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# Philippines: Solar and Wind Energy Developments

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# Solar and Wind Energy Developments

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| Luzon | 2011 | | 2015 | | 2011-2015 | |
|---|---|---|---|---|---|---|
| | GWh | % Share | GWh | % Share | AAGR | Average Share |
| Sales | 41,706 | 74.35 | 50,589 | 74.61 | 4.96 | 74.47 |
| Consumption | 50,965 | 73.67 | 61,099 | 74.14 | 4.65 | 73.99 |
| **Visayas** | **2011** | | **2015** | | **2011-2015** | |
| | GWh | % Share | GWh | % Share | AAGR | Average Share |
| Sales | 7,224 | 12.88 | 8,765 | 12.93 | 4.99 | 12.84 |
| Consumption | 9,508 | 13.75 | 11,184 | 13.57 | 4.19 | 13.60 |
| **Mindanao** | **2011** | | **2015** | | **2011-2015** | |
| | GWh | % Share | GWh | % Share | AAGR | Average Share |
| Sales | 7,167 | 12.78 | 8,453 | 12.47 | 4.22 | 12.69 |
| Consumption | 8,703 | 12.58 | 10,130 | 12.29 | 3.89 | 12.42 |
| Total Sales | 56,098 | 100.00 | 67,808 | 100.00 | 4.87 | 100.00 |
| **Total Consumption** | **69,176** | **100.00** | **82,413** | **100.00** | **4.49** | **100.00** |

From the 2016 – 2030 Power Development Plan

- The Philippines has enjoyed robust economic growth in the past 5 years and analysts expect the growth to be sustained in the coming years.
- Among the challenges confronting the Philippines is the provision of reliable energy that can catch up with the rise in demand.

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**Philippine Installed and Dependable Capacity by Plant Type, 2003-2015 (in MW)**

| Philippines | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Philippine Installed Capacity** | **2003** | **2004** | **2005** | **2006** | **2007** | **2008** | **2009** | **2010** | **2011** | **2012** | **2013** | **2014** | **2015** | **2016** |
| Coal | 3,958 | 3,967 | 3,967 | 4,177 | 4,213 | 4,213 | 4,277 | 4,867 | 4,917 | 5,568 | 5,568 | 5,708 | 5,963 | 7,419 |
| Oil Based | 3,604 | 3,669 | 3,663 | 3,602 | 3,616 | 3,353 | 3,193 | 3,193 | 2,994 | 3,074 | 3,353 | 3,476 | 3,610 | 3,616 |
| Natural Gas | 2,763 | 2,763 | 2,763 | 2,763 | 2,834 | 2,831 | 2,831 | 2,861 | 2,861 | 2,862 | 2,862 | 2,862 | 2,862 | 3,431 |
| Renewable Energy (RE) | 4,799 | 5,149 | 5,226 | 5,261 | 5,277 | 5,284 | 5,309 | 5,438 | 5,391 | 5,521 | 5,541 | 5,898 | 6,330 | 6,958 |
| *Geothermal* | *1,932* | *1,932* | *1,978* | *1,978* | *1,958* | *1,958* | *1,953* | *1,966* | *1,783* | *1,848* | *1,868* | *1,918* | *1,917* | *1,916* |
| *Hydro* | *2,867* | *3,217* | *3,222* | *3,257* | *3,293* | *3,291* | *3,291* | *3,400* | *3,491* | *3,521* | *3,521* | *3,543* | *3,600* | *3,618* |
| *Biomass, Solar, Wind* | *0* | *0* | *26* | *26* | *26* | *34* | *64* | *73* | *117* | *153* | *153* | *437* | *812* | *1,424* |
| **Total** | **15,124** | **15,548** | **15,619** | **15,803** | **15,941** | **15,681** | **15,610** | **16,359** | **16,162** | **17,025** | **17,325** | **17,944** | **18,765** | **21,423** |
| Philippine Dependable Capacity | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| Coal | 3,691 | 3,696 | 3,432 | 3,638 | 3,467 | 3,412 | 3,813 | 4,245 | 4,651 | 5,206 | 5,206 | 5,378 | 5,613 | 6,979 |
| Oil Based | 3,175 | 3,216 | 3,043 | 2,879 | 2,670 | 2,702 | 2,528 | 2,488 | 2,579 | 2,561 | 2,846 | 2,705 | 2,734 | 2,821 |
| Natural Gas | 2,703 | 2,703 | 2,703 | 2,703 | 2,703 | 2,562 | 2,700 | 2,756 | 2,770 | 2,760 | 2,760 | 2,760 | 2,759 | 3,291 |
| Renewable Energy (RE) | 3,828 | 4,251 | 4,419 | 4,407 | 4,650 | 4,370 | 4,285 | 4,413 | 4,478 | 4,539 | 4,559 | 4,789 | 5,325 | 6,005 |
| *Geothermal* | *1,568* | *1,560* | *1,685* | *1,682* | *1,667* | *1,387* | *1,322* | *1,350* | *1,434* | *1,462* | *1,482* | *1,607* | *1,601* | *1,689* |
| *Hydro* | *2,260* | *2,690* | *2,725* | *2,715* | *2,973* | *2,950* | *2,919* | *3,021* | *2,963* | *2,983* | *2,983* | *2,982* | *3,073* | *3,181* |
| *Biomass, Solar, Wind* | *0* | *1* | *10* | *10* | *10* | *34* | *44* | *41* | *80* | *94* | *94* | *201* | *651* | *1,135* |
| **Total** | **13,397** | **13,865** | **13,598** | **13,627** | **13,490** | **13,047** | **13,326** | **13,902** | **14,477** | **15,066** | **15,371** | **15,633** | **16,432** | **19,097** |

From the 2016 – 2030 Power Development Plan

# Solar and Wind Energy Developments

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**Relevant Laws/Rules**

- **1987 Philippine Constitution Article XII, Section 2**: Reserves the exploration, utilization and development of natural resources to Philippine citizens or corporations which are 60% Filipino-owned;
- **Republic Act No. 9136 or the Electric Power Industry Reform Act of 2001 ("EPIRA")**: provided the framework for the restructuring of the electric power industry - privatization of the power assets, transition to a competitive structure definition of the responsibilities of the government agencies and private entities;
- **Republic Act No. 9513 or the Renewable Energy Act of 2008 ("RE Law")**: accelerate the exploration and development of renewable energy resources; increase the utilization of renewable energy; encourage the development and utilization of renewable energy resources as tools to effectively prevent or reduce harmful emissions;
- **Department of Energy Department Circular DC No. 2009-05-008**: issued the Implementing Rules and Regulations ("**IRR**") of the RE Law

# Solar and Wind Energy Developments

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| Important Government Regulators | |
|---|---|
| Department of Energy ("**DOE**") | The DOE is the lead agency mandated to implement the provisions of the RE Law and its implementing rules and regulations |
| Energy Regulatory Commission ("**ERC**") | Regulation of the electric power industry resides in the ERC, which is an independent, quasi-judicial regulatory body. Responsible for encouraging competition in the market. |
| Renewable Energy Management Bureau ("**REMB**") | A Bureau under the DOE, was created under the RE Law, the REMB takes the lead in implementing the law |
| National Renewable Energy Development Board ("**NREB**") | Advisory board to the DOE |
| Local Government Units ("**LGU**") | Granted discretion on local government matters; responsible for issuing various permits; Prior and periodic consultations with the LGU concerned is required before any RE exploration activity is conducted within the LGU's jurisdiction |
| Department of Environment and Natural Resources ("**DENR**") | All RE explorations, development, utilization, and RE systems operations shall be conducted in accordance with existing environmental regulations as prescribed by the DENR and/or any other concerned government agency. |
| National Commission Indigenous Peoples ("**NCIP**") | All government agencies are enjoined from issuing, renewing, or granting any concession, license or lease, or entering into any production-sharing agreement, without prior certification from the NCIP that the area affected does not overlap with any ancestral domain |

# Solar and Wind Energy Developments

## Selected Data on Solar and Wind Service Contracts

| | SOLAR | | | | | | WIND | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **No. of Service Contracts (As of June 2017)** | Grid-Use | | | Own-Use | | | Grid-Use | | | Own-Use |
| | 186 | | | 16 | | | 62 | | | 1 |
| **Location of Renewable Energy Projects** | Luzon | | 119 | Luzon | | 12 | Luzon | | 43 | Luzon |
| | Visayas | | 37 | Visayas | | 4 | Visayas | | 19 | |
| | Mindanao | | 30 | | | | | | | |
| **Capacity** | | Potential Capacity | Installed Capacity | | Potential Capacity | Installed Capacity | | Potential Capacity | Installed Capacity | Installed Capacity |
| | Luzon | 3,263.24 | 337.40 | Luzon | 1.072 | 3.122 | Luzon | 1,379.95 | 336.90 | 0.006 |
| | Visayas | 1,035.93 | 504.97 | | | | | | | |
| | Mindanao | 882.50 | 57.81 | Visayas | 3.214 | 0.096 | Visayas | 1,001.55 | 90.00 | |
| | TOTAL | 5,181.67 | 900.18 | TOTAL | 4.286 | 3.218 | TOTAL | 2,381.50 | 426.90 | |

# Feed-in Tariffs ("FIT") Suspended – No third round

| FEED-IN TARIFF (FIT) | SOLAR | | WIND | |
|---|---|---|---|---|
| | FIT1 | FIT2 | FIT1 | FIT2* |
| **RATE** | PhP9.68/kWH | PhP8.69/kWH | PhP8.53/kWH | PhP7.40/kWH |
| **APPROVED FIT CAPACITY (MW)** | Initial installation target was 50MW, subsequently increased to 500MW | | Initial installation target was 200MW, subsequently increased to 400MW | |

** The entitlement to the WIND FIT2 was limited to the three (3) wind power projects with a total of 144MW, which have commenced commercial operations as certified by the DOE.*

# Requirement for Distribution Utilities to Undertake Competitive Selection Process ("CSP")

**Under the rules issued by the ERC:**

- Power Supply Agreements ("**PSA**") shall be awarded to the winning Generation Company following a successful transparent and competitive selection process or by Direct Negotiation in case of two failed CSPs. A CSP is successful if the DU receives at least two (2) qualified bids from entities with which the DU is not prohibited from entering into a contract for PSAs.
- Direct negotiation with an interested party for PSAs may be made by the DU after at least two (2) failed CSPs. A CSP is considered failed when during its conduct, any of the following circumstances exist:
  - No proposal was received by the DU;
  - Only one supplier submitted an offer; and
  - Competitive offers of prospective suppliers failed to meet the requirements prescribed under the Terms of Reference, as determined by the DU Bids and Awards Committee.

# QUESTIONS?


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