



KEMENTERIAN KOORDINATOR
BIDANG PEREKONOMIAN
REPUBLIK INDONESIA



Focus Group Discussion: Investment models for scaling up renewable energy deployment in Indonesia's eastern islands

21 October 2020 • 8h30-11h00 CEST/13h30-16h00 WIB

Background

The OECD [Clean Energy Finance and Investment Mobilisation \(CEFIM\) Programme](#) aims to support Indonesia in strengthening its policy frameworks to accelerate investment in clean energy. This focus group discussion (FGD) is one in a series of virtual events that are part of the OECD *Clean Energy Finance and Investment Review* of Indonesia. These FGDs call upon Indonesian and international experiences in topical areas, which will help produce insights and provide recommendations on the enabling conditions to mobilise clean energy finance and investment in Indonesia.

This third FGD discussed the various business models and policies that can enable renewables deployment in an island context. The FGD will also highlight major policy and financing challenges faced by project developers as well as the utility in integrating variable renewable energy and highlighted international experiences in overcoming these challenges in similar geographical contexts.

Summary of Discussions

Indonesia is already taking steps to improve its clean energy policy and regulatory framework that can help support investments in eastern islands and achieve its goal of 23% of renewable energy in total primary energy supply. As part of the Renewable Energy Based Economic Development (REBED) Programme, the country is making considerable efforts to increase energy access in frontier, remote and disadvantaged areas as well as convert diesel generators to renewable / hybrid power plants. This is supported by PLN's "Green Transformation Programme" that aims to accelerate the deployment of renewable energy (including in eastern Indonesia), notably through the construction of floating solar, co-firing of existing coal power plants, and diesel conversion.

A range of measures and incentives are also being (or planned to be) implemented. As of today, Indonesia has implemented a range of fiscal incentives (some as part of COVID-19 Policy Response) to support renewable energy projects. These will be complemented by Presidential Regulation no. 04/2020 (which will revise ministerial regulation no. 50/2017 on "Utilisation of Renewable Energy Sources for Power Supply") that could help remove some of the barriers to renewable energy investments, particularly for small-scale projects in eastern islands. Most notably, Presidential Regulation no.04/2020 intends to streamline the procurement process (through Direct Appointment) as well as re-instate a two-stage Feed-in Tariff (FiT) system for projects of less than 5 MW. The development of such measures and incentives are welcome steps and could usefully draw from the Philippines' experience in designing and implementing a range of power market regulations and incentive schemes (e.g., FiT, Competitive Renewable Energy Zone, Green Energy Option Programme) to promote renewable energy deployment.

As Indonesia also plans to develop a renewable energy roadmap, it could usefully draw from international experience in this area, which notably shows that clear, transparent and consistent (island-level) plans as well as regulations are critical to build public acceptance of projects and drive in investments. The Jeju island's Carbon-Free 2030 Plan, for example, has laid out a clear long term trajectory for renewable deployment, which has helped build public acceptance of wind farms over time and sent positive signals for investments. In French islands, island-level five-year Specific Development Plans (PPEs its French acronym) -- in tandem with reverse

auctions, consistent regulations and low off-taker risks -- have also helped lower the risk perception of renewable energy projects in small islands. However, for such plans to be successful in Indonesia, the country will need to increase collaboration across all sectors and levels of government to improve policy coherence as well as reduce regulatory overlaps.

Increased penetration of solar and wind into the grid of small eastern islands will pose considerable challenges, however, given the limited coverage and capacity of their transmission and distribution (T&D) network. Hence, Indonesia should continue to expand network and integrated mini-grids coverage and capacity in these islands as well as increasingly consider the use of storage to mitigate intermittency – in this regards, the use of hydrogen as storage could potentially be an interesting option to consider, particularly for small islands, as the HDF Energy's experience shows. Such efforts could pay off as *La Réunion* island example demonstrates -- the island is projected to be powered by 100% renewable energy by 2030 (although this is ambitious and would imply tremendous storage capacity) from 32% today with a limited foreseen impact on the local cost of electricity. In the meantime, continuing to improve operational procedures would also be important and could go a long way even before investing in new hardware. Additionally, developing a programmes on productive uses of renewables, including on the demand-side management aspects, can help improve system flexibility as well as help support livelihoods for local communities.

Additionally, smaller eastern islands continue to face considerable capacity issues and high investment costs. It was highlighted that small project developers (below 10 MW) do not yet have the required capacity to develop robust feasibility studies and bankable projects. Consequently, further capacity building as well as project preparation support are needed. Similarly, on the cost side, high local content requirements (which notably define a 60% minimum LCR target for solar photovoltaics as part of Indonesia's strategy to develop a local manufacturing base) significantly add to project costs, especially given that locally produced components are usually more expensive (e.g., 5-10 US cents/Wp above the price of imported solar modules) than that of international competitors.

Last, the lack of access to innovative and affordable financing for projects in eastern islands was also highlighted as a key barrier to investment. This is partly due to the small deal size of projects in eastern Indonesia on the one hand, and a lack of understanding/familiarity of commercial banks with renewable projects on the other. De-risking instruments could help improve the risk-return profile of projects and reduce transaction costs but these are still limited in Indonesia; increasing the availability of instruments such as guarantees or government-supported project insurance programmes, were highlighted as possible solutions. In addition, the use of public private partnership (PPP) was highlighted as a possible option for financing renewable energy projects in eastern islands but would necessitate (among other) the development of dedicated viability gap funding and availability payment schemes to help improve the economic and financial viability of these projects.

Conclusions and recommendations

- Policy and regulatory framework for projects in eastern islands should continue to be strengthened.
- More collaboration across all sectors and levels of government will be necessary to improve policy coherence and avoid regulatory overlaps.
- Project development support should be targeted at smaller project developers (<10MW) to improve the quality of feasibility studies and bankability of projects.
- Indonesia should continue to expand network coverage as in easter islands and consider the use of integrated mini-grids to improve flexibility and storage to mitigate intermittency. Operational procedures are also important to consider as they can go a long way with integration, even before investing in new hardware.
- Indonesia should reconsider high local content requirements which weigh on projects' costs.
- Increasing the availability of de-risking instruments (particularly partial or full guarantees or project insurance programmes) should be considered to improve the risk-return profile of these projects and make them more attractive to banks.

- As the use of PPP grows, Indonesia should also consider developing dedicated viability gap funding to help improve the economic and financial viability of renewable projects in small islands.