

2016

PHILIPPINE POWER SITUATION REPORT



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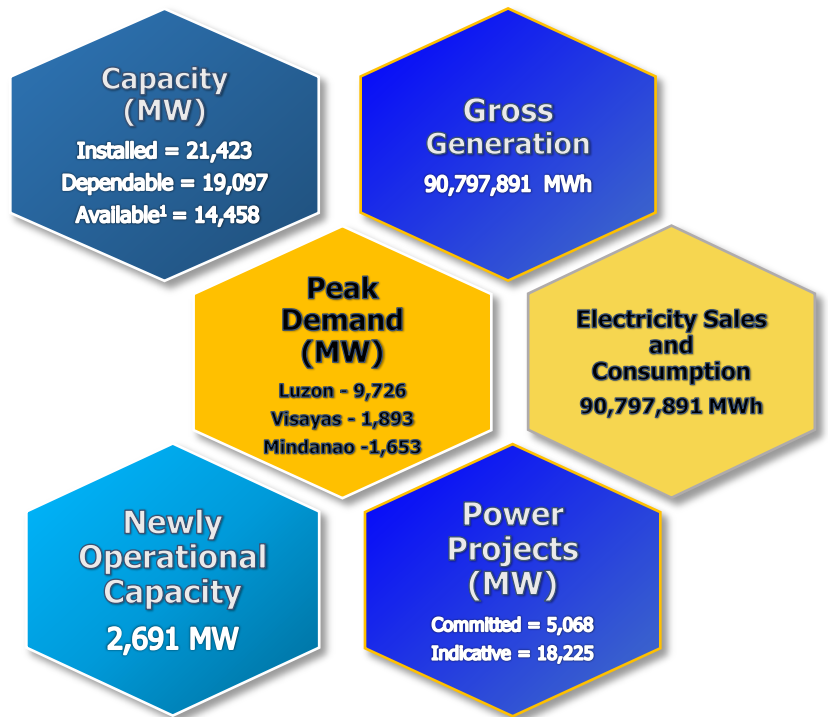
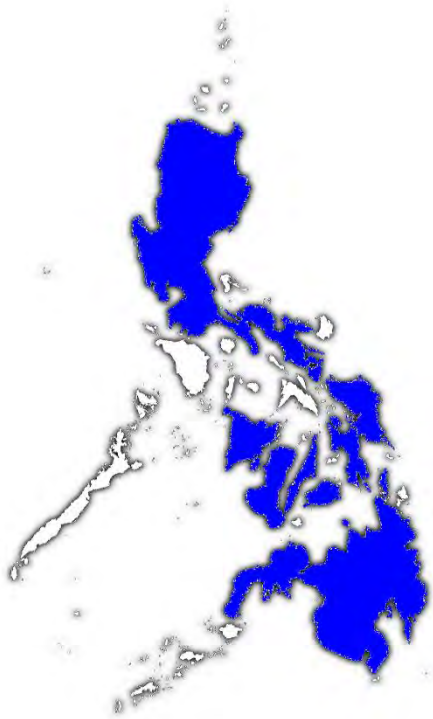
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2016 PHILIPPINE ELECTRICITY DEMAND-SUPPLY SNAPSHOT



¹Total Average Available Capacity

Notes: Shaded blue and white portions of the Philippine map correspond to on-grid and off-grid areas, respectively
Totals may not correspond to the sum of all figures due to rounding

The year 2016 is characterized by a significant increase in electricity consumption at 10% and peak demand at 8.7% attributed to several factors such as the increase in temperature and utilization of cooling equipment aggravated by the strong El Niño, the conduct of National and Local elections during the first half of the year, increase in economic growth, and entry of large power generating plants. The residential and industrial sectors remained the major drivers of electricity consumption in the country while Luzon remained the largest on a per grid basis.

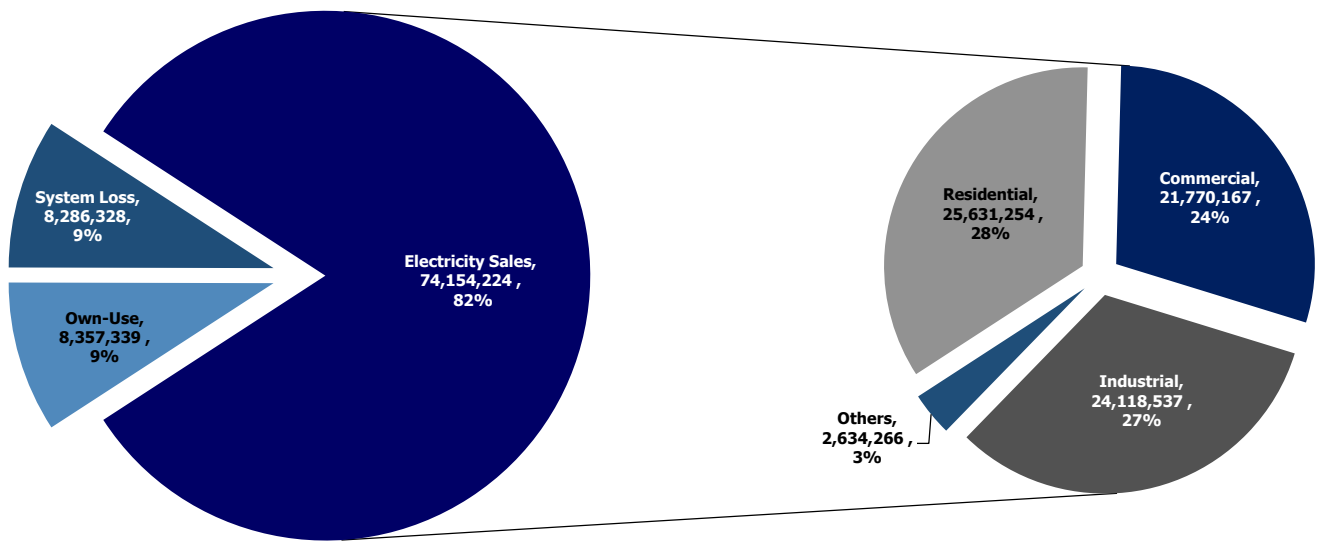
Notably, the **growth of the country's supply base supplemented the increase in demand with the growth of total installed capacity at 14% from 18,765 MWh (2015) to 21,423 MWh (2016) majority coming from coal-fired power plants.** Among the three grids, Mindanao has the highest recorded growth in terms of capacity at 31% from 2015-2016. From 2017-2025 a total of 5,068 MW committed projects are expected to come online. The DOE is continuously encouraging investments in power generation in view of the increasing peak demand which is expected to grow by more than triple* in 2040.

Along with supply security, the DOE also embarks on increasing the reliability and resiliency of the system. In 2016, several yellow and red alerts were declared by the system operator in Luzon and Visayas in addition to the major grid disturbances and load dropping incidents. Among the three major grids, Mindanao was adversely affected by El Niño which caused the decline in hydro power generation and curtailment of supply during the first half of 2016. The entry of large coal-fired power plants in Mindanao on the latter part of 2016 has addressed these supply shortfalls.







* Based from the Power Demand and Supply Outlook of the Power Development Plan, 2016-2040

Electricity Sales and Consumption

Electricity Consumption = 90,797,891 MWh



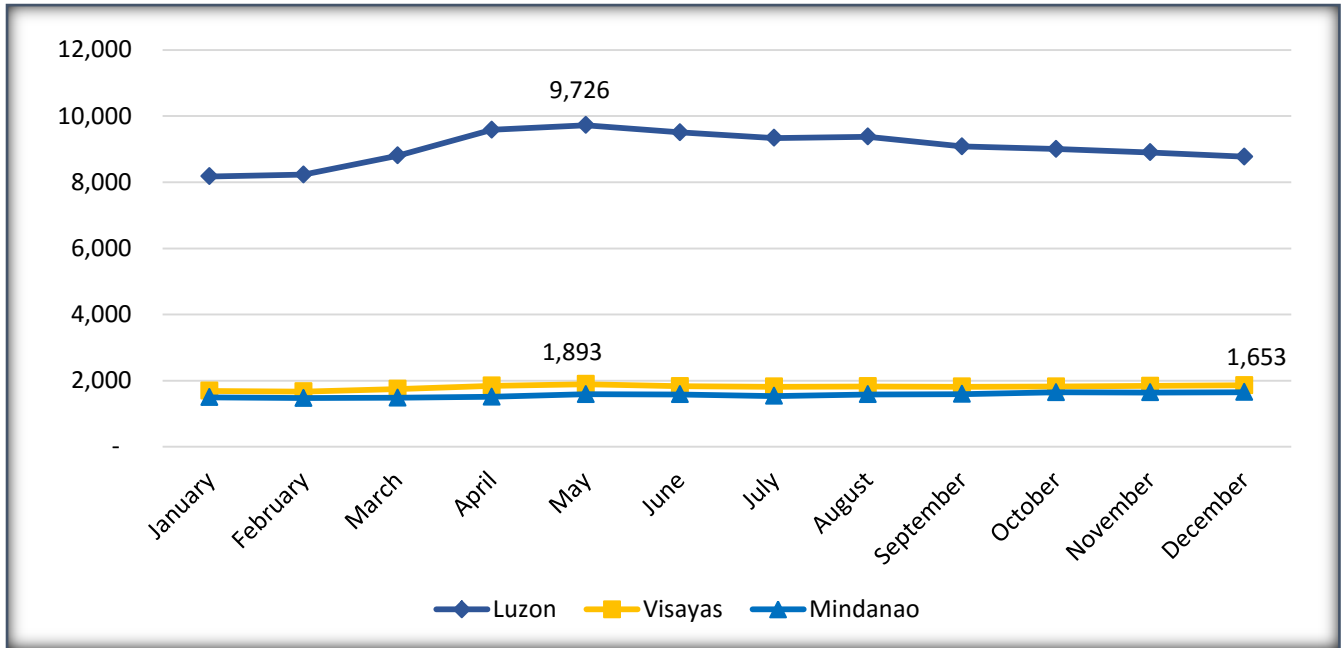
Electricity Sales and Consumption, per Grid (MWh)

	Luzon	Visayas	Mindanao
 Residential	18,650,032 27.7%	3,508,238 28.7%	3,472,984 30.6%
 Commercial	18,726,890 27.9%	1,554,845 12.7%	1,488,432 13.1%
 Industrial	17,094,048 25.4%	3,470,390 28.4%	3,554,098 31.3%
 Others	942,178 1.4%	1,065,378 8.7%	626,710 5.5%
 Own-Use	6,517,149 9.7%	1,188,570 9.7%	651,156 5.7%
 Systems Loss	5,289,833 7.9%	1,444,418 11.8%	1,552,077 13.7%
TOTAL 2016	67,220,596	12,231,839	11,345,457
TOTAL 2015	61,099,345	11,184,002	10,129,866

Electricity Sales and Consumption Highlights

- Electricity consumption grew significantly from 82,413,213 MWh (2015) to 90,797,891 MWh (2016). This year's growth level increased to 10.2% compared to the 6.7% growth from 2014-2015. The substantial increase is due to the strong El Niño which affected the entire country during the 1st half of 2016.
- This increase is primarily driven by the growth of residential consumption at 12.7% from 22,747,049 MWh (2015) to 25,631,254 MWh (2016) due to high requirements for cooling system.
- On a per grid basis, Mindanao's electricity consumption grew the highest at 12% boosted by the own-use consumption of newly operational and large coal-fired power plants. Own-use consumption in Mindanao massively increased from 395,268 MWh to 651,156 MWh which is equivalent to a 64.7% growth rate in 2016.
- In terms of share, Luzon, Visayas and Mindanao contributed 74%, 13.5% and 12.5% shares, respectively. The residential sector, together with the industrial sector, comprised more than half of the total Philippine electricity consumption. Own-use and systems loss have at par shares at 9%.

Peak Demand



Luzon reached new all-time high system peak demand at 9,726 MW which occurred on 03 May 2016, 1:52 PM with corresponding 11,137 MW available capacity. This is 9% higher than the 2015 peak demand at 8,928 MW.

Highest system peak demand in Visayas at 1,893 MW occurred on 05 May 2016, 1:28 PM with corresponding 2,242 MW available capacity. This is 7% higher than the 2015 peak demand at 1,768 MW.

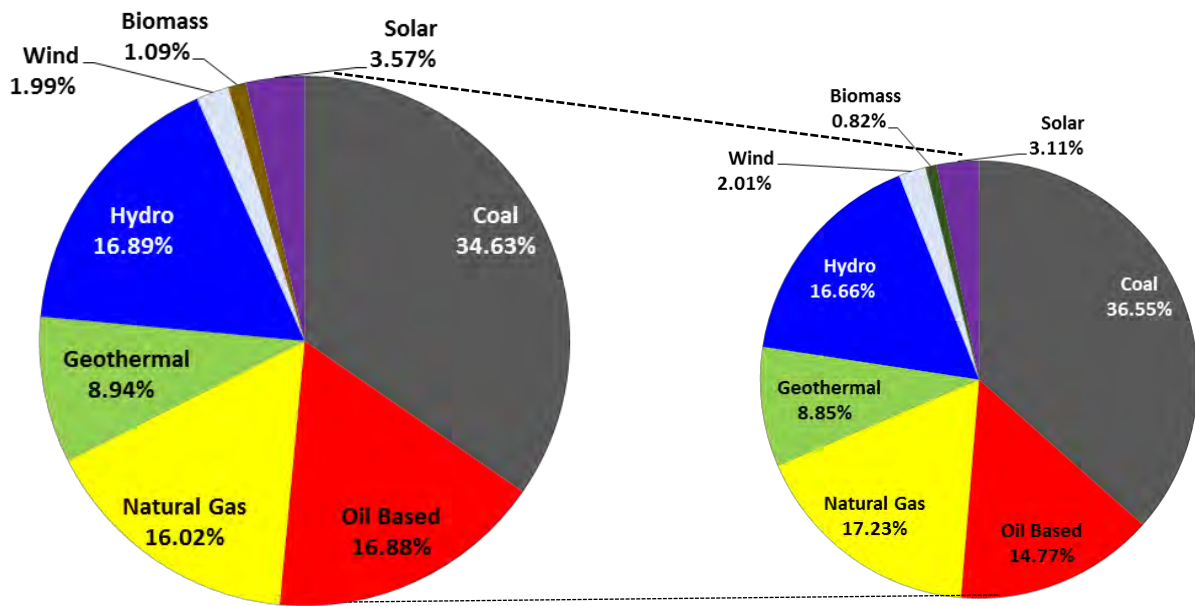
Highest system peak demand in Mindanao at 1,653 MW occurred on 1 December 2016, 5:53 PM with corresponding 1,931 MW Available Capacity. This is 9% higher than the 2015 peak demand at 1,517 MW.

Comparative Peak Demand, Actual 2015-2016 vs. Forecast

Grid	2015 Actual (MW)	2016 Actual (MW)	Difference (MW)	2015-2016 Growth Rate	PDP 2016 High GDP Forecast (MW)	Difference of 2016 Forecast vs. Actual (MW)	2016 Forecast vs. Actual Deviation
Luzon	8,928	9,726	798	8.94%	9,726*	0	0
Visayas	1,768	1,893	125	7.07%	1,878	(15)	(0.8)%
Mindanao	1,517	1,653	136	8.97%	1,786	133	8.0%

* Actual 2016 Peak Demand was already adopted in the PDP, 2016-2040 since the peak demand already occurred prior to the finalization of the PDP, 2016-2040

Electricity Supply

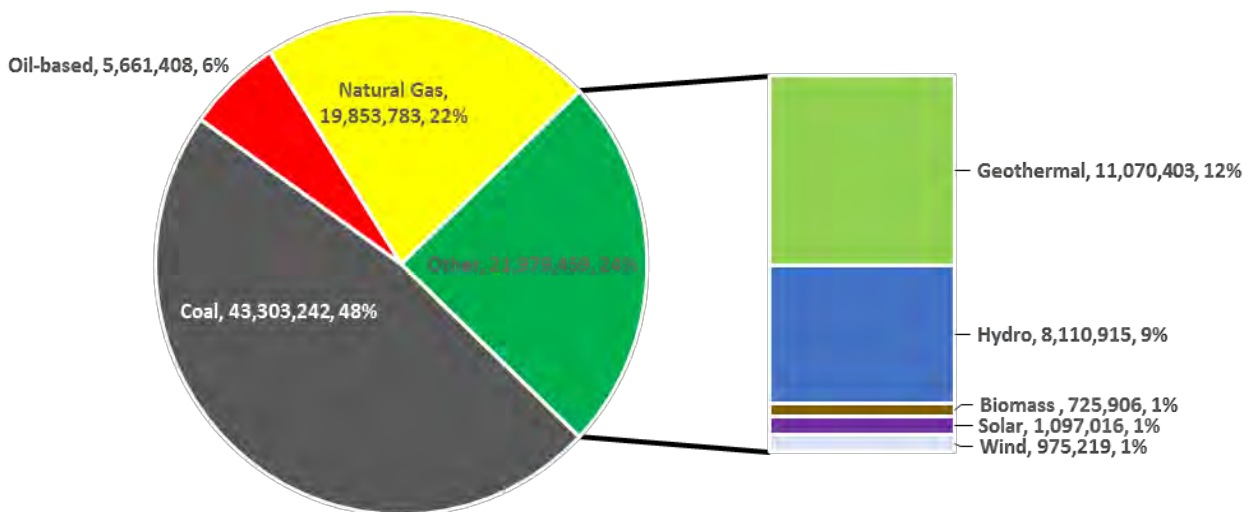


Installed Capacity = 21,423 MW

Dependable Capacity = 19,097 MW

The country's total installed capacity for 2016 grew to 21,423 MW compared to 18,765 MW from 2015. This increase in capacity is associated with the commercial operation of new power plants in Luzon such as the 2x150 MW SLPGC Coal Power Plant, 450 MW San Gabriel Natural Gas Power Plant; Visayas the 135 MW Palm Concepcion Coal Power Plant Unit 1, 132.5 MW HELIOS Solar Farm; and Mindanao the 2 x 135 MW FDC Misamis Coal Power Plant, and 150 MW SMC Malita Coal Power Plant. On the other hand, the country has a total of 19,097 MW dependable capacity or about 89% of the total installed capacity which has been delivered to the grid.

The Philippines also displayed a significant growth in power generation at 10% from 82,413,213 MWh in 2015 to 90,797,891 MWh in 2016. Of this total generation, 48% comes from coal, 22% comes from natural gas and 6% comes from oil-based generation. The remaining 24% or about one-fourth of the total power generation comes from renewable energy (RE) – based generating facilities.

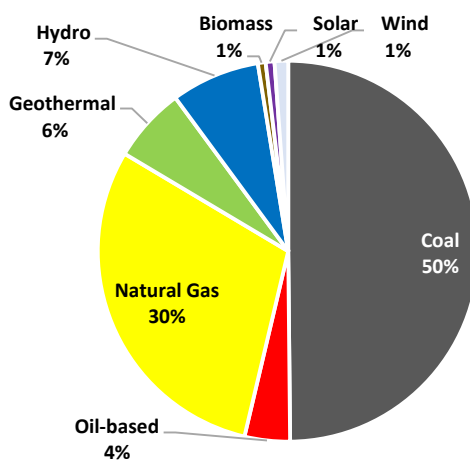


Gross Generation = 90,797,891 MWh

Luzon Installed, Dependable and Available Capacity from January-December 2016 (in MW)

Fuel Type	Installed		Dependable		Available		
	MW	Percent Share (%)	MW	Percent Share (%)	Min	Max	Average
Coal	5,294	35.35	4,970	36.54	2,601	4,859	3,977
Oil Based	2,133	14.24	1,655	12.17	593	1,606	1,216
Natural Gas	3,430	22.90	3,291	24.20	1,864	3,272	2,729
Renewable Energy	4,120	27.51	3,684	27.09	1,319	3,648	2,586
<i>Geothermal</i>	<i>843</i>	<i>5.63</i>	<i>777</i>	5.71	<i>239</i>	<i>740</i>	<i>500</i>
<i>Hydro</i>	<i>2,537</i>	<i>16.94</i>	<i>2,323</i>	17.08	<i>1,058</i>	<i>2,314</i>	<i>1,826</i>
<i>Wind</i>	<i>337</i>	<i>2.25</i>	<i>293</i>	2.15	<i>1</i>	<i>298</i>	<i>95</i>
<i>Biomass</i>	<i>95</i>	<i>0.63</i>	<i>71</i>	0.52	<i>20</i>	<i>61</i>	<i>48</i>
<i>Solar</i>	<i>307</i>	<i>2.05</i>	<i>220</i>	1.62	<i>1</i>	<i>235</i>	<i>117</i>
TOTAL	14,977	100.00	13,600	100.00	6,377	13,385	10,508

Gross Power Generation (January-December 2016) 66,497,549 MWh



1,319 MW

• Newly Operational Plants

3,528 MW

• Committed Projects

12,076 MW

• Indicative Projects

LUZON HIGHLIGHTS AND SIGNIFICANT INCIDENTS

- Fire incident on an oil depot nearby the SLTEC Unit 2 in Calaca, Batangas deferred its commercial operation which is scheduled on 20 March 2016 to 21 March 2016.
- Yellow Alert occurred once in April 2016 due to tight supply caused by forced outages, planned outages of power plants and limited dispatch of hydro as an effect of El Niño. It is then followed by a Red Alert the next day for the same reason.
- On 03 May 2016, the all-time high peak demand of Luzon grid occurred at 9,726 MW, an increase of 9% from the previous year.
- For the month of June 2016, Luzon grid experienced five (5) Yellow Alert occurrences due to tripping and maintenance of power plants with large capacities.

LUZON HIGHLIGHTS AND SIGNIFICANT INCIDENTS (continued)

- At the last week of July 2016 to first week of August 2016, Luzon Grid experienced ten (10) Yellow Alert Notices and four (4) Red Alert Notices due to the forced outage and planned outage of some major power plants. The maximum capacity outage was 3,146 MW which occurred on 05 August 2016. To alleviate Red Alert Notices, the Interruptible Load Program (ILP) was implemented within the MERALCO franchise area.
- On September 2016, Luzon experienced one (1) Yellow Alert Notice and one (1) Red Alert Notice while another Yellow Alert Notice on November 2016 was experienced.
- On 15 November 2016, 7:31 PM, a major grid disturbance occurred which was caused by the fault at the NGCP San Jose substation wherein a total of 2,407 MW generator tripped simultaneously in Batangas, Bataan, Bicol, Pangasinan and Quezon. The maximum load which was dropped due to this major grid disturbance is equivalent to 672 MW with a maximum unserved energy of 484.16 MWh. Customers in the MERALCO franchise experienced automatic load dropping (ALD) wherein 672 MW was dropped for a duration of 45 minutes. 407 MW of NGCP customers were also automatically dropped for 72 minutes. The ALD on the MERALCO franchise was followed by a manual load dropping (MLD) resulting to 383 MW load dropping for 72 minutes.
- Luzon grid experienced 34 ALD and three (3) MLD for 2016. Most of ALDs occurred in the month of June with seven (7) ALDs due to the tripping of power plants with large capacities. On the average, most of the outages caused by the load dropping were not sustained for more than 15 minutes.
- At the end of 2016, a total of 1,318.8 MW increase in the installed capacity was recorded with the entry of the power plants listed on the table below.

Luzon Additional Capacities (01 January to 31 December 2016)

Newly-Operating Power Plants	Location	Installed Capacity (MW)	Dependable Capacity (MW)	Commercial Operation Date
COAL				
SLTEC Puting Bato Coal Fired Power Plant Unit 2	Calaca, Batangas	135.0	122.0	February 2016
SLPGC Coal-Fired Power Plant Units 1 & 2	Calaca, Batangas	300.0	280.0	July 2016
Anda Coal Fired Power Plant	Mabalacat, Pampanga	83.7	72.0	September 2016
SUBTOTAL		518.7	474.0	
NATURAL GAS				
Avion Open Cycle Power Plant	Batangas City	100.0	97.0	August 2016
San Gabriel Combined Cycle Power Plant	Batangas City	450.0	414.0	November 2016
SUBTOTAL		550.0	511.0	
BIOMASS				
GIFT Biomass Project	Talavera, Nueva Ecija	12.0	10.8	March 2016
SUBTOTAL		12.0	10.8	
HYDRO				
Bulanao HEPP	Tabuk, Kalinga	1.0	1.0	March 2016
SUBTOTAL		1.0	1.0	

Newly-Operating Power Plants	Location	Installed Capacity (MW)	Dependable Capacity (MW)	Commercial Operation Date
SOLAR				
Burgos Solar Phase 2 Project	Burgos, Ilocos Norte	2.7	1.9	January 2016
Petosolar - Tarlac Project	Tarlac City, Tarlac	50.1	35.0	February 2016
YH Green Solar	Hermosa, Bataan	14.5	10.2	February 2016
Cabanatuan Solar Project	Cabanatuan City, Nueva Ecija	10.3	7.2	April 2016
Calatagan Solar Project	Calatagan and Balayan, Batangas	63.3	44.3	March 2016
Mirae Currimao Solar Project	Currimao, Ilocos Norte	20.0	14.0	February 2016
Valenzuela Solar Project	Brgy. Isla, Valenzuela City	8.5	6.0	March 2016
Absolute Distiller Lian Solar Project	Lian, Batangas	2.0	1.4	March 2016
MSPI Clark Solar Project	Clark Freeport Zone, Pampanga	22.3	15.6	March 2016
SPARC Palauig Solar Project	Morong, Bataan	5.0	3.5	March 2016
BSEC San Ildefonso Solar Project	San Ildefonso, Bulacan	15.0	10.5	March 2016
Sta. Rita Solar	Morong and Hermosa, Bataan	7.1	5.0	November 2016
Dalayap Solar	Tarlac City, Tarlac	7.5	5.2	December 2016
Armenia Solar	Tarlac City, Tarlac	8.8	6.2	December 2016
SUBTOTAL		237.1	166.0	
TOTAL 2016		1,318.8	1,162.8	
TOTAL 2015		412.0	332.5	

Luzon Summary of Committed and Indicative Power Projects As of December 2016

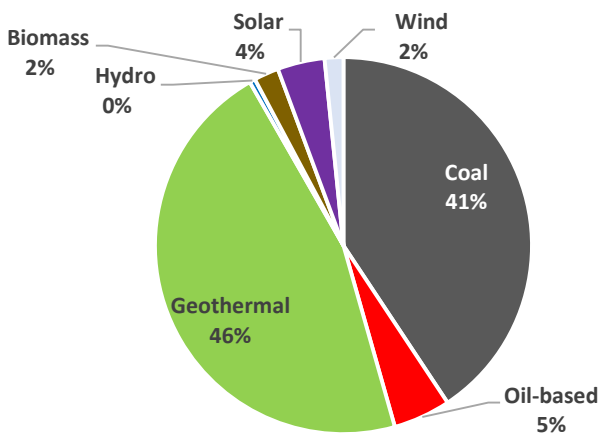
Type of Power Plant	Committed			Indicative		
	No. of Proponents	Capacity (MW)	% Share	No. of Proponents	Capacity (MW)	% Share
Coal	5	2,720.0	77.1	10	6,570.0	54.4
Oil-Based	0	0.0	0.0	2	196.0	1.6
Natural Gas	1	650.0	18.4	3	2,050.0	17.0
Renewable Energy	13	157.9	4.5	57	3,259.5	27.0
<i>Geothermal</i>	<i>2</i>	<i>43.0</i>	<i>1.2</i>	<i>1</i>	<i>80.0</i>	<i>0.7</i>
<i>Hydro</i>	<i>3</i>	<i>62.5</i>	<i>1.8</i>	<i>32</i>	<i>1070.6</i>	<i>8.9</i>
<i>Biomass</i>	<i>4</i>	<i>22.9</i>	<i>0.7</i>	<i>4</i>	<i>58.2</i>	<i>0.5</i>
<i>Solar</i>	<i>4</i>	<i>29.5</i>	<i>0.8</i>	<i>15</i>	<i>1053.7</i>	<i>8.7</i>
<i>Wind</i>	<i>0</i>	<i>0.0</i>	<i>0.0</i>	<i>5</i>	<i>997.0</i>	<i>8.2</i>
TOTAL	19	3,527.9	100.0	72	12,075.5	100.0
Battery Storage*	1	10.0		2	230.0	

* for accounting purposes; declared capacity for Ancillary Services (AS) to the system

Visayas Installed, Dependable and Available Capacity from January-December 2016 (in MW)

Fuel Type	Installed		Dependable		Available		
	MW	Percent Share (%)	MW	Percent Share (%)	Min	Max	Average
Coal	1,054	32.10	1,050	37.33	320	1,048	805
Oil Based	655	19.95	434	15.43	202	445	390
Natural Gas	1	0.03	0	0.00	0	0	0
Renewable Energy	1,574	47.93	1,329	47.24	535	1,346	1,113
<i>Geothermal</i>	<i>965</i>	<i>29.38</i>	<i>813</i>	<i>28.90</i>	<i>384</i>	<i>798</i>	<i>702</i>
<i>Hydro</i>	<i>20</i>	<i>0.61</i>	<i>18</i>	<i>0.64</i>	<i>6</i>	<i>18</i>	<i>12</i>
<i>Wind</i>	<i>90</i>	<i>2.74</i>	<i>90</i>	<i>3.20</i>	<i>1</i>	<i>90</i>	<i>45</i>
<i>Biomass</i>	<i>101</i>	<i>3.08</i>	<i>77</i>	<i>2.74</i>	<i>18</i>	<i>67</i>	<i>59</i>
<i>Solar</i>	<i>399</i>	<i>12.15</i>	<i>331</i>	<i>11.77</i>	<i>126</i>	<i>373</i>	<i>295</i>
TOTAL	3,284	100.00	2,813	100.00	1,057	2,839	2,308

Gross Power Generation (January-December 2016) 12,954,886 MWh



624 MW

- Newly Operational Plants

272 MW

- Committed Projects

3,343 MW

- Indicative Projects

VISAYAS HIGHLIGHTS AND SIGNIFICANT INCIDENTS

- From the months of April until November 2016, the Visayas grid has experienced frequent issuances of Yellow Alert Status and few issuances of Red Alert Status especially in the evening peak period. This can be attributed to the following: (1) increase in electricity demand, (2) decrease in or zero output of solar power plants in the evening, and (3) the simultaneous outages (planned and/or forced) of large coal and geothermal power plants.
- A few load dropping incidents occurred within the months of January, March, August, October, and November 2016. It can be noted that the first level of ALD scheme was activated during those instances where (1) there were sudden load reduction in the output of solar power plants, (2) tripping of large generating units, and (3) occurrence of high-voltage direct current (HVDC) telecom fault.

VISAYAS HIGHLIGHTS AND SIGNIFICANT INCIDENTS (continued)

- On 5 September 2016, the all-time high peak demand of Visayas grid occurred at 1,893 MW, an increase of 7% from the previous year (1,768 MW).
- At the end of 2016, a total of 623.9 MW of installed capacity was added into the Visayas grid primarily composed of solar power plants and a few coal-fired and diesel power generation facilities.

Visayas Additional Capacities (01 January to 31 December 2016)

Newly-Operating Power Plants	Location	Installed Capacity (MW)	Dependable Capacity (MW)	Commercial Operation Date
COAL				
Palm Concepcion U1	Concepcion, Iloilo	135.00	135.00	August 2016
PEDC U3	Iloilo City, Iloilo	150.00	150.00	December 2016*
SUB-TOTAL		285.00	285.00	
OIL-BASED				
Calumangan DPP U2	Bago City, Negros Occidental	5.00	4.20	April 2016
Calumangan DPP U1	Bago City, Negros Occidental	5.00	4.20	June 2016
Calumangan DPP U3	Bago City, Negros Occidental	5.00	4.20	June 2016
SUB-TOTAL		15.00	12.60	
SOLAR				
MONTESOL Solar Power Project	Cadiz City, Negros Occidental	18.00	14.00	March 2016
HELIOS Solar Power Project	Cadiz City, Negros Occidental	132.50	108.00	Mar-2016
SACASUN Solar Power Project	San Carlos City, Negros Occidental	23.40	23.40	Mar-2016
ISLASOL II Solar Power Project	La Carlota City, Negros Occidental	32.00	27.00	Mar-2016
ISLASOL III Solar Power Project	Manapla, Negros Occidental	48.00	42.00	Mar-2016
SILAY Solar Power Project	Silay City, Negros Occidental	25.00	20.00	April 2016
SEPALCO Solar Power Project	Palo, Leyte	45.00	35.00	October 2016*
SUB-TOTAL		323.90	269.40	
TOTAL 2016		623.90	567.00	
TOTAL 2015		227.0	173.4	

* PEDC U3 and SEPALCO with Provisional Authority (PA) to Operate from ERC

Visayas Summary of Committed and Indicative Power Projects As of December 2016

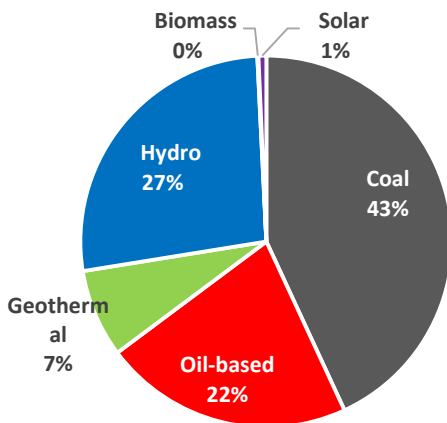
Type of Power Plant	Committed			Indicative		
	No. of Proponents	Capacity (MW)	% Share	No. of Proponents	Capacity (MW)	% Share
Coal	1	135.0	49.7	3	900.0	26.9
Oil-Based	1	8.0	2.9	1	10.0	0.3
Natural Gas	0	0.0	0.0	0	0.0	0.0
Renewable Energy	5	128.8	47.4	29	2,432.9	72.8
<i>Geothermal</i>	1	50.0	18.4	1	40.0	1.2
<i>Hydro</i>	2	13.1	4.8	12	701.7	21.0
<i>Biomass</i>	0	0.0	0.0	2	78	2.3
<i>Solar</i>	2	65.7	24.2	10	464.6	13.9
<i>Wind</i>	0	0.0	0.0	4	1,148.6	34.4
TOTAL	7	271.8	100.0	33	3,342.9	100.0
Battery Storage*	0	0.0		3	100.0	

* for accounting purposes; declared capacity for Ancillary Services (AS) to the system

Mindanao Installed, Dependable and Available Capacity from January-December 2016 (in MW)

Fuel Type	Installed		Dependable		Available		
	MW	Percent Share (%)	MW	Percent Share (%)	Min	Max	Average
Coal	1,070	33.84	959	35.73	333	959	609
Oil Based	828	26.19	733	27.31	51	656	435
Natural Gas	0	0.00	0	0.00	0	0	0
Renewable Energy	1,264	39.97	993	37.00	215	923	598
<i>Geothermal</i>	<i>108</i>	<i>3.42</i>	<i>100</i>	<i>3.73</i>	<i>50</i>	<i>104</i>	<i>98</i>
<i>Hydro</i>	<i>1,061</i>	<i>33.55</i>	<i>840</i>	<i>31.30</i>	<i>165</i>	<i>770</i>	<i>476</i>
<i>Wind</i>	<i>0</i>	<i>0.00</i>	<i>0</i>	<i>0.00</i>	<i>0</i>	<i>0</i>	<i>0</i>
<i>Biomass</i>	<i>36</i>	<i>1.14</i>	<i>10</i>	<i>0.37</i>	<i>0</i>	<i>8</i>	<i>5</i>
<i>Solar</i>	<i>59</i>	<i>1.87</i>	<i>43</i>	<i>1.60</i>	<i>0</i>	<i>41</i>	<i>19</i>
TOTAL	3,162	100.00	2,684	100.00	599	2,539	1,642

Mindanao Gross Power Generation (January-Dec 2016) 11,345,457 MWh



748 MW

- Newly Operational Plants

1,268 MW

- Committed Projects

2,806 MW

- Indicative Projects

MINDANAO HIGHLIGHTS AND SIGNIFICANT INCIDENTS

- In the previous years prior to 2016, Mindanao has been dependent on the available capacities, such as diesel and hydro power plants to supply the electricity demand in the region. For 2016, the generation of coal-fired power plants increased by 2,852 GWh or 139.9% compared to 2038 GWh in 2015 because of the commercial operations of the 688 MW coal-fired power plants. Consequently, the generation for diesel power plants decreased by 907 GWh or 26.9% since the distribution utilities in Mindanao shifted to the new coal-fired power plants as their power supply instead of diesel due to commercial reasons. The occurrence of El Niño from January to May 2016 resulted to decrease in generation of hydro plants due to low water level in Lake Lanao. On the other hand, the generation from solar plants significantly increased from 2 GWh in 2015 to 77 GWh in 2016 due to commercial operation of the 39.1 MW solar power plants in Mindanao.
- The occurrence of El Niño affected the operation of the Hydro Power Plants in Mindanao which caused curtailments to some Distribution Utilities which do not have enough supply contracts to cover the deficiency of NPC-PSALM through the Agus and Pulangi Hydroelectric Power Plants:
 - Average Available Capacity of Agus and Pulangi from January to May 2016 was at 253.1 MW, with the lowest available capacity occurring on 4 April 2016 at 129.4 MW.

MINDANAO HIGHLIGHTS AND SIGNIFICANT INCIDENTS (continued)

- Water level of Lanao Lake breached the minimum operating level of 899.15 meters above sea level (masl) and reached the lowest level for this year at 699.0 masl on 23 April 2016.
- Compared to the occurrence in 2010, the 2015-2016 El Niño had lesser impact because of the commercial operation of coal power plants such as the 2x150 MW TSI Coal and 118 MW SEC Coal.
- Upon the directive of President Benigno S. Aquino III to ensure sufficient and uninterrupted power supply and at the same time secure the transmission facilities during the conduct of the 2016 Elections, the Inter-Agency Task Force on Securing Facilities (IATFSEF) was created on 27 January 2016. However, the IATFSEF is yet to address two remaining issues:
 - Repair of Tower No. 25 located along the Agus 2 – Kibawe 138 kV Line, which was bombed last 24 December 2015.
 - Clearing of tall trees under the transmission facilities, specifically along the Agus 2- Baloi 138 kV Line.
- The highest demand for 2016 was recorded at 1,653 which occurred on 1 December 2016. This was higher by 9% compared to the 1,519 MW peak demand of Mindanao for 2015 which occurred on 12 November 2015.
- The power situation in the Mindanao Grid has shifted from supply deficiency to generation adequacy due to the commercial operation of a total of 748.2 MW of installed capacity from the following power plants in 2016.

Mindanao Additional Capacities (01 January to 31 December 2016)

Newly-Operating Power Plants	Location	Installed Capacity (MW)	Dependable Capacity (MW)	Commercial Operation Date
COAL				
Therma South Inc. Coal Fired Power Plant U2	Sta. Cruz, Davao del Sur	150	130	February 2016
SEC Coal Fired Power Station U1	Brgy. Kamanga, Maasim, Sarangani	118	105	April 2016
FDC Misamis Coal Unit 1 & 2	PHIVIDEC, Misamis Oriental	270	240	October 2016
SMC Davao Power Plant Project Phase I Unit 1	Brgy. Culaman, Malita, Davao del Sur	150	135	December 2016
SUB-TOTAL		688.0	610.0	
OIL-BASED				
KEGI Camiguin	Brgy. Maubog, Balbagon, Mambajao, Camiguin	4.4	4.4	February 2016
BPC Fuel Power Plant Project	Barangay Barandias, Municipality of Pangantucan, Province of Bukidnon	4.8	4.7	February 2016
SPC Koronadal	Purok Garfin, Brgy. Paraiso, Koronadal, South Cotabato	11.9	11.9	May 2016
SUB-TOTAL		21.1	21.0	
SOLAR				
Kibawe Solar	Brgy. Labuagon, Kibawe, Bukidnon	10.5	7.3	March 2016

Newly-Operating Power Plants	Location	Installed Capacity (MW)	Dependable Capacity (MW)	Commercial Operation Date
Digos Solar	Brgy. San Roque, DigosCity, Davao del Sur	28.6	20	March 2016
SUB-TOTAL		39.1	27.3	
TOTAL 2016		748.2	658.3	
TOTAL 2015		203.3	1699.7	

Mindanao Summary of Committed and Indicative Power Projects As of December 2016

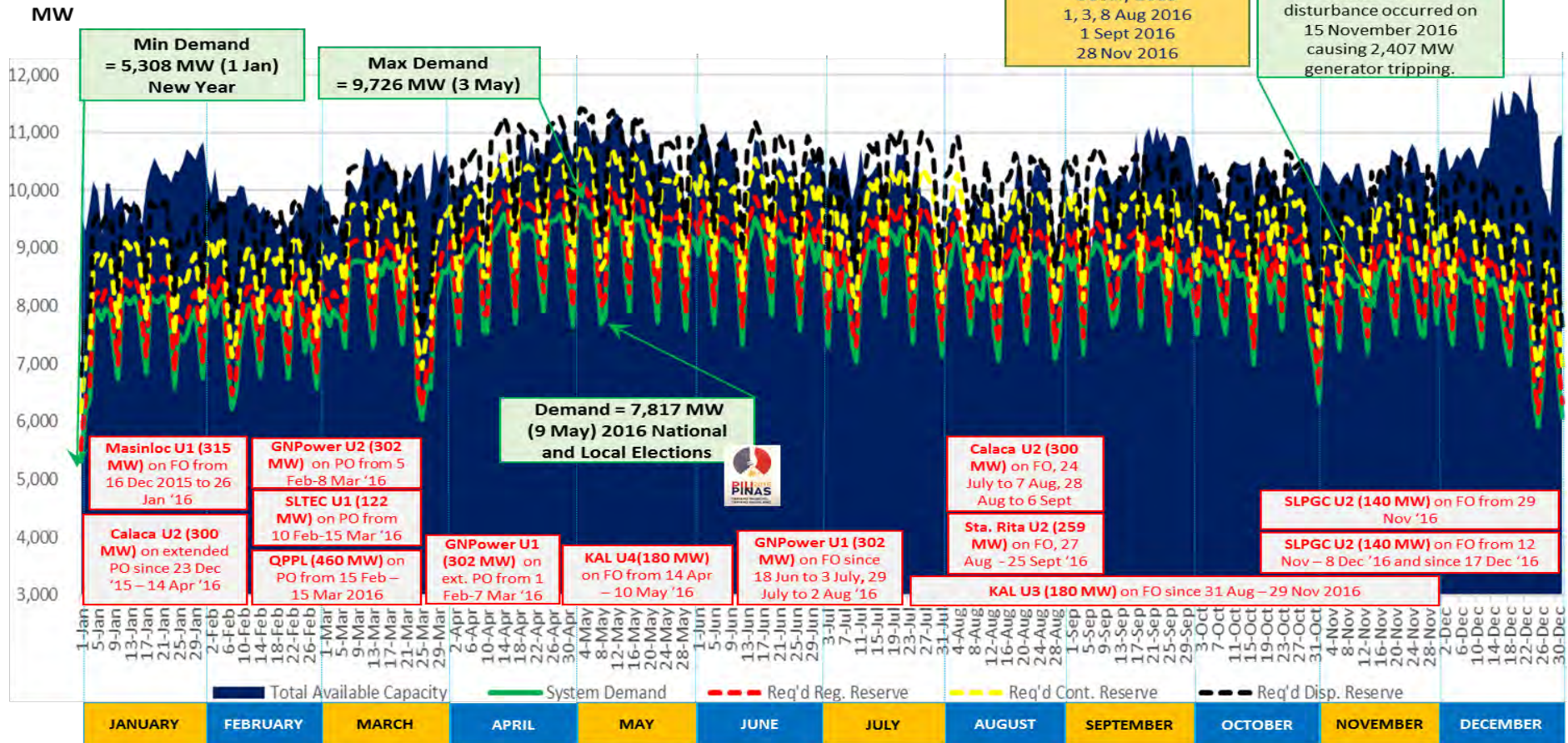
Type of Power Plant	Committed			Indicative		
	No. of Proponents	Capacity (MW)	% Share	No. of Proponents	Capacity (MW)	% Share
Coal	5	1,090.0	86.0	6	1,733.0	61.8
Oil-Based	4	29.5	2.3	3	36.8	1.3
Natural Gas	0	0.0	0.0	0	0.0	0.0
Renewable Energy	8	148.4	11.7	30	1,036.6	36.9
<i>Geothermal</i>	0	0.0	0.0	1	40.0	1.4
<i>Hydro</i>	5	134.2	10.6	18	673.4	24.0
<i>Biomass</i>	3	14.2	1.1	6	85.2	3.0
<i>Solar</i>	0	0.0	0.0	5	238.0	8.5
<i>Wind</i>	0	0.0	0.0	0	0.0	0.0
TOTAL	17	1,267.9	100.0	39	2,806.4	100.0

ANNEXES

Annex 1. Luzon Actual 2016 Electricity Demand-Supply Situation

Luzon Demand-Supply Situation

01 January to 31 December 2016



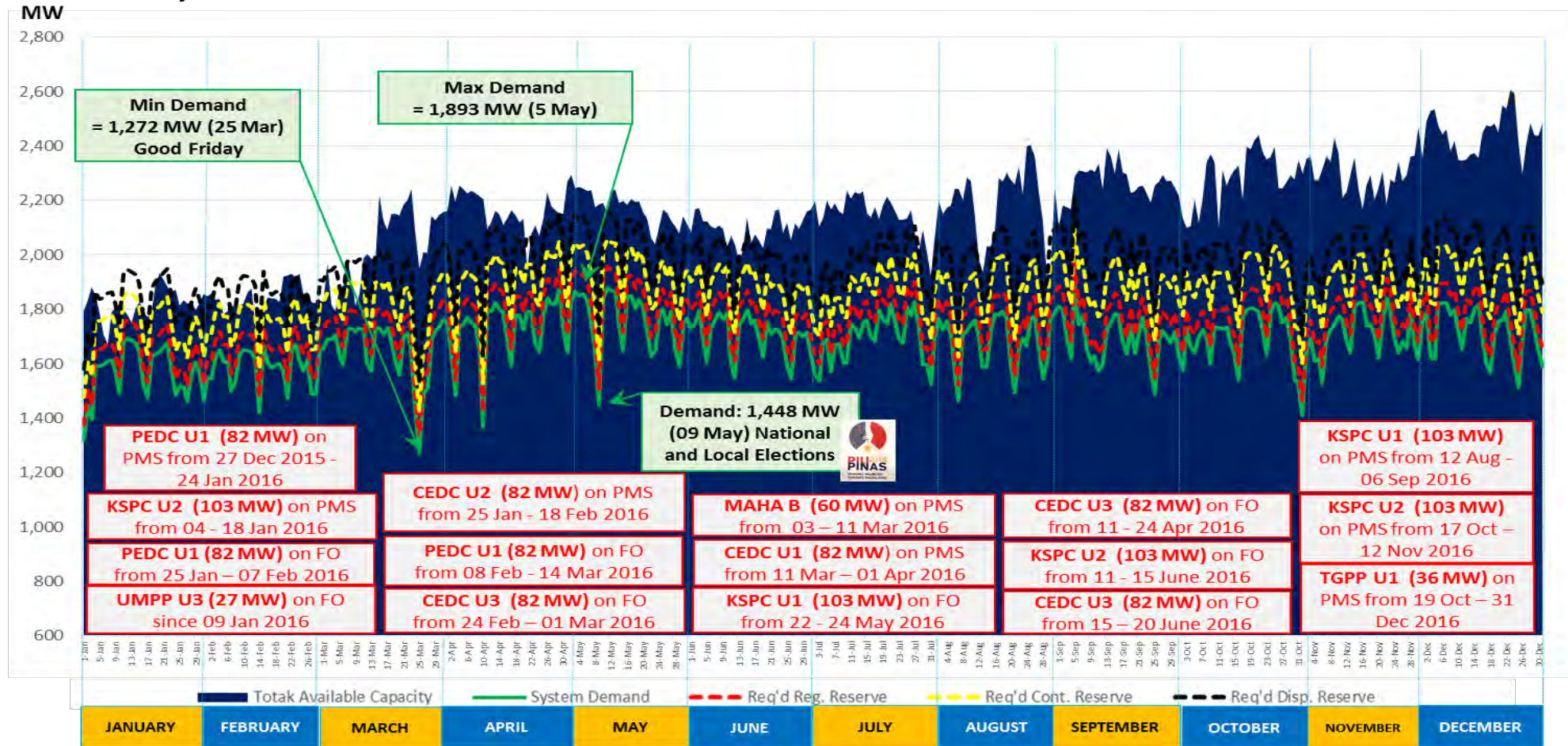
Source: National Grid Corporation of the Philippines (NGCP) Daily Operations Report

Note: FO – Forced Outage / PO – Planned Outage

Annex 2. Visayas Actual 2016 Electricity Demand-Supply Situation

Visayas Demand-Supply Situation

01 January – 31 December 2016



Source: National Grid Corporation of the Philippines (NGCP) Daily Operations Report

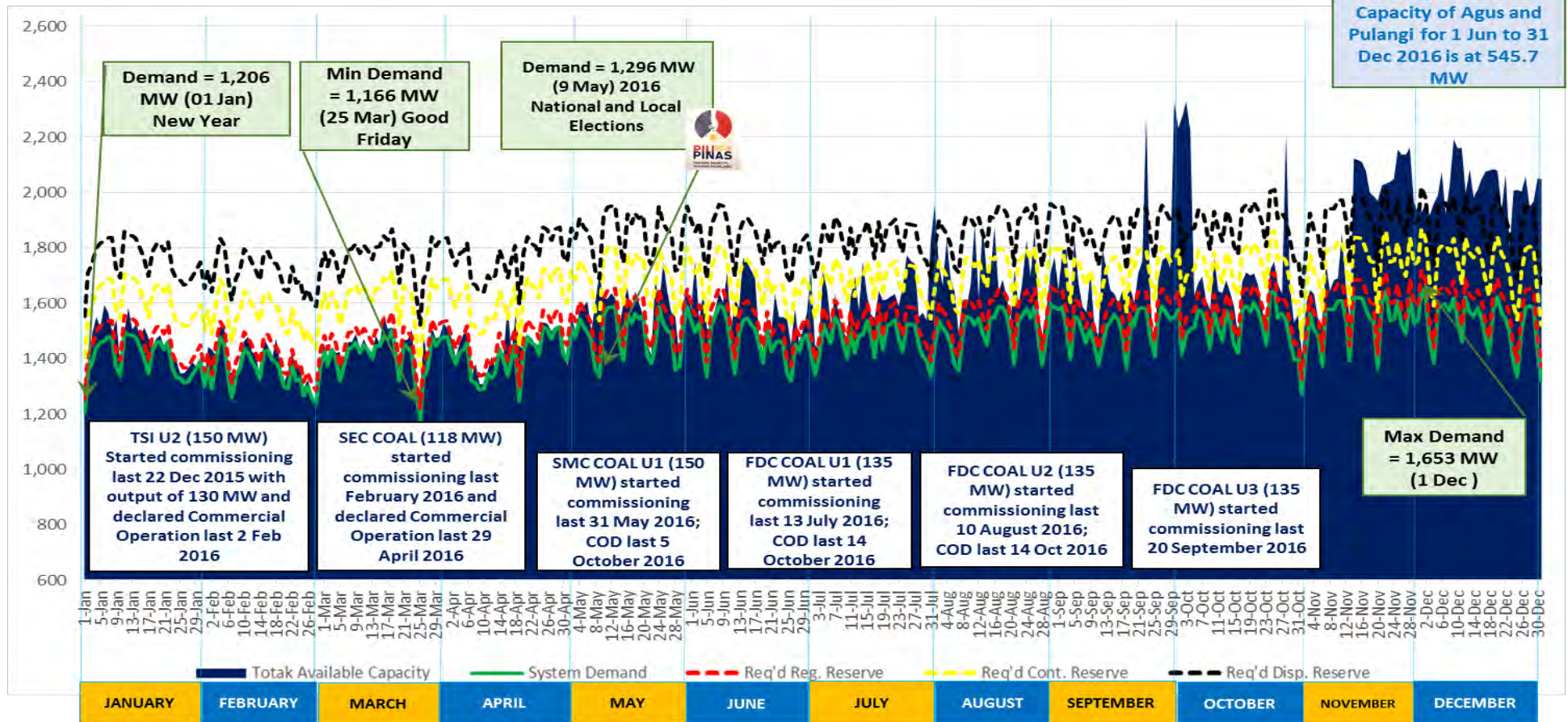
Note: FO – Forced Outage / PO – Planned Outage

Annex 3. Mindanao Actual 2016 Electricity Demand-Supply Situation

Mindanao Demand-Supply Situation

01 January to 31 December 2016

MW



Source: National Grid Corporation of the Philippines (NGCP) Daily Operations Report

Note: FO – Forced Outage / PO – Planned Outage

Annex 4. 2016 List of Existing Power Plants, Philippines

CAPACITY MIX, MW as 31 December 2016

FUEL TYPE	LUZON			
	Capacity (MW)		Percent Share (%)	
	Installed	Dependable	Installed	Dependable
Coal	5,294	4,970	35.3	36.5
Oil Based	2,133	1,655	14.2	12.2
<i>Diesel</i>	763	645	5.1	4.7
<i>Oil Thermal</i>	650	470	4.3	3.5
<i>Gas Turbine</i>	720	540	4.8	4.0
Natural Gas	3,430	3,291	22.9	24.2
Renewable Energy	4,120	3,684	27.5	27.1
<i>Geothermal</i>	843	777	5.6	5.7
<i>Hydro</i>	2,537	2,323	16.9	17.1
<i>Wind</i>	337	293	2.2	2.2
<i>Biomass</i>	95	71	0.6	0.5
<i>Solar</i>	307	220	2.1	1.6
TOTAL	14,977	13,600	100.0	100.0

FUEL TYPE	VISAYAS			
	Capacity (MW)		Percent Share (%)	
	Installed	Dependable	Installed	Dependable
Coal	1,054	1,050	32.1	37.3
Oil Based	655	434	19.9	15.4
<i>Diesel</i>	600	434	18.3	15.4
<i>Gas Turbine</i>	55	0	1.7	0.0
Natural Gas	1	0	0.0	0.0
Renewable Energy	1,574	1,329	47.9	47.2
<i>Geothermal</i>	965	813	29.4	28.9
<i>Hydro</i>	20	18	0.6	0.6
<i>Wind</i>	90	90	2.7	3.2
<i>Biomass</i>	101	77	3.1	2.7
<i>Solar</i>	399	331	12.1	11.8
TOTAL	3,284	2,813	100.0	100.0

FUEL TYPE	MINDANAO			
	Capacity (MW)		Percent Share (%)	
	Installed	Dependable	Installed	Dependable
Coal	1,070	959	33.8	35.7
Oil Based	828	733	26.2	27.3
<i>Diesel</i>	828	733	26.2	27.3
Natural Gas	0	0	0.0	0.0
Renewable Energy	1,264	993	40.0	37.0
<i>Geothermal</i>	108	100	3.4	3.7
<i>Hydro</i>	1,061	840	33.5	31.3
<i>Wind</i>	0	0	0.0	0.0
<i>Biomass</i>	36	10	1.1	0.4
<i>Solar</i>	59	43	1.9	1.6
TOTAL	3,162	2,684	100.0	100.0

FUEL TYPE	PHILIPPINES			
	Capacity (MW)		Percent Share (%)	
	Installed	Dependable	Installed	Dependable
Coal	7,419	6,979	34.6	36.5
Oil Based	3,616	2,821	16.9	14.8
Natural Gas	3,431	3,291	16.0	17.2
Renewable Energy	6,958	6,005	32.5	31.4
<i>Geothermal</i>	1,916	1,689	8.9	8.8
<i>Hydro</i>	3,618	3,181	16.9	16.7
<i>Wind</i>	427	383	2.0	2.0
<i>Biomass</i>	233	157	1.1	0.8
<i>Solar</i>	765	594	3.6	3.1
TOTAL	21,423	19,097	100.0	100.0

Note:

Excluding off-grid generators

Release date, 15 February 2017

GRID	Capacity (MW)		Percent Share (%)	
	Installed	Dependable	Installed	Dependable
LUZON	14,977	13,600	69.9	71.2
VISAYAS	3,284	2,813	15.3	14.7
MINDANAO	3,162	2,684	14.8	14.1
TOTAL	21,423	19,097	100.0	100.0

Annex 5. 2016 List of Existing Power Plants, Luzon

POWER PLANT		CAPACITY, MW		Number of Unit/s	LOCATION	OPERATOR	IPPA	FIT APPROVED (for RE)	OWNER TYPE	TYPE OF CONTRACT	DATE COMMISSIONED/ COMMERCIAL OPERATION
FACILITY NAME	SUBTYPE	INSTALLED	DEPENDABLE		MUN/PROV						
GRID-CONNECTED		14,767.5	13,451.5								
COAL		5,294.3	4,970.0								
PAGBILAO U1	Pulvurized Sub Critical Coal	382.0	382.0	1	Pagbilao, Quezon	TeaM Pagbilao Corporation	Thermal Luzon Inc. (TLI)		NON-NPC/IPP	BOT-ECA	Mar-1996
PAGBILAO U2	Pulvurized Sub Critical Coal	382.0	382.0	1							
CALACA U1	Pulvurized Sub Critical Coal	300.0	240.0	1	Calaca, Batangas	SEM Calaca Power Corp.	SEM Calaca Power Corp.		NON-NPC/IPP		Sep-1984
CALACA U2	Pulvurized Sub Critical Coal	300.0	240.0	1							
MASINLOC U1	Pulvurized Sub Critical Coal	315.0	315.0	1	Masinloc, Zambales	Masinloc-Power Partners Ltd.	Masinloc-Power Partners Ltd.		NON-NPC/IPP		Jun-1998
MASINLOC U2	Pulvurized Sub Critical Coal	315.0	315.0	1							
SUAL U1	Pulvurized Sub Critical Coal	647.0	647.0	1	Sual, Pangasinan	TeaM Sual Corporation	San Miguel Energy Corp. (SMEC)		NON-NPC/IPP	BOT-ECA	Oct-1999
SUAL U2	Pulvurized Sub Critical Coal	647.0	647.0	1							
QUEZON POWER	Pulvurized Sub Critical Coal	511.0	460.0	1	Mauban, Quezon	Quezon Power Phils. Ltd (QPPL)	Quezon Power Phils. Ltd (QPPL)		NON-NPC/IPP		May-2000
APEC	Pulvurized Sub Critical Coal	50.0	42.0	1	Mabalacat, Pampanga	Asia Pacific Energy Corp.	Asia Pacific Energy Corp.		NON-NPC/IPP		Jul-2006
MARIVELES U1	Pulvurized Sub Critical Coal	325.8	302.0	1	Mariveles, Bataan	GN Power Mariveles Coal Plant Ltd.Co	GN Power Mariveles Coal Plant Ltd.Co		NON-NPC/IPP		May-2013
MARIVELES U2	Pulvurized Sub Critical Coal	325.8	302.0	1							
PETRON RSFFB	Pulvurized Sub Critical Coal	140.0	100.0	4	Limay, Bataan	Petron Corp	Petron Corp		NON-NPC/IPP		Phase1 - May-2013 Phase2 - May-2014
SLTEC PUTING BATO U1	Circulating Fluidized Bed (CFB) Coal	135.0	122.0	1	Calaca, Batangas	South Luzon Thermal Energy Corporation	South Luzon Thermal Energy Corporation		NON-NPC/IPP		Unit 1 - Apr-2015
SLTEC PUTING BATO U2	Circulating Fluidized Bed (CFB) Coal	135.0	122.0	1							Unit 2 - Feb-2016
SLPGC U1	Circulating Fluidized Bed (CFB) Coal	150.0	140.0	1	Calaca, Batangas	Southwest Luzon Power Generation Corporation	Southwest Luzon Power Generation Corporation		NON-NPC/IPP		Jul-2016
SLPGC U2	Circulating Fluidized Bed (CFB) Coal	150.0	140.0	1							
ANDA	Circulating Fluidized Bed (CFB) Coal	83.7	72.0	1	Brgy. Bundagul, Mabalacat, Pampanga	Anda Power Corporation	Anda Power Corporation		NON-NPC/IPP		Sep-2016

POWER PLANT		CAPACITY, MW		Number of Unit/s	LOCATION	OPERATOR	IPPA	FIT APPROVED (for RE)	OWNER TYPE	TYPE OF CONTRACT	DATE COMMISSIONED/ COMMERCIAL OPERATION
FACILITY NAME	SUBTYPE	INSTALLED	DEPENDABLE		MUN/PROV						
Diesel		679.2	570.0								
SUBIC DPP	Bunker/Diesel Internal Combustion Engine	116.0	110.0	8	Olongapo, Zambales	One Subic Power Generation Corp.	One Subic Power Generation Corp.		NON-NPC/IPP		Feb-1994
TMO	Bunker/Diesel Internal Combustion Engine Power Barge	242.0	200.0	4	Navotas, Metro Manila	Therma Mobile Inc.	Therma Mobile Inc.		NON-NPC/IPP		Nov-2013
BAUANG DPP	Bunker/Diesel Internal Combustion Engine	235.2	180.0	21	Bauang, La Union	1590 Energy Corporation	1590 Energy Corporation		NON-NPC/IPP		Aug-1994
TRANS ASIA POWER	Bunker/Diesel Internal Combustion Engine	52.0	48.0	1	Norzagaray, Bulacan	Trans Asia Power Generation Corp.	Trans Asia Power Generation Corp.		NON-NPC/IPP		Jun-1905
CIP II	Bunker/Diesel Internal Combustion Engine	21.3	20.0	1	Bacnotan, La Union	CIP II Power Corporation	CIP II Power Corporation		NON-NPC/IPP		Jan-2013
LAFARGE	Bunker/Diesel Internal Combustion Engine	12.7	12.0	2	Taysan, Batangas	Republic Cement and Building Materials Inc.	Republic Cement and Building Materials Inc.		NON-NPC/IPP		Jul-2014
Oil Thermal		650.0	470.0								
MALAYA	Bunker-fired Thermal Plant	650.0	470.0	2	Piililla, Rizal	STX Marine Inc.	PSALM Corporation		NPC-IPP	ROM-ECA	Sep-1995
Gas Turbine		720.0	540.0								
MILLENNIUM GTPP	Open Cycle Gas Turbine (OCGT)	100.0	0.0	1	Navotas, Metro Manila	Millenium Energy Inc	Millenium Energy Inc		NON-NPC/IPP		1990 / 1993
LIMAY CCGT	Combined Cycle Gas Turbine (CCGT)	620.0	540.0	8	Limay, Bataan	Panasia Energy Holding Inc.	Panasia Energy Holding Inc.		NON-NPC/IPP		Block A - May-1993 Block B - Dec-1994
NATURAL GAS		3,430.1	3,291.0								
STA RITA	Combined Cycle Gas Turbine (CCGT)	1,060.0	1,040.0	4	Sta. Rita, Batangas City	First Gas Power Corp	First Gas Power Corp		NON-NPC/IPP		Unit 1&2 - Jun-2000 Unit 3&4 - Oct-

POWER PLANT		CAPACITY, MW		Number of Unit/s	LOCATION	OPERATOR	IPPA	FIT APPROVED (for RE)	OWNER TYPE	TYPE OF CONTRACT	DATE COMMISSIONED/ COMMERCIAL OPERATION
FACILITY NAME	SUBTYPE	INSTALLED	DEPENDABLE		MUN/PROV						
											2001
ILIJAN	Combined Cycle Gas Turbine (CCGT)	1,271.0	1,200.0	6	Ilijan, Batangas City	KEPCO (Ilijan) Corp.	South Premiere Power Corporation		NON-NPC/IPP	BOT-ECA/GSPA	Jun-2002
SAN LORENZO	Combined Cycle Gas Turbine (CCGT)	549.1	540.0	2	Sta. Rita, Batangas City	First Gas Power Corp	First Gas Power Corp		NON-NPC/IPP		Sep-2002
AVION	Open Cycle Gas Turbine (OCGT)	100.0	97.0	2	Bolbok, Batangas City	Prime Meridian PowerGen Corp.	Prime Meridian PowerGen Corp.		NON-NPC/IPP		Aug-2016
SAN GABRIEL	Combined Cycle Gas Turbine (CCGT)	450.0	414.0	1	Sta. Rita, Batangas City	First NatGas Power Corp.	First NatGas Power Corp.		NON-NPC/IPP		Jul-2016
GEO THERMAL		842.5	776.9								
MAKBAN	Flash/Binary Type Steam recovery	442.8	420.0	10	Calauan, Laguna	AP Renewable Inc.	AP Renewable Inc.	NO	NON-NPC/IPP		Apr-1979
BACMAN	Flash Type Steam recovery	130.0	130.0	3	Bacon, Sorsogon	Bac-Man Geothermal Inc.	Bac-Man Geothermal Inc.	NO	NON-NPC/IPP		Sep-1993
TIWI	Flash Type Steam recovery	234.0	207.9	5	Tiwi, Albay	AP Renewable Inc.	AP Renewable Inc.	NO	NON-NPC/IPP		Jan-1979
MAKBAN-BINARY	-	15.7	0.0	1	Bitin bay, Laguna	AP Renewable Inc.	AP Renewable Inc.	NO	NON-NPC/IPP		
MAIBARARA	Flash Type Steam recovery	20.0	19.0	1	Sto. Tomas, Batangas	Maibarara Geothermal Inc.	Maibarara Geothermal Inc.	NO	#REF!		Feb-2014
HYDRO		2,523.0	2,310.8								
<i>Large Hydroelectric Plants</i>		2,517.0	2,304.8								
SAN ROQUE	Dam-type HEPP	435.0	435.0	3	San Manuel, Pangasinan	San Roque Power Corporation	Strategic Power Development Corporation	NO	NON-NPC/IPP	BOT-PPA	May-2003
HEDCOR	Run-of-River type HEPP	33.8	15.4	13	Benguet	Hydro Electric Dev't. Corp. (HEDCOR)	Hydro Electric Dev't. Corp. (HEDCOR)	YES	NON-NPC/IPP	BOO-EP SA	Jan-1993

POWER PLANT		CAPACITY, MW		Number of Unit/s	LOCATION	OPERATOR	IPPA	FIT APPROVED (for RE)	OWNER TYPE	TYPE OF CONTRACT	DATE COMMISSIONED/ COMMERCIAL OPERATION
FACILITY NAME	SUBTYPE	INSTALLED	DEPENDABLE		MUN/PROV						
KALAYAAN PSPP	Dam-type HEPP	739.2	720.0	4	Kalayaan, Laguna	CBK Power Company Ltd.	PSALM Corporation	NO	NPC-IPP	BROT-PPA	U1&2 - Aug-1982 U3&4 - May-2004
MAGAT	Dam-type HEPP	380.0	380.0	4	Ramon, Isabela	SN Aboitiz Power, Inc.	SN Aboitiz Power - Magat, Inc.	NO	NON-NPC/IPP		U1&2 - Aug-1983 U3&4 - Oct-1983
CALIRAYA	Dam-type HEPP	35.0	35.0	2	Lumban, Laguna	CBK Power Company Ltd.	PSALM Corporation	NO	NPC-IPP	BROT-PPA	1942 1947 1950
BOTOCAN	Run-of-River type HEPP	22.8	22.0	3	Kalayaan, Laguna	CBK Power Company Ltd.	PSALM Corporation	NO	NPC-IPP	BROT-PPA	Unit 1 - 1930 Unit 2&3 - 1947
ANGAT M	Dam-type HEPP	200.0	200.0	4	Norzagaray, Bulacan	Angat Hydro Power Corporation (AHPC)	Angat Hydro Power Corporation (AHPC)	NO	NON-NPC/IPP		M - Oct-1967
ANGAT A	Dam-type HEPP	46.0	18.0	5							A - Jun-1986
PANTABANGAN-MASIWAY	Dam-type HEPP	132.0	132.0	6	Pantabangan, Nueva Ecija	First Gen Hydro Power Corp.	First Gen Hydro Power Corp.	NO	NON-NPC/IPP		U1&2 - Apr1977 U3&4 - May1977 U5&6 - Feb1981
AMBUKLAO	Dam-type HEPP	105.0	105.0	3	Bokud, Benguet	SN Aboitiz Power Hydro, Inc.	SN Aboitiz Power - Benguet, Inc.	NO	NON-NPC/IPP		Dec-1956
BINGA	Dam-type HEPP	140.0	138.0	4	Itogon, Benguet	SN Aboitiz Power Hydro, Inc.	SN Aboitiz Power - Benguet, Inc.	NO	NON-NPC/IPP		Jan-1960
BAKUN	Run-of-River type HEPP	70.0	36.4	2	Alilem, Ilocos Sur	Luzon Hydro Corp.	Vivant Sta. Clara Northern Renewables Generation	NO	NON-NPC/IPP	BOT-PPA	Unit 1 - Nov-2000 Unit 2 - Feb-2001

POWER PLANT		CAPACITY, MW		Number of Unit/s	LOCATION	OPERATOR	IPPA	FIT APPROVED (for RE)	OWNER TYPE	TYPE OF CONTRACT	DATE COMMISSIONED/ COMMERCIAL OPERATION
FACILITY NAME	SUBTYPE	INSTALLED	DEPENDABLE		MUN/PROV						
CASECNAN (NIA)	Dam-type HEPP	165.0	60.0	2	Pantabangan, Nueva Ecija	CE Casecnan Water & Energy Co., Inc.	PSALM Corporation	NO	NPC-IPP	BOT-PPA	Apr-2002
SABANGAN	Run-of-River type HEPP	13.2	8.0		Sabangan, Mt. Province	Hydro Electric Dev't. Corp. (HEDCOR)	Hydro Electric Dev't. Corp. (HEDCOR)	NO	NON-NPC/IPP		Jun-2015
Small Hydroelectric Plants		6.0	6.0								
NIA-BALIGATAN	Run-of-River type HEPP	6.0	6.0	1	Ramon, Isabela	National Irrigation Administration (NIA)	National Irrigation Administration (NIA)	NO	NON-NPC/IPP		1987
WIND		282.9	271.9								
BANGUI WIND POWER Ph1 and Ph2	On-shore Wind Turbine	33.0	33.0		Bangui Bay, Ilocos Norte	North Wind Power Dev. Corp.	North Wind Power Dev. Corp.	NO	NON-NPC/IPP		Jun-2005
BANGUI WIND POWER Ph3	On-shore Wind Turbine	18.9	18.9		Bangui Bay, Ilocos Norte	North Wind Power Dev. Corp.	North Wind Power Dev. Corp.	YES	NON-NPC/IPP		Oct-2014
BURGOS WIND	On-shore Wind Turbine	150.0	139.0		Burgos, Ilocos Norte	EDC Burgos Wind Power Corporation (EBWPC)	EDC Burgos Wind Power Corporation (EBWPC)	YES	NON-NPC/IPP		Nov-2014
CAPARISPISAN WIND	On-shore Wind Turbine	81.0	81.0		Caparispisan, Ilocos Norte	North UPC	North Luzon Renewable Energy Corp.	YES	NON-NPC/IPP		Nov-2014
BIOMASS		86.1	65.2								
GREEN FUTURE	Bagasse-fired Cogeneration Plant	19.8	12.0	1	San Mariano, Isabela	Green Future Innovation Inc.	Green Future Innovation Inc.	YES	NON-NPC/IPP		Mar-2013
SJC IPOWER	Rice Husk-fired Cogeneration Plant	12.0	10.0	1	San Jose City, Nueva Ecija	I Power Corporation	San Jose City I Power Corporation	YES	NON-NPC/IPP		Oct-2014
MONTALBAN LFG	Landfill Gas Recovery System	9.3	3.4	10	Rodriguez, Rizal	Montalban Methane Power Corp.	Montalban Methane Power Corp.	YES	NON-NPC/IPP		Jun-2009

POWER PLANT		CAPACITY, MW		Number of Unit/s	LOCATION	OPERATOR	IPPA	FIT APPROVED (for RE)	OWNER TYPE	TYPE OF CONTRACT	DATE COMMISSIONED/ COMMERCIAL OPERATION
FACILITY NAME	SUBTYPE	INSTALLED	DEPENDABLE		MUN/PROV						
IBEC	Bagasse-fired Cogeneration Plant	20.0	18.0		San Mariano, Isabela	Isabela Biomass Energy Corporation	Isabela Biomass Energy Corporation	NO	NON-NPC/IPP		Jul-2015
BATAAN 2020	Rice Husk-fired Cogeneration Plant	13.0	11.0		Samal, Bataan	Bataan 2020 Inc.	Bataan 2020 Inc.	YES	NON-NPC/IPP		Sep-2015
GIFT	Rice Husk-fired Cogeneration Plant	12.0	10.8		Talavera, Nueva Ecija	Green Innovations for Tomorrow Corporation (GIFTC)	Green Innovations for Tomorrow Corporation (GIFTC)	YES	NON-NPC/IPP		Mar-2016
SOLAR		259.5	185.7								
MAJESTIC	Rooftop Installed Solar PVs	41.3	33.0		CEZA, Rosario, Cavite	Majestic Power Corporation	Majestic Power Corporation	YES	NON-NPC/IPP		Mar-2015
PETROSOLAR	Ground Mounted Solar PVs	50.1	35.0		Tarlac City, Tarlac	PetroSolar Corporation	PetroSolar Corporation	YES	NON-NPC/IPP		Feb-2016
YH GREEN	Ground Mounted Solar PVs	14.5	10.2		Hermosa, Bataan	YH Green Energy Incorporated	YH Green Energy Incorporated	YES	NON-NPC/IPP		Feb-2016
CABANATUAN SOLAR	Ground Mounted Solar PVs	10.3	7.2		Cabanatuan City, Nueva Ecija	First Cabanatuan Renewable Ventures, Inc.	First Cabanatuan Renewable Ventures, Inc.	YES	NON-NPC/IPP		Mar-2016
CALATAGAN SOLAR	Ground Mounted Solar PVs	63.3	44.3		Calatagan and Balayan, Batangas	Solar Philippines Calatagan Corporation	Solar Philippines Calatagan Corporation	YES	NON-NPC/IPP		Mar-2016
CURRIMAO SOLAR	Ground Mounted Solar PVs	20.0	14.0		Currimao, Ilocos Norte	Mirae Asia Energy Corp.	Mirae Asia Energy Corp.	YES	NON-NPC/IPP		Feb-2016
VALENZUELA SOLAR	Ground Mounted Solar PVs	8.5	6.0		Brgy. Isla, Valenzuela City	Valenzuela Solar Energy Inc.	Valenzuela Solar Energy Inc.	YES	NON-NPC/IPP		Mar-2016
LIAN SOLAR	Ground Mounted Solar PVs	2.0	1.4		Lian, Batangas	Absolut Distillers Inc.	Absolut Distillers Inc.	YES	NON-NPC/IPP		Mar-2016

POWER PLANT		CAPACITY, MW		Number of Unit/s	LOCATION	OPERATOR	IPPA	FIT APPROVED (for RE)	OWNER TYPE	TYPE OF CONTRACT	DATE COMMISSIONED/ COMMERCIAL OPERATION
FACILITY NAME	SUBTYPE	INSTALLED	DEPENDABLE		MUN/PROV						
CLARK SOLAR	Ground Mounted Solar PVs	22.3	15.6		Prince Balagtas Extension, Clark Special Economic Zone, Mabalacat, Pampanga	Enfinity Philippines Renewable Resources Inc.	Enfinity Philippines Renewable Resources Inc.	YES	NON-NPC/IPP		Mar-2016
PALAUIG SOLAR	Ground Mounted Solar PVs	5.0	3.5		Morong, Bataan	SPARC Solar Powered Agri-Rural Communities Corp.	SPARC Solar Powered Agri-Rural Communities Corp.	YES	NON-NPC/IPP		Mar-2016
SAN ILDEFONSO SOLAR	Ground Mounted Solar PVs	15.0	10.5		San Ildefonso, Bulacan	Bulacan Solar Energy Corporation	Bulacan Solar Energy Corporation	YES	NON-NPC/IPP		Mar-2016
STA. RITA SOLAR	Ground Mounted Solar PVs	7.1	5.0		Mt. Sta. Rita, Morong and Hermosa, Bataan	Jobin-Sqm Inc. (JOBIN)	Jobin-Sqm Inc. (JOBIN)	NO	NON-NPC/IPP		Nov-2016
EMBEDDED		209.4	148.6								
OIL-BASED											
<i>Diesel</i>		83.8	74.8								
CALIBU DPP	Bunker/Diesel Internal Combustion Engine	30.0	30.0	5	Angeles City	Angeles Power Inc.	Angeles Power Inc.		NON-NPC/IPP		Dec-1994
PETERSVILLE DPP	Bunker/Diesel Internal Combustion Engine	9.3	6.0	5	Angeles City	Angeles Electric Corporation	Angeles Electric Corporation		NON-NPC/IPP		Aug-1966
FCVC DPP	Bunker/Diesel Internal Combustion Engine	25.6	24.0	4	Cabanatuan City	First Cabanatuan Venture Corp.	First Cabanatuan Venture Corp.		NON-NPC/IPP		Jan-1996
TARLAC POWER	Bunker/Diesel Internal Combustion Engine	18.9	14.8	3	Capas, Tarlac	Tarlac Power Corporation	Tarlac Power Corporation		NON-NPC/IPP		Jul-1995
HYDROELECTRIC											
<i>Small Hydroelectric Plants</i>		14.5	12.4								

POWER PLANT		CAPACITY, MW		Number of Unit/s	LOCATION	OPERATOR	IPPA	FIT APPROVED (for RE)	OWNER TYPE	TYPE OF CONTRACT	DATE COMMISSIONED/ COMMERCIAL OPERATION
FACILITY NAME	SUBTYPE	INSTALLED	DEPENDABLE		MUN/PROV						
CAWAYAN	Run-of-River type HEPP	0.4	0.4	1	Guinlajan, Sorsogon	SORECO II	SORECO II	NO	NON-NPC/IPP		Jun-2002
BUHI-BARIT	Run-of-River type HEPP	2.0	2.0	1	Buhi, Camarines Sur	People's Energy Inc.	People's Energy Inc.	NO	NON-NPC/IPP		Sep-1957
AGUA-GRANDE	Run-of-River type HEPP	4.5	4.5	2	Pagudpod, Ilocos Norte	INEC	INEC	NO	NON-NPC/IPP		Jun-1905
MAGAT A&B	Run-of-River type HEPP	2.5	0.5	7	Ramon, Isabela	ISELCO I	ISELCO I	NO	NON-NPC/IPP		1984 / 1985
BALUGBOG	Run-of-River type HEPP	0.7	0.7	3	Nagcarlan, Laguna	Phil. Power Dev.Co.	Phil. Power Dev.Co.	NO	NON-NPC/IPP		Apr-1905
PALAPAQUIN	Run-of-River type HEPP	0.4	0.4	1	Sn Pablo, Laguna	Phil. Power Dev.Co.	Phil. Power Dev.Co.	NO	NON-NPC/IPP		Apr-1905
CALIBATO	Run-of-River type HEPP	0.05	0.05	1	Sn Pablo, Laguna	Phil. Power Dev.Co.	Phil. Power Dev.Co.	NO	NON-NPC/IPP		
INARIHAN	Run-of-River type HEPP	1.0	1.0	3	Panicuason, Naga City	Bicol Hydropower Corp.	Bicol Hydropower Corp.	NO	NON-NPC/IPP		Jun-1905
YABO	Run-of-River type HEPP	0.2	0.2	1	Pili, Camarines Sur	PROSAMAPI Coop.	PROSAMAPI Coop.	NO	NON-NPC/IPP		
COMMUNAL-UDDIAWAN	Run-of-River type HEPP	1.8	1.8	2	Solano, Nueva Viscaya	Smith-Bell Mini-Hydro Corporation	Smith-Bell Mini-Hydro Corporation	YES	NON-NPC/IPP		2010
BULANAO HEPP	Run-of-River type HEPP	1.0	1.0	1	Tabuk, Kalinga	DPJ Engineers and Consultants	DPJ Engineers and Consultants		NON-NPC/IPP		Mar-2016
BIOMASS		9.4	5.6								
LAGUNA LFG	Landfill Gas Recovery System	4.2	0.9	4	San Pedro, Laguna	Bacavalley Energy Inc.	Bacavalley Energy Inc.		NON-NPC/IPP		Mar-2011
LUCKY PPH	Bagasse-fired Cogeneration Plant	4.0	3.6	8	Alicia, Isabela	Lucky PPH International Inc	Lucky PPH International Inc	YES	NON-NPC/IPP		2008
PANGEA	Landfill Gas Recovery System	1.2	1.1	3	Payatas, Quezon City, M. Manila	Pangea Green Energy Phil., Inc.	Pangea Green Energy Phil., Inc.	YES	NON-NPC/IPP		Mar-2013
SOLAR		47.7	34.4								
PAMPANGA SOLAR PH1	Ground Mounted Solar PVs	10.0	8.0		Brgy. Suclaban, Mexico, Pampanga	Raslag Corporation	Raslag Corporation	YES	NON-NPC/IPP		Feb-2015

POWER PLANT		CAPACITY, MW		Number of Unit/s	LOCATION	OPERATOR	IPPA	FIT APPROVED (for RE)	OWNER TYPE	TYPE OF CONTRACT	DATE COMMISSIONED/ COMMERCIAL OPERATION
FACILITY NAME	SUBTYPE	INSTALLED	DEPENDABLE		MUN/PROV						
BURGOS SOLAR 1	Ground Mounted Solar PVs	4.1	2.9		Burgos, Ilocos Norte	EDC Burgos Wind Power Corporation (EBWPC)	EDC Burgos Wind Power Corporation (EBWPC)	YES	NON-NPC/IPP		Mar-2015
SPCRPI SM NORTH	Rooftop Installed Solar PVs	1.5	1.1		Quezon City, Metro Manila	Solar Philippines	Solar Philippines	YES	NON-NPC/IPP		Apr-2015
PAMPANGA SOLAR PH2	Ground Mounted Solar PVs	13.1	9.2		Brgy. Suclaban, Mexico, Pampanga	Raslag Corporation	Raslag Corporation	NO	NON-NPC/IPP		Dec-2015
BURGOS SOLAR 2	Ground Mounted Solar PVs	2.7	1.9		Burgos, Ilocos Norte	EDC Burgos Wind Power Corporation (EBWPC)	EDC Burgos Wind Power Corporation (EBWPC)	YES	NON-NPC/IPP		Jan-2016
DALAYAP SOLAR	Ground Mounted Solar PVs	7.5	5.2		Barangay Dalayap, Tarlac City, Tarlac	nv vogt Philippines Solar Energy Four, Inc. (nv vogt 4)	nv vogt Philippines Solar Energy Four, Inc. (nv vogt 4)	NO	NON-NPC/IPP		Dec-2016
ARMENIA SOLAR	Ground Mounted Solar PVs	8.8	6.2		Barangay Armenia, Tarlac City, Tarlac	nv vogt Philippines Solar Energy Three, Inc. (nv vogt 3)	nv vogt Philippines Solar Energy Three, Inc. (nv vogt 3)	NO	NON-NPC/IPP		Dec-2016
WIND		54.0	21.4								
PILILIA WIND	Mountain Range-Installed Wind Turbine	54.0	21.4		Pililia, Rizal	Alternergy Philippine Holdings Corporation	Alternergy Philippine Holdings Corporation	YES	NON-NPC/IPP		Jun-2015
TOTAL LUZON		14,976.9	13,600.1								

Annex 6. 2016 List of Existing Power Plants, Visayas

POWER PLANT		CAPACITY, MW		Number of Unit/s	LOCATION	OPERATOR	IPPA	FIT APPROVED (for RE)	OWNER TYPE	TYPE OF CONTRACT	DATE COMMISSIONED/ COMMERCIAL OPERATION
FACILITY NAME	SUBTYPE	Installed	Dependable		MUN/PROV						
GRID-CONNECTED		3,281.5	2,811.7								
Coal		1,054.4	1,050.1								
CEDC Coal U1	Circulating Fluidized Bed (CFB) Coal	82.0	82.0	1	Toledo City, Cebu	GBPC - Cebu Energy Development Corporation	GBPC - Cebu Energy Development Corporation		NON-NPC/IPP		Apr-2010
CEDC Coal U2	Circulating Fluidized Bed (CFB) Coal	82.0	82.0	1							Jun-2010
CEDC Coal U3	Circulating Fluidized Bed (CFB) Coal	82.0	82.0	1							Jan-2011
KEPCO Coal U1	Circulating Fluidized Bed (CFB) Coal	103.0	103.0	1	Naga, Cebu	KepCo-Salcon	KepCo-Salcon		NON-NPC/IPP		Nov-2010
KEPCO Coal U2	Circulating Fluidized Bed (CFB) Coal	103.0	103.0	1							Mar-2011
PCPC	Circulating Fluidized Bed (CFB) Coal	135.0	135.0	1	Concepcion, Iloilo	Palm Concepcion Power Corporation (PCPC)	Palm Concepcion Power Corporation (PCPC)		NON-NPC/IPP		Aug 2016
PEDC Coal U1	Circulating Fluidized Bed (CFB) Coal	83.7	83.7	1	Iloilo City, Iloilo	GBPC - Panay Energy Development Corporation	GBPC - Panay Energy Development Corporation		NON-NPC/IPP		Nov-2010
PEDC Coal U2	Circulating Fluidized Bed (CFB) Coal	83.7	83.7	1							Apr-2011
PEDC Coal U3	Circulating Fluidized Bed (CFB) Coal	150.0	150.0	1							Dec-2016
TPC TG4 (Sangi Station)	Pulverized Sub Critical Coal	26.3	22.0	1	Toledo City, Cebu	Global Business Power Corp. (GBPC) - TPC	Global Business Power Corp. (GBPC) - TPC		NON-NPC/IPP		1993
TPC TG5 (Sangi Station)	Pulverized Sub Critical	40.0	40.0	1							

POWER PLANT		CAPACITY, MW		Number of Unit/s	LOCATION	OPERATOR	IPPA	FIT APPROVED (for RE)	OWNER TYPE	TYPE OF CONTRACT	DATE COMMISSIONED/ COMMERCIAL OPERATION
FACILITY NAME	SUBTYPE	Installed	Dependable		MUN/PROV						
	Coal										
TPC 1A Expansion	Circulating Fluidized Bed (CFB) Coal	83.7	83.7	1	Toledo City, Cebu	Global Business Power Corp. (GBPC) - TPC	Global Business Power Corp. (GBPC) - TPC		NON-NPC/IPP		Oct-2015
Diesel		599.6	433.9								
AVON-NABAS	Bunker/Diesel Internal Combustion Engine	7.5	6.4	2	Nabas, Aklan	Global Business Power Corp. (GBPC) - PPC	Panay Power Corporation		NON-NPC/IPP		Aug-2006
AVON-NEW WASHINGTON	Bunker/Diesel Internal Combustion Engine	5.0	4.2	1	New Washington, Aklan	Global Business Power Corp.	Global Business Power Corp.		NON-NPC/IPP		Sep-2006
BOHOL DPP	Bunker/Diesel Internal Combustion Engine	22.0	16.0	4	Tagbilaran City, Bohol	SPC Island Power Corp.	SPC Island Power Corp.		NON-NPC/IPP		1978
CALUMANGAN DPP	Bunker/Diesel Internal Combustion Engine	15.0	12.6	3	Bago City, Negros Occidental	Central Negros Power Reliability, Inc.	Central Negros Power Reliability, Inc.		NON-NPC/IPP		U2 - Apr-2016; U1 and U3 - Jun-2016
CEBU DPP (Salcon)	Bunker/Diesel Internal Combustion Engine	39.0	33.0	6	Naga, Cebu	Salcon Phils.	PSALM Corporation		NPC-IPP	ROMM-ECA	1978 - 1989
CEBU PRIVATE POWER	Bunker/Diesel Internal Combustion Engine	70.0	65.0	10	Cebu City	Cebu Private Power Corp.	Cebu Private Power Corp.		NON-NPC/IPP		1997
EAST ASIA UTILITIES (MEPZA)	Bunker/Diesel Internal Combustion Engine	49.6	45.5	4	Cebu City	East Asia Utilities Corporation	East Asia Utilities Corporation		NON-NPC/IPP		1998
ENERVANTAGE DPP	Bunker/Diesel Internal Combustion Engine	11.0	8.0	2	Panit-an, Capiz	Enervantage Suppliers Co. Inc.	Enervantage Suppliers Co. Inc.		NON-NPC/IPP		Jan-2009

POWER PLANT		CAPACITY, MW		Number of Unit/s	LOCATION	OPERATOR	IPPA	FIT APPROVED (for RE)	OWNER TYPE	TYPE OF CONTRACT	DATE COMMISSIONED/ COMMERCIAL OPERATION
FACILITY NAME	SUBTYPE	Installed	Dependable		MUN/PROV						
GUIMARAS POWER	Bunker/Diesel Internal Combustion Engine	3.4	3.0	2	San Miguel, Jordan, Guimaras	Trans-Asia	PHINMA Energy Corporation		NON-NPC/IPP		Apr-2005
PANAY DPP I	Bunker/Diesel Internal Combustion Engine	36.5	15.0	5	Dingle, Iloilo	SPC Island Power Corp.	SPC Island Power Corp.		NON-NPC/IPP		May-1981 / Aug-1983 / 1993
PANAY DPP III	Bunker/Diesel Internal Combustion Engine	106.6	74.0	8	Dingle, Iloilo	SPC Island Power Corp.	SPC Island Power Corp.		NON-NPC/IPP		Transferred Mar 2005
PANAY POWER CORP.	Bunker/Diesel Internal Combustion Engine	92.0	78.8	14	Ingore, Lapaz, Iloilo City	Global Business Power Corp. (GBPC) - PPC	Global Business Power Corp. (GBPC) - PPC		NON-NPC/IPP		1999
PB 101	Bunker/Diesel Internal Combustion Engine Power Barge	32.0	11.0	4	Iloilo	Trans-Asia	PHINMA Energy Corporation		NON-NPC/IPP		1978 / 1986 / 1989
PB 102	Bunker/Diesel Internal Combustion Engine Power Barge	32.0	24.0	4	Obrero, Iloilo	Trans-Asia	PHINMA Energy Corporation		NON-NPC/IPP		Apr-1981
PB 103	Bunker/Diesel Internal Combustion Engine Power Barge	32.0	0.0	4	Estancia, Iloilo	Trans-Asia	PHINMA Energy Corporation		NON-NPC/IPP		Apr-1981
TPC (Carmen Station)	Bunker/Diesel Internal Combustion Engine	46.0	37.4	4	Toledo City, Cebu	Global Business Power Corp. - TPC	Global Business Power Corp. - TPC		NON-NPC/IPP	BOO	1993
Gas Turbine		55.0	0.0								
CEBU LAND-BASED GT	Open Cycle Gas Turbine (OCGT)	55.0	0.0	2	Cebu	SPC Island Power Corp.	SPC Island Power Corp.		NON-NPC/IPP		May-1994
Geothermal		964.6	812.5								

POWER PLANT		CAPACITY, MW		Number of Unit/s	LOCATION	OPERATOR	IPPA	FIT APPROVED (for RE)	OWNER TYPE	TYPE OF CONTRACT	DATE COMMISSIONED/ COMMERCIAL OPERATION
FACILITY NAME	SUBTYPE	Installed	Dependable		MUN/PROV						
LEYTE GPP	Flash Type Steam recovery	112.5	112.0	3	Tongonan, Leyte	Green Core Energy	Green Core Energy	NO	NON-NPC/IPP		Mar-1983 / Jun-1983
NASULO GPP	Flash Type Steam recovery	49.4	47.5	1	Nasulo, Negros Occidental	Energy Development Corporation	Energy Development Corporation	NO	NON-NPC/IPP		Sep-2014
PALINPINON GPP	Flash Type Steam recovery	192.5	172.0	7	Valencia, Negros Oriental	Green Core Energy	Green Core Energy	NO	NON-NPC/IPP		May / Jul / Aug 1983
UNIFIED LEYTE	Flash Type Steam recovery	610.2	481.0	18	Tongonan, Leyte	Energy Development Corporation	Energy Development Corporation	NO	NPC-IPP	BOO-PPA	Jul 1996 / 1997
Hydro		17.8	17.3								
AMLAN HEPP	Run-of-River type HEPP	0.8	0.6	3	Negros Oriental	Amlan Hydro Power Inc. (AHPI)	ICS Renewables	NO	NON-NPC/IPP		May-1961
JANOPOL HEPP	Run-of-River type HEPP	5.2	5.0	4	Bohol	Bohol I Electric Cooperative Inc. (BOHECO I)	Bohol I Electric Cooperative Inc. (BOHECO I)	NO	NON-NPC/IPP		May-1992
LOBOC HEPP	Run-of-River type HEPP	1.2	1.2	3	Loboc, Bohol	Sta. Clara International Inc.	Sta. Clara International Inc.	NO	NON-NPC/IPP		Apr-1968
SEVILLA HEPP	Run-of-River type HEPP	2.5	2.5	2	Sevilla, Bohol	Bohol I Electric Cooperative Inc. (BOHECO I)	Bohol I Electric Cooperative Inc. (BOHECO I)	NO	NON-NPC/IPP		Nov-2008
VILLASIGA HEPP	Run-of-River type HEPP	8.1	8.0	3	Bugasong, Antique	Sunwest Water and Electric Company Inc. - II	Sunwest Water and Electric Company Inc. - II	NO	NON-NPC/IPP		Apr-2016
Biomass		101.3	76.5								
CASA	Bagasse-fired Cogeneration Plant	15.0	15.0	1	Passi, Iloilo, Panay	Central Azucarera De San Antonio Inc.	Central Azucarera De San Antonio Inc.	NO	NON-NPC/IPP		2007
FIRST FARMERS	Bagasse-fired Cogeneration Plant	21.0	12.0	1	Talisay City, Negros Occidental	First Farmers Holding Corp.	First Farmers Holding Corp.	NO	NON-NPC/IPP		Feb-2009

POWER PLANT		CAPACITY, MW		Number of Unit/s	LOCATION	OPERATOR	IPPA	FIT APPROVED (for RE)	OWNER TYPE	TYPE OF CONTRACT	DATE COMMISSIONED/ COMMERCIAL OPERATION
FACILITY NAME	SUBTYPE	Installed	Dependable		MUN/PROV						
HPCo	Bagasse-fired Cogeneration Plant	8.0	6.0	1	Silay City, Negros Occidental	Hawaiian Philippines Company	Hawaiian Philippines Company	YES	NON-NPC/IPP		Feb-2015
SAN CARLOS	Rice Husk-fired Cogeneration Plant	8.3	5.0	1	San Carlos, Negros Occidental	Bronzeoak Philippines Inc.	San Carlos Bioenergy, Inc.	NO	NON-NPC/IPP		Feb-2009
URC	Bagasse-fired Cogeneration Plant	46.0	36.0	2	Kabankalan, Negros Occidental	Universal Robina Corporation (URC)	Universal Robina Corporation (URC)	YES	NON-NPC/IPP		Jan-2015
VMC	Bagasse-fired Cogeneration Plant	3.0	2.5	4	Victorias City, Negros Occidental	Victorias Milling Company Inc.	Victorias Milling Company Inc.	NO	NON-NPC/IPP		Nov-2015
Solar		398.9	331.4								
HELIOS	Ground Mounted Solar PVs	132.5	108.0		Brgy., Tinampa-an Cadiz City, Negros Occidental	Helios Solar Energy Corp. (HSEC)	Helios Solar Energy Corp. (HSEC)	YES	NON-NPC/IPP		Mar-2016
ISLASOL II	Ground Mounted Solar PVs	32.0	27.0		La Carlota City, Negros Occidental	Negros Island Solar Power Inc. (ISLASOL)	Negros Island Solar Power Inc. (ISLASOL)	NO	NON-NPC/IPP		Mar-2016
ISLASOL III	Ground Mounted Solar PVs	48.0	42.0		Manapla, Negros Occidental	Negros Island Solar Power Inc. (ISLASOL)	Negros Island Solar Power Inc. (ISLASOL)	NO	NON-NPC/IPP		Mar-2016
MONTESOL	Ground Mounted Solar PVs	18.0	14.0		Bais City, Negros Occidental	Monte Solar Energy Inc. (MONTESOL)	Monte Solar Energy Inc. (MONTESOL)	YES	NON-NPC/IPP		Mar-2016
SACASOL I - A	Ground Mounted Solar PVs	13.0	11.0		San Carlos, Negros Occidental	San Carlos Solar Energy Inc. (SACASOL)	San Carlos Solar Energy Inc. (SACASOL)	YES	NON-NPC/IPP		May-2014
SACASOL I - B	Ground Mounted Solar PVs	9.0	7.0		San Carlos, Negros Occidental	San Carlos Solar Energy Inc. (SACASOL)	San Carlos Solar Energy Inc. (SACASOL)	YES	NON-NPC/IPP		Aug-2014
SACASOL I - C & D	Ground Mounted Solar PVs	23.0	20.0		San Carlos, Negros Occidental	San Carlos Solar Energy Inc. (SACASOL)	San Carlos Solar Energy Inc. (SACASOL)	YES	NON-NPC/IPP		Sep-2015

POWER PLANT		CAPACITY, MW		Number of Unit/s	LOCATION	OPERATOR	IPPA	FIT APPROVED (for RE)	OWNER TYPE	TYPE OF CONTRACT	DATE COMMISSIONED/ COMMERCIAL OPERATION
FACILITY NAME	SUBTYPE	Installed	Dependable		MUN/PROV						
SACASUN	Ground Mounted Solar PVs	23.4	23.4		San Carlos City, Negros Occidental	San Carlos Sun Power Inc. (SACASUN)	San Carlos Sun Power Inc. (SACASUN)	NO	NON-NPC/IPP		Mar-2016
SILAY SOLAR	Ground Mounted Solar PVs	25.0	20.0		Silay City, Negros Occidental	Silay Solar Power, Inc.	Silay Solar Power, Inc.	NO	NON-NPC/IPP		Apr-2016
SOLEQ	Ground Mounted Solar PVs	30.0	24.0		Ormoc, Leyte	Phil. Solar Farm-Leyte, Inc.	Phil. Solar Farm-Leyte, Inc.	YES	NON-NPC/IPP		Apr-2015
SEPALCO	Ground Mounted Solar PVs	45.0	35.0		Palo, Leyte	Sulu Electric Power and Light (Phils.), Inc. (SEPALCO)	Sulu Electric Power and Light (Phils.), Inc. (SEPALCO)	NO	NON-NPC/IPP		Oct-2016
Wind		90.0	90.0								
NABAS WIND Ph1	On-shore Wind Turbine	36.0	36.0		Nabas, Aklan	PetroWind Energy Inc. (PWEI)	PetroWind Energy Inc. (PWEI)	YES	NON-NPC/IPP		Jun-2015
TAREC	On-shore Wind Turbine	54.0	54.0		San Lorenzo, Guimaras	Trans Asia Renewable Energy Corp. (TAREC)	Trans Asia Renewable Energy Corp. (TAREC)	YES	NON-NPC/IPP		Dec-2014
EMBEDDED		2.7	1.0								
Diesel		0.0	0.0								
Hydro		1.7	1.0								
BASAK	Run-of-River type HEPP	0.5	0.3	2	Badian, Cebu	CEBECO I	CEBECO I	NO	NON-NPC/IPP		1986
MANTAYUPAN	Run-of-River type HEPP	0.5	0.3	2	Barili, Cebu	CEBECO I	CEBECO I	NO	NON-NPC/IPP		1985
MATUTINAO	Run-of-River type HEPP	0.7	0.5	3	Badian, Cebu	CEBECO I	CEBECO I	NO	NON-NPC/IPP		1990
Natural Gas		1.0	0.0								
DESCO NATURAL GAS	Gas Engine	1.0	0.0	1	Bogo City, Cebu	DESCO Inc.	DESCO Inc.		NON-NPC/IPP		Feb-2012
TOTAL VISAYAS		3,284.2	2,812.7								

Annex 7. 2016 List of Existing Power Plants, Mindanao

POWER PLANT		CAPACITY, MW		Number of Unit/s	LOCATION	OPERATOR	IPPA	FIT APPROVED (for RE)	OWNER TYPE	TYPE OF CONTRACT	DATE COMMISSIONED / COMMERCIAL OPERATION
FACILITY NAME	SUBTYPE	Installed	Dependable		MUN/PROV						
GRID-CONNECTED		2,595.7	2,210.4								
Coal Thermal		952.0	854.0								
MINDANAO COAL U1	Pulvurized Sub Critical Coal	116.0	105.0	1	PHIVIDEC, Villanueva, Misamis Oriental	STEAG State Power Inc.	PSALM Corporation		NPC-IPP	BOT-PPA	Sep-2006
MINDANAO COAL U2	Pulvurized Sub Critical Coal	116.0	105.0	1							
THERMA SOUTH U1	Circulating Fluidized Bed (CFB) Coal	150.0	130.0	1	Davao City/ Sta. Cruz, Davao Del Sur	Therma South Inc (TSI)	Therma South Inc (TSI)		NON-NPC/IPP		Sep-2015
THERMA SOUTH U2	Circulating Fluidized Bed (CFB) Coal	150.0	130.0	1							Feb-2016
FDC MISAMIC U1	Circulating Fluidized Bed (CFB) Coal	135.0	124.5	1	PHIVIDEC, Villanueva, Misamis Oriental	FDC Utilities, Inc.	FDC Utilities, Inc.		NON-NPC/IPP		Oct-2016
FDC MISAMIC U2	Circulating Fluidized Bed (CFB) Coal	135.0	124.5	1							
SMC MALITA U1	Circulating Fluidized Bed (CFB) Coal	150.0	135.0	1	Brgy. Culaman, Malita, Davao Occidental	San Miguel Consolidated Power Corporation	San Miguel Consolidated Power Corporation		NON-NPC/IPP		Nov-2016
Diesel		507.0	446.0								
SPPC	Bunker/Diesel Internal Combustion Engine	59.0	50.0	6	Alabel, Sarangani	Southern Philippines Power Corp.	Southern Philippines Power Corp.		NON-NPC/IPP		Mar-1998
PB 104	Bunker/Diesel Internal Combustion Engine Power Barge	32.0	0.0	4	Brgy Ilang, Davao		SPC Power Corporation		NON-NPC/IPP		Sep-2005
TMI 2	Bunker/Diesel Internal Combustion Engine Power	100.0	99.0	2	Nasipit, Agusan del Norte	Therma Marine Inc.	Therma Marine Inc.		NON-NPC/IPP		Feb-1994

POWER PLANT		CAPACITY, MW		Number of Unit/s	LOCATION	OPERATOR	IPPA	FIT APPROVED (for RE)	OWNER TYPE	TYPE OF CONTRACT	DATE COMMISSIONED / COMMERCIAL OPERATION
FACILITY NAME	SUBTYPE	Installed	Dependable		MUN/PROV						
	Barge										
TMI 1	Bunker/Diesel Internal Combustion Engine Power Barge	100.0	99.0	2	Maco, Davao del Norte	Therma Marine Inc.	Therma Marine Inc.		NON-NPC/IPP		Jul-1994
WMPC	Bunker/Diesel Internal Combustion Engine	113.0	100.0	10	Sangali, Zamboanga City, Zamboanga, del Sur	Western Mindanao Power Corp.	Western Mindanao Power Corp.		NON-NPC/IPP		Dec-1997
MPC - IDPP	Bunker/Diesel Internal Combustion Engine	103.0	98.0	18	Dalipuga, Iligan City, Lanao del Norte	Mapalad Power Corporation	Mapalad Power Corporation		NON-NPC/IPP		May-2013
Geothermal		108.5	100.0								
MT APO	Flash Type Steam recovery	108.5	100.0	2	Kidapawan, North Cotabato	Energy Development Corp.	FDC Utilities, Inc.	NO	NON-NPC/IPP		Dec-1996
Hydro		989.1	783.0								
Large Hydroelectric Plants		982.1	776.0								
AGUS 1	Dam-type HEPP	80.0	50.0	2	Marawi City, Lanao del Sur	NPC-Mindanao Generation	PSALM Corporation		NPC		Jun-1992
AGUS 2	Dam-type HEPP	180.0	122.0	3	Saguiaran, Lanao del Sur	NPC-Mindanao Generation	PSALM Corporation		NPC		Jun-1979 / Nov-1979
AGUS 4	Dam-type HEPP	158.1	136.0	3	Baloi, Lanao del Norte	NPC-Mindanao Generation	PSALM Corporation		NPC		Mar-1985 / Apr-1985
AGUS 5	Dam-type HEPP	55.0	52.0	2	Buru-un, Iligan City, Lanao del Norte	NPC-Mindanao Generation	PSALM Corporation		NPC		Feb-1985 / Mar-1985
AGUS 6	Dam-type HEPP	200.0	151.0	5	Buru-un, Iligan City, Lanao del Norte	NPC-Mindanao Generation	PSALM Corporation		NPC		Jul-1953 / Apr-1971
AGUS 7	Dam-type HEPP	54.0	40.0	2	Buru-un, Iligan City, Lanao del Norte	NPC-Mindanao Generation	PSALM Corporation		NPC		Mar-1983 / Dec-1983
PULANGI 4	Run-of-River type HEPP	255.0	225.0	3	Maramag, Bukidnon	NPC-Mindanao Generation	PSALM Corporation		NPC		Dec-1985 / Jun-1986

POWER PLANT		CAPACITY, MW		Number of Unit/s	LOCATION	OPERATOR	IPPA	FIT APPROVED (for RE)	OWNER TYPE	TYPE OF CONTRACT	DATE COMMISSIONED / COMMERCIAL OPERATION
FACILITY NAME	SUBTYPE	Installed	Dependable		MUN/PROV						
Small Hydroelectric Plants		7.0	7.0								
TUDAYA 2	Run-of-River type HEPP	7.0	7.0	2	Sta. Cruz, Davao del Sur	HEDCOR Inc.	HEDCOR Inc.	YES	NON-NPC/IPP		May-2014
Solar		39.1	27.4								
KIBAWA SOLAR	Ground Mounted Solar PVs	10.5	7.3		Brgy. Labuagon, Kibawe, Bukidnon	AsigaGreen Energy Corp	AsigaGreen Energy Corp	YES	NON-NPC/IPP		Mar-2016
DIGOS SOLAR	Ground Mounted Solar PVs	28.6	20.0		Brgy. San Roque, DigosCity, Davao del Sur	Enfinity Philippines Renewable Resources, Inc.	Enfinity Philippines Renewable Resources, Inc.	NO (w/ RESA)	NON-NPC/IPP		Mar-2016
EMBEDDED		566.2	473.9								
Coal Thermal		118.0	105.0								
SEC	Pulverized Sub Critical Coal	118.0	105.0	1	Maasim, Sarangani	Sarangani Energy Corporation (SEC)	Sarangani Energy Corporation (SEC)		NON-NPC/IPP		Apr-2016
Diesel		321.1	286.8								
MINDANAO ENERGY SYSTEM 1	Bunker/Diesel Internal Combustion Engine	18.9	18.0	1	Cagayan de Oro City, Misamis Oriental	Mindanao Energy Systems	Mindanao Energy Systems		NON-NPC/IPP		Aug-1995
MINDANAO ENERGY SYSTEM 2	Bunker/Diesel Internal Combustion Engine	27.5	27.0	2	Cagayan de Oro City, Misamis Oriental	Mindanao Energy Systems	Mindanao Energy Systems		NON-NPC/IPP		Mar-2012
COTABATO LIGHT	Bunker/Diesel Internal Combustion Engine	10.0	9.9	6	Cotabato	Cotabato Light and Power Company	Cotabato Light and Power Company		NON-NPC/IPP		1963
BAJADA DPP	Bunker/Diesel Internal Combustion Engine	58.7	48.0	12	Davao City, Davao del Sur	Davao Light and Power Company	Davao Light and Power Company		NON-NPC/IPP		Jun-1995
KEGI - BUKIDNON	Bunker/Diesel Internal Combustion Engine	3.2	3.1	1	Valencia City, Bukidnon	King Energy Generation Inc	King Energy Generation Inc		NON-NPC/IPP		Aug-2012

POWER PLANT		CAPACITY, MW		Number of Unit/s	LOCATION	OPERATOR	IPPA	FIT APPROVED (for RE)	OWNER TYPE	TYPE OF CONTRACT	DATE
FACILITY NAME	SUBTYPE	Installed	Dependable		MUN/PROV						COMMISSIONED / COMMERCIAL OPERATION
KEGI - MISAMIS OR.	Bunker/Diesel Internal Combustion Engine	10.6	10.0	2	Gingoong, Misamis Oriental	King Energy Generating Inc.	King Energy Generating Inc.		NON-NPC/IPP		Sep-2013
MPC-KORONADAL	Diesel-fired Modular Genset	13.0	13.0	13	Koronadal City, South Cotabato	Mapalad Power Corporation	Mapalad Power Corporation		NON-NPC/IPP		Oct-2013
EEI POWER	Bunker/Diesel Internal Combustion Engine	15.0	15.0	3	Davao del Norte	EEI Power	EEI Power		NON-NPC/IPP		Dec-2013
SOENERGY	Diesel-fired Modular Genset	19.0	19.0	14	Bgry. Apopong, Gen. Santos City, South Cotabato	SoEnergy Int'l Philippines, Inc.	SoEnergy Int'l Philippines, Inc.		NON-NPC/IPP		Mar-2014
MPC-DIGOS	Diesel-fired Modular Genset	15.0	15.0	15	Digos, Davao del sur	Mapalad Power Corporation	Mapalad Power Corporation		NON-NPC/IPP		Mar-2014
KEGI - PANAON	Bunker/Diesel Internal Combustion Engine	15.6	15.0	2	Panaon, Ozamis City, Misamis Occ.	King Energy Generation Inc	King Energy Generation Inc		NON-NPC/IPP		May-2014
KEGI-TANDAG	Bunker/Diesel Internal Combustion Engine	7.8	7.5	1	Tandag, Surigao del Norte	King Energy Generation Inc	King Energy Generation Inc		NON-NPC/IPP		Oct-2014
PSC	Waste Heat Recovery System	37.1	18.4	7	PHIVIDEC, Villanueva, Misamis Oriental	Phil. Sinter Corporation	Phil. Sinter Corporation		NON-NPC/IPP		2008
MEGC	Bunker/Diesel Internal Combustion Engine	15.0	15.0	2	Iligan City, Lanao del Norte	Mapalad Energy Generation Corp.	Mapalad Energy Generation Corp.		NON-NPC/IPP		Dec-2014
PSI	Bunker/Diesel Internal Combustion Engine	20.9	19.6	3	Brgy. Apopong, General Santos City, South Cotabato	Peak Power Soccsargen, Inc. (PSI)	Peak Power Soccsargen, Inc. (PSI)		NON-NPC/IPP		Jan-2015
PSFI	Bunker/Diesel Internal Combustion Engine	5.2	5.0	1	San Francisco, Agusan del Sur	Peak Power San Francisco (PSFI)	Peak Power San Francisco (PSFI)		NON-NPC/IPP		Feb-2015

POWER PLANT		CAPACITY, MW		Number of Unit/s	LOCATION	OPERATOR	IPPA	FIT APPROVED (for RE)	OWNER TYPE	TYPE OF CONTRACT	DATE
FACILITY NAME	SUBTYPE	Installed	Dependable		MUN/PROV						COMMISSIONED / COMMERCIAL OPERATION
KEGI - MARAMAG	Bunker/Diesel Internal Combustion Engine	7.8	7.5	1	Maramag , Bukidnon	King Energy Generation Inc	King Energy Generation Inc		NON-NPC/IPP		2015
KEGI - CAMIGUIN	Bunker/Diesel Internal Combustion Engine	4.1	4.0	2	Brgy. Maubog, Balbagon, Mambajao, Camiguin	King Energy Generation Inc	King Energy Generation Inc		NON-NPC/IPP		Feb-2016
BPC DPP	Bunker/Diesel Internal Combustion Engine	4.8	4.8		Barangay Barandias, Municipality of Pangantucan, Province of Bukidnon	Bukidnon Power Corporation (BPC)	Bukidnon Power Corporation		NON-NPC/IPP		Feb-2016
SPC - KORONADAL	Bunker/Diesel Internal Combustion Engine	11.9	11.9		Purok Garfin, Brgy. Paraiso, Koronadal, South Cotabato	Supreme Power Corporation (SPC)	Supreme Power Corporation		NON-NPC/IPP		May-2016
Hydro		71.5	56.9								
Large Hydroelectric Plants		42.6	36.0								
SIBULAN HEP	Run-of-River type HEPP	42.6	36.0	4	Santa cruz, Davao del Sur	HEDCOR Sibulan Inc.	HEDCOR Sibulan Inc.	NO	NON-NPC/IPP		Mar-2010
Small Hydroelectric Plants		28.9	20.9								
AGUSAN	Run-of-River type HEPP	1.6	1.6	2	M. Fortich, Bukidnon	FG Bukidnon Power Corp.	FG Bukidnon Power Corp.	NO	NON-NPC/IPP		Dec-1957
BUBUNAWAN	Run-of-River type HEPP	7.0	2.6	1	Baungon, Bukidnon	BPC Inc.	BPC Inc.	NO	NON-NPC/IPP		Sep-2001
CABULIG HEP	Run-of-River type HEPP	9.2	6.0	1	Claveria, Misamis Oriental	Mindanao Energy Systems	Mindanao Energy Systems	NO	NON-NPC/IPP		Sep-2012
TALOMO HEP	Run-of-River type HEPP	4.5	4.1	5	Mintal, Davao City, Davao del Sur	HEDCOR Inc.	HEDCOR Inc.	NO	NON-NPC/IPP		Oct-1998
TUDAYA 1	Run-of-River type HEPP	6.6	6.6	1	Sta. Cruz, Davao del Sur	HEDCOR Inc.	HEDCOR Inc.	NO	NON-NPC/IPP		May-2014
Biomass		35.9	10.0								
CRYSTAL SUGAR	Bagasse-fired Cogeneration Plant	35.9	10.0	4	Maramag, Bukidnon	Crystal Sugar Co., Inc.	Crystal Sugar Co., Inc.	NO	NON-NPC/IPP		Jun-2010
Solar		19.7	15.3								

POWER PLANT		CAPACITY, MW		Number of Unit/s	LOCATION	OPERATOR	IPPA	FIT APPROVED (for RE)	OWNER TYPE	TYPE OF CONTRACT	DATE
FACILITY NAME	SUBTYPE	Installed	Dependable		MUN/PROV						COMMISSIONED / COMMERCIAL OPERATION
CEPALCO SOLAR PV	Ground Mounted Solar PVs	1.0	0.3		Sitio Lomboy, Cagayan de Oro, Misamis Oriental	CEPALCO	CEPALCO	NO	NON-NPC/IPP		Sep-2004
KIRAHON SOLAR	Ground Mounted Solar PVs	12.5	10.0		Villanueva, Misamis Oriental	Kirahon Solar Energy Corporation	Kirahon Solar Energy Corporation	NO	NON-NPC/IPP		Oct-2015
CENTRALLA SOLAR	Ground Mounted Solar PVs	6.2	5.0		Brgy. Centrala, Surallah, South Cotabato	NV Vogt Philippines Solar Energy One, Inc.	NV Vogt Philippines Solar Energy One, Inc.	YES	NON-NPC/IPP		Dec-2015
TOTAL MINDANAO		3,161.9	2,684.3								

Notes:

Excluding off-grid generators

Release date, 15 February 2017

FIT Approved Plants based on RE Projects under FIT System, June 2016

in GREEN - New Entry

in BLACK - NON-NPC/IPP

in RED - NPC

in BLUE - NPC-IPP

**Annex 8. Luzon Grid Committed Power Projects
As of 31 December 2016**

Name of the Project	Project Proponent	Mother/ JV Company	Location	Rated Capacity (MW)	Target Testing & Commissioning	Target Commercial Operation
COAL						
Limay Power Plant Project Phase I Unit 1***	SMC Consolidated Power Corporation	SMC Consolidated Power Corporation	Brgy. Lamao, Limay, Bataan	150.0	Nov 2016 ^b	Jan 2017 ^b
Limay Power Plant Project Phase I Unit 2	SMC Consolidated Power Corporation	SMC Consolidated Power Corporation	Brgy. Lamao, Limay, Bataan	150.0	Apr 2017	Jul 2017
Pagbilao 3 Coal-Fired Thermal Power Plant	Pagbilao Energy Corporation	TeaM Energy / Aboitiz Power	Pagbilao Power Station, Nrgy. Ibabang Polo, Pagbilao, Quezon	420.0	May 2017	Nov 2017
GNPower Dinginin Supercritical Coal-Fired Power Plant Unit 1	GNPower Dinginin Coal Plant Ltd. Co.	GNPower Mariveles Coal Plant Ltd. Co	Mariveles, Bataan	600	Oct 2018	Mar 2019
San Buenaventura Power Ltd. Co. (SBPL) Project	San Buenaventura Power Ltd. Co. (SBPL)	QPPL / EGCO	Barangay Cagsiay 1, Mauban, Quezon ^b	500.0	Dec 2018	Dec 2019
Masinloc Expansion Project Unit 3	AES Masinloc Power Partners Co., Inc.	AES Masinloc Power Partners Co., Inc.	Zambales	300.0	Sep 2019	Dec 2019
GNPower Dinginin Supercritical Coal-Fired Power Plant Unit 2	GNPower Dinginin Coal Plant Ltd. Co.	GNPower Mariveles Coal Plant Ltd. Co	Mariveles, Bataan	600	Dec 2019	Jan 2020
SUBTOTAL				2,720.0		

*Excluding Off-grid power projects

*** on-going testing and commissioning

^b Updated from proponent's submission

Name of the Project	Project Proponent	Mother/ JV Company	Location	Rated Capacity (MW)	Target Testing & Commissioning	Target Commercial Operation
BIOMASS						
ACNPC WTE Biomass Power Plant Project	Asian Carbon Neutral Power Corporation	Asian Carbon Neutral Power Corporation	Tarlac City, Tarlac	Phase 1 – 0.75 MW Phase 2 – 0.75 MW	Phase 1 - Jan 2017 ^b Phase 2 – TBD	Phase 1 - Jan 2017 ^b (Target Testing & Commissioning) Phase 2 – TBD
Bicol Biomass Energy Corporation	Bicol Biomass Energy Corporation	Bicol Biomass Energy Corporation	Pili, Camarines Sur	4.5	Jan 2017 ^b	Jan 2017 ^b (Target Testing & Commissioning)
AseaGas Biogas Power Plant Project	AseaGas Corporation	AseaGas Corporation	Batangas	6.1	Jan 2017 ^b	Jan 2017 ^b (Target Testing & Commissioning)
SJCIpower Rice Husk-Fired Biomass power Plant Project Phase 2	San Jose City I Power Corporation	San Jose City I Power Corporation	Brgy. Tulat, San Jose, Nueva Ecija	10.8	Jun 2017	Jul 2017
SUBTOTAL				22.9		
NATURAL GAS						
EWC Combined Cycle Gas Fired Power Plant ^b	Energy World Corp. (EWC)	Energy World Corp. (EWC)	Brgy. Ibabang Polo, Grande Island, Pagbilao, Quezon	650.0	U1 - Jun 2017 U2 - Sep 2017 U3 - Dec 2017	U1 - Jun 2017 U2 - Sep 2017 U3 - Dec 2017
SUBTOTAL				650.0		

Name of the Project	Project Proponent	Mother/ JV Company	Location	Rated Capacity (MW)	Target Testing & Commissioning	Target Commercial Operation
SOLAR						
Bataan Solar Power Project***	Next Generation Power Technology Corp. (NGPT)	Next Generation Power Technology Corp. (NGPT)	Brgy. Alas-asin, Mariveles, Bataan	18	March 2016	January 2017 ^b
CW Home Depot Solar Power Project***	CW Marketing & Development Corp. (CW)	CW Marketing & Development Corp. (CW)	CW Home Depot, Brgy. Pulong, Sta. Rosa City, Laguna	1.675	September 2016	January 2017 ^b
San Rafael Solar Power Plant***	SPARC Solar Powered Agri-Rural Communities Corporation	SPARC Solar Powered Agri-Rural Communities Corporation	San Rafael, Bulacan	3.82	July 2016	January 2017 ^b
Morong Solar Power Plant***	SPARC Solar Power Agri-Rural Communities	SPARC Solar Power Agri-Rural Communities	Morong, Bataan	5.02	June 2016	January 2017 ^b
Sarrat Solar Power Project	Bosung Solartec, Inc. (BOSUNG)	Bosung Solartec, Inc. (BOSUNG)	Brgy. 21 San Marcos, Sarrat, Ilocos Norte	1	January 2017 ^b	January 2017 ^b (Target Testing & Commissioning)
SUBTOTAL				29.515		
GEOHERMAL						
Maibarara 2 Geothermal Project	Maibarara Geothermal Inc.	Maibarara Geothermal Inc.	Batangas	12.0	Aug 2017	Aug 2017
Bacman 3 (Tanawon) Geothermal Project	Energy Development Corporation	Energy Development Corporation	Guinlajon, Sorsogon	31.0	Dec 2018	Dec 2018
SUBTOTAL				43.0		

Name of the Project	Project Proponent	Mother/ JV Company	Location	Rated Capacity (MW)	Target Testing & Commissioning	Target Commercial Operation
HYDRO						
Kapangan HEPP	Cordillera Hydro Electric Power Corp	Cordillera Hydro Electric Power Corp	Kapangan & Kibungan, Benguet	60.0	Feb 2019	Feb 2019
Prismc HEPP	PNOC-Renewables Corporation	PNOC	Rizal, Nueva Ecija	1.0	Sep 2019	Sep 2019
Tubao Mini Hydro	Tubao Mini-Hydro Electric Corp	Tubao Mini-Hydro Electric Corp	Tubao, La Union	1.5	Mar 2020	Mar 2020
SUBTOTAL				62.5		
TOTAL				3,527.9		

BATTERY**						
AES Battery Storage – Masinloc Project Unit 1	AES Philippines Power Partners Co., LTD.	AES Philippines Power Partners Co., LTD.	Masinloc, Zambales	10.0	Dec 2016	Dec 2017
SUBTOTAL				10.0		

* Excluding Off-grid power projects

** for accounting purposes; declared capacity for Ancillary Services (AS) to the system

**Annex 9. Luzon Grid Indicative Power Projects
As of 31 December 2016**

Name of the Project	Project Proponent	Mother/ JV Company	Location	Rated Capacity (MW)	Target Commissioning
COAL					
Lucidum Coal Power Plant	Lucidum Energy, Inc.	Lucidum Energy, Inc.	Silanguin Bay, Zambales	300	Jun 2017
Limay Power Plant Project Phase II	SMC Consolidated Power Corporation	SMC Consolidated Power Corporation	Brgy. Lamao, Limay, Bataan	300	Unit 1 - Jul 2017 Unit 2 - Dec 2017
SRPGC Coal-Fired Power Plant	St. Raphael Power Generation Corporation	St. Raphael Power Generation Corporation	Brgy. San Rafael, Calaca, Batangas	700	Dec 2019
JGS Coal Fired Thermal Power Plant	JG Summit Holdings, Inc.	JG Summit Holdings, Inc.	Brgy. Pinamukan Ibaba, Batangas City	600	Unit 1 - Jun 2018 Unit 2 - Dec 2018 Unit 3 - Jun 2019 Unit 4 - Dec 2019
RPEI Coal-Fired Power Plant	Redondo Peninsula Energy, Inc.	Redondo Peninsula Energy, Inc.	Sitio Naglatore, Cawag, Subic Bay Freeport Zone	600	Dec 2019
Masinloc Expansion Project Unit 4	AES Masinloc Power Partners Co., Inc.	AES Masinloc Power Partners Co., Inc.	Zambales	300	Dec 2019
AOE Coal-Fired Power Plant Project Unit 1	Atimonan One Energy	Meralco PowerGen Corporation	Atimonan, Quezon	600	June 2021
H & WB PCB Supercritical Coal-Fired Power Plant	H & WB ASIA PACIFIC (PTE LTD) CORPORATION	H & WB ASIA PACIFIC (PTE LTD) CORPORATION	Jose Panganiban, Camarines Norte	700	Unit 1 - Dec 2021 Unit 2 - Dec 2025
AOE Coal-Fired Power Plant Project Unit 2	Atimonan One Energy	Meralco PowerGen Corporation	Atimonan, Quezon	600	TBD
SMC Circulating Fluidized Bed Coal-Fired Power Plant	SMC Global Power	SMC Consolidated Power Corporation	Brgy. Ibabang Polo, Pagbilao, Quezon	600	TBD
Global Luzon Coal-Fired Power Plant ¹	Global Luzon Energy Development Corporation	Global Luzon Energy Development Corporation	Brgys. Carisquis and Nalvo Sur, Luna, La Union	670	TBD
SMC Circulating Fluidized Bed Coal-Fired Power Plant	SMC Global Power	SMC Consolidated Power Corporation	Sariaya, Quezon	600	TBD
SUBTOTAL				6,570.0	

TBD – to be determined

Name of the Project	Project Proponent	Mother/ JV Company	Location	Rated Capacity (MW)	Target Commissioning
OIL-BASED					
Aero Derivative Combined Cycle Power Plant	Calamba Aero Power Corporation	Calamba Aero Power Corporation	Calamba, Laguna	150	TBD
SLPGC Gas Turbine Project Phase 1	Southwest Luzon Power Generation Corporation (SLPGC)	DMCI Power Corporation	Brgy. San Rafael, Calaca, Batangas	23	TBD
SLPGC Gas Turbine Project Phase 2	Southwest Luzon Power Generation Corporation (SLPGC)	DMCI Power Corporation	Brgy. San Rafael, Calaca, Batangas	23	TBD
SUBTOTAL				196.00	
NATURAL GAS					
VIRES LNG-Fired Power Barge Project	VIRES Energy Corporation	VIRES Energy Corporation	Batangas Bay Area, Batangas	500	Mar 2018
Sta. Maria Power Plant (Phase II)	First Gen Ecopower Solutions Inc.	First Gen Ecopower Solutions Inc.	Santa Rita, Batangas	450	June 2020
Batangas CCGT Plant Unit 1	Therma Batangas Gas, Inc.	Therma Batangas Gas, Inc.	Brgy. Libjo, Batangas City	300	TBD
Batangas CCGT Plant Unit 2	Therma Batangas Gas, Inc.	Therma Batangas Gas, Inc.	Brgy. Libjo, Batangas City	400	TBD
Batangas CCGT Plant Unit 3	Therma Batangas Gas, Inc.	Therma Batangas Gas, Inc.	Brgy. Libjo, Batangas City	400	TBD
SUBTOTAL				2,050.0	
GEOTHERMAL					
Bacman 4 Botong - Rangas Geothermal Project	Energy Development Corporation	Energy Development Corporation	Bacon District, Sorsogon, Sorsogon City	40	Jun 2021
Kayabon Geothermal Project	Energy Development Corporation	Energy Development Corporation	Manito, Albay	40	Jun 2022
SUBTOTAL				80.0	
HYDRO					
Ibulao Hydroelectric Power Project	Hydrocore, Inc.	Hydrocore, Inc.	Lagawe, Ifugao	4.5	Jun 2018
Dupinga Hydroelectric Power Project	Constellation Energy Corporation	Constellation Energy Corporation	Gabalton, Nueva Ecija	3	Jun 2018

Name of the Project	Project Proponent	Mother/ JV Company	Location	Rated Capacity (MW)	Target Commissioning
Tinoc 1	Philnew Hydro Power Corporation	Philnew Hydro Power Corporation	Tinoc, Ifugao	4.1	Aug 2018
Tinoc 4	Philnew Hydro Power Corporation	Philnew Hydro Power Corporation	Tinoc, Ifugao	5.0	Aug 2018
Pinacanauan	Sunwest Water & Electric Co., Inc.	Sunwest Water & Electric Co., Inc.	Peñablanca, Cagayan	6.0	Sep 2018
Tinoc 2	Philnew Hydro Power Corporation	Philnew Hydro Power Corporation	Tinoc, Ifugao	11.0	Jan 2019
Tinoc 3	Quadriver Energy Corp.	Quadriver Energy Corp.	Tinoc, Ifugao	8.0	Jan 2019
Colasi	Colasi Mini Hydro Electric Power Plant Corporation	Colasi Mini Hydro Electric Power Plant Corporation	Mercedes, Camarines Norte	1.0	Feb 2019
Kabayan 1	Hedcor Benguet, Inc.	Aboitiz Power	Kabayan, Benguet	20	Mar 2019
Kabayan 2 (Natalang HEP)	Hedcor Cordillera, Inc.	Aboitiz Power	Kabayan, Benguet	52	Mar 2019
Kabayan 3	Hedcor Benguet, Inc.	Aboitiz Power	Kabayan, Benguet	27	Mar 2019
Bineng 1-2b Combination HEPP	Hedcor, Inc.	Aboitiz Power	La Trinidad, Benguet	19	Mar 2019
Majayjay	Majayjay Hydro Power Company, Inc.	Majayjay Hydro Power Company, Inc.	Majayjay, Laguna	3.0	Apr 2019
Ranggas	Clean and Green Energy Solutions, Inc.	Clean and Green Energy Solutions, Inc.	Goa & Tigaon, Camarines Sur	1.5	Jul 2019
Tignoan HEP	Aurora All Asia Energy Corp.	Aurora All Asia Energy Corp.	Real, Quezon	20.0	Jul 2019
Biyao	AV Garcia Power Systems Corp.	AV Garcia Power Systems Corp.	Balbalan, Kalinga	0.8	Aug 2019
Barit (Irrigation Discharge) Hydroelectric Power Project	Nascent Technologies	Nascent Technologies	Buhi, Camarines Sur	0.4	Sep 2019
Abdao HEP	AV Garcia Power Systems Corp.	AV Garcia Power Systems Corp.	Tabaan Sur, Tuba, Benguet	1.0	Sep 2019
Tumauni (Lower Cascade)	Quadriver Energy Corp.	Quadriver Energy Corp.	tumauni, Isabela	7.8	Oct 2019
Tumauni (Upper Cascade)	Quadriver Energy Corp.	Quadriver Energy Corp.	tumauni, Isabela	14.0	Oct 2019

Name of the Project	Project Proponent	Mother/ JV Company	Location	Rated Capacity (MW)	Target Commissioning
Tinoc 5	Philnew Hydro Power Corporation	Philnew Hydro Power Corporation	Tinoc, Ifugao	6.9	Dec 2019
Tinoc 6	Philnew Hydro Power Corporation	Philnew Hydro Power Corporation	Tinoc, Ifugao	8.0	Dec 2019
Alilem	Philnew Hydro Power Corporation	Philnew Hydro Power Corporation	Alilem, Ilocos Sur	16.2	Dec 2019
Ilaguen	Isabela Power Corporation	Isabela Power Corporation	San Mariano & San Guillermo	19.0	Feb 2020
Cawayan 2	Sunwest Water & Electric Co., Inc.	Sunwest Water & Electric Co., Inc.	Sorsogon, Sorsogon	1.0	Apr 2020
Ilaguen 2	Isabela Power Corporation	Isabela Power Corporation	Dinapigue, Isabela	14.0	May 2020
Danac	Philnewriver Power Corp.	Philnewriver Power Corp.	Sugpon, Ilocos Sur	13.2	Jun 2020
Matuno	Epower Technologies Corporation	Epower Technologies Corporation	Bambang, Nueva Ecija	8.0	Jun 2020
Dibulan	Greenpower Resources Corp	Greenpower Resources Corp	San Agustin, Isabela	5.0	Jun 2020
Man-Asok	Benguet Electric Cooperative	Benguet Electric Cooperative	Buguias, Benguet	3.0	Sep 2020
Quirino	Philnewriver Power Corp.	Philnewriver Power Corp.	Quirino, Ilocos Sur	11.5	Sep 2020
Laguio Malaki 1	Enervantage Suppliers Co., Inc.	Enervantage Suppliers Co., Inc.	Mauban, Quezon	1.6	Oct 2020
Laguio Malaki 2	Enervantage Suppliers Co., Inc.	Enervantage Suppliers Co., Inc.	Mauban, Quezon	3.1	Oct 2020
Davidavilan	PTC Energy, Inc.	PTC Energy, Inc.	Mauban, Quezon	1.0	Oct 2020
Bansud	PTC Energy, Inc.	PTC Energy, Inc.	Mauban, Quezon	1.0	Oct 2020
Matuno 1	Smith Bell Mini Hydro Corporation	Smith Bell Mini Hydro Corporation	Ambaguio, Nueva Vizcaya	7.4	Dec 2020
Matuno 2	Smith Bell Mini Hydro Corporation	Smith Bell Mini Hydro Corporation	Bambang, Nueva Ecija	7.9	Dec 2020

Name of the Project	Project Proponent	Mother/ JV Company	Location	Rated Capacity (MW)	Target Commissioning
Lalawinan Mini HEPP	Repower Energy Development	Repower Energy Development	Real, Quezon	3.0	Dec 2020
Maapon River Mini-Hydro Power Project (MHP)	Renasons Energy Corporation	Renasons Energy Corporation	Brgy. Piis, Lucban, Quezon	2.6	Dec 2020
Alimit (100MW)	SN Aboitiz Power-Ifugao	SN Aboitiz Power-Ifugao	Lagawe, Ifugao	100.0	Jan 2021
Alimit (240 MW)	SN Aboitiz Power-Ifugao	SN Aboitiz Power-Ifugao	Lagawe, Ifugao	240.0	Jan 2021
Olilicon HEPP	SN Aboitiz Power-Ifugao	SN Aboitiz Power-Ifugao	Lagawe, Ifugao	10.0	Jan 2021
Maris Main Canal 1 HEP	SN Aboitiz Power Generation	SN Aboitiz Power Generation	Ramon, Isabela	8.5	Jan 2021
Majayjay	Majayjay Hydro Power Company, Inc.	Majayjay Hydro Power Company, Inc.	Majayjay, Laguna	2.0	Jan 2021
Didipio 1	AT Dinum Company	AT Dinum Company	Kasibu, Nueva Vizcaya	2.1	Mar 2021
Didipio 2	AT Dinum Company	AT Dinum Company	Kasibu, Nueva Vizcaya	9.4	Apr 2021
Matibuey	Sta. Clara Power Corporation	Sta. Clara Power Corporation	Matibuey	16.0	Apr 2021
Maris Main Canal2 HEP	SN Aboitiz Power Generation	SN Aboitiz Power Generation	Alfonso Lista, Ifugao	1.75	TBD
Talubin Hydropower Project	Mountain Province Electric Cooperative, Inc.	Mountain Province Electric Cooperative, Inc.	Bontoc, Mountain Province	5.4	TBD
Ibulao I Hydroelectric Power Project	Kiangan Mini-Hydro Corporation	Kiangan Mini-Hydro Corporation	Kiangan, Ifugao	6.0	TBD
Cervantes-Mankayan-Bakun HEPP	Hedcor, Inc.	Hedcor, Inc.	Benguet	27.0	TBD
Chico HEPP	San Lorenzo Ruiz Piat & Water	San Lorenzo Ruiz Piat & Water	Tabuk, Kalinga	150.0	TBD
Wawa Pumped Storage 2 HEPP	Olympia Violago Water and Power, Inc.	San Lorenzo Ruiz Piat & Water	Rodriguez, Rizal	100.0	TBD
Wawa Pumped Storage 3 HEPP	Olympia Violago Water and Power, Inc.	San Lorenzo Ruiz Piat & Water	Rodriguez, Rizal	50.0	TBD
SUBTOTAL				1,070.6	
BIOMASS					
Napier Grass-Fired Biomass Power Plant	Grassgold Renewable Energy Corporation	Grassgold Renewable Energy Corporation	Llanera, Nueva Ecija	10.8	Jan 2018

Name of the Project	Project Proponent	Mother/ JV Company	Location	Rated Capacity (MW)	Target Commissioning
Pampanga Oxyfuel-Gas Fired Power Plant Project	CENERTEC Philippines, Inc.	CENERTEC Philippines, Inc.	Brgy. Balubad, Porac Pampanga	1.5	TBD
Balintawak Oxyfuel-Gas Fired Power Plant Project	CENERTEC Philippines, Inc..	CENERTEC Philippines, Inc..	Old Samson Road, Balintawak, Quezon City	4	TBD
Central Azucarera Don Pedro, Inc.	Biomass Cogeneration Plant	Biomass Cogeneration Plant	Brgy. Lumbangan, Nasugbu, Batangas	31.9	TBD
Santa Biomass Power Project	Satrap Power Corporation	Satrap Power Corporation	Brgy. Nagpanaoan, Santa, Ilocos Sur	10	TBD
SUBTOTAL				58.2	
SOLAR					
Botolan Solar Power Project	Solar Power Utilities Generator Corporation	Solar Power Utilities Generator Corporation	Brgy. San Juan, Botolan, Zambales	39.27	June 2017
Macabud Solar Photovoltaic Power Project	ATN Philippines Solar Energy Group, Inc.	ATN Philippines Solar Energy Group, Inc.	Brgy. Macabud, Rodriguez, Rizal	30	June 2017
Sta. Rita Solar Power Project - Phase II	Jobin-Sqm Inc. (JOBIN)	Jobin-Sqm Inc. (JOBIN)	Mt. Sta. Rita, Morong and Hermosa, Bataan	92.86	December 2017
Concepcion Solar Power Project	Enfinity Philippines Renewable Resources, Inc	Enfinity Philippines Renewable Resources, Inc	Brgy. Sta. Rosa, Concepcion Tarlac	50.55	December 2017
Cavite Solar Power Project	Enfinity Philippines Renewable Resources, Inc	Enfinity Philippines Renewable Resources, Inc	Cavite Economic Zone, Rosario Cavite	3	December 2017
V-Mars Solar Power Project	V-Mars Solar Energy Corporation	V-Mars Solar Energy Corporation	San Jose/Lupao, Nueva Ecija	10	TBD

Name of the Project	Project Proponent	Mother/ JV Company	Location	Rated Capacity (MW)	Target Commissioning
SJC Solar Power Project	SJC Solar Power Corporation	SJC Solar Power Corporation	San Jose City, Nueva Ecija	10	TBD
RGEC Solar Power Project	Roxas Green Energy Corporation	Roxas Green Energy Corporation	Nasugbu and Tuy, Province of Batangas	30	TBD
Calabanga Solar Power Project	Calabanga Renewable Energy Inc.	Calabanga Renewable Energy Inc.	Calabanga, Camarines Sur	50	TBD
Sta. Maria Solar Power Project	East Coast Fas Renewable Energy and Industrial Corporation	East Coast Fas Renewable Energy and Industrial Corporation	Sta. Maria, Isabela	30	TBD
Cordon Solar PV Power Project	Greenergy Solutions, Inc.	Greenergy Solutions, Inc.	Cordon, Isabela	50	TBD
FPI Solar PV Power Project	Firmgreen Phils. Inc.	Firmgreen Phils. Inc.	Tarlac City, Tarlac	50	TBD
Nueva Ecija Solar Power Project	Firmgreen Phils. Inc.	Firmgreen Phils. Inc.	Pantabangan, Nueva Ecija	100	TBD
Solana Solar Power Plant	Solana Solar Alpha, Inc.	Solana Solar Alpha, Inc.	Hermosa, Bataan	20	TBD
Santa Solar Power Project	Satrap Power Corporation	Satrap Power Corporation	Brgy. Nagpanaoan, Santa, Ilocos Sur	20	TBD

Name of the Project	Project Proponent	Mother/ JV Company	Location	Rated Capacity (MW)	Target Commissioning
Talugtug Solar PV Power Project	Greenery Solutions, Inc.	Greenery Solutions, Inc.	Talugtug, Nueva Ecija	125	TBD
Capas Solar PV Power Project	Greenery Solutions, Inc.	Greenery Solutions, Inc.	Capas, Tarlac	50	TBD
Iligan II Solar PV Power Project	Greenery Solutions, Inc.	Greenery Solutions, Inc.	Iligan City, Isabela	100	TBD
Sta. Maria Solar PV Power Project	Greenery Solutions, Inc.	Greenery Solutions, Inc.	Sta. Maria, Isabela	125	TBD
Solana Solar PV Phase 1	Solana Solar Alpha, Inc.	Solana Solar Alpha, Inc.	Hermosa, Bataan	24	TBD
Solana Solar PV Phase 2	Solana Solar Alpha, Inc.	Solana Solar Alpha, Inc.	Hermosa, Bataan	14	TBD
Earthenergy Solar Power Plant1	Earthenergy Corp.	Earthenergy Corp.	Balayan, Batangas	30	TBD
SUBTOTAL				1053.7	
WIND					
Pasuquin East Wind Power Project Phase I	Energy Logics Philippines, Inc.	Energy Logics Philippines, Inc.	Pasuquin, Ilocos Norte	48	Jan 2017
Balaoi Wind Power Project	Northern Luzon UPC Asia Corporation	Northern Luzon UPC Asia Corporation	Brgy. Balaoi, Pagudpud, Ilocos Norte	45	Oct 2017
Sembrano Wind Power Project	Alternergy Sembrano Wind Corporation	Alternergy Sembrano Wind Corporation	Mt. Sembrano, Mabitac, Laguna	72	Jun 2018

Name of the Project	Project Proponent	Mother/ JV Company	Location	Rated Capacity (MW)	Target Commissioning
Pagudpud Wind Power Project	EDC Pagudpud Wind Power Corporation	EDC Pagudpud Wind Power Corporation	Brgy. Balaoi and Caunayan, Pagudpud, Ilocos Norte	84	Dec 2018
Matnog 1 Wind Power Project	Energy Development Corporation	Energy Development Corporation	Matnog, Sorsogon	153	TBD
Matnog 2 Wind Power Project	Energy Development Corporation	Energy Development Corporation	Matnog, Sorsogon	206	TBD
Matnog 3 Wind Power Project	Energy Development Corporation	Energy Development Corporation	Matnog, Sorsogon	206	TBD
Burgos 2 Wind Power Project	Energy Development Corporation	Energy Development Corporation	Burgos, Ilocos Norte	183	TBD
SUBTOTAL				997.0	
TOTAL				12,075.5	
BATTERY**					
AES Battery Storage – Masinloc Project Unit 2	AES Philippines Power Partners Co., LTD.	AES Philippines Power Partners Co., LTD.	Masinloc, Zambales	10	TBD
AES Battery Storage – Masinloc Project Unit 3	AES Philippines Power Partners Co., LTD.	AES Philippines Power Partners Co., LTD.	Masinloc, Zambales	10	TBD
AES Battery Storage – Masinloc Project Unit 4	AES Philippines Power Partners Co., LTD.	AES Philippines Power Partners Co., LTD.	Masinloc, Zambales	10	TBD
AES Battery Storage – Laoag Project	AES Philippines Power Partners Co., LTD.	AES Philippines Power Partners Co., LTD.	Laoag, Ilocos Norte	40	TBD
AES Battery Storage – Bantay Project	AES Philippines Power Partners Co., LTD.	AES Philippines Power Partners Co., LTD.	Bantay, Ilocos Norte	40	TBD

Name of the Project	Project Proponent	Mother/ JV Company	Location	Rated Capacity (MW)	Target Commissioning
BATTERY**					
Enerhiya Central Battery Energy Storage Project	SunAsia Energy Inc.	SunAsia Energy Inc.	Concepcion, Tarlac	40	TBD
Enerhiya Sur I Battery Energy Storage Project	SunAsia Energy Inc.	SunAsia Energy Inc.	Lemery and Tuy, Calaca, Batangas	40	TBD
Enerhiya Sur II Battery Energy Storage Project	SunAsia Energy Inc.	SunAsia Energy Inc.	Lumban, Laguna	40	TBD
SUBTOTAL				230.0	

** for accounting purposes; declared capacity for Ancillary Services (AS) to the system

**Annex 10. Visayas Grid Committed Power Projects
As of 31 December 2016**

Name of the Project	Project Proponent	Mother/ JV Company	Location	Rated Capacity (MW)	Target Testing & Commissioning	Target Commercial Operation
COAL						
Concepcion Coal-fired Power Plant Unit 2	Palm Thermal Consolidated Holdings Corp.	AC Energy Holdings, Inc./ Palm Thermal Consolidated Holdings Corporation	Brgy. Nipa, Concepcion, Iloilo	135.00	Mar 2018	Dec 2018
SUBTOTAL				135.00		
OIL-BASED						
Calumangan Diesel Power Plant	Energreen Power Development & Management, Inc.	Energreen Power Development & Management, Inc.	Brgy. Calumangan, Bago City, Negros Occidental	8	U4 – Jan 2017 ^b	U4 – January 2017 ^b
SUBTOTAL				8.00		
HYDRO						
Igbulo (Bais) Hydroelectric Power Project	Century Peak Energy Corporation	Century Peak Energy Corporation	Igbaras, Iloilo	5.10	Jun 2018	Jun 2018 (Target Testing & Commissioning)
Cantakoy HEP	Quadriver Energy Corp.	Quadriver Energy Corp.	Danao, Bohol	8.00	Jun 2018	Jun 2018 (Target Testing & Commissioning)
SUBTOTAL				13.10		

Name of the Project	Project Proponent	Mother / JV Company	Location	Rated Capacity (MW)	Target Testing & Commissioning	Target Commercial Operation
GEOTHERMAL						
Biliran Geothermal Plant Project Phase 1	Biliran Geothermal Incorporated	Orka Energy Philippine (Iceland)	Biliran, Biliran	50.00	Jan 2017 ^b	U1 – Jan 2017 ^b
						U2 – Jan 2017 ^b
						U3 – Jul 2017
						U4 – Nov 2017
SUBTOTAL				50.00		
SOLAR						
Miag-ao Solar Power Project	COSMO Solar Energy, Inc.	COSMO Solar Energy, Inc.	Miag-ao, Iloilo	5.67	June 2016 (Ongoing Testing and Commissioning)	January 2017
First Toledo Solar Power Project	SunAsia Energy, Inc.	SunAsia Energy, Inc.	Toledo City, Cebu	60	December 2016 (Ongoing Testing and Commissioning)	January 2017
SUBTOTAL				65.67		
TOTAL				271.8		

Annex 11. Visayas Grid Indicative Power Projects As of 31 December 2016

Name of the Project	Project Proponent	Mother/ JV Company	Location	Rated Capacity (MW)	Target Commissioning
COAL					
Therma Visayas Energy Project	Therma Visayas Inc.	Aboitiz Power Corporation	Brgy. Bato, Toledo City, Cebu	300.00	U1-Dec 2017 U2 – Mar 2018
SPC Coal Power Plant Project	SPC Power Corporation	SPC Power Corporation	Brgy. Colon, Naga City, Cebu	300.00	TBD
Ludo Coal-Fired Thermal Power Plant	Ludo Power Corporation	Ludo Power Corporation	Cebu City	300.00	TBD
SUBTOTAL				900.00	
OIL-BASED					
Datem Energy Northern Samar Diesel Power Plant Project	Datem Energy Corporation	Datem Energy Corporation	Northern Samar	10.00	TBD
SUBTOTAL				10.00	
SOLAR					
Grid Tied Solar Farm	E & P Green Energy, Inc.	E & P Green Energy, Inc.	Biliran, Biliran	25	March 2017
Biliran Solar Power	E & P Green Energy, Inc.	E & P Green Energy, Inc.	Biliran, Biliran	25	December 2017
Tigbauan Solar Power Project	Solexar Energy International, Inc.	Solexar Energy International, Inc.	Brgy. Cordova Norte and Bantud, Tigbauan, Iloilo	34.3	December 2018
Victorias Solar Power Project	VictoriaSolar Energy Corp.	VictoriaSolar Energy Corp.	Brgy. XII, Victorias City, Negros Occidental	30.6	December 2018
Ceko Solar PV Project (Daanbantayan Solar PV Power Project)	CEKO Solar Farm Systems Corp.	CEKO Solar Farm Systems Corp.	Brgy. Tominjao, Daan Bantayan, Cebu	100	TBD
Mabinay Solar Power Project	Lohas and Soul Lighting, Inc.	Lohas and Soul Lighting, Inc.	Mabinay, Negros Oriental	90	TBD
Bogo V Solar Power Project	Sun Premier Bogo Philippine Corporation	Sun Premier Bogo Philippine Corporation	Bogo , Cebu	16.7	TBD
Silay Phase II Solar Power Project	Silay Solar Power Inc.	Silay Solar Power Inc.	Silay City, Negros Occidental	10	TBD
Montesol II Solar PV Power Project	Monte Solar Energy, Inc.	Monte Solar Energy, Inc.	Brgy. Tamisu, Bais City, Negros Occidental	18	TBD

Name of the Project	Project Proponent	Mother/ JV Company	Location	Rated Capacity (MW)	Target Commissioning
Bogo 3 Solar Power Plant	Sun Premier Bogo Philippine Corporation	Sun Premier Bogo Philippine Corporation	Bogo, Cebu	15	TBD
Sanpalo Solar Power Plant	Sunpalo Solar Energy, Inc.	Sunpalo Solar Energy, Inc.	San Miguel, Leyte	100	TBD
SUBTOTAL				464.6	
GEOTHERMAL					
Dauin Geothermal Project	Energy Development Corporation (EDC)	Energy Development Corporation (EDC)	Dauin, Negros Oriental	40.00	Dec 2022
SUBTOTAL				40.00	
HYDRO					
Timbaban Hydroelectric Power Project	Oriental Energy and Power Generation Corporation	Oriental Peninsula Resources Group Inc (ORE)	Madalag, Aklan	18.00	May 2018
Loboc Hydro Power Project	Sta Clara Power Corporation	Sta Clara Int'l Corporation	Loboc, Bohol	1.20	Jun 2018
Hilabangan (Upper Cascade)	Century Peak Energy Corporation	Century Peak Metals Holdings Corp	Kabankalan, Negros Occidental	4.80	Aug 2018
Hilabangan (Lower Cascade)	Century Peak Energy Corporation	Century Peak Metals Holdings Corp	Kabankalan, Negros Occidental	3.00	Aug 2018
Main Aklan River Hydroelectric Power	Sunwest Water & Electric Co. Inc. (SUWECO)	Sunwest Water & Electric Co. Inc. (SUWECO)	Libacao, Aklan	15.00	Sep 2018
Maninila (Lower Cascade)	Century Peak Energy Corporation	Century Peak Metals Holdings Corp	San Remigio, Antique	4.50	Oct 2018
Maninila (Upper Cascade)	Century Peak Energy Corporation	Century Peak Metals Holdings Corp	San Remigio, Antique	3.10	Oct 2018

Name of the Project	Project Proponent	Mother/ JV Company	Location	Rated Capacity (MW)	Target Commissioning
Sibalom (Upper Cascade)	Century Peak Energy Corporation	Century Peak Metals Holdings Corp	San Remigio, Antique	4.20	Oct 2018
Sibalom (Middle Cascade)	Century Peak Energy Corporation	Century Peak Metals Holdings Corp	San Remigio, Antique	4.00	Oct 2018
Sibalom (Lower Cascade)	Century Peak Energy Corporation	Century Peak Metals Holdings Corp	San Remigio, Antique	4.00	Oct 2018
HYDRO					
Basak II	Meadowland Developers, Inc.	Meadowland Developers, Inc.	Badian, Cebu	0.50	Apr 2019
Amlan (Plant B)	Natural Power Sources Integration, Inc.	Natural Power Sources Integration, Inc.	Amlan, Negros Oriental	1.50	Jul 2019
Amlan (Plant A)	Natural Power Sources Integration, Inc.	Natural Power Sources Integration, Inc.	Amlan, Negros Oriental	3.20	Sep 2019
Amlan (Plant C)	Natural Power Sources Integration, Inc.	Natural Power Sources Integration, Inc.	Amlan, Negros Oriental	0.80	Sep 2019
Malugo	Vivant-Malogo Hydropower, Inc	Vivant-Malogo Hydropower, Inc	Silay City, Negros	6.00	Oct 2019
Lower Himogaan	LGU of Sagay	LGU of Sagay	Sagay, Negros Occidental	4.00	Sep 2020
Caroan	Antique Electric Cooperative	Antique Electric Cooperative	Sebaste, Antique	0.84	Sep 2020
Ipayo	Antique electric Cooperative	Antique electric Cooperative	Sebaste, Antique	11.60	Sep 2020

Name of the Project	Project Proponent	Mother/ JV Company	Location	Rated Capacity (MW)	Target Commissioning
Ilaguen 4	Isabela Power Corporation	Isabela Power Corporation	Echague	10.00	Oct 2020
Bansud	Sunwest Water & Electric Company, Inc.	Sunwest Water & Electric Company, Inc.	Bansud & Gloria, Oriental Mindoro	1.50	Oct 2020
Aklan Pumped-Storage Hydropower	Strategic Power Development Corp.	Strategic Power Development Corp.	Malay, Aklan	300	TBD
Bolusao Pumped Storage ¹	San Lorenzo Samar and Water, Inc.	San Lorenzo Samar and Water, Inc.	Lawaan, Eastern Samar	300	TBD
SUBTOTAL				701.74	
WIND					
Pulupandan Wind Power Project	First Maxpower International Corporation	First Maxpower International Corporation	Pulupandan, Negros Occidental	50.00	July 2018
Nabas Wind Power Project Phase II	PetroWind Energy Corporation	PetroWind Energy Corporation	Brgy. Pawa, Nabas, Aklan	14.00	TBD
Iloilo 1 Wind Project	Energy Development Corporation	Energy Development Corporation	Batad & San Dionisio, Iloilo	213	TBD
Iloilo 2 Wind Project	Energy Development Corporation	Energy Development Corporation	Concepcion, Iloilo	500	TBD
Negros Wind Project	Energy Development Corporation	Energy Development Corporation	Manapla & Cadiz, Negros Occidental	262	TBD
Bronzeoak Wind Power Project	Bronzeoak Philippines, Inc.	Bronzeoak Philippines, Inc.	Calatrava, Salvador Benedicto and San Carlos, Negros Occidental	100	TBD
Montesol Wind Power Project	Monte Solar Energy, Inc.	Monte Solar Energy, Inc.	Bais City, Manjuyod and Mabinay, Negros Oriental	9.6	TBD
SUBTOTAL				1148.6	

Name of the Project	Project Proponent	Mother/ JV Company	Location	Rated Capacity (MW)	Target Commissioning
BIOMASS					
MCEI Multi-Feedstock Biomass Power Plant Project	Megawatt Clean Energy, Inc.	Megawatt Clean Energy, Inc.	Negros Occidental	12.00	May 2018
Boracay Oxyfuel-Gas Fired Power Plant Project	CENERTEC Philippines, Inc.	CENERTEC Philippines, Inc.	Brgy. Yapak, Malaya, Aklan	3.0	TBD
VMC Biomass Co-generation Plant	Victorias Milling Company, Inc. (Amendment)	Victorias Milling Company, Inc. (Amendment)	Victoria, Negros Occidental	63.00	TBD
SUBTOTAL				78	
TOTAL				3,342.9	
BATTERY**					
AES Battery Storage - Kabankalan Project	AES Philippines Power Partners Co., LTD.	AES Philippines Power Partners Co., LTD.	Kabankalan, Negros Occidental	40	Jun 2018
Enerhiya Delas Islas I Battery Energy Storage Project	SunAsia Energy Inc.	SunAsia Energy Inc.	Amlan, Negros Oriental	15	TBD
Enerhiya Delas Islas II Battery Energy Storage Project	SunAsia Energy Inc.	SunAsia Energy Inc.	Ormoc, Leyte	15	TBD
Enerhiya Delas Islas III Battery Energy Storage Project	SunAsia Energy Inc.	SunAsia Energy Inc.	Compostela, Cebu	15	TBD
Cadiz Energy Storage Project	EQ Energy Storage Inc	EQ Energy Storage Inc	Cadiz City, Negros Occidental	15	TBD
SUBTOTAL				100.00	

**Annex 12. Mindanao Grid Committed Power Projects
As of 31 December 2016**

Name of the Project	Project Proponent	Mother/ JV Company	Location	Rated Capacity (MW)	Target Testing & Commissioning	Target Commercial Operation
COAL						
SMC Davao Power Plant Project Phase I Unit 2***	San Miguel Consolidated Power Corporation	San Miguel Consolidated Power Corporation	Brgy. Culaman, Malita, Davao del Sur	150	Jan 2017	Jan 2017 ^b
FDC-Misamis CFB Coal-Fired Power Plant Project	FDC Utilities, Inc.	FDC Utilities, Inc.	Phividec Industrial Estate, Villanueva, Misamis Oriental	135	U3 – Sep 2016***	U3 – Jan 2017 ^b
Balingasag Thermal CFBC Coal-Fired Power Plant (Plant)	Minergy Coal Corporation	Mindanao Energy Systems, Inc.	Brgy. Mandangoa, Balingasag, Misamis Oriental	165	U1 – Jan 2017	U1 – Jan 2017
					U2 – Mar 2017	U2 – Mar 2017
					U3 – May 2017	U3 – May 2017
GNPower Kauswagan Clean Coal-Fired Power Plant	GN Power Kauswagan Ltd. Co.	GNPower Ltd. Co	Kauswagan, Lanao del Norte	540	Dec 2017	Mar 2018
Southern Mindanao Coal Fired Power Station Unit 2	Sarangani Energy Corporation (SEC)	Alsons Power Corporation	Brgy, Kamanga, Maasim, Sarangani	100	2018	2018
SUBTOTAL				1,090.00		
OIL-BASED						
Peakpower Soccsargen, Inc. Bunker Fired Power Plant	Peakpower Soccsargen, Inc.	Peakpower Soccsargen, Inc.	General Santos City, South Cotabato	13.94	Jan 2017 ^b	Jan 2017 ^b (Target Testing & Commissioning)
Peakpower San Francisco, Inc. Bunker Fired Power Plant	Peakpower San Francisco, Inc.	Peakpower San Francisco, Inc.	San Francisco, Agusan del Sur	5.2	Feb 2017	Mar 2017
Peakpower Bukidnon, Inc. Bunker Fired Power Plant	Peakpower Bukidnon, Inc.	Peakpower Bukidnon, Inc.	Manolo Fortich, Bukidnon	10.4	May 2017	Jun 2017

Name of the Project	Project Proponent	Mother / JV Company	Location	Rated Capacity (MW)	Target Testing & Commissioning	Target Commercial Operation
SUBTOTAL				29.54		
HYDRO						
New Bataan	Euro Hydro Power (Asia) Holdings, Inc.	Euro Hydro Power (Asia) Holdings, Inc.	New Bataan, Compostela Valley	2.4	Jan 2017	Jan 2017
Manolo Fortich I	Hedcor Bukidnon, Inc.	Hedcor Bukidnon, Inc.	Santiago, Bukidnon	43.40	Mar 2017	Jun 2017
Manolo Fortich 2	Hedcor Bukidnon, Inc.	Hedcor Bukidnon, Inc.	Santiago, Bukidnon	25.40	Mar 2017	Jun 2017
Lake Mainit	Agusan Power Corporation	Tranzen Group Inc.	Jabonga, Agusan del Norte	25	Dec 2017	Dec2017
Puyo Hydroelectric Power Project	First Gen Mindanao Hydropower Corp.	First Gen Power Corporation	Jabonga, Agusan del Norte	30	Jul 2018	Jul 2018
Asiga HEPP	Asiga Green Energy Corp	Asiga Green Energy Corp	Santiago, Agusan Del Norte	8	Aug 2019	Aug 2019
SUBTOTAL				134.2		
BIOMASS						
PTCI Rice Husk-Fired Biomass Cogeneration Facility ***	Philippine Trade Center, Inc.	Philippine Trade Center, Inc.	Maguindanao	1.6	Feb 2016	Jan 2017
GEEC Biomass Cogeneration System	Green Earth Enersource Corporation	Green Earth Enersource Corporation	Maguindanao	2.6	Jan 2017	Jan 2017 (Target Testing & Commissioning)
LPC Rice Husk-Fired Biomass Power Plant Project	Lamsan Power Corporation	Lamsan Power Corporation	Maguindanao	10	Jan 2017	Jan 2017 (Target Testing & Commissioning)
SUBTOTAL				14.2		
TOTAL				1,267.9		

**Annex 13. Mindanao Grid Indicative Power Projects
As of 31 December 2016**

Name of the Project	Project Proponent	Mother/ JV Company	Location	Rated Capacity (MW)	Target Commissioning
HYDRO					
Pasonanca	Philcarbon, Inc.	Philcarbon, Inc.	Zamboanga City	0.5	Jan 2019
Kitaotao1	Hedcor Bukidnon, Inc.	Hedcor Bukidnon, Inc.	Bukidnon	70	Mar 2019
Cabulig-2	Mindanao Energy Systems, Inc.	Mindanao Energy Systems, Inc.	Jasaan, Misamis Oriental	10.0	Mar 2019
Clarin	Philnew Hydro Power Corporation	Philnew Hydro Power Corporation	Clarin, Misamis Occidental	5.0	Apr 2019
Mat-i-1	Philnew Hydro Power Corporation	Philnew Hydro Power Corporation	Claveria, Cagayan de Oro	2.0	Apr 2019
Mat-i-2	Philnew Hydro Power Corporation	Philnew Hydro Power Corporation	Cagayan de Oro, Misamis Oriental	1.6	Sep 2019
Mat-i-3	Philnew Hydro Power Corporation	Philnew Hydro Power Corporation	Cagayan de Oro, Misamis Oriental	3.25	Sep 2019
Mangima Hydroelectric Power Project	Philnew Hydro Power Corporation	Philnew Hydro Power Corporation	Manolo Fortich, Bukidnon	10.0	Sep 2019
Maladugao River (Upper Cascade)	UHPC Bukidnon Hydro Power I Corporation	UHPC Bukidnon Hydro Power I Corporation	Wao, Bukidnon	5.50	Jan 2020
Maladugao River (Lower Cascade)	UHPC Bukidnon Hydro Power I Corporation	UHPC Bukidnon Hydro Power I Corporation	Kalilangan & Wao, Bukidnon	10.0	Apr 2020
Lanon (Lam-alu)	Euro Hydro Power (Asia) Holdings, Inc.	Euro Hydro Power (Asia) Holdings, Inc.	Lake Sebu, South Cotabato	9.50	May 2020
Silo-o	Philnewriver Power Corp.	Philnewriver Power Corp.	Malitbog, Bukidnon	3.29	Jun 2020

Name of the Project	Project Proponent	Mother/ JV Company	Location	Rated Capacity (MW)	Target Commissioning
HYDRO					
Agus III	Maranao Energy Corporation	Maranao Energy Corporation	Pantar & Balo-I, Lanao del Sur & Lanao del Norte	225	Jul 2020
Malitbog	Philnewriver Power Corp	Philnewriver Power Corp	Malitbog, Bukidnon	17.85	Sep 2020
Maramag	Maramag Mini-Hydro Corp	Maramag Mini-Hydro Corp	Maramag, Bukidnon	1.40	Sep 2020
Manupali	Matic Hydropower Corp	Matic Hydropower Corp	Valencia, Bukidnon	9.0	Sep 2020
Pulanai	Repower Energy Development	Repower Energy Development	Valencia, Bukidnon	10.60	Dec 2020
Upper Manupali	Bukidnon II Electric Cooperative, Inc.	Bukidnon II Electric Cooperative, Inc.	Valencia City, Bukidnon	4.40	Feb 2021
Bubunawan Hydroelectric Power Project	First Gen Mindanao Hydropower Corp.	First Gen Mindanao Hydropower Corp.	Baungon and Libona, Bukidnon	23	TBD
Lower Maladugao River Mini-Hydropower Project	Bukidnon Maladugao Hydro Power Corporation	Bukidnon Maladugao Hydro Power Corporation	Kalilangan and Wao, Bukidnon	15.7	TBD
Maladugao (Upper Cascade) Hydroelectric Power Project	UHPC Bukidnon Hydro Power I Corporation	UHPC Bukidnon Hydro Power I Corporation	Kalilangan, Bukidnon	8.4	TBD
Davao Hydroelectric Power Plant	San Lorenzo Ruiz Olympia	San Lorenzo Ruiz Olympia	Davao City	140	TBD
Sawaga River Mini Hydro Power Project	Repower Energy Development	Repower Energy Development	Malaybalay, Bukidnon	4.5	TBD
Katipunan River Mini Hydro Power Project	Repower Energy Development	Repower Energy Development	Cabanglasan, Bukidnon	6.2	TBD
SUBTOTAL				673.4	
OIL					
TPI Diesel Power Plant	Total Power Incorporated	Total Power Incorporated	Mati, Davao Oriental	5.88	March 2018
Nickel Asia Diesel Power Project	Nickel Asia Corporation	Nickel Asia Corporation	Surigao City, Surigao del Norte	10.9	TBD

Name of the Project	Project Proponent	Mother/ JV Company	Location	Rated Capacity (MW)	Target Commissioning
Panasia Malita Diesel Power Plant	Panasia Energy, Inc.	Millennium Energy, Inc.	Malita, Davao	20	TBD
SUBTOTAL				36.8	
SOLAR					
San Francisco Solar Power Project	GPower Inc.	GPower Inc.	San Francisco, Agusan del Sur	10	January 2017
GenSan Solar Power Project Phase I	Del Sol Energy CGS, Inc.	Del Sol Energy CGS, Inc.	Brgy. Conel, General Santos City, South Cotabato	48	December 2018
GenSan Solar Power Project Phase II	Del Sol Energy CGS, Inc.	Del Sol Energy CGS, Inc.	Brgy. Tambler, General Santos City, South Cotabato	48	December 2018
60 MW General Santos City Solar Power Project	Astroenergy Gensan Inc.	Astroenergy Gensan Inc.	General Santos City, South Cotabato	60	TBD
San Francisco Solar Power Project	Gpower Inc.	Gpower Inc.	San Francisco, Agusan del Sur	10	TBD
Jasaan Solar Power Project	Lohas and Soul Lighting, Inc.	Lohas and Soul Lighting, Inc.	Jasaan, Misamis Oriental	60	TBD
Sumilao Solar Power Project	Sunasia Energy, Inc.	Sunasia Energy, Inc.	San Vicente, Sumilao, Bukidnon	2	TBD
SUBTOTAL				238	
BIOMASS					
Malay-balay Bio-Energy Corporation Multi Feedstock Generating Facility	Malaybalay Bio-Energy Corporation	Malaybalay Bio-Energy Corporation	Bukidnon	9.0	Dec 2017
EPC Woody Biomass Power Plant Project	Eastern Petroleum Corporation	Eastern Petroleum Corporation	Agusan del Norte	21.0	Dec 2017

Name of the Project	Project Proponent	Mother/ JV Company	Location	Rated Capacity (MW)	Target Commissioning
Napier Grass-Fired Biomass Power Plant Project	Manolo Fortich Biomass Energy Corporation	Manolo Fortich Biomass Energy Corporation	Bukidnon	10.8	Jan 2018
LPC Biomass Power Plant Project	Lamsan Power Corporation	Lamsan Power Corporation	Maguindanao	5.50	December 2018
Crystal Sugar Bagasse-Fired Co-generation Power Plant ¹	Crystal Sugar, inc.	Crystal Sugar, Inc.	Maramag, Bukidnon	14.9	TBD
NAREDCO Biogas Power Plant	Natures Renewable Energy Development Corporation	Natures Renewable Energy Development Corporation	Lal-lo Cagayan	24	TBD
SUBTOTAL				85.2	
TOTAL				2,806.4	

Annex 14. Electricity Sales and Consumption by Sector, 2003-2016 (in GWh)

Philippines	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<i>Residential</i>	15,357	15,920	16,031	15,830	16,376	16,644	17,504	18,833	18,694	19,695	20,614	20,969	22,747	25,631
<i>Commercial</i>	11,106	11,785	12,245	12,679	13,470	14,136	14,756	16,261	16,624	17,777	18,304	18,761	20,085	21,770
<i>Industrial</i>	15,188	15,012	15,705	15,888	16,522	17,031	17,084	18,576	19,334	20,071	20,677	21,429	22,514	24,119
<i>Others</i>	1,069	1,359	1,177	1,275	1,641	1,395	1,523	1,596	1,446	1,668	1,971	2,186	2,462	2,634
Total Sales	42,720	44,076	45,159	45,672	48,009	49,206	50,868	55,266	56,098	59,211	61,566	63,345	67,808	74,154
Own-Use	3,410	4,654	4,591	4,227	3,994	3,935	3,524	4,677	5,398	5,351	5,959	6,461	7,124	8,357
System Loss	6,810	7,228	6,817	6,885	7,608	7,680	7,542	7,800	7,680	8,360	7,741	7,455	7,481	8,286
Total Consumption	52,941	55,957	56,568	56,784	59,612	60,821	61,934	67,743	69,176	72,922	75,266	77,261	82,413	90,798

Annex 15. Electricity Sales and Consumption by Sector, per Grid, 2003-2016 (in GWh)

Luzon	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<i>Residential</i>	11,796	12,115	12,038	11,802	12,129	12,236	12,801	13,865	13,558	14,262	15,056	15,304	16,528	18,650
<i>Commercial</i>	9,649	10,138	10,495	10,865	11,503	12,066	12,519	13,684	13,975	14,905	15,510	16,103	17,272	18,727
<i>Industrial</i>	10,476	10,149	10,670	10,563	11,034	11,522	11,745	13,030	13,394	14,086	14,379	14,939	15,876	17,094
<i>Others</i>	547	623	589	712	768	792	794	809	779	810	859	895	913	942
Total Sales	32,468	33,025	33,791	33,941	35,435	36,615	37,859	41,389	41,706	44,064	45,803	47,241	50,589	55,413
Own-Use	2,826	3,856	3,738	3,444	3,141	3,069	2,666	3,729	4,114	3,952	4,550	5,040	5,598	6,518
System Loss	5,191	5,509	5,033	5,039	5,764	5,632	5,110	5,204	5,145	5,707	5,383	5,208	4,912	5,290
Total Consumption	40,485	42,390	42,563	42,424	44,340	45,317	45,635	50,322	50,965	53,723	55,736	57,489	61,099	67,221
Visayas	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<i>Residential</i>	1,785	1,873	1,999	2,036	2,157	2,208	2,341	2,523	2,527	2,668	2,735	2,770	3,068	3,508
<i>Commercial</i>	666	783	861	910	1,003	1,044	1,094	1,312	1,324	1,426	1,446	1,302	1,418	1,555
<i>Industrial</i>	2,022	1,999	2,104	2,340	2,402	2,416	2,562	2,770	3,038	3,032	3,137	3,214	3,268	3,470
<i>Others</i>	245	377	320	265	455	293	313	431	336	521	550	753	1,011	1,065
Total Sales	4,718	5,032	5,284	5,551	6,017	5,961	6,309	7,036	7,224	7,647	7,868	8,039	8,765	9,599
Own-Use	484	661	679	606	574	589	565	665	996	1,092	1,055	1,049	1,131	1,189
System Loss	742	788	799	788	790	982	1,190	1,317	1,288	1,333	1,260	1,204	1,288	1,444
Total Consumption	5,945	6,481	6,762	6,946	7,382	7,532	8,064	9,018	9,508	10,072	10,183	10,292	11,184	12,232
Mindanao	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<i>Residential</i>	1,776	1,933	1,995	1,992	2,089	2,200	2,362	2,445	2,609	2,765	2,823	2,895	3,151	3,473
<i>Commercial</i>	791	864	889	904	964	1,026	1,143	1,265	1,324	1,446	1,348	1,357	1,394	1,488
<i>Industrial</i>	2,690	2,864	2,931	2,985	3,086	3,092	2,778	2,776	2,902	2,954	3,161	3,275	3,370	3,554
<i>Others</i>	277	359	269	298	418	311	417	356	332	336	563	538	538	627
Total Sales	5,534	6,020	6,084	6,179	6,557	6,630	6,699	6,841	7,167	7,500	7,895	8,065	8,453	9,142
Own-Use	100	137	173	178	279	277	293	282	289	306	355	372	395	651
System Loss	877	931	985	1,057	1,054	1,065	1,243	1,280	1,247	1,320	1,097	1,044	1,281	1,552
Total Consumption	6,511	7,087	7,243	7,414	7,890	7,972	8,235	8,403	8,703	9,127	9,347	9,481	10,130	11,345

Annex 16. Annual System Peak Demand per Grid, 1985-2016 (in MW)

Year	Luzon	% AAGR	Visayas*	% AAGR	Mindanao	% AAGR	Total Non-Coincident Peak (Max)	% AAGR
1985	2,311	(2.7)	256	5.8	470	8.5	3,037	(0.4)
1986	2,435	5.4	284	10.9	484	3.0	3,203	5.5
1987	2,592	6.4	307	8.1	533	10.1	3,432	7.1
1988	2,780	7.3	333	8.5	571	7.1	3,684	7.3
1989	2,938	5.7	354	6.3	617	8.1	3,909	6.1
1990	2,973	1.2	380	7.3	621	0.6	3,974	1.7
1991	3,045	2.4	410	7.9	626	0.8	4,081	2.7
1992	3,250	6.7	472	15.1	573	(8.5)	4,295	5.2
1993	3,473	6.9	512	8.5	691	20.6	4,676	8.9
1994	3,561	2.5	557	8.8	696	0.7	4,814	3.0
1995	3,920	10.1	628	12.7	780	12.1	5,328	10.7
1996	4,306	9.8	647	3.0	828	6.2	5,781	8.5
1997	4,773	10.8	725	12.1	852	2.9	6,350	9.8
1998	4,863	1.9	707	(2.5)	868	1.9	6,438	1.4
1999	4,986	2.5	729	3.1	892	2.8	6,607	2.6
2000	5,450	9.3	749	2.7	939	5.3	7,138	8.0
2001	5,646	3.6	898	19.9	953	1.5	7,497	5.0
2002	5,823	3.1	903	0.6	995	4.4	7,721	3.0
2003	6,149	5.6	995	10.2	1,131	13.7	8,275	7.2
2004	6,323	2.8	1,025	3.0	1,177	4.1	8,525	3.0
2005	6,443	1.9	1,037	1.2	1,149	(2.4)	8,629	1.2
2006	6,466	0.4	1,066	2.8	1,228	6.9	8,760	1.5
2007	6,643	2.7	1,102	3.4	1,241	1.1	8,987	2.6
2008	6,674	0.5	1,176	6.7	1,204	(3.0)	9,054	0.7
2009	6,928	3.8	1,241	5.5	1,303	8.3	9,472	4.6
2010	7,656	10.5	1,431	15.3	1,288	(1.2)	10,375	9.5
2011	7,552	(1.4)	1,481	3.5	1,346	4.5	10,379	0.0
2012	7,889	4.5	1,551	4.7	1,321	(1.9)	10,761	3.7
2013	8,305	5.3	1,572	1.4	1,428	8.1	11,305	5.1
2014	8,717	5.0	1,636	4.1	1,469	2.9	11,822	4.6
2015	8,928	2.4	1,768	8.1	1,517	3.3	12,213	3.3
2016	9,726	8.9	1,893	7.1	1,653	9.0	13,272	8.7

Annex 17. Visayas Annual System Peak Demand per Sub-Grid, 1995-2016 (in MW)

Year	CEBU	% AAGR	NEGROS	% AAGR	PANAY	% AAGR	LEYTE-SAMAR	% AAGR	BOHOL	% AAGR	TOTAL VISAYAS	% AAGR
1995	248		113		88		116		21		586	
1996	272	9.73	127	12.61	95	7.03	116	0.30	22	5.69	632	7.87
1997	291	7.10	141	10.66	114	20.76	152	30.41	24	7.17	722	14.15
1998	297	2.06	136	(3.70)	114	(0.47)	127	(15.96)	28	15.90	702	(2.79)
1999	333	12.16	152	12.03	81	(28.65)	126	(1.10)	30	8.66	722	2.97
2000	353	6.04	156	2.45	84	3.45	122	(3.25)	32	4.98	746	3.33
2001	377	6.65	151	(2.78)	146	73.92	156	28.09	31	(3.39)	861	15.33
2002	349	(7.40)	178	17.45	113	(22.39)	162	3.91	40	30.88	842	(2.16)
2003	422	20.97	179	0.94	105	(7.61)	175	7.93	41	3.28	923	9.54
2004	417	(1.14)	199	10.86	122	16.68	167	(4.52)	49	18.73	955	3.46
2005	438	4.94	195	(2.03)	120	(1.91)	168	0.65	46	(6.33)	967	1.28
2006	458	4.68	199	1.87	123	2.64	171	1.43	46	0.44	997	3.09
2007	477	4.12	209	5.11	182	48.20	186	8.76	49	5.42	1,102	10.61
2008	522	9.39	218	4.30	203	11.49	182	(2.21)	52	6.17	1,176	6.68
2009	559	7.07	215	(1.13)	223	9.91	188	3.49	56	7.77	1,241	5.52
2010	674	20.56	263	22.29	243	8.68	204	8.33	48	(14.21)	1,431	15.31
2011	704	4.44	245	(6.75)	260	7.25	209	2.81	62	30.83	1,481	3.50
2012	747	6.20	256	4.45	262	0.48	221	5.65	65	3.42	1,551	4.71
2013	780	4.41	253	(1.40)	272	3.82	199	(10.08)	63	(2.25)	1,567	1.01
2014	862	10.45	266	5.38	264	(2.72)	181	(8.74)	62	(2.23)	1,636	4.40
2015	850	(1.34)	309	15.92	309	16.84	230	26.54	70	14.18	1,768	8.09
2016	936	10.09	316	2.17	331	7.12	241	4.96	69	(1.69)	1,893	7.05

Annex 18. Luzon Monthly System Peak Demand, 2001-2016 (in MW)

MONTH	LUZON															
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
JAN	5,119	5,212	5,282	5,511	5,471	5,619	5,819	5,972	6,118	6,407	6,594	7,027	7,079	7,121	7,315	8,175
FEB	5,157	5,056	5,345	5,701	5,853	5,776	6,115	6,094	6,452	6,878	6,877	7,162	7,214	7,545	7,610	8,229
MAR	5,384	5,424	5,705	6,065	6,210	6,186	6,157	6,211	6,642	7,057	7,006	7,503	7,720	7,655	7,878	8,806
APR	5,523	5,589	6,149	6,218	6,266	6,222	6,581	6,663	6,845	7,305	7,056	7,885	8,178	8,267	8,727	9,586
MAY	5,646	5,823	6,109	6,323	6,443	6,466	6,643	6,485	6,829	7,656	7,538	7,889	8,305	8,717	8,928	9,726
JUN	5,447	5,750	5,831	5,978	6,348	6,339	6,619	6,674	6,928	7,646	7,552	7,709	8,208	8,607	8,881	9,507
JUL	5,281	5,652	5,856	6,061	6,039	6,221	6,464	6,559	6,848	7,240	7,438	7,574	8,030	8,265	8,826	9,339
AUG	5,313	5,604	5,813	5,906	6,107	6,094	6,369	6,403	6,863	7,009	7,200	7,242	7,755	8,230	8,889	9,379
SEP	5,364	5,559	5,885	6,097	5,998	6,195	6,416	6,496	6,873	7,057	7,107	7,293	7,966	8,005	8,738	9,082
OCT	5,460	5,687	5,878	5,916	5,843	5,845	6,155	6,627	6,530	7,074	7,255	7,421	7,564	7,993	8,624	9,005
NOV	5,319	5,712	5,957	5,987	5,889	5,974	6,137	6,492	6,662	6,851	7,223	7,425	7,488	8,033	8,498	8,900
DEC	5,305	5,707	5,904	5,900	5,910	5,813	6,195	6,376	6,575	6,946	7,178	7,395	7,670	7,996	8,487	8,774
MAX	5,646	5,823	6,149	6,323	6,443	6,466	6,643	6,674	6,928	7,656	7,552	7,889	8,305	8,717	8,928	9,726

Annex 19. Visayas Monthly System Peak Demand, 2001-2016 (in MW)

MONTH	VISAYAS															
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
JAN	761	781	797	866	890	906	946	1,067	1,122	1,219	1,324	1,391	1,463	1,331	1,476	1,693
FEB	747	760	792	839	892	929	969	1,069	1,159	1,199	1,356	1,386	1,446	1,362	1,479	1,669
MAR	755	765	822	878	899	949	972	1,092	1,166	1,254	1,370	1,370	1,528	1,411	1,528	1,749
APR	794	826	828	889	916	964	1,007	1,112	1,193	1,308	1,431	1,447	1,548	1,499	1,630	1,846
MAY	777	842	837	896	928	968	1,015	1,090	1,204	1,364	1,405	1,464	1,572	1,606	1,618	1,893
JUN	773	818	858	857	926	961	1,078	1,089	1,204	1,344	1,399	1,449	1,555	1,636	1,562	1,831
JUL	780	803	817	880	931	977	1,090	1,105	1,201	1,323	1,398	1,440	1,543	1,511	1,584	1,819
AUG	778	793	832	889	919	951	1,100	1,127	1,214	1,310	1,415	1,480	1,207	1,579	1,596	1,825
SEP	826	790	834	894	911	976	1,094	1,128	1,206	1,341	1,414	1,456	1,547	1,528	1,625	1,817
OCT	798	780	857	904	917	967	1,088	1,174	1,215	1,333	1,435	1,489	1,520	1,517	1,705	1,823
NOV	799	790	897	952	943	984	1,101	1,176	1,241	1,402	1,462	1,502	1,518	1,610	1,768	1,838
DEC	813	842	924	955	967	997	1,102	1,165	1,231	1,431	1,481	1,551	1,350	1,526	1,727	1,859
MAX	826	842	924	955	967	997	1,102	1,176	1,241	1,431	1,481	1,551	1,572	1,636	1,768	1,893

Annex 20. Mindanao Monthly System Peak Demand, 2001-2016 (in MW)

MONTH	MINDANAO															
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
JAN	887	911	946	1,058	1,082	1,062	1,108	1,158	1,143	1,240	1,250	1,270	1,284	1,354	1,387	1,497
FEB	900	913	918	1,044	1,082	1,077	1,141	1,146	1,163	1,180	1,231	1,191	1,244	1,351	1,380	1,472
MAR	903	900	978	1,027	1,082	1,088	1,177	1,162	1,158	1,026	1,219	1,244	1,245	1,344	1,370	1,485
APR	887	927	985	1,051	1,087	1,090	1,167	1,190	1,186	1,009	1,253	1,232	1,226	1,310	1,406	1,514
MAY	901	920	1,001	1,099	1,055	1,118	1,109	1,159	1,194	1,211	1,253	1,301	1,366	1,339	1,438	1,590
JUN	897	931	1,021	1,035	1,072	1,100	1,145	1,188	1,220	1,238	1,264	1,309	1,364	1,416	1,435	1,585
JUL	894	924	976	1,025	1,045	1,093	1,141	1,163	1,198	1,214	1,298	1,289	1,384	1,390	1,397	1,536
AUG	926	941	980	1,086	1,061	1,119	1,141	1,147	1,208	1,221	1,290	1,306	1,326	1,386	1,446	1,582
SEP	947	927	995	1,102	1,078	1,090	1,203	1,163	1,217	1,235	1,288	1,268	1,256	1,391	1,453	1,592
OCT	954	950	1,019	1,134	1,122	1,130	1,193	1,156	1,292	1,263	1,290	1,319	1,219	1,441	1,507	1,645
NOV	938	965	1,051	1,155	1,149	1,147	1,158	1,204	1,303	1,286	1,326	1,321	1,397	1,469	1,517	1,642
DEC	933	995	1,131	1,177	1,105	1,228	1,241	1,175	1,282	1,288	1,346	1,318	1,428	1,453	1,510	1,653
MAX	954	995	1,131	1,177	1,149	1,228	1,241	1,204	1,303	1,288	1,346	1,321	1,428	1,469	1,517	1,653

Annex 21. Philippine Gross Generation by Plant Type, 2003-2016 (in GWh)

PHILIPPINES by Plant Type	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Coal	14,939	16,194	15,257	15,294	16,837	15,749	16,476	23,301	25,342	28,265	32,081	33,054	36,686	43,303
Oil-based	7,170	8,504	6,141	4,665	5,148	4,868	5,381	7,101	3,398	4,254	4,491	5,708	5,886	5,661
<i>Combined Cycle</i>	439	738	91	239	653	513	639	1,202	124	227	247	515	276	694
<i>Diesel</i>	5,509	6,253	5,717	4,152	4,162	3,660	3,771	4,532	2,762	3,332	3,805	4,730	5,521	4,722
<i>Gas Turbine</i>	42	82	25	0	9	36	62	3	0	0	0	0	10	0
<i>Oil Thermal</i>	1,180	1,431	309	274	324	658	909	1,364	512	695	438	463	80	245
Natural Gas	13,139	12,384	16,861	16,366	18,789	19,576	19,887	19,518	20,591	19,642	18,791	18,690	18,878	19,854
Renewable Energy (RE)	17,692	18,874	18,308	20,459	18,837	20,628	20,191	17,823	19,845	20,762	19,903	19,810	20,963	21,979
<i>Geothermal</i>	9,822	10,282	9,902	10,465	10,215	10,723	10,324	9,929	9,942	10,250	9,605	10,308	11,044	11,070
<i>Hydro</i>	7,870	8,593	8,387	9,939	8,563	9,843	9,788	7,803	9,698	10,252	10,019	9,137	8,665	8,111
<i>Biomass</i>	0	0	0	0	0	0	14	27	115	183	212	196	367	726
<i>Solar</i>	0	0	2	1	1	1	1	1	1	1	1	17	139	1,097
<i>Wind</i>	0	0	17	53	58	61	64	62	88	75	66	152	748	975
Total Generation	52,941	55,957	56,568	56,784	59,612	60,821	61,934	67,743	69,176	72,922	75,266	77,261	82,413	90,798

Annex 22. Luzon, Visayas and Mindanao Gross Generation by Plant Type, 2003-2016 (in GWh)

LUZON	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Coal	14,351	15,548	14,653	14,099	14,418	13,504	14,091	20,047	19,681	21,878	25,756	27,346	29,680	33,143
Oil-based	3,596	4,591	2,022	1,711	2,192	1,928	1,864	3,287	1,291	1,800	1,601	2,342	1,845	2,562
Natural Gas	13,139	12,384	16,861	16,366	18,789	19,576	19,887	19,518	20,591	19,642	18,783	18,686	18,878	19,854
Renewable Energy (RE)	6,448	7,330	7,091	9,065	8,221	9,192	9,132	7,413	8,454	8,993	8,679	8,392	9,711	10,938
<i>Geothermal</i>	<i>2,600</i>	<i>3,033</i>	<i>2,742</i>	<i>3,519</i>	<i>3,601</i>	<i>3,730</i>	<i>3,516</i>	<i>3,323</i>	<i>3,486</i>	<i>3,588</i>	<i>3,399</i>	<i>3,817</i>	<i>4,096</i>	<i>4,227</i>
<i>Hydro</i>	<i>3,848</i>	<i>4,297</i>	<i>4,331</i>	<i>5,492</i>	<i>4,562</i>	<i>5,400</i>	<i>5,549</i>	<i>4,014</i>	<i>4,836</i>	<i>5,292</i>	<i>5,156</i>	<i>4,357</i>	<i>4,769</i>	<i>5,011</i>
<i>Biomass</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>3</i>	<i>14</i>	<i>44</i>	<i>37</i>	<i>60</i>	<i>65</i>	<i>187</i>	<i>439</i>
<i>Solar</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>66</i>	<i>495</i>
<i>Wind</i>	<i>0</i>	<i>0</i>	<i>17</i>	<i>53</i>	<i>58</i>	<i>61</i>	<i>64</i>	<i>62</i>	<i>88</i>	<i>75</i>	<i>66</i>	<i>152</i>	<i>592</i>	<i>767</i>
Total Generation	37,535	39,854	40,627	41,241	43,620	44,200	44,975	50,265	50,017	52,312	54,820	56,766	60,113	66,498
VISAYAS	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Coal	588	646	604	719	848	746	822	1,529	4,032	4,701	4,690	4,449	4,968	5,270
Oil-based	1,861	1,998	1,800	1,282	1,477	1,665	1,864	1,727	683	734	796	766	672	637
Natural Gas	0	0	0	0	0	0	0	0	0	0	8	4	0	0
Renewable Energy (RE)	6,394	6,373	6,295	6,128	5,776	6,239	6,038	5,820	5,740	6,047	5,606	5,794	6,530	7,047
<i>Geothermal</i>	<i>6,361</i>	<i>6,338</i>	<i>6,267</i>	<i>6,100</i>	<i>5,747</i>	<i>6,199</i>	<i>5,985</i>	<i>5,771</i>	<i>5,616</i>	<i>5,930</i>	<i>5,463</i>	<i>5,627</i>	<i>6,105</i>	<i>5,974</i>
<i>Hydro</i>	<i>33</i>	<i>34</i>	<i>27</i>	<i>28</i>	<i>29</i>	<i>40</i>	<i>42</i>	<i>36</i>	<i>53</i>	<i>46</i>	<i>37</i>	<i>35</i>	<i>38</i>	<i>64</i>
<i>Biomass</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>11</i>	<i>13</i>	<i>72</i>	<i>71</i>	<i>106</i>	<i>117</i>	<i>159</i>	<i>276</i>
<i>Solar</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>15</i>	<i>71</i>	<i>525</i>
<i>Wind</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>157</i>	<i>209</i>
Total Generation	8,842	9,016	8,698	8,129	8,102	8,650	8,724	9,075	10,456	11,483	11,100	11,014	12,170	12,955
MINDANAO	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Coal	0	0	0	476	1,571	1,499	1,563	1,726	1,629	1,686	1,635	1,258	2,038	4,890
Oil-based	1,714	1,916	2,320	1,672	1,479	1,275	1,652	2,087	1,424	1,720	2,094	2,599	3,369	2,462
Natural Gas	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Renewable Energy (RE)	4,850	5,171	4,923	5,266	4,841	5,197	5,020	4,590	5,650	5,721	5,618	5,624	4,723	3,994
<i>Geothermal</i>	<i>861</i>	<i>910</i>	<i>893</i>	<i>846</i>	<i>867</i>	<i>794</i>	<i>823</i>	<i>834</i>	<i>841</i>	<i>731</i>	<i>743</i>	<i>864</i>	<i>842</i>	<i>869</i>
<i>Hydro</i>	<i>3,989</i>	<i>4,262</i>	<i>4,028</i>	<i>4,419</i>	<i>3,972</i>	<i>4,402</i>	<i>4,196</i>	<i>3,754</i>	<i>4,808</i>	<i>4,913</i>	<i>4,827</i>	<i>4,745</i>	<i>3,858</i>	<i>3,036</i>
<i>Biomass</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>75</i>	<i>47</i>	<i>14</i>	<i>21</i>	<i>11</i>
<i>Solar</i>	<i>0</i>	<i>0</i>	<i>2</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>2</i>	<i>77</i>
<i>Wind</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
Total Generation	6,564	7,087	7,243	7,414	7,890	7,972	8,235	8,403	8,703	9,127	9,347	9,481	10,130	11,345

Annex 23. Visayas Subgrid Gross Generation by Plant Type, 2003-2016 (in GWh)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
CEBU	1,716	1,366	1,567	1,647	1,902	2,434	3,651	4,158	4,197	3,811	4,154	4,209
Coal	604	719	848	746	822	1,499	3,249	3,674	3,652	3,354	3,868	3,915
Oil-based	1,108	642	714	895	1,074	930	395	477	532	448	282	253
Natural Gas	0	0	0	0	0	0	0	0	8	4	0	0
Renewable Energy (RE)	5	5	5	6	6	5	6	7	5	4	4	41
<i>Geothermal</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
<i>Hydro</i>	<i>5</i>	<i>5</i>	<i>5</i>	<i>6</i>	<i>6</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>5</i>	<i>4</i>	<i>4</i>	<i>3</i>
<i>Biomass</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
<i>Solar</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>38</i>
<i>Wind</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
NEGROS	1,423	1,379	1,460	1,344	1,356	1,425	1,452	1,600	1,552	1,743	1,940	2,437
Coal	0	0	0	0	0	0	0	0	0	0	0	0
Oil-based	0	0	0	0	0	0	0	0	0	0	0	9
Natural Gas	0	0	0	0	0	0	0	0	0	0	0	0
Renewable Energy (RE)	1,423	1,379	1,460	1,344	1,356	1,425	1,452	1,600	1,552	1,743	1,940	2,428
<i>Geothermal</i>	<i>1,421</i>	<i>1,377</i>	<i>1,458</i>	<i>1,343</i>	<i>1,344</i>	<i>1,411</i>	<i>1,404</i>	<i>1,572</i>	<i>1,491</i>	<i>1,657</i>	<i>1,767</i>	<i>1,797</i>
<i>Hydro</i>	<i>2</i>	<i>3</i>	<i>2</i>	<i>2</i>	<i>1</i>	<i>2</i>	<i>2</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>8</i>
<i>Biomass</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>11</i>	<i>13</i>	<i>47</i>	<i>28</i>	<i>62</i>	<i>70</i>	<i>131</i>	<i>233</i>
<i>Solar</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>15</i>	<i>42</i>	<i>390</i>
<i>Wind</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
PANAY	652	608	728	725	744	787	1,043	1,266	1,284	1,393	1,597	1,920
Coal	0	0	0	0	0	30	783	1,027	1,037	1,095	1,101	1,356
Oil-based	652	608	728	725	744	757	235	197	202	251	312	280
Natural Gas	0	0	0	0	0	0	0	0	0	0	0	0
Renewable Energy (RE)	0	0	0	0	0	0	25	43	44	46	185	284
<i>Geothermal</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
<i>Hydro</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>28</i>
<i>Biomass</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>25</i>	<i>43</i>	<i>44</i>	<i>46</i>	<i>28</i>	<i>43</i>
<i>Solar</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>5</i>
<i>Wind</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>157</i>	<i>209</i>

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
LEYTE-SAMAR	4,848	4,725	4,290	4,858	4,643	4,362	4,212	4,358	3,972	3,970	4,367	4,270
Coal	0	0	0	0	0	0	0	0	0	0	0	0
Oil-based	0	0	0	0	0	0	0	0	0	0	0	0
Natural Gas	0	0	0	0	0	0	0	0	0	0	0	0
Renewable Energy (RE)	4,848	4,725	4,290	4,858	4,643	4,362	4,212	4,358	3,972	3,970	4,367	4,270
<i>Geothermal</i>	4,847	4,723	4,289	4,857	4,641	4,361	4,212	4,358	3,972	3,970	4,339	4,178
<i>Hydro</i>	2	2	1	2	2	1	0	0	0	0	0	0
<i>Biomass</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Solar</i>	0	0	0	0	0	0	0	0	0	0	28	92
<i>Wind</i>	0	0	0	0	0	0	0	0	0	0	0	0
BOHOL	24	23	33	50	54	38	49	45	38	43	45	41
Coal	0	0	0	0	0	0	0	0	0	0	0	0
Oil-based	5	5	11	20	20	10	4	6	6	12	11	16
Natural Gas	0	0	0	0	0	0	0	0	0	0	0	0
Renewable Energy (RE)	19	18	21	30	33	28	45	39	32	31	34	24
<i>Geothermal</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Hydro</i>	19	18	21	30	33	28	45	39	32	31	34	24
<i>Biomass</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Solar</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Wind</i>	0	0	0	0	0	0	0	0	0	0	0	0
Summary per Visayas Subgrid	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
CEBU	1,716	1,366	1,567	1,647	1,902	2,434	3,651	4,158	4,197	3,811	4,154	4,209
NEGROS	1,423	1,379	1,460	1,344	1,356	1,425	1,452	1,600	1,552	1,743	1,940	2,437
PANAY	652	608	728	725	744	787	1,043	1,266	1,284	1,393	1,597	1,920
LEYTE-SAMAR	4,848	4,725	4,290	4,858	4,643	4,362	4,212	4,358	3,972	3,970	4,367	4,270
BOHOL	24	23	33	50	54	38	49	45	38	43	45	41
Total Visayas w/o SPUG	8,663	8,101	8,077	8,625	8,698	9,046	10,407	11,428	11,043	10,959	12,103	12,875
SPUG	35	28	24	25	26	30	49	55	56	55	67	80
Total Visayas w/ SPUG	8,698	8,129	8,102	8,650	8,724	9,075	10,456	11,483	11,100	11,014	12,170	12,955

NPC – National Power Corporation; SPUG-Small Power Utilities Group; IPP-Independent Power Producer

Annex 24. Gross Power Generation by Ownership, 2003-2016 (in GWh)

Total PHILIPPINES	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
NPC	14,868	16,431	15,318	16,792	15,151	12,743	9,745	4,053	5,142	5,241	5,035	4,692	3,759	2,715
NPC-SPUG	459	395	462	507	437	448	474	522	543	466	423	416	405	440
NPC-IPP	24,058	25,133	24,717	23,173	26,156	27,972	27,400	14,725	9,536	9,875	8,912	8,382	8,747	7,223
Non-NPC	13,556	13,999	16,071	16,312	17,867	19,658	24,315	48,442	53,955	57,340	60,895	63,770	69,501	80,420
Total Generation	52,941	55,957	56,568	56,784	59,612	60,821	61,934	67,743	69,176	72,922	75,266	77,261	82,413	90,798
LUZON	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
NPC	8,658	9,816	8,941	10,151	8,754	6,018	3,834	225	527	514	474	212	243	0
NPC-SPUG	362	308	348	396	323	330	347	380	381	314	263	250	236	252
NPC-IPP	16,551	17,388	16,802	15,698	18,187	19,591	18,598	6,691	2,160	2,285	2,069	1,973	1,575	2,041
Non-NPC	11,963	12,342	14,535	14,997	16,357	18,260	22,195	42,969	46,949	49,200	52,014	54,332	58,059	64,205
Total Generation	37,535	39,854	40,627	41,241	43,620	44,200	44,975	50,265	50,017	52,312	54,820	56,766	60,113	66,498
VISAYAS	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
NPC	2,248	2,384	2,406	2,285	2,380	2,332	1,690	176	43	35	30	21	0	0
NPC-SPUG	28	26	35	28	24	25	26	30	49	32	33	34	22	23
NPC-IPP	5,014	4,987	4,783	4,568	4,255	4,983	4,967	4,482	4,174	4,274	3,581	3,364	3,576	3,454
Non-NPC	1,552	1,619	1,474	1,248	1,443	1,310	2,042	4,387	6,191	7,142	7,455	7,595	8,572	9,477
Total Generation	8,842	9,016	8,698	8,129	8,102	8,650	8,724	9,075	10,456	11,483	11,100	11,014	12,170	12,955
MINDANAO	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
NPC	3,962	4,231	3,971	4,356	4,017	4,393	4,221	3,652	4,572	4,692	4,531	4,458	3,516	2,715
NPC-SPUG	68	61	80	83	90	93	101	113	113	121	128	132	147	165
NPC-IPP	2,493	2,757	3,131	2,907	3,715	3,398	3,834	3,551	3,202	3,316	3,262	3,046	3,596	1,728
Non-NPC	41	38	61	67	68	88	79	1,086	815	998	1,426	1,844	2,870	6,738
Total Generation	6,564	7,087	7,243	7,414	7,890	7,972	8,235	8,403	8,703	9,127	9,347	9,481	10,130	11,345

References:

List of Existing Power Plants as of December 2016, Department of Energy (DOE), <https://www.doe.gov.ph/list-existing-power-plants>

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Images used for the cover are as follows:

1. Pililia Wind Farm, Rizal
2. PEDC Coal-Fired Power Plant, Iloilo
3. SACASOL Solar Farm, Negros Occidental

PUBLISHED BY:

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