	1.13	..
Lithuania	..	..	1.85	1.05	1.38	1.42	1.66	1.78	..
Malta	0.08	0.09	0.15	0.15	0.17	0.19	0.19	0.19	..
Republic of Moldova	..	..	0.83	0.21	0.39	0.58	0.64	0.66	..
Montenegro	..	..	..	..	0.16	0.23	0.19	0.22	..
Romania	2.39	2.37	3.90	3.19	4.01	4.58	5.10	5.48	..
Russian Federation	..	..	72.90	42.30	47.58	56.30	59.59	57.62	..
Serbia	..	..	1.48	0.77	2.18	2.17	1.94	1.99	..
Tajikistan	..	..	0.25	0.01	0.03	0.08	0.44	0.43	..
Turkmenistan	..	..	1.39	1.26	1.65	2.14	2.64	2.64	..
Ukraine	..	..	18.13	6.74	7.66	8.84	6.56	7.15	..
Uzbekistan	..	..	1.97	2.40	1.90	1.83	1.29	1.20	..
Former Soviet Union	59.96	84.11	x	x	x	x	x	x	..
Former Yugoslavia	3.51	4.31	x	x	x	x	x	x	..
<b>Non-OECD Europe and Eurasia</b>	<b>67.84</b>	<b>93.01</b>	<b>122.77</b>	<b>70.44</b>	<b>82.32</b>	<b>97.17</b>	<b>101.20</b>	<b>101.26</b>	<b>..</b>
Algeria	1.00	2.08	5.03	5.08	7.07	9.99	14.88	14.36	..
Angola	0.47	0.33	0.34	0.36	0.83	2.15	2.84	2.75	..
Benin	0.10	0.09	0.05	0.31	0.52	1.06	1.53	1.59	..
Botswana	..	..	0.22	0.41	0.51	0.65	0.80	0.83	..
Cameroon	0.21	0.39	0.58	0.62	0.70	0.90	1.07	1.08	..
Congo	0.12	0.17	0.17	0.14	0.24	0.49	0.68	0.67	..
Côte d'Ivoire	0.31	0.52	0.40	0.42	0.40	0.50	1.04	1.20	..
Dem. Rep. of the Congo	0.17	0.21	0.19	0.26	0.37	0.55	0.88	0.63	..
Egypt	1.49	2.73	5.36	9.57	9.94	14.55	17.97	18.31	..
Eritrea	..	..	..	0.07	0.06	0.05	0.06	0.06	..
Ethiopia	0.19	0.21	0.31	0.52	0.71	0.93	1.61	1.73	..
Gabon	0.01	0.08	0.11	0.11	0.12	0.21	0.26	0.27	..
Ghana	0.37	0.42	0.54	0.98	1.20	1.71	2.62	2.42	..
Kenya	0.50	0.64	0.90	0.89	0.94	1.65	2.69	2.94	..
Libya	0.55	1.57	2.07	3.71	4.27	6.06	5.13	7.09	..
Mauritius	0.06	0.08	0.15	0.25	0.28	0.31	0.36	0.38	..
Morocco	0.67	0.86	1.28	2.66	3.31	4.43	5.32	5.55	..
Mozambique	0.10	0.10	0.20	0.28	0.34	0.56	0.84	1.28	..
Namibia	..	..	..	0.38	0.52	0.59	0.70	0.75	..
Niger	..	..	..	0.12	0.13	0.27	0.40	0.39	..
Nigeria	1.27	4.54	3.97	7.41	9.74	9.48	15.11	17.25	..
Senegal	0.17	0.24	0.24	0.38	0.48	0.67	0.89	0.97	..
South Africa	6.54	6.92	9.91	11.86	14.50	16.09	18.35	18.50	..
South Sudan	..	..	..	..	..	..	0.34	0.32	..
Sudan	0.80	0.75	1.29	0.87	1.62	2.91	2.76	3.14	..
United Rep. of Tanzania	0.27	0.23	0.23	0.48	0.88	1.14	2.33	2.30	..
Togo	0.07	0.11	0.14	0.14	0.21	0.53	0.48	0.51	..
Tunisia	0.35	0.58	0.82	1.33	1.51	2.03	2.20	2.21	..
Zambia	0.24	0.29	0.26	0.24	0.33	0.22	0.39	0.40	..
Zimbabwe	0.42	0.40	0.52	0.63	0.43	0.41	0.83	0.71	..
Other Africa	0.46	1.11	1.64	2.44	2.95	3.79	4.90	4.99	..
<b>Africa</b>	<b>16.92</b>	<b>25.65</b>	<b>36.91</b>	<b>52.92</b>	<b>65.11</b>	<b>84.85</b>	<b>110.26</b>	<b>115.56</b>	<b>..</b>

Includes non-energy use in transport.

1. Please refer to section 'Geographical coverage'.

## Transport consumption of oil (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	0.08	0.32	0.54	1.00	1.59	1.68	2.23	2.34	..
Brunei Darussalam	0.03	0.11	0.19	0.27	0.32	0.40	0.46	0.45	..
Cambodia	..	..	..	0.44	0.50	1.03	1.43	1.68	..
DPR of Korea	0.67	1.84	1.56	0.56	0.43	0.44	0.47	0.48	..
India	6.80	11.62	18.20	31.07	37.09	61.68	81.89	85.32	..
Indonesia	3.06	5.94	10.71	20.83	23.68	30.54	41.68	45.11	..
Malaysia	1.56	2.14	4.88	10.80	13.58	14.66	20.42	20.95	..
Mongolia	..	..	0.47	0.30	0.35	0.45	0.65	0.57	..
Myanmar	0.43	0.63	0.44	1.16	1.52	0.64	1.35	1.55	..
Nepal	0.02	0.05	0.11	0.27	0.27	0.64	0.77	1.28	..
Pakistan	1.08	2.21	4.50	8.26	8.20	9.02	13.52	14.29	..
Philippines	3.41	3.26	4.52	8.10	8.29	7.85	10.19	11.02	..
Singapore	0.60	0.95	1.34	1.73	1.85	2.31	2.19	2.13	..
Sri Lanka	0.54	0.68	0.82	1.68	2.07	2.28	2.86	3.10	..
Chinese Taipei	1.11	2.83	6.58	11.46	12.71	12.04	12.34	12.71	..
Thailand	2.39	3.21	9.01	14.60	18.05	17.79	19.79	21.32	..
Viet Nam	0.97	0.59	1.37	3.50	6.37	10.14	10.67	12.28	..
Other Non-OECD Asia	0.71	0.93	0.95	1.18	1.42	2.87	4.28	4.34	..
<b>Non-OECD Asia excl. China</b>	<b>23.47</b>	<b>37.31</b>	<b>66.19</b>	<b>117.21</b>	<b>138.31</b>	<b>176.45</b>	<b>227.18</b>	<b>240.93</b>	..
People's Rep. of China	10.14	15.88	24.24	84.23	134.97	185.03	263.29	268.62	..
Hong Kong, China	0.50	0.82	1.50	3.76	2.04	2.19	2.43	2.57	..
<b>China</b>	<b>10.64</b>	<b>16.70</b>	<b>25.74</b>	<b>87.99</b>	<b>137.01</b>	<b>187.22</b>	<b>265.72</b>	<b>271.19</b>	..
Argentina	8.76	10.45	9.34	11.49	10.13	11.79	12.78	12.79	..
Bolivia	0.39	0.71	0.75	0.96	1.08	1.51	2.16	2.27	..
Brazil	18.84	24.20	27.00	41.18	43.86	53.66	63.56	63.80	..
Colombia	2.63	4.01	5.70	6.24	6.67	6.77	9.59	10.08	..
Costa Rica	0.28	0.44	0.53	1.00	1.25	1.52	1.77	1.89	..
Cuba	1.48	1.77	1.77	0.78	0.68	0.45	0.53	0.52	..
Curaçao	0.45	0.51	0.29	0.44	0.47	0.51	0.36	0.36	..
Dominican Republic	0.53	0.60	0.78	1.82	1.89	1.86	1.94	2.01	..
Ecuador	0.70	1.34	2.59	2.91	3.22	4.16	5.37	5.56	..
El Salvador	0.22	0.29	0.42	0.84	1.02	1.00	1.12	1.17	..
Guatemala	0.32	0.45	0.57	1.29	1.71	1.89	2.49	2.69	..
Haiti	0.06	0.10	0.14	0.24	0.39	0.36	0.47	0.47	..
Honduras	0.18	0.21	0.35	0.70	0.75	1.02	1.37	1.36	..
Jamaica	0.54	0.29	0.37	0.66	0.75	0.63	0.57	0.60	..
Nicaragua	0.28	0.29	0.25	0.48	0.48	0.53	0.73	0.78	..
Panama	0.30	0.35	0.43	0.78	0.95	1.17	1.45	1.56	..
Paraguay	0.16	0.36	0.53	0.92	1.00	1.41	1.75	1.98	..
Peru	2.10	2.04	2.38	3.20	3.31	5.15	6.28	6.89	..
Suriname	..	..	..	0.10	0.17	0.22	0.23	0.20	..
Trinidad and Tobago	0.38	0.48	0.46	0.55	0.72	1.07	1.13	1.24	..
Uruguay	0.59	0.55	0.50	0.80	0.76	1.03	1.17	1.20	..
Venezuela	4.96	9.19	9.71	11.57	14.30	16.38	15.44	13.59	..
Other Non-OECD Americas	0.15	0.35	0.65	1.41	1.46	1.73	1.98	2.02	..
<b>Non-OECD Americas</b>	<b>44.28</b>	<b>58.98</b>	<b>65.50</b>	<b>90.34</b>	<b>97.01</b>	<b>115.82</b>	<b>134.24</b>	<b>135.07</b>	..
Bahrain	0.08	0.21	0.34	0.52	0.84	1.06	1.20	1.22	..
Islamic Republic of Iran	3.44	7.12	13.03	25.38	34.56	34.92	40.08	37.96	..
Iraq	0.98	3.26	7.25	8.77	8.69	9.35	8.33	8.49	..
Jordan	0.24	0.55	0.91	1.20	1.61	1.75	2.61	2.77	..
Kuwait	0.75	1.79	0.97	2.06	2.78	4.22	4.73	4.79	..
Lebanon	0.55	0.64	0.64	1.38	1.39	1.74	1.91	1.95	..
Oman	0.04	0.22	0.58	0.90	1.25	2.76	4.44	4.17	..
Qatar	0.11	0.35	0.50	0.81	1.57	2.94	4.22	4.37	..
Saudi Arabia	1.45	6.59	16.40	20.37	25.32	35.23	47.51	45.80	..
Syrian Arab Republic	0.58	1.21	2.42	2.79	4.48	4.11	2.14	2.15	..
United Arab Emirates	0.26	2.30	3.72	4.92	7.56	10.05	10.43	11.69	..
Yemen	0.41	0.76	1.35	1.49	1.90	2.42	1.08	0.94	..
<b>Middle East</b>	<b>8.88</b>	<b>24.99</b>	<b>48.10</b>	<b>70.60</b>	<b>91.96</b>	<b>110.54</b>	<b>128.70</b>	<b>126.31</b>	..

Includes non-energy use in transport.

## Transport consumption of electricity (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>10.594</b>	<b>13.862</b>	<b>20.961</b>	<b>18.602</b>	<b>21.693</b>	<b>25.051</b>	<b>29.030</b>	<b>30.732</b>	..
<b>Non-OECD Total</b>	<b>5.291</b>	<b>7.798</b>	<b>13.289</b>	<b>9.602</b>	<b>12.817</b>	<b>16.556</b>	<b>19.651</b>	<b>20.962</b>	..
<b>OECD Total</b>	<b>5.302</b>	<b>6.064</b>	<b>7.672</b>	<b>9.000</b>	<b>8.876</b>	<b>8.495</b>	<b>9.379</b>	<b>9.770</b>	..
Canada	0.278	0.196	0.281	0.389	0.366	0.351	0.527	0.594	..
Chile	0.017	0.017	0.018	0.019	0.022	0.037	0.094	0.085	..
Mexico	0.031	0.037	0.069	0.095	0.094	0.102	0.098	0.098	..
United States	0.369	0.266	0.355	0.380	0.534	0.552	0.763	0.912	..
<b>OECD Americas</b>	<b>0.694</b>	<b>0.517</b>	<b>0.723</b>	<b>0.882</b>	<b>1.016</b>	<b>1.042</b>	<b>1.481</b>	<b>1.689</b>	..
Australia	0.057	0.077	0.155	0.201	0.297	0.315	0.508	0.540	..
Israel <sup>1</sup>	-	-	-	-	-	-	-	-	..
Japan	1.138	1.309	1.445	1.597	1.625	1.569	1.514	1.514	..
Korea	0.011	0.034	0.087	0.175	0.224	0.188	0.191	0.231	..
New Zealand	0.003	0.003	0.005	0.006	0.006	0.005	0.005	0.005	..
<b>OECD Asia Oceania</b>	<b>1.209</b>	<b>1.423</b>	<b>1.693</b>	<b>1.979</b>	<b>2.151</b>	<b>2.078</b>	<b>2.218</b>	<b>2.291</b>	..
Austria	0.151	0.196	0.238	0.298	0.294	0.276	0.268	0.269	..
Belgium	0.070	0.083	0.107	0.124	0.146	0.149	0.136	0.140	..
Czech Republic	0.163	0.197	0.272	0.201	0.188	0.140	0.138	0.141	..
Denmark	0.009	0.012	0.018	0.030	0.032	0.035	0.034	0.036	..
Estonia	..	..	0.030	0.008	0.009	0.008	0.004	0.004	..
Finland	0.005	0.019	0.037	0.046	0.056	0.064	0.060	0.061	..
France	0.550	0.595	0.643	0.807	0.848	0.863	0.945	0.927	..
Germany	0.848	1.030	1.175	1.368	1.132	1.042	0.970	1.009	..
Greece	0.004	0.008	0.011	0.020	0.017	0.016	0.033	0.016	..
Hungary	0.068	0.093	0.102	0.087	0.094	0.095	0.101	0.101	..
Iceland	-	-	-	-	-	-	0.002	0.005	..
Ireland	-	-	0.001	0.002	0.005	0.004	0.004	0.004	..
Italy	0.325	0.412	0.578	0.732	0.853	0.917	0.933	0.960	..
Latvia	..	..	0.022	0.013	0.013	0.011	0.009	0.009	..
Luxembourg	0.003	0.004	0.005	0.005	0.008	0.010	0.011	0.013	..
Netherlands	0.077	0.084	0.111	0.141	0.139	0.151	0.151	0.161	..
Norway	0.045	0.059	0.056	0.054	0.052	0.049	0.071	0.083	..
Poland	0.298	0.414	0.471	0.400	0.343	0.287	0.267	0.283	..
Portugal	0.019	0.021	0.027	0.031	0.041	0.041	0.026	0.033	..
Slovak Republic	0.054	0.084	0.100	0.083	0.049	0.046	0.052	0.052	..
Slovenia	..	..	0.019	0.023	0.017	0.015	0.013	0.014	..
Spain	0.125	0.164	0.315	0.358	0.461	0.277	0.480	0.463	..
Sweden	0.179	0.195	0.213	0.275	0.242	0.207	0.223	0.229	..
Switzerland	0.174	0.180	0.221	0.227	0.256	0.272	0.270	0.275	..
Turkey	0.009	0.013	0.030	0.066	0.064	0.051	0.091	0.099	..
United Kingdom	0.225	0.261	0.454	0.741	0.349	0.350	0.388	0.401	..
<b>OECD Europe</b>	<b>3.400</b>	<b>4.125</b>	<b>5.256</b>	<b>6.139</b>	<b>5.709</b>	<b>5.375</b>	<b>5.680</b>	<b>5.791</b>	..
IEA	5.286	6.047	7.613	8.945	8.824	8.432	9.262	9.657	..
IEA/Accession/Association	5.619	6.567	8.631	11.106	12.025	15.128	19.746	21.460	..
European Union - 28	..	..	5.336	6.024	5.549	5.183	5.397	5.476	..
G7	3.733	4.070	4.932	6.014	5.707	5.643	6.040	6.318	..
G8	..	..	13.854	11.252	12.859	12.977	13.101	13.417	..
G20	..	..	18.015	16.767	19.478	22.459	26.636	28.353	..
<i>OPEC</i>	0.002	0.001	0.047	0.055	0.073	0.105	0.153	0.145	..

1. Please refer to section 'Geographical coverage'.

## Transport consumption of electricity (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>5.291</b>	<b>7.798</b>	<b>13.289</b>	<b>9.602</b>	<b>12.817</b>	<b>16.556</b>	<b>19.651</b>	<b>20.962</b>	<b>..</b>
Albania	-	-	-	-	0.001	-	-	-	..
Armenia	..	..	0.033	0.011	0.011	0.010	0.009	0.009	..
Azerbaijan	..	..	0.069	0.046	0.050	0.047	0.041	0.037	..
Belarus	..	..	0.254	0.158	0.172	0.139	0.106	0.102	..
Bosnia and Herzegovina	..	..	-	-	-	0.012	0.008	0.006	..
Bulgaria	-	0.089	0.112	0.045	0.043	0.034	0.030	0.030	..
Croatia	..	..	0.032	0.021	0.022	0.023	0.021	0.022	..
Cyprus <sup>1</sup>	0.003	0.000	-	-	-	-	-	-	..
FYR of Macedonia	..	..	0.002	0.002	0.002	0.002	0.001	0.001	..
Georgia	..	..	0.093	0.039	0.031	0.047	0.025	0.026	..
Gibraltar	..	..	-	-	-	-	-	-	..
Kazakhstan	..	..	0.556	0.130	0.296	0.269	0.307	0.279	..
Kosovo	..	..	..	-	-	-	-	-	..
Kyrgyzstan	..	..	0.012	0.010	-	-	0.015	0.004	..
Lithuania	..	..	0.018	0.007	0.009	0.007	0.006	0.006	..
Malta	..	..	-	-	-	-	-	-	..
Republic of Moldova	..	..	0.007	0.008	0.007	0.004	0.004	0.005	..
Montenegro	..	..	..	..	0.002	0.002	0.002	0.002	..
Romania	-	0.165	0.225	0.160	0.138	0.117	0.093	0.090	..
Russian Federation	..	..	8.922	5.238	7.151	7.333	7.061	7.100	..
Serbia	..	..	0.039	0.021	0.021	0.019	0.030	0.030	..
Tajikistan	..	..	0.017	0.004	0.002	0.003	0.003	0.003	..
Turkmenistan	..	..	0.089	0.013	0.017	0.020	0.028	0.028	..
Ukraine	..	..	1.245	0.794	0.815	0.771	0.585	0.584	..
Uzbekistan	..	..	0.107	0.113	0.115	0.121	0.131	0.133	..
Former Soviet Union	4.626	6.535	x	x	x	x	x	x	..
Former Yugoslavia	0.062	0.077	x	x	x	x	x	x	..
<b>Non-OECD Europe and Eurasia</b>	<b>4.691</b>	<b>6.867</b>	<b>11.834</b>	<b>6.818</b>	<b>8.907</b>	<b>8.979</b>	<b>8.508</b>	<b>8.497</b>	<b>..</b>
Algeria	0.002	0.001	0.024	0.030	0.041	0.055	0.084	0.087	..
Angola	-	-	-	-	-	-	-	-	..
Benin	-	-	-	-	-	-	-	-	..
Botswana	..	..	-	-	-	-	-	-	..
Cameroon	-	-	-	-	-	-	-	-	..
Congo	-	-	-	-	-	-	-	-	..
Côte d'Ivoire	-	-	-	-	-	-	-	-	..
Dem. Rep. of the Congo	-	-	-	-	-	-	-	-	..
Egypt	-	-	-	-	-	-	0.048	0.050	..
Eritrea	..	..	..	-	-	-	-	-	..
Ethiopia	-	-	-	-	-	-	-	-	..
Gabon	-	-	-	0.000	0.000	0.001	0.001	0.001	..
Ghana	-	-	-	-	-	-	-	-	..
Kenya	-	-	-	-	-	-	-	-	..
Libya	-	-	-	-	-	-	-	-	..
Mauritius	-	-	-	-	-	-	-	-	..
Morocco	0.007	0.009	0.017	0.018	0.018	0.024	0.030	0.030	..
Mozambique	..	..	..	-	-	-	-	-	..
Namibia	..	..	..	-	-	-	-	-	..
Niger	..	..	..	-	-	-	-	-	..
Nigeria	-	-	-	-	-	-	-	-	..
Senegal	-	-	-	-	-	-	-	-	..
South Africa	0.249	0.372	0.340	0.463	0.468	0.309	0.298	0.297	..
South Sudan	..	..	..	..	..	..	-	-	..
Sudan	-	-	-	-	-	-	-	-	..
United Rep. of Tanzania	-	-	-	-	-	-	-	-	..
Togo	-	-	-	-	-	-	-	-	..
Tunisia	-	0.004	0.009	0.016	0.020	0.007	0.008	0.008	..
Zambia	-	-	0.001	0.001	0.001	0.002	0.003	0.002	..
Zimbabwe	-	-	-	-	-	-	-	-	..
Other Africa	-	-	-	0.001	0.001	0.001	-	-	..
<b>Africa</b>	<b>0.259</b>	<b>0.387</b>	<b>0.391</b>	<b>0.529</b>	<b>0.549</b>	<b>0.398</b>	<b>0.470</b>	<b>0.476</b>	<b>..</b>

1. Please refer to section 'Geographical coverage'.



## Transport consumption of electricity (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	-	-	-	-	-	-	-	-	..
Brunei Darussalam	-	-	-	-	-	-	-	-	..
Cambodia	..	..	..	-	-	-	-	-	..
DPR of Korea	-	-	-	-	-	-	-	-	..
India	0.132	0.195	0.354	0.706	0.855	1.146	1.427	1.480	..
Indonesia	-	-	-	-	-	-	-	-	..
Malaysia	-	-	-	0.004	0.005	0.018	0.023	0.029	..
Mongolia	..	..	-	-	-	-	-	-	..
Myanmar	-	-	-	-	-	-	-	-	..
Nepal	-	0.000	0.000	0.001	0.001	0.001	0.001	0.001	..
Pakistan	0.002	0.003	0.003	0.001	0.001	0.000	-	-	..
Philippines	-	-	-	0.005	0.008	0.010	0.008	0.009	..
Singapore	-	-	0.016	0.025	0.103	0.180	0.210	0.227	..
Sri Lanka	-	-	-	-	-	-	-	-	..
Chinese Taipei	0.000	0.018	0.017	0.039	0.045	0.100	0.116	0.117	..
Thailand	-	-	-	0.003	0.005	0.006	0.015	0.016	..
Viet Nam	-	-	-	-	-	-	-	-	..
Other Non-OECD Asia	-	-	-	-	-	-	-	-	..
<b>Non-OECD Asia excl. China</b>	<b>0.134</b>	<b>0.216</b>	<b>0.390</b>	<b>0.784</b>	<b>1.023</b>	<b>1.461</b>	<b>1.799</b>	<b>1.879</b>	..
People's Rep. of China	0.126	0.228	0.510	1.282	2.096	5.159	8.472	9.742	..
Hong Kong, China	-	-	-	-	-	-	-	-	..
<b>China</b>	<b>0.126</b>	<b>0.228</b>	<b>0.510</b>	<b>1.282</b>	<b>2.096</b>	<b>5.159</b>	<b>8.472</b>	<b>9.742</b>	..
Argentina	0.025	0.023	0.027	0.045	0.052	0.058	0.052	0.047	..
Bolivia	-	-	-	-	-	-	-	-	..
Brazil	0.052	0.071	0.103	0.107	0.102	0.143	0.238	0.222	..
Colombia	-	-	-	0.004	0.004	0.005	0.008	0.008	..
Costa Rica	0.001	0.001	0.001	-	-	-	-	-	..
Cuba	0.003	0.006	0.008	0.008	0.009	0.022	0.027	0.025	..
Curaçao	-	-	-	-	-	-	-	-	..
Dominican Republic	-	-	-	-	-	0.002	0.005	0.005	..
Ecuador	-	-	-	0.001	0.001	0.001	0.001	0.001	..
El Salvador	-	-	-	-	-	-	-	-	..
Guatemala	-	-	-	-	-	-	-	-	..
Haiti	-	-	-	-	-	-	-	-	..
Honduras	-	-	-	-	-	-	-	-	..
Jamaica	-	-	-	-	-	-	-	-	..
Nicaragua	-	-	-	-	-	-	-	-	..
Panama	-	-	-	-	-	-	-	-	..
Paraguay	-	-	-	-	-	-	-	-	..
Peru	-	-	-	-	-	0.233	0.004	0.004	..
Suriname	..	..	..	-	-	-	-	-	..
Trinidad and Tobago	-	-	-	-	-	-	-	-	..
Uruguay	-	-	-	-	-	-	-	-	..
Venezuela	-	-	0.024	0.022	0.022	0.024	0.021	0.019	..
Other Non-OECD Americas	-	-	-	-	0.043	0.046	-	-	..
<b>Non-OECD Americas</b>	<b>0.081</b>	<b>0.100</b>	<b>0.162</b>	<b>0.187</b>	<b>0.233</b>	<b>0.534</b>	<b>0.355</b>	<b>0.331</b>	..
Bahrain	-	-	-	-	-	-	-	-	..
Islamic Republic of Iran	-	-	-	0.001	0.009	0.026	0.047	0.037	..
Iraq	-	-	-	-	-	-	-	-	..
Jordan	-	-	-	-	-	-	-	-	..
Kuwait	-	-	-	-	-	-	-	-	..
Lebanon	-	-	-	-	-	-	-	-	..
Oman	-	-	-	-	-	-	-	-	..
Qatar	-	-	-	-	-	-	-	-	..
Saudi Arabia	-	-	-	-	-	-	-	-	..
Syrian Arab Republic	-	-	-	-	-	-	-	-	..
United Arab Emirates	-	-	-	-	-	-	-	-	..
Yemen	-	-	-	-	-	-	-	-	..
<b>Middle East</b>	-	-	-	<b>0.001</b>	<b>0.009</b>	<b>0.026</b>	<b>0.047</b>	<b>0.037</b>	..

## Total transport consumption of energy (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>1 088.52</b>	<b>1 254.01</b>	<b>1 580.88</b>	<b>1 970.49</b>	<b>2 218.91</b>	<b>2 427.29</b>	<b>2 695.41</b>	<b>2 757.63</b>	..
<b>Non-OECD Total</b>	<b>202.84</b>	<b>286.89</b>	<b>430.89</b>	<b>542.21</b>	<b>684.39</b>	<b>872.27</b>	<b>1 085.16</b>	<b>1 113.64</b>	..
<b>OECD Total</b>	<b>701.61</b>	<b>788.74</b>	<b>947.72</b>	<b>1 154.46</b>	<b>1 215.82</b>	<b>1 196.45</b>	<b>1 226.25</b>	<b>1 245.49</b>	..
Canada	33.60	44.32	43.40	52.34	54.71	58.60	61.13	61.13	..
Chile	1.84	2.09	3.05	5.67	6.16	7.14	8.46	8.84	..
Mexico	12.41	22.80	28.31	35.84	44.24	51.09	51.09	52.94	..
United States	418.12	429.31	492.45	593.07	623.08	595.94	619.09	626.10	..
<b>OECD Americas</b>	<b>465.95</b>	<b>498.52</b>	<b>567.20</b>	<b>686.92</b>	<b>728.19</b>	<b>712.76</b>	<b>739.78</b>	<b>749.01</b>	..
Australia	12.93	16.82	21.11	25.66	27.14	29.99	32.56	32.92	..
Israel <sup>1</sup>	1.15	1.39	2.69	4.45	4.49	5.48	5.65	5.87	..
Japan	41.13	54.22	69.36	86.46	82.02	76.75	72.78	72.41	..
Korea	2.50	4.78	14.57	26.75	29.82	30.62	34.36	35.42	..
New Zealand	1.94	2.29	2.96	4.06	4.54	4.57	4.81	4.89	..
<b>OECD Asia Oceania</b>	<b>59.66</b>	<b>79.51</b>	<b>110.69</b>	<b>147.38</b>	<b>148.02</b>	<b>147.40</b>	<b>150.16</b>	<b>151.51</b>	..
Austria	4.13	4.28	4.90	6.51	8.47	8.18	8.46	8.58	..
Belgium	4.42	5.50	6.93	8.22	8.71	8.98	9.00	9.09	..
Czech Republic	2.40	2.48	2.79	4.43	6.04	6.03	6.31	6.53	..
Denmark	2.70	3.03	3.48	4.07	4.50	4.40	4.10	4.19	..
Estonia	..	..	0.84	0.56	0.72	0.75	0.76	0.79	..
Finland	2.41	2.80	3.95	3.95	4.25	4.32	4.15	4.31	..
France	25.15	30.72	38.92	45.23	44.69	43.82	44.04	44.06	..
Germany	36.54	44.75	54.96	59.90	55.33	53.46	56.01	57.17	..
Greece	2.07	3.19	5.16	6.44	7.38	7.51	5.77	5.92	..
Hungary	2.28	2.88	2.93	3.04	4.09	4.18	4.27	4.37	..
Iceland	0.13	0.16	0.21	0.21	0.23	0.28	0.30	0.33	..
Ireland	1.17	1.58	1.68	3.56	4.34	4.00	3.75	4.05	..
Italy	18.96	24.35	32.96	40.17	42.26	38.77	36.70	36.13	..
Latvia	..	..	1.09	0.74	1.04	1.10	1.07	1.07	..
Luxembourg	0.23	0.44	0.88	1.61	2.37	2.19	1.98	1.93	..
Netherlands	6.53	7.68	9.27	10.92	11.68	11.75	10.49	10.47	..
Norway	2.30	2.89	3.41	4.06	4.38	4.90	4.76	4.81	..
Poland	8.97	9.17	7.17	9.76	12.26	17.07	16.68	18.67	..
Portugal	1.64	2.32	3.31	5.92	6.38	6.47	5.55	5.61	..
Slovak Republic	1.68	1.50	1.45	1.43	2.35	2.59	2.18	2.45	..
Slovenia	..	..	0.90	1.21	1.45	1.78	1.77	1.88	..
Spain	10.85	15.07	21.54	30.52	36.88	34.11	29.66	30.83	..
Sweden	5.35	5.92	6.99	7.57	8.09	7.88	7.84	8.22	..
Switzerland	3.59	3.74	5.21	5.88	5.89	6.08	5.75	5.72	..
Turkey	4.38	5.49	9.35	12.04	12.84	15.33	24.72	26.69	..
United Kingdom	28.12	30.76	39.53	42.18	42.97	40.37	40.22	41.09	..
<b>OECD Europe</b>	<b>176.00</b>	<b>210.71</b>	<b>269.83</b>	<b>320.15</b>	<b>339.60</b>	<b>336.29</b>	<b>336.31</b>	<b>344.96</b>	..
International marine bunkers	121.53	110.85	115.75	155.02	177.49	205.73	206.36	212.19	..
International aviation bunkers	62.54	67.53	86.51	118.79	141.22	152.85	177.65	186.31	..
IEA	698.49	785.10	939.78	1 142.17	1 202.45	1 180.66	1 209.00	1 227.50	..
IEA/Accession/Association	755.82	864.23	1 050.27	1 353.21	1 486.23	1 578.44	1 751.94	1 787.84	..
European Union - 28	..	..	261.75	306.53	327.20	321.66	313.98	321.29	..
G7	601.62	658.44	771.58	919.34	945.08	907.70	929.97	938.09	..
G8	..	..	887.46	993.83	1 033.65	1 004.19	1 023.84	1 032.38	..
G20	..	..	1 189.72	1 449.78	1 600.11	1 709.75	1 892.65	1 926.24	..
OPEC	16.04	40.53	66.03	94.37	122.08	150.98	181.79	181.67	..

Includes non-energy use in transport.

World includes international marine bunkers and international aviation bunkers.

1. Please refer to section 'Geographical coverage'.

## Total transport consumption of energy (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>202.84</b>	<b>286.89</b>	<b>430.89</b>	<b>542.21</b>	<b>684.39</b>	<b>872.27</b>	<b>1 085.16</b>	<b>1 113.64</b>	<b>..</b>
Albania	0.26	0.49	0.23	0.48	0.78	0.73	0.82	0.83	..
Armenia	..	..	1.05	0.21	0.25	0.50	0.57	0.62	..
Azerbaijan	..	..	2.23	0.88	1.53	1.75	2.44	2.27	..
Belarus	..	..	4.15	2.34	2.81	3.62	3.65	3.79	..
Bosnia and Herzegovina	..	..	0.73	0.70	0.76	1.13	1.03	1.19	..
Bulgaria	1.59	1.51	2.28	1.91	2.65	2.71	3.24	3.29	..
Croatia	..	..	1.26	1.49	1.85	1.98	2.00	2.05	..
Cyprus <sup>1</sup>	0.25	0.21	0.38	0.58	0.67	0.76	0.62	0.65	..
FYR of Macedonia	..	..	0.26	0.34	0.35	0.46	0.60	0.68	..
Georgia	..	..	1.39	0.36	0.55	0.80	1.31	1.46	..
Gibraltar	0.01	0.01	0.03	0.08	0.10	0.11	0.14	0.15	..
Kazakhstan	..	..	5.45	3.32	3.54	4.75	5.37	5.47	..
Kosovo	..	..	..	0.19	0.27	0.32	0.37	0.39	..
Kyrgyzstan	..	..	2.02	0.30	0.37	0.67	0.93	1.14	..
Lithuania	..	..	1.87	1.05	1.41	1.50	1.76	1.87	..
Malta	0.08	0.09	0.15	0.15	0.17	0.19	0.20	0.20	..
Republic of Moldova	..	..	0.84	0.26	0.41	0.59	0.66	0.69	..
Montenegro	..	..	..	..	0.16	0.23	0.19	0.22	..
Romania	2.84	2.54	4.15	3.38	4.18	4.83	5.40	5.82	..
Russian Federation	..	..	115.88	74.48	88.57	96.49	93.87	94.29	..
Serbia	..	..	1.52	0.79	2.21	2.19	1.98	2.03	..
Tajikistan	..	..	0.27	0.02	0.05	0.10	0.45	0.43	..
Turkmenistan	..	..	3.90	2.44	3.25	2.96	4.33	4.33	..
Ukraine	..	..	19.45	10.44	11.77	12.95	8.76	9.18	..
Uzbekistan	..	..	2.08	3.90	3.35	3.07	2.32	2.24	..
Former Soviet Union	73.23	97.65	x	x	x	x	x	x	..
Former Yugoslavia	3.82	4.44	x	x	x	x	x	x	..
<b>Non-OECD Europe and Eurasia</b>	<b>82.07</b>	<b>106.93</b>	<b>171.59</b>	<b>110.08</b>	<b>132.01</b>	<b>145.37</b>	<b>142.97</b>	<b>145.28</b>	<b>..</b>
Algeria	1.00	2.09	5.35	5.77	8.29	10.67	15.57	15.13	..
Angola	0.47	0.33	0.34	0.36	0.83	2.15	2.84	2.75	..
Benin	0.10	0.09	0.05	0.31	0.52	1.06	1.53	1.59	..
Botswana	..	..	0.22	0.41	0.51	0.65	0.80	0.83	..
Cameroon	0.21	0.39	0.58	0.62	0.70	0.90	1.07	1.08	..
Congo	0.12	0.17	0.17	0.14	0.24	0.49	0.68	0.67	..
Côte d'Ivoire	0.31	0.52	0.40	0.42	0.40	0.50	1.04	1.20	..
Dem. Rep. of the Congo	0.17	0.21	0.19	0.26	0.37	0.55	0.88	0.63	..
Egypt	1.49	2.73	5.36	9.57	10.19	14.89	18.33	18.69	..
Eritrea	..	..	..	0.07	0.06	0.05	0.06	0.06	..
Ethiopia	0.19	0.21	0.31	0.52	0.71	0.93	1.62	1.74	..
Gabon	0.01	0.08	0.11	0.11	0.12	0.21	0.27	0.27	..
Ghana	0.37	0.42	0.54	0.98	1.20	1.71	2.62	2.42	..
Kenya	0.53	0.64	0.90	0.89	0.94	1.65	2.69	2.94	..
Libya	0.55	1.57	2.07	3.71	4.27	6.06	5.13	7.09	..
Mauritius	0.06	0.08	0.15	0.25	0.28	0.31	0.36	0.38	..
Morocco	0.68	0.87	1.30	2.68	3.33	4.45	5.35	5.58	..
Mozambique	0.10	0.10	0.20	0.28	0.34	0.56	0.84	1.28	..
Namibia	..	..	..	0.38	0.52	0.59	0.70	0.75	..
Niger	..	..	..	0.12	0.13	0.27	0.40	0.39	..
Nigeria	1.36	4.54	3.97	7.41	9.74	9.48	15.11	17.25	..
Senegal	0.17	0.24	0.24	0.38	0.48	0.67	0.89	0.97	..
South Africa	9.53	8.55	10.30	12.32	14.97	16.40	18.64	18.80	..
South Sudan	..	..	..	..	..	..	0.34	0.32	..
Sudan	0.80	0.75	1.29	0.87	1.62	2.91	2.76	3.14	..
United Rep. of Tanzania	0.27	0.23	0.23	0.48	0.88	1.14	2.33	2.30	..
Togo	0.07	0.11	0.14	0.14	0.21	0.53	0.48	0.51	..
Tunisia	0.35	0.58	0.83	1.34	1.53	2.40	2.30	2.45	..
Zambia	0.25	0.29	0.26	0.24	0.33	0.22	0.39	0.40	..
Zimbabwe	0.68	0.57	0.65	0.64	0.44	0.42	0.86	0.74	..
Other Africa	0.46	1.12	1.65	2.44	2.95	3.79	4.90	4.99	..
<b>Africa</b>	<b>20.31</b>	<b>27.46</b>	<b>37.79</b>	<b>54.12</b>	<b>67.10</b>	<b>86.59</b>	<b>111.79</b>	<b>117.33</b>	<b>..</b>

Includes non-energy use in transport.

1. Please refer to section 'Geographical coverage'.

## Total transport consumption of energy (Mtoe)

Mtoe	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	0.08	0.32	0.54	1.00	1.67	2.61	3.25	3.45	..
Brunei Darussalam	0.03	0.11	0.19	0.27	0.32	0.40	0.46	0.45	..
Cambodia	..	..	..	0.44	0.50	1.03	1.43	1.68	..
DPR of Korea	0.67	1.84	1.56	0.56	0.43	0.44	0.47	0.48	..
India	12.53	16.76	20.75	31.92	38.72	64.25	86.01	89.95	..
Indonesia	3.08	5.95	10.71	20.85	23.69	30.72	42.24	47.25	..
Malaysia	1.56	2.14	4.88	10.81	13.69	14.93	21.10	21.58	..
Mongolia	..	..	0.51	0.32	0.35	0.48	0.67	0.58	..
Myanmar	0.43	0.63	0.44	1.16	1.54	0.81	1.53	1.71	..
Nepal	0.02	0.05	0.11	0.27	0.27	0.64	0.77	1.28	..
Pakistan	1.09	2.21	4.50	8.36	9.07	11.53	14.95	15.66	..
Philippines	3.41	3.26	4.52	8.10	8.30	8.04	10.59	11.46	..
Singapore	0.60	0.95	1.36	1.75	1.96	2.51	2.41	2.37	..
Sri Lanka	0.54	0.68	0.82	1.68	2.07	2.28	2.86	3.10	..
Chinese Taipei	1.21	2.85	6.60	11.50	12.76	12.14	12.46	12.83	..
Thailand	2.39	3.21	9.01	14.61	18.13	19.92	23.80	25.20	..
Viet Nam	0.97	0.65	1.38	3.50	6.37	10.14	10.67	12.28	..
Other Non-OECD Asia	0.71	0.93	0.95	1.18	1.42	2.87	4.28	4.34	..
<b>Non-OECD Asia excl. China</b>	<b>29.31</b>	<b>42.55</b>	<b>68.83</b>	<b>118.29</b>	<b>141.26</b>	<b>185.74</b>	<b>239.93</b>	<b>255.64</b>	..
People's Rep. of China	17.14	23.59	31.36	86.19	139.24	198.80	290.56	298.19	..
Hong Kong, China	0.50	0.82	1.50	3.76	2.04	2.19	2.43	2.58	..
<b>China</b>	<b>17.65</b>	<b>24.41</b>	<b>32.86</b>	<b>89.95</b>	<b>141.28</b>	<b>200.99</b>	<b>292.99</b>	<b>300.76</b>	..
Argentina	8.82	10.47	9.55	13.83	13.95	15.71	17.54	17.51	..
Bolivia	0.39	0.71	0.75	0.98	1.20	1.89	2.73	2.86	..
Brazil	19.09	25.71	32.96	47.37	52.55	69.99	84.12	82.96	..
Colombia	2.63	4.02	5.72	6.30	6.91	7.35	10.27	10.65	..
Costa Rica	0.28	0.44	0.53	1.00	1.25	1.52	1.77	1.89	..
Cuba	1.48	1.78	1.77	0.78	0.69	0.47	0.56	0.55	..
Curaçao	0.45	0.51	0.29	0.44	0.47	0.51	0.36	0.36	..
Dominican Republic	0.53	0.60	0.78	1.82	1.89	1.87	1.97	2.04	..
Ecuador	0.70	1.34	2.59	2.91	3.22	4.16	5.39	5.58	..
El Salvador	0.22	0.29	0.42	0.84	1.02	1.00	1.12	1.17	..
Guatemala	0.32	0.45	0.57	1.29	1.71	1.89	2.49	2.69	..
Haiti	0.06	0.10	0.14	0.24	0.39	0.36	0.47	0.47	..
Honduras	0.18	0.21	0.35	0.70	0.75	1.02	1.37	1.36	..
Jamaica	0.54	0.29	0.37	0.66	0.75	0.63	0.61	0.64	..
Nicaragua	0.28	0.29	0.25	0.48	0.48	0.53	0.73	0.78	..
Panama	0.30	0.35	0.43	0.78	0.95	1.17	1.45	1.56	..
Paraguay	0.18	0.37	0.56	0.92	1.01	1.49	1.87	2.13	..
Peru	2.10	2.04	2.38	3.20	3.31	5.83	7.22	7.87	..
Suriname	..	..	..	0.10	0.17	0.22	0.23	0.20	..
Trinidad and Tobago	0.38	0.48	0.46	0.55	0.72	1.07	1.13	1.24	..
Uruguay	0.59	0.55	0.50	0.80	0.76	1.04	1.24	1.28	..
Venezuela	4.96	9.19	9.74	11.67	14.43	16.41	15.47	13.62	..
Other Non-OECD Americas	0.15	0.35	0.65	1.41	1.50	1.77	1.98	2.02	..
<b>Non-OECD Americas</b>	<b>44.62</b>	<b>60.55</b>	<b>71.74</b>	<b>99.07</b>	<b>110.08</b>	<b>137.91</b>	<b>162.07</b>	<b>161.44</b>	..
Bahrain	0.08	0.21	0.34	0.52	0.84	1.06	1.20	1.22	..
Islamic Republic of Iran	3.44	7.12	13.03	25.49	35.25	40.05	46.79	44.84	..
Iraq	0.98	3.26	7.25	8.77	8.69	9.35	8.33	8.49	..
Jordan	0.24	0.55	0.91	1.20	1.61	1.75	2.61	2.77	..
Kuwait	0.75	1.79	0.97	2.06	2.78	4.22	4.73	4.79	..
Lebanon	0.55	0.64	0.64	1.38	1.39	1.74	1.91	1.95	..
Oman	0.04	0.22	0.58	0.90	1.25	2.76	4.44	4.17	..
Qatar	0.11	0.35	0.50	0.81	1.57	2.94	4.22	4.37	..
Saudi Arabia	1.45	6.59	16.40	20.37	25.32	35.23	47.51	45.80	..
Syrian Arab Republic	0.58	1.21	2.42	2.79	4.48	4.11	2.14	2.15	..
United Arab Emirates	0.26	2.30	3.72	4.92	7.56	10.05	10.43	11.69	..
Yemen	0.41	0.76	1.35	1.49	1.90	2.42	1.08	0.94	..
<b>Middle East</b>	<b>8.88</b>	<b>24.99</b>	<b>48.10</b>	<b>70.71</b>	<b>92.66</b>	<b>115.67</b>	<b>135.40</b>	<b>133.19</b>	..

Includes non-energy use in transport.

## GDP using exchange rates (billion 2010 USD)

<i>billion 2010 USD</i>	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>22 768.1</b>	<b>28 406.4</b>	<b>37 943.1</b>	<b>49 978.2</b>	<b>58 084.4</b>	<b>65 943.9</b>	<b>75 596.7</b>	<b>77 362.4</b>	..
<b>Non-OECD Total</b>	<b>4 904.0</b>	<b>6 795.9</b>	<b>8 543.8</b>	<b>11 630.6</b>	<b>15 418.6</b>	<b>21 176.5</b>	<b>26 647.4</b>	<b>27 575.5</b>	..
<b>OECD Total</b>	<b>17 864.0</b>	<b>21 610.5</b>	<b>29 399.3</b>	<b>38 347.6</b>	<b>42 665.8</b>	<b>44 767.4</b>	<b>48 949.3</b>	<b>49 786.9</b>	<b>50 975.2</b>
Canada	616.8	781.3	1 014.1	1 342.7	1 524.5	1 613.5	1 802.5	1 828.0	1 883.7
Chile	40.4	52.1	75.5	144.5	181.7	218.5	264.6	267.9	271.9
Mexico	347.7	537.8	643.2	915.2	982.7	1 057.8	1 223.4	1 259.0	1 284.7
United States	5 490.3	6 529.2	9 064.4	12 713.1	14 408.1	14 964.4	16 672.7	16 920.3	17 305.0
<b>OECD Americas</b>	<b>6 495.2</b>	<b>7 900.4</b>	<b>10 797.2</b>	<b>15 115.5</b>	<b>17 097.0</b>	<b>17 854.2</b>	<b>19 963.2</b>	<b>20 275.3</b>	<b>20 745.3</b>
Australia	417.5	502.7	675.2	957.4	1 131.6	1 297.3	1 493.1	1 522.4	1 557.0
Israel <sup>1</sup>	51.9	66.0	95.5	171.0	188.9	233.6	278.0	289.0	298.6
Japan	2 392.7	3 019.3	4 703.6	5 348.9	5 672.3	5 700.1	5 996.4	6 052.7	6 156.3
Korea	79.5	141.1	362.9	710.0	894.7	1 094.5	1 268.8	1 305.9	1 345.9
New Zealand	66.8	70.0	82.7	111.8	136.0	146.6	170.2	176.1	181.5
<b>OECD Asia Oceania</b>	<b>3 008.5</b>	<b>3 799.1</b>	<b>5 919.9</b>	<b>7 299.1</b>	<b>8 023.5</b>	<b>8 472.1</b>	<b>9 206.5</b>	<b>9 346.1</b>	<b>9 539.4</b>
Austria	171.2	208.3	260.2	336.5	367.3	391.9	414.0	420.0	432.8
Belgium	225.0	270.4	330.0	411.8	450.5	483.5	507.9	515.1	524.0
Czech Republic	107.3	127.2	144.6	151.8	183.9	207.5	225.5	231.3	241.3
Denmark	167.7	186.4	229.1	298.2	318.6	322.0	340.8	347.5	355.3
Estonia	..	..	15.0	14.1	19.9	19.5	23.3	23.8	25.0
Finland	99.8	122.6	167.1	209.4	237.9	247.8	247.4	252.7	259.3
France	1 224.0	1 492.1	1 907.3	2 346.5	2 547.2	2 646.8	2 777.5	2 810.5	2 861.7
Germany	1 729.0	2 040.5	2 568.6	3 123.9	3 213.8	3 417.1	3 709.6	3 781.7	3 865.8
Greece	151.2	184.6	197.7	251.5	304.3	299.4	245.1	244.5	247.8
Hungary	72.7	93.1	104.2	107.1	132.3	130.9	144.0	147.2	153.1
Iceland	4.1	5.9	7.8	10.3	12.6	13.3	15.3	16.4	17.0
Ireland	42.4	58.4	83.3	163.4	214.3	222.0	316.1	332.4	358.3
Italy	1 074.6	1 379.8	1 749.2	2 060.2	2 158.7	2 125.1	2 062.9	2 080.6	2 111.9
Latvia	..	..	..	16.4	24.4	23.8	28.3	28.9	30.2
Luxembourg	13.7	14.9	24.1	40.8	47.2	53.2	61.3	63.2	64.7
Netherlands	354.1	425.6	530.5	734.7	785.1	836.4	870.9	890.1	918.3
Norway	145.5	198.3	255.6	367.0	409.1	429.1	467.7	472.8	481.8
Poland	197.2	228.2	226.7	326.2	379.8	479.3	556.2	572.7	599.3
Portugal	97.5	121.0	166.6	221.4	231.1	238.3	228.1	231.7	238.0
Slovak Republic	37.2	44.1	51.1	55.5	71.0	89.5	101.3	104.7	108.2
Slovenia	..	..	30.9	36.9	44.1	48.0	49.0	50.5	53.0
Spain	558.7	653.9	873.1	1 149.5	1 358.1	1 431.6	1 418.1	1 464.5	1 509.2
Sweden	228.5	258.4	321.1	396.5	451.4	488.4	542.8	560.4	573.2
Switzerland	339.2	346.9	432.1	487.1	524.1	583.8	633.4	642.1	648.8
Turkey	172.2	219.0	364.0	520.9	658.1	771.9	1 087.8	1 122.5	1 205.7
United Kingdom	1 147.6	1 231.3	1 642.5	2 095.2	2 400.4	2 441.2	2 705.3	2 757.6	2 806.9
<b>OECD Europe</b>	<b>8 360.3</b>	<b>9 911.0</b>	<b>12 682.3</b>	<b>15 932.9</b>	<b>17 545.3</b>	<b>18 441.2</b>	<b>19 779.6</b>	<b>20 165.6</b>	<b>20 690.6</b>
IEA	17 767.5	21 486.5	29 189.8	37 968.4	42 214.2	44 230.2	48 314.2	49 134.2	50 304.5
IEA/Accession/Association	19 068.9	23 469.4	32 316.2	43 554.6	49 950.4	55 840.7	63 904.6	65 473.8	..
European Union - 28	..	..	11 874.8	14 787.5	16 254.1	16 992.8	17 956.8	18 308.2	..
G7	13 675.0	16 473.6	22 649.7	29 030.5	31 925.0	32 908.1	35 726.9	36 231.5	36 991.2
G8	..	..	24 063.6	29 982.1	33 206.3	34 433.0	37 358.6	37 859.5	..
G20	..	..	33 730.1	44 382.1	51 140.7	57 294.1	65 479.9	67 027.7	..
OPEC	1 056.8	1 327.4	1 341.5	1 768.8	2 264.9	2 829.6	3 278.8	3 286.8	..

1. Please refer to section 'Geographical coverage'.

## GDP using exchange rates (billion 2010 USD)

<i>billion 2010 USD</i>	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>4 904.0</b>	<b>6 795.9</b>	<b>8 543.8</b>	<b>11 630.6</b>	<b>15 418.6</b>	<b>21 176.5</b>	<b>26 647.4</b>	<b>27 575.5</b>	..
Albania	4.0	5.4	6.2	7.0	9.3	11.9	13.1	13.6	..
Armenia	..	..	6.4	4.3	7.7	9.3	11.5	11.5	..
Azerbaijan	..	..	22.3	13.1	24.8	52.9	59.0	57.2	..
Belarus	..	..	31.6	28.0	40.3	57.2	60.7	59.1	..
Bosnia and Herzegovina	..	..	3.4	11.3	14.9	17.2	18.3	18.7	..
Bulgaria	18.1	28.6	36.3	32.8	43.5	50.6	54.6	56.5	..
Croatia	..	..	48.1	46.8	58.3	59.7	58.2	59.9	..
Cyprus <sup>1</sup>	3.8	6.7	12.3	19.0	22.6	25.6	23.4	24.0	..
FYR of Macedonia	..	..	7.7	7.0	7.7	9.4	10.6	10.9	..
Georgia	..	..	16.9	6.3	9.0	11.6	14.8	15.2	..
Gibraltar	0.5	0.5	0.7	0.9	1.0	1.1	1.2	1.3	..
Kazakhstan	..	..	96.3	66.9	109.5	148.0	186.3	188.1	..
Kosovo	..	..	..	3.3	4.7	5.8	6.8	7.1	..
Kyrgyzstan	..	..	4.8	3.2	3.9	4.8	6.1	6.3	..
Lithuania	..	..	27.0	24.3	35.0	37.1	44.6	45.6	..
Malta	1.3	2.9	4.3	7.1	7.9	8.7	11.1	11.6	..
Republic of Moldova	..	..	10.0	3.5	5.0	5.8	7.0	7.3	..
Montenegro	..	..	..	..	3.3	4.1	4.5	4.6	..
Romania	65.1	116.3	124.0	110.0	145.5	168.0	189.5	198.6	..
Russian Federation	..	..	1 413.9	951.6	1 281.3	1 524.9	1 631.6	1 628.0	..
Serbia	..	..	24.6	25.6	34.6	39.5	40.2	41.3	..
Tajikistan	..	..	6.8	2.6	4.1	5.6	7.9	8.5	..
Turkmenistan	..	..	13.7	10.8	13.8	22.6	37.3	39.6	..
Ukraine	..	..	205.8	89.4	129.4	136.0	121.2	124.0	..
Uzbekistan	..	..	20.5	20.0	26.1	39.3	57.9	62.5	..
Former Soviet Union	1 274.9	1 707.8	x	x	x	x	x	x	x
Former Yugoslavia	83.1	129.3	x	x	x	x	x	x	x
<b>Non-OECD Europe and Eurasia</b>	<b>1 450.9</b>	<b>1 997.6</b>	<b>2 143.4</b>	<b>1 494.7</b>	<b>2 043.1</b>	<b>2 456.8</b>	<b>2 677.4</b>	<b>2 700.9</b>	..
Algeria	45.9	70.0	92.0	110.4	142.3	161.2	189.8	196.8	..
Angola	26.8	25.0	32.0	34.5	46.2	82.5	103.9	103.9	..
Benin	1.8	2.2	3.0	4.8	5.8	7.0	8.8	9.1	..
Botswana	..	..	5.3	8.6	10.2	12.8	16.1	16.6	..
Cameroon	6.4	10.7	14.9	17.1	20.5	23.6	30.4	31.8	..
Congo	2.8	4.1	6.6	7.6	9.3	12.0	14.6	14.3	..
Côte d'Ivoire	12.0	16.5	17.8	22.3	22.3	24.9	34.1	37.0	..
Dem. Rep. of the Congo	23.3	21.2	23.1	13.0	15.7	20.5	29.8	30.5	..
Egypt	29.5	52.6	89.6	136.4	162.2	218.9	250.0	260.7	..
Eritrea	..	..	..	1.9	2.2	2.1	2.8	2.9	..
Ethiopia	8.1	8.2	10.0	13.1	17.9	29.9	48.7	52.3	..
Gabon	5.7	8.9	10.6	12.5	13.6	14.4	18.5	18.9	..
Ghana	9.9	9.7	12.0	18.4	23.5	32.2	46.5	48.2	..
Kenya	10.2	14.6	21.8	26.2	31.3	40.0	52.3	55.4	..
Libya	50.1	72.7	46.9	48.0	61.7	74.8	19.6	18.8	..
Mauritius	1.6	2.2	3.9	6.6	7.7	10.0	12.0	12.4	..
Morocco	18.4	27.2	43.2	57.5	73.0	93.2	113.2	114.5	..
Mozambique	2.8	2.3	2.3	4.6	7.1	10.2	14.3	14.9	..
Namibia	..	..	..	7.1	9.1	11.3	14.8	14.9	..
Niger	..	..	..	3.7	4.4	5.7	7.6	8.0	..
Nigeria	112.6	143.8	130.9	157.5	260.5	369.1	464.3	457.1	..
Senegal	4.2	5.0	6.4	8.7	10.9	12.9	15.8	16.9	..
South Africa	152.7	191.9	222.9	267.0	322.2	375.3	418.4	419.6	..
South Sudan	..	..	..	..	..	..	8.9	9.3	..
Sudan	10.7	15.5	19.8	34.1	46.4	65.6	72.7	76.1	..
United Rep. of Tanzania	6.7	8.3	12.2	16.5	23.4	31.4	43.7	46.8	..
Togo	1.4	1.9	2.1	2.6	2.7	3.2	4.0	4.2	..
Tunisia	8.2	12.9	18.3	29.1	35.3	44.1	48.1	48.6	..
Zambia	7.1	7.6	8.4	9.9	13.4	20.3	26.1	26.9	..
Zimbabwe	7.5	8.4	12.9	15.4	10.5	10.1	14.6	14.7	..
Other Africa	41.8	49.8	57.9	70.5	100.6	132.6	160.1	163.1	..
<b>Africa</b>	<b>608.3</b>	<b>793.2</b>	<b>926.9</b>	<b>1 165.3</b>	<b>1 511.7</b>	<b>1 951.6</b>	<b>2 304.5</b>	<b>2 345.3</b>	..

1. Please refer to section 'Geographical coverage'.

## GDP using exchange rates (billion 2010 USD)

<i>billion 2010 USD</i>	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	22.2	28.6	42.4	67.0	85.9	115.3	156.6	167.8	..
Brunei Darussalam	6.8	11.5	9.6	12.0	13.3	13.7	13.6	13.3	..
Cambodia	..	..	..	5.2	8.1	11.2	15.9	17.0	..
DPR of Korea	10.5	22.4	42.7	29.8	28.9	26.8	26.9	27.1	..
India	211.0	271.7	466.5	802.8	1 111.2	1 656.6	2 301.4	2 464.9	..
Indonesia	109.8	181.5	309.8	453.4	571.2	755.1	988.1	1 037.7	..
Malaysia	27.8	45.8	81.8	162.5	204.9	255.0	330.0	343.9	..
Mongolia	..	..	3.8	3.8	5.3	7.2	11.7	11.8	..
Myanmar	4.7	7.1	8.0	16.0	29.3	49.5	70.5	75.1	..
Nepal	3.5	4.2	6.7	10.9	12.9	16.0	19.7	19.8	..
Pakistan	29.8	43.4	79.9	117.6	150.0	177.4	215.9	228.3	..
Philippines	54.5	80.0	94.5	125.3	156.9	199.6	266.1	284.5	..
Singapore	19.1	32.1	67.6	134.5	170.7	236.4	289.2	294.9	..
Sri Lanka	9.6	13.7	20.6	34.3	41.6	56.7	76.4	79.7	..
Chinese Taipei	41.4	82.5	155.1	296.7	361.6	446.1	506.1	513.2	..
Thailand	41.3	66.5	141.6	217.7	283.8	341.1	393.7	406.4	..
Viet Nam	14.5	16.9	29.5	61.1	85.4	115.9	154.5	164.1	..
Other Non-OECD Asia	23.2	29.0	35.1	43.8	58.5	83.5	102.7	104.2	..
<b>Non-OECD Asia excl. China</b>	<b>629.7</b>	<b>936.9</b>	<b>1 595.2</b>	<b>2 594.4</b>	<b>3 379.2</b>	<b>4 563.3</b>	<b>5 938.8</b>	<b>6 253.8</b>	..
People's Rep. of China	223.8	341.4	829.6	2 237.1	3 569.9	6 100.6	8 908.3	9 505.2	..
Hong Kong, China	30.6	54.3	104.1	153.4	188.6	228.6	264.4	269.8	..
<b>China</b>	<b>254.3</b>	<b>395.7</b>	<b>933.7</b>	<b>2 390.5</b>	<b>3 758.5</b>	<b>6 329.3</b>	<b>9 172.7</b>	<b>9 775.0</b>	..
Argentina	186.8	226.3	194.4	303.2	333.6	423.6	455.5	445.0	..
Bolivia	7.5	9.2	9.3	13.5	15.7	19.7	25.7	26.8	..
Brazil	637.7	1 010.4	1 192.7	1 538.7	1 774.8	2 208.9	2 331.9	2 248.1	..
Colombia	74.1	104.1	148.1	192.5	229.9	287.0	359.1	366.2	..
Costa Rica	8.5	11.9	15.2	24.5	29.5	37.3	45.2	47.2	..
Cuba	23.1	30.0	44.7	38.7	49.5	64.3	73.9	77.1	..
Curaçao	1.1	1.4	1.7	2.3	2.5	2.7	1.9	1.9	..
Dominican Republic	10.2	14.7	18.5	33.4	39.7	54.0	69.0	73.6	..
Ecuador	19.2	29.4	38.0	46.5	58.9	69.6	86.6	85.4	..
El Salvador	10.9	11.8	11.3	17.8	20.0	21.4	23.6	24.1	..
Guatemala	12.7	18.2	19.9	29.8	34.6	41.3	49.9	51.4	..
Haiti	4.8	6.6	6.3	6.6	6.4	6.6	7.8	7.9	..
Honduras	4.2	6.0	7.7	10.6	13.3	15.8	18.8	19.5	..
Jamaica	9.8	7.9	10.3	12.3	13.5	13.2	13.6	13.8	..
Nicaragua	5.9	5.4	4.7	6.6	7.7	8.8	11.4	12.0	..
Panama	6.2	8.7	9.9	16.5	20.4	28.9	42.2	44.3	..
Paraguay	3.9	7.5	11.3	14.3	15.7	20.0	25.4	26.4	..
Peru	51.9	64.7	58.5	85.8	105.8	147.5	186.3	193.5	..
Suriname	..	..	..	2.7	3.5	4.4	4.8	4.3	..
Trinidad and Tobago	7.4	10.2	8.0	12.4	18.3	22.2	22.7	21.5	..
Uruguay	15.7	21.4	21.4	29.9	30.2	40.3	47.6	48.3	..
Venezuela	182.8	216.6	235.0	289.0	327.8	393.2	395.2	324.0	..
Other Non-OECD Americas	17.5	22.5	29.7	35.0	39.1	40.4	43.5	44.3	..
<b>Non-OECD Americas</b>	<b>1 302.0</b>	<b>1 845.0</b>	<b>2 096.7</b>	<b>2 762.4</b>	<b>3 190.2</b>	<b>3 971.0</b>	<b>4 341.4</b>	<b>4 206.4</b>	..
Bahrain	2.5	7.6	8.9	15.3	19.6	25.7	30.8	31.7	..
Islamic Republic of Iran	226.5	165.1	205.5	281.9	368.5	467.8	456.9	486.8	..
Iraq	16.6	45.7	71.3	101.6	104.2	138.5	190.9	211.9	..
Jordan	3.5	7.1	8.7	14.3	19.5	26.4	30.2	30.8	..
Kuwait	60.5	53.3	40.7	73.4	108.9	115.4	139.7	143.1	..
Lebanon	20.3	14.4	11.4	21.8	26.3	38.0	41.2	41.9	..
Oman	6.4	11.4	27.0	42.4	44.3	58.6	71.7	73.9	..
Qatar	25.8	22.8	18.9	36.0	53.4	125.1	167.0	170.7	..
Saudi Arabia	237.6	355.7	293.9	379.2	461.6	528.2	678.7	690.6	..
Syrian Arab Republic	9.2	18.9	24.2	38.6	47.2	59.9	17.0	15.3	..
United Arab Emirates	46.7	118.5	125.8	198.2	257.4	289.9	367.6	378.8	..
Yemen	3.4	7.0	11.7	20.3	25.0	30.9	20.8	18.7	..
<b>Middle East</b>	<b>658.9</b>	<b>827.5</b>	<b>848.0</b>	<b>1 223.2</b>	<b>1 535.9</b>	<b>1 904.6</b>	<b>2 212.5</b>	<b>2 294.3</b>	..

## GDP using purchasing power parities (billion 2010 USD)

<i>billion 2010 USD</i>	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>26 848.3</b>	<b>34 173.7</b>	<b>46 097.2</b>	<b>61 738.5</b>	<b>74 363.9</b>	<b>89 110.1</b>	<b>105 887.0</b>	<b>109 230.7</b>	<b>..</b>
<b>Non-OECD Total</b>	<b>9 735.0</b>	<b>13 376.4</b>	<b>17 841.1</b>	<b>24 567.7</b>	<b>32 831.7</b>	<b>45 316.8</b>	<b>57 715.6</b>	<b>60 196.6</b>	<b>..</b>
<b>OECD Total</b>	<b>17 113.3</b>	<b>20 797.3</b>	<b>28 256.1</b>	<b>37 170.9</b>	<b>41 532.2</b>	<b>43 793.4</b>	<b>48 171.4</b>	<b>49 034.1</b>	<b>50 252.5</b>
Canada	520.3	659.1	855.5	1 132.7	1 286.1	1 361.1	1 520.6	1 542.1	1 589.1
Chile	57.4	74.1	107.2	205.3	258.0	310.4	375.7	380.5	386.2
Mexico	573.0	886.2	1 060.0	1 508.2	1 619.5	1 743.2	2 016.1	2 074.8	2 117.1
United States	5 490.3	6 529.2	9 064.4	12 713.1	14 408.1	14 964.4	16 672.7	16 920.3	17 305.0
<b>OECD Americas</b>	<b>6 641.0</b>	<b>8 148.5</b>	<b>11 087.0</b>	<b>15 559.3</b>	<b>17 571.7</b>	<b>18 379.1</b>	<b>20 585.1</b>	<b>20 917.8</b>	<b>21 397.3</b>
Australia	303.2	365.0	490.3	695.2	821.7	942.0	1 084.2	1 105.4	1 130.6
Israel <sup>1</sup>	48.9	62.1	89.8	160.9	177.8	219.9	261.6	272.0	280.9
Japan	1 881.6	2 374.4	3 698.9	4 206.3	4 460.6	4 482.5	4 715.5	4 759.8	4 841.3
Korea	109.4	194.0	499.1	976.5	1 230.5	1 505.3	1 745.0	1 796.1	1 851.1
New Zealand	62.0	65.0	76.7	103.7	126.2	136.0	158.0	163.4	168.4
<b>OECD Asia Oceania</b>	<b>2 405.0</b>	<b>3 060.5</b>	<b>4 854.8</b>	<b>6 142.7</b>	<b>6 816.8</b>	<b>7 285.7</b>	<b>7 964.3</b>	<b>8 096.7</b>	<b>8 272.3</b>
Austria	153.6	186.9	233.5	301.9	329.6	351.7	371.5	376.9	388.4
Belgium	203.4	244.5	298.4	372.4	407.4	437.2	458.8	465.3	473.4
Czech Republic	150.1	178.0	202.3	212.5	257.4	290.4	315.6	323.8	337.3
Denmark	124.5	138.3	170.1	221.4	236.5	239.0	253.0	258.0	263.5
Estonia	..	..	22.1	20.9	29.4	28.8	34.5	35.2	36.8
Finland	83.9	103.0	140.4	175.9	199.9	208.2	207.6	212.1	217.7
France	1 083.4	1 320.7	1 688.2	2 076.9	2 254.5	2 342.7	2 458.4	2 487.6	2 530.5
Germany	1 624.6	1 917.4	2 413.6	2 935.3	3 019.8	3 210.8	3 485.7	3 553.4	3 628.9
Greece	158.4	193.4	207.1	263.5	318.9	313.7	256.8	256.2	259.4
Hungary	119.7	153.4	171.8	176.5	218.1	215.8	237.3	242.6	252.0
Iceland	3.8	5.5	7.2	9.5	11.6	12.3	14.1	15.1	15.7
Ireland	37.7	51.9	74.1	145.4	190.7	197.4	281.2	295.7	318.7
Italy	1 051.4	1 350.0	1 711.4	2 015.8	2 112.1	2 079.2	2 016.5	2 033.8	2 064.4
Latvia	..	..	35.1	25.5	37.8	36.9	43.8	44.8	46.8
Luxembourg	11.2	12.2	19.7	33.3	38.5	43.5	50.1	51.7	52.8
Netherlands	313.7	376.9	469.9	650.7	695.4	740.8	771.4	788.4	812.6
Norway	96.3	131.2	169.1	242.8	270.7	284.0	309.5	312.8	318.5
Poland	330.1	382.0	379.4	545.5	635.0	802.3	930.1	957.7	1 002.2
Portugal	118.3	146.7	202.0	268.5	280.3	289.0	276.6	281.1	288.6
Slovak Republic	56.0	66.5	77.0	83.6	106.9	134.8	152.6	157.7	162.9
Slovenia	..	..	36.6	43.8	52.3	56.9	58.1	59.9	62.8
Spain	581.4	680.4	908.6	1 196.2	1 413.2	1 489.8	1 475.7	1 524.0	1 569.0
Sweden	182.8	206.8	256.9	317.3	361.2	390.8	434.3	448.4	458.2
Switzerland	241.7	247.2	308.0	347.2	373.5	416.1	451.4	457.6	461.9
Turkey	281.7	358.3	595.4	852.2	1 076.7	1 262.8	1 779.7	1 836.4	1 970.7
United Kingdom	1 059.6	1 136.9	1 516.5	1 934.5	2 216.3	2 253.9	2 497.8	2 543.7	2 589.1
<b>OECD Europe</b>	<b>8 067.3</b>	<b>9 588.3</b>	<b>12 314.3</b>	<b>15 468.9</b>	<b>17 143.7</b>	<b>18 128.6</b>	<b>19 622.0</b>	<b>20 019.6</b>	<b>20 582.8</b>
IEA	17 003.2	20 655.7	27 980.3	36 725.9	40 994.8	43 157.0	47 418.0	48 261.8	49 460.0
IEA/Accession/Association	19 473.3	24 346.2	34 184.6	48 138.7	57 050.7	67 526.5	80 702.9	83 365.6	..
European Union - 28	..	..	11 703.0	14 453.3	15 983.5	16 797.8	17 776.8	18 135.6	..
G7	12 711.2	15 287.6	20 948.5	27 014.6	29 757.6	30 694.7	33 367.2	33 840.7	34 548.2
G8	..	..	23 663.4	28 841.8	32 218.0	33 622.8	36 551.1	37 017.5	..
G20	..	..	37 744.8	50 740.2	60 435.4	71 500.1	85 120.9	87 761.6	..
<i>OPEC</i>	2 269.8	2 800.4	2 879.2	3 795.9	4 869.6	6 022.2	6 961.3	7 163.5	..

1. Please refer to section 'Geographical coverage'.



## GDP using purchasing power parities (billion 2010 USD)

<i>billion 2010 USD</i>	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>9 735.0</b>	<b>13 376.4</b>	<b>17 841.1</b>	<b>24 567.7</b>	<b>32 831.7</b>	<b>45 316.8</b>	<b>57 715.6</b>	<b>60 196.6</b>	..
Albania	9.4	12.8	15.1	17.0	22.6	28.1	30.7	31.7	..
Armenia	..	..	13.0	8.8	15.6	18.9	23.4	23.5	..
Azerbaijan	..	..	59.7	35.2	66.2	141.5	157.9	153.0	..
Belarus	..	..	83.4	73.9	106.2	151.0	160.2	156.0	..
Bosnia and Herzegovina	..	..	6.9	22.8	30.1	34.7	37.0	38.2	..
Bulgaria	39.6	62.4	79.3	71.6	95.0	110.6	119.4	124.1	..
Croatia	..	..	68.4	66.5	82.8	84.8	83.2	85.7	..
Cyprus <sup>1</sup>	4.1	7.2	13.2	20.5	24.4	27.6	25.4	26.1	..
FYR of Macedonia	..	..	19.1	17.4	19.2	23.4	26.4	27.0	..
Georgia	..	..	37.7	14.1	20.1	25.9	32.9	33.8	..
Gibraltar	0.4	0.4	0.6	0.8	0.9	0.9	1.0	1.1	..
Kazakhstan	..	..	209.0	145.1	237.7	321.4	404.3	408.8	..
Kosovo	..	..	..	7.7	11.2	13.7	16.1	16.6	..
Kyrgyzstan	..	..	14.9	10.0	12.0	14.9	18.9	19.6	..
Lithuania	..	..	45.3	40.7	58.8	62.3	74.8	76.5	..
Malta	1.7	3.8	5.6	9.4	10.4	11.5	14.5	15.3	..
Republic of Moldova	..	..	23.4	8.3	11.7	13.6	16.5	17.2	..
Montenegro	..	..	..	..	7.0	8.5	9.3	9.5	..
Romania	134.7	240.7	256.6	227.5	301.0	347.5	392.2	410.2	..
Russian Federation	..	..	2 714.9	1 827.2	2 460.4	2 928.1	3 184.0	3 176.8	..
Serbia	..	..	54.8	57.2	77.3	88.1	89.7	92.3	..
Tajikistan	..	..	18.9	7.2	11.5	15.8	22.1	23.6	..
Turkmenistan	..	..	30.0	23.6	30.3	49.6	81.7	86.8	..
Ukraine	..	..	532.0	231.1	334.4	351.7	313.4	320.6	..
Uzbekistan	..	..	61.7	60.5	78.7	118.6	174.8	188.4	..
Former Soviet Union	2 299.0	3 079.7	x	x	x	x	x	x	x
Former Yugoslavia	133.9	208.1	x	x	x	x	x	x	x
<b>Non-OECD Europe and Eurasia</b>	<b>2 622.8</b>	<b>3 615.3</b>	<b>4 363.5</b>	<b>3 004.0</b>	<b>4 125.3</b>	<b>4 992.5</b>	<b>5 509.7</b>	<b>5 562.4</b>	..
Algeria	129.8	197.8	259.9	312.0	401.9	455.5	536.2	553.8	..
Angola	43.8	40.9	52.4	56.5	75.7	135.0	170.1	169.0	..
Benin	4.3	5.2	7.1	11.2	13.6	16.4	20.6	21.4	..
Botswana	..	..	10.9	17.6	21.1	26.3	33.2	34.7	..
Cameroon	15.5	26.0	34.7	39.0	48.3	57.3	73.6	76.9	..
Congo	5.2	7.7	12.3	14.2	17.3	22.3	27.1	26.6	..
Côte d'Ivoire	25.8	35.8	38.4	48.2	48.2	53.8	73.4	79.5	..
Dem. Rep. of the Congo	43.8	39.8	43.4	24.4	29.4	38.5	56.0	57.4	..
Egypt	109.5	195.2	332.4	506.0	601.9	812.3	927.6	967.5	..
Eritrea	..	..	..	5.6	6.3	6.1	8.0	8.3	..
Ethiopia	25.0	25.4	30.7	40.3	55.1	92.3	150.0	161.4	..
Gabon	9.9	15.2	18.2	21.5	23.1	24.7	31.8	32.6	..
Ghana	22.7	22.2	27.5	41.9	53.6	73.5	106.2	110.0	..
Kenya	25.7	36.6	54.6	65.7	78.5	100.3	131.2	138.9	..
Libya	120.0	174.1	112.4	115.0	147.8	179.1	47.0	45.0	..
Mauritius	3.1	4.3	7.7	12.9	15.0	19.5	23.3	24.2	..
Morocco	40.9	60.6	96.2	128.1	162.6	207.6	252.6	255.7	..
Mozambique	6.1	4.8	4.9	9.9	15.2	21.8	30.7	31.9	..
Namibia	..	..	..	11.4	14.5	18.0	23.7	23.9	..
Niger	..	..	..	8.4	10.2	13.1	17.6	18.5	..
Nigeria	244.1	311.7	283.9	341.4	564.8	800.2	1 006.6	990.4	..
Senegal	9.0	10.6	13.7	18.5	23.2	27.6	33.7	35.9	..
South Africa	244.4	307.2	356.8	427.4	515.8	600.8	669.7	671.6	..
South Sudan	..	..	..	..	..	..	21.1	22.0	..
Sudan	23.9	34.6	44.3	76.1	103.7	146.6	162.5	170.1	..
United Rep. of Tanzania	19.4	24.4	35.7	48.2	68.3	91.7	127.7	136.6	..
Togo	3.3	4.5	5.0	6.2	6.6	7.7	9.8	10.3	..
Tunisia	20.3	31.9	45.3	72.0	87.1	108.8	118.7	120.1	..
Zambia	15.7	16.6	18.4	21.7	29.3	44.5	57.2	59.3	..
Zimbabwe	15.1	17.0	26.0	30.9	21.1	20.4	29.6	29.7	..
Other Africa	102.7	121.3	137.2	169.8	236.5	311.4	382.0	392.3	..
<b>Africa</b>	<b>1 329.0</b>	<b>1 771.4</b>	<b>2 110.0</b>	<b>2 702.0</b>	<b>3 495.7</b>	<b>4 533.0</b>	<b>5 358.6</b>	<b>5 475.3</b>	..

1. Please refer to section 'Geographical coverage'.

## GDP using purchasing power parities (billion 2010 USD)

<i>billion 2010 USD</i>	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	70.1	90.4	134.0	211.7	271.2	364.1	494.8	530.0	..
Brunei Darussalam	15.1	25.8	21.5	26.8	29.7	30.7	30.5	29.8	..
Cambodia	..	..	..	16.4	25.6	35.4	50.0	53.5	..
DPR of Korea	39.5	84.0	160.2	111.7	108.4	100.6	100.8	101.9	..
India	676.6	871.3	1 496.1	2 574.3	3 563.4	5 312.4	7 380.0	7 904.5	..
Indonesia	291.3	481.8	822.2	1 203.3	1 515.9	2 004.0	2 622.4	2 753.9	..
Malaysia	63.4	104.4	186.5	370.5	467.0	581.4	752.6	784.3	..
Mongolia	..	..	11.0	10.9	15.0	20.5	33.3	33.7	..
Myanmar	17.5	26.0	29.6	59.0	108.1	182.9	259.6	274.9	..
Nepal	11.4	13.9	22.0	35.8	42.3	52.6	65.0	65.2	..
Pakistan	120.2	175.2	322.3	474.3	605.2	715.8	871.3	919.0	..
Philippines	140.3	205.9	243.4	322.8	404.0	514.0	685.1	732.5	..
Singapore	29.0	48.7	102.5	204.0	259.0	358.7	438.7	447.4	..
Sri Lanka	28.6	40.7	61.3	102.0	123.9	168.8	227.2	237.2	..
Chinese Taipei	80.8	160.9	302.4	578.6	705.1	870.0	986.9	1 000.8	..
Thailand	107.6	173.2	368.7	566.8	738.8	888.1	1 025.0	1 058.1	..
Viet Nam	47.8	55.8	97.1	201.5	281.3	382.1	509.3	540.9	..
Other Non-OECD Asia	48.8	60.9	70.3	86.0	118.6	176.0	222.7	228.3	..
<b>Non-OECD Asia excl. China</b>	<b>1 788.0</b>	<b>2 618.8</b>	<b>4 451.1</b>	<b>7 156.5</b>	<b>9 382.5</b>	<b>12 757.9</b>	<b>16 755.3</b>	<b>17 695.9</b>	..
People's Rep. of China	457.9	698.6	1 697.7	4 578.2	7 305.7	12 485.0	18 230.9	19 450.4	..
Hong Kong, China	44.3	78.7	150.8	222.1	273.2	331.1	382.9	390.7	..
<b>China</b>	<b>502.2</b>	<b>777.2</b>	<b>1 848.5</b>	<b>4 800.3</b>	<b>7 578.9</b>	<b>12 816.1</b>	<b>18 613.8</b>	<b>19 841.1</b>	..
Argentina	333.2	403.8	346.8	541.0	595.2	755.8	812.6	794.3	..
Bolivia	20.1	24.6	24.9	36.1	42.0	52.5	68.6	71.6	..
Brazil	809.3	1 282.3	1 513.7	1 952.8	2 252.5	2 803.4	2 959.5	2 853.2	..
Colombia	126.7	177.9	253.0	328.9	392.9	490.4	613.6	625.6	..
Costa Rica	13.2	18.4	23.6	38.0	45.9	57.9	70.3	73.3	..
Cuba	71.7	93.1	138.9	120.3	153.7	199.8	229.5	239.4	..
Curaçao	1.0	1.2	1.5	2.1	2.2	2.4	1.7	1.7	..
Dominican Republic	20.4	29.3	37.1	66.8	79.5	107.9	137.9	147.1	..
Ecuador	37.8	57.9	74.8	91.4	115.8	136.8	170.0	167.3	..
El Salvador	22.4	24.2	23.3	36.6	41.1	44.1	48.5	49.7	..
Guatemala	29.6	42.4	46.3	69.3	80.4	96.2	116.1	119.7	..
Haiti	10.6	14.6	14.1	14.6	14.2	14.7	17.3	17.6	..
Honduras	8.5	12.1	15.4	21.3	26.7	31.9	37.9	39.2	..
Jamaica	16.4	13.3	17.3	20.6	22.6	22.1	22.8	23.1	..
Nicaragua	15.2	14.0	12.2	17.0	19.9	22.6	29.6	31.0	..
Panama	11.9	16.5	18.9	31.4	38.8	55.0	80.4	84.3	..
Paraguay	8.6	16.7	24.9	31.6	34.8	44.4	56.2	58.5	..
Peru	100.8	125.7	113.6	166.6	205.5	286.5	361.8	375.8	..
Suriname	..	..	..	4.5	5.9	7.3	8.0	7.6	..
Trinidad and Tobago	13.6	18.7	14.7	22.8	33.6	40.7	41.7	40.7	..
Uruguay	22.0	30.1	30.0	41.9	42.3	56.5	66.7	67.6	..
Venezuela	218.8	259.3	281.2	345.8	392.3	470.6	472.9	387.8	..
Other Non-OECD Americas	18.4	23.5	30.6	34.9	38.8	40.5	44.0	44.6	..
<b>Non-OECD Americas</b>	<b>1 930.3</b>	<b>2 699.7</b>	<b>3 056.9</b>	<b>4 036.3</b>	<b>4 676.4</b>	<b>5 840.0</b>	<b>6 467.5</b>	<b>6 320.6</b>	..
Bahrain	4.8	14.6	17.1	29.3	37.6	49.3	59.0	60.8	..
Islamic Republic of Iran	634.7	462.7	606.8	832.4	1 077.5	1 310.9	1 283.0	1 454.9	..
Iraq	45.9	126.4	197.2	281.1	288.3	383.3	528.3	586.4	..
Jordan	8.7	18.0	21.9	36.2	49.3	66.7	76.2	77.7	..
Kuwait	115.8	102.0	77.8	140.5	208.5	220.9	264.1	273.4	..
Lebanon	37.3	26.4	20.8	39.7	47.9	69.9	76.6	78.1	..
Oman	14.6	26.3	62.2	97.7	102.0	135.1	165.2	170.2	..
Qatar	44.9	39.7	33.0	62.9	93.0	218.2	291.2	297.6	..
Saudi Arabia	549.1	821.9	679.2	876.3	1 066.6	1 220.5	1 568.3	1 595.6	..
Syrian Arab Republic	20.4	41.8	53.4	85.3	104.1	132.3	37.5	33.9	..
United Arab Emirates	75.2	190.7	202.4	319.1	414.3	466.6	591.7	609.7	..
Yemen	11.3	23.3	39.3	68.2	83.8	103.6	69.6	62.8	..
<b>Middle East</b>	<b>1 562.7</b>	<b>1 893.9</b>	<b>2 011.1</b>	<b>2 868.6</b>	<b>3 573.0</b>	<b>4 377.3</b>	<b>5 010.7</b>	<b>5 301.2</b>	..

## Population (millions)

<i>millions</i>	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>3 911.9</b>	<b>4 434.8</b>	<b>5 280.1</b>	<b>6 111.0</b>	<b>6 509.0</b>	<b>6 921.3</b>	<b>7 343.3</b>	<b>7 429.3</b>	<b>..</b>
<b>Non-OECD Total</b>	<b>2 992.1</b>	<b>3 449.9</b>	<b>4 207.1</b>	<b>4 954.5</b>	<b>5 311.8</b>	<b>5 680.9</b>	<b>6 066.4</b>	<b>6 144.8</b>	<b>..</b>
<b>OECD Total</b>	<b>919.7</b>	<b>984.9</b>	<b>1 072.9</b>	<b>1 156.5</b>	<b>1 197.2</b>	<b>1 240.4</b>	<b>1 276.9</b>	<b>1 284.5</b>	<b>1 291.7</b>
Canada	22.5	24.5	27.7	30.7	32.2	34.0	35.8	36.3	36.7
Chile	10.1	11.2	13.2	15.4	16.3	17.1	18.0	18.3	18.5
Mexico	57.1	70.4	87.1	100.9	107.2	114.3	121.0	122.3	123.5
United States	211.9	227.7	250.2	282.4	296.0	309.8	321.2	323.4	325.7
<b>OECD Americas</b>	<b>301.6</b>	<b>333.8</b>	<b>378.1</b>	<b>429.4</b>	<b>451.7</b>	<b>475.2</b>	<b>496.1</b>	<b>500.2</b>	<b>504.5</b>
Australia	13.6	14.8	17.3	19.3	20.5	22.3	24.1	24.5	24.9
Israel <sup>1</sup>	3.3	3.9	4.7	6.3	7.0	7.6	8.4	8.5	8.7
Japan	108.9	117.1	123.6	126.8	127.8	128.0	127.1	127.0	126.7
Korea	34.1	38.1	42.9	47.0	48.2	49.6	51.0	51.2	51.4
New Zealand	3.0	3.1	3.4	3.9	4.1	4.4	4.6	4.7	4.8
<b>OECD Asia Oceania</b>	<b>162.9</b>	<b>177.0</b>	<b>191.8</b>	<b>203.3</b>	<b>207.5</b>	<b>211.9</b>	<b>215.3</b>	<b>216.0</b>	<b>216.6</b>
Austria	7.6	7.5	7.7	8.0	8.2	8.4	8.6	8.7	8.8
Belgium	9.7	9.9	10.0	10.3	10.5	10.9	11.2	11.3	11.3
Czech Republic	9.9	10.3	10.4	10.3	10.2	10.5	10.5	10.6	10.6
Denmark	5.0	5.1	5.1	5.3	5.4	5.5	5.7	5.7	5.8
Estonia	..	..	1.6	1.4	1.4	1.3	1.3	1.3	1.3
Finland	4.7	4.8	5.0	5.2	5.2	5.4	5.5	5.5	5.5
France	53.3	55.2	58.2	60.9	63.1	65.0	66.6	66.9	67.1
Germany	79.0	78.3	79.4	81.5	81.3	80.3	81.7	82.3	82.7
Greece	9.0	9.7	10.3	10.8	11.0	11.1	10.8	10.8	10.7
Hungary	10.4	10.7	10.4	10.2	10.1	10.0	9.8	9.8	9.8
Iceland	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Ireland	3.1	3.4	3.5	3.8	4.2	4.6	4.6	4.7	4.8
Italy	54.8	56.4	56.7	56.9	58.2	59.8	60.7	60.6	60.5
Latvia	..	..	2.7	2.4	2.2	2.1	2.0	2.0	1.9
Luxembourg	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.6
Netherlands	13.4	14.1	14.9	15.9	16.3	16.6	16.9	17.0	17.1
Norway	4.0	4.1	4.2	4.5	4.6	4.9	5.2	5.2	5.3
Poland	33.4	35.6	38.0	38.3	38.2	38.5	38.5	38.4	38.4
Portugal	8.7	9.9	10.0	10.3	10.5	10.6	10.4	10.3	10.3
Slovak Republic	4.6	5.0	5.3	5.4	5.4	5.4	5.4	5.4	5.4
Slovenia	..	..	2.0	2.0	2.0	2.0	2.1	2.1	2.1
Spain	35.3	38.0	39.3	40.6	43.7	46.6	46.4	46.5	46.5
Sweden	8.1	8.3	8.6	8.9	9.0	9.4	9.8	9.9	10.1
Switzerland	6.4	6.4	6.8	7.2	7.5	7.9	8.3	8.4	8.5
Turkey	38.1	44.4	55.1	64.3	68.6	73.0	77.4	78.2	79.0
United Kingdom	56.2	56.3	57.2	58.9	60.4	62.8	65.1	65.6	66.1
<b>OECD Europe</b>	<b>455.3</b>	<b>474.1</b>	<b>503.0</b>	<b>523.8</b>	<b>538.0</b>	<b>553.3</b>	<b>565.5</b>	<b>568.3</b>	<b>570.7</b>
IEA	906.2	969.6	1 050.2	1 130.1	1 169.4	1 211.2	1 246.1	1 253.3	1 260.1
IEA/Accession/Association	2 677.5	2 997.3	3 484.0	3 943.9	4 147.4	4 341.0	4 517.5	4 552.9	..
European Union - 28	..	..	477.9	487.1	494.9	503.7	509.7	511.3	..
G7	586.6	615.5	653.0	698.1	719.1	739.7	758.2	762.1	765.5
G8	..	..	801.3	844.7	862.6	882.5	902.3	906.4	..
G20	..	..	3 657.7	4 117.0	4 317.7	4 512.2	4 693.2	4 729.5	..
<i>OPEC</i>	155.5	193.7	263.3	329.9	368.6	415.6	467.0	477.3	..

1. Please refer to section 'Geographical coverage'.

## Population (millions)

millions	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>2 992.1</b>	<b>3 449.9</b>	<b>4 207.1</b>	<b>4 954.5</b>	<b>5 311.8</b>	<b>5 680.9</b>	<b>6 066.4</b>	<b>6 144.8</b>	<b>..</b>
Albania	2.3	2.7	3.3	3.1	3.0	2.9	2.9	2.9	..
Armenia	..	..	3.5	3.1	3.0	2.9	2.9	2.9	..
Azerbaijan	..	..	7.2	8.0	8.4	9.1	9.6	9.8	..
Belarus	..	..	10.2	10.0	9.7	9.5	9.5	9.5	..
Bosnia and Herzegovina	..	..	4.5	3.8	3.8	3.7	3.5	3.5	..
Bulgaria	8.6	8.9	8.7	8.2	7.7	7.4	7.2	7.1	..
Croatia	..	..	4.8	4.4	4.4	4.4	4.2	4.2	..
Cyprus <sup>1</sup>	0.6	0.5	0.6	0.7	0.7	0.8	0.8	0.8	..
FYR of Macedonia	..	..	2.0	2.0	2.1	2.1	2.1	2.1	..
Georgia	..	..	4.8	4.4	4.2	3.9	3.7	3.7	..
Gibraltar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	..
Kazakhstan	..	..	16.3	14.9	15.1	16.3	17.5	17.8	..
Kosovo	..	..	..	1.7	1.7	1.8	1.8	1.8	..
Kyrgyzstan	..	..	4.4	4.9	5.2	5.4	6.0	6.1	..
Lithuania	..	..	3.7	3.5	3.3	3.1	2.9	2.9	..
Malta	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	..
Republic of Moldova	..	..	3.7	3.6	3.6	3.6	3.6	3.6	..
Montenegro	..	..	..	..	0.6	0.6	0.6	0.6	..
Romania	20.8	22.2	23.2	22.4	21.3	20.2	19.8	19.7	..
Russian Federation	..	..	148.3	146.6	143.5	142.8	144.1	144.3	..
Serbia	..	..	10.1	8.1	7.4	7.3	7.1	7.1	..
Tajikistan	..	..	5.3	6.2	6.9	7.6	8.5	8.7	..
Turkmenistan	..	..	3.7	4.5	4.8	5.1	5.6	5.7	..
Ukraine	..	..	51.9	49.2	47.1	45.9	45.2	45.0	..
Uzbekistan	..	..	20.5	24.7	26.2	28.6	31.3	31.8	..
Former Soviet Union	248.0	264.0	x	x	x	x	x	x	x
Former Yugoslavia	20.4	21.8	x	x	x	x	x	x	x
<b>Non-OECD Europe and Eurasia</b>	<b>301.1</b>	<b>320.4</b>	<b>340.9</b>	<b>338.5</b>	<b>334.1</b>	<b>335.5</b>	<b>340.9</b>	<b>342.1</b>	<b>..</b>
Algeria	15.8	19.3	25.9	31.2	33.3	36.1	39.9	40.6	..
Angola	7.3	8.9	12.2	16.4	19.6	23.4	27.9	28.8	..
Benin	3.1	3.7	5.0	6.9	8.0	9.2	10.6	10.9	..
Botswana	..	..	1.4	1.7	1.9	2.0	2.2	2.3	..
Cameroon	7.1	8.6	11.7	15.3	17.4	20.0	22.8	23.4	..
Congo	1.5	1.8	2.4	3.2	3.7	4.4	5.0	5.1	..
Côte d'Ivoire	6.0	8.3	12.3	16.7	18.3	20.4	23.1	23.7	..
Dem. Rep. of the Congo	21.7	26.4	34.6	47.1	54.8	64.5	76.2	78.7	..
Egypt	37.5	44.1	57.4	69.9	76.8	84.1	93.8	95.7	..
Eritrea	..	..	..	3.4	4.0	4.4	5.3	5.5	..
Ethiopia	31.0	35.3	48.1	66.5	76.7	87.7	99.9	102.4	..
Gabon	0.6	0.7	1.0	1.2	1.4	1.6	1.9	2.0	..
Ghana	9.4	10.8	14.6	18.9	21.5	24.5	27.6	28.2	..
Kenya	12.5	16.3	23.4	31.5	36.0	41.4	47.2	48.5	..
Libya	2.4	3.2	4.4	5.4	5.8	6.2	6.2	6.3	..
Mauritius	0.9	1.0	1.1	1.2	1.2	1.3	1.3	1.3	..
Morocco	17.0	20.0	24.9	28.9	30.5	32.4	34.8	35.3	..
Mozambique	9.8	11.8	13.2	18.1	20.9	24.2	28.0	28.8	..
Namibia	..	..	..	1.9	2.0	2.2	2.4	2.5	..
Niger	..	..	..	11.4	13.6	16.4	19.9	20.7	..
Nigeria	60.1	73.5	95.3	122.4	138.9	158.6	181.2	186.0	..
Senegal	4.7	5.6	7.6	9.9	11.3	12.9	15.0	15.4	..
South Africa	24.4	29.1	36.8	44.9	47.6	51.0	55.0	55.9	..
South Sudan	..	..	..	..	..	..	11.9	12.2	..
Sudan	15.3	19.2	25.9	34.0	39.0	44.5	38.6	39.6	..
United Rep. of Tanzania	15.0	18.7	25.5	34.2	39.4	46.1	53.9	55.6	..
Togo	2.3	2.7	3.8	5.0	5.7	6.5	7.4	7.6	..
Tunisia	5.4	6.4	8.2	9.7	10.1	10.6	11.3	11.4	..
Zambia	4.6	5.9	8.0	10.5	12.1	13.9	16.1	16.6	..
Zimbabwe	5.7	7.2	10.2	12.2	12.9	14.1	15.8	16.2	..
Other Africa	72.5	88.2	115.6	136.9	158.4	183.7	211.6	217.7	..
<b>Africa</b>	<b>393.7</b>	<b>476.7</b>	<b>630.4</b>	<b>816.3</b>	<b>922.9</b>	<b>1 048.1</b>	<b>1 193.7</b>	<b>1 224.6</b>	<b>..</b>

1. Please refer to section 'Geographical coverage'.

## Population (millions)

<i>millions</i>	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	68.7	81.5	106.2	131.6	143.4	152.1	161.2	163.0	..
Brunei Darussalam	0.1	0.2	0.3	0.3	0.4	0.4	0.4	0.4	..
Cambodia	..	..	..	12.2	13.3	14.3	15.5	15.8	..
DPR of Korea	15.6	17.5	20.3	22.9	23.9	24.6	25.2	25.4	..
India	593.1	696.8	870.1	1 053.1	1 144.1	1 231.0	1 309.1	1 324.2	..
Indonesia	124.2	147.5	181.4	211.5	226.7	242.5	258.2	261.1	..
Malaysia	11.6	13.8	18.0	23.2	25.7	28.1	30.7	31.2	..
Mongolia	..	..	2.2	2.4	2.5	2.7	3.0	3.0	..
Myanmar	28.3	33.4	40.6	46.1	48.5	50.2	52.4	52.9	..
Nepal	12.8	14.9	18.7	23.7	25.6	27.0	28.7	29.0	..
Pakistan	63.1	78.1	107.7	138.5	153.9	170.6	189.4	193.2	..
Philippines	39.0	47.4	61.9	78.0	86.3	93.7	101.7	103.3	..
Singapore	2.2	2.4	3.0	4.0	4.3	5.1	5.5	5.6	..
Sri Lanka	13.1	14.7	17.1	18.7	19.4	20.1	21.0	21.2	..
Chinese Taipei	15.5	17.8	20.2	21.9	22.7	23.2	23.4	23.5	..
Thailand	40.2	47.4	56.6	63.0	65.4	67.2	68.7	68.9	..
Viet Nam	45.8	53.7	66.0	77.6	82.4	86.9	91.7	92.7	..
Other Non-OECD Asia	29.2	31.2	33.5	35.4	42.0	47.5	54.1	55.4	..
<b>Non-OECD Asia excl. China</b>	<b>1 102.5</b>	<b>1 298.2</b>	<b>1 624.0</b>	<b>1 964.1</b>	<b>2 130.5</b>	<b>2 287.2</b>	<b>2 439.8</b>	<b>2 469.6</b>	..
People's Rep. of China	881.9	981.2	1 135.2	1 262.6	1 303.7	1 337.7	1 371.2	1 378.7	..
Hong Kong, China	4.2	5.1	5.7	6.7	6.8	7.0	7.3	7.3	..
<b>China</b>	<b>886.2</b>	<b>986.3</b>	<b>1 140.9</b>	<b>1 269.3</b>	<b>1 310.5</b>	<b>1 344.7</b>	<b>1 378.5</b>	<b>1 386.0</b>	..
Argentina	25.2	28.1	32.7	37.1	39.1	41.2	43.4	43.8	..
Bolivia	4.8	5.6	6.9	8.3	9.1	9.9	10.7	10.9	..
Brazil	102.6	121.2	149.4	175.3	186.9	196.8	206.0	207.7	..
Colombia	23.7	27.7	34.3	40.4	43.3	45.9	48.2	48.7	..
Costa Rica	2.0	2.4	3.1	3.9	4.2	4.5	4.8	4.9	..
Cuba	9.2	9.8	10.6	11.2	11.3	11.3	11.5	11.5	..
Curaçao	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	..
Dominican Republic	4.9	5.8	7.2	8.6	9.2	9.9	10.5	10.6	..
Ecuador	6.6	8.0	10.2	12.6	13.7	14.9	16.1	16.4	..
El Salvador	4.0	4.6	5.3	5.9	6.0	6.2	6.3	6.3	..
Guatemala	6.1	7.3	9.3	11.7	13.1	14.6	16.3	16.6	..
Haiti	5.0	5.7	7.1	8.5	9.3	10.0	10.7	10.8	..
Honduras	3.0	3.7	5.0	6.5	7.4	8.2	9.0	9.1	..
Jamaica	2.0	2.2	2.4	2.7	2.7	2.8	2.9	2.9	..
Nicaragua	2.6	3.3	4.1	5.0	5.4	5.7	6.1	6.2	..
Panama	1.7	2.0	2.5	3.0	3.3	3.6	4.0	4.0	..
Paraguay	2.7	3.2	4.2	5.3	5.8	6.2	6.6	6.7	..
Peru	14.4	17.4	21.8	25.9	27.6	29.4	31.4	31.8	..
Suriname	..	..	..	0.5	0.5	0.5	0.6	0.6	..
Trinidad and Tobago	1.0	1.1	1.2	1.3	1.3	1.3	1.4	1.4	..
Uruguay	2.8	2.9	3.1	3.3	3.3	3.4	3.4	3.4	..
Venezuela	12.6	15.3	19.9	24.5	26.8	29.0	31.2	31.6	..
Other Non-OECD Americas	2.7	2.8	3.0	3.0	3.1	3.3	3.5	3.5	..
<b>Non-OECD Americas</b>	<b>239.6</b>	<b>280.1</b>	<b>343.4</b>	<b>404.6</b>	<b>432.8</b>	<b>459.1</b>	<b>484.6</b>	<b>489.5</b>	..
Bahrain	0.2	0.4	0.5	0.7	0.9	1.2	1.4	1.4	..
Islamic Republic of Iran	30.9	38.7	56.2	66.1	70.4	74.6	79.4	80.3	..
Iraq	11.0	13.7	17.5	23.6	27.0	30.8	36.1	37.2	..
Jordan	1.9	2.4	3.6	5.1	5.7	7.2	9.2	9.5	..
Kuwait	0.9	1.4	2.1	2.1	2.3	3.0	3.9	4.1	..
Lebanon	2.5	2.6	2.7	3.2	4.0	4.3	5.9	6.0	..
Oman	0.8	1.2	1.8	2.3	2.5	3.0	4.2	4.4	..
Qatar	0.1	0.2	0.5	0.6	0.9	1.8	2.5	2.6	..
Saudi Arabia	6.7	9.7	16.3	20.8	23.9	27.4	31.6	32.3	..
Syrian Arab Republic	7.0	8.9	12.4	16.4	18.3	21.0	18.7	18.4	..
United Arab Emirates	0.4	1.0	1.9	3.2	4.6	8.3	9.2	9.3	..
Yemen	6.5	8.1	12.1	17.9	20.6	23.6	26.9	27.6	..
<b>Middle East</b>	<b>69.1</b>	<b>88.2</b>	<b>127.5</b>	<b>161.8</b>	<b>181.0</b>	<b>206.2</b>	<b>228.8</b>	<b>233.0</b>	..

## Energy production/TPES (self-sufficiency)

	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>1.019</b>	<b>1.013</b>	<b>1.004</b>	<b>0.999</b>	<b>1.006</b>	<b>0.995</b>	<b>1.010</b>	<b>1.000</b>	<b>..</b>
<b>Non-OECD Total</b>	<b>1.726</b>	<b>1.482</b>	<b>1.328</b>	<b>1.388</b>	<b>1.366</b>	<b>1.257</b>	<b>1.203</b>	<b>1.199</b>	<b>..</b>
<b>OECD Total</b>	<b>0.657</b>	<b>0.716</b>	<b>0.760</b>	<b>0.724</b>	<b>0.696</b>	<b>0.718</b>	<b>0.790</b>	<b>0.770</b>	<b>0.784</b>
Canada	1.244	1.079	1.308	1.478	1.471	1.526	1.681	1.698	1.729
Chile	0.598	0.612	0.566	0.341	0.329	0.299	0.340	0.332	0.325
Mexico	0.899	1.546	1.581	1.520	1.459	1.246	1.025	0.975	0.899
United States	0.842	0.861	0.863	0.733	0.703	0.778	0.925	0.884	0.926
<b>OECD Americas</b>	<b>0.875</b>	<b>0.911</b>	<b>0.942</b>	<b>0.843</b>	<b>0.823</b>	<b>0.877</b>	<b>1.003</b>	<b>0.968</b>	<b>1.004</b>
Australia	1.192	1.227	1.829	2.160	2.337	2.540	3.046	3.010	3.060
Israel <sup>1</sup>	0.792	0.020	0.037	0.035	0.113	0.166	0.325	0.361	0.366
Japan	0.092	0.126	0.170	0.202	0.195	0.200	0.074	0.083	0.094
Korea	0.313	0.225	0.243	0.183	0.204	0.180	0.188	0.182	0.169
New Zealand	0.496	0.609	0.898	0.836	0.760	0.919	0.802	0.783	0.752
<b>OECD Asia Oceania</b>	<b>0.276</b>	<b>0.304</b>	<b>0.416</b>	<b>0.456</b>	<b>0.483</b>	<b>0.533</b>	<b>0.560</b>	<b>0.569</b>	<b>0.578</b>
Austria	0.369	0.330	0.327	0.342	0.291	0.346	0.365	0.371	0.366
Belgium	0.142	0.173	0.273	0.236	0.239	0.259	0.201	0.271	0.274
Czech Republic	0.853	0.878	0.827	0.748	0.734	0.710	0.688	0.659	0.650
Denmark	0.022	0.050	0.581	1.488	1.658	1.198	0.988	0.909	0.930
Estonia	..	..	0.545	0.675	0.742	0.877	1.023	0.847	1.039
Finland	0.232	0.281	0.426	0.461	0.486	0.478	0.544	0.524	0.531
France	0.245	0.274	0.500	0.519	0.503	0.517	0.557	0.539	0.529
Germany	0.513	0.520	0.530	0.402	0.406	0.395	0.389	0.374	0.369
Greece	0.198	0.247	0.429	0.369	0.341	0.342	0.365	0.296	0.311
Hungary	0.597	0.511	0.510	0.465	0.387	0.448	0.448	0.448	0.422
Iceland	0.484	0.604	0.714	0.774	0.763	0.885	0.881	0.869	0.882
Ireland	0.162	0.230	0.350	0.156	0.113	0.129	0.145	0.302	0.354
Italy	0.171	0.152	0.173	0.164	0.162	0.190	0.237	0.224	0.221
Latvia	..	..	0.147	0.368	0.411	0.439	0.548	0.576	0.546
Luxembourg	0.001	0.008	0.009	0.019	0.024	0.028	0.040	0.043	0.047
Netherlands	0.916	1.116	0.901	0.775	0.767	0.844	0.652	0.619	0.555
Norway	0.564	3.002	5.672	8.715	8.365	6.904	7.166	7.637	7.922
Poland	1.156	1.000	1.007	0.892	0.850	0.667	0.715	0.671	0.616
Portugal	0.203	0.148	0.202	0.156	0.137	0.247	0.241	0.271	0.223
Slovak Republic	0.166	0.175	0.248	0.356	0.351	0.348	0.402	0.391	0.393
Slovenia	..	..	0.537	0.483	0.481	0.517	0.518	0.528	0.530
Spain	0.220	0.233	0.384	0.259	0.212	0.270	0.282	0.285	0.267
Sweden	0.238	0.398	0.629	0.642	0.670	0.647	0.746	0.709	0.736
Switzerland	0.226	0.351	0.423	0.481	0.424	0.482	0.498	0.485	0.475
Turkey	0.637	0.545	0.483	0.346	0.282	0.299	0.246	0.264	0.255
United Kingdom	0.498	0.997	1.010	1.222	0.921	0.729	0.651	0.671	0.682
<b>OECD Europe</b>	<b>0.463</b>	<b>0.573</b>	<b>0.643</b>	<b>0.670</b>	<b>0.606</b>	<b>0.576</b>	<b>0.573</b>	<b>0.567</b>	<b>0.558</b>
IEA	0.657	0.718	0.764	0.729	0.700	0.723	0.796	0.776	0.790
IEA/Accession/Association	0.713	0.773	0.819	0.787	0.774	0.790	0.818	0.796	..
European Union - 28	..	..	0.578	0.561	0.507	0.487	0.485	0.475	..
G7	0.663	0.702	0.726	0.674	0.640	0.677	0.776	0.753	0.780
G8	..	..	0.876	0.794	0.804	0.853	0.950	0.936	..
G20	..	..	0.936	0.886	0.895	0.894	0.926	0.910	..
<b>OPEC</b>	<b>14.257</b>	<b>6.826</b>	<b>4.101</b>	<b>3.759</b>	<b>3.479</b>	<b>2.788</b>	<b>2.611</b>	<b>2.732</b>	<b>..</b>

1. Please refer to section 'Geographical coverage'.

## Energy production/TPES (self-sufficiency)

	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>1.726</b>	<b>1.482</b>	<b>1.328</b>	<b>1.388</b>	<b>1.366</b>	<b>1.257</b>	<b>1.203</b>	<b>1.199</b>	<b>..</b>
Albania	1.725	1.123	0.920	0.550	0.522	0.763	0.947	0.870	..
Armenia	..	..	0.019	0.319	0.346	0.353	0.361	0.318	..
Azerbaijan	..	..	0.917	1.665	2.030	5.654	4.061	4.027	..
Belarus	..	..	0.074	0.143	0.142	0.146	0.142	0.146	..
Bosnia and Herzegovina	..	..	0.656	0.708	0.723	0.674	0.707	0.702	..
Bulgaria	0.267	0.273	0.341	0.532	0.535	0.592	0.649	0.623	..
Croatia	..	..	0.604	0.508	0.488	0.549	0.524	0.522	..
Cyprus <sup>1</sup>	0.012	0.007	0.004	0.021	0.023	0.036	0.060	0.060	..
FYR of Macedonia	..	..	0.507	0.575	0.551	0.560	0.478	0.418	..
Georgia	..	..	0.162	0.462	0.345	0.420	0.285	0.287	..
Gibraltar	-	-	-	-	-	-	-	-	..
Kazakhstan	..	..	1.239	2.202	2.332	2.269	2.101	1.993	..
Kosovo	..	..	..	0.710	0.718	0.746	0.717	0.748	..
Kyrgyzstan	..	..	0.334	0.590	0.514	0.461	0.451	0.474	..
Lithuania	..	..	0.307	0.475	0.457	0.216	0.257	0.255	..
Malta	-	-	-	-	0.001	0.006	0.023	0.030	..
Republic of Moldova	..	..	0.009	0.032	0.031	0.144	0.183	0.190	..
Montenegro	..	..	..	..	0.580	0.732	0.709	0.681	..
Romania	0.967	0.806	0.656	0.782	0.723	0.784	0.831	0.784	..
Russian Federation	..	..	1.471	1.579	1.846	1.857	1.879	1.876	..
Serbia	..	..	0.698	0.865	0.640	0.676	0.729	0.700	..
Tajikistan	..	..	0.382	0.588	0.661	0.709	0.707	0.714	..
Turkmenistan	..	..	4.168	3.089	3.213	2.083	2.940	2.792	..
Ukraine	..	..	0.539	0.571	0.561	0.596	0.694	0.703	..
Uzbekistan	..	..	0.833	1.083	1.201	1.276	1.437	1.356	..
Former Soviet Union	1.168	1.225	x	x	x	x	x	x	..
Former Yugoslavia	0.632	0.558	x	x	x	x	x	x	..
<b>Non-OECD Europe and Eurasia</b>	<b>1.125</b>	<b>1.161</b>	<b>1.141</b>	<b>1.325</b>	<b>1.510</b>	<b>1.579</b>	<b>1.663</b>	<b>1.648</b>	<b>..</b>
Algeria	11.713	5.866	4.512	5.268	5.140	3.755	2.630	2.852	..
Angola	2.827	2.476	4.870	6.041	8.487	7.669	5.879	5.947	..
Benin	0.882	0.896	1.068	0.729	0.669	0.567	0.569	0.560	..
Botswana	..	..	0.713	0.600	0.542	0.490	0.635	0.618	..
Cameroon	0.906	1.835	2.203	1.766	1.483	1.206	1.292	1.289	..
Congo	4.580	6.161	11.108	20.384	12.545	10.448	5.521	5.562	..
Côte d'Ivoire	0.653	0.677	0.778	0.886	1.105	1.099	0.969	1.073	..
Dem. Rep. of the Congo	0.886	1.014	1.019	1.072	1.060	1.030	1.007	1.013	..
Egypt	1.228	2.218	1.701	1.324	1.267	1.158	0.877	0.785	..
Eritrea	..	..	..	0.717	0.656	0.784	0.780	0.780	..
Ethiopia	0.968	0.970	0.964	0.966	0.959	0.955	0.934	0.932	..
Gabon	5.983	6.938	12.207	9.950	5.341	3.351	3.075	3.005	..
Ghana	0.780	0.821	0.830	0.704	0.625	0.529	1.079	0.993	..
Kenya	0.784	0.791	0.818	0.816	0.847	0.808	0.814	0.799	..
Libya	43.320	13.696	6.552	4.800	5.477	5.073	2.175	1.931	..
Mauritius	0.719	0.571	0.445	0.266	0.224	0.184	0.172	0.150	..
Morocco	0.350	0.262	0.190	0.123	0.155	0.112	0.093	0.091	..
Mozambique	0.902	0.906	0.947	1.012	1.187	1.225	1.473	1.445	..
Namibia	..	..	..	0.360	0.309	0.258	0.254	0.236	..
Niger	..	..	..	0.875	0.873	0.803	1.020	1.062	..
Nigeria	3.814	2.965	2.202	2.273	2.219	1.991	1.753	1.599	..
Senegal	0.636	0.567	0.571	0.497	0.454	0.527	0.390	0.372	..
South Africa	0.821	1.075	1.277	1.312	1.279	1.170	1.192	1.160	..
South Sudan	..	..	..	..	..	..	9.090	7.972	..
Sudan	0.803	0.847	0.826	1.502	1.803	2.094	0.952	0.943	..
United Rep. of Tanzania	0.898	0.910	0.931	0.943	0.920	0.925	0.881	0.894	..
Togo	0.861	0.846	0.835	0.836	0.844	0.760	0.794	0.795	..
Tunisia	2.407	2.042	1.158	0.908	0.804	0.810	0.588	0.550	..
Zambia	0.789	0.897	0.911	0.949	0.916	0.933	0.904	0.895	..
Zimbabwe	0.900	0.892	0.920	0.875	0.913	0.938	0.951	0.816	..
Other Africa	0.886	0.875	0.898	1.011	1.383	1.274	1.197	1.151	..
<b>Africa</b>	<b>2.259</b>	<b>1.986</b>	<b>1.760</b>	<b>1.776</b>	<b>1.827</b>	<b>1.674</b>	<b>1.406</b>	<b>1.354</b>	<b>..</b>

1. Please refer to section 'Geographical coverage'.

## Energy production/TPES (self-sufficiency)

	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	0.843	0.803	0.844	0.819	0.833	0.868	0.825	0.845	..
Brunei Darussalam	38.190	15.658	9.057	8.254	9.495	5.731	5.927	5.119	..
Cambodia	..	..	..	0.797	0.727	0.679	0.624	0.602	..
DPR of Korea	0.925	0.896	0.870	0.953	1.033	1.131	2.403	2.413	..
India	0.902	0.905	0.917	0.796	0.779	0.719	0.643	0.646	..
Indonesia	2.487	2.245	1.709	1.526	1.561	1.829	1.894	1.887	..
Malaysia	1.004	1.485	2.215	1.586	1.454	1.217	1.124	1.098	..
Mongolia	..	..	0.804	0.813	1.285	3.973	3.120	4.197	..
Myanmar	0.987	1.010	0.998	1.201	1.500	1.631	1.505	1.444	..
Nepal	0.970	0.965	0.950	0.880	0.893	0.869	0.839	0.779	..
Pakistan	0.849	0.845	0.797	0.738	0.804	0.770	0.738	0.728	..
Philippines	0.468	0.543	0.600	0.489	0.551	0.583	0.498	0.519	..
Singapore	-	-	0.006	0.011	0.018	0.023	0.023	0.024	..
Sri Lanka	0.689	0.708	0.760	0.570	0.547	0.569	0.470	0.434	..
Chinese Taipei	0.286	0.208	0.223	0.139	0.122	0.117	0.113	0.099	..
Thailand	0.523	0.508	0.634	0.608	0.557	0.599	0.558	0.569	..
Viet Nam	0.743	0.916	1.023	1.389	1.473	1.127	0.951	0.847	..
Other Non-OECD Asia	0.935	0.884	1.237	1.037	1.721	1.655	1.895	1.764	..
<b>Non-OECD Asia excl. China</b>	<b>1.040</b>	<b>1.034</b>	<b>0.992</b>	<b>0.889</b>	<b>0.898</b>	<b>0.886</b>	<b>0.840</b>	<b>0.837</b>	..
People's Rep. of China	1.011	1.029	1.008	0.994	0.938	0.881	0.840	0.798	..
Hong Kong, China	0.010	0.008	0.005	0.004	0.004	0.007	0.007	0.007	..
<b>China</b>	<b>1.004</b>	<b>1.021</b>	<b>0.998</b>	<b>0.983</b>	<b>0.932</b>	<b>0.877</b>	<b>0.836</b>	<b>0.794</b>	..
Argentina	0.858	0.928	1.051	1.346	1.265	1.011	0.862	0.878	..
Bolivia	3.827	1.786	1.886	1.367	2.679	2.501	2.744	2.480	..
Brazil	0.625	0.565	0.743	0.788	0.904	0.928	0.937	0.996	1.011
Colombia	1.232	1.000	1.989	2.802	2.902	3.395	3.335	3.110	..
Costa Rica	0.390	0.395	0.407	0.424	0.530	0.525	0.527	0.505	..
Cuba	0.357	0.330	0.434	0.551	0.532	0.464	0.519	0.517	..
Curaçao	-	-	-	0.000	0.003	0.003	0.010	0.011	..
Dominican Republic	0.421	0.386	0.235	0.129	0.143	0.130	0.119	0.127	..
Ecuador	5.039	2.344	2.591	2.543	2.949	2.231	2.009	2.154	..
El Salvador	0.673	0.759	0.686	0.534	0.552	0.545	0.477	0.462	..
Guatemala	0.693	0.681	0.767	0.749	0.692	0.757	0.671	0.680	..
Haiti	0.923	0.901	0.803	0.767	0.805	0.822	0.775	0.775	..
Honduras	0.718	0.703	0.712	0.511	0.452	0.484	0.483	0.496	..
Jamaica	0.086	0.098	0.122	0.077	0.077	0.115	0.121	0.115	..
Nicaragua	0.565	0.592	0.704	0.536	0.524	0.532	0.571	0.549	..
Panama	0.168	0.373	0.411	0.294	0.265	0.186	0.211	0.211	..
Paraguay	0.838	0.770	1.490	1.775	1.662	1.481	1.313	1.351	..
Peru	0.828	1.285	1.089	0.766	0.800	1.098	1.084	1.052	..
Suriname	..	..	..	1.212	1.135	1.327	1.548	1.510	..
Trinidad and Tobago	3.782	3.437	2.109	1.935	2.167	2.120	1.962	1.839	..
Uruguay	0.225	0.290	0.510	0.332	0.345	0.508	0.587	0.588	..
Venezuela	10.571	4.213	3.663	4.216	4.086	2.734	3.057	2.998	..
Other Non-OECD Americas	0.092	0.105	0.186	0.108	0.127	0.127	0.086	0.087	..
<b>Non-OECD Americas</b>	<b>1.658</b>	<b>1.155</b>	<b>1.275</b>	<b>1.432</b>	<b>1.479</b>	<b>1.335</b>	<b>1.304</b>	<b>1.307</b>	..
Bahrain	5.323	4.273	2.738	2.100	1.756	1.592	1.592	1.595	..
Islamic Republic of Iran	15.006	2.122	2.709	2.062	1.799	1.675	1.372	1.579	..
Iraq	22.107	13.934	5.505	5.196	3.702	3.328	3.820	4.202	..
Jordan	0.002	0.000	0.049	0.059	0.038	0.038	0.033	0.040	..
Kuwait	22.472	8.953	5.529	6.102	5.583	4.193	4.985	4.870	..
Lebanon	0.060	0.072	0.073	0.035	0.051	0.032	0.024	0.023	..
Oman	157.394	13.108	9.077	7.969	6.015	3.584	3.085	3.298	..
Qatar	20.611	7.993	4.242	5.445	5.359	6.452	5.095	5.400	..
Saudi Arabia	53.716	17.157	6.351	4.862	4.658	2.865	2.926	3.187	..
Syrian Arab Republic	2.706	2.128	2.133	2.117	1.270	1.277	0.444	0.425	..
United Arab Emirates	58.332	12.472	5.395	4.881	3.941	2.914	2.985	3.186	..
Yemen	0.052	0.047	3.733	4.641	3.104	2.455	1.137	0.534	..
<b>Middle East</b>	<b>21.738</b>	<b>8.778</b>	<b>4.450</b>	<b>3.746</b>	<b>3.236</b>	<b>2.609</b>	<b>2.585</b>	<b>2.784</b>	..



## TPES/GDP (toe per thousand 2010 USD)

<i>toe per thousand 2010 USD</i>	<b>1973</b>	<b>1980</b>	<b>1990</b>	<b>2000</b>	<b>2005</b>	<b>2010</b>	<b>2015</b>	<b>2016</b>	<b>2017p</b>
<b>World</b>	<b>0.268</b>	<b>0.254</b>	<b>0.231</b>	<b>0.201</b>	<b>0.198</b>	<b>0.195</b>	<b>0.181</b>	<b>0.178</b>	<b>..</b>
<b>Non-OECD Total</b>	<b>0.444</b>	<b>0.436</b>	<b>0.473</b>	<b>0.383</b>	<b>0.366</b>	<b>0.335</b>	<b>0.301</b>	<b>0.293</b>	<b>..</b>
<b>OECD Total</b>	<b>0.209</b>	<b>0.188</b>	<b>0.154</b>	<b>0.138</b>	<b>0.130</b>	<b>0.121</b>	<b>0.108</b>	<b>0.106</b>	<b>0.104</b>
Canada	0.258	0.246	0.208	0.189	0.179	0.163	0.156	0.153	0.155
Chile	0.210	0.182	0.186	0.174	0.156	0.141	0.134	0.141	0.140
Mexico	0.151	0.177	0.192	0.165	0.184	0.169	0.151	0.147	0.142
United States	0.315	0.276	0.211	0.179	0.161	0.148	0.131	0.128	0.123
<b>OECD Americas</b>	<b>0.300</b>	<b>0.266</b>	<b>0.210</b>	<b>0.179</b>	<b>0.164</b>	<b>0.151</b>	<b>0.135</b>	<b>0.132</b>	<b>0.128</b>
Australia	0.137	0.138	0.128	0.113	0.100	0.098	0.084	0.085	0.085
Israel <sup>1</sup>	0.149	0.119	0.120	0.107	0.098	0.099	0.082	0.079	0.078
Japan	0.134	0.114	0.093	0.097	0.092	0.088	0.072	0.070	0.070
Korea	0.271	0.292	0.256	0.265	0.235	0.228	0.215	0.216	0.219
New Zealand	0.118	0.128	0.155	0.153	0.124	0.125	0.121	0.119	0.117
<b>OECD Asia Oceania</b>	<b>0.138</b>	<b>0.124</b>	<b>0.108</b>	<b>0.116</b>	<b>0.110</b>	<b>0.108</b>	<b>0.095</b>	<b>0.094</b>	<b>0.094</b>
Austria	0.125	0.111	0.096	0.085	0.091	0.086	0.080	0.079	0.078
Belgium	0.204	0.173	0.145	0.141	0.129	0.124	0.105	0.110	0.106
Czech Republic	0.421	0.369	0.345	0.272	0.246	0.218	0.186	0.180	0.179
Denmark	0.113	0.103	0.076	0.063	0.059	0.061	0.047	0.048	0.048
Estonia	..	..	0.641	0.334	0.262	0.288	0.234	0.232	0.217
Finland	0.211	0.201	0.170	0.155	0.145	0.148	0.132	0.135	0.132
France	0.147	0.129	0.117	0.107	0.107	0.099	0.089	0.087	0.086
Germany	0.194	0.175	0.137	0.108	0.105	0.096	0.083	0.082	0.081
Greece	0.078	0.081	0.108	0.108	0.099	0.092	0.095	0.093	0.094
Hungary	0.293	0.305	0.276	0.233	0.212	0.203	0.175	0.174	0.174
Iceland	0.272	0.252	0.292	0.303	0.247	0.407	0.365	0.322	0.339
Ireland	0.163	0.141	0.119	0.084	0.068	0.065	0.042	0.042	0.038
Italy	0.111	0.095	0.084	0.083	0.086	0.082	0.074	0.073	0.073
Latvia	..	..	..	0.233	0.186	0.190	0.151	0.147	0.157
Luxembourg	0.325	0.239	0.140	0.082	0.093	0.079	0.061	0.058	0.058
Netherlands	0.175	0.151	0.127	0.103	0.104	0.101	0.085	0.084	0.082
Norway	0.098	0.093	0.082	0.071	0.066	0.069	0.061	0.058	0.056
Poland	0.471	0.555	0.455	0.272	0.243	0.210	0.171	0.173	0.173
Portugal	0.071	0.083	0.101	0.111	0.114	0.099	0.096	0.095	0.098
Slovak Republic	0.417	0.450	0.417	0.320	0.265	0.199	0.162	0.158	0.157
Slovenia	..	..	0.185	0.174	0.166	0.153	0.134	0.134	0.130
Spain	0.092	0.104	0.103	0.106	0.105	0.089	0.084	0.082	0.083
Sweden	0.170	0.157	0.147	0.120	0.114	0.104	0.084	0.088	0.082
Switzerland	0.056	0.058	0.056	0.051	0.049	0.045	0.039	0.037	0.037
Turkey	0.141	0.144	0.141	0.146	0.128	0.137	0.118	0.122	0.123
United Kingdom	0.190	0.161	0.125	0.106	0.093	0.083	0.067	0.065	0.063
<b>OECD Europe</b>	<b>0.165</b>	<b>0.151</b>	<b>0.128</b>	<b>0.110</b>	<b>0.106</b>	<b>0.099</b>	<b>0.086</b>	<b>0.085</b>	<b>0.085</b>
IEA	0.210	0.188	0.154	0.138	0.130	0.121	0.108	0.106	0.104
IEA/Accession/Association	0.234	0.216	0.185	0.167	0.167	0.166	0.153	0.149	..
European Union - 28	..	..	0.139	0.115	0.111	0.102	0.089	0.087	..
G7	0.224	0.195	0.154	0.139	0.129	0.120	0.106	0.104	0.101
G8	..	..	0.182	0.155	0.144	0.135	0.120	0.119	..
G20	..	..	0.209	0.182	0.179	0.178	0.164	0.160	..
<i>OPEC</i>	0.107	0.159	0.251	0.286	0.283	0.296	0.296	0.297	..

1. Please refer to section 'Geographical coverage'.

## TPES/GDP (toe per thousand 2010 USD)

<i>toe per thousand 2010 USD</i>	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>0.444</b>	<b>0.436</b>	<b>0.473</b>	<b>0.383</b>	<b>0.366</b>	<b>0.335</b>	<b>0.301</b>	<b>0.293</b>	..
Albania	0.441	0.564	0.433	0.257	0.234	0.178	0.167	0.166	..
Armenia	..	..	1.212	0.467	0.328	0.268	0.268	0.264	..
Azerbaijan	..	..	1.015	0.859	0.543	0.219	0.243	0.249	..
Belarus	..	..	1.441	0.881	0.668	0.481	0.415	0.424	..
Bosnia and Herzegovina	..	..	2.066	0.384	0.338	0.378	0.338	0.362	..
Bulgaria	1.132	0.994	0.778	0.568	0.458	0.353	0.341	0.322	..
Croatia	..	..	0.197	0.179	0.167	0.157	0.144	0.141	..
Cyprus <sup>1</sup>	0.204	0.129	0.111	0.113	0.098	0.096	0.086	0.089	..
FYR of Macedonia	..	..	0.322	0.380	0.369	0.305	0.249	0.245	..
Georgia	..	..	0.734	0.452	0.314	0.268	0.314	0.316	..
Gibraltar	0.056	0.060	0.081	0.140	0.146	0.165	0.183	0.185	..
Kazakhstan	..	..	0.763	0.534	0.465	0.467	0.419	0.434	..
Kosovo	..	..	..	0.473	0.410	0.428	0.368	0.381	..
Kyrgyzstan	..	..	1.556	0.723	0.667	0.574	0.654	0.611	..
Lithuania	..	..	0.595	0.294	0.253	0.190	0.158	0.159	..
Malta	0.200	0.110	0.163	0.095	0.107	0.096	0.058	0.052	..
Republic of Moldova	..	..	0.993	0.818	0.710	0.661	0.528	0.519	..
Montenegro	..	..	..	..	0.306	0.272	0.223	0.209	..
Romania	0.734	0.561	0.502	0.329	0.265	0.209	0.168	0.160	..
Russian Federation	..	..	0.622	0.651	0.509	0.452	0.435	0.450	..
Serbia	..	..	0.803	0.536	0.464	0.396	0.367	0.370	..
Tajikistan	..	..	0.786	0.836	0.571	0.386	0.348	0.341	..
Turkmenistan	..	..	1.281	1.384	1.391	1.005	0.742	0.697	..
Ukraine	..	..	1.225	1.497	1.091	0.974	0.766	0.761	..
Uzbekistan	..	..	2.267	2.538	1.805	1.099	0.672	0.602	..
Former Soviet Union	0.666	0.650	x	x	x	x	x	x	x
Former Yugoslavia	0.279	0.261	x	x	x	x	x	x	x
<b>Non-OECD Europe and Eurasia</b>	<b>0.650</b>	<b>0.621</b>	<b>0.714</b>	<b>0.669</b>	<b>0.525</b>	<b>0.453</b>	<b>0.412</b>	<b>0.419</b>	..
Algeria	0.105	0.160	0.241	0.245	0.228	0.249	0.286	0.273	..
Angola	0.154	0.183	0.184	0.208	0.180	0.156	0.165	0.157	..
Benin	0.643	0.613	0.548	0.416	0.433	0.531	0.487	0.489	..
Botswana	..	..	0.229	0.210	0.182	0.168	0.168	0.157	..
Cameroon	0.441	0.341	0.335	0.370	0.355	0.295	0.300	0.291	..
Congo	0.189	0.150	0.119	0.093	0.117	0.140	0.183	0.188	..
Côte d'Ivoire	0.225	0.216	0.245	0.305	0.431	0.408	0.381	0.338	..
Dem. Rep. of the Congo	0.304	0.400	0.510	1.070	1.063	0.967	0.968	0.971	..
Egypt	0.271	0.287	0.360	0.294	0.380	0.334	0.317	0.331	..
Eritrea	..	..	..	0.365	0.346	0.350	0.321	0.320	..
Ethiopia	1.812	2.028	2.300	2.423	2.064	1.424	1.028	0.984	..
Gabon	0.252	0.155	0.112	0.118	0.221	0.354	0.282	0.281	..
Ghana	0.339	0.413	0.439	0.345	0.251	0.236	0.203	0.195	..
Kenya	0.549	0.500	0.487	0.534	0.515	0.494	0.484	0.469	..
Libya	0.052	0.097	0.238	0.329	0.289	0.274	0.741	0.803	..
Mauritius	0.243	0.197	0.170	0.150	0.153	0.131	0.124	0.124	..
Morocco	0.192	0.199	0.176	0.192	0.203	0.183	0.173	0.170	..
Mozambique	2.387	2.978	2.585	1.548	1.196	0.985	0.912	0.887	..
Namibia	..	..	..	0.149	0.151	0.140	0.130	0.135	..
Niger	..	..	..	0.402	0.390	0.390	0.388	0.364	..
Nigeria	0.319	0.340	0.507	0.553	0.404	0.346	0.312	0.328	..
Senegal	0.314	0.315	0.264	0.277	0.257	0.306	0.274	0.256	..
South Africa	0.322	0.355	0.402	0.414	0.379	0.367	0.325	0.335	..
South Sudan	..	..	..	..	..	..	0.096	0.084	..
Sudan	0.689	0.540	0.536	0.391	0.323	0.255	0.253	0.243	..
United Rep. of Tanzania	1.155	0.961	0.796	0.815	0.739	0.660	0.595	0.566	..
Togo	0.545	0.478	0.612	0.824	0.876	0.982	0.842	0.826	..
Tunisia	0.230	0.253	0.270	0.251	0.236	0.233	0.226	0.226	..
Zambia	0.558	0.602	0.646	0.636	0.564	0.431	0.415	0.414	..
Zimbabwe	0.787	0.774	0.721	0.652	0.919	0.959	0.774	0.759	..
Other Africa	0.555	0.563	0.727	0.676	0.541	0.469	0.459	0.465	..
<b>Africa</b>	<b>0.340</b>	<b>0.347</b>	<b>0.423</b>	<b>0.427</b>	<b>0.393</b>	<b>0.359</b>	<b>0.346</b>	<b>0.349</b>	..

1. Please refer to section 'Geographical coverage'.

## TPES/GDP (toe per thousand 2010 USD)

<i>toe per thousand 2010 USD</i>	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	0.286	0.294	0.301	0.276	0.271	0.261	0.241	0.236	..
Brunei Darussalam	0.051	0.117	0.180	0.199	0.167	0.236	0.199	0.222	..
Cambodia	..	..	..	0.655	0.422	0.474	0.442	0.446	..
DPR of Korea	1.957	1.356	0.778	0.663	0.739	0.552	0.292	0.325	..
India	0.757	0.736	0.655	0.549	0.463	0.423	0.363	0.350	..
Indonesia	0.348	0.307	0.318	0.343	0.314	0.274	0.228	0.222	..
Malaysia	0.218	0.260	0.267	0.301	0.321	0.288	0.260	0.259	..
Mongolia	..	..	0.886	0.625	0.570	0.549	0.398	0.421	..
Myanmar	1.675	1.336	1.333	0.803	0.504	0.273	0.252	0.257	..
Nepal	1.112	1.082	0.865	0.744	0.709	0.638	0.596	0.649	..
Pakistan	0.616	0.570	0.537	0.540	0.506	0.476	0.433	0.419	..
Philippines	0.315	0.280	0.304	0.319	0.248	0.202	0.194	0.193	..
Singapore	0.197	0.160	0.171	0.139	0.126	0.108	0.092	0.093	..
Sri Lanka	0.431	0.332	0.268	0.243	0.216	0.172	0.150	0.147	..
Chinese Taipei	0.316	0.338	0.308	0.286	0.283	0.248	0.216	0.214	..
Thailand	0.378	0.331	0.296	0.332	0.349	0.346	0.342	0.341	..
Viet Nam	0.963	0.851	0.607	0.470	0.483	0.508	0.493	0.494	..
Other Non-OECD Asia	0.262	0.267	0.197	0.188	0.163	0.147	0.167	0.192	..
<b>Non-OECD Asia excl. China</b>	<b>0.532</b>	<b>0.481</b>	<b>0.437</b>	<b>0.400</b>	<b>0.365</b>	<b>0.333</b>	<b>0.296</b>	<b>0.290</b>	..
People's Rep. of China	1.907	1.752	1.053	0.505	0.499	0.416	0.336	0.311	..
Hong Kong, China	0.104	0.085	0.083	0.089	0.067	0.060	0.053	0.054	..
<b>China</b>	<b>1.690</b>	<b>1.523</b>	<b>0.945</b>	<b>0.478</b>	<b>0.477</b>	<b>0.403</b>	<b>0.328</b>	<b>0.304</b>	..
Argentina	0.191	0.185	0.237	0.203	0.201	0.186	0.188	0.194	..
Bolivia	0.159	0.266	0.280	0.365	0.332	0.321	0.324	0.330	..
Brazil	0.129	0.113	0.118	0.122	0.121	0.120	0.127	0.127	..
Colombia	0.188	0.170	0.164	0.134	0.118	0.109	0.107	0.109	..
Costa Rica	0.110	0.106	0.110	0.117	0.131	0.124	0.109	0.108	..
Cuba	0.467	0.488	0.389	0.329	0.216	0.176	0.149	0.125	..
Curaçao	5.223	2.855	0.850	0.899	0.835	0.762	1.087	0.948	..
Dominican Republic	0.281	0.234	0.216	0.220	0.183	0.141	0.121	0.119	..
Ecuador	0.122	0.170	0.166	0.190	0.159	0.169	0.174	0.168	..
El Salvador	0.182	0.214	0.218	0.223	0.226	0.203	0.182	0.181	..
Guatemala	0.231	0.208	0.222	0.237	0.226	0.266	0.253	0.274	..
Haiti	0.332	0.318	0.246	0.307	0.534	0.573	0.548	0.548	..
Honduras	0.349	0.311	0.311	0.284	0.311	0.291	0.311	0.300	..
Jamaica	0.297	0.287	0.253	0.283	0.264	0.189	0.199	0.211	..
Nicaragua	0.230	0.284	0.428	0.382	0.375	0.338	0.338	0.328	..
Panama	0.326	0.163	0.150	0.156	0.143	0.125	0.101	0.101	..
Paraguay	0.392	0.277	0.273	0.270	0.252	0.240	0.213	0.224	..
Peru	0.183	0.174	0.166	0.142	0.129	0.131	0.126	0.125	..
Suriname	..	..	..	0.227	0.173	0.161	0.135	0.138	..
Trinidad and Tobago	0.357	0.375	0.749	0.794	0.881	0.906	0.833	0.847	..
Uruguay	0.152	0.123	0.105	0.103	0.098	0.101	0.105	0.108	..
Venezuela	0.104	0.151	0.168	0.177	0.167	0.184	0.152	0.173	..
Other Non-OECD Americas	0.329	0.256	0.172	0.147	0.134	0.154	0.177	0.174	..
<b>Non-OECD Americas</b>	<b>0.162</b>	<b>0.151</b>	<b>0.156</b>	<b>0.154</b>	<b>0.149</b>	<b>0.146</b>	<b>0.145</b>	<b>0.147</b>	..
Bahrain	0.816	0.368	0.588	0.522	0.529	0.494	0.465	0.450	..
Islamic Republic of Iran	0.091	0.231	0.337	0.436	0.469	0.437	0.515	0.509	..
Iraq	0.280	0.213	0.281	0.256	0.254	0.270	0.251	0.262	..
Jordan	0.178	0.213	0.377	0.339	0.342	0.269	0.286	0.291	..
Kuwait	0.118	0.196	0.224	0.255	0.241	0.278	0.241	0.250	..
Lebanon	0.117	0.172	0.171	0.225	0.191	0.168	0.186	0.185	..
Oman	0.015	0.101	0.156	0.179	0.224	0.319	0.351	0.326	..
Qatar	0.056	0.145	0.345	0.303	0.312	0.221	0.263	0.248	..
Saudi Arabia	0.030	0.087	0.197	0.258	0.266	0.351	0.327	0.305	..
Syrian Arab Republic	0.223	0.236	0.433	0.400	0.441	0.362	0.619	0.648	..
United Arab Emirates	0.028	0.061	0.162	0.159	0.173	0.210	0.209	0.196	..
Yemen	0.288	0.183	0.214	0.233	0.263	0.253	0.177	0.157	..
<b>Middle East</b>	<b>0.077</b>	<b>0.137</b>	<b>0.249</b>	<b>0.289</b>	<b>0.305</b>	<b>0.327</b>	<b>0.330</b>	<b>0.320</b>	..

## TPES/GDP PPP (toe per thousand 2010 USD)

<i>toe per thousand 2010 USD</i>	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>0.227</b>	<b>0.211</b>	<b>0.190</b>	<b>0.163</b>	<b>0.155</b>	<b>0.144</b>	<b>0.129</b>	<b>0.126</b>	<b>..</b>
<b>Non-OECD Total</b>	<b>0.224</b>	<b>0.221</b>	<b>0.226</b>	<b>0.181</b>	<b>0.172</b>	<b>0.156</b>	<b>0.139</b>	<b>0.134</b>	<b>..</b>
<b>OECD Total</b>	<b>0.219</b>	<b>0.196</b>	<b>0.160</b>	<b>0.143</b>	<b>0.133</b>	<b>0.124</b>	<b>0.109</b>	<b>0.108</b>	<b>0.105</b>
Canada	0.306	0.291	0.247	0.224	0.212	0.193	0.185	0.182	0.183
Chile	0.148	0.128	0.131	0.123	0.110	0.099	0.095	0.099	0.099
Mexico	0.092	0.107	0.117	0.100	0.112	0.102	0.092	0.089	0.086
United States	0.315	0.276	0.211	0.179	0.161	0.148	0.131	0.128	0.123
<b>OECD Americas</b>	<b>0.294</b>	<b>0.258</b>	<b>0.204</b>	<b>0.174</b>	<b>0.159</b>	<b>0.146</b>	<b>0.131</b>	<b>0.128</b>	<b>0.124</b>
Australia	0.188	0.191	0.176	0.156	0.138	0.135	0.115	0.117	0.117
Israel <sup>1</sup>	0.159	0.126	0.128	0.113	0.104	0.106	0.087	0.084	0.083
Japan	0.170	0.145	0.118	0.123	0.117	0.111	0.091	0.089	0.089
Korea	0.197	0.213	0.186	0.193	0.171	0.166	0.156	0.157	0.159
New Zealand	0.127	0.138	0.167	0.165	0.134	0.135	0.130	0.129	0.126
<b>OECD Asia Oceania</b>	<b>0.172</b>	<b>0.154</b>	<b>0.132</b>	<b>0.138</b>	<b>0.129</b>	<b>0.126</b>	<b>0.109</b>	<b>0.109</b>	<b>0.109</b>
Austria	0.140	0.124	0.107	0.095	0.102	0.096	0.089	0.088	0.087
Belgium	0.226	0.191	0.161	0.156	0.143	0.137	0.116	0.121	0.117
Czech Republic	0.301	0.264	0.246	0.194	0.176	0.155	0.133	0.128	0.128
Denmark	0.153	0.138	0.102	0.084	0.080	0.082	0.064	0.064	0.064
Estonia	..	..	0.434	0.226	0.177	0.195	0.159	0.157	0.147
Finland	0.251	0.239	0.202	0.184	0.172	0.176	0.157	0.160	0.158
France	0.166	0.145	0.133	0.121	0.121	0.112	0.101	0.098	0.097
Germany	0.206	0.186	0.146	0.115	0.112	0.102	0.088	0.087	0.086
Greece	0.075	0.077	0.104	0.103	0.095	0.088	0.090	0.089	0.089
Hungary	0.178	0.185	0.168	0.142	0.129	0.123	0.106	0.106	0.106
Iceland	0.295	0.274	0.317	0.330	0.268	0.442	0.397	0.349	0.368
Ireland	0.183	0.159	0.134	0.095	0.076	0.073	0.047	0.047	0.043
Italy	0.113	0.097	0.086	0.085	0.088	0.084	0.076	0.074	0.074
Latvia	..	..	0.225	0.150	0.120	0.122	0.097	0.095	0.101
Luxembourg	0.397	0.293	0.172	0.101	0.114	0.097	0.074	0.071	0.072
Netherlands	0.198	0.171	0.143	0.116	0.117	0.114	0.095	0.095	0.092
Norway	0.148	0.140	0.125	0.108	0.099	0.104	0.092	0.087	0.085
Poland	0.281	0.331	0.272	0.163	0.145	0.125	0.102	0.104	0.103
Portugal	0.058	0.068	0.083	0.092	0.094	0.081	0.080	0.079	0.081
Slovak Republic	0.277	0.298	0.277	0.212	0.176	0.132	0.107	0.105	0.104
Slovenia	..	..	0.156	0.146	0.140	0.129	0.113	0.113	0.110
Spain	0.089	0.099	0.099	0.102	0.100	0.086	0.081	0.079	0.080
Sweden	0.212	0.196	0.184	0.150	0.143	0.130	0.105	0.110	0.103
Switzerland	0.078	0.081	0.079	0.072	0.069	0.063	0.054	0.052	0.052
Turkey	0.086	0.088	0.086	0.090	0.078	0.084	0.072	0.074	0.075
United Kingdom	0.206	0.175	0.136	0.115	0.101	0.090	0.073	0.070	0.068
<b>OECD Europe</b>	<b>0.171</b>	<b>0.156</b>	<b>0.132</b>	<b>0.113</b>	<b>0.108</b>	<b>0.101</b>	<b>0.087</b>	<b>0.086</b>	<b>0.085</b>
IEA	0.219	0.196	0.161	0.143	0.134	0.124	0.110	0.108	0.106
IEA/Accession/Association	0.229	0.208	0.175	0.151	0.146	0.137	0.121	0.117	..
European Union - 28	..	..	0.141	0.117	0.112	0.103	0.089	0.088	..
G7	0.241	0.211	0.167	0.149	0.139	0.129	0.114	0.111	0.108
G8	..	..	0.185	0.161	0.149	0.138	0.123	0.121	..
G20	..	..	0.187	0.159	0.152	0.142	0.126	0.122	..
<i>OPEC</i>	0.050	0.075	0.117	0.133	0.131	0.139	0.139	0.136	..

1. Please refer to section 'Geographical coverage'.

## TPES/GDP PPP (toe per thousand 2010 USD)

<i>toe per thousand 2010 USD</i>	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>0.224</b>	<b>0.221</b>	<b>0.226</b>	<b>0.181</b>	<b>0.172</b>	<b>0.156</b>	<b>0.139</b>	<b>0.134</b>	<b>..</b>
Albania	0.187	0.240	0.177	0.105	0.096	0.076	0.071	0.071	..
Armenia	..	..	0.594	0.229	0.161	0.131	0.131	0.129	..
Azerbaijan	..	..	0.380	0.321	0.203	0.082	0.091	0.093	..
Belarus	..	..	0.546	0.334	0.253	0.182	0.157	0.161	..
Bosnia and Herzegovina	..	..	1.023	0.190	0.167	0.187	0.167	0.177	..
Bulgaria	0.518	0.455	0.356	0.260	0.209	0.162	0.156	0.146	..
Croatia	..	..	0.138	0.126	0.118	0.111	0.101	0.099	..
Cyprus <sup>1</sup>	0.189	0.120	0.103	0.104	0.091	0.089	0.079	0.082	..
FYR of Macedonia	..	..	0.130	0.153	0.148	0.123	0.100	0.099	..
Georgia	..	..	0.330	0.203	0.141	0.121	0.141	0.142	..
Gibraltar	0.069	0.073	0.099	0.165	0.169	0.189	0.212	0.215	..
Kazakhstan	..	..	0.351	0.246	0.214	0.215	0.193	0.200	..
Kosovo	..	..	..	0.201	0.174	0.182	0.157	0.162	..
Kyrgyzstan	..	..	0.501	0.233	0.215	0.185	0.211	0.197	..
Lithuania	..	..	0.354	0.175	0.151	0.113	0.094	0.095	..
Malta	0.151	0.083	0.124	0.072	0.081	0.073	0.044	0.039	..
Republic of Moldova	..	..	0.423	0.348	0.302	0.282	0.225	0.221	..
Montenegro	..	..	..	..	0.145	0.133	0.109	0.102	..
Romania	0.355	0.271	0.243	0.159	0.128	0.101	0.081	0.077	..
Russian Federation	..	..	0.324	0.339	0.265	0.235	0.223	0.231	..
Serbia	..	..	0.360	0.240	0.208	0.177	0.164	0.166	..
Tajikistan	..	..	0.281	0.299	0.204	0.138	0.125	0.122	..
Turkmenistan	..	..	0.584	0.631	0.634	0.458	0.338	0.318	..
Ukraine	..	..	0.474	0.579	0.422	0.377	0.296	0.294	..
Uzbekistan	..	..	0.752	0.841	0.599	0.364	0.223	0.199	..
Former Soviet Union	0.369	0.360	x	x	x	x	x	x	x
Former Yugoslavia	0.174	0.162	x	x	x	x	x	x	x
<b>Non-OECD Europe and Eurasia</b>	<b>0.360</b>	<b>0.343</b>	<b>0.351</b>	<b>0.333</b>	<b>0.260</b>	<b>0.223</b>	<b>0.200</b>	<b>0.203</b>	<b>..</b>
Algeria	0.037	0.057	0.085	0.087	0.081	0.088	0.101	0.097	..
Angola	0.094	0.112	0.112	0.127	0.110	0.095	0.101	0.097	..
Benin	0.273	0.261	0.233	0.177	0.184	0.226	0.207	0.208	..
Botswana	..	..	0.111	0.102	0.089	0.082	0.081	0.075	..
Cameroon	0.182	0.140	0.144	0.162	0.151	0.122	0.124	0.121	..
Congo	0.102	0.081	0.064	0.050	0.063	0.075	0.099	0.101	..
Côte d'Ivoire	0.104	0.100	0.113	0.141	0.200	0.189	0.177	0.157	..
Dem. Rep. of the Congo	0.162	0.213	0.272	0.570	0.566	0.515	0.516	0.516	..
Egypt	0.073	0.077	0.097	0.079	0.102	0.090	0.086	0.089	..
Eritrea	..	..	..	0.127	0.120	0.122	0.112	0.111	..
Ethiopia	0.588	0.658	0.746	0.786	0.670	0.462	0.334	0.319	..
Gabon	0.146	0.090	0.065	0.069	0.130	0.206	0.164	0.164	..
Ghana	0.148	0.181	0.192	0.151	0.110	0.103	0.089	0.085	..
Kenya	0.219	0.199	0.194	0.213	0.205	0.197	0.193	0.187	..
Libya	0.022	0.040	0.099	0.138	0.121	0.114	0.309	0.335	..
Mauritius	0.124	0.101	0.087	0.077	0.078	0.067	0.064	0.064	..
Morocco	0.086	0.089	0.079	0.086	0.091	0.082	0.077	0.076	..
Mozambique	1.113	1.388	1.206	0.722	0.558	0.459	0.425	0.414	..
Namibia	..	..	..	0.093	0.094	0.088	0.081	0.084	..
Niger	..	..	..	0.175	0.170	0.170	0.168	0.158	..
Nigeria	0.147	0.157	0.234	0.255	0.186	0.159	0.144	0.151	..
Senegal	0.147	0.148	0.123	0.130	0.120	0.143	0.129	0.120	..
South Africa	0.201	0.222	0.251	0.259	0.237	0.230	0.203	0.209	..
South Sudan	..	..	..	..	..	..	0.040	0.035	..
Sudan	0.308	0.242	0.240	0.175	0.144	0.114	0.113	0.109	..
United Rep. of Tanzania	0.396	0.329	0.273	0.279	0.253	0.226	0.204	0.194	..
Togo	0.225	0.197	0.252	0.339	0.361	0.405	0.347	0.340	..
Tunisia	0.093	0.102	0.109	0.102	0.095	0.095	0.092	0.092	..
Zambia	0.254	0.274	0.294	0.290	0.257	0.196	0.189	0.188	..
Zimbabwe	0.389	0.382	0.358	0.324	0.456	0.474	0.382	0.374	..
Other Africa	0.226	0.231	0.307	0.281	0.230	0.199	0.192	0.193	..
<b>Africa</b>	<b>0.156</b>	<b>0.156</b>	<b>0.186</b>	<b>0.184</b>	<b>0.170</b>	<b>0.154</b>	<b>0.149</b>	<b>0.149</b>	<b>..</b>

1. Please refer to section 'Geographical coverage'.

## TPES/GDP PPP (toe per thousand 2010 USD)

<i>toe per thousand 2010 USD</i>	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	0.090	0.093	0.095	0.087	0.086	0.083	0.076	0.075	..
Brunei Darussalam	0.023	0.052	0.080	0.089	0.075	0.106	0.089	0.099	..
Cambodia	..	..	..	0.208	0.134	0.151	0.141	0.142	..
DPR of Korea	0.521	0.361	0.207	0.177	0.197	0.147	0.078	0.087	..
India	0.236	0.230	0.204	0.171	0.144	0.132	0.113	0.109	..
Indonesia	0.131	0.116	0.120	0.129	0.118	0.103	0.086	0.084	..
Malaysia	0.096	0.114	0.117	0.132	0.141	0.126	0.114	0.113	..
Mongolia	..	..	0.311	0.219	0.200	0.193	0.140	0.147	..
Myanmar	0.454	0.362	0.361	0.218	0.137	0.074	0.068	0.070	..
Nepal	0.339	0.329	0.263	0.226	0.216	0.194	0.180	0.197	..
Pakistan	0.153	0.141	0.133	0.134	0.126	0.118	0.107	0.104	..
Philippines	0.122	0.109	0.118	0.124	0.096	0.079	0.075	0.075	..
Singapore	0.130	0.105	0.112	0.092	0.083	0.071	0.061	0.061	..
Sri Lanka	0.145	0.111	0.090	0.082	0.073	0.058	0.050	0.049	..
Chinese Taipei	0.162	0.173	0.158	0.147	0.145	0.127	0.111	0.110	..
Thailand	0.145	0.127	0.114	0.128	0.134	0.133	0.131	0.131	..
Viet Nam	0.292	0.258	0.184	0.143	0.147	0.154	0.150	0.150	..
Other Non-OECD Asia	0.124	0.127	0.098	0.096	0.080	0.070	0.077	0.088	..
<b>Non-OECD Asia excl. China</b>	<b>0.187</b>	<b>0.172</b>	<b>0.157</b>	<b>0.145</b>	<b>0.132</b>	<b>0.119</b>	<b>0.105</b>	<b>0.103</b>	..
People's Rep. of China	0.932	0.856	0.515	0.247	0.244	0.203	0.164	0.152	..
Hong Kong, China	0.072	0.059	0.057	0.061	0.046	0.041	0.036	0.037	..
<b>China</b>	<b>0.856</b>	<b>0.775</b>	<b>0.477</b>	<b>0.238</b>	<b>0.237</b>	<b>0.199</b>	<b>0.161</b>	<b>0.150</b>	..
Argentina	0.107	0.104	0.133	0.114	0.112	0.104	0.105	0.109	..
Bolivia	0.059	0.099	0.105	0.136	0.124	0.120	0.121	0.123	..
Brazil	0.101	0.089	0.093	0.096	0.096	0.095	0.100	0.100	..
Colombia	0.110	0.100	0.096	0.078	0.069	0.064	0.063	0.064	..
Costa Rica	0.071	0.068	0.071	0.076	0.084	0.080	0.070	0.069	..
Cuba	0.150	0.157	0.125	0.106	0.069	0.057	0.048	0.040	..
Curaçao	5.824	3.181	0.948	1.003	0.931	0.849	1.212	1.057	..
Dominican Republic	0.141	0.117	0.108	0.110	0.091	0.070	0.061	0.060	..
Ecuador	0.062	0.086	0.085	0.096	0.081	0.086	0.089	0.086	..
El Salvador	0.088	0.104	0.106	0.108	0.110	0.099	0.088	0.088	..
Guatemala	0.099	0.089	0.095	0.102	0.097	0.114	0.109	0.118	..
Haiti	0.149	0.143	0.111	0.138	0.240	0.258	0.247	0.247	..
Honduras	0.174	0.154	0.155	0.141	0.154	0.144	0.154	0.149	..
Jamaica	0.178	0.171	0.151	0.169	0.158	0.113	0.119	0.126	..
Nicaragua	0.089	0.110	0.165	0.148	0.145	0.131	0.131	0.127	..
Panama	0.171	0.086	0.079	0.082	0.075	0.066	0.053	0.053	..
Paraguay	0.177	0.125	0.123	0.122	0.114	0.108	0.096	0.101	..
Peru	0.094	0.090	0.086	0.073	0.066	0.068	0.065	0.064	..
Suriname	..	..	..	0.135	0.103	0.096	0.081	0.077	..
Trinidad and Tobago	0.194	0.204	0.408	0.432	0.480	0.493	0.454	0.448	..
Uruguay	0.108	0.088	0.075	0.074	0.070	0.072	0.075	0.077	..
Venezuela	0.087	0.126	0.141	0.148	0.139	0.154	0.127	0.145	..
Other Non-OECD Americas	0.312	0.246	0.167	0.147	0.135	0.154	0.174	0.172	..
<b>Non-OECD Americas</b>	<b>0.109</b>	<b>0.103</b>	<b>0.107</b>	<b>0.105</b>	<b>0.101</b>	<b>0.099</b>	<b>0.097</b>	<b>0.098</b>	..
Bahrain	0.425	0.192	0.306	0.272	0.276	0.257	0.242	0.234	..
Islamic Republic of Iran	0.033	0.082	0.114	0.148	0.160	0.156	0.183	0.170	..
Iraq	0.101	0.077	0.102	0.092	0.092	0.098	0.091	0.095	..
Jordan	0.070	0.085	0.149	0.135	0.136	0.107	0.113	0.115	..
Kuwait	0.062	0.103	0.117	0.133	0.126	0.145	0.128	0.131	..
Lebanon	0.064	0.094	0.094	0.124	0.105	0.091	0.100	0.100	..
Oman	0.007	0.044	0.068	0.077	0.097	0.139	0.152	0.142	..
Qatar	0.032	0.083	0.198	0.174	0.179	0.127	0.151	0.142	..
Saudi Arabia	0.013	0.038	0.085	0.112	0.115	0.152	0.141	0.132	..
Syrian Arab Republic	0.101	0.107	0.196	0.181	0.200	0.164	0.280	0.293	..
United Arab Emirates	0.017	0.038	0.101	0.099	0.107	0.131	0.130	0.122	..
Yemen	0.086	0.055	0.064	0.070	0.079	0.075	0.053	0.047	..
<b>Middle East</b>	<b>0.032</b>	<b>0.060</b>	<b>0.105</b>	<b>0.123</b>	<b>0.131</b>	<b>0.142</b>	<b>0.146</b>	<b>0.138</b>	..

## TPES/population (toe per capita)

<i>toe per capita</i>	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>1.560</b>	<b>1.625</b>	<b>1.662</b>	<b>1.642</b>	<b>1.766</b>	<b>1.860</b>	<b>1.862</b>	<b>1.852</b>	<b>..</b>
<b>Non-OECD Total</b>	<b>0.727</b>	<b>0.858</b>	<b>0.960</b>	<b>0.900</b>	<b>1.061</b>	<b>1.247</b>	<b>1.322</b>	<b>1.316</b>	<b>..</b>
<b>OECD Total</b>	<b>4.067</b>	<b>4.130</b>	<b>4.225</b>	<b>4.587</b>	<b>4.626</b>	<b>4.378</b>	<b>4.126</b>	<b>4.107</b>	<b>4.104</b>
Canada	7.085	7.830	7.630	8.263	8.468	7.736	7.836	7.724	7.937
Chile	0.844	0.848	1.063	1.635	1.742	1.805	1.968	2.068	2.061
Mexico	0.921	1.351	1.421	1.495	1.685	1.563	1.528	1.514	1.475
United States	8.163	7.925	7.655	8.052	7.834	7.156	6.811	6.700	6.561
<b>OECD Americas</b>	<b>6.467</b>	<b>6.295</b>	<b>5.988</b>	<b>6.296</b>	<b>6.201</b>	<b>5.660</b>	<b>5.420</b>	<b>5.337</b>	<b>5.250</b>
Australia	4.191	4.701	4.984	5.609	5.549	5.698	5.186	5.292	5.325
Israel <sup>1</sup>	2.368	2.017	2.460	2.892	2.650	3.045	2.709	2.686	2.673
Japan	2.942	2.943	3.545	4.080	4.083	3.898	3.387	3.352	3.386
Korea	0.632	1.082	2.167	4.003	4.364	5.046	5.345	5.511	5.730
New Zealand	2.653	2.858	3.806	4.425	4.080	4.209	4.459	4.451	4.394
<b>OECD Asia Oceania</b>	<b>2.546</b>	<b>2.668</b>	<b>3.345</b>	<b>4.177</b>	<b>4.244</b>	<b>4.332</b>	<b>4.049</b>	<b>4.082</b>	<b>4.160</b>
Austria	2.831	3.067	3.240	3.571	4.068	4.025	3.816	3.812	3.841
Belgium	4.729	4.744	4.809	5.666	5.554	5.517	4.744	5.004	4.896
Czech Republic	4.551	4.547	4.806	4.015	4.422	4.293	3.987	3.933	4.079
Denmark	3.782	3.734	3.378	3.493	3.486	3.513	2.846	2.887	2.944
Estonia	..	..	6.044	3.366	3.835	4.219	4.167	4.195	4.112
Finland	4.508	5.146	5.692	6.257	6.556	6.824	5.951	6.191	6.235
France	3.378	3.477	3.844	4.136	4.319	4.052	3.733	3.653	3.654
Germany	4.239	4.562	4.426	4.132	4.150	4.065	3.773	3.766	3.792
Greece	1.309	1.538	2.089	2.507	2.753	2.482	2.143	2.104	2.163
Hungary	2.041	2.648	2.777	2.448	2.781	2.651	2.560	2.611	2.723
Iceland	5.277	6.565	8.902	11.101	10.552	17.027	16.870	15.777	17.039
Ireland	2.248	2.422	2.827	3.628	3.498	3.156	2.862	2.974	2.855
Italy	2.176	2.319	2.584	3.012	3.203	2.904	2.512	2.490	2.535
Latvia	..	..	2.962	1.618	2.023	2.150	2.156	2.170	2.443
Luxembourg	12.629	9.779	8.871	7.665	9.412	8.313	6.552	6.318	6.335
Netherlands	4.614	4.550	4.496	4.739	4.989	5.076	4.347	4.378	4.378
Norway	3.608	4.491	4.967	5.826	5.803	6.015	5.476	5.202	5.101
Poland	2.783	3.559	2.711	2.322	2.415	2.610	2.468	2.584	2.693
Portugal	0.791	1.013	1.679	2.390	2.519	2.223	2.123	2.143	2.257
Slovak Republic	3.344	3.985	4.026	3.285	3.495	3.283	3.023	3.037	3.126
Slovenia	..	..	2.858	3.224	3.645	3.575	3.180	3.290	3.346
Spain	1.463	1.782	2.289	3.005	3.251	2.742	2.562	2.580	2.680
Sweden	4.773	4.872	5.514	5.360	5.714	5.428	4.641	4.955	4.689
Switzerland	2.936	3.138	3.585	3.449	3.467	3.335	2.961	2.855	2.845
Turkey	0.640	0.708	0.933	1.187	1.225	1.448	1.663	1.747	1.869
United Kingdom	3.879	3.523	3.598	3.787	3.689	3.245	2.789	2.725	2.667
<b>OECD Europe</b>	<b>3.021</b>	<b>3.152</b>	<b>3.235</b>	<b>3.346</b>	<b>3.450</b>	<b>3.296</b>	<b>3.021</b>	<b>3.033</b>	<b>3.070</b>
IEA	4.109	4.176	4.277	4.644	4.683	4.425	4.168	4.147	4.144
IEA/Accession/Association	1.666	1.688	1.718	1.848	2.009	2.133	2.160	2.143	..
European Union - 28	..	..	3.445	3.480	3.630	3.434	3.119	3.127	..
G7	5.220	5.231	5.348	5.770	5.748	5.335	4.998	4.929	4.893
G8	..	..	5.455	5.502	5.547	5.252	4.987	4.952	..
G20	..	..	1.932	1.963	2.123	2.257	2.283	2.267	..
<i>OPEC</i>	<i>0.725</i>	<i>1.087</i>	<i>1.277</i>	<i>1.535</i>	<i>1.736</i>	<i>2.017</i>	<i>2.078</i>	<i>2.047</i>	<i>..</i>

1. Please refer to section 'Geographical coverage'.

## TPES/population (toe per capita)

<i>toe per capita</i>	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>0.727</b>	<b>0.858</b>	<b>0.960</b>	<b>0.900</b>	<b>1.061</b>	<b>1.247</b>	<b>1.322</b>	<b>1.316</b>	..
Albania	0.763	1.150	0.813	0.580	0.720	0.729	0.760	0.783	..
Armenia	..	..	2.179	0.656	0.843	0.863	1.052	1.034	..
Azerbaijan	..	..	3.166	1.404	1.600	1.280	1.488	1.457	..
Belarus	..	..	4.470	2.475	2.783	2.898	2.658	2.634	..
Bosnia and Herzegovina	..	..	1.572	1.154	1.333	1.741	1.747	1.920	..
Bulgaria	2.378	3.204	3.238	2.277	2.598	2.417	2.592	2.549	..
Croatia	..	..	1.980	1.895	2.195	2.125	1.997	2.030	..
Cyprus <sup>1</sup>	1.237	1.709	2.382	3.097	3.028	2.982	2.378	2.536	..
FYR of Macedonia	..	..	1.241	1.311	1.385	1.387	1.272	1.279	..
Georgia	..	..	2.586	0.649	0.678	0.795	1.246	1.289	..
Gibraltar	1.092	1.160	2.055	4.409	4.870	5.580	6.235	6.820	..
Kazakhstan	..	..	4.493	2.397	3.359	4.235	4.452	4.587	..
Kosovo	..	..	..	0.909	1.141	1.405	1.396	1.483	..
Kyrgyzstan	..	..	1.705	0.473	0.499	0.505	0.668	0.634	..
Lithuania	..	..	4.344	2.037	2.663	2.276	2.428	2.521	..
Malta	0.845	1.004	1.963	1.732	2.097	2.019	1.487	1.377	..
Republic of Moldova	..	..	2.677	0.792	0.980	1.079	1.045	1.070	..
Montenegro	..	..	..	..	1.664	1.822	1.624	1.555	..
Romania	2.296	2.933	2.684	1.614	1.810	1.730	1.607	1.611	..
Russian Federation	..	..	5.930	4.225	4.541	4.823	4.927	5.074	..
Serbia	..	..	1.961	1.690	2.160	2.141	2.080	2.165	..
Tajikistan	..	..	1.005	0.346	0.341	0.285	0.322	0.330	..
Turkmenistan	..	..	4.756	3.296	4.034	4.460	4.966	4.872	..
Ukraine	..	..	4.857	2.721	2.995	2.887	2.057	2.097	..
Uzbekistan	..	..	2.261	2.064	1.800	1.513	1.245	1.180	..
Former Soviet Union	3.422	4.203	x	x	x	x	x	x	x
Former Yugoslavia	1.139	1.550	x	x	x	x	x	x	x
<b>Non-OECD Europe and Eurasia</b>	<b>3.132</b>	<b>3.874</b>	<b>4.487</b>	<b>2.955</b>	<b>3.214</b>	<b>3.319</b>	<b>3.236</b>	<b>3.304</b>	..
Algeria	0.305	0.580	0.856	0.866	0.974	1.110	1.362	1.324	..
Angola	0.568	0.511	0.483	0.437	0.424	0.549	0.614	0.567	..
Benin	0.380	0.364	0.334	0.289	0.313	0.402	0.403	0.410	..
Botswana	..	..	0.884	1.039	1.006	1.066	1.225	1.159	..
Cameroon	0.399	0.424	0.425	0.413	0.417	0.349	0.399	0.396	..
Congo	0.356	0.337	0.323	0.220	0.292	0.382	0.536	0.525	..
Côte d'Ivoire	0.448	0.431	0.354	0.407	0.525	0.498	0.562	0.528	..
Dem. Rep. of the Congo	0.327	0.321	0.341	0.295	0.304	0.308	0.379	0.376	..
Egypt	0.214	0.342	0.562	0.574	0.802	0.868	0.846	0.901	..
Eritrea	..	..	..	0.209	0.192	0.169	0.170	0.170	..
Ethiopia	0.474	0.473	0.477	0.476	0.481	0.486	0.501	0.503	..
Gabon	2.311	1.885	1.241	1.195	2.142	3.099	2.705	2.692	..
Ghana	0.360	0.373	0.362	0.334	0.273	0.309	0.342	0.332	..
Kenya	0.449	0.449	0.453	0.445	0.448	0.477	0.536	0.536	..
Libya	1.069	2.190	2.517	2.954	3.082	3.316	2.334	2.395	..
Mauritius	0.439	0.446	0.629	0.835	0.953	1.050	1.176	1.220	..
Morocco	0.207	0.270	0.306	0.382	0.486	0.527	0.561	0.553	..
Mozambique	0.692	0.567	0.447	0.397	0.406	0.413	0.466	0.457	..
Namibia	..	..	..	0.557	0.672	0.727	0.791	0.813	..
Niger	..	..	..	0.129	0.127	0.136	0.149	0.141	..
Nigeria	0.597	0.665	0.697	0.712	0.757	0.805	0.800	0.806	..
Senegal	0.283	0.279	0.223	0.243	0.248	0.307	0.289	0.280	..
South Africa	2.017	2.340	2.438	2.463	2.568	2.705	2.472	2.512	..
South Sudan	..	..	..	..	..	..	0.071	0.063	..
Sudan	0.483	0.435	0.410	0.392	0.384	0.377	0.476	0.467	..
United Rep. of Tanzania	0.513	0.429	0.382	0.394	0.439	0.450	0.483	0.477	..
Togo	0.324	0.326	0.334	0.425	0.417	0.479	0.459	0.461	..
Tunisia	0.349	0.513	0.601	0.753	0.823	0.966	0.964	0.965	..
Zambia	0.861	0.773	0.675	0.597	0.625	0.630	0.672	0.671	..
Zimbabwe	1.025	0.906	0.913	0.819	0.743	0.684	0.715	0.690	..
Other Africa	0.320	0.318	0.364	0.348	0.343	0.338	0.347	0.348	..
<b>Africa</b>	<b>0.525</b>	<b>0.578</b>	<b>0.621</b>	<b>0.610</b>	<b>0.644</b>	<b>0.668</b>	<b>0.667</b>	<b>0.668</b>	..

1. Please refer to section 'Geographical coverage'.



## TPES/population (toe per capita)

<i>toe per capita</i>	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	0.092	0.103	0.120	0.141	0.162	0.198	0.234	0.243	..
Brunei Darussalam	2.312	6.959	6.669	7.162	6.078	8.332	6.502	6.995	..
Cambodia	..	..	..	0.281	0.259	0.373	0.453	0.481	..
DPR of Korea	1.320	1.738	1.637	0.860	0.893	0.602	0.310	0.348	..
India	0.269	0.287	0.351	0.419	0.450	0.569	0.639	0.651	..
Indonesia	0.307	0.378	0.544	0.736	0.790	0.853	0.872	0.881	..
Malaysia	0.524	0.862	1.211	2.109	2.562	2.611	2.795	2.851	..
Mongolia	..	..	1.561	1.000	1.186	1.454	1.561	1.639	..
Myanmar	0.279	0.282	0.263	0.279	0.304	0.270	0.339	0.365	..
Nepal	0.303	0.306	0.309	0.342	0.356	0.378	0.409	0.443	..
Pakistan	0.291	0.317	0.398	0.459	0.494	0.495	0.494	0.495	..
Philippines	0.440	0.473	0.463	0.513	0.450	0.431	0.507	0.530	..
Singapore	1.712	2.126	3.783	4.635	5.056	5.007	4.830	4.878	..
Sri Lanka	0.316	0.308	0.323	0.446	0.465	0.484	0.545	0.552	..
Chinese Taipei	0.847	1.567	2.360	3.868	4.505	4.776	4.659	4.671	..
Thailand	0.389	0.464	0.741	1.148	1.513	1.754	1.962	2.012	..
Viet Nam	0.305	0.268	0.271	0.370	0.501	0.678	0.830	0.874	..
Other Non-OECD Asia	0.207	0.249	0.206	0.233	0.226	0.259	0.317	0.362	..
<b>Non-OECD Asia excl. China</b>	<b>0.304</b>	<b>0.347</b>	<b>0.429</b>	<b>0.528</b>	<b>0.579</b>	<b>0.665</b>	<b>0.720</b>	<b>0.735</b>	..
People's Rep. of China	0.484	0.609	0.770	0.895	1.366	1.896	2.182	2.146	..
Hong Kong, China	0.748	0.914	1.511	2.039	1.845	1.947	1.902	1.977	..
<b>China</b>	<b>0.485</b>	<b>0.611</b>	<b>0.773</b>	<b>0.901</b>	<b>1.369</b>	<b>1.896</b>	<b>2.180</b>	<b>2.145</b>	..
Argentina	1.412	1.488	1.408	1.661	1.710	1.909	1.971	1.967	..
Bolivia	0.249	0.437	0.381	0.590	0.571	0.635	0.776	0.810	..
Brazil	0.799	0.940	0.939	1.069	1.152	1.351	1.433	1.370	..
Colombia	0.589	0.638	0.707	0.639	0.626	0.680	0.796	0.823	..
Costa Rica	0.470	0.526	0.542	0.732	0.912	1.020	1.025	1.048	..
Cuba	1.176	1.489	1.645	1.142	0.946	0.998	0.961	0.837	..
Curaçao	36.247	22.692	7.716	10.031	9.494	8.910	12.793	10.976	..
Dominican Republic	0.586	0.591	0.559	0.860	0.787	0.766	0.793	0.822	..
Ecuador	0.356	0.626	0.620	0.698	0.680	0.788	0.934	0.873	..
El Salvador	0.500	0.550	0.470	0.676	0.748	0.707	0.679	0.690	..
Guatemala	0.483	0.521	0.476	0.604	0.596	0.753	0.777	0.849	..
Haiti	0.320	0.366	0.220	0.235	0.368	0.380	0.399	0.399	..
Honduras	0.497	0.509	0.480	0.460	0.560	0.562	0.652	0.641	..
Jamaica	1.483	1.053	1.081	1.315	1.303	0.884	0.945	1.013	..
Nicaragua	0.513	0.472	0.487	0.500	0.536	0.515	0.635	0.637	..
Panama	1.231	0.714	0.603	0.848	0.875	0.991	1.073	1.109	..
Paraguay	0.571	0.655	0.729	0.726	0.683	0.774	0.816	0.879	..
Peru	0.658	0.649	0.446	0.472	0.494	0.660	0.749	0.759	..
Suriname	..	..	..	1.293	1.231	1.334	1.167	1.054	..
Trinidad and Tobago	2.685	3.529	4.901	7.762	12.429	15.114	13.911	13.373	..
Uruguay	0.846	0.907	0.724	0.931	0.889	1.211	1.460	1.516	..
Venezuela	1.506	2.125	1.990	2.090	2.038	2.494	1.925	1.779	..
Other Non-OECD Americas	2.165	2.059	1.681	1.743	1.683	1.917	2.203	2.189	..
<b>Non-OECD Americas</b>	<b>0.880</b>	<b>0.992</b>	<b>0.951</b>	<b>1.048</b>	<b>1.095</b>	<b>1.263</b>	<b>1.296</b>	<b>1.261</b>	..
Bahrain	8.480	7.794	10.538	11.987	11.684	10.231	10.434	9.997	..
Islamic Republic of Iran	0.668	0.984	1.233	1.860	2.452	2.740	2.963	3.085	..
Iraq	0.425	0.712	1.147	1.102	0.979	1.217	1.325	1.494	..
Jordan	0.316	0.641	0.919	0.954	1.168	0.989	0.942	0.949	..
Kuwait	7.844	7.621	4.338	9.127	11.544	10.703	8.555	8.842	..
Lebanon	0.959	0.950	0.723	1.517	1.265	1.471	1.309	1.295	..
Oman	0.120	0.997	2.329	3.338	3.946	6.157	5.986	5.449	..
Qatar	10.091	14.788	13.714	18.451	19.270	15.533	17.675	16.458	..
Saudi Arabia	1.077	3.193	3.553	4.713	5.127	6.764	7.026	6.520	..
Syrian Arab Republic	0.292	0.500	0.841	0.941	1.137	1.031	0.562	0.539	..
United Arab Emirates	3.288	6.942	10.983	9.993	9.718	7.375	8.405	8.013	..
Yemen	0.149	0.157	0.208	0.266	0.320	0.331	0.137	0.107	..
<b>Middle East</b>	<b>0.732</b>	<b>1.287</b>	<b>1.655</b>	<b>2.185</b>	<b>2.588</b>	<b>3.018</b>	<b>3.186</b>	<b>3.151</b>	..

## Electricity consumption/GDP (kWh per 2010 USD)

<i>kWh per 2010 USD</i>	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>0.248</b>	<b>0.268</b>	<b>0.287</b>	<b>0.283</b>	<b>0.288</b>	<b>0.300</b>	<b>0.297</b>	<b>0.299</b>	<b>..</b>
<b>Non-OECD Total</b>	<b>0.307</b>	<b>0.348</b>	<b>0.440</b>	<b>0.428</b>	<b>0.443</b>	<b>0.450</b>	<b>0.458</b>	<b>0.463</b>	<b>..</b>
<b>OECD Total</b>	<b>0.232</b>	<b>0.243</b>	<b>0.243</b>	<b>0.240</b>	<b>0.233</b>	<b>0.230</b>	<b>0.209</b>	<b>0.208</b>	<b>0.216</b>
Canada	0.374	0.402	0.441	0.389	0.358	0.329	0.301	0.294	0.325
Chile	0.192	0.198	0.218	0.265	0.276	0.258	0.271	0.285	0.290
Mexico	0.094	0.112	0.155	0.195	0.215	0.218	0.220	0.223	0.249
United States	0.331	0.343	0.323	0.303	0.281	0.277	0.248	0.245	0.249
<b>OECD Americas</b>	<b>0.321</b>	<b>0.332</b>	<b>0.323</b>	<b>0.304</b>	<b>0.284</b>	<b>0.278</b>	<b>0.251</b>	<b>0.249</b>	<b>0.257</b>
Australia	0.136	0.173	0.216	0.204	0.188	0.182	0.160	0.160	0.167
Israel <sup>1</sup>	0.158	0.178	0.204	0.233	0.241	0.227	0.203	0.204	0.209
Japan	0.185	0.182	0.176	0.191	0.187	0.190	0.168	0.167	0.176
Korea	0.170	0.247	0.280	0.391	0.420	0.440	0.421	0.417	0.420
New Zealand	0.245	0.282	0.361	0.324	0.292	0.283	0.242	0.227	0.237
<b>OECD Asia Oceania</b>	<b>0.178</b>	<b>0.185</b>	<b>0.190</b>	<b>0.215</b>	<b>0.217</b>	<b>0.223</b>	<b>0.204</b>	<b>0.203</b>	<b>0.211</b>
Austria	0.160	0.170	0.180	0.168	0.180	0.179	0.174	0.172	0.180
Belgium	0.171	0.178	0.193	0.205	0.198	0.189	0.171	0.171	0.176
Czech Republic	0.345	0.371	0.400	0.385	0.353	0.320	0.299	0.295	0.307
Denmark	0.103	0.126	0.133	0.116	0.113	0.109	0.097	0.097	0.098
Estonia	..	..	0.604	0.449	0.377	0.444	0.376	0.395	0.417
Finland	0.283	0.323	0.373	0.378	0.355	0.357	0.333	0.336	0.339
France	0.137	0.163	0.182	0.188	0.190	0.190	0.170	0.170	0.180
Germany	0.213	0.222	0.205	0.175	0.183	0.174	0.154	0.151	0.156
Greece	0.091	0.117	0.166	0.197	0.191	0.198	0.231	0.242	0.263
Hungary	0.281	0.310	0.341	0.315	0.287	0.296	0.280	0.279	0.298
Iceland	0.510	0.487	0.529	0.717	0.657	1.229	1.192	1.099	1.130
Ireland	0.156	0.168	0.159	0.135	0.121	0.120	0.085	0.083	0.084
Italy	0.125	0.127	0.134	0.146	0.154	0.153	0.150	0.148	0.158
Latvia	..	..	..	0.300	0.255	0.285	0.244	0.242	0.247
Luxembourg	0.303	0.264	0.216	0.168	0.154	0.160	0.134	0.132	0.130
Netherlands	0.137	0.145	0.146	0.141	0.144	0.139	0.130	0.129	0.131
Norway	0.423	0.386	0.387	0.306	0.283	0.283	0.262	0.262	0.278
Poland	0.383	0.480	0.550	0.382	0.345	0.301	0.277	0.278	0.288
Portugal	0.088	0.126	0.151	0.185	0.213	0.220	0.218	0.217	0.238
Slovak Republic	0.378	0.492	0.575	0.481	0.373	0.313	0.276	0.271	0.274
Slovenia	..	..	0.345	0.311	0.314	0.278	0.290	0.286	0.297
Spain	0.117	0.152	0.157	0.182	0.196	0.186	0.179	0.175	0.188
Sweden	0.311	0.344	0.422	0.351	0.309	0.287	0.245	0.244	0.246
Switzerland	0.093	0.109	0.116	0.116	0.118	0.110	0.098	0.098	0.106
Turkey	0.065	0.099	0.138	0.201	0.208	0.233	0.211	0.217	0.246
United Kingdom	0.229	0.214	0.187	0.172	0.158	0.147	0.122	0.120	0.125
<b>OECD Europe</b>	<b>0.181</b>	<b>0.195</b>	<b>0.199</b>	<b>0.190</b>	<b>0.190</b>	<b>0.186</b>	<b>0.170</b>	<b>0.168</b>	<b>0.178</b>
IEA	0.232	0.244	0.243	0.239	0.232	0.229	0.209	0.207	0.215
IEA/Accession/Association	0.232	0.246	0.255	0.261	0.268	0.282	0.279	0.281	..
European Union - 28	..	..	0.208	0.192	0.192	0.186	0.169	0.168	..
G7	0.250	0.258	0.248	0.243	0.233	0.229	0.206	0.204	0.211
G8	..	..	0.275	0.261	0.249	0.245	0.223	0.221	..
G20	..	..	0.279	0.277	0.282	0.295	0.291	0.293	..
<i>OPEC</i>	0.042	0.088	0.197	0.251	0.262	0.287	0.317	0.323	..

1. Please refer to section 'Geographical coverage'.

## Electricity consumption/GDP (kWh per 2010 USD)

<i>kWh per 2010 USD</i>	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>0.307</b>	<b>0.348</b>	<b>0.440</b>	<b>0.428</b>	<b>0.443</b>	<b>0.450</b>	<b>0.458</b>	<b>0.463</b>	..
Albania	0.343	0.561	0.294	0.643	0.560	0.475	0.461	0.466	..
Armenia	..	..	1.515	0.924	0.592	0.536	0.501	0.493	..
Azerbaijan	..	..	0.826	1.249	0.810	0.274	0.367	0.378	..
Belarus	..	..	1.412	1.067	0.779	0.591	0.556	0.570	..
Bosnia and Herzegovina	..	..	3.861	0.673	0.603	0.681	0.661	0.678	..
Bulgaria	1.277	1.233	1.143	0.916	0.734	0.666	0.638	0.625	..
Croatia	..	..	0.294	0.270	0.265	0.282	0.281	0.276	..
Cyprus <sup>1</sup>	0.202	0.145	0.152	0.168	0.187	0.200	0.185	0.192	..
FYR of Macedonia	..	..	0.692	0.840	0.898	0.787	0.671	0.612	..
Georgia	..	..	0.862	1.011	0.827	0.667	0.688	0.706	..
Gibraltar	0.093	0.096	0.104	0.132	0.136	0.164	0.187	0.196	..
Kazakhstan	..	..	1.003	0.706	0.555	0.521	0.544	0.532	..
Kosovo	..	..	..	0.811	0.780	0.807	0.768	0.609	..
Kyrgyzstan	..	..	2.127	2.592	1.839	1.559	1.793	1.700	..
Lithuania	..	..	0.551	0.363	0.302	0.290	0.255	0.255	..
Malta	0.285	0.181	0.235	0.236	0.251	0.223	0.197	0.186	..
Republic of Moldova	..	..	1.200	1.692	1.484	1.056	0.705	0.647	..
Montenegro	..	..	..	..	1.164	0.811	0.649	0.625	..
Romania	0.610	0.549	0.547	0.406	0.347	0.307	0.277	0.267	..
Russian Federation	..	..	0.700	0.801	0.646	0.600	0.582	0.595	..
Serbia	..	..	1.430	1.233	0.844	0.805	0.802	0.790	..
Tajikistan	..	..	2.629	5.226	3.559	2.526	1.662	1.556	..
Turkmenistan	..	..	0.615	0.711	0.707	0.537	0.441	0.415	..
Ukraine	..	..	1.207	1.528	1.182	1.199	1.195	1.163	..
Uzbekistan	..	..	2.389	2.189	1.723	1.201	0.885	0.830	..
Former Soviet Union	0.653	0.684	x	x	x	x	x	x	x
Former Yugoslavia	0.376	0.415	x	x	x	x	x	x	x
<b>Non-OECD Europe and Eurasia</b>	<b>0.640</b>	<b>0.663</b>	<b>0.801</b>	<b>0.826</b>	<b>0.666</b>	<b>0.606</b>	<b>0.579</b>	<b>0.582</b>	..
Algeria	0.054	0.091	0.149	0.192	0.208	0.227	0.303	0.305	..
Angola	0.028	0.020	0.020	0.036	0.046	0.058	0.083	0.088	..
Benin	0.032	0.047	0.057	0.084	0.102	0.127	0.128	0.128	..
Botswana	..	..	0.186	0.222	0.258	0.249	0.242	0.229	..
Cameroon	0.169	0.125	0.158	0.159	0.162	0.225	0.208	0.210	..
Congo	0.032	0.036	0.062	0.039	0.046	0.050	0.066	0.068	..
Côte d'Ivoire	0.056	0.089	0.108	0.128	0.141	0.177	0.180	0.183	..
Dem. Rep. of the Congo	0.156	0.188	0.196	0.350	0.313	0.329	0.244	0.246	..
Egypt	0.247	0.315	0.425	0.493	0.588	0.596	0.654	0.654	..
Eritrea	..	..	..	0.089	0.110	0.128	0.124	0.124	..
Ethiopia	0.068	0.077	0.109	0.115	0.143	0.133	0.175	0.175	..
Gabon	0.028	0.059	0.082	0.087	0.094	0.108	0.107	0.114	..
Ghana	0.370	0.473	0.397	0.343	0.226	0.216	0.187	0.211	..
Kenya	0.104	0.117	0.135	0.127	0.150	0.155	0.148	0.144	..
Libya	0.018	0.050	0.149	0.248	0.322	0.279	1.547	1.571	..
Mauritius	0.100	0.132	0.181	0.245	0.270	0.249	0.236	0.231	..
Morocco	0.141	0.174	0.206	0.245	0.265	0.269	0.271	0.276	..
Mozambique	0.196	0.191	0.239	0.480	1.303	1.051	1.048	0.802	..
Namibia	..	..	..	0.265	0.326	0.298	0.257	0.262	..
Niger	..	..	..	0.101	0.113	0.127	0.145	0.137	..
Nigeria	0.019	0.039	0.082	0.075	0.072	0.060	0.058	0.057	..
Senegal	0.089	0.116	0.122	0.116	0.163	0.199	0.223	0.225	..
South Africa	0.392	0.524	0.700	0.771	0.689	0.620	0.545	0.537	..
South Sudan	..	..	..	..	..	..	0.062	0.045	..
Sudan	0.046	0.045	0.065	0.064	0.066	0.092	0.154	0.165	..
United Rep. of Tanzania	0.076	0.082	0.107	0.120	0.131	0.136	0.122	0.128	..
Togo	0.093	0.092	0.166	0.183	0.227	0.251	0.300	0.297	..
Tunisia	0.126	0.199	0.284	0.325	0.310	0.330	0.341	0.342	..
Zambia	0.725	0.803	0.730	0.630	0.615	0.396	0.452	0.415	..
Zimbabwe	0.666	0.834	0.700	0.695	1.030	0.766	0.546	0.502	..
Other Africa	0.086	0.098	0.112	0.137	0.119	0.117	0.105	0.106	..
<b>Africa</b>	<b>0.171</b>	<b>0.222</b>	<b>0.309</b>	<b>0.349</b>	<b>0.332</b>	<b>0.302</b>	<b>0.302</b>	<b>0.301</b>	..

1. Please refer to section 'Geographical coverage'.

## Electricity consumption/GDP (kWh per 2010 USD)

<i>kWh per 2010 USD</i>	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	0.047	0.053	0.121	0.199	0.285	0.316	0.335	0.343	..
Brunei Darussalam	0.035	0.028	0.117	0.210	0.233	0.250	0.288	0.303	..
Cambodia	..	..	..	0.076	0.109	0.184	0.321	0.367	..
DPR of Korea	1.428	0.858	0.588	0.549	0.668	0.681	0.430	0.525	..
India	0.284	0.365	0.509	0.518	0.483	0.478	0.491	0.493	..
Indonesia	0.018	0.038	0.095	0.182	0.198	0.204	0.214	0.218	..
Malaysia	0.156	0.199	0.255	0.392	0.360	0.459	0.424	0.422	..
Mongolia	..	..	0.846	0.658	0.602	0.563	0.523	0.531	..
Myanmar	0.141	0.165	0.228	0.220	0.125	0.127	0.190	0.206	..
Nepal	0.021	0.044	0.099	0.129	0.154	0.173	0.200	0.252	..
Pakistan	0.214	0.245	0.374	0.439	0.475	0.447	0.438	0.423	..
Philippines	0.231	0.221	0.236	0.311	0.317	0.300	0.282	0.290	..
Singapore	0.184	0.204	0.225	0.227	0.217	0.186	0.171	0.172	..
Sri Lanka	0.092	0.104	0.127	0.162	0.188	0.164	0.161	0.167	..
Chinese Taipei	0.456	0.483	0.547	0.594	0.604	0.532	0.494	0.498	..
Thailand	0.157	0.207	0.283	0.419	0.441	0.455	0.452	0.486	..
Viet Nam	0.126	0.173	0.220	0.375	0.560	0.776	0.920	0.913	..
Other Non-OECD Asia	0.191	0.220	0.177	0.208	0.205	0.215	0.268	0.250	..
<b>Non-OECD Asia excl. China</b>	<b>0.219</b>	<b>0.252</b>	<b>0.334</b>	<b>0.396</b>	<b>0.399</b>	<b>0.401</b>	<b>0.405</b>	<b>0.411</b>	..
People's Rep. of China	0.693	0.810	0.699	0.560	0.651	0.645	0.623	0.621	..
Hong Kong, China	0.196	0.201	0.229	0.237	0.212	0.184	0.177	0.174	..
<b>China</b>	<b>0.634</b>	<b>0.726</b>	<b>0.646</b>	<b>0.540</b>	<b>0.629</b>	<b>0.629</b>	<b>0.610</b>	<b>0.608</b>	..
Argentina	0.129	0.153	0.219	0.254	0.281	0.277	0.300	0.306	..
Bolivia	0.111	0.154	0.196	0.260	0.280	0.305	0.324	0.308	..
Brazil	0.089	0.121	0.182	0.216	0.211	0.210	0.224	0.231	..
Colombia	0.134	0.165	0.195	0.174	0.169	0.172	0.197	0.192	..
Costa Rica	0.158	0.188	0.220	0.244	0.250	0.232	0.211	0.210	..
Cuba	0.218	0.276	0.287	0.327	0.263	0.227	0.232	0.225	..
Curaçao	0.575	0.525	0.395	0.417	0.419	0.415	0.371	0.401	..
Dominican Republic	0.192	0.175	0.151	0.348	0.300	0.244	0.235	0.231	..
Ecuador	0.056	0.098	0.129	0.173	0.187	0.246	0.265	0.275	..
El Salvador	0.074	0.107	0.164	0.204	0.229	0.247	0.263	0.252	..
Guatemala	0.070	0.101	0.093	0.129	0.182	0.192	0.197	0.203	..
Haiti	0.021	0.036	0.065	0.046	0.054	0.037	0.055	0.059	..
Honduras	0.101	0.129	0.238	0.304	0.326	0.323	0.416	0.385	..
Jamaica	0.201	0.180	0.203	0.490	0.486	0.259	0.219	0.222	..
Nicaragua	0.100	0.156	0.271	0.266	0.292	0.337	0.328	0.311	..
Panama	0.167	0.176	0.207	0.233	0.238	0.220	0.208	0.203	..
Paraguay	0.072	0.102	0.189	0.330	0.319	0.365	0.434	0.437	..
Peru	0.116	0.135	0.204	0.205	0.219	0.218	0.230	0.240	..
Suriname	..	..	..	0.397	0.389	0.361	0.422	0.422	..
Trinidad and Tobago	0.149	0.199	0.410	0.408	0.365	0.371	0.444	0.488	..
Uruguay	0.127	0.137	0.181	0.226	0.221	0.235	0.217	0.225	..
Venezuela	0.079	0.142	0.207	0.223	0.233	0.231	0.206	0.232	..
Other Non-OECD Americas	0.869	0.781	0.738	0.840	0.882	0.826	0.696	0.696	..
<b>Non-OECD Americas</b>	<b>0.113</b>	<b>0.143</b>	<b>0.200</b>	<b>0.230</b>	<b>0.232</b>	<b>0.228</b>	<b>0.238</b>	<b>0.245</b>	..
Bahrain	0.200	0.218	0.871	0.872	0.966	0.870	0.903	0.878	..
Islamic Republic of Iran	0.052	0.126	0.258	0.360	0.394	0.419	0.517	0.520	..
Iraq	0.201	0.237	0.320	0.287	0.216	0.266	0.232	0.203	..
Jordan	0.098	0.122	0.383	0.461	0.466	0.507	0.575	0.583	..
Kuwait	0.056	0.156	0.424	0.392	0.356	0.434	0.419	0.433	..
Lebanon	0.080	0.177	0.122	0.444	0.426	0.397	0.408	0.401	..
Oman	0.006	0.063	0.147	0.171	0.223	0.286	0.413	0.419	..
Qatar	0.016	0.095	0.242	0.236	0.251	0.211	0.234	0.233	..
Saudi Arabia	0.012	0.054	0.222	0.309	0.341	0.414	0.461	0.459	..
Syrian Arab Republic	0.139	0.168	0.354	0.453	0.583	0.650	0.888	0.991	..
United Arab Emirates	0.014	0.049	0.124	0.195	0.219	0.313	0.321	0.319	..
Yemen	0.061	0.072	0.125	0.122	0.148	0.191	0.222	0.210	..
<b>Middle East</b>	<b>0.040</b>	<b>0.092</b>	<b>0.242</b>	<b>0.311</b>	<b>0.335</b>	<b>0.384</b>	<b>0.416</b>	<b>0.413</b>	..

## Electricity consumption/population (kWh per capita)

<i>kWh per capita</i>	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>World</b>	<b>1 443</b>	<b>1 719</b>	<b>2 065</b>	<b>2 318</b>	<b>2 574</b>	<b>2 861</b>	<b>3 057</b>	<b>3 110</b>	<b>..</b>
<b>Non-OECD Total</b>	<b>503</b>	<b>685</b>	<b>894</b>	<b>1 004</b>	<b>1 286</b>	<b>1 677</b>	<b>2 012</b>	<b>2 078</b>	<b>..</b>
<b>OECD Total</b>	<b>4 502</b>	<b>5 341</b>	<b>6 654</b>	<b>7 947</b>	<b>8 290</b>	<b>8 285</b>	<b>8 023</b>	<b>8 048</b>	<b>8 525</b>
Canada	10 242	12 804	16 167	17 037	16 919	15 594	15 166	14 844	16 663
Chile	772	923	1 247	2 490	3 077	3 301	3 972	4 182	4 260
Mexico	575	854	1 143	1 765	1 976	2 016	2 226	2 295	2 589
United States	8 572	9 841	11 687	13 660	13 683	13 374	12 854	12 825	13 239
<b>OECD Americas</b>	<b>6 922</b>	<b>7 865</b>	<b>9 223</b>	<b>10 705</b>	<b>10 754</b>	<b>10 440</b>	<b>10 106</b>	<b>10 082</b>	<b>10 551</b>
Australia	4 158	5 869	8 419	10 129	10 430	10 579	9 884	9 911	10 442
Israel <sup>1</sup>	2 498	3 022	4 175	6 308	6 543	6 956	6 751	6 893	7 155
Japan	4 060	4 706	6 705	8 068	8 324	8 437	7 917	7 974	8 563
Korea	397	914	2 373	5 907	7 796	9 716	10 482	10 618	10 993
New Zealand	5 508	6 281	8 857	9 367	9 581	9 517	8 911	8 474	8 935
<b>OECD Asia Oceania</b>	<b>3 296</b>	<b>3 978</b>	<b>5 867</b>	<b>7 734</b>	<b>8 374</b>	<b>8 931</b>	<b>8 721</b>	<b>8 789</b>	<b>9 308</b>
Austria	3 621	4 685	6 111	7 076	8 032	8 385	8 330	8 258	8 854
Belgium	3 948	4 894	6 380	8 248	8 510	8 394	7 744	7 778	8 127
Czech Republic	3 730	4 575	5 584	5 694	6 343	6 322	6 384	6 460	6 989
Denmark	3 428	4 598	5 946	6 484	6 660	6 328	5 822	5 882	6 067
Estonia	..	..	5 691	4 527	5 514	6 499	6 684	7 155	7 915
Finland	6 047	8 295	12 487	15 306	16 118	16 485	15 050	15 468	15 944
France	3 156	4 423	5 970	7 229	7 658	7 744	7 071	7 148	7 657
Germany	4 654	5 796	6 646	6 697	7 238	7 399	7 015	6 956	7 287
Greece	1 532	2 224	3 200	4 586	5 297	5 334	5 229	5 501	6 068
Hungary	1 957	2 699	3 430	3 309	3 771	3 877	4 098	4 178	4 669
Iceland	9 910	12 689	16 137	26 221	28 057	51 447	55 054	53 913	56 752
Ireland	2 152	2 878	3 776	5 798	6 242	5 861	5 811	5 887	6 292
Italy	2 458	3 105	4 145	5 300	5 709	5 443	5 099	5 081	5 498
Latvia	..	..	3 396	2 082	2 777	3 231	3 492	3 564	3 853
Luxembourg	11 778	10 788	13 662	15 643	15 616	16 795	14 425	14 274	14 074
Netherlands	3 613	4 365	5 185	6 509	6 914	7 008	6 706	6 734	7 012
Norway	15 544	18 724	23 357	24 994	25 085	24 877	23 585	23 692	25 410
Poland	2 264	3 076	3 279	3 256	3 438	3 750	4 007	4 141	4 493
Portugal	985	1 543	2 522	3 989	4 683	4 959	4 807	4 873	5 498
Slovak Republic	3 027	4 359	5 543	4 945	4 920	5 164	5 151	5 226	5 458
Slovenia	..	..	5 335	5 778	6 916	6 510	6 877	6 997	7 620
Spain	1 860	2 610	3 494	5 170	6 110	5 708	5 479	5 505	6 100
Sweden	8 745	10 704	15 836	15 682	15 430	14 935	13 594	13 756	14 021
Switzerland	4 906	5 931	7 357	7 776	8 256	8 142	7 499	7 481	8 102
Turkey	293	490	909	1 627	1 994	2 469	2 960	3 114	3 754
United Kingdom	4 669	4 683	5 357	6 115	6 270	5 702	5 089	5 033	5 309
<b>OECD Europe</b>	<b>3 330</b>	<b>4 072</b>	<b>5 023</b>	<b>5 768</b>	<b>6 189</b>	<b>6 187</b>	<b>5 930</b>	<b>5 977</b>	<b>6 436</b>
IEA	4 549	5 399	6 741	8 042	8 381	8 364	8 086	8 109	8 592
IEA/Accession/Association	1 649	1 927	2 361	2 877	3 226	3 630	3 945	4 037	..
European Union - 28	..	..	5 157	5 833	6 307	6 277	5 970	6 007	..
G7	5 834	6 893	8 602	10 101	10 350	10 186	9 711	9 693	10 201
G8	..	..	8 245	9 250	9 588	9 575	9 212	9 219	..
G20	..	..	2 571	2 984	3 337	3 749	4 066	4 152	..
<i>OPEC</i>	285	605	1 006	1 344	1 608	1 956	2 225	2 224	..

1. Please refer to section 'Geographical coverage'.

## Electricity consumption/population (kWh per capita)

<i>kWh per capita</i>	1973	1980	1990	2000	2005	2010	2015	2016	2017p
<b>Non-OECD Total</b>	<b>503</b>	<b>685</b>	<b>894</b>	<b>1 004</b>	<b>1 286</b>	<b>1 677</b>	<b>2 012</b>	<b>2 078</b>	..
Albania	593	1 143	552	1 450	1 722	1 943	2 098	2 197	..
Armenia	..	..	2 723	1 297	1 522	1 726	1 967	1 933	..
Azerbaijan	..	..	2 576	2 040	2 388	1 603	2 245	2 215	..
Belarus	..	..	4 381	2 996	3 245	3 563	3 560	3 546	..
Bosnia and Herzegovina	..	..	2 938	2 022	2 379	3 142	3 422	3 597	..
Bulgaria	2 683	3 973	4 759	3 674	4 165	4 560	4 858	4 956	..
Croatia	..	..	2 965	2 856	3 476	3 813	3 899	3 967	..
Cyprus <sup>1</sup>	1 225	1 917	3 251	4 612	5 748	6 230	5 098	5 453	..
FYR of Macedonia	..	..	2 668	2 895	3 373	3 574	3 426	3 197	..
Georgia	..	..	3 039	1 453	1 785	1 977	2 734	2 880	..
Gibraltar	1 808	1 857	2 643	4 172	4 548	5 548	6 382	7 235	..
Kazakhstan	..	..	5 905	3 169	4 012	4 728	5 774	5 620	..
Kosovo	..	..	..	1 557	2 169	2 649	2 914	2 368	..
Kyrgyzstan	..	..	2 331	1 696	1 374	1 372	1 831	1 765	..
Lithuania	..	..	4 023	2 517	3 187	3 471	3 906	4 051	..
Malta	1 209	1 662	2 825	4 313	4 911	4 687	5 042	4 954	..
Republic of Moldova	..	..	3 235	1 638	2 048	1 723	1 396	1 334	..
Montenegro	..	..	..	..	6 318	5 423	4 727	4 661	..
Romania	1 907	2 872	2 925	1 988	2 365	2 551	2 645	2 688	..
Russian Federation	..	..	6 673	5 198	5 770	6 410	6 588	6 715	..
Serbia	..	..	3 492	3 886	3 922	4 359	4 540	4 621	..
Tajikistan	..	..	3 358	2 162	2 129	1 865	1 539	1 507	..
Turkmenistan	..	..	2 283	1 692	2 052	2 382	2 954	2 903	..
Ukraine	..	..	4 787	2 778	3 246	3 555	3 209	3 204	..
Uzbekistan	..	..	2 383	1 780	1 717	1 653	1 638	1 628	..
Former Soviet Union	3 355	4 424	x	x	x	x	x	x	x
Former Yugoslavia	1 533	2 464	x	x	x	x	x	x	x
<b>Non-OECD Europe and Eurasia</b>	<b>3 085</b>	<b>4 136</b>	<b>5 033</b>	<b>3 649</b>	<b>4 076</b>	<b>4 438</b>	<b>4 549</b>	<b>4 592</b>	..
Algeria	158	328	528	680	887	1 013	1 444	1 479	..
Angola	101	57	52	75	109	206	311	319	..
Benin	19	28	35	58	74	96	106	107	..
Botswana	..	..	718	1 099	1 420	1 580	1 769	1 688	..
Cameroon	153	156	200	178	190	266	278	285	..
Congo	61	80	168	93	114	137	192	189	..
Côte d'Ivoire	111	177	156	172	172	216	265	286	..
Dem. Rep. of the Congo	167	151	131	97	90	105	96	95	..
Egypt	194	375	663	962	1 241	1 551	1 744	1 783	..
Eritrea	..	..	..	51	61	62	66	66	..
Ethiopia	18	18	23	23	33	46	85	89	..
Gabon	259	722	917	878	908	949	1 031	1 092	..
Ghana	392	426	327	332	246	283	316	360	..
Kenya	85	105	125	106	130	150	164	165	..
Libya	370	1 120	1 577	2 223	3 431	3 377	4 873	4 685	..
Mauritius	180	299	670	1 363	1 684	1 996	2 233	2 272	..
Morocco	152	237	358	489	633	774	881	897	..
Mozambique	57	36	41	123	442	440	535	413	..
Namibia	..	..	..	994	1 451	1 547	1 562	1 576	..
Niger	..	..	..	33	37	44	55	53	..
Nigeria	35	77	113	96	136	140	147	141	..
Senegal	80	103	103	102	158	199	235	246	..
South Africa	2 455	3 456	4 240	4 587	4 664	4 564	4 148	4 031	..
South Sudan	..	..	..	..	..	..	46	34	..
Sudan	32	37	49	64	78	136	290	318	..
United Rep. of Tanzania	34	37	51	58	78	93	99	108	..
Togo	56	63	91	94	108	123	164	166	..
Tunisia	192	403	632	977	1 084	1 364	1 456	1 459	..
Zambia	1 118	1 031	763	591	681	580	731	674	..
Zimbabwe	866	976	887	873	832	547	504	457	..
Other Africa	50	55	56	71	75	85	79	79	..
<b>Africa</b>	<b>264</b>	<b>369</b>	<b>455</b>	<b>498</b>	<b>543</b>	<b>562</b>	<b>583</b>	<b>576</b>	..

1. Please refer to section 'Geographical coverage'.

## Electricity consumption/population (kWh per capita)

<i>kWh per capita</i>	1973	1980	1990	2000	2005	2010	2015	2016	2017p
Bangladesh	15	19	48	101	171	240	326	353	..
Brunei Darussalam	1 577	1 691	4 320	7 550	8 466	8 802	9 404	9 520	..
Cambodia	..	..	..	33	67	145	329	396	..
DPR of Korea	963	1 099	1 237	712	807	742	458	562	..
India	101	142	273	395	469	643	864	918	..
Indonesia	16	46	163	390	500	634	821	865	..
Malaysia	375	659	1 157	2 748	2 877	4 160	4 550	4 656	..
Mongolia	..	..	1 489	1 054	1 252	1 492	2 051	2 068	..
Myanmar	23	35	45	76	76	125	256	293	..
Nepal	6	12	35	59	77	103	137	172	..
Pakistan	101	136	277	372	463	465	499	500	..
Philippines	322	374	361	499	577	640	737	799	..
Singapore	1 599	2 718	4 983	7 575	8 678	8 680	8 949	9 041	..
Sri Lanka	67	97	154	297	404	463	585	627	..
Chinese Taipei	1 221	2 236	4 194	8 031	9 616	10 230	10 669	10 880	..
Thailand	161	291	709	1 448	1 915	2 307	2 590	2 868	..
Viet Nam	40	55	98	295	580	1 035	1 549	1 616	..
Other Non-OECD Asia	151	205	185	258	285	378	509	470	..
<b>Non-OECD Asia excl. China</b>	<b>125</b>	<b>182</b>	<b>328</b>	<b>523</b>	<b>634</b>	<b>799</b>	<b>987</b>	<b>1 040</b>	..
People's Rep. of China	176	282	511	993	1 782	2 944	4 046	4 279	..
Hong Kong, China	1 416	2 157	4 178	5 447	5 879	5 974	6 397	6 382	..
<b>China</b>	<b>182</b>	<b>291</b>	<b>529</b>	<b>1 016</b>	<b>1 804</b>	<b>2 959</b>	<b>4 059</b>	<b>4 290</b>	..
Argentina	956	1 234	1 300	2 078	2 393	2 847	3 145	3 109	..
Bolivia	173	253	266	420	482	604	775	757	..
Brazil	553	1 013	1 457	1 892	2 007	2 361	2 539	2 504	..
Colombia	421	618	842	829	896	1 078	1 463	1 444	..
Costa Rica	675	932	1 080	1 521	1 736	1 901	1 985	2 039	..
Cuba	547	841	1 214	1 136	1 153	1 291	1 497	1 511	..
Curaçao	3 988	4 173	3 587	4 648	4 764	4 852	4 361	4 644	..
Dominican Republic	400	441	389	1 360	1 292	1 329	1 542	1 599	..
Ecuador	163	360	481	638	800	1 144	1 422	1 434	..
El Salvador	204	274	353	617	758	860	984	959	..
Guatemala	145	252	200	330	481	542	605	629	..
Haiti	20	41	58	35	37	24	40	43	..
Honduras	143	211	368	493	586	624	872	823	..
Jamaica	1 001	661	866	2 274	2 393	1 213	1 039	1 066	..
Nicaragua	222	260	308	348	417	514	617	606	..
Panama	630	773	833	1 267	1 455	1 745	2 211	2 229	..
Paraguay	105	242	505	887	864	1 179	1 661	1 715	..
Peru	417	503	546	680	837	1 094	1 366	1 460	..
Suriname	..	..	..	2 261	2 768	2 998	3 646	3 235	..
Trinidad and Tobago	1 124	1 876	2 682	3 991	5 142	6 190	7 411	7 697	..
Uruguay	705	1 004	1 244	2 030	1 999	2 803	3 001	3 158	..
Venezuela	1 145	1 998	2 449	2 635	2 849	3 131	2 612	2 383	..
Other Non-OECD Americas	5 721	6 274	7 205	9 961	11 080	10 249	8 678	8 759	..
<b>Non-OECD Americas</b>	<b>612</b>	<b>940</b>	<b>1 219</b>	<b>1 574</b>	<b>1 708</b>	<b>1 974</b>	<b>2 131</b>	<b>2 106</b>	..
Bahrain	2 083	4 611	15 619	20 003	21 330	18 036	20 264	19 514	..
Islamic Republic of Iran	384	538	943	1 535	2 060	2 631	2 979	3 153	..
Iraq	305	792	1 305	1 237	834	1 196	1 227	1 157	..
Jordan	174	366	935	1 295	1 593	1 866	1 897	1 898	..
Kuwait	3 695	6 050	8 205	14 026	17 025	16 723	14 878	15 279	..
Lebanon	650	974	518	2 994	2 811	3 479	2 872	2 797	..
Oman	51	624	2 187	3 202	3 924	5 522	7 045	6 998	..
Qatar	2 958	9 701	9 597	14 360	15 465	14 819	15 723	15 477	..
Saudi Arabia	415	1 961	3 995	5 638	6 590	7 973	9 921	9 818	..
Syrian Arab Republic	182	357	689	1 065	1 503	1 853	806	825	..
United Arab Emirates	1 690	5 629	8 356	12 232	12 302	10 968	12 893	13 045	..
Yemen	32	62	122	139	179	250	171	143	..
<b>Middle East</b>	<b>382</b>	<b>867</b>	<b>1 607</b>	<b>2 351</b>	<b>2 839</b>	<b>3 547</b>	<b>4 023</b>	<b>4 070</b>	..





# ANNEX



## ADDITIONAL BALANCES

For this 2018 edition, the IEA Secretariat continued the successful cooperation with the two countries: Greenland and Mali. For this 2018 edition, their data are published as an annex, but will be included in the full book in future years.

The IEA Secretariat is very grateful to statisticians in both countries for their support to broaden the scope of country coverage.

Note that Mali energy data are included in the Africa region, as well as in “Other Africa”. Greenland energy data are not included in any regional aggregate after 1990. Prior to 1990, Greenland data are included in Denmark data.

### Greenland

#### General notes

- From 2015 on, the statistical difference reported in oil products reflects the use of waste oil for energy production purposes.

#### Sources

##### *Sources 2004 to 2016:*

- Direct communication with Statistics Greenland, Nuuk.
- Statbank Greenland, accessed April 2018, <http://bank.stat.gl>

- IEA Secretariat estimates.

##### *Sources for biofuels and waste:*

- Statbank Greenland, accessed April 2018, <http://bank.stat.gl>
- IEA Secretariat estimates.

### Mali

#### Sources

##### *Sources 2000 to 2016:*

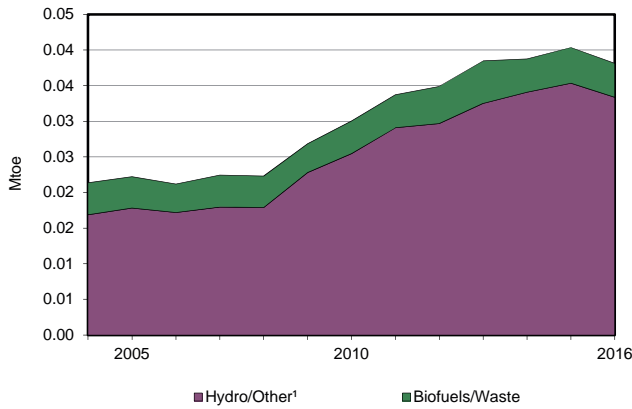
- Direct communication with the Ministère de l’Energie et de l’Eau, Bamako.
- *Système d’Information Energétique du Mali 2014 and 2015*, Ministère de l’Energie et de l’Eau, Bamako, 2015 and 2017.
- *Rapport Annuel 2011 to 2015*, Energie du Mali, Bamako, 2012 to 2016.
- AFREC Energy questionnaire, African Energy Commission, 2000 to 2015.

##### *Sources for biofuels and waste:*

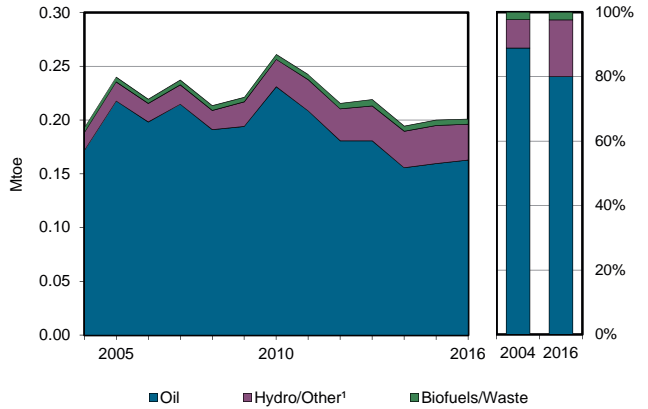
- AFREC Energy questionnaire, African Energy Commission, 2000 to 2015.
- IEA Secretariat estimates.

## Greenland

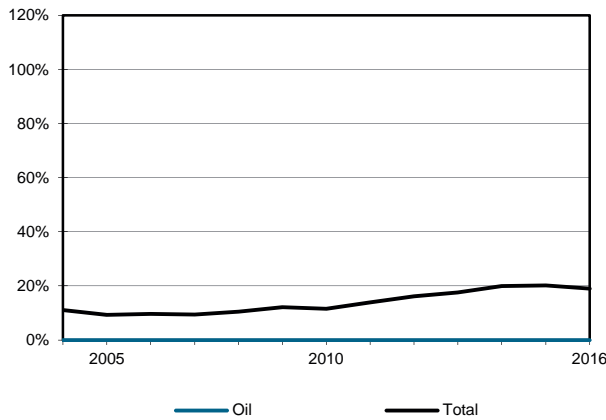
**Figure 1. Energy production**



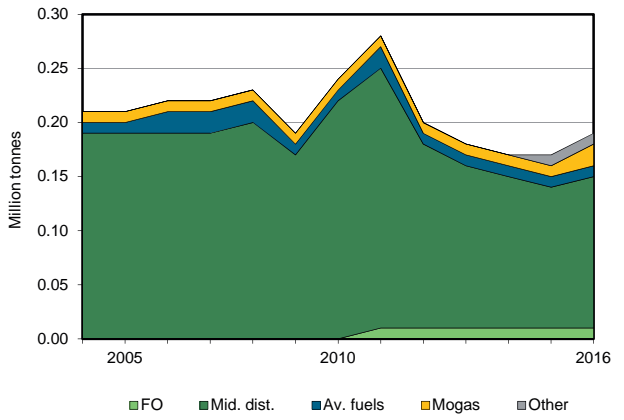
**Figure 2. Total primary energy supply²**



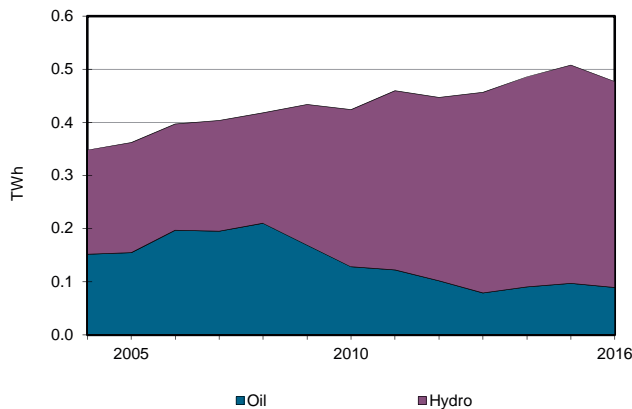
**Figure 3. Energy self-sufficiency³**



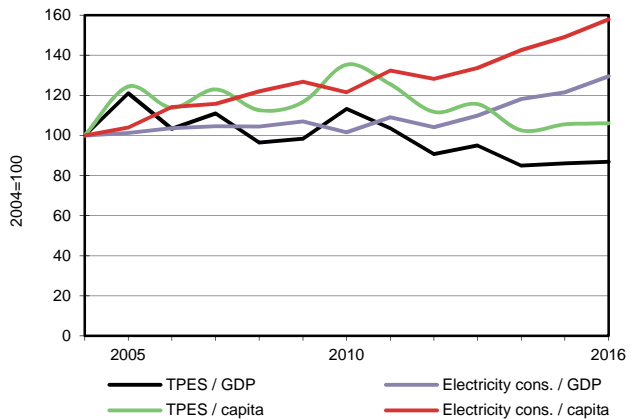
**Figure 4. Oil products demand⁴**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators⁵**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. GDP in 2010 USD.

## Greenland

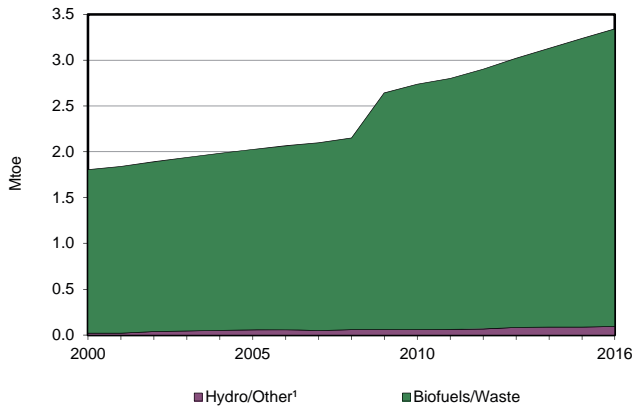
2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	-	-	-	-	33	-	5	-	-	38
Imports	-	-	190	-	-	-	-	-	-	-	190
Exports	-	-	-	-	-	-	-	-	-	-	-
Intl. marine bunkers	-	-	-17	-	-	-	-	-	-	-	-17
Intl. aviation bunkers	-	-	-7	-	-	-	-	-	-	-	-7
Stock changes	-	-	-2	-	-	-	-	-	-	-	-2
<b>TPES</b>	-	-	<b>163</b>	-	-	<b>33</b>	-	<b>5</b>	-	-	<b>201</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-	-	10	-	-	-	-	-	-0	-	10
Electricity plants	-	-	-	-	-	-33	-	-	33	-	-
CHP plants	-	-	-35	-	-	-	-	-5	8	18	-14
Heat plants	-	-	-	-	-	-	-	-	-11	10	-1
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-	-	-	-	-	-	-	-	-	-
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-	-	-	-
Energy industry own use	-	-	-	-	-	-	-	-	-1	-0	-1
Losses	-	-	-2	-	-	-	-	-	-1	-10	-14
<b>TFC</b>	-	-	<b>135</b>	-	-	-	-	-	<b>27</b>	<b>17</b>	<b>180</b>
<b>INDUSTRY</b>	-	-	<b>9</b>	-	-	-	-	-	<b>4</b>	<b>0</b>	<b>14</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	1	-	-	-	-	-	-	-	1
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	3	-	-	-	-	-	1	0	4
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	5	-	-	-	-	-	4	0	9
<b>TRANSPORT</b>	-	-	<b>32</b>	-	-	-	-	-	-	-	<b>32</b>
Domestic aviation	-	-	7	-	-	-	-	-	-	-	7
Road	-	-	11	-	-	-	-	-	-	-	11
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	12	-	-	-	-	-	-	-	12
Non-specified	-	-	1	-	-	-	-	-	-	-	1
<b>OTHER</b>	-	-	<b>94</b>	-	-	-	-	-	<b>23</b>	<b>17</b>	<b>134</b>
Residential	-	-	33	-	-	-	-	-	9	10	52
Comm. and public services	-	-	16	-	-	-	-	-	14	7	38
Agriculture/forestry	-	-	-	-	-	-	-	-	-	-	-
Fishing	-	-	45	-	-	-	-	-	-	-	45
Non-specified	-	-	-	-	-	-	-	-	-	-	-
<b>NON-ENERGY USE</b>	-	-	-	-	-	-	-	-	-	-	-
in industry/transf./energy	-	-	-	-	-	-	-	-	-	-	-
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	-	-	<b>89</b>	-	-	<b>388</b>	-	-	-	-	<b>477</b>
Electricity plants	-	-	-	-	-	388	-	-	-	-	388
CHP plants	-	-	89	-	-	-	-	-	-	-	89
<b>Heat generated - TJ</b>	-	-	<b>654</b>	-	-	-	-	<b>94</b>	<b>415</b>	-	<b>1163</b>
CHP plants	-	-	654	-	-	-	-	94	-	-	748
Heat plants	-	-	-	-	-	-	-	-	415	-	415

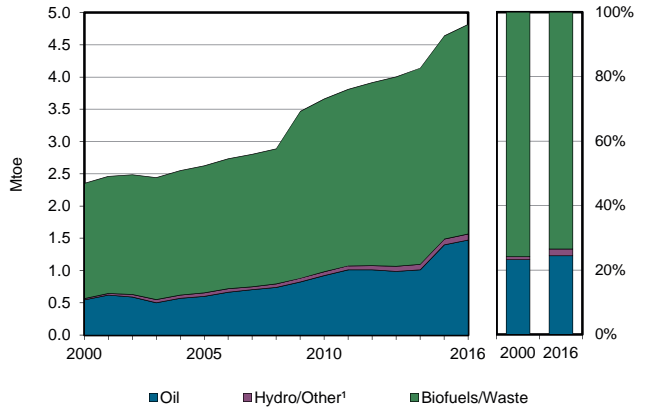
1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

## Mali

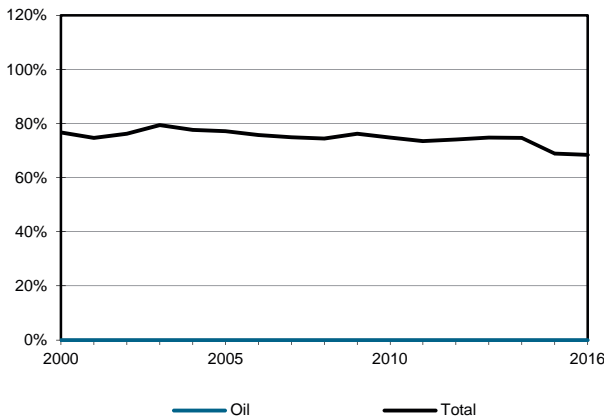
**Figure 1. Energy production**



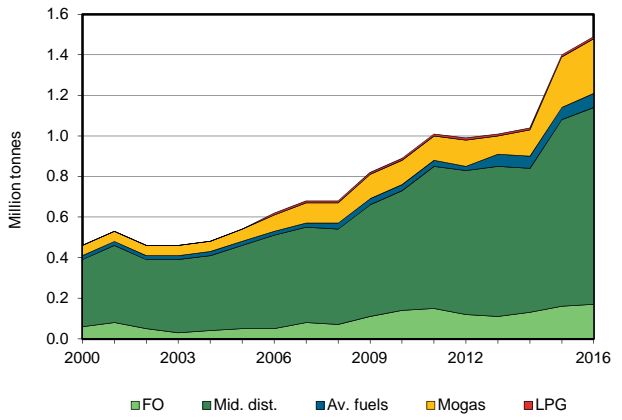
**Figure 2. Total primary energy supply<sup>2</sup>**



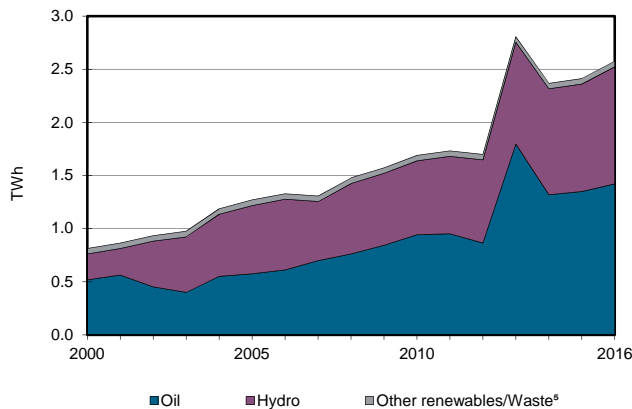
**Figure 3. Energy self-sufficiency<sup>3</sup>**



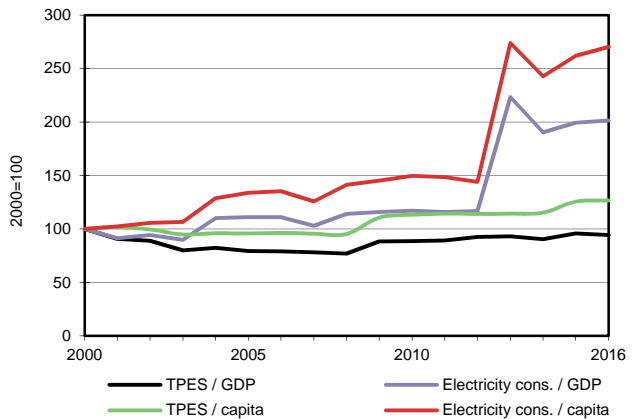
**Figure 4. Oil products demand<sup>4</sup>**



**Figure 5. Electricity generation by source**



**Figure 6. Selected indicators<sup>6</sup>**



In these graphs, peat and oil shale are aggregated with coal, where applicable.

1. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.
2. Excluding electricity trade.
3. Production divided by TPES. 100% represents full self-sufficiency.
4. Includes international bunkers. LPG: LPG, NGL, ethane and naphtha. Other also includes direct use of crude oil and other hydrocarbons.
5. Includes geothermal, solar, wind, tide/wave/ocean, biofuels, waste, heat and other.
6. GDP in 2010 USD.

## Mali

2016

Thousand tonnes of oil equivalent											
SUPPLY AND CONSUMPTION	Coal	Crude oil <sup>1</sup>	Oil products	Natural gas	Nuclear	Hydro	Geotherm./Solar/etc.	Biofuels/Waste	Electricity	Heat	Total
Production	-	-	-	-	-	95	0	3245	-	-	3340
Imports	-	-	1544	-	-	-	-	-	69	-	1613
Exports	-	-	-	-	-	-	-	-	-	-	-
Intl. marine bunkers	-	-	-	-	-	-	-	-	-	-	-
Intl. aviation bunkers	-	-	-71	-	-	-	-	-	-	-	-71
Stock changes	-	-	-	-	-	-	-	-	-	-	-
<b>TPES</b>	-	-	<b>1474</b>	-	-	<b>95</b>	<b>0</b>	<b>3245</b>	<b>69</b>	-	<b>4883</b>
Transfers	-	-	-	-	-	-	-	-	-	-	-
Statistical differences	-	-	-3	-	-	-	-	-	-	-	-3
Electricity plants	-	-	-655	-	-	-95	-0	-69	222	-	-597
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-
Gas works	-	-	-	-	-	-	-	-	-	-	-
Coke/pat.fuel/BKB/PB plants	-	-	-	-	-	-	-	-	-	-	-
Oil refineries	-	-	-	-	-	-	-	-	-	-	-
Petrochemical plants	-	-	-	-	-	-	-	-	-	-	-
Liquefaction plants	-	-	-	-	-	-	-	-	-	-	-
Other transformation	-	-	-	-	-	-	-	-848	-	-	-848
Energy industry own use	-	-	-	-	-	-	-	-	-1	-	-1
Losses	-	-	-	-	-	-	-	-	-26	-	-26
<b>TFC</b>	-	-	<b>815</b>	-	-	-	-	<b>2329</b>	<b>263</b>	-	<b>3407</b>
<b>INDUSTRY</b>	-	-	<b>39</b>	-	-	-	-	-	<b>100</b>	-	<b>139</b>
Iron and steel	-	-	-	-	-	-	-	-	-	-	-
Chemical and petrochemical	-	-	-	-	-	-	-	-	-	-	-
Non-ferrous metals	-	-	-	-	-	-	-	-	-	-	-
Non-metallic minerals	-	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-	-
Machinery	-	-	-	-	-	-	-	-	-	-	-
Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-
Food and tobacco	-	-	-	-	-	-	-	-	-	-	-
Paper pulp and printing	-	-	-	-	-	-	-	-	-	-	-
Wood and wood products	-	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-	-	-
Textile and leather	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	39	-	-	-	-	-	100	-	139
<b>TRANSPORT</b>	-	-	<b>681</b>	-	-	-	-	-	-	-	<b>681</b>
Domestic aviation	-	-	-	-	-	-	-	-	-	-	-
Road	-	-	-	-	-	-	-	-	-	-	-
Rail	-	-	-	-	-	-	-	-	-	-	-
Pipeline transport	-	-	-	-	-	-	-	-	-	-	-
Domestic navigation	-	-	-	-	-	-	-	-	-	-	-
Non-specified	-	-	681	-	-	-	-	-	-	-	681
<b>OTHER</b>	-	-	<b>96</b>	-	-	-	-	<b>2329</b>	<b>163</b>	-	<b>2588</b>
Residential	-	-	52	-	-	-	-	2102	77	-	2231
Comm. and public services	-	-	-	-	-	-	-	227	38	-	265
Agriculture/forestry	-	-	43	-	-	-	-	-	-	-	43
Fishing	-	-	-	-	-	-	-	-	0	-	0
Non-specified	-	-	-	-	-	-	-	-	48	-	48
<b>NON-ENERGY USE</b>	-	-	-	-	-	-	-	-	-	-	-
in industry/transf./energy	-	-	-	-	-	-	-	-	-	-	-
of which: chem./petrochem.	-	-	-	-	-	-	-	-	-	-	-
in transport	-	-	-	-	-	-	-	-	-	-	-
in other	-	-	-	-	-	-	-	-	-	-	-
<b>Electricity and Heat Output</b>											
<b>Electr. generated - GWh</b>	-	-	<b>1422</b>	-	-	<b>1102</b>	<b>2</b>	<b>52</b>	-	-	<b>2578</b>
Electricity plants	-	-	1422	-	-	1102	2	52	-	-	2578
CHP plants	-	-	-	-	-	-	-	-	-	-	-
<b>Heat generated - TJ</b>	-	-	-	-	-	-	-	-	-	-	-
CHP plants	-	-	-	-	-	-	-	-	-	-	-
Heat plants	-	-	-	-	-	-	-	-	-	-	-

1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

# Energy Data Officer/Statistician

## Possible staff vacancies

International Energy Agency, Paris, France

### The IEA

The International Energy Agency, based in Paris, acts as energy policy advisor to 30 member countries in their effort to ensure reliable, affordable and clean energy for their citizens. Founded during the oil crisis of 1973-74, the initial role of the IEA was to co-ordinate measures in times of oil supply emergencies. As energy markets have changed, so has the IEA. Its mandate has broadened to incorporate the “Three E’s” of balanced energy policy making: energy security, economic development and environmental protection. Current work focuses on climate change policies, market reform, energy technology collaboration and outreach to the rest of the world, especially major consumers and producers of energy like China, India, Russia and the OPEC countries.

The Energy Data Centre, with a staff of around 30 people, provides a dynamic environment for young people just finishing their studies or with one to two years of work experience.

### Job description

The data officers/statisticians compile, verify and disseminate information on all aspects of energy including production, transformation and consumption of all fuels, energy efficiency indicators, CO<sub>2</sub> emissions, and energy prices and taxes. The data officers are responsible for the production of data sets through receiving, reviewing and inputting data submissions from member countries and other sources. They check for completeness, correct calculations, internal consistency, accuracy and consistency with definitions. Often this entails proactively investigating and helping to resolve anomalies in collaboration with national administrations. The data officers/statisticians also design and implement computer macros used in the preparation of their energy statistics publication(s) alongside analysis of the data.

### Principal qualifications

- University degree in a topic relevant to energy, or statistics. We currently have staff with degrees in mathematics, statistics, information technology, economics, engineering, physics, environmental studies, etc.
- Experience in the basic use of databases and computer software. Experience in Visual Basic is an advantage.
- Ability to work accurately, pay attention to detail and work to deadlines; ability to deal simultaneously with a wide variety of tasks and to organise work efficiently.
- Good communication skills; ability to work well in a team and in a multicultural environment, particularly in liaising with contacts in national administrations and industry; ability to understand, and communicate data.
- An excellent written and oral command of English; knowledge of other languages would be an asset.
- Some knowledge of energy industry operations and terminology would also be an advantage, but is not required.

Nationals of any IEA member country are eligible for appointment. Basic salaries start at 3 300 euros per month. The possibilities for advancement are good for candidates with appropriate qualifications and experience. Tentative enquiries about future vacancies are welcomed from men and women with relevant qualifications and experience. Applications in English, accompanied by a curriculum vitae, should be sent to:

Office of Management and Administration  
International Energy Agency  
31-35 rue de la Fédération  
75739 Paris Cedex 15, France



## Online data services

Users can instantly access not only all the data published in this book, but also all the time series used for preparing this publication and all the other statistics publications of the IEA. The data are available online, either through annual subscription or pay-per-view access. More information on this service can be found on our website at <http://data.iea.org>.

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## Nine annual publications

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### ■ World Energy Statistics 2018

*World Energy Statistics* provides comprehensive world energy statistics on all energy sources – coal, gas, oil, electricity, renewables and waste. It covers energy supply and consumption for 150 countries and regions, including all OECD countries, over 100 other key energy producing and consuming countries, as well as world totals and various regional aggregates. The book includes detailed tables by country in original units, and summary time series on production, trade, and final consumption by sector.

*Published August 2018 - Price: Print €120; PDF €96*

### ■ World Energy Balances 2018

*World Energy Balances* provides comprehensive energy balances for all the world's largest energy producing and consuming countries. It contains detailed data on the supply and consumption of energy for 150 countries and regions, including all OECD countries, over 100 other key energy producing and consuming countries, as well as world totals and various regional aggregates. The book includes graphs and detailed data by country for all energy sources – coal, gas, oil, electricity, renewables and waste - expressed in balance format. Alongside this, there are summary time series on production, trade, final consumption by sector, as well as key energy and economic indicators and an overview of trends in global energy production and use.

*Published August 2018 - Price: Print €120; PDF €96*

### ■ Coal Information 2018

*Coal Information* provides a comprehensive review of historical and current market trends in the world coal sector. It provides an overview of world coal developments covering coal production and coal reserves, coal demand by type, coal trade and coal prices. A detailed and comprehensive statistical picture of historical and current coal developments in the 35 OECD member countries, by region and individually is presented in tables and charts. Complete coal balances and coal trade data for selected years are presented on 22 major non-OECD coal-producing and -consuming countries, with summary statistics on coal supply and end-use statistics for about 40 countries and regions worldwide.

*Published August 2018 - Price: Print €165; PDF €132*

## ■ Electricity Information 2018

*Electricity Information* provides a comprehensive review of historical and current market trends in the OECD electricity sector. It provides an overview of the world electricity developments covering world electricity and heat production, input fuel mix, supply and consumption, and electricity imports and exports. More detail is provided for the 35 OECD countries with information covering production, installed capacity, input energy mix to electricity and heat production, consumption, electricity trades, input fuel prices and end-user electricity prices. It provides comprehensive statistical details on overall energy consumption, economic indicators, electricity and heat production by energy form and plant type, electricity imports and exports, sectoral energy and electricity consumption, as well as prices for electricity and electricity input fuels for each country and regional aggregate.

*Published August 2018 - Price: Print €150; PDF €120*

## ■ Natural Gas Information 2018

*Natural Gas Information* is a detailed reference work on gas supply and demand covering OECD countries and the rest of the world. The publication contains essential information on LNG and pipeline trade, gas reserves, storage capacity and prices. The main part of the book concentrates on OECD countries, showing a detailed supply and demand balance for each country and for the three OECD regions: Americas, Asia-Oceania and Europe, as well as a breakdown of gas consumption by end user. Import and export data are reported by source and destination.

*Published August 2018 - Price: Print €165; PDF €132*

## ■ Oil Information 2018

*Oil Information* is a comprehensive reference book on current developments in oil supply and demand. This publication contains key data on world production, trade, prices and consumption of major oil product groups, with time series back to the early 1970s. Its core consists of a detailed and comprehensive picture of oil supply, demand, trade, production and consumption by end-user for each OECD country individually and for the OECD regions. Trade data are reported extensively by origin and destination.

*Published August 2018 - Price: Print €165; PDF €132*

## ■ Renewables Information 2018

*Renewables Information* provides a comprehensive review of historical and current market trends in OECD countries. It provides an overview of the development of renewables and waste in the world since 1990. A greater focus is given to the OECD countries with a review of electricity generation and capacity from renewable and waste energy sources, including detailed tables. However, an overview of developments in the world and OECD renewable and waste market is also presented. The publication encompasses energy indicators, generating capacity, electricity and heat production from renewable and waste sources, as well as production and consumption of renewables and waste.

*Published August 2018 - Price: Print €110; PDF €88*

## ■ CO<sub>2</sub> Emissions from Fuel Combustion 2018

*CO<sub>2</sub> Emissions from Fuel Combustion* provides a full analysis of emissions stemming from energy use. The data in this book cover the emissions of CO<sub>2</sub> for 150 countries and regions by sector and by fuel. The publication contains estimates of CO<sub>2</sub> emissions, selected indicators such as CO<sub>2</sub>/GDP, CO<sub>2</sub>/capita and CO<sub>2</sub>/TPES and a decomposition of CO<sub>2</sub> emissions into driving factors for more than 150 countries and regions. Emissions are calculated using IEA energy databases and the default methods and emission factors from the *2006 IPCC Guidelines for National Greenhouse Gas Inventories*.

*Published November 2018 - Price: Print €165; PDF €132*

## ■ Energy Efficiency Indicators Highlights 2018

*Energy Efficiency Indicators Highlights* is designed to help understand what drives final energy use in IEA member countries in order to improve and track national energy efficiency policies. It provides the first comprehensive selection of data that the IEA has been collecting each year after its member states recognised in 2009 the need to better monitor energy efficiency policies. The report includes country-specific analysis of end uses across the largest sectors – residential, services, industry and transport. It answers questions such as:

- What are the largest drivers for energy use trends in each country?
- Was energy saved because of efficiency progress over time?
- How much energy is used for space heating, appliances or cooking?
- What are the most energy-intensive industries?

Improving energy efficiency is a critical step for governments to take to move towards a sustainable energy system. This report highlights the key role of end-use energy data and indicators in monitoring progress in energy efficiency around the world.

*Published December 2018 - Free pdf*

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## Two quarterlies

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## ■ Oil, Gas, Coal and Electricity

*Oil, Gas, Coal and Electricity* provides detailed and up-to-date quarterly statistics on oil, natural gas, coal and electricity for the OECD countries. Oil statistics cover production, trade, refinery intake and output, stock changes and consumption for crude oil, NGL and nine selected product groups. Statistics for electricity, natural gas and coal show supply and trade. Oil and coal import and export data are reported by origin and destination. Gas imports and exports data are reported by entries and exits of physical flows. Moreover, oil and coal production are reported on a worldwide basis.

*Published Quarterly - Price €120, annual subscription: Print €380; PDF €304*

## ■ Energy Prices and Taxes

*Energy Prices and Taxes* provides up-to-date information on prices and taxes in national and international energy markets. It contains crude oil import prices by crude stream, industry prices and consumer prices. The end-user prices for OECD member countries cover main oil products, gas, coal and electricity. Every issue includes full notes on sources and methods and a description of price and tax components in each country.

*Published Quarterly - Price €120, annual subscription: Print €380; PDF €304*

## Electronic editions

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To complement its publications, the Energy Data Centre produces online data services containing the complete databases which are used for preparing the statistics publications. Built-in software allows you to access and manipulate all these data in a very user-friendly manner and includes graphic facilities.

### Annual Databases

- World Energy Statistics 2018 Price: €800 (single user)
- World Energy Balances 2018 Price: €800 (single user)
- **World Energy Statistics and Balances 2018**  
(Combined subscription of the above two series) Price: €1 400 (single user)
- Coal Information 2018 Price: €550 (single user)
- Electricity Information 2018 Price: €550 (single user)
- Natural Gas Information 2018 Price: €550 (single user)
- Oil Information 2018 Price: €550 (single user)
- Renewables Information 2018 Price: €400 (single user)
- CO<sub>2</sub> Emissions from Fuel Combustion 2018 Price: €400 (single user)
- Energy Efficiency Indicators 2018 Price: €400 (single user)

### Quarterly Databases

- Energy Prices and Taxes Price: (four quarters) €900 (single user)

## Other services

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### ■ Emissions Factors 2018

The *Emissions Factors* database includes a series of indicators related to emissions from electricity and heat generation for over 150 countries and regions, based on the IEA *World Energy Balances* and *CO<sub>2</sub> Emissions from Fuel Combustion* data. The main factors included are: CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O emissions per kWh of electricity and heat; adjustments due trade (for OECD) and to losses; emission factors by fuel for sectors other than electricity. The database is available in Excel format.

Price: €550 (single user)

### ■ World Energy Prices 2018

The *World Energy Prices* data service contains annual end-use energy prices for selected products and sectors for over one hundred countries in the world. Complementing the quarterly OECD *Energy Prices and Taxes*, the world database focuses on prices for gasoline and diesel for transport; as well as electricity for households and industry.

Price: €400 (single user)

### ■ Energy Prices & Taxes and World Energy Prices package

This service is a package containing both the *Energy Prices and Taxes* and *World Energy Prices* online data services offered at a reduced rate.

Price: €1 100 (single user)

Detailed descriptions of all these data services are available on our website at <http://data.iea.org>.

## ■ The Monthly Oil Data Service

The *Monthly Oil Data Service* provides the detailed databases of historical and projected information which is used in preparing the IEA's monthly *Oil Market Report* (OMR). The *Monthly Oil Data Service* is available as an annual subscription and includes twelve monthly updates. The service comprises three packages available separately or combined. The data are released on the same day as the official release of the *Oil Market Report*.

The packages include:

- |                                       |                                    |
|---------------------------------------|------------------------------------|
| ■ Supply, Demand, Balances and Stocks | Price: €6 150 (single user)        |
| ■ Trade                               | Price: €2 050 (single user)        |
| ■ Field-by-Field Supply               | Price: €3 080 (single user)        |
| ■ <b>Complete Service</b>             | <b>Price: €9 200 (single user)</b> |

A description of this service is available on our website at [www.iea.org/statistics/mods](http://www.iea.org/statistics/mods).

## ■ The Monthly Gas Data Service

The *Monthly Gas Data Service* provides the following monthly natural gas data for OECD countries:

- Supply balances in terajoules and cubic metres;
- Production, trade, stock changes and levels where available, gross inland deliveries, own use and losses;
- Highly detailed trade data with about 50 import origins and export destinations;
- LNG trade detail available from January 2002,
- From 2011 onwards, transit volumes are included and trade data corresponds to entries/exits.

The databases cover the time period January 1984 to current month with a time lag of two months for the most recent data.

Price: €800 (single user)

For more information consult [www.iea.org/statistics/mgds](http://www.iea.org/statistics/mgds).

**Moreover, the IEA statistics website contains a wealth of free statistics covering oil, natural gas, coal, electricity, renewables, energy-related CO<sub>2</sub> emissions and more for 150 countries and regions and historic data for the last 20 years. It also contains Sankey flows to enable users to explore visually how a country's energy balance shifts over up to 40 years, starting with production and continuing through transformation to see important changes in supply mix or share of consumption. The IEA Energy Atlas offers panoramas on every aspect of energy on a global basis and for 150 individual countries, with interactive maps and customisable charts that detail and compare a host of data based on the Agency's authoritative statistics. The website also includes free headline energy data in excel format for all OECD countries and global regions from 1971 onwards as well as for Association countries from 1990 onwards.**

**The IEA statistics website can be accessed at [www.iea.org/statistics/](http://www.iea.org/statistics/)**



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IEA Publications

International Energy Agency

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Contact information: [www.iea.org/about/contact](http://www.iea.org/about/contact)

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More detailed data in original units are published in the companion publication *World Energy Statistics*.

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