Is there Life After COVID-19?
The Road to Green Recovery in the Philippines

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Webinar, Global Solar Council
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## Solar Deployment in the Philippines, 2005-2019

<table>
<thead>
<tr>
<th>Year</th>
<th>Utility-Scale, in MW</th>
<th>Solar Rooftop, in MW</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>164.47</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>905</td>
<td>2.95</td>
</tr>
<tr>
<td>2017</td>
<td>925.39</td>
<td>6.04</td>
</tr>
<tr>
<td>2018</td>
<td>928.59</td>
<td>19.66</td>
</tr>
<tr>
<td>2019</td>
<td>958.14</td>
<td>26.91</td>
</tr>
<tr>
<td>2020</td>
<td>975</td>
<td>53.83</td>
</tr>
</tbody>
</table>

In seven years, solar deployment in the country rose from 22Mw to 1,028Mw, or over a gigawatt. Utility-scale solar comprise 94 percent while share of solar rooftop is 6 percent. This jump was primarily driven by the feed-in tariff program in 2016. For rooftop solar, the growth may be attributed to the net metering regime.
## Renewable Energy Act of 2008

### Renewable Portfolio Standards (RPS)
- Setting a minimum percentage of generation from RE sources to be sourced by Mandated Participants, currently set at 1% of electricity sold above FIT allocation.

### Renewable Energy Market (REM)
- To facilitate tracking and trading of RE Certificates (RECs) to be administered and operated by the RE Registrar (RER)
- REM Rules for the orderly implementation of the RPS Rules

### Net Metering Program
- A consumer-based incentive - 3,542 registered participants (as of May 2020) among various distribution utilities (DUs).
- Pricing or cost-recovery scheme as approved by the ERC

### Green Energy Option (CEO)
- Voluntary market for sourcing of RE supply and available to customers with monthly average peak demand of 100kW. Non-regulated transactions and establishes new players: RE Suppliers
Philippine COVID-19 Situationer

- First Recorded Case: January 2020
- Two Months After: 633 reported cases
- Lockdown in Metro Manila: March 2020
- Partial Resumption of Activities: June, 2020
- 2nd Lockdown: 1st of August 2020
- Partial Resumption of Activities: 15th August
- Unemployment is at 17%
- GDP dropped to 3.7 from 6%.
Meralco asked to explain 'unusual spike' in power bills

By Filane Mikee Cervantes   May 15, 2020, 5:15 pm
Benefits of Rooftop Solar

Background

A homeowner at an affordable housing community published a copy of his unpaid Meralco bills of Php 15 on Facebook.

March & April 2020

1.2kWp hybrid solar package

Meralco Bills = ₱15 TOTAL

Developer: Imperial Homes Corporation
Solar Provider: Enfinity Imperial Solar Solutions, Inc.
Homeowner: Mr. Zoren Dictado
Community: Via Verde Sto. Tomas, Batangas (Economic Housing)
Government Auction Rules

- Signed by Energy Secretary DOE Circular 2020-07-0017
- July 19, 2020
- Published July 29, 2020
- Defined Eligible Participants: DUs, RES
- Type of Auction: Supply Only or Integrated OCSP
- Pricing Parameters: Green Energy Auction Reserve (GEAR)
- Auction Process
Maximum price Php/kwh set by the ERC;
Annually set no later than May 31st of each year

5.2. Pricing Parameters. The resulting Green Energy Tariff for each Winning Bidder in a Green Energy Auction shall not exceed the GEAR Price. The ERC, in accordance with its mandate under EPIRA, shall determine, on an annual basis, the GEAR Prices for peak and off-peak, or variable and non-variable power supply, or for each RE technology, for the combined Luzon-Visayas grid and for the Mindanao grid, which may consider, among others, the LCOE for each RE technology and/or the parameters used in the pricing model utilized in setting FIT rates for the relevant technologies and applying, to the fullest extent possible, to the non-FIT RE technologies.
Auction Process

1. **SETTING OF GEAR PRICE BY ERC** (On or before May 31)
2. **PUBLICAITION OF NOTICE OF AUCTION** (On or before June 15)
3. **REGISTRATION OF QUALIFIED SUPPLIERS**
4. **VERIFICATION OF QUALIFIED SUPPLIERS**
5. **AUCTION** (Electronic Bidding)
6. **PRE-BID CONFERENCE** (20 days before Auction Date)
7. **NOTICE OF WINNING BIDS**
8. **REVIEW OF WINNING BIDS**
9. **EXECUTION OF GREEN ENERGY IMPLEMENTATION AGREEMENT**
10. **REVIEW OF WINNING BIDS**
Growth of Solar Installation in the Philippines

<table>
<thead>
<tr>
<th>Year</th>
<th>Installed Capacity</th>
<th>Cumulative Installation</th>
<th>Net Metering</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>903</td>
<td>905</td>
<td>2.95</td>
</tr>
<tr>
<td>2020</td>
<td>70</td>
<td>975</td>
<td>53.82</td>
</tr>
<tr>
<td>2023</td>
<td>375</td>
<td>1345</td>
<td>107.64</td>
</tr>
<tr>
<td>2025</td>
<td>2000</td>
<td>4690</td>
<td>215.28</td>
</tr>
<tr>
<td>2030</td>
<td>2000</td>
<td>6690</td>
<td>430.56</td>
</tr>
</tbody>
</table>
As an archipelago, the Philippines has numerous bodies of water...

183 Bays
9 Dams
LUZON

59 Bays
2 Dams
VISAYAS

81 Bays, 10 Dams
MINDANAO
Laguna Lake: 3rd Largest in SEA
There are nine (9) Companies with Existing Service Contracts issued by DOE;

Four Companies have Pilot Projects in the Lake;

In January 2020, Board Resolution Declared Lake Open for Commercial FPV;

Rules for Lease Application Currently Being Drafted;

Issuance of Lease Agreement Q1 2021.

Estimated Capacity of 9 projects: 4,500Mw

Possible Solar Allocation in Laguna Lake: 9,000Mw
Pantabangan Dam

Biggest Dam in the Philippines; Managed by National Irrigation Administration; Three Companies Have Pilot Projects; Solar Zone have been designated; Potential Floating Solar – 2,000Mw.

Developers in Water Reservoir Magat Dam Pilot Project, 200kw
Post-COV19 promises dramatic RE growth in the Philippines...

1. Floating Solar offers solution to the long land conversion process.
2. Conduct of a yearly Auction that lessens long regulatory review.
4. Other Policies Encouraging RE Deployment i.e. Green Energy Option & Renewable Energy Certificates will rollout.
1. About 1.2 billion dollars of new investments are expected to flow into the system with government’s resolve to increase renewables into the electricity mix.

2. Some 153,000 construction workers will be available in the CALABARZON, Metro Manila and Central Luzon areas.

3. Consumer spending will increase and stimulate growth of other businesses.
Thank You.