Philippines
MINI-GRID
B 2 B
FORUM

KEY RECOMMENDATIONS
FOR DECISION MAKERS

October 2018

SUMMARY OF THE PHILIPPINES MINI-GRID B2B FORUM

With 7,641 islands, 1,702 potential off-grid sites and around 400 MW of diesel generating capacity installed in over 320 off-grid missionary areas, the Philippines offers tremendous potential for the implementation of clean energy and hybrid mini-grids.

7,641 islands

1,702 potential off-grid sites

400 MW

Under the new administration, the Department of Energy of the Philippines' goal is to attain 100% electrification for all islands of the Philippines by 2020.

This is why the government is reviewing current policy and regulatory procedures that will streamline the process on Qualified Third Parties (QTP) and New Power Producer (NPP) investments in hybrid and clean energy mini-grids in the Philippines. The revision will pave the way for collaboration between electric cooperatives and private sector players, which could provide innovative and competitive energy access solutions to answer the country's off-grid power supply challenge.

To make use of this window of opportunity, the Philippine Department of Energy (DOE) and the Alliance for Rural Electrification (ARE) through the support of the European Union through its Access to Sustainable Energy Programme (ASEP), organised the Philippines Mini-Grid B2B Forum on 19-21 September 2018 in Manila Hotel. The Philippines National Electrification Administration (NEA) was also one of the supporting organisations.

The Forum brought together 283 local and international players from more than 30 countries to share knowledge on the latest mini-grid industry developments and innovative technical solutions to bring down the costs, as well as to link key players to form mini-grid partnerships. Participants included:

- More than 100 private sector such project developers, technology providers, and financiers;
- More than 50 local Philippine electric cooperatives;
- More than 50 public sector representatives including the DOE, NEA, ERC and representatives from various EU embassies; representatives from foundations, research institutions, NGOs and various other stakeholders in Philippine energy sector.

283
local and international players from

30
countries

Day 1 and Day 2 of the Forum included high-level discussions, regulatory advisory sessions, pitches from ARE Members on innovations for mini-grids and presentations on mini-grid opportunities from electric cooperatives.

182
bilateral B2B meetings

Day 3 included 182 bilateral B2B meetings, that allowed participants to learn more about each other's business objectives, range of products and services to start discussions on synergies and potential future cooperation opportunities. Based on the survey results received from foreign participants, 16 participants stated that they would or were very likely to invest in mini-grids in the Philippines. A large percentage of the meetings (48%) that took place resulted in general interest; 37% of the meetings even resulted in the expected cooperation between the meeting partners.

- Presentations from the Philippines Mini-Grid B2B Forum are available here.
- The agenda from the Philippines Mini-Grid B2B Forum can be found here.
- The participant list from the Philippines Mini-Grid B2B Forum can be found here.

KEY RECOMMENDATIONS

Based on the latest figures from the National Electrification Administration (NEA), a total of 2,399,108 households in the Philippines remain unserved. In addition, the Philippines has 400 MW of diesel generating capacity installed in over 320 off-grid missionary areas.

2,399,108
households remain unserved

320
off-grid areas

The Philippines Mini-Grid B2B Forum highlighted **key bottlenecks as well as solutions** to achieve full energy access in the Philippines and to increase the share of renewable energy in existing diesel mini-grids and power plants. Key lessons learnt from the Forum include:

1 Increasing capacity of the most challenged local Philippine electric cooperatives

increasing capacity

The Philippines is home to 121 electric cooperatives, each operating in specific islands of the country. The electric cooperatives vastly differ in size and capacity. While the most advanced cooperatives have the capacity to liaise with international donors, private sector, government and other stakeholders by themselves, the smaller electric cooperatives remain financially challenged and lack capacity to develop renewable energy solutions, to write tenders, as well as the capacity to access to information about funding or partnership opportunities.

To address this issue, it is recommended that ASEP, as well as future donor programmes provide additional support to ongoing NEA efforts, which focus on capacity building for the most challenged Philippine electric cooperatives in the field of energy efficiency and renewable energy.

Photo credit: NPC

2 Further improving regulations for clean energy mini-grids in the Philippines

improving regulations for mini-grids

The Philippine government is reviewing its current policy and regulatory procedures for investments in hybrid and clean energy mini-grids. The policy review is welcome and timely, as a number of issues are currently hindering further private sector engagement.

- **Application process for Qualified Third Parties (QTPs) and New Power Producers (NPPs):**

  Based on ASEP studies it is recommended that the Competitive Selection Process (CSP) for QTPs and NPPs will be united into one uniform process.

  At present, the process might take up to two years, which limits interest and investments. With a new streamlined process, it is estimated that the processing time could come down to eight months. A harmonisation is already being addressed in the "Draft Omnibus Guidelines for Missionary Electrification" by the Department of Energy.

- **Exemptions from the Competitive Selection Process (CSP):**

  It is recommended that exemptions in the CSPs for NPPs and QTPs are granted to projects under a certain threshold.

  In such cases, cost benchmarking could be implemented to verify the cost effectiveness of the mini-grid project as well as the reliability of the developer. Furthermore, competitive selection processes tend to benefit larger corporations as they have the capacity and manpower to research and to submit applications. It could hence be considered that small projects under a certain threshold have less stringent rules. In Tanzania, for example, mini-grids with a capacity of less than 1 MW need not to apply for a generation license.

- **Unsolicited proposals:** Under DOE Department Circular No. DC2018-02-003 unsolicited proposals are excluded. The circular includes the establishment of Third-Party Bids, an Awards Committee (TBAC) to improve transparency and accountability, as well as a Power Supply Procurement Plan (PSPP) to increase private sector participation. The Energy Regulatory Commission (ERC) also clarified at the Forum that the DC 2018-02-003 takes precedence and that unsolicited proposals remain an open debate in the Philippines.

  However, to increase flexibility, it is suggested that under certain conditions based on Republic Act 6957, as amended by RA 7718, unsolicited proposals should be allowed provided that the following conditions are met: (a) the project involves a new concept or technology and / or are not part of the list of priority

projects (b) no direct government guarantee, subsidy or equity is required (c) the government agency or local government unit has invited by publication, for three consecutive weeks, in a newspaper comparative or competitive proposals, and no other proposal is received for a period of sixty (60) working days.

- **Mini-grid interconnection with the national grid :** Interconnection with the national grid remains a key risk for mini-grid developers worldwide. In the Philippines, this risk does not universally apply due to the remoteness of many island grids. However, the risk remains relevant in larger islands (e.g. Luzon). When the main grid reaches a mini-grid before its assets have been amortised, two main choices could be presented: the mini-grid may be connected to the main grid (subject to technical compatibility) and/or the operator may be compensated.

  In line with the above, it is recommended that DOE and NEA develop a mechanism and ruleset for mini-grid developers in areas where the main grid might arrive.

  As a first step to address this issue, DOE is already performing a study on mini-grid interconnection.

3 Financing and subsidies for hybrid/clean energy mini-grids in the Philippines

financing and subsidies

Clean energy mini-grids face changing challenges in raising capital at different stages of projects, including: CAPEX finance for capital investments in mini-grid infrastructure, OPEX finance for enterprises that will operate and maintain mini-grids; and, as well as end-user finance, which will allow consumers to pay tariffs for electricity consumption.

- **Reduction of diesel subsidies through efficiency improvements of diesel power plants and solar-hybridisation of mini-grids – Introduction of life-cycle cost approach and least-cost as key criteria for investment decisions by NPC and others:** Major saving can be achieved if diesel power plants are operated at full load and not at partial load.

  Together with an improved maintenance and service of diesel power plants, which includes improved spare part management and full-service contracts with suppliers, diesel subsidies can be reduced tremendously.

  A recent study by ASEP revealed that savings of up to 4-5 PHP/kWh in some diesel power plants are possible. In the long run, life-cycle costs of diesel power supply shall be the base for orders of new and operating of existing diesel power plants by NPC-SPUC.

Parallel to this efficiency improvement, the step-by-step increase of renewable energy in diesel power plants can further reduce the costs by up to 1 PHP/kWh, depending on size of the system, load curve and diesel costs.

Here as well a life-cycle costs approach, combined with least-cost calculation of the overall system costs, can lead to substantial savings. The challenge is to implement regulatory steps, which make rational and cost-effective investment decisions possible and those decisions are not hindered by "lowest" first investment costs criteria by government procurement guidelines.

Support from all involved institutions is required to improve the procurement procedures and allow least-cost investments based on life-cycle considerations.

reduction of diesel subsidies

- **Rationalisation of UCME subsidies:** While Universal Charge for Missionary Electrification (UCME) subsidies provide a good mechanism to keep electricity tariffs lower in remote or 'unviable' areas, these subsidies could be rationalised further. Based on a study that ASEP is conducting, it is recommended that the following improvements are put in place:

(a) Full-cost charging where customers are charged the True Cost of Generation Rate (TCGR) instead of the Subsidized Approved Generation Rate (SAGR). This will spur competition and motivate NPPs to reduce the cost to a level close to the SAGR, which has been approved by the ERC as the customer's affordable rate. The poorest customers would be protected by one-time connection subsidies and some form of "lifeline tariff" charging.

(b) Graduation program where off-grid areas that have achieved a certain level of economic development with increased buying power of the consumers would be given a lower allocation from the UCME fund. The reduced subsidy would then be transferred to other areas where consumers are still unable to pay the full cost of electricity.

(c) To reduce subsidies in the long-term, it is important to balance market access and conditions for energy access both via the grid and for off-grid. If electricity from grid-connected Independent Power Producers will show to be the more cost-effective solution to bring clean electricity to consumers and commercial clients, a potential interconnection of off-grid areas into the main grid is expected to bring down subsidies. It is important to compare the long-term costs of providing subsidy with the one-time cost of interconnection of off-grid areas into the grid.

rationalisation of UCME subsidies

- **Developing standards for commercial mini-grid project applications:** Experience from ARE Members worldwide has demonstrated that the customers' ability and willingness to pay

for off-grid solutions is relatively high - provided that services offered by mini-grid companies are reliable and predictable. Yet early-stage firms – even if they have the potential to be genuinely catalytic and game-changing for local economies – find it very difficult to raise financing to move beyond initial grant or private equity-backed pilot stages. During the Forum, presentations from several banks, including LandBank and Development Bank of the Philippines revealed that there is an appetite to provide commercial debt finance for mini-grid projects. On the other hand, the amount of commercial loans given out to mini-grid developers to date are very limited. This is particularly because developers and financiers still speak different languages.

To facilitate scale-up of commercial financing, it is recommended to standardise the way mini-grid projects applications are structured and evaluated by commercial banks.

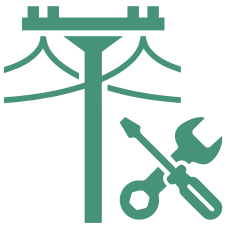
ARE in cooperation with banks and its other financier Members could help in developing such standards.

standardise mini-grid applications

- **Additional maintenance of distribution lines in remote areas:** While financing for mini-grids often focuses on mini-grid project development or on equity for companies generating the electricity, it is also important to consider the infrastructure needed for mini-grids to be operated. In many islands, distribution lines are aging, as highlighted by Felix William B. Fuentebella, Undersecretary, DOE.

It is therefore recommended that additional support should be given to maintain distribution lines – especially in remote areas of the Philippines.

The Barangay Line Enhancement Program (BLEP) of NEA provides one opportunity to support such initiatives.



maintain distribution lines

4 Lack of coordination between private sector mini-grid developers, government and electric cooperatives

Lack of private sector interest and coordination between private sector, government and electric cooperatives in pursuing clean energy mini-grid projects in the most remote areas of the Philippines was stated several times during the Forum as a hinderance to increase power supply in the most remote areas of the Philippines.

In part the seeming lack of appetite from private sector can be explained by the above-mentioned policy and financial challenges; in part limited access to information and lack of transparency can also help explain this problem.

lack of coordination

Facing dispersed information on existing regulations and mini-grid opportunities at present, an online Philippine mini-grid portal to provide information about existing financing mechanisms, regulations and opportunities for mini-grids in the Philippines is recommended. An additional supporting tool could be to develop a mini-grid developer guide for the Philippines.

ARE, with its 150+ Members that promotes a sustainable decentralised renewable energy industry for the 21st century, is well positioned to develop such tools in cooperation with the DOE, NEA and ASEP.

online Philippine mini-grid portal

Photo credit: NPC

About the Organisers

The **Philippine Department of Energy (DoE)** has for its mission to improve the quality of life of the Filipino by formulating and implementing policies and programs to ensure sustainable, stable, secure, sufficient, accessible and reasonably-priced energy.

The **Alliance for Rural Electrification (ARE)** is an international business association with the aim to promote a sustainable decentralised renewable energy industry for the 21st century, activating markets for affordable energy services, and creating local jobs and inclusive economies. ARE enables improved energy access through business development support for more than 150 members along the whole value chain for off-grid technologies.

The **Access to Sustainable Energy Programme (ASEP)** is a joint undertaking of the European Union and the Philippine Department of Energy (DoE). Through ASEP, the EU has allocated a grant of over PhP 3 billion to assist the Government of the Philippines to meet its rural electrification targets by means of renewable energy, and to promote energy efficiency. As a focal sector for EU development cooperation with the Philippines, the EU has earmarked a total of EUR 190 million out of an overall cooperation budget of EUR 325 million to the energy sector for the period 2014-2020.

The **National Electrification Administration (NEA)** focuses on strengthening its partners in the rural electrification programme, the electric cooperatives, by ensuring that they become more efficient, reliable and globally competitive.

Philippines MINI-GRID B 2 B FORUM

ORGANISED BY

Alliance for Rural Electrification
Shining a Light for Progress

SUPPORTED BY

ASEP

EUROPEAN UNION

NATIONAL ELECTRIFICATION ADMINISTRATION