

# 29<sup>th</sup> Electric Power Industry Reform Act (EPIRA) Implementation Status Report

(For the Report Period October 2016)

*Prepared by the*  
Department of Energy

*With Contributions from*

Energy Regulatory Commission  
Philippine Electricity Market Corporation  
National Power Corporation  
National Electrification Administration  
Power Sector Assets and Liabilities Management Corporation  
National Transmission Corporation



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## I. INTRODUCTION

The 29<sup>th</sup> Status Report on EPIRA implementation covers the period May 2016 to October 2016 with development highlights as follows:

Successful turn over for the closing of sale of 32 MW Power Barge 104 to its new owner, SPC Power Corporation (SPC) and continuing privatization of the government's remaining assets to include the commencement of privatization of the 650 MW – Malaya Thermal Power Plant;

Promulgation of the regulatory issuance to revise the timeframe for mandatory contestability for end user with 1 MW peak demand consumption to enter with supply contracts with Retail Electricity Supplier (RES) until 26 February 2017 and other relevant policies on the implementation of Retail Competition and Open Access (RCOA);

Continuing improvement in the WESM processes and operations arising from recommendations on audits, evaluation and incorporation of relevant policies to include among others, renewable energy and ancillary services;

Supply and demand monitoring to ensure supply security and reliability including continuing assistance for the development of generation, transmission and distribution projects; and

Continuing efforts to intensify rural electrification with the renewed targets for household electrification.

## II. PRIVATIZATION

For the report period, the Power Sector Assets and Liabilities Management (PSALM) Corporation sets another milestone in their privatization mandate under EPIRA for the successful turn over of Power Barge (PB) 104. The rest of the remaining plants and NPC-IPP contracts of PSALM except for some assets in Mindanao are lined up for privatization activities specifically Sucat Thermal Power Plant (STPP) and Malaya Thermal Power Plant (MTPP). Also, the disposal of other disposable assets of PSALM are set for inclusion in the bidding activities.

Below are the recent developments on the privatization program of PSALM:

### A. Privatization of Generating Assets

#### **Power Barge (PB) 104**

On 30 June 2016, upon the receipt of payment amounting to PhP218,899,999.00, PSALM has successfully turned over for the closing of sale of 32 MW Power Barge 104 to its new owner, SPC Power Corporation (SPC).

SPC Island Power Corporation (SIPC) was declared the negotiating party with the highest offer after it bested the two other negotiating companies (Trans-Asia Oil & Energy Development Corporation and D.M. Wenceslao & Associates, Inc.).

Prior to the issuance of Notice of Award (NOA), SPC Island Power Corporation (SIPC) requested the PSALM Board to assign its rights and obligations under the Asset Purchase Agreement (APA) to its parent company, SPC Power Corporation. Said request was duly approved by the PSALM Board after thorough review and deliberation on the matter were undertaken.

#### **Sucat Thermal Power Plant (STPP)**

During the report period, PSALM, with the approval of the PSALM Board, shall commence the conduct of the 3<sup>rd</sup> round of bidding in the 2<sup>nd</sup> semester of 2016 for the Negotiated Sale of the structures, plant equipment, auxiliaries and accessories of the decommissioned STPP.

PSALM declared failures of two (2) previous biddings for the sale of STPP on 31 March 2014 and 08 April 2016 respectively. The conduct of the 1<sup>st</sup> bidding for the sale of STPP had declared Genetron International Marketing (GIM) as the winning buyer which bid PhP602 million was later terminated by PSALM due to a fake performance bond provided by GIM. GIM acknowledged the notice of termination on 28 July 2014. The declaration of PSALM of 2<sup>nd</sup> failed bidding for the sale of STPP was done since the three qualified bidders (Riverbend Consolidated Mining Corp., VPD Trading and Sta. Clara International Corporation) did not meet the reserve price set by the PSALM Board.

The preparatory activities with respective dates/timelines for the Negotiated Sale of STPP Assets are as follows:

Issuance of Invitation to Negotiate to Prospective Negotiating Parties, Confidentiality Agreement and Undertaking forms – 15 June 2016;  
Deadline for receipt of Expression of Interest from Prospective Negotiating Parties, duly executed Confidentiality Agreement and Undertaking and issuance of Negotiation Procedure – 30 June 2016;

Due Diligence Period - 04 July 2016 until 2 days before Offer Submission Deadline  
Pre-Negotiation Meeting – 06 July 2016;  
PSALM release of the execution version of the APA was on 01-05 August 2016  
Offer Submission Deadline was held on 10 August 2016;  
Evaluation of First and Second Envelopes is immediately after Offer Submission Deadline;  
Determination of the Negotiating Party with the Highest Offer will be after the evaluation of First and Second Envelopes;  
Post-qualification of the Negotiating Party with the Highest Offer is within five (5) Business Days after the declaration of the Negotiating Party with the Highest Offer;  
and  
Notice of Award and Certificate of Effectivity of the APA is within fifteen (15) Business Days after the declaration of the Negotiating Party with the Highest Offer

Adoption of the Asset Purchase Agreement (APA) used in the previous biddings shall be applied the same as follows:

Sales of assets shall be on an “As is Where-Is Basis”;  
Sale shall cover the dismantling within 30 months of the Structures, Plant Equipment, Auxiliaries and Accessories to ground zero as well as the removal, treatment and disposal of all toxic and hazardous wastes in the course of dismantling, the cost of which shall be for the account of the Buyer; and  
The land underlying the Assets is not included. It is owned by the National Government through DOF as caretaker of the titles.

On 22 July 2016, PSALM submitted the Agency Appraisal Report for the STPP to the Commission on Audit.

In line with the provisions of the APA, PSALM will subject the suspected Polychlorinated Biphenyl (PCB) contaminated equipment and materials of STPP to laboratory testing to determine the appropriate mode of disposal in accordance with environmental regulations. PSALM will also consider the DENR’s recommendation for the inclusion of the requirement for the conduct of an Environmental Site Assessment (ESA) to serve as basis for clean-up/remediation for identified contaminated area/s, if there is any. Said DENR recommendation will be considered in the finalization of bidding documents.

### **Malaya Thermal Power Plant (MTPP)**

During the report period, the PSALM Board approved the commencement of the privatization through public bidding of the 650 MW – Malaya Thermal Power Plant. Details of the salient features of the Bidding Documents for the sale of MTPP are the following:

#### *Subject of the Bid*

Bids shall cover the sale and purchase of the Asset’s Equipment, Auxiliaries, Accessories, General Plant Equipment (GPE) and Materials, Supplies & Equipment (MSE) on an “As-is, Where-is” basis. The plant shall be sold as a Merchant plant;

#### *Technical Capability*

The Bidder or its Affiliate must own or operate a thermal power plant (coal/oil-fired) facility with an aggregate capacity of at least 100 megawatts, and which must be

connected to a national grid. In lieu of such qualification, the bidder must present a plan for the operation of the Asset.

#### *Financial Capability*

The Bidder or its Affiliate must establish that it has a Net Asset Value (NAV) or Market Capitalization to be determined by PSALM.

#### *Bid Security*

Irrevocable Stand By Letter of Credit (SBLC) in an amount to be determined by PSALM.

#### *Land Lease Agreement (LLA)*

The winning bidder shall enter into an LLA with PSALM for a period of 25 years. The total lease amount will be included in the bid. The Performance Security shall be in the form of SBLC in an amount to be determined by PSALM.

#### *Asset Purchase Agreement (APA)*

The winning bidder shall enter into an APA with PSALM with Buyer's obligation to operate, rehabilitate, uprate or decommission the Plant and install a new power plant.

#### *Payment for the Asset*

Full payment for the Asset shall be made on the Closing Date/Turnover Date.

#### *Obligations of the Second Ranking Bidder*

The rights and obligations of the Second Ranking Bidder shall exist until Closing Date (originally until "Effective Date").

Meanwhile, in case of privatization of MTPP, said power plant should be maintained as a Security Plant in line with the instruction of the DOE to PSALM. This means that the utilization of the source of power of MTPP will be implemented in case that there is insufficiency of power supply in the Luzon grid due to preventive maintenance/forced outages of other plants or during Malampaya natural gas facility maintenance shutdown. Also, the MTPP as Must Run Unit (MRU) is being dispatched by the grid Operator in the Luzon grid pursuant to DOE Department Circular No. DC 2014-01-0003.

Currently, MTPP is being operated by private contractors through a one - year Operation and Maintenance Service Contracts (OMSC). MTPP's current operator is STX Marine Service Co. Ltd., with existing contract until 25 June 2017. Once MTPP will be privatized, PSALM may pre-terminate the OMSC contract upon 30-day prior notice to the operator.

## **Indicative Privatization Schedule**

PSALM's latest privatization targets for the remaining plants are shown in Table 1.

Table 1. Schedule of Privatization for Generating Assets as of 31 October 2016

<b>Asset Type/ Plant Name</b>	<b>Rated Capacity (MW)</b>	<b>Bid Date</b>	<b>Turnover Date</b>
<b>Owned Generating Plants</b>			
Malaya Thermal	650.00	1 <sup>st</sup> Semester 2017	1 <sup>st</sup> Semester 2017
Agus 1 & 2 Hydro	260.00	1 <sup>st</sup> Semester 2018	1 <sup>st</sup> Semester 2018
Agus 4 & 5 Hydro	213.10		
Agus 6 & 7 Hydro	254.00		
Pulangui Hydro	255.00		
<b>Decommissioned Plants</b>			
Sucac Thermal	850.00	1 <sup>st</sup> Semester 2017	1 <sup>st</sup> Semester 2017
Bataan Thermal	175.00	Sale/disposal is subject to resolution of court cases involving the asset	
Bataan Gas Turbines	120.00		

Source: PSALM

## **B. Transfer of NPC Contracted Energy Outputs to Independent Administrators**

### **Unified Leyte Geothermal Power Plant (ULGPP) - Bulk Energy**

During the report period, DOE directed PSALM to retain and include the 40 MW Strips of Energy in the Unified Leyte IPPA is duly deemed as transitory control to cushion the impact of the Independent Power Producer Administrator (IPPA) appointment to customers who will be having difficulty securing supply contracts from IPPAs of Strips of Energy. The 200 MW UL Strips of Energy was turned over to IPPAs in December 2014.

### **Mindanao Coal-Fired Thermal Power Plant (MCFTPP)**

Consistent with the directives of the Congress and DOE, PSALM implemented deferment on the privatization of some assets in Mindanao to include the selection and appointment of IPPA for Mindanao CFTPP. The DOE even recommended to PSALM to set new timeline schedules to address the supply shortage specifically in Mindanao until the commercial operation of new power plants are realized. Hence, PSALM recommended the indicative privatization schedule of Mindanao CFTPP in 2018 subject for the approval of the PSALM Board in view of the considerations namely: a) entry of new base load plants which are cheaper than Mindanao Coal, b) absence of an established Wholesale Electricity Spot Market in Mindanao, and opposition from stakeholders/local government units.

PSALM was further instructed by the DOE to submit its position paper for both UL Security Strips of Energy and Mindanao Coal which will serve as basis for the scheduling of the privatization of the contracted energy/capacity of said plants.

Table 2 shows the indicative schedule for the remaining IPP contracts for transfer to IPPAs:

*Table 2. Indicative Privatization Schedule for the Appointment of IPPAs as of 31 October 2016*

Grid	Plant Name	Contracted Capacity (MW)	Bid Date	Turnover Date
Luzon Grid	Casecan Multi-Purpose Hydro	140.00	2018	
	Benguet Mini Hydro <sup>1/</sup>	30.75	IPP contract to expire in 2018	
	Caliraya-Botocan-Kalayaan Hydro	728.00	2018	
	<b>Sub-total Luzon</b>	<b>898.75</b>		
Visayas Grid	Unified Leyte - Bulk Energy	160.00*	2017	
	- Security Strip	40.00		
	<b>Sub-total Visayas</b>	<b>200.00</b>		
	Mindanao Coal-Fired	200.00	2018	
	<b>Sub-total Mindanao</b>	<b>250.00</b>		
<b>GRAND TOTAL</b>		<b>1,298.75</b>		

<sup>1/</sup> IPP contract not subject to privatization/asset sale

\* Based on the average daily declared capability by the Energy Development Corporation (EDC) of about 400 MW less the 200 MW sum of Strips of Energy and 40 MW security capacity of PSALM.

Source: PSALM

### C. Other Disposable Assets

#### **Disposal of Assets Sale of Unserviceable Assets, Junk, Scrap Materials and Structures located in Visayas and Mindanao Plant Site**

On 22 June 2016, the PSALM Board approved the new round of bidding for the Package Sale of Unserviceable Assets, Junk and Scrap Materials with a re-appraised Minimum Bid Price of the plants namely: a) Cebu Diesel Power Plant II (CDPP II)- Toledo, Cebu City, b) Cebu, Palinpinon Geothermal Power Plant (PGPP) – Valencia, Negros Oriental, c) Bohol Diesel Power Plant (BDPP) – Tagbilaran City, Bohol, and d) Aplaya Diesel Power Plant (ADPP) – Jasaa, Misamis Oriental.

On 26 July 2016, the Agency Appraisal Report was submitted to COA.

On 16 September 2016, submission of bids were undertaken by three (3) bidders namely: a) Dong Junkshop, b) Bonapor, and c) Izbanda Enterprises. Among said bidders, Izbanda Enterprises was declared as the bidder with the Highest Calculated Bid in the amount of PhP 5,860,000.00.

On 24 October 2016, PSALM issued the Notice of Award (NOA) to Izbanda Enterprises and the Notice to Proceed.

#### **Negotiated Sale of Unserviceable Assets, Junk, Scrap Materials and Structures located at Panay Diesel Power Plant (DPP) and General Santos DPP**

On 16 June 2016, JCZS Trading complied in accordance with the contract to complete the hauling/removal of the assets within seventy-five (75) days from receipt of the Notice to Proceed (NTP). JCZS Trading was declared the negotiating party for the negotiated sale for the unserviceable assets, junk, scrap materials and structures located at Panay DPP and General Santos DPP.



## **Sale of Unserviceable Assets, Junk, Scrap Materials and Structures located in Mexico Central Warehouse**

On 22 June 2016, the PSALM Board approved the commencement of bidding for the sale with a Minimum Bid Price (MBP) of PhP5,850,000.00. The Invitation to Bid (ITB) was published on 13 September 2016.

On 26 September 2016, the Pre-Bid Conference was conducted and participated in by eight (8) prospective bidders namely: 1) Dong Junsksshop, 2) Bonapor Metal Contractor Service and General Merchandise (Bonapor), 3) JCZS Trading, 4) Izbanda Enterprises, 5) Clavince Enterprises, 6) Bong Enterprises, 7) King Air Trading, and 8) GTR Trading.

On 13 October 2016, among said prospective bidders, only Bonapor submitted its bid; thus, failure of bidding was declared by PSALM.

### **D. Privatization Proceeds**

As of 3<sup>rd</sup> Quarter 2016, PSALM, through the privatization of generation assets, the transmission business, and the IPP contracted capacities, has generated a total of US\$20 billion. Also, the actual collection amounted to US\$10.8 billion.

*Table 3. Privatization Proceeds as of 3<sup>rd</sup> Quarter 2016, (in US\$ Billion)*

<b>Privatization Assets</b>	<b>Generated</b>	<b>Collected</b>	<b>Balance</b>
Generating Assets	3.61	3.61	0.00
Decommissioned Plants	0.01	0.01	0.00
Transmission Asset (TransCo)	6.10	3.96	2.14
Appointment of IPPAs	10.25	3.23	7.02
<b>TOTAL</b>	<b>19.96</b>	<b>10.80</b>	<b>9.15</b>

Source: PSALM

PSALM utilizes its privatization proceeds to cover maturing obligations such as regular debt service, debt prepayment, IPP obligations, TransCo operating expenses, and other privatization-related expenses.

Out of the US\$9.7 billion privatization proceeds utilized, US\$9.6 billion or 98.95% was used for the liquidation of financial obligations. The difference between the total amount collected and total utilization in the amount of US\$1.1 billion is placed in temporary investments while awaiting utilization.

*Table 4. Privatization Proceeds Utilization as of 3<sup>rd</sup> Quarter 2016*

<b>Particulars</b>	<b>In US\$ Billion</b>
Debt Prepayment	1.30
Regular Debt Service	5.74
Lease Obligations	2.57
Others	0.10
TRANSCO Opex	0.00
<b>TOTAL</b>	<b>9.713</b>

USD:PhP = 48.257 (BSP Guiding Rate dated 30 September 2016)

Source: PSALM

### **E. Concession of the National Transmission Network**

Pursuant to the Concession Agreement (CA) between the Government and the National Grid Corporation of the Philippines (NGCP), Republic Act No. 9511 or the Franchise Law and the Construction Management Agreement (CMA), the National Transmission Company (TransCo) continues to monitor the performance and compliance of NGCP to these Agreements.

For the report period, the proposal of Transco for the creation of a joint PSALM and Transco Team was raised which would be tasked to undertake the assessment of NGCP's compliance with the CA in all aspects – legal, regulatory, technical and financial. TransCo requested PSALM to assign representatives to the Technical, Regulatory, Financial and Legal Compliance Assessment Team (TRFLAT).

On 06 June 2016, a kick-off meeting between PSALM and TransCo representatives to the TRFLAT and Inspection of Books and Records (IBR) was held. The following matters were discussed:

1. Preparation of a joint PSALM-Transco draft memorandum order for the creation of TRFLAT to conduct the review/assessment of NGCP's compliance with the CA for CYs 2013, 2014 and 2015 in all aspects technical, regulatory, financial and legal;
2. Monitoring of NGCP's complete and updated copy of books and records pursuant to Section 10.01 of the CA (CY 2015); and
3. Conduct of compliance assessment for the technical, regulatory, financial and legal aspects .

Further, one of the agreements during the said meeting was to conduct compliance assessment which will be done per sub-committee. Sub-committee heads, as advised, should regularly meet to discuss the details and schedule of activities. Assignment of PSALM's representatives to the TRFLAT and IBR is still for approval.

On 29 July 2016, the Office Order was issued for the creation of the Joint PSALM-Transco TRFLAT to assess/review NGCP's compliance with the provisions of the CA for CYs 2013, 2014 and 2015 as well as the conduct of Inspection of Books and Records (IBR) for CYs 2014 and 2015. However, the said Office Order was amended because the Department of Finance (DOF) instructed that the TRFLAT should be co-chaired by both the President and CEO of PSALM and TransCo so that the audit or assessment activities will be at the highest level in terms of compliances.

On 23 August 2016, a coordination meeting among the heads of the joint PSALM TransCo Technical Working Group and NGCP Representatives was held to discuss the conduct of the IBR of NGCP. The conduct of the IBR of NGCP will commence on 15 September 2016.

On 07 September 2016, the heads of the joint PSALM and TransCo TWG conducted a meeting for the assessment of NGCP's compliance with the CA and the TRFLAT for CYs 2013-2015 and further discussed the change of TRFLAT chairmanship per directive of the DOF to indicate heads of PSALM and TransCo as Co-chairman.

On 04 October 2016, the 5<sup>th</sup> meeting of the Joint PSALM and TRFALT was held to discuss, among others, the preparation of reply to NGCP's letter dated 25 July 2016 regarding NGCP's action and response to observations/finding under the Final TRFLAT Report for CY 2012.

On 06 October 2016, the ERC conducted a seminar on Performance-Based Regulation at TransCo for the members of PSALM-TransCo TRFLAT.

A new Office Order No. 2016-492 dated 19 September 2016 was issued in view of the reconstitution of the TRFLAT composition under Office Order No. 2016-402 dated 29 July 2016.

Pursuant to 10.01 of the CA, the different sub-committees of the TRFLAT commenced the IBR covering CYs 2014-2015 at NGCP Technical Document Centers in Diliman, Quezon City and Mexico, Pampanga.

Moreover, the 6<sup>th</sup> meeting was ensued on 18 October 2016 to discuss the reports of each sub-committee on the conducted Inspection of Books and Records (IBR) of NGCP for CY 2014-2015.

On 20 October 2016, the TRFLAT further discussed the reports and reviewed the reply letter to NGCP on its 7<sup>th</sup> meeting.

Meanwhile, Transco continues on the conduct of inspection of the assets condition and PUC accomplishments consistent with the inspection protocol established with the concessionaire. Observation Reports were forwarded to the Concessionaire for their corrective actions. Annex 1 shows the summary of observations and responses of the Concessionaire.

With regard to NGCP's compliance to CMA, TransCo conducted inspections of Project Under Construction (PUC) and new projects' summary of observations and the responses of the Concessionaire as shown in Annex 2.

## **F. Sale of Sub-Transmission Assets (STAs)**

The sale of TransCo's STAs involves 123<sup>1</sup> sale contracts and 107 interested distribution utilities (DUs), most of which are electric cooperatives (ECs). The STAs include some 5,900 ckt-km of mostly 69 kV transmission lines and 1,600 MVA of substation capacity.

In compliance with the mandate of EPIRA and under the guidelines set by the Energy Regulatory Commission (ERC), TransCo in January 2016 signed one (1) sale contract with DU amounting to about PhP2.9 Million.

As of 31 October 2016, TransCo has signed 113 sale contracts with 92 DUs/ECs/consortia amounting to PhP6 billion. These sales cover an aggregate length of 3,804 ckt-kms of sub-transmission lines and 34,048 sub-transmission structures and 830 MVA of substation capacity. Of the 113 sale contracts, 70 contracts with total sale price of PhP4.2<sup>2</sup> billion have been approved, approved with modification, and disapproved. Included in the said contracts are eight (8) contracts amounting to PhP261.4 million disapproved as of September 30, 2016 posted at the ERC website. The rest of the sale contracts are for filing with the ERC for evaluation and approval.

Following the EPIRA provision to extend concessional financing to ECs, TransCo implemented lease purchase arrangements with a term of 20 years. Of the 113 sale contracts already signed, 76 are under lease purchase agreements with 65 ECs/consortia, valued at about PhP3.9 billion. The remaining 37 involved sales to private DUs/consortia.

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<sup>1</sup> Corrected number of sale contracts

<sup>2</sup> The total ERC approved amount of PhP2.938 billion is lower compared to the total contract amount of PhP4.24 billion due to the following reasons:

- a) Exclusion of some assets from the ERC approval due to reclassification from sub-transmission to transmission assets
- b) The lower amount of valuation was used as basis of the ERC approval
- c) Exclusion of some assets from the ERC approval since said assets are not yet connected to the sold assets
- d) Exclusion of some assets from the ERC approval due to decommissioning
- e) DU withdrawal from the ERC Joint Application of the sale contract
- f) The STA in the sale contract should be sold to a consortium instead of a single DU because the STA is in a super loop configuration.

Table 5 shows the summary of the sale as of the report period.

*Table 5. Summary Table of STAs Sale Per Region as of 31 October 2016*

	<b>DUs</b>	<b>Sale Amount in PhP (Original Contract)</b>	<b>CKM</b>
North Luzon	34	1,673,152,549.20	1,189.04
South Luzon	17	1,155,312,490.46	469.04
Visayas	29	1,211,689,831.22	683.26
Mindanao	33	1,916,546,545.94	1,462.66
<b>TOTAL</b>	<b>113</b>	<b>5,956,701,416.82</b>	<b>3,803.99</b>

Source: Transco

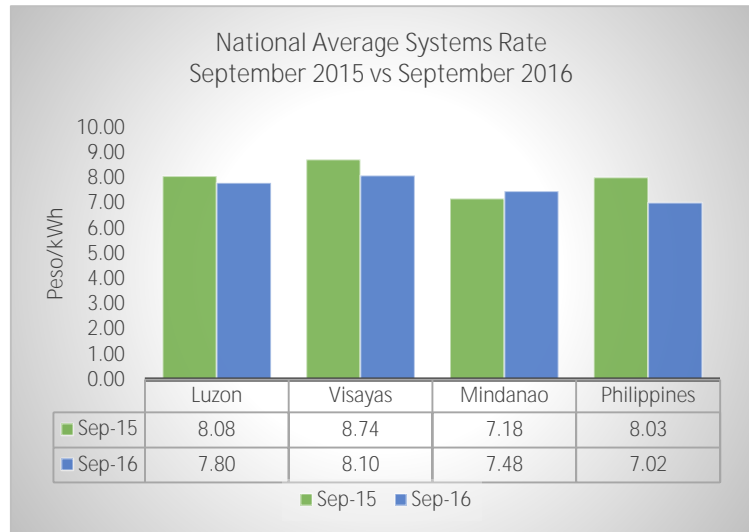
### III. ELECTRICITY RATES

This Section provides updates on electricity price data and other significant related developments based on information from the ERC, TransCo, PSALM, NPC, NEA and distribution utilities, among others.

#### A. Average Electricity Rates

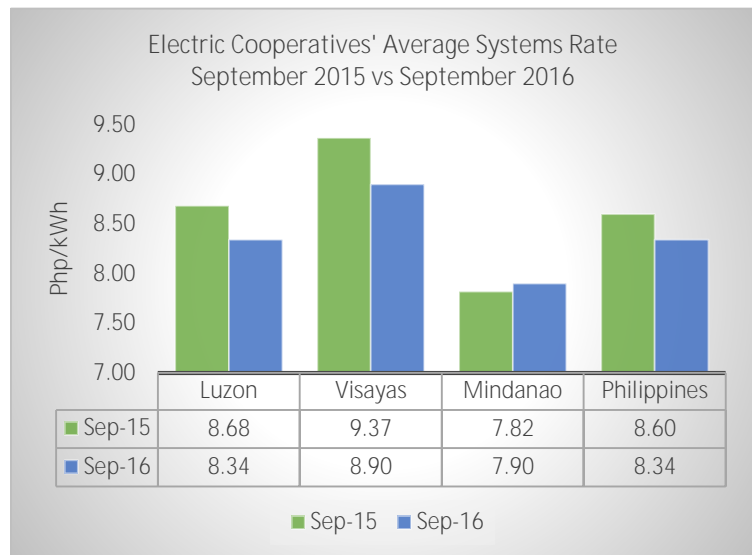
The country's average electricity rates as of September 2016 is around PhP7.02/kWh, one peso lower compared with the September 2015 national average systems rate. Biggest reduction in rate was posted in the Visayas Grid from PhP8.74/kWh in September 2015 to PhP8.10/kWh in September 2016 or a reduction of 64 centavos/kWh. Luzon and Mindanao grids likewise enjoyed a reduction of around 30 centavos in the same period.

Figure 1. National Average Systems Rate



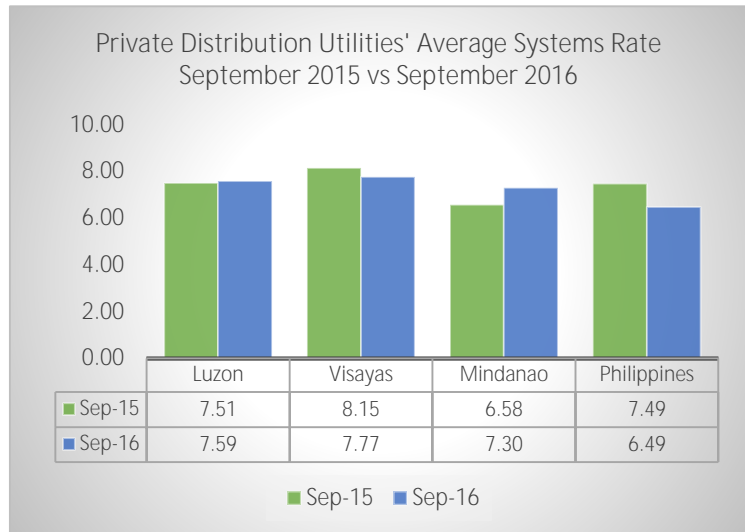
Meanwhile, the ECs' average systems rate for September 2016 is at PhP8.34/kWh, 26 centavos lower compared to September 2015 rate. Among the three grids, only Mindanao grid experienced an increase of two centavos from PhP7.82/kWh in September 2015 to PhP7.90/kWh in September 2016. Luzon and Visayas grids posted a significant reduction of 34 and 47centavos/kWh respectively.

Figure 2. ECs Average Systems Rate



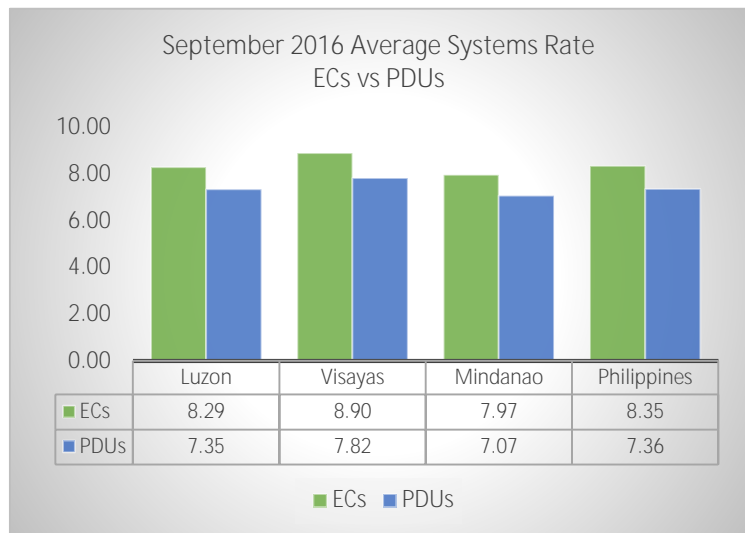
The national average systems rates of private DUs also posted a significant reduction of PhP1/kWh from PhP7.49/kWh in September 2015 to PhP6.49/kWh in September 2016. Visayas grid received a reduction of almost 40 centavos while Mindanao grid had an increase of 8 centavos/kWh in the same billing period.

Figure 3. Private Distribution Utilities' Average Systems Rate



Comparing the rates of ECs and PDUs, the average systems rate of PDUs is lower by around PhP1/kWh for the month of September 2016 for the whole country. Mindanao grid posted the lowest rate of PhP7.52/kWh while Visayas grid has the highest rate of PhP8.36/kWh, average for ECs and PDUs.

Figure 4. Average Systems Rates, PDUs vs ECs



The ECs' national average unbundled residential electricity rate for September 2016 was PhP 8.91/kWh. Generation costs comprised 52% of ECs' national average effective electricity rates followed by distribution costs' share of 19%. Among the three grids, Mindanao still enjoys the lowest generation cost at PhP4.23/kWh. Visayas grid still has the highest average effective residential electricity rates at around PhP9.38/kWh of which generation costs comprise 55%. Among the grids, distribution cost is the next largest component of electricity cost followed by transmission cost.

Table 6. EC's Unbundled Average Effective Residential Electricity Rates, September 2016

Bill Subgroup	LUZON		VISAYAS		MINDANAO		NATIONAL	
	PhP/kWh	% share	PhP/kWh	% share	PhP/kWh	% share	PhP/kWh	% share
Generation	4.45	50.3	5.14	54.8	4.23	49.8	4.61	51.7
Transmission	1.06	12.0	0.73	7.8	0.88	10.3	0.89	10.0
System Loss	0.78	8.8	0.78	8.3	0.69	8.1	0.75	8.4
DSM <sup>1</sup>	1.71	19.3	1.82	19.4	1.68	19.8	1.74	19.5
RFSC <sup>2</sup>	0.36	4.0	0.36	3.8	0.48	5.7	0.40	4.5
Other Charges <sup>3</sup>	(0.03)	(0.3)	-0.04	-0.5	-0.07	-0.8	-0.05	-0.5
Subsidy Charges <sup>4</sup>	0.04	0.5	0.06	0.7	0.06	0.7	0.05	0.6
Universal Charges <sup>5</sup>	0.46	5.2	0.47	5.1	0.46	5.4	0.47	5.2
Other Taxes <sup>6</sup>	0.02	0.3	0.06	0.7	0.09	1.0	0.06	0.7
<b>Total</b>	<b>8.86</b>	<b>100.0</b>	<b>9.38</b>	<b>100</b>	<b>8.50</b>	<b>100</b>	<b>8.91</b>	<b>100</b>

<sup>1</sup> Distribution, Supply and Metering Charges

<sup>2</sup> Reinvestment Fund for Sustainable CAPEX

<sup>3</sup> Loan Condonation & PEMC-SPA Charge

<sup>4</sup> Lifeline & Senior Citizen Subsidy/Discount

<sup>5</sup> Missionary Electrification, Environmental Charges, NPC Stranded Cost

<sup>6</sup> Local Franchise & Business Taxes, Real Property Tax

Source: NEA

Meanwhile, for the October 2016 billing of MERALCO, its effective residential rates for the different residential customer classes ranged from PhP8.34/kWh to PhP9.54/kWh of which the highest component was generation costs at PhP3.89/kWh. MERALCO distribution charges for its different residential customer classes comprised 23%-32% of the total effective residential rates equivalent to about PhP1.96/kWh and PhP3.03/kWh, respectively. Systems loss charges on the other hand was 40-centavos/kWh.

Table 7. Summary of MERALCO Residential Unbundled Power Rates, October 2016 (PhP/kWh)

BILL SUBGROUP	0 to 200 kWh	% Share	201 to 300 kWh	% Share	301 to 400 kWh	% Share	Over 400 kWh	% Share
Generation	3.89	47%	3.89	45%	3.89	43%	3.89	41%
Transmission	0.77	9%	0.77	9%	0.77	9%	0.77	8%
System Loss	0.40	5%	0.40	5%	0.40	4%	0.40	4%
Distribution	1.96	23%	2.24	26%	2.52	28%	3.03	32%
Subsidies*	0.07	1%	0.07	1%	0.07	1%	0.07	1%
Universal Charge	0.35	4%	0.35	4%	0.35	4%	0.35	4%
Fit-All Renewable	0.12	1%	0.12	1%	0.12	1%	0.12	1%
Government Taxes	0.77	9%	0.80	9%	0.84	9%	0.90	9%
<b>TOTAL</b>	<b>8.34</b>	<b>100%</b>	<b>8.65</b>	<b>100%</b>	<b>8.97</b>	<b>100%</b>	<b>9.54</b>	<b>100%</b>

\* Lifeline Rate Charges (applicable to 101 kWh consumption and up) + Cross Subsidy Charge

\*\* For fixed 200, 300, 400 & 500 kWh consumption respectively

Source: <http://www.meralco.com.ph>

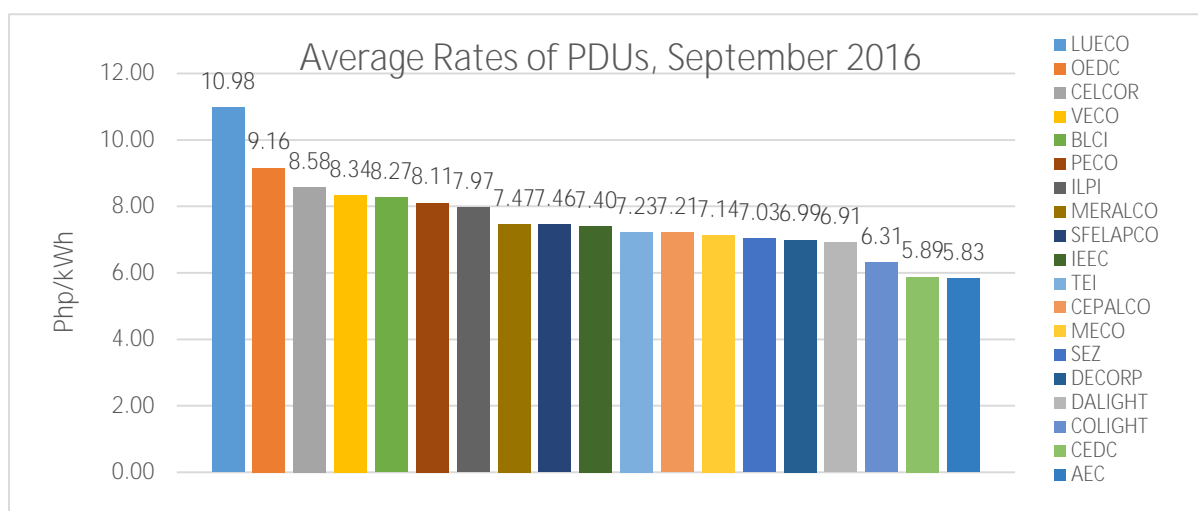
For MERALCO's various customer classes in the same billing period, industrial customers have the lowest rate at PhP5.68/kWh, followed by commercial customers and residential customers at PhP7.29/kWh and PhP8.68/kWh respectively.

Table 8. Summary of MERALCO Unbundled Power Rates per Customer Class, October 2016 (Php/kWh)

BILL SUBGROUP	Residential	% Share	Commercial	% Share	Industrial	% Share
Generation	3.89	45%	3.89	53%	3.41	60%
Transmission	0.77	9%	0.83	11%	0.66	12%
System Loss	0.40	5%	0.30	4%	0.21	4%
Distribution	2.50	29%	1.13	15%	0.60	11%
Subsidies*	(0.18)	-2%	0.07	1%	0.07	1%
Universal Charge	0.35	4%	0.35	5%	0.34	6%
Government Taxes	0.83	10%	0.59	8%	0.27	5%
Fit-All Renewable	0.12	1%	0.12	2%	0.12	2%
<b>TOTAL</b>	<b>8.68</b>	<b>100%</b>	<b>7.29</b>	<b>100%</b>	<b>5.68</b>	<b>100%</b>

Among the PDUs, La Union Electric Company (LUECO) has the highest average effective rate at Php10.98/kWh for the billing period September 2016. On the other hand, Angeles Electric Company (AEC) has the lowest average effective rates at Php5.83/kWh for the same billing period. The variation on the distribution utilities average rates may be attributed to their type of supply and supply mix.

Figure 5. Average Rates of PDUs



## B. Administration of Universal Charge (UC)

This section provides development on the implementation of UC pursuant to *Section 34 of the EPIRA*. Highlights include status of collection and disbursements, updates on PSALM's application for the recovery of stranded contract costs and stranded debts, and the implementation of UC collection from self-generating facilities.

### 1. Universal Charge Remittances, Interests & Disbursements Charge Remittances, Interests & Disbursements

As of 31 October 2016, remittances of collecting entities (CEs) to PSALM amounted to Php106 billion with interest earnings from deposits and placements of UC funds amounted to Php0.15 billion. On the other hand, UC fund disbursement amounted to



PhP105.6 billion. Below are the details of UC remittances, interests and disbursements:

Table 9. UC Collections as of 31 October 2016 (in Billion PHP)

Particulars	Remittances	Interests	Disbursements	Balance
Special Trust Fund – Missionary Electrification (ME) NPC-SPUG	60.19	0.04	60.22	0.01
Special Trust Fund – ME Renewable Energy Developer Cash Incentive (REDCI)	0.30	0.00	0.15	0.15
Special Trust Fund – Environmental Charge (EC)	1.80	0.10	1.49	0.41
Special Trust Fund – Stranded Contract Cost (SCC)	43.73	0.01	43.71	0.03
<b>TOTAL</b>	<b>106.02</b>	<b>0.15</b>	<b>105.57</b>	<b>0.60</b>

Source: PSALM

Accounting for the inflows and outflows of the UC fund leaves it with a balance of about PhP0.60 billion as of 31 October 2016.

## 2. Remittances for CY 2016

For the period May to October 2016, PSALM received PhP13.2 billion in UC remittances broken down as follows:

Table 10. UC Remittances to PSALM for the period May 2016 to October 2016 (In Billion PhP)

Month	UC-ME (NPC-SPUG)	UC-ME (REDCI)	UC – EWR	UC - SCC	Total/Month
May	0.87	0.01	0.01	1.09	1.98
June	1.01	0.01	0.02	1.25	2.29
July	<b>0.98</b>	<b>0.01</b>	<b>0.02</b>	<b>1.22</b>	<b>2.23</b>
August	<b>0.98</b>	<b>0.01</b>	<b>0.02</b>	<b>1.22</b>	<b>2.23</b>
September	<b>0.98</b>	<b>0.01</b>	<b>0.02</b>	<b>1.22</b>	<b>2.23</b>
October	<b>0.97</b>	<b>0.01</b>	<b>0.02</b>	<b>1.23</b>	<b>2.23</b>
<b>Total</b>	<b>5.79</b>	<b>0.06</b>	<b>0.11</b>	<b>7.23</b>	<b>13.19</b>

Note: Difference of .001 with previous reports was due to rounding off

Source: PSALM

### 3. Disbursements for CY 2016

For the period May to October 2016, PSALM disbursed a total amount of PhP13 billion to UC beneficiaries as follows:

Table 11. UC Disbursements of PSALM for the Period May 2016 – October 2016 (in PhP Billion)

Month	ME (NPC-SPUG)	ME(REDCI)	UC-SCC	Total/Month
May	0.87	0.01	1.07	1.95
June	0.99	0.00	1.24	2.23
July	<b>0.99</b>	<b>0.00</b>	<b>1.22</b>	<b>2.21</b>
August	<b>0.98</b>	<b>0.00</b>	<b>1.23</b>	<b>2.21</b>
September	<b>0.96</b>	<b>0.00</b>	<b>1.20</b>	<b>2.16</b>
October	<b>0.99</b>	<b>0.00</b>	<b>1.24</b>	<b>2.23</b>
<b>Total</b>	<b>5.78</b>	<b>0.01</b>	<b>7.20</b>	<b>12.99</b>

Source: PSALM

For the period May to October 2016, PSALM disbursed PhP5.8 billion to NPC-SPUG to fund the missionary electrification functions, chargeable against the UC-ME fund. This is pursuant to the ERC Decisions/Orders reflected in Table 20.

Table 12. ERC Decisions on True-Up Adjustments

Date	Particulars	ERC Case No.
12 August 2013	ERC Decision on CY 2011 True-up Adjustments (PhP4.651 billion)	2012-085 RC
10 October 2013	ERC Decision on CY 2010 True-up Adjustments (PhP2.566 billion)	2012-046 RC
03 November 2013 & 17 August 2015	ERC Order on CY 2015 UC-ME Subsidy	2014-135 RC
20 April 2015	ERC Order on CY 2014 UC-ME Subsidy (PhP2.763 billion)	2012-85 RC

In accordance with the ERC decision dated 28 January 2013 under Case No. 2011-091 RC, the amount of PhP7.2 billion was transferred from the UC-SCC STF to the UC-SCC SFA for the period May 2016 to October 2016.

### 4. ERC Approved UC Rates

The table below shows the ERC-approved UC rates being implemented as of 31 October 2016:

Table 13. Effective UC Rate

Type of UC	PhP/kWh
UC-ME	0.16
UC-EC	0.00
UC-SCC	0.19
<b>Total</b>	<b>0.35</b>

Source: ERC

## 5. Updates on UC Rate Application

### UC- ME

For August 2016, NGCP bills the UCME rate of PhP0.1561/kWh to end-user customers.

In an Order dated 22 June 2015, the ERC provisionally approved the Cash Incentive rate of PhP2.1007/kWh for SunWest Water and Electric Company, Inc (SUWECO), subject to the condition that the rate shall be effective and applicable only on the subsequent cash incentive claims of SUWELCO from receipt of the Order, among others.

### UC-EC

NPC filed the following petitions before ERC for the availment of the environmental share from the UC, and are still pending resolution by the ERC.

Table 14. NPC Filings for UC –EC

ERC Case No.	Date Filed	Calendar Year	Amount (In PhP)
2014-021 RC	12 March 2014	2014	320,008,239.75
2015-050-RC	12 March 2015	2015	426,875,421.95
2016-019 RC	14 March 2016	2016	426,710,057.72
<b>Total</b>			<b>1,173,593,719.42</b>

Source: ERC

### UC-SCC and SD

The table below shows PSALM's UC applications still pending with the ERC.

Table 15. NPC Filings for UC SCC/SD

Particulars	Date Applied	Period Covered	Amount (PhP B'n)	Proposed Rate (PhP/ kWh)	Proposed Recovery Period	Remarks
UC-SCC ( <i>Motion for Reconsideration</i> )/ ERC Case No. 2011-091 RC	06 March 2013	CYs 2007 - 2010	8.55	0.03	4 years	Awaiting ERC decision.
UC-SCC (True-Up Adjustments)/ ERC Case No. 2013-160 RC	31 July 2013	CYs 2011 - 2012	17.69	0.13	2 years	Awaiting ERC decision.
UC-SCC (True-Up Adjustment)/ERC Case No. 2014-111 RC	30 July 2014	CY 2013	4.08	0.05	1 year	Awaiting ERC decision.
UC SD (True-Up Adjustment)/ ERC Case No. 2015-139 RC	24 July 2015	CY 2014	7.35	0.09	1 year	Awaiting ERC notice of public hearings
UC-SD (True-Up Adjustment)/ ERC Case No. 2013-195 RC	30 Sept. 2013	CYs 2011- 2012	41.14	0.04	12.5 years	Awaiting ERC decision
UC-SD (True-up Adjustment)/ ERC	30 July 2015	CY 2014	1.35	0.00	10.5 years	Awaiting submission of Manifestation from Intervenor Meralco

Particulars	Date Applied	Period Covered	Amount (PhP B'n)	Proposed Rate (PhP/kWh)	Proposed Recovery Period	Remarks
Case No. 2015-144 RC						
UC-SD (True-Up Adjustments)/ ERC Case No. 2016-150 RC	30 June 2016	CY 2015	27.67	0.01	9.5 years	PSALM submitted the detailed Variance Analysis Report (VAR), duly audited by the COA as evidenced by the Independent Auditor's Report dated 28 June 2016 Awaiting ERC decision
<b>Total</b>			<b>PhP107.83</b>			

Source: ERC

On 31 May 2016, PSALM submitted to ERC a Report under Oath on the calculated NPC's SCC portion for CY 2015 in the amount of negative PhP431 million, including all the supporting data relevant to the calculations.

Further, PSALM submitted to ERC its compliance under the True-Up adjustments for the NPC's SCC Portion of the UC for the CYs 2007-2010 on 31 May 2016 reporting an under recovery of PhP21.7 billion as of 31 December 2015 out of the PhP53.9 billion ERC-approved SCC.

Consistent with the Decision on ERC Case No. 2011-091 RC dated 28 January 2013, effective March 2013 billing period, NGCP collects from its end-user customers PhP0.1938/kWh Universal Charge-Stranded Costs (UC-SCC) of NPC for Luzon, Visayas and Mindanao Grids.

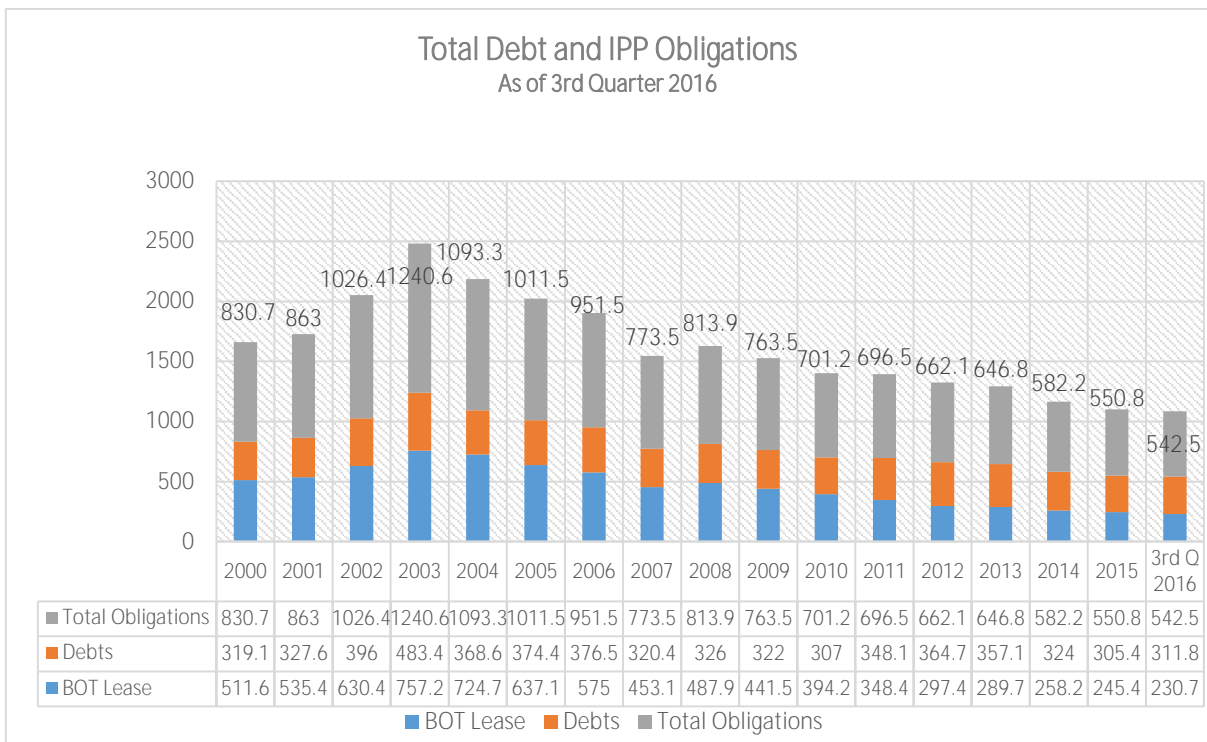
### C. PSALM Liability Management

From the beginning balance in 2000 of PhP830.7 billion, PSALM's financial obligations amounted to a total of PhP1.2 trillion in 2003, which included PhP483.4 billion debts and PhP757.2 billion BOT lease obligations. The increase was brought about by the following:

- New capacities were commissioned after 2001 (Bakun, Ilijan Natural Gas, San Roque Multi Purpose and Kalayaan 3 and 4);
- Further Peso devaluation by 8% from 2001 level (PhP55.57=1USD); and
- New debts were incurred since Internal Cash Generated was able to fund only 10% of maturing obligations.

Figure below shows the movement of the financial obligations of PSALM from 2000 to 30 October 2016.

Figure No. 15. Total Debt and IPP Obligations



Source: PSALM

During the report period, PSALM's implementation of its liability management program and strategies, PSALM's financial obligations was reduced to PhP542.5 billion (or USD11.2 billion) or a decrease of PhP698.5 billion from 2003 level of PhP1.2 trillion.

Table 16. Financial Obligations as of 3<sup>rd</sup> Quarter 2016

	PhP Equivalent (In Billions)	USD Equivalent (In Billions)
Debts	311.77	6.46
IPP Lease Obligations	230.73	4.78
Total	542.50	11.24

Note: Figures based on 3<sup>rd</sup> quarter 2016 Statement of Financial Position

Source: PSALM

In terms of currency, more than half (51.91%) of PSALM's debt is denominated in dollars, amounting to PhP161.8 billion. Peso-denominated debt accounts for 38.64%, equivalent to PhP120.5 billion. The remaining debt is in Japanese Yen (9.45%), amounting to PhP29.5 billion.

Table 17. Debt Profile By Currency as of 3<sup>rd</sup> Quarter 2016

Currency	Amount in PhP equivalent (in Millions)	Amount in USD equivalent (In Millions)	% to Total
US\$	161,844.0	3,353.8	51.91%
PHP	120,474.4	2,496.5	38.64%
JPY	29,454.7	610.4	9.45%
<b>Total</b>	<b>311,773.1</b>	<b>6,460.7</b>	<b>100.00%</b>

Exchange Rates Used: BSP Guiding Rate dated 30 September 2016

USD : PhP 1.00 = 48.2570

JPY : PhP 1.00 = 0.4777

EUR : PhP 1.00 = 54.1685

KRW : PhP 1.00 = 0.0438

Source: PSALM

## Fund Management Activities

For the report period, PSALM received collection amounting to PhP23 billion from the Department of Public Works and Highways (DPWH), Department of Environment and Natural Resources (DENR) and National Irrigation Administration (NIA) for the reimbursement of advances of PSALM/NPC for the San Roque Multi-Purpose Project (SRMPP advances), with the following breakdown:

Table 18. PSALM Collection on Reimbursement of Advances to DENR, DPWH and NEA

Agency	Previous Years	2015	Total (In PhP)
DPWH	160,370,000	-	160,370,000
DENR	4,887,000,000	596,170,000	5,483,170,000
NIA	14,007,000,000	3,360,582,000	17,367,582,000
<b>Total</b>	<b>19,054,370,000</b>	<b>3,956,752,000</b>	<b>23,011,122,000</b>

Source: PSALM

On 23 March 2016, PSALM was able to collect from the DENR the amount of PhP596,170,000.00 as partial payment to the advances made by PSALM for the non-power component of the San Roque Multi Purpose Project. The amount will be deposited to PSALM's Investment Fund under the Fund Management Agreement executed by PSALM and the Bureau of Treasury.

On 26 August 2016, the amount of PhP3,360,582,000.00 was credited to PSALM representing the Special Allotment Release Order (SARO) No. SAROBMB-C-16-0023622 issued in favor of PSALM to cover payment of NIA's share in the SRMPP advances.

## D. Lifeline Rate Subsidy Program

The provision of lifeline rate subsidy is allowed by *Section 73 of the EPIRA* which defines the lifeline rate as a subsidized rate given to low-income captive market end-users who cannot afford to pay at full cost. This program is extended for another ten (10) years with the enactment of Republic Act 10150 on June 2011.

For the period January to October 2016, the average monthly total amount of subsidy provided to lifeline consumers was PhP322 million which translated to an average of PhP2.28/kWh per month subsidy to lifeline customers in the whole country. On the average, the amount of subsidy paid for by the non-lifeline customers of other PDUs is at PhP0.06/kWh, while those in the MERALCO franchise area is at PhP0.08/kWh. For the ECs, non-lifeline customers subsidized an average of PhP0.05/kWh.

Meanwhile, table below shows the January to October 2016 status of lifeline rate subsidy implementation, as provided by the ERC.

*Table 19. Summary of Lifeline Subsidy Implementation, January 2016 - October 2016*

Particulars	MERALCO	Other PDUs	ECs	Total
Average Monthly Total Amount of Subsidy Provided by Non-Lifeline Customers (in PhP)	251,289,429.32	30,678,153	39,755,731	321,723,314.10
Average Monthly Total Consumption of Lifeline Customers (kWh)	3,120,249,039.63	495,445,319	754,960,928	4,370,655,286.57
Average Monthly Total Consumption of Non-Lifeline Customers (kWh)	107,349,360.38	15,661,548	18,020,208	141,031,116.83
<b>Average Amount of Subsidy Provided to Lifeline Customers (In PhP/kWh)</b>	0.08	0.06	0.05	0.07
<b>Average Amount of Subsidy Provided by Non-Lifeline Customers (In PhP/kWh)</b>	2.34	1.96	2.21	2.28

Source: ERC Investigation & Enforcement Division

## E. Mandatory Rate Reduction (MRR)

Pursuant to *Section 72 of the EPIRA*, NPC is continuously granting to residential customers the mandatory discount of 30-centavos/kWh. For this report period, focus is given in the Small Power Utilities Group (SPUG) areas, which is being served by the NPC.

*Table 20. NPC-incurred Amount on Grant of Mandatory Rate Reduction*

Billing Month	Luzon	Mindanao	Philippines
January 2016	2,056,346.94	1,945,101.98	4,001,448.92
February 2016	1,973,871.25	2,049,961.38	4,023,832.63
March 2016	1,953,078.74	1,951,000.98	3,904,079.72
April 2016	1,886,615.97	2,214,918.19	4,101,534.16
May 2016	2,535,660.68	2,089,154.51	4,624,815.19
June 2016	2,181,118.99	1,915,226.84	4,096,345.83
<b>Total</b>	<b>12,586,692.57</b>	<b>12,165,363.88</b>	<b>24,752,056.45</b>

Source: NPC

For January to June 2016, total discounts granted by NPC-SPUG have amounted to PhP24.8 million. This amount is almost equally shared by electricity end-users in the Luzon and Mindanao areas.

## IV. COMPETITION

This section provides an update on key areas of competition to include the operation of the WESM, commercial operations of Retail Competition and Open Access (RCOA), implementation of the Reserve Market, and monitoring of compliance to *Section 45 of the EPIRA*.

### A. Wholesale Electricity Spot Market (WESM) Operational Highlights

As of 25 October 2016, the integrated WESM (Luzon and Visayas) has a total of 276 registered participants comprised of 105 generating companies, and 171 customers comprised of 16 Private Distribution Utilities, 71 ECs, 79 Bulk users, and 5 Wholesale Aggregators.

Table 21. Registration Update as of 25 October 2016 (Luzon and Visayas)

CATEGORY		EXPECTED (Luz & Vis)	REGISTERED					
			DIRECT			INDIRECT		
			LUZ	VIS	LUZ/ VIS	LUZ	VIS	LUZ/ VIS
<b>Generation Companies</b>		<b>105</b>	<b>67</b>	<b>34</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>
Customer Trading Participants	Private DUs & LGUs	16	8	3	0	5	0	0
	ECs	71	29	28	0	14	0	0
	Bulk Users	79	8	7	1	49	12	2
	Wholesale aggregators	5	0	0	5	0	0	0
Total Customer Trading Participant		<b>171</b>	<b>45</b>	<b>38</b>	<b>6</b>	<b>68</b>	<b>12</b>	<b>2</b>
<b>TOTAL PARTICIPANTS/ APPLICANTS</b>		<b>276</b>	<b>112</b>	<b>72</b>	<b>10</b>	<b>68</b>	<b>12</b>	<b>2</b>

Source: PEMC

For the billing period of May 2016 to October 2016, the average system-wide demand constantly decreases and remained relatively low from 9,361MW in May 2016 to 9,148MW in June 2016 to 8,803MW in July 2016 to 8,709MW in August 2016 to 8,729MW in September to 8,645MW in October 2016 which was assumed to be influenced by colder weather conditions and increase in rainfall. Given the decreasing trend of demand from May to August, the lowest demand was noted at 6,052MW. The peak demand registered at 11,458MW during the 1300H trading interval on 11 May 2016.

In terms of supply, the total WESM registered capacity slightly increased to 17,149MW during the billing month of May 2016 influenced by the entry of 5.67MW Solar Power Plant of COSMO Solar, but is still on testing and commissioning at the moment. In June 2016, the total WESM registered capacity increased very lightly to 17,155MW but declined to 17,154MW in July 2016. During this month, it was noted that additional capacities were contributed by the registration of Masinloc Power Partners Co. Ltd.' battery—Masinloc Battery—with 10 MW capacity, as well as the 49 MW capacity of First Toledo Solar Energy Corporation's solar plant 5TOLSOL. On the other hand, coal plant Calaca CFTPP reduced its registered capacity from 660 MW (2 x 330 MW) to 600 MW (2 x 300 MW). Further, the total registered capacity slightly increased from the previous month to 17,280MW during the August billing month. Coal plant Panay Energy Development Corporation (PEDC) in the Visayas contributed an additional 150 MW with its registration in the WESM on 19 August of its additional facility. On the other hand, adjustment in the Registered Capacity of PetroSolar Corporation from 50 MW to 45.5 MW was made effective on 12 August. Consistently, the total WESM registered capacity slightly increased to 17,292MW during the September billing month and remained the same in October 2016.

In spite of the increasing trend in registered capacity, only 10,928MW was offered in the market which accounted for 63% of the total registered capacity in May 2016. The capacity offered declined to 10,436MW in June 2016 which accounted to 61% of the total registered



capacity. As the WESM registered capacity decreased in July 2016 billing period, the capacity offered likewise decreased to 10,326MW which also accounted for 60% of the registered capacity. Consistently, the offered capacity declined in August 2016 to 9,791MW. This accounted 57% of the total registered capacity. However, the capacity offered in the market increased to 10,837MW which accounted for 63% of total registered capacity in September billing month. In October, the capacity offered consistently increased to 11,191MW which accounted for 65% of total registered capacity.

Table 30 below summarizes the capacities not offered during the period which includes the outage capacity, capacity not offered, and ancillary services.

*Table 22. Unavailable Capacities in the Market based on PEMC Report*

Month	Outage Capacity	Capacity Not Offered	Ancillary Services
<b>May 2016</b>	1,079MW	3,215MW	169MW
% of total Registered Capacity	6%	19%	1%
<b>June 2016</b>	1,977MW	2,950MW	128MW
% of total Registered Capacity	12%	17%	1%
<b>July 2016</b>	1,716MW	3,331MW	88MW
% of total Registered Capacity	10%	19%	1%
<b>August 2016</b>	2,574MW	2,958MW	78MW
% of total Registered Capacity	15%	17.6%	0.5%
<b>September 2016</b>	2,106MW	2,350MW	82MW
% of total Registered Capacity	12%	14%	0.5%
<b>October 2016</b>	1,764MW	2,231MW	80MW
% of total Registered Capacity	10%	13%	0.5%

Lower system-wide outage capacity manifested during the May billing month with 39.1% decrease from the previous month to 1,079MW. In contrast, the system-wide average outage capacity increased to 1,977MW in June contributed the increase in the outage capacity involving coal plants, from the previous month's 209 MW to the current billing month's 884 MW. An improved outage capacity, however, was noted in the billing month of July showing a 10.3% drop to 1,716. In August 2016 billing period, a 2,574MW outage capacity is recorded with a significant 50.1% increase from the previous month. During this month, several plants went on outage almost simultaneously, namely: coal plants Mariveles CFTPP 1, Sual CFTPP 2, Calaca CFTPP 2, CEDC 2 and SLTEC CFTPP 2; natural gas plant Avion NGPP; and geothermal plants Bacman GPP and Malitbog GPP 1 and 2. These were on top of the existing outages of coal plants SLPGC CFTPP 2, hydro plant Kalayaan PSPP 2 and natural gas plant Sta. Rita NGPP 2, which were all on planned outages for the duration of the August billing month. However, system-wide outage capacity incurred a decline of 18.2% to 2,106MW this September. The month-on-month decrease in outage capacity was driven by the decline in the outage capacity of Ilijan NGPP Block B, Sta. Rita NGPP 2 and Malaya TPP 2 which was mainly due to the full resumption of operations. Lower system-wide outage capacity continued with 16.3 decline from the previous month to 1,764MW in October. The 42.5% decline in the outage capacity of natural gas plants largely influenced the month-on-month decline in the total outage capacity during the month.

The table below shows the plant outages that contributed to the unavailable capacities in Luzon and Visayas during the said period.

Table 23. Major Plant Outages

Month	Luzon	Visayas		
<b>May 2016</b>	ANDA 1 Pagbilao 2 SLTEC 1 Makban 2, 5, 6 & 9 Tiwi 1 & 3 Angat M4	Limay 5 Malaya 1 Pantabangan 1 & 2 San Roque 1 Kalayaan 4 Ilijan A2	Kepco Salcon 1 TPC Sangi 1 Mahanagdong A1 Malitbog 1 Upper Mahiao 1, 2, 3 & 4	PGPP2 Unit 4 Bohol 1 HPCO SCBE URC 1 & 2
<b>June 2016</b>	APEC 1 GN Power 1 & 2 Sual 1 Calaca 1 & 2 Pagbilao 2 QPPL SLPGC 1 SLTEC 1 & 2	Tiwi 1 & 3 Angat M4 Pantabangan 2 San Roque 1, 2 & 3 Caliraya 1 & 2 Kalayaan 3 AVION 1 Makban 2, 6, 9 & 10	AVION 1 San Gabriel Sta. Rita 4 San Lorenzo 1 & 2 Limay 1, 5, 6 & 7 Malaya 1	
<b>July 2016</b>	ANDA 1 APEC 1 GN Power 1 Masinloc 1 & 2 Sual 1 & 2 Calaca 2 Pagbilao 2 SLPGC 1 & 2 SLTC 2	Makban 1, 2, 6, 9, 10 Tiwi 1 & 3 AVION 1 Ilijan B2 Sta. Rita 1, 2, 3, and 4 BPPC 1 Limay 3 & 5 QPPL0	CEDC 2 TPC Sangi 1 Mahanagdong A1 Malitbog 2 Upper Mahiao 3 Leyte 3	Bohol 1 URC 1 & 2 ISLASOL III Silay Solar PGPP2 Unit 3 & 4
<b>August 2016</b>	GN Power 1 & 2 Masinloc 2 Sual 2 Calaca 2 Pagbilao 2 QPPL SLPGC 1 & 2 SLTEC 1 & 2 Bacman 1 & 2 Makban 1, 6 & 10	Tiwi 1 & 3 Angat M4 Kalayaan 1 & 2 AVION Ilijan B1, B2 & B3 Sta. Rita 1 & 2 Limay 3 & 5 Malaya 1 & 2 Republic 1	CEDC 2 Kepco Salcon 1 PEDC 1 Mahanagdong A1 Malitbog 1, 2 & 3 PGPP2 Unit 4	Cebu Diesel 4 & 5 Bohol 1 URC 1 & 2 Montesol 1
<b>September 2016</b>	GN Power 2 Masinloc 2 Sual 1 & 2 Calaca 1 & 2 SLPGC 2 SLTEC 2 Makban 1, 5, 6 & 10 Tiwi 1 & 3	Angat M4 Kalayaan 2 & 3 AVION 1 Ilijan A2, B1, B2 & B3 Sta. Rita San Lorenzo 1, 2 & 3 Limay 5 & 7 Malaya 2	Kepco Salcon 1 TPC Sangi 2 Mahanagdong A2 Malitbog 2	Upper Mahiao 3 PGPP2 Unit 3 & 4 Cebu Diesel 4
<b>October 2016</b>	ANDA 1 GN Power 1 & 2 Masinloc 1 & 2 Sual 1 & 2 SLPGC 1 & 2 SLTEC 1 Makban 1, 3, 5, 6 & 10 Tiwi 1 & 3	Angat M4 Kalayaan 3 Ilijan A2 Sta. Rita 1, 2 & 3 San Lorenzo 1 & 2 Limay 3 & 6 Republic 1	CEDC 3 Kepco Salcon 1 & 2 TPC Sangi 2 Mahanagdong A2 Malitbog 2 Upper Mahiao 3	Cebu Diesel 4 Bohol 1, 2, & 3 PDPP3 H PB102 Unit 3 & Unit 4 Leyte 1 & 3 PGPP2 Unit 1, 2, 3 & 4

Source: PEMC

As a result of the interplay between supply and demand in the month of May, supply margin stood at an average of 1,377 MW translating to a 7% increase compared to the previous month. In the month of June, supply margin narrowed by 30.1% to an average of 962 MW due to higher rate of decrease in supply than demand. Owing to the higher rate of decrease in demand than supply in the billing month of July, supply margin increased by 41% to an average of 1,357MW. The lowest supply margin noted this month was experienced on 19

July 2016 during trading interval 1500H. Correspondingly, driven by tighter supply conditions particularly during the first and second weeks of the billing month of August (averaging 588 MW and 1,038 MW, respectively), supply margin narrowed by 13.1% this month to 1,179 MW. Driven by better supply conditions, supply margin widened by 32.8% and 14.7% to an average of 1,566MW in September and 1,796MW in October respectively.

As a result of improved supply conditions, system load-weighted average price for the May billing month was recorded at PhP2,734/MWh, manifesting a 20.2% decrease from the previous month. In the billing month of June, the average system-wide load-weighted average price (LWAP) posted a large increase by 71.6% from previous month to PhP4,693/MWh. Highest system price registered at PhP33,467/MWh during the overlapping series of outages of coal plants from 11 to 15 June 2016. In particular, the LWAP in Luzon posted at PhP4,685/MWh which was slightly lower than Visayas which averaged at PhP4,731/MWh. On the other hand, the average system-wide load-weighted average price (LWAP) of the July billing month dropped by 40% from previous month to PhP2,837/MWh. Also, a negative price was recorded on 10 July 2016 at 0700H at – PhP12/MWh due to large supply margin. However, the average system-wide load-weighted average price (LWAP) of the August billing month increased by 42.2% from previous month to PhP4,034/MWh. The hourly market price reached PhP25,392/MWh, which was the maximum price on record for the billing month on 30 July at 1900H. Nevertheless, the average system-wide load-weighted average price (LWAP) decreased by 31.5% and 12.1% to PhP2,764/MWh in September and PhP2,429/MWh in October respectively.

## **B. Updates on WESM Governance Activities**

The DOE provides oversight in the governance of the WESM through the different committees which undertake rules changes, operational audit, conduct of technical evaluation and studies, investigation of breach of the WESM Rules, and management of dispute resolution process. For the report period, following are highlights of the activities of the various WESM governance committees:

### **1. Market Surveillance Committee (MSC)**

Reviewed and adopted the Market Assessment Report for March 2016 (MAG-MMAR-2016-03), April 2016 (MAG-MMAR-2016-04), May 2016 (MAG-MMAR-2016-05), June 2016 (MAG-MMAR-2016-06), July 2016 (MAG-MMAR-2016-07), August 2016 (MAG-MMAR-2016-08) and the Annual Market Assessment Report which were submitted by the Market Assessment Group (MAG);

Reviewed and deliberated the quarterly Retail Market Assessment Report covering the period 26 December 2015 to 25 June 2016;

Reviewed and approved the advance transmittal to the DOE of the Monthly Monitoring Indices (MMI) for July 2016 (MAG-MMI-2016-07) submitted by the MAG;

Revised its Compliance Monitoring Process to consider the significant event reports submitted by Trading Participants in accordance with the procedures and requirements set in the Bulletin;

Submitted Requests for Investigation (RFI) for possible non-compliances for the billing month of March 2016 to August 2016:

**Frequencies of Possible Non-Compliances with Requests for Investigation**

Billing Month	Must-Offer Rule			Real-Time Dispatch Deviation		
	No. of Generating Plants	No. of Trading Participants	No. of Trading Intervals	No. of Generating Plants	No. of Trading Participants	No. of Trading Intervals
March 2016	54	40	38,424	53	42	12,646
April 2016	59	44	40,322	54	42	7,846
May 2016	49	38	39,221	54	44	7,580
June 2016	52	39	40,061	55	43	8,538
July 2016	54	39	41,123	53	43	7,418
August 2016	54	40	36,577	59	46	7,298

Source: PEMC

Reviewed the Monthly Monitoring Reports on Compliances for the period April to August 2016 with summary as follows:

- a. Report on Compliance to the Must Offer Rule of the Luzon and Visayas Generators:

**Frequencies of Capacity Gap due to MOR**

Billing Month	Luzon		Visayas	
	No. of Intervals	No. of Generating Plants Involved	No. of Intervals	No. of Generating Plants Involved
April 2016	30,200	31	10,122	13
May 2016	<b>30,285</b>	<b>30</b>	<b>8,936</b>	<b>10</b>
June 2016	<b>31,035</b>	<b>26</b>	<b>9,026</b>	<b>13</b>
July 2016	<b>32,892</b>	<b>26</b>	<b>8,231</b>	<b>13</b>
August 2016	<b>28,827</b>	<b>27</b>	<b>9,750</b>	<b>13</b>

Source: PEMC

- b. Report on the non-compliance with RTD Schedule of the Luzon and Visayas Generators:

**Frequencies of RTD Deviation**

Billing Month	Luzon		Visayas	
	No. of Intervals	No. of Generating Plants Involved	No. of Intervals	No. of Generating Plants Involved
April 2016	<b>7,423</b>	<b>29</b>	<b>423</b>	<b>13</b>
May 2016	<b>7,823</b>	<b>30</b>	<b>241</b>	<b>10</b>
June 2016	<b>5,909</b>	<b>26</b>	<b>595</b>	<b>12</b>
July 2016	<b>4,973</b>	<b>25</b>	<b>461</b>	<b>13</b>
August 2016	<b>3,472</b>	<b>26</b>	<b>913</b>	<b>14</b>

Source:PEMC

Presented its reviewed Report on the Submission of Schedule of Loading Levels for March to August 2016:

No. of non-scheduled, must-dispatch and priority dispatch generating units	March 2016	April 2016	May 2016	June 2016	July 2016	August 2016
<b>Registered</b>	58	62	64	65	66	66
<b>Registered units that started WESM Participation</b>	26	29	32	32	31	32
<b>Submitted nomination of loading levels and projected output in all trading intervals</b>	7	5	7	6	9	11
<b>Did not submit nomination of loading level and projected output in any of the trading intervals</b>	10	13	12	12	22	21
<b>Submitted nomination of loading level and projected output at less than 100% of all the relevant trading intervals</b>	9	11	13	14		

Commenced its review of the market intervention events. The subcommittee meeting was convened to discuss the six (6) market intervention events, as follows:

- a. Market Operator Report on the Market Intervention on 29 December 2015 (2000H);
- b. Market Operator Report on the Market Intervention on 14 January 2016 (2400H) to 15 January 2016 (0500H);
- c. Market Operator Report on the Market Intervention on 11 March 2016 (1200H);
- d. Market Operator Report on the Market Intervention on 27 March 2016 (0600H – 1600H); and
- e. Market Operator Report on the Market Intervention on 21 April 2016 (2200H) and 23 April 2016 (0700H).
- f. Market Operator Report on the Market Intervention on 06 September 2016 (1400H - 1700H).

Reviewed the Report on the Over-riding Constraints for March to August 2016:

	March 2016	April 2016	May 2016	June 2016	July 2016	August 2016
<b>Total Number of over-riding events</b>	9,400	13,618	13,033	13,964	14,429	16,304
<b>Involved Luzon generating plants</b>	32	51	40	41	45	43
<b>Involved Visayas generating plants</b>	4	13	13	14	14	20
<b>Event Category</b>	Security Limit Events	Security Limit Events	Security Limit Events (96.4%) Must-Run Unit (3.6%)	Security Limit Events (97.3%) Must-Run Unit (2.7%)	Security Limit Events (98.1%) Must-Run Unit (1.9%)	Security Limit Events (96.9%) Must-Run Unit (3.1%)

Conducted a coordination meeting with the ECO to discuss the following:

- a. WESM Compliance Bulletin 6.0 issued by the ECO;
- b. Designation of WESM Compliance Officer (WCO) and the TPs' compliance to the WESM Rules requiring the designation of WCOs; and
- c. Proposed Market Surveillance and Monitoring Market Manual

Conducted a coordination meeting with the SO to discuss possible enhancements to the SO Market Monitoring Reports pertaining to:

- a. Outage events involving the transmission lines and grid equipment;
- b. Categories of Over-Riding Events indicated in the SO Market Monitoring Reports; and
- c. Possible non-compliance to RTD schedule due to SO-related instructions

Reviewed the Market Surveillance, Compliance and Enforcement Market Manual Issue 3.0 (WESM-MSC-EM-003) and considered the proposed new Market Manual on enforcement and compliance as drafted by the Enforcement and Compliance Officer (ECO). The MSC also discussed the proposed

Enforcement and Compliance Market Manual (ECO Manual) and provided inputs/revisions on the same;

Finalized its recommendations prescribing minimum qualifications for a WCO seeing that, currently, there are no provisions on the same in the WESM Rules;

Reviewed the proposed amendments and agreed to the following:

- a. WESM Manuals on Metering Standards and Procedures:
  - i. The cost of the installation of the backup meters should not be passed on to customers; and
  - ii. The reference for settlement, i.e. whether the main meter or backup meter, should be made clear in the rules
- b. WESM Manuals for the Implementation of Enhancements to the WESM Design and Operations – For comments

Submitted to the PEM Board its Review of 13 ECO Consolidated Investigation Reports, which involved 43 cases for possible non-compliances with the MOR and RTD Schedule covering the December 2013 to September 2014 billing periods;

Discussed the following concerns with the Grid Management Committee (GMC):

- a. Implementation of ERC Resolution No. 17, Series of 2013<sup>3</sup> and ERC Resolution No.16, Series of 2014; and
- b. MSC observations on outage events of generating plants including the grid transmission lines and equipment and over-riding constraints due to commissioning and testing of generating plants.

Deliberated the following with the ERC:

- a. Reliability issues that were presented and discussed by the GMC in recognition that the efficiency and reliability of the generating plant impact on market prices; and
- b. Reserve market.

Discussed with the Aboitiz Power its recommendations in minimizing the trading intervals covered in the preliminary notices of investigation (PNI) issued by ECO, which are based on MSC's requests for investigations (RFI) of generator trading participants' (TP) for possible non-compliance to MOR and RTD schedules and agreed to consider the significant event reporting (SER) submitted by TPs in its compliance monitoring;

Reviewed and discussed the report on Red and Yellow Alert Issuances for the Period July 25 – 31, 2016, prepared by the Market Assessment Group (MAG). Said report is in compliance with the ERC's instructions to:

- a. Submit a report on the bidding activities of generator Trading Participants (TP) in the WESM focusing on plants on forced outage and marginal plants

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<sup>3</sup> ERC Resolution 17, Series of 2013 entitled "A Resolution Adopting and Approving the Rules and Procedures to Govern the Monitoring of Reliability Performance of Generating Units and the Transmission System"

in trading intervals with high prices during the period July 25 – 31, 2016;  
and

- b. Identify acts or omissions which may have constituted breaches of the WESM Rules, abuse of market power or anti-competitive behavior during the period.

Transmitted on 23 August 2016 its proposed amendments to the WESM Rules for the ECO's reference.

Reviewed and subsequently revised the proposed flowchart and procedure for the review of market intervention events to include the following:

- a. Timeline for the preparation and submission of the MSC Reports; and
- b. Requirement to furnish copies of the MSC Reports to DOE and ERC.

Created a subcommittee on the review of rules on outages. The MSC agreed to focus the review on the management of outages with the view to submit recommendations to the DOE; and

Participated as resource speaker during the WESM Open House attended by WESM Participants. The MSC presented the changes in its Compliance Monitoring Process in consideration of the submission of significant event reports (SER) pursuant to WESM Compliance Bulletin 6.

## **2. Technical Committee (TC)**

Submitted its comments to the RCC on the following:

- a. PEMC's proposed amendments to the WESM Manual on Metering Standards and Procedures Issue 10 regarding the performance measures of metering service providers;
- b. RCC's Proposed Amendments to the WESM Manual on Dispatch Protocol Issue 11 regarding Dispatch Tolerance Standards and Cogeneration Facilities;
- c. RCC's proposed amendments to the WESM Manual on Metering Standards and Procedures; and
- d. PEMC's proposed amendments to the WESM Manuals for the Implementation of Enhancements to the WESM Design and Operations;

Continued its discussion on the study on the framework for the participation of battery energy storage (BES) systems in the market and agreed to conduct a site visit to the AES's BES facility, subject to PEMC approval;

Continued its study on the operation of the reserve market and the integration of variable renewable energy (VRE) resources. Among the major issues discussed by the TC are the current reserve categories and the reserve categories during the interim and the full implementation of Reserve Market. The TC also noted that the proposed reserve categories for the Reserve Market is not harmonized with the reserve categories in the Philippine Grid Code amendment 2;

Approved the publication of the Study on Pmin of Combined Cycle Gas Turbine Plants in the market information website which was made available on 06 May 2016;

Agreed to request for a presentation from the TOD regarding the forecasting methodology in the New Market Management System (MMS) as reference in their Study on the Planned Forecasting Methodology in the new MMS;

Commenced its discussion on the study on the participation of embedded generation in the market. As part of its consultation process, the TC requested resource persons from PEMC-Corporate Planning and Communications (CPC) to present their issue paper on embedded generation in the WESM, for a discussion on the same with the TC;

Conducted a meeting with NGCP for the Presentation of Transmission Development Plan (TDP) 2016 on 09 June 2016;

Reviewed the RCC's Proposed Amendments to the WESM Manual on Metering Standards and Procedures;

Reviewed the PEMC's Proposed Amendments to the WESM Manuals for the Implementation of Enhancements to the WESM Design and Operations

Conducted a seminar on Power System 101 (Introduction to Power Systems for Non-Engineers) on 26 September 2016; and

Discussed the GN Power's request for a meeting regarding Bataan System Integrity Protection Scheme (SIPS).

### **3. Dispute Resolution Administration (DRA)**

Continued developing the Guidelines for the WESM-accredited ADR Support Service Center (ASSC) and the proposed amendments to the Dispute Resolution Market Manual Issue 4.0 (DRMM);

Updated list of Dispute Management Protocol (DMP) Focal Persons as of May 2016;

Settled that an amendment to the DRMM will be proposed, giving the DRA the responsibility to tap qualified individuals to function as the case secretariat on an ad hoc or temporary basis, pending the availability of a qualified ASSC;

Discussed general guidelines for engaging an Arbitral Tribunal Secretary, who would provide administrative support to the arbitral tribunal throughout the course of arbitration;

Submitted to the Rules Change Committee (RCC) two (2) proposed amendments, namely:

- a. Proposed Amendments to the WESM Rules, Dispute Resolution Market Manual and Registration Manual regarding WESM Disputes, which intends to align relevant provisions to the agreement-based commercial arbitration framework of WESM Dispute Resolution; and
- b. Proposed Amendments to the WESM Rules and Dispute Resolution Market Manual regarding Dispute Resolution Process, which aims to enhance and also clarify vague procedures in the Dispute Resolution Process of the WESM



Reviewed and provided responses to the comments received from the DOE, MERALCO and SNAP to the DRA's two (2) proposed amendments regarding dispute resolution, as follows:

- a. Proposed Amendments to the WESM Rules, Dispute Resolution Market Manual and Registration Manual regarding Dispute Resolution Process; and
- b. Proposed Amendments to the WESM Rules and WESM Manuals on Dispute Resolution and Registration, Suspension and De-Registration Criteria and Procedures regarding WESM Disputes.

Appeared and approved before the RCC during its meeting on 05 October 2016 during the deliberation of the following proposals regarding WESM Disputes and the WESM Dispute Resolution Process:

- a. Proposed Amendments to the WESM Rules and WESM Manuals on Dispute Resolution and Registration, Suspension and De-registration Criteria and Procedures regarding WESM Disputes; and
- b. Proposed Amendments to the WESM Rules and Dispute Resolution Market Manual regarding Dispute Resolution Process

#### **4. Rules Change Committee (RCC)**

The RCC continued its deliberations on the proposed amendments to the WESM Rules and Market Manuals. Most of the amendments are in compliance to various audit findings which calls for the alignment of the WESM Rules and Market Manuals to policy and regulatory issuances. Summarized below are the proposals approved by the Committee:

Proposed Amendments to the Dispatch Protocol (DP) Manual Issue 11 on Data Format, Dispatch Tolerance Standards and Co-Generation Systems and flowcharts on Market Intervention;

Proposed Amendments to the WESM Market Manuals regarding Preferential Dispatch, FIT-All Collection Implementation and Submission of Standing Offers

Proposed Amendments to the WESM Market Manual on Management of Net Settlement Surplus;

Proposed Amendments to the WESM Rules and Market Manuals on the Management of Must-Run Units and Must-Stop Units and Administered Price Determination Methodology;

Proposed Amendments to the WESM Market Manual on Metering Standards and Procedures;

Proposed Amendments to the WESM Metering Market Manual on Guidelines Governing the Constitution of PEM Committees;

Proposed Amendments to the WESM Manual on Management Procedures for Load Shedding;

Proposed Amendments to the WESM Rules, Dispute Resolution Market Manual and Registration Manual regarding WESM Disputes and Dispute Resolution process; and

Proposed Amendments to the WESM Market Manual on Price Determination Methodology and Constraint Violation Coefficient Manual.

In addition, below are the proposals under the RCC review:

Proposed Amendments to the WESM Rules regarding BCQ Declaration and Line Rental Calculation;

Proposed Amendment to the WESM Rules and WESM Manual on Metering Standards and Procedures (proposals from PEMC and TC);

Proposed Amendment to the WESM Rules and WESM Billing and Settlement Manual; and

Proposed Amendments to the WESM Metering Manual regarding MSP Performance.

## **5. PEM Audit Committee (PAC)**

Discussed the comments submitted by MERALCO on 14 April 2016 to the Draft Terms of Reference for the 2016 Market Audit;

Agreed to come up with the list of metering sites to be inspected, which shall include at least 20% of the metering points with the largest volume in the WESM;

Agreed to include in the list of metering sites for inspection the meters that have been tagged with “major non-compliance”, defective meters as reconciled by PEMC-BSMD, embedded FIT generators, and all Retail Metering Service Providers (RMSPs);

Approved the recommendation of the Audit TWG to shortlist the following companies who have submitted the required documents for evaluation:

- a. PA Consulting (Philippines) with sub-consulting agreement with Snowy Owl Energy Inc;
- b. RSM Australia with the support from TechSafe Australia, Market Reform and Cicero Ray Rufino; and
- c. Intelligent Energy Systems in consortium with Alliance of Power Xponents and Navarro and Amper.

Approved the list of metering sites for inspection for the implementation of the 2016 Market Audit;

Approved the updated schedule of activities relative to the 2016 Market Audit, as follows:

Activity	Date
<b>Pre-Bid Conference</b>	September 5, 2016
<b>Opening of Technical Proposal</b>	September 26, 2016
<b>Opening of Financial Proposal</b>	October 4, 2016
<b>Negotiation and Contract Signing</b>	November 4 to 13, 2016
<b>Issuance of Notice to Proceed</b>	November 14, 2016
<b>Audit Proper, including site visits</b>	November 21, 2016 to May 2017

Conducted a Pre-Bid Conference for the Procurement of External Audit Services for the 2016 Market Audit attended by the following representatives:

- a. PA Consulting (Philippines) with sub-consulting agreement with Snowy Owl Energy Inc;
- b. RSM Australia with the support from TechSafe Australia, Market Reform and Cicero Ray Rufino; and
- c. Intelligent Energy Systems in consortium with Alliance of Power Xponents and Navarro and Amper.

Opened the technical proposals of shortlisted bidders on 26 September 2016. The evaluation of the technical proposals by the Audit TWG followed on 29 September 2016 and 03 October 2016; and

Agreed to solicit proposals for the New Management Ssystem (NMMS) Software Certification Audit.

### **C. Reserve Market Implementation**

In preparation for the operations of the Reserve Market, the DOE promulgated DOE Department Circular No. DC2015-11-0018, entitled “Declaring the Commercial Operation of the Central Scheduling and Dispatch of Energy and Contracted Reserves in the Wholesale Electricity Spot Market and further Amendments to its Protocol in Preparation for the Eventual Commercial Operation of the WESM Reserve Market”, last 12 November 2015.

With the said circular, PEMC started the implementation of Central Scheduling through Trial Operation Program (TOP) but its commercial operation was deferred taking into consideration the recommendation of the stakeholder regarding the supply-demand outlook during the summer months of 2015. As the electric power supply condition became stable, PEMC resumed the TOP on 26 July 2015 for the implementation of the Central Scheduling in the WESM.

On 17 September 2015, PEMC confirmed that the application of the Central Scheduling in the Luzon Grid was fully met while facilities and familiarization of some Visayas participants have yet to be completed. In addition, PEMC proposed an amendment to the said Protocol for Central Scheduling to include an additional provision to address the dispatch scheduling encountered during the TOP.

Consequently, the DOE considered the PEMC’s readiness assessment including the proposed amendments to the Protocol since it was consistent with the objectives of the WESM and the implementation of the WESM Reserve Market. On 22 December 2015, the

Central Scheduling and Dispatch of Energy and Contracted Reserves in the WESM was implemented.

#### D. Retail Competition and Open Access (RCOA)

As the government continues to work in progress for the implementation of RCOA, the DOE issued Department Circular No. DC2016-04-0004 providing for the new timelines for the mandatory contestability of the CCs as follows:

Starting 26 June 2016, those Contestable Customers (CCs) with an average demand of 750 and above for the last 12 months may voluntarily secure its power supply from a Retail Electricity Supplier (RES);

By 26 December 2016, all CCs with an average demand of 1 MW and above shall be required to source their supply from a licensed RES;

By 26 June 2017, all CCs with an average demand of below 1 MW to 750 kW for the last 12 months shall secure their power supply from a licensed RES. At this point, Aggregators will also be allowed to serve electricity end-users with an aggregated demand of at least 750 kW.

#### 1. RCOA Registration

As of October 2016, out of 1,487 prospective RCOA participants, the Central Registration Body (CRB) registered a total of 525 participants while 25 applications for registration are in process. From the 275 registered members in June 2013, the number of participants increased by 91% in October 2016.

Table 24. Summary of RCOA Registration

Participants	Prospective Based on ERC Data	Registered as of June 2013	Registered as of October 2016	Percent Change	Applicants as of October 2016
Retail Electricity Supplier (RES)	20	15	19	26.7%	4
Local Retail Electricity Supplier (LRES)	23	3	12	300.0%	2
Retail Metering Service Provider (RMSP)	39	18	26	44.4%	4
Contestable Customer (CC)	1,378	239	470	96.7%	12
Supplier of Last Resort (SOLR)	27	0	6	100.0%	3
<b>Total</b>	<b>1,487</b>	<b>275</b>	<b>525</b>	<b>90.9%</b>	<b>25</b>

Source: PEMC

New RESs have registered with the CRB thru the Millenium Power RES, Inc. (MPRI), FDC Retail Electricity Sales Corporation (FDC) and AC Energy Holdings, Inc., (ACE) putting the number of CRB registered RES to 19 as of October 2016. Further, 2 more RES are awaiting to be registered with CRB to Corenergy, Inc., and SMC Consolidated Power Corporation (SMCPC). Trans-Asia Oil and Energy Development Corporation has adopted a new name to Phinma Energy Corporation. The Authority of the Freeport Area of Bataan (AFAB) became the newest addition to the Retail Metering Service Providers (RMSP).

Among the 449 Contestable Customers registered with the CRB, 13 are Directly Connected Customers wherein three (3) have opted to be Direct WESM Members while others opted to get the services of RES' for their power supply.

Table 25. Number of Prospective Contestable Customers vis-à-vis Contestable Customers that Switched to Retail Electricity Suppliers

	1 MW and UP	750 kW to 999 kW	Total CCs	% Share	No. of CCs Registered with the CRB	% Share
<b>LUZON</b>	939	274	1,213	88.0%	460	97.87%
<b>MERALCO</b>	759	242	1,001	72.6%	421	89.57%
<b>Other PDUs</b>	40	5	45	3.3%	9	1.91%
<b>EC</b>	51	22	73	5.3%	4	0.85%
<b>NGCP</b>	46	1	47	3.4%	11	2.34%
<b>Ecozones</b>	43	4	47	3.4%	15	3.19%
<b>VISAYAS</b>	131	34	165	12.0%	10	2.13%
<b>VECO</b>	59	24	83	6.0%	4	0.85%
<b>Other PDUs</b>	16	0	16	1.2%	1	0.21%
<b>EC</b>	29	9	38	2.8%	0	
<b>NGCP</b>	15	1	16	1.2%	3	0.64%
<b>Ecozones</b>	12	0	12	0.9%	2	0.43%
<b>TOTAL</b>	1,070	308	1,378	100.0%	470	100.00%

Out of 1,378 ERC-Certified CCs, 1,213 or 88% are located in Luzon while 165 CCs or 12% are in the Visayas. Among the 1,378 CCs, 308 are new entrants considering the lowering of the RCOA threshold level down to 750 kW effective 26 June 2016 wherein they can now participate voluntarily. MERALCO franchise area has 72.6% comprising 759 1 MW and above and 242 CCs for 750 kW and up demand. Only 34 CCs in the Visayas have under the second phase of the RCOA.

In terms of demand, CCs in Luzon have an aggregated demand of 2,639 MW and 419 MW in the Visayas to a total of 3,058 MW. Demand of CCs in the MERALCO franchise was at 1,987 followed by CCs that are directly connected to NGCP with 405 MW. Also in the Visayas, customers directly connected to NGCP has 152 MW demand while 131 MW from Visayas Electric Company (VECO).

470 or 30% of the CCs are already sourcing their supply through a RES and registered with the CRB. These 470 CCs have total energy consumption of 4,608 GWh for the period May to October 2016, of which, 94.7% or 4,366 GWh was consumed in Luzon while the remaining 5.3% or 242 GWh was used by CCs in the Visayas.

Table 26. Prospective Contestable Customers Demand vs. Demand and Consumption of CCs who switched to RES (May to October 2016)

Grid	Power Demand				Actual Consumption of CCs Registered in the CRB	
	Indicative MW	% share	Actual CCs Registered with the CRB (MW)	% share	MWh	% share
<b>LUZON</b>	2,638.9	86.3%	1,383.0	97.4%	4,366,274.41	94.7%
<b>MERALCO</b>	1,987.5	65.0%	1,303.2	91.8%	4,026,208.39	87.4%
<b>Other PDUs</b>	74.1	2.4%	25.3	1.8%	92,406.26	2.0%
<b>EC</b>	68.9	2.3%	3.1	0.2%	3,120.37	0.1%
<b>NGCP</b>	405.5	13.3%	35.6	2.5%	174,432.81	3.8%
<b>Ecozones</b>	102.9	3.4%	15.9	1.1%	70,106.57	1.5%
<b>VISAYAS</b>	419.3	13.7%	36.8	2.6%	242,557.98	5.3%
<b>VECO</b>	131.7	4.3%	9.6	0.7%	40,280.88	0.9%

Grid	Power Demand				Actual Consumption of CCs Registered in the CRB	
	Indicative MW	% share	Actual CCs Registered with the CRB (MW)	% share	MWh	% share
Other PDUs	33.8	1.1%				
EC	64.3	2.1%				
NGCP	152.4	5.0%	27.2	1.9%	202,277.11	4.4%
Ecozones	37.1	1.2%				
<b>TOTAL</b>	<b>3,058.2</b>	<b>100.0%</b>	<b>1,419.8</b>	<b>100.0%</b>	<b>4,608,832.39</b>	<b>100.0%</b>

Source: ERC and PEMC

## 2. Customer Switching

During the report period covering May to October 2016, a total of 20 CCs switched their suppliers. Majority of the switch came from MPOWER, SMELC, TAO-EDC, FGEN and AESI. Most of the switching customers transferred to EPMI, GESC, AEI, MPPCL and TPEC. Table 35 provides details on customer switching.

Table 27. Customer Switching

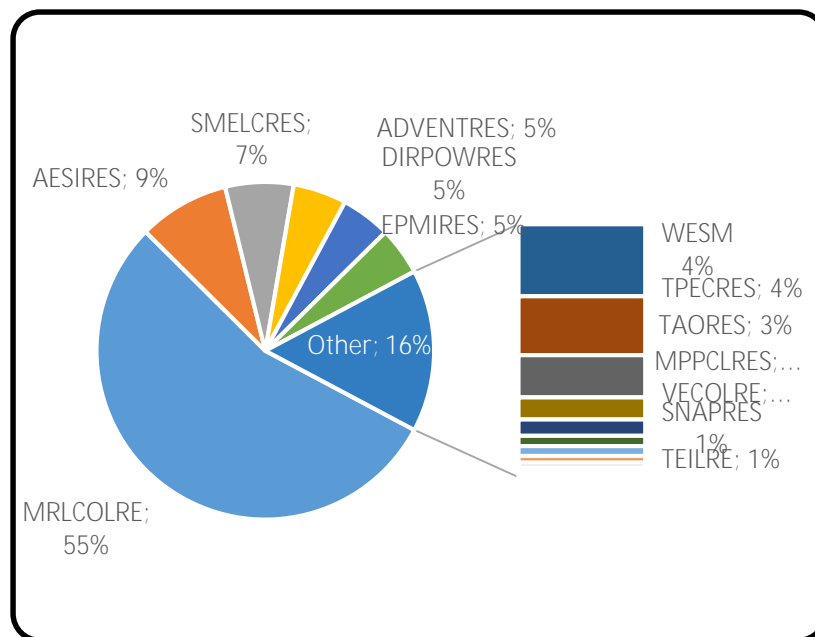
Contestable Customer	Supplier		New Contract	
	Former	New	Start	End
1 Cathay Pacific Steel Corporation	SMELC	GESC	26-Oct-15	25-Dec-16
2 Cathay Pacific Steel Corporation	SMELC	GESC	26-Oct-15	25-Dec-16
3 Philippine Resins Industries, Inc.	AESI	TPEC	26-Jan-16	Open
4 EMS Land Services, Inc.	SMELC	EPMI	26-Feb-16	25-Dec-16
5 TDK Philippines Corporation	SMELC	EPMI	26-Feb-16	25-Dec-16
6 Toshiba Information Equipment Inc.	SMELC	EPMI	26-Feb-16	25-Dec-16
7 Universal Robina	MPOWER	AESI	26-Feb-16	25-Feb-20
8 Swedish Match-Philippines, Inc.	MPOWER	EPMI	26-Feb-16	25-Dec-23
9 International Container Terminal Services, Inc.	MPOWER	AESI	26-Feb-16	25-Dec-23
10 Amkor Technology Philippines, Inc.	MPOWER	ADVENT	26-Feb-16	25-Dec-20
11 Amkor Technology Philippines, Inc.	MPOWER	ADVENT	26-Feb-16	25-Dec-20
12 RFM Corporation	FGEN	EPMI	26-Feb-16	25-Feb-20
13 Kraft Foods Philippines, Inc.	TAO-EDC	AESI	26-Feb-16	25-Feb-19
14 Asia Brewery Incorporated	MPOWER	AESI	26-May-16	25-Dec-19
15 Air Liquide Pipeline Utilities Services, Inc.	SMELC	ADVENT	26-May-16	25-Dec-19
16 Asian Transmission Corporation	TAO-EDC	ADVENT	26-May-16	25-May-19
17 American Wire & Cable	TAO-EDC	AESI	26-May-16	25-May-19
18 Solid Cement Corporation	SMELC	MPPCL	26-Jun-16	Open
19 Saffron Philippines, Inc.	MPOWER	AESI	26-Jun-16	Open
20 Universal Robina	MPOWER	AESI	26-Jun-16	Open

Source: ERC and PEMC

### 3. RES Market Share

Mpower still has the highest number of customers with 239 CCs with energy sales of about 2,519 GWh or equivalent to 55% of the total sales of all RES in Luzon and Visayas. AESI placed second with 65 CCs having shared in energy sales 9% or 511 GWh. AEI 5 percentshare compared to the previous 9% due to switching of two (2) accounts Amkor Technologies to MPower, which is among the biggest contestable customers.

Figure 16. RES Market Share (May 2016 to October 2016)



Source: PEMC-CRB

### E. Market Share Monitoring

The ERC adopted and promulgated Resolution No. 26, Series of 2005 entitled, "A Resolution Adopting the Guidelines for the Determination of the Installed Generating Capacity in a Grid and the National Installed Generating Capacity and Enforcement of the Limits on Concentration of Ownership, Operation or Control Installed Generating Capacity under Section 45 of Republic Act No. 9136" (Market Share Guidelines). The Guidelines issued under the said Resolution were based primarily on the provisions of Section 4 of Rule 11 of the Implementing Rules and Regulations (IRR) of R.A 9136 which provides for control as the basis for crediting the installed generating capacity of a Generation Facility to a Generation Company and its affiliate or related group. The ERC issues a Resolution every 15<sup>th</sup> day of March setting the installed generating capacity per grid and for the national grid and the market share limitation per grid and for the national grid based on the maximum capacity of the power plants submitted by the generation companies and other entities required to submit the Generation Company Management Reports.

In March 2016, the ERC issued Resolution No. 3, series of 2016, entitled, "A Resolution Holding in Abeyance the Issuance of the ERC Resolution Setting the Annual Installed Generating Capacity Per Grid and National Grid and the Market Share Limitations Per Grid and The National Grid" citing need to further study the existing Guidelines to address issues on the appropriate determination of the market share of a person or entity covered by the market share limitations' for end the national grid in accordance with Section 45 (a) of EPIRA. Thus, the ERC decided to hold in abeyance the issuance of the annual

resolution setting the installed generating capacity per grid and for the national grid and the market share limitations per grid and for the national grid until 30 June 2016.

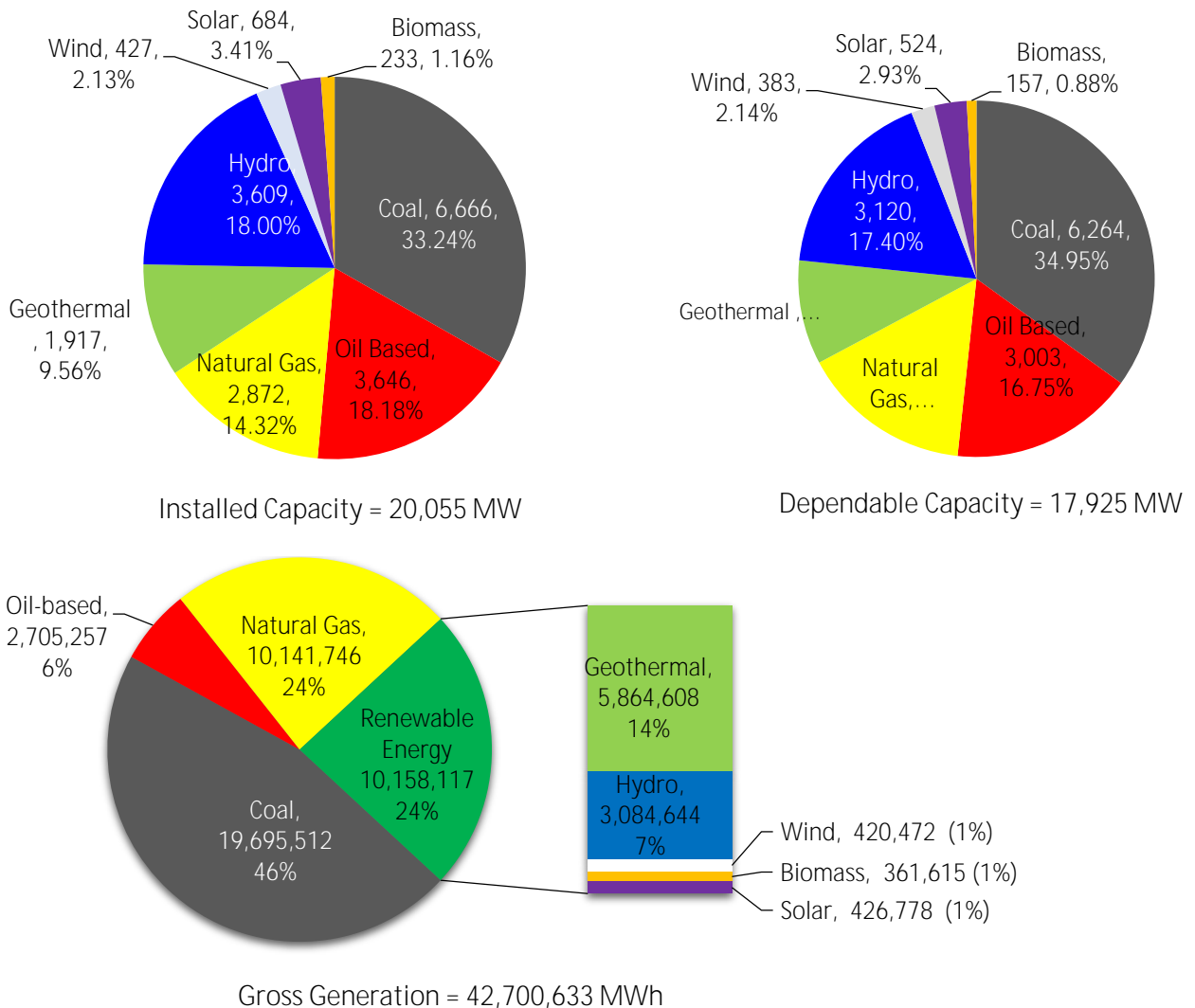


## V. POWER SUPPLY SECURITY AND RELIABILITY

The Philippine Power Demand-Supply Situation remained stable in the First Quarter of 2016 despite the onset of strong El Niño which generally resulted in increased peak demand levels in the three Grids. On the supply side, hydro capacities especially in Mindanao decreased. Several yellow and red alerts were declared by the system operator in Luzon and Visayas during the summer period of April 2016 to May 2016. However, the Energy Sector's El Niño Mitigation Measures alongside with the preparation for the 09 May 2016 National and Local Elections stabilized the power situation during the critical periods. These measures include the activation of the Interruptible Load Program (ILP), ensuring minimal forced outages, management of power plant maintenance schedules and optimization of hydro capacities specifically in Mindanao.

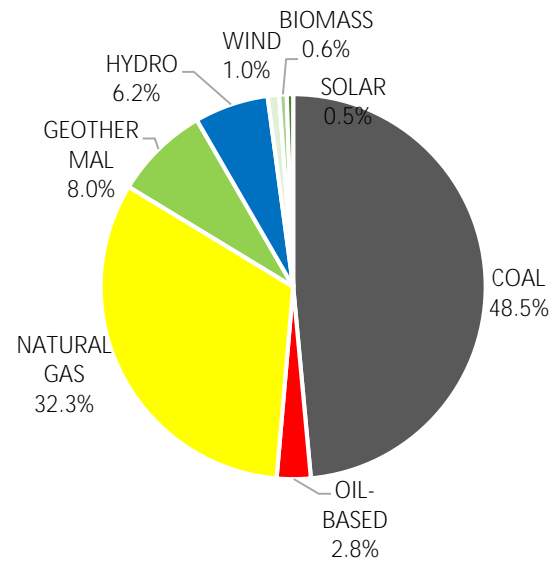
### A. Power Supply

Renewable Energy plants (geothermal, hydro, wind, biomass and solar) constitute the largest share in the total installed capacity as of June 2016 with 34.3% share. Coal power plants remain the major source of Philippine Power Generation at 46%, with additional plants to come online in the latter part of 2016. Additional capacities from January-June 2016 mainly comprised coal and solar power plants which added 703 MW and 520 MW to the total installed capacity. Other additional capacities from January-June 2016 are oil, hydro and biomass at 36MW, 1MW and 12MW respectively.



**Luzon Installed and Dependable Capacity from January-June 2016 (in MW)**

LUZON		
Fuel Type	Installed	Dependable
Coal	5,247	4,928
Oil Based	2,133	1,785
Natural Gas*	2,871	2,780
Renewable Energy	4,098	3,616
<i>Geothermal</i>	<i>844</i>	<i>777</i>
<i>Hydro*</i>	<i>2,537</i>	<i>2,271</i>
<i>Wind</i>	<i>337</i>	<i>293</i>
<i>Biomass</i>	<i>95</i>	<i>71</i>
<i>Solar</i>	<i>284</i>	<i>204</i>
<b>TOTAL</b>	<b>14,348</b>	<b>13,109</b>



**Luzon Gross Power Generation (January-June 2016)  
31,388,751 MWh**

**LUZON SIGNIFICANT INCIDENTS**

Fire incident of an oil depot nearby during the commercial operation of SLTEC Unit 2 in Calaca, Batangas deferred target date from 20 March 2016 to 21 March 2016.

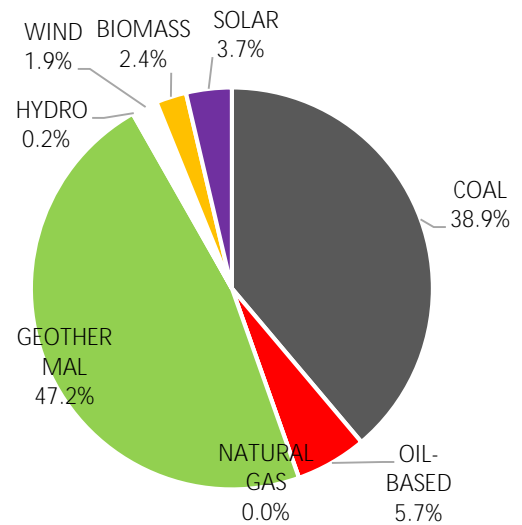
Luzon grid experienced 16 automatic load dropping (ALD) during the first half of 2016. Most of ALDs occurred in the month of June which experienced seven (7) ALDs due to tripping of power plants with large capacities. The maximum load that was dropped was 330 MW on 12 January 2016 caused by tripping of Sual Unit 1. While the maximum unserved energy was 116.8 MWh on 02 June 2016 due to sudden load dropping of Calaca Unit 2. On the average, most of the outages caused by the load dropping were not sustained for more than 12 minutes.

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.

For the month of June 2016, Luzon grid experienced 5 Yellow Alert occurrences due to tripping and maintenance of power plants with large capacities.

**Visayas Installed and Dependable Capacity from January-June 2016 (in MW)**

VISAYAS		
Fuel Type	Installed	Dependable
Coal	769	761
Oil Based	685	469
Natural Gas	1	0
Renewable Energy	1,509	1,268
<i>Geothermal</i>	<i>965</i>	<i>813</i>
<i>Hydro</i>	<i>11</i>	<i>11</i>
<i>Wind</i>	<i>90</i>	<i>90</i>
<i>Biomass</i>	<i>101</i>	<i>77</i>
<i>Solar</i>	<i>342</i>	<i>278</i>
<b>TOTAL</b>	<b>2,965</b>	<b>2,498</b>



**Visayas Gross Power Generation from (January-June 2016)  
6,267,369 MWh**

**VISAYAS SIGNIFICANT INCIDENTS**

Various load dropping incidents occurred in the Visayas grid within the first half of 2016. It can be noted that the first level of automatic load dropping (ALD) was activated on 23 January 2016 and 03 March 2016 due to sudden load reduction of Solar Power Plants and tripping of geothermal units.

Large coal fired power plants such as the 82 MW PEDC Unit 1 (27 December 2015 to 24 January 2016) and 103 MW KSPC Unit 2 (04 to 18 January 2016) were on scheduled Planned Maintenance during the early part of 2016.

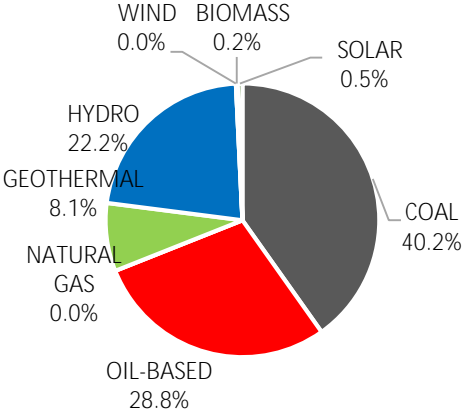
Several Forced Outages (FO) occurred which resulted to tightening of supply in the Visayas Grid:

- 82 MW PEDC U1 - 08 February to 14 March 2016
- 82 MW CEDC U3 - 11 to 24 April 2016
- 103 MW KSPC U1 - 22 to 24 May 2016

There were frequent issuances of Yellow Alert Status in Visayas during the first half of 2016 especially in the evening primarily due to the increase in electricity demand and decrease in output of Solar Plants and some planned maintenance and forced outages.

**Mindanao Installed and Dependable Capacity from January-June 2016 (in MW)**

Fuel Type	Installed	Dependable
Coal	650	575
Oil Based	828	749
Natural Gas	0	0
Renewable Energy	1,264	994
<i>Geothermal</i>	<i>108</i>	<i>104</i>
<i>Hydro</i>	<i>1,061</i>	<i>837</i>
<i>Wind</i>	<i>0</i>	<i>0</i>
<i>Biomass</i>	<i>36</i>	<i>10</i>
<i>Solar</i>	<i>59</i>	<i>43</i>
<b>TOTAL</b>	<b>2,742</b>	<b>2,318</b>



Mindanao Gross Power Generation from (January-June 2016) 5,044,512 MWh

**MINDANAO SIGNIFICANT INCIDENTS**

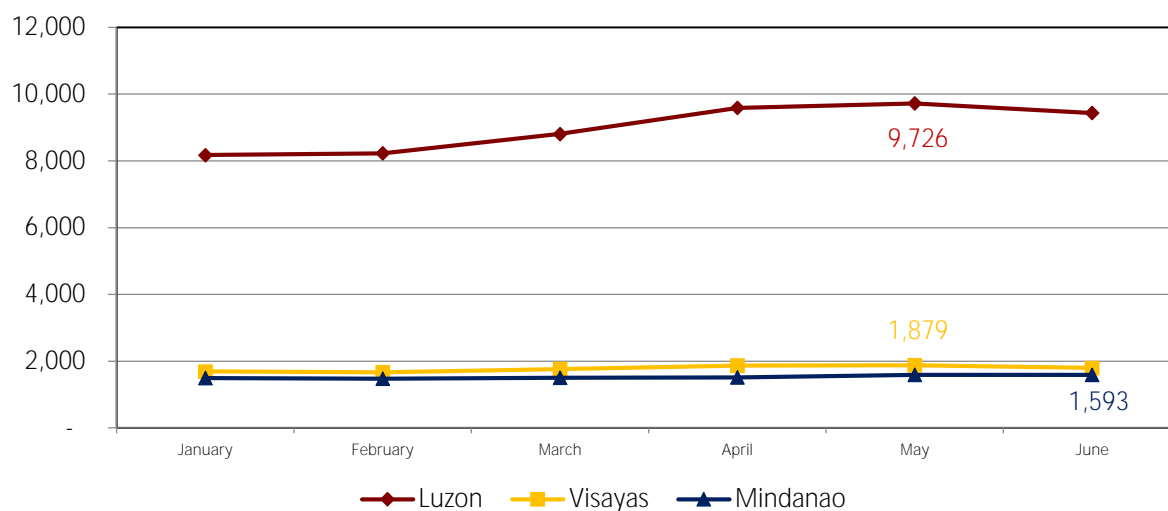
El Niño affected the operation of the Hydro Power Plants in Mindanao which caused curtailments to some Distribution Utilities which do not have enough supply contracts to cover the deficiency of NPC-PSALM through the Agus and Pulangi Hydroelectric Power Plants:

- Average Available Capacity of Agus and Pulangi from January to May 2016 was at 253.1 MW, with the lowest available capacity occurring last 4 April 2016 at 129.4 MW;
- Water level of Lanao Lake breached the minimum operating level of 899.15 masl and reached the lowest level for this year at 699.0 masl last 23 April 2016; and
- 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. 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; and
- Clearing of tall trees under the transmission facilities, specifically along the Agus 2- Baloi 138 kV Line.

## B. System Peak Demand



Source: NGCP




Note: Peak Demand for Visayas and Mindano is expected to occur in the latter part of 2016



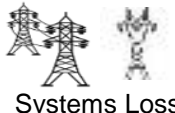
Luzon reached new all-time high system peak demand at 9,726 MW which occurred on 03 May 2016, 2:00 PM with corresponding 11,137 MW available capacity. This is 9% higher than the 2015 peak demand at 8,928 MW.

Highest system peak demand in Visayas at 1,878 MW occurred on 11 May 2016, 2:00 PM with corresponding 2,141 MW available capacity. This is 6% higher than the 2015 peak demand at 1,768 MW.

Highest system peak demand in Mindanao at 1,593 MW occurred on 08 June 2016, 1:35 PM with corresponding 1,641 MW Available Capacity. This is 5% higher than the 2015 peak demand at 1,517 MW.

## C. Electricity Sales and Consumption

Customer Class	Luzon	Visayas	Mindanao	Philippines
 Residential	7,465,905 25%	1,421,865 38%	1,438,119 37%	10,325,889 27%
 Commercial	7,478,511 25%	476,071 13%	596,920 15%	8,551,502 22%
 Industrial	6,592,978 22%	596,405 16%	1,229,184 31%	8,418,567 22%

 Others	1,105,503 4%	337,560 9%	238,224 6%	1,681,287 4%
<b>TOTAL SALES</b>	<b>22,642,897</b>	<b>2,831,901</b>	<b>3,502,447</b>	<b>28,977,245</b>
 Own-Use	4,779,351 16%	6,822 0%	8,734 0%	4,794,907 13%
 Systems Loss	2,918,793 10%	894,360 24%	424,392 11%	4,237,545 11%
<b>TOTAL CONSUMPTION</b>	<b>30,341,041</b>	<b>3,733,082</b>	<b>3,935,573</b>	<b>38,009,697</b>

Source: Monthly Operations Report (MOR) of PIOUs and ECs

Note: Preliminary Data as of May 2016, in MWh Own-Use and Systems Loss excludes Power Plants' Station Use and Transmission Losses Electricity Consumption excludes directly connected customers

Electricity sales of distribution utilities to the residential sector comprised the largest share to total electricity consumption at 27% from January-May 2016 uplifted by residential consumption in Visayas and Mindanao;

The commercial and industrial sectors have at par shares at 22% of the total electricity consumption.; and

Electricity sales and consumption of distribution utilities in Luzon, particularly MERALCO, remained the largest among the three major grids.

#### D. Status of Government Generating Assets

##### 1. Agus VI HEPP Upgrading Project

The Project consists of engineering investigation, design, manufacturing and installation of new hydropower turbines and blades for the upgrading of Units 1 and 2 from 25 MW to 34.5 MW per unit.

The Project was awarded to the joint venture of Guangxi Hydroelectric Construction Bureau and ITP Construction Inc. in December 2013 and is targeted for completion by August 2016. The table below shows the Project's Milestone Schedule:

Activities	Timeline
a. Detailed Engineering	January 2014 to July 2014
b. Manufacturing	April 2014 to March 2015
c. Start of construction	January 2015
d. Target Completion Date	August 2016

As of 31 October 2016, the Project's overall accomplishment is 99.91%. Table 28 shows the detailed activities which were already taken.

Table 28. Project Over-All Accomplishments as of 31 October 2016

Item	Activity	% Weight	% Accomplishment as 30 April 2015	% of Cumulative Weight
1.0	Mobilization	4.74	100%	4.74
2.0	Engineering Design	14.21	100%	14.21
3.0	Turbine Model and Manufacture of Equipment	36.0	100%	36.00
4.0	Equipment Delivery			
	Unit 2	6.63	100%	6.63
	Unit 1	6.63	100%	6.63
	Common Plant Equipment	7.58	100%	7.58
5.0	Purchase of Major Equipment Components and Materials for Fabrication and Construction	5.21	100%	5.21
6.0	Construction of Temporary Facilities	4.27	100%	4.27
7.0	Installation			
	Unit 2*	2.84	99%	2.81
	Unit 1	2.84	99%	2.81
	Civil and Architectural Construction	3.79	99%	3.75
8.0	Variation works			
	Tailrace Weir	1.5	100%	1.5
	Surge Tank	3.76	100%	3.76
	<b>Total</b>	<b>100.0</b>		<b>99.91</b>

Source: PSALM

## 2. Malaya Thermal Power Plant (MTPP)

The following are details on the developments on the scheduled rehabilitation of MTPP:

### **Operation and Maintenance Service Contract (OMSC)**

For the report period, the issuance of the Notice of Award (NOA) to STX Marine Service Co., Ltd. as the bidder with the Lowest Calculated Responsive Bid for the procurement of One (1) Year OMSC for MTPP held some delays due to the following concerns:

1. Question on the technical experience and financial capability of STX to operate the MTPP Unit 1 which caused the 8 months delay completion of its overhauling contract;
2. Instruction by the Board to BAC to present the ff: a) Calculation for slippage and liquidation damages incurred by STX in the implementation of MTPP Unit 1 Overhauling Project; and b) computations and interpretations by PSALM of the relevant provision of RA 9184 on slippage and liquidated damages; and
3. Instruction by the Board to seek OGCC opinion on the OMSC procurement whether or not to award to STX considering that there were issues pertaining to its technical experience and financial capability of STX.

On 15 June 2016, the DOE issued an instruction to the PSALM Board in response to the urgency of issuance of the NOA regarding the importance of the MTPP in its major role in terms of its supply to the grid.

On 17 June 2016, the PSALM Board approved the award of the OMSC upon receipt of the opinion from the Office of the Government Corporate Counsel (OGCC) dated 12 April 2016 with recommendation that the Procuring Entity or the PSALM Board may issue the NOA to STX for the project.

Subsequently, PSALM issued the NOA and Notice to Proceed (NTP) to STX on 20 June 2016 and 24 June 2016, respectively. The OMSC will be effective on 25 June 2016 to 25 June 2017.

## E. Status of Transmission Projects

### 1. Luzon

The Luzon Power Circuit Breaker Replacement (PCB) Project includes 9 x 230 kV and 9 x 115 kV PCBs as replacement for the old units in San Jose, Labo, Malaya, and Gumaca to improve the system reliability. The 115 kV PCBs included in this project are all classified as transmission assets. This project is 72.6% complete as of 31 July 2016 and is scheduled to be completed on 31 December 2016.

The San Jose-Quezon (Balintawak) Line 3 Transmission Line project involves the construction of the third circuit at San Jose-Quezon 230 kV transmission corridor. This will increase the transfer capacity of the line to address the projected overloading problem during an outage of one of the San Jose-Quezon circuits at peak load condition. Without this project, the dispatch of the power plants delivering power to the 500 kV system will have to be limited to maintain the N-1 contingency for the line, which may also require load dropping within Metro Manila. This project shall also complement the capacity addition (from 4-600 MVA to 4-750 MVA) at San Jose EHV Substation with the completion of the transformer replacement project thereat, thus improving the overall reliability and security of the grid. Currently, as of 31 July 2016, the substation and transmission components of this project are 91.6% and 81.5% complete, respectively, with target date of completion for the substation portion on 31 December 2016 and for the transmission portion on 31 December 2017.

Figure 17. San Jose-Quezon 230kV Line 3 T/L Project



The Ambuklao-Binga Transmission Project involves the upgrading of 11km, 230 kV Transmission Line together with 6-230 kV PCB and associated equipment in Ambuklao Substation to maintain N-1 contingency taking into consideration the repowering of Ambuklao Hydro Electric Power Plant (HEPP) to a new capacity of 105 MW and also the proposed expansion of Magat HEPP (180 MW additional capacity). Thus, during maximum generation of both power plants, this project will prevent the overloading under N-1 contingency condition, i.e., outage of one 230 kV circuit. The substation component of this project is 85.9% complete as of 31 July 2016 and has a target date of completion on 30 September 2017.

Figure 18. Ambuklao-Binga 230kV T/L Project



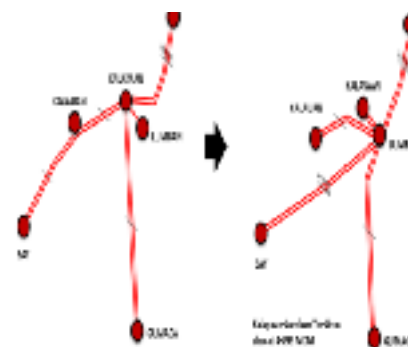


The Lumban (Kalayaan)-Bay (Makban) 230 kV Transmission Line Project aims to maintain the N-1 contingency for the existing Lumban-Bay transmission corridor that could allow all possible generation dispatch scenarios for the power plants in Southern Luzon. The Lumban-Bay 230 kV Line is an important transmission corridor in providing operational flexibility, particularly during maintenance of other 230 kV transmission lines. It also complements the upgraded (through the 230 kV Line 4) Biñan-Muntinlupa 230 kV transmission lines by increasing the transfer capacity of this alternate corridor for the generated power from the Sta. Rita/San Lorenzo NGPP and Makban GPP. It helps supply Taytay Substation and also supplies Kalayaan Pumped Storage Hydro during its operation as a pump during off-peak hours. The upgrading is also expected to reduce system loss during pumping of Kalayaan units as the Kalayaan-Bay transmission corridor provides the shortest route from generation sources. This project also involves the full development of Lumban Substation as a bulk power delivery point where all the transmission lines in the area will be terminated. The resulting configuration is such that both the existing Kalayaan and Calauan Substations will become radial end substations from Lumban Substation. The status of transmission and substation components of this project are 100% and 97.9% complete, respectively, as of 31 July 2016. Though, transmission component of the project has already been completed, its other sub-components were scheduled to be energized in various months of 2016. The substation component has a target date of completion on 31 October 2016.

Figure 19. Lumban-Bay 230kV T/L Project (a)



Figure 20. Lumban-Bay 230kV T/L Project (b)



The Binga-San Manuel Transmission Line project involves the construction of a new 40 km double circuit Binga-San Manuel 230 kV transmission line using new right-of-way, including the installation of switching facilities at Binga and San Manuel Substations. The project aims to provide N-1 contingency during maximum dispatch of the generating plants, particularly HEPPs, in north Luzon. The existing line, as well as the power circuit breakers at Binga Substation, which were constructed/installed in 1956 have already surpassed their economic lives. Moreover, there are developments in the power plants affecting the power flow at Binga-San Manuel 230 kV line. These include the repowering of Ambuklao HEPP to a new capacity of 105 MW (previously at 75 MW capacity) and the completion of Binga HEPP expansion to an additional capacity of 25 MW. The substation component of this project is divided into two (2) stages wherein Stage 1 is for Binga Substation and Stage 2 is for San Manuel Substation. Binga Substation was already energized on 21 December 2015, though there are remaining minor works (e.g. revamping, building painting, quality assurance repairs, gravels bedding, etc.) to be done with status of 98.4% complete. The San Manuel Substation has the status of 83.8% complete, as of 31 July 2016. The target date of completion for Binga and San

Figure 21. Binga-San Manuel 230 T/L Project



Manuel Substations will be on 31 December 2018 and 31 September 2017, respectively.

The Santiago-Tuguegarao 230kV Transmission Line project involves the installation of a second circuit from Santiago to Tuguegarao Substations bypassing Gamu Substation. This new line will provide reliability as tripping of the existing Santiago-Gamu and Gamu- Tuguegarao 230 kV lines will no longer result in the isolation of the customers in the provinces of Isabela and Cagayan. The project will benefit the northeastern part of the Luzon Grid by providing reliable power supply. This shall also serve as the first step in strengthening this part of the grid as Cagayan is also among the areas identified to be rich in RE potentials, particularly wind. As of 31 July 2016, the transmission and substation components of the project are 99.8% and 94.8% complete, respectively. The target date of completion for transmission component is on 31 October 2016 while the substation component is expected to be completed on 30 November 2016.

Figure 22. Santiago-Tuguegarao 230kV T/L Project



Luzon Substation Reliability Project 1 involves the provision of N-1 contingency at Botoloan, Labo, and San Esteban Substations with only one transformer installed. This will ensure reliable supply of power for the connected customers even during transformer outage or maintenance shutdown. This project is 96.3% complete as of 31 July 2016 with target date of completion on 30 September 2016 for Botoloan and Labo Substation. San Esteban Substation was energized on 23 April 2016.

Luzon Substation Expansion III project involves the installation of transformers at Batangas, Calaca and Bay Substations to maintain the provision for N-1 contingency due to high and increasing load. Two units will be installed (2-300 MVA) in Batangas Substation for capacity upgrade to meet the growing demand in the area and for provision of N-1 contingency. For Bay Substation, which is presently with 1-100 MVA transformer only will be provided with the second 100 MVA transformer unit. In Calaca Substation, on the other hand, the additional new 100 MVA transformer will be re-packaged under Calaca Substation Expansion and Calaca-Dasmariñas Line Projects, which are associated with the generation capacity expansion in the area. The two transformers in Batangas S/S were already energized while Bay S/S was energized on 19 February 2016. Due to the remaining minor works (e.g. building painting, quality assurance repairs, gravel bedding, etc.) that needs to be done, the project is expected to be fully completed on 31 October 2016 with 98.7% completion status as of 31 July 2016.

Dasmariñas EHV Substation Expansion project involves the installation of additional capacity both in the 500 kV and 230 kV substations in Dasmariñas, Cavite. The 600 MVA capacity expansion at the EHV substation is required in order to maintain N-1 contingency during maximum dispatch of Ilijan NGPP, Quezon Power Philippines Ltd. (QPPL) and Pagbilao CFPPs. Similarly, the third 300 MVA 230/115 kV transformer in Dasmariñas will be required in order to maintain N-1 contingency as the loads being served by the substation continue to grow. This project also involves the replacement of the 230 kV circuit breakers at Dasmariñas Substation as the resulting fault level will already exceed the interrupting capabilities of the existing circuit breakers. The

300MVA transformer was energized and in commercial operation already since 27 October 2014 yet there are still minor works (e.g. building painting, quality assurance repairs, gravel bedding, etc.) to be done with 99.7% complete as of 31 July 2016.

Las Piñas (Zapote) Substation Expansion project is intended to meet the ever increasing demand in Metro Manila and to comply with the N-1 provision as stated in Grid Code. The substation is loaded more than 85% already under normal condition and any outage of one transformer would result in overloading of the remaining transformer in service. Thus, it has no more provision for single-outage or N-1 contingency which is a reliability standard of the PGC. The present situation is very detrimental for the reliability of power supply to Metro Manila. In March-April 2012, when one transformer at Las Piñas Substation was damaged, sub-sectorization of the 115 kV distribution network of Meralco was implemented to avoid load shedding. This resulted in both reliability and low voltage issues as the 115 kV lines connected to Las Piñas Substation were put on radial configuration. Las Piñas Substation is critical to the successful operation of the WESM, hence without N-1 contingency, pricing error notices were declared for some trading intervals in the market due to constraint violations. The project scope will also include the expansion of the GIS switchyard not only to provide termination for the 4th bank but also for the termination of the proposed 230 kV transmission lines going to a new substation in Pasay City. As of 31 July 2016, its status is 91.8% complete and expected to be completed on 31 December 2016.

Figure 23. Las Piñas S/S Project



## 2. Visayas

The Calung-Calung-Colon 138 kV T/L project shall increase the transfer capacity for the existing 3-82 MW Cebu Energy Development Corporation (CEDC) Coal-Fired Power Plant (CFPP), and accommodate the entry of the 82 MW Toledo Power Company (TPC) CFPP. The new 138kV line will also provide N-1 contingency along the Calung-calung-Colon corridor. In addition, Toledo Substation will have two alternative routes to receive power from CEDC via Calung-calung-Toledo 138 kV Line or Calung-calung-Colon-Toledo 138 kV Line. This project, as of 31 July 2016, has a 97.5% and 99.3% completion for its transmission and substation components, respectively. The transmission and substation component are both expected to be completed on 30 September 2016.

Figure 24. Calung-Calung-Colon 138kV T/L Project



The Southern Panay Backbone 138 kV Transmission Project is part of the Panay Power Transmission backbone which involves the installation/construction of a total of 97 kilometers of 138 kV and 69 kV overhead transmission lines which is aimed to accommodate the load growth and address the low voltage problem in Southern Panay. The transmission component of the project was already completed and energized. On the other hand, Sta. Barbara substation and San Jose substation were already energized on 29 December 2015 and 19 March 2016, respectively. With the remaining minor works (e.g. building painting, quality assurance repairs, gravel bedding, etc.) to be done, the project's target completion date is on 31 August 2016 with status of 99.4% complete as of 31 July 2016.

Figure 25. Southern Panay Backbone 138 kV Transmission Project



The Colon (New Naga)-Cebu (Banilad) 138 kV Transmission Line project involves the construction of 25 km, 138 kV double circuit transmission line that utilizes two bundles of 795 MCM ACSR conductor per circuit from Colon directly to Cebu. It also includes PCB and associated equipment at Colon S/S (4-138kV PCB) and Cebu S/S (2-138kV PCB). The substation component of the project was already 100% completed on 30 April 2016. On the other hand, the transmission component, as of 31 July 2016, is 99.4% complete. The target completion date for the project's substation component is on 31 December 2016.

Figure 26. Colon-Cebu 138kV T/L Project



The Ormoc-Babatngon Transmission Line project involves the construction of 138 kV steel tower overhead transmission line utilizing 1-795 MCM ACSR conductor as second line/circuit of the existing Ormoc-Babatngon 138 kV line to comply with N-1 contingency provision of the Grid Code. It also involves the expansion of Ormoc and Babatngon Substations. The structures will be designed for a double circuit line but will be single circuit strung initially. As of 31 July 2016, the transmission and substation components of this project are 93.1% and 97.7% complete, respectively. The project's transmission component has a target date of completion on 31 March 2017 while the substation component is expected to be completed on 31 December 2016.

Figure 27. Ormoc-Babatngon T/L 138kV Project



The Ormoc-Maasin 138kV Transmission Line Project involves the 2<sup>nd</sup> circuit stringing of existing single circuit Ormoc-Maasin 138kV line to comply with N-1 contingency provision of Grid Code in order to prevent power outage in Bohol as well as in Southern Leyte. It will also benefit the eco-tourism activities in Bohol since the island relies heavily on the power supply from Leyte. The status of this project, as of 31 July 2016, is 97.1% and 96% complete for transmission and substation components, respectively. The project's target date of completion for transmission is on 31 August 2016 while its substation component is expected to be completed on 30 November 2016.

Figure 28. Ormoc-Maasin 138kV T/L Project



The Sta. Rita-Quinapondan 69 kV Transmission Line project is intended primarily to make Quinapondan Substation closer to its power source and thus, provide a more reliable power delivery system. At present, the Quinapondan Substation draws its power from NGCP's 138 kV Paranas Substation via a long stretch of 69 kV woodpole line, i.e., Paranas-Taft-Borongan-Quinapondan, which is approximately 191 kilometers long. This very long 69 kV line is prone to frequent tripping as it traverses some mountainous terrain in a predominantly rural area. Therefore, this project aims to form a 69 kV line loop from the existing Sta. Rita Substation to Quinapondan. The line shall provide an alternate supply route to the Eastern Samar load-end substations. As of 31 July 2016, the project is 97.3% complete and is scheduled for completion on 31 March 2017.

Figure 29. Sta. Rita-Quinapondan 69 kV T/L Project



The Visayas Substation Reliability Project I entails the installation of 500 MVA substation capacity to address the projected overloading of Ormoc, Amlan, Bacolod, Cadiz, Babatngon, Maasin, and Samboan S/S during N-1 occurrence. The installation of these transformers will improve the security and reliability of the Visayas Grid. The loss of a single transformer at any of these seven substations which four have only one transformer, namely: Cadiz, Babatngon, Maasin and Samboan, will interrupt the supply of power to consumers. Therefore, the addition of a second transformer at these substations will provide N-1 capability. The status of Ormoc substation is 97.7% complete as of 31 July 2016 with target date completion on 31 December 2016 while Babatngon substation was already energized on 18 July 2015. On the other hand, Amlan, Bacolod, Maasin and Samboan substation components are 85.8% complete as of 31 July 2016 with target date of completion on 30 September 2017. The Cadiz substation was already energized on 17 January 2016.

The Culasi-San Jose 69kV Transmission Line Project will provide alternate power source from either Culasi, Aklan in the north or Sibalom, Antique in the south. The formation of a 69 kV line loop will improve the reliability of supply towards the province of Antique in the western side of Panay Island. As of 31 July 2016, the status of Schedule 1A&2A and 1B&2B of this project for erection portion are 86.4% and 94.5% complete, respectively. On the other hand, the supply portion for both schedule were already completed.

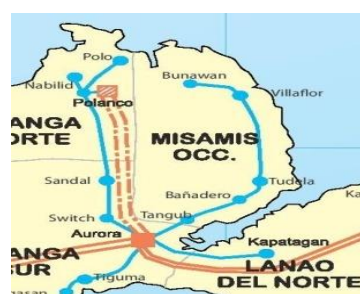
Figure 30. Culasi-San Jose 69kV T/L Project



### 3. Mindanao

The Aurora-Polanco 138 kV T/L Project is intended to serve the growing power demand of Dipolog City and surrounding load centers. This will ensure a continuous and reliable power supply in the area. Currently, Dipolog City including neighboring cities and municipalities draw their power requirements from the Aurora Substation a very long 69kV single circuit transmission line. The contractor of the project, China National Electric Engineering Company Limited has backed out and stopped all its activities on 22 March 2013 at 30.5% complete for transmission portion and on 27 April 2013 (Polanco) at 28% complete for substation portion, thus, the NGCP will need to re-bid the remaining work components of the project. As of 31 July 2016, transmission line and substation components have already started again with statuses of 45.4% and 7.32% complete, respectively. The transmission line component of the project is expected to be completed on 4 March 2017 while the substation component's expected completion is on 9 August 2017.

Figure 31. Aurora-Polanco 138kV T/L Project



The Matanao-Gen. Santos 138 kV Transmission project is part of the Reliability Compliance Project I - Mindanao, which involves the provision of N-1 contingency to the existing Matanao-Gen. Santos 138kV transmission corridor. Without the project, an outage of the existing Matanao-Gen. Santos line, the Tacurong-Gen. Santos line will not be able to accommodate the load of Gen. Santos Substation starting 2015. As of 31 July 2016, the transmission line component was already 100% completed and was energized on 9 June 2016 while the substation component is 92% complete. The target date of completion for the substation component is on 31 October 2016.

Figure 32. Matanao-Gen. Santos 138kV T/L Project



The Mindanao Substation Expansion II involves the installation of 100MVA new transformer unit at Gen. Santos Substation and deployment of its existing 50MVA unit to Kidapawan Substation. This will enable the said substations to meet demand growth and improve system reliability. The status of this project, as of 31 July 2016, is 92% complete and is scheduled for completion on 31 October 2016.

The Mindanao Substation Reliability Project I involve the installation of four (4) transformers with a total 275 MVA substation capacity to provide N-1 capability to Aurora, Jasaan and Lugait substations in Mindanao. The Aurora substation was energized on 17 February 2014 while Jasaan was energized on 6 December 2015. The transformer intended for Lugait substation was installed in Opol Substation instead.

Figure 33. Opol S/S Project

The new Opol Substation will be strategically located to serve the load centers of CEPALCO and MORESCO I, with both areas showing significant increase in demand. The new substation, which will initially be via “cut-in” connection scheme along the Lugait-Tagoloan 138 kV transmission line, will avoid the overloading of the Lugait-Carmen 69kV line. The transmission component was already completed on 12 November 2015 while its substation component is 89% complete with target date of completion on 30 September 2016, as of 31 July 2016.



## F. Distribution Infrastructure Projects

### 1. ERC-Approved Capital Expenditure (CAPEX) Projects

For this period, the ERC granted approval to the Capital Expenditure (CAPEX) Projects applications filed by seven (7) Distribution Utilities namely: Occidental Mindoro Electric Cooperative, Inc. (OMECO), Nueva Ecija I Electric Cooperative, Inc. (NEECO I), Don Orestes Romualdez Electric Cooperative, Inc. (DORELCO), Agusan Del Sur Electric Cooperative, Inc. (ASELCO), Davao Del Sur Electric Cooperative, Inc. (DASURECO), South Cotabato II Electric Cooperative, Inc. (SOCOTECO II), and Bohol I Electric Cooperative, Inc. (BOHECO I). Details of these projects are shown in Annex 10.

### 2. Private Sector Financing of CAPEX Projects on System Loss Reduction

During the report period, there are 29 ECs participating in the Electric Cooperative Partial Credit Guarantee (ECPCG) Program with a combined loan amount of PHP3.570 billion from five (5) commercial banks. Of this, 23 ECs have their loans either fully or partially released while six (6) ECs have yet to receive their loans.

The ECPCG Program created the guarantee facility that provides partial credit guarantee coverage of up to 80% of the outstanding loans of ECs from commercial banks for the financing of the ECs power distribution system upgrades.

Due to the Program’s success, an expansion of the partial guarantee coverage for renewable energy (RE) projects of ECs to be funded from the Clean Technology Fund (CTF) through the Philippines Renewable Energy Development (PHRED) Project has been approved by the Investment Coordination Committee and the Monetary Board.

Table 29. ECs Booked in EC-PCG Program

	EC	Loan Amount (PhP Million)	ECPCG Program Guaranteed Amount (PhP Million)	Lender	Signing Date of Loan and Guarantee Agreements
<b>A. Booked Accounts with loan releases</b>					
1	MORESCO I	115.00	92.00	Security Bank	July 20, 2010
2	PANELCO I	113.00	90.40	BPI	September 15, 2010
3	SOCOTECO I	102.42	81.94	BPI	October 05, 2010
4	SURNECO	85.00	68.00	UCPB	March 03, 2011
5	FIBECO	143.00	114.40	PNB*	May 16, 2011
6	BUSECO	135.90	108.72	BPI	February 11, 2011
7	BOHECO I	106.46	85.17	DBP	June 13, 2011
8	DANECO	172.37	137.90	UCPB	October 04, 2011
9	MORESCO II	135.49	108.39	BPI	December 16, 2011
10	CANORECO	133.25	106.60	BPI	July 15, 2011
11	LUELCO	173.12	138.50	PNB*	December 07, 2012
12	MOELCI I	137.25	109.80	UCPB	July 06, 2012
13	CAMELCO	140.00	112.00	BPI	November 09, 2011
14	NEECO I	94.80	75.84	PNB*	June 06, 2012
15	BENECO	163.50	130.80	BPI	December 28, 2012
16	BUSECO (2nd loan)	43.49	34.79	PNB	December 13, 2012
17	FICELCO	106.10	84.88	Security Bank	July 26, 2013
18	LEYECO V	185.86	148.69	Security Bank	December 03, 2013
19	PALECO	167.00	133.60	PNB	December 19, 2012
20	BOHECO II	184.18	147.34	Security Bank	June 27, 2013
21	BOHECO I (Additional)	81.07	64.86	DBP	May 13, 2014
22	BUSECO (3rd loan)	25.88	20.70	Security Bank	May 08, 2015
23	CENECO	191.68	153.34	Security Bank	March 07, 2016
<b>Sub-Total</b>		<b>2,935.82</b>	<b>2,348.66</b>		
<b>B. Committed Accounts (Booked Accounts with no loan releases yet)</b>					
1	AKELCO	181.72	145.38	UCPB	August 16, 2013
2	COTELCO	180.03	144.02	UCPB	March 18, 2014
3	CAGELCO I	36.87	29.49	PNB	December 19, 2014
4	SORECO I	103.74	82.99	Security Bank	January 29, 2015
5	SOCOTECO I (2nd loan)	91.92	73.54	DBP	February 11, 2015
6	MORESCO II (2nd loan)	40.00	32.00	Security Bank	March 11, 2015
<b>Sub-Total</b>		<b>634.28</b>	<b>507.42</b>		
<b>Grand Total</b>		<b>3,570.09</b>	<b>2,856.08</b>		

\* These accounts were originally booked by Allied Bank prior to its merger with PNB.

Source: DOE, LGUGC



## VI. TOTAL ELECTRIFICATION

Under *Sec. 2(a) of the EPIRA 2001*, it is the declared policy of the State to ensure and accelerate the total electrification of the country. Said law also mandates the DUs to provide universal service in their franchise areas including unviable areas at a reasonable time. The Government has implemented a massive and focused action to increase and accelerate access to electricity services by the country's unenergized communities and households while contributing to poverty alleviation. Previous programs and activities of the Government resulted to almost 100% barangay electrification, with only six (6) barangays out of the total of 41,974 potential barangays remaining as unenergized due to geographical and security reasons. The current program of the Government aims to attain 90% household electrification by 2017.

### Status of Household Electrification

Table 30. Household Electrification Level as of October 2016

For the report period, the household electrification level of the country is estimated at 89.6% based on the major updates provided by the NEA and the 120 ECs. Said level corresponds to 20.36 million energized HHs out of the estimated total HH population of 22.72 million (see Table 38).

Distribution Utility	Household		
	Total Household Population (2015)	Served	%
Electric Cooperatives	13,330,500	11,497,021	86.20%
MERALCO	7,090,398	6,922,828	97.6%
Other PIOUs/LGU Owned Utilities	2,292,532	1,939,885	84.62%
<b>Total</b>	<b>22,721,430</b>	<b>20,360,334</b>	<b>89.61%</b>

Source: DOE

The Government is targeting the 90% level by 2017 as specified in the Philippine Development Plan 2011-2016 (as revised).

### On-going and Planned Programs and Activities

Consistent with HEDP, following are the different projects and activities that directly support the HH electrification goal of the Government, namely:

#### Grid Electrification

##### 1. NEA's Sitio Electrification Program (SEP)

This refers to NEA's program of attaining 100 % sitio electrification in the country while providing housewiring and connection assistance to eligible HHs. Based on its 2016 target of 3,150 sitios, NEA have already energized a total of 2,863 sitios or an estimated 85,890 HH beneficiaries.

Table 31. Status of NEA-SEP Program

LVM	TARGETS	ACCOMPLISHMENT (As of October 2016)	HOUSEHOLD CONNECTION *30 HH per Sitio
Luzon	1,151	980	29,400
Visayas	959	870	26,100
Mindanao	1,040	1,013	30,390
<b>2016 Total</b>	<b>3,150</b>	<b>2,863</b>	<b>85,890</b>

## 2. NEA's Barangay Line Enhancement Program

This aims to rehabilitate those barangays previously energized by off-grid solutions but deemed unsustainable. To enhance the program, it shall only cover those off-grid barangays that are already economically feasible for distribution line extension. NEA shall assist in recovering the existing off-grid electrification facilities still owned by the Government for reconfiguration and transfer to other far-flung areas that can be best served by off-grid solutions. As of September 30, 2016, 81 BLEP projects were already completed out of 176 target projects.

Table 32. Status of NEA-BLEP Program

LVM	TARGETS BLEP	STATUS		
		Under Const.	Completed	Energized
Luzon	56	6	29	21
Visayas	62	18	34	10
Mindanao	58	6	18	34
<b>Total</b>	<b>176</b>	<b>30</b>	<b>81</b>	<b>65</b>

Source:DOE

## 3. Rationalization of Implementation of Energy Regulations 1-94 Electrification Funds

Under this concept, DOE shall effectively administer ER 1-94 EF to support the total electrification of the identified host barangays and municipalities consistent with the policies set forth under the guidelines. This aims of bringing electricity to all households in the communities hosting the power generating facilities and/or energy resources following the radiating order, prioritizing the host cities/municipalities.

Respective distribution utilities will then submit to the Department of corresponding project proposal for DOE's funding approval under the ER 1-94 Electrification Fund.

## 4. Nationwide Intensification of Household Electrification (NIHE) Program

Approved in 2014, the NIHE project is 3-year program that aims to implement measures and grant assistance to intensify household electrification. Under NIHE, DUs are encouraged to adopt more pro-active and innovative marketing strategies to fast-track electrification of the remaining unelectrified households both in rural and urban areas of the country. Technical assistance to be undertaken by the NIHE Project include streamlining of connection process, LGU-DU partnership for assistance in connection permits, and policy support to address the issue of slum electrification and flying connections, among others.

Under NIHE 2015 Program a total of 30,512HH Beneficiaries are approved and expected to be implemented and completed this year by the 22 distribution utilities. The DOE is also targeting to implement a total of 173,500 HH for 2016 and 185,000 HH for 2017. In order to achieve the target number of beneficiaries, the Department through the Rural Electrification and Management Division (REAMD) of the Electric Power Industry Management Bureau conducted several NIHE Project Development Workshop Series. The attendees of the said workshop are the concerned distribution utilities who wish to implement the said project. For the Month of September and October, the DOE held the said workshop in following venues and respective dates:

Cebu and Leyte – September 20-22, 2016; September 27-29, 2016;  
Cagayan De Oro City – October 04-06, 2016; and  
Iloilo City – October 18-20, 2016

Table 33. NIHE Program

REGION	NIHE 2015		NIHE 2016		Total No. HHS	Total Project Cost
	No. HHS	Project Cost	No. HHS	Project Cost		
Luzon	3,693	Php 13,848,750.00	8,746	Php 32,797,500.00	12,439	Php 46,646,250.00
I	589	Php 2,208,750.00			589	Php 2,208,750.00
II	500	Php 1,875,000.00	6,723	Php 25,211,250.00	7,223	Php 27,086,250.00
III			568	Php 2,130,000.00	568	Php 2,130,000.00
IV-A	2,000	Php 7,500,000.00			2,000	Php 7,500,000.00
IV-B	604	Php 2,265,000.00	1,455	Php 5,456,250.00	2,059	Php 7,721,250.00
Visayas	19,421	Php 72,828,750.00	12,717	Php 47,688,750.00	32,138	Php 120,517,500.00
VII	4,760	Php 17,850,000.00	12,717	Php 47,688,750.00	17,477	Php 65,538,750.00
VIII	14,661	Php 54,978,750.00			14,661	Php 54,978,750.00
Mindanao	7,398	Php 27,742,500.00	47,864	Php 179,490,000.00	55,262	Php 207,232,500.00
ARMM	309	Php 1,158,750.00	3,692	Php 13,845,000.00	4,001	Php 15,003,750.00
CARAGA			734	Php 2,752,500.00	734	Php 2,752,500.00
IX	1,089	Php 4,083,750.00	6,907	Php 25,901,250.00	7,996	Php 29,985,000.00
X	1,000	Php 3,750,000.00	1,550	Php 5,812,500.00	2,550	Php 9,562,500.00
XI	1,000	Php 3,750,000.00			1,000	Php 3,750,000.00
XII	4,000	Php 15,000,000.00	34,981	Php 131,178,750.00	38,981	Php 146,178,750.00
Subtotal with Approval	30,512	Php 114,420,000.00	69,327	Php 259,976,250.00	99,839	Php 374,396,250.00
For Approval						
Luzon			5,494	Php 20,602,500.00	5,494	Php 20,602,500.00
CAR			5,092	Php 19,095,000.00	5,092	Php 19,095,000.00
III			402	Php 1,507,500.00	402	Php 1,507,500.00
Mindanao			18,614	Php 69,802,500.00	18,614	Php 69,802,500.00
X			3,614	Php 13,552,500.00	3,614	Php 13,552,500.00
XI				Php -		Php -
XII			15,000	Php 56,250,000.00	15,000	Php 56,250,000.00
Subtotal For Approval			24,108	Php 90,405,000.00		
Subtotal Indicative For Approval			73,638	Php 276,142,500.00		
Grand Total			215,289	Php 807,333,750.00		
TARGET OF PROGRAM	25,000	Php 93,750,000.00	172,500	Php 646,875,000.00		

Source: DOE

## Off-Grid Electrification

### 1. Solar PV Mainstreaming (PVM) Project

This PVM project is co-financed by the EU-Philippines “Access to Sustainable Energy Programme (ASEP), DOE, participating Electric Cooperatives and the recipient households. It targets 40,500 households for the next three (3) years to be provided with solar PV electrification as a utility service offering by the Electric Cooperatives. To date, eight (8) ECs have committed to participate in the Project. Activities undertaken over the past months include (a) market segmentation through remote sensing and geo-tagging of potential households beneficiaries, (b) firming up the service packages and technical specifications of the products to be offered to the households; (c) establishing the PV supply chain; and (d) creation of the Solar Business Unit (SBUs) within the ECs organizational structure.

Of recent events, ASEP through the World Bank and Global Partnership on Output-based Aid (GPOBA), organized the first Philippines Offgrid Electrification Expo held at SMX MOA, Pasay City from September 21-23, 2016 and participated in by international and local PV suppliers. The participants of this Expo had the opportunities to learn more about the incentive program, demonstrate their off-grid products, network with international off-grid industry leaders (e.g., distributors of Lighting Global certified products and 2015-16 Global LEAP Awards Winners and Finalists), meet with local electricity cooperatives to explore ways to conduct business in the growing off-grid market.

## 2. *Qualified Third Party (QTP) Approach*

Under *Sec. 59 of EPIRA*, areas deemed unviable and waived by the DUs may be offered to QTPs as part of the missionary electrification program. There is now a growing interest among private sector to enter into QTP operations with the entry of the renewables in offgrid electrification. Said interest was generated by the various incentives offered to private sector among which is the cash generation based incentive per kWh generated, equivalent to 50% of the Universal Charge (UC) in the area where it operates. Hence, the program anticipates the future development of mini-grid and micro-grid electrification projects using solar, biomass, wind and other renewable energy sources by other proponents that may also adopt QTP approach.

Following are the updates on the QTP Program being spearheaded by the DOE:

### **a. Rio Tuba QTP Project in Bataraza, Palawan**

PowerSource Philippines, Inc. (PSPI) continues to operate as QTP in Barangay Rio Tuba. For the report period, the average monthly electricity generation reached 295,599 kWh and the average monthly electricity sales is 264,647 kWh, indicating an increase of about 7.69% and 7.0% respectively as compared with the last year's report (for 6 months period from March 2015 to September 2015) electricity generation and sales. To date, overall installed capacity is 1.10MW covering the highest recorded peak demand of 660kW. The average system loss is 10%.

To date, there are 680 remaining unelectrified households which can be classified as informal settlers as they do not have permanent residencies. PSPI is coordinating with the LGU and DOE on how to provide electricity to these households.

With regard to the Biomass Plant, testing and commissioning were completed last February 2016 and now operating with a dependable capacity of 10kW. However, there are modifications still to be made on the gasifier to meet the target output of 50 kW due to the very low output. Gasifier is undergoing upgrading including the purchase of blower with a higher capacity to supply enough gas required by the gas engine to operate at 100% load.

In order to provide efficient and reliable service and serve more customers, PSPI completed the following activities, namely: a) Extension of line in Kinurong; b) Commissioning of 350 kW in April 2016; c) Macadam Road pole relocation in September 2016; and d) replacement of overloaded distribution transformer and splitting of transformer load to achieve a balanced system for system improvement.

## **b. Malapascua QTP Project in Malapascua Island, Logon, DaanBantayan, Cebu**

PSPI continues to operate its existing generating facility in the island. For the report period, the average net electricity generation was 170,501 kWh per month and the average electricity sales was 159,872 kWh. There was a significant increase of about 18.12% in generation and 22.82% in sales showing the continuous growth of demand in the area. In June 2016, a new genset was installed with a capacity 500kW in replacement of genset no.3. The installed capacity now is 1.2 MW. Highest recorded peak demand is 440kW and the average system loss is 6.26%.

In addition, 40 additional households were electrified, a 3.26% increase in the past six (6) months. Based on the barangay records, out of 1,227 households in the island, 1,007 are connected to the mini-grid system, achieving 82.07% electrification level. The remaining 220 households are targeted to be connected to the grid within the next 2-3 years.

In June 2016, the final decision with regard to PSPI's application for Malapascua was issued by ERC. On the Subsidized Approved Retail Rate (SARR), the ERC granted a 2-tier tariff as follows:

For consumers with monthly consumption of 40kWh or lower, the SARR is PhP12/kWh; and

For consumers with monthly consumption higher than 40kWh, the SARR is PhP15kWh.

On August 2016, PSPI has complied with NPC's Subsidy Protocol Payment with the installation of NPC Billing Meter on project site.

## **c. Liminangcong, Taytay, Palawan**

The mini-grid systems in these barangays were funded by the Provincial Government of Palawan (PGP) and operated by a Barangay Power Association from 1995-2012. In February 2013, a Master Agreement was signed between PGP and PSPI to take-over the management and operations in nine (9) areas namely: Barangays Port Barton, Poblacion, Sta. Teresita, Funda, Caburian, Balading, Manamoc, Mangsee, and New Ibajay. Consequently, an Alliance with Palawan Electric Cooperative, Inc. (PALECO) was signed in November 2013 for the electrification of remote and unviable areas through the QTP Program of which these areas were also included.

On August 2016, PSPI received the ERC's order for the Provisional Authority (PA). In the Order, the ERC granted the SARR equivalent to PhP9.12/kWh.

Currently, the total number of customers is 705 which results to 78% electrification level and expected to increase due to upcoming line extensions. The installed capacity is 310 kW and has a recorded peak demand of 80 kW with an average loss is 13.63%. PSPI has an on-going replacement of defective household kilowatt-hour meters and upgrading of distribution system to reduce the losses.

From March 2016 to September 2016, the average monthly net electricity generation is 21,953 kWh and the average monthly electricity sale is 18,960 kWh.

The operating hours were gradually increased from 8-12-14 hours and now have reached the 20 hour operation (6AM to 2AM). PSPI is expecting a 24/7 operation on the fourth quarter of 2016 as soon as the new gensets are installed and commissioned.

**d. Brgy. Cabayugan , Puerto Princesa City**

On 05 October 2016, ERC approved the: (i) application of Sabang Renewable Energy Corporation (SREC) for Authority to Operate (ATO) as a QTP in Barangay Cabayugan, Puerto Princesa City, Palawan and (ii) correspondingly, its QTP Service and Subsidy Agreement (QSSA) with the National Power Corporation (NPC).

The Project comprises a 1.404 (Solar PV), 2.363 (battery), and 1.280 (four (4) gensets@320kW diesel) to be installed in year 1 and additional capacities to be installed in succeeding years as the energy demand increases in the area.

**e. Other QTP Projects:**

ERC still has to issue its approval on the application of PowerSource Philippines, Inc. (PSPI) for the following QTP Projects namely: (a) Balut Island comprising seven (7) barangays in Sarangani, Davao Occidental; and, (b) Brgys. Candawaga and Culasian, Municipality of Rizal, Palawan.

On the other hand, the DOE expects to receive the technical and financial proposals for the potential QTPs for the following areas:

1. 66 Sitios in the Province of Apayao;
2. Lahuy Island, Municipality of Caramoan, Camarines Sur (with four barangays, namely: Gata, Oring, Daraga, and Gogon);
3. Haponan Island in the same Municipality;
4. Quinasalag Island in the Municipality of Garchitorena, Camarines Sur (with eight (8) barangays, as follows:

Dangla;  
Binagasbasan;  
Burabod;  
Cagamutan;  
Mansangat;  
Tamiawon;  
Cagnipa; and  
Sumaoy.

5. Semirara Island in the Municipality of Caluya, Antique (with three barangays).

## VII. BENEFITS TO HOST COMMUNITIES

Pursuant to Energy Regulations No.1-94 (ER 1-94), as amended, the Generation Company and/or Energy resource developer shall set aside one centavo per kilowatt-hour (P 0.01/kWh) of the total electricity sales as financial benefit for the host communities. 50% of one centavo per kilowatt-hour (P0.005/kWh) is for electrification projects, 25% (P0.0025/kWh) for development and livelihood projects and the remaining 25% (P0.0025/kWh) for reforestation, watershed management, health and/or environment enhancement projects.

DOE as fund administrator, has already established a total of 907 Trust Accounts for Electrification Fund (EF) Development and Livelihood Fund (DLF), Reforestation, Watershed Management, Health and/or Environment Enhancement Fund (RWMHEEF).

The financial benefit from inception (*Year 1995*) to October 2016 has accrued to PhP10.7 Billion from which PhP6.2 Billion was obligated for the implementation of projects. This leaves an available fund at around PhP4.5 Billion.

*Table 34. Summary of Financial Benefits from May 2016 to October 2016 (In PhP Billion)*

<i>Particulars</i>	<i>EF</i>	<i>DLF</i>	<i>RWMHEE F</i>	<i>Total</i>
Accrued Financial Benefit	4.78	2.81	3.11	10.71
Approved	2.75	1.60	1.83	6.17
Available/Collectible Balance	2.03	1.21	1.28	4.54

Source: DOE

### 1. Project Approval

The initial process in availing a project is the submission of project proposal and other documentary requirements. For electrification program, the concerned Distribution Utility (DU) endorses LGU's project proposal to the DOE. Whereas, non-electrification (DL and RWMHEEF) project proposals are being endorsed by the generation company or the energy resource developer to DOE. The latter evaluates and approves all project proposals and subsequently issues Notice to Proceed and Memorandum of Agreement to the project implementer.

From May 2016 – October 2016, there were about PhP96 Million worth of electrification projects approved for 3,905 household beneficiaries located in various barangays in the Provinces of Batangas, Bulacan, Laguna, Quezon, Rizal, Zambales, Iloilo and Lanao del Norte.

Over the same period, PhP10.4 Million worth of development and livelihood projects were approved for the host communities located in the Provinces of Bataan, Nueva Ecija, Quezon, Ifugao, Samar, Misamis Occidental and Lanao del Sur. Most of these projects pave the way for the development of roads, streetlights and barangay halls. Meanwhile, PhP21 Million was approved for the implementation of reforestation, watershed management, health and/or environment enhancement projects in the Provinces Bataan, Quezon, Aurora, Nueva Ecija, Nueva Vizcaya, Bukidnon and Lanao del Sur.

Table 35. Project Approval (In PhP Million) May 2016 – October 2016

Fund Source	No. of Approved Projects	Amount (PhP in Million)
Electrification Fund	58 Barangays	95.98
Development and Livelihood Fund	46	10.45
Reforestation, Watershed Management, Health and/or Environment Enhancement Fund	47	21.06

## 2. Fund Releases

The preparation and processing of fund release commence upon submission of complete bidding documents by the proponent in accordance to RA 9184 or otherwise known as “The Government Procurement Reform Act”. The scheme being applied for fund transfer is through a bank transaction.

In a given reporting period, several releases were executed for the concerned DU’s and Host LGU’s for the implementation of their respective projects. Of these, a sum of PhP46.7 Million was disbursed for electrification projects, PhP136.7 Million for development projects and PhP107.8 Million intended for reforestation, health and environment enhancement projects.

Table 36. Fund Release (In PhP Million) May 2016 – October 2016

Fund Source	No. of Projects	Amount (PhP in Million)
Electrification Fund	78 Sitios line extension and 711 households SHS projects	46.67
Development and Livelihood Fund	60	136.71
Reforestation, Watershed Management, Health and/or Environment Enhancement Fund	43	107.75

Source: DOE-Treasury

### Financial Audit and Technical Inspection

Consistent with the auditing rules and procedures under ER 1-94 program, the DOE through the Internal Audit Services conducts a post-audit for the liquidation of project funds. In a given reporting period, the Department has audited and validated PhP28.7 Million for two (2) electrification projects implemented by PANELCO III and FIBECO.

Likewise, there were 38 projects amounting to PhP 77.3M under DLF and additional 14 projects amounting to PhP15 Million under RWMHEEF were audited and validated within the same period.



Table 37. Financial Audit (In PhP Million) May 2016 – October 2016

Fund Source	No. of Projects	Amount (PhP in Million)
Electrification Fund	3	28.72
Development and Livelihood Fund	38	77.25
Reforestation, Watershed Management, Health and/or Environment Enhancement Fund	14	15.05

Source: DOE-Internal Audit

Upon completion of projects, the DOE together with its partners, the LGU, Generation Company and Electric Cooperatives, conduct a joint technical inspection and evaluation to assess the quality, value and impact of projects to the community. Resulting from the project implementation was the inspection of Electrification projects covering 170 barangays/sitios under the franchise area of PANELCO I, CEBECO I, TAWELCO, BISELCO, NORECO II, ORMECO, and SIASELCO.

Moreover, 35 non-electrification projects were inspected in the Provinces of Benguet, Batangas, Quezon, Leyte, Misamis Oriental, Compostela Valey, and Lanao del Sur.

In the event of unjustified disbursement of funds and non-completion or delay in the implementation of projects, the DOE has to defer the succeeding releases of project funds to the implementer. This is essential to ensure proper and efficient disbursement of funds.

#### Information and Education Campaign

As a result of the increasing number of generating facilities operating in the country today, the DOE conducted series of IEC which intends to inform and educate new power plant owners and their designated Community Relations Officers (CRO) together with their host communities on the processes involved in availing projects under ER 1-94 program.

The first three (3) legs of IEC were successfully held on the following venues and dates:

1. Cagayan De Oro City – August 11, 2016;
2. Davao - September 26, 2016; and
3. Cebu City – October 20, 2016

There are two (2) more IECs to follow in Baguio City and Metro Manila which will conclude the IEC program of the Department.

Beyond providing electricity, the DOE is committed to provide projects with long lasting social impact to build a better and brighter future for the people especially the communities hosting the Generation Facility through the Energy Regulations No. 1-94 program. Below are few examples of these projects:



# ANNEXES

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**Annex 1. TransCo Inspection Report Based on Concession Agreement (May 2016 to October 2016)**

No.	Inspection Report No.	Location	Name of Project/ Transmission Facilities	Inspection Date
<b>LUZON</b>				
1	NLR-RS-16-20	North Luzon	Cuyapo, Dasol and San Isidro Repeater Stations	May 16-20, 2016
2	SL-MB-16-21	South Luzon	South Luzon MTD-B Office – Daraga, Albay	May 16-20, 2016
3	SLR-D1-16-22	District 1 South Luzon	Dasmariñas, Biñan, Muntinlupa, Las Piñas, Batangas, Ternate, Calaca & Rosario S/S, Bolbok, Cuenca & Taal LES and Tamayo RS	May 16-20, 2016
4	NLR-D3-16-25	District 3 North Luzon	San Manuel, Nagsaag, Bolo & Labrador Substations, and Mangaldan Load End S/S	May 30-Jun 2, 2016
5	NLR-D4-16-27	District 4 North Luzon	Santiago, Tuguegarao, Gamu & Bayombong S/S and Cauayan, Ilagan & Lagawe LES	June 13-17, 2016
6	SL-MTDA-16-31	South Luzon	South Luzon MTD-A Office in Calamba, Laguna	June 27-30, 2016
7	NLR-D7-16-33	District 7 North Luzon	San Jose, Taytay, Malaya, and Doña Imelda Substations and Quezon Switching Station	July 11-14, 2016
8	NLR-D6-16-36	District 6 North Luzon	Mexico, Cabanatuan, San Rafael & Concepcion S/S, Pantabangan HEP S/Y, Pantabangan LES and Pantabangan RS	July 25-28, 2016
9	NL-MTDA-16-37	North Luzon	North Luzon MTD-A Office in San Fernando, La Union	July 25-28, 2016
10	NLR-PR-16-08	North Luzon	Bacnotan-Tap Bacnotan 230kV T/L Project & San Esteban S/S (LSRP1)	Aug. 9-12, 2016
11	SLR-D3-16-41	District 3 South Luzon	Naga, Tiwi, Daraga & Labo S/S, Iriga, Libmanan, Talisay, Ligao, Balogo & Bulan LES, Naga HVDC Converter Station, Calabanga Electrode Station and Sta. Magdalena CTS	Aug. 22-26, 2016
12	SLR-PR-16-09	South Luzon	Las Piñas (Zapote) S/S Expansion Project (4 <sup>th</sup> Bank)	Aug. 24-26, 2016
13	SLR-D2-16-43	District 2 South Luzon	Tayabas, Lumban, Gumaca & Bay S/S, San Juan Switchyard, Famy, Pitogo, Caliraya, Los Ba os, Calamba, Lopez & Mulanay LES, and Calamba, Lumban & Maunong RS	Sept. 5-9, 2016
14	NLR-PR-16-10	North Luzon	Ambuklao & Binga S/S (Ambuklao-Binga-San Manuel 230 KV T/L Project)	Sept. 6-9, 2016
15	NLR-RS-16-48	North Luzon	San Mateo (San Mateo), Ampucao, Cabuyao, and Angat Repeater Stations	Oct. 3-7, 2016
<b>VISAYAS</b>				
1	VIS-PR-16-05	Visayas	Visayas S/S Reliability Proj. 1 (Amlan & Samboan S/S)	May 17-20, 2016
2	VIS-RC-16-30	Visayas	VRCC, and Minglanilla (Majic) Repeater Facility	June 27-30, 2016
3	VIS-PR-16-07	Visayas	San Carlos-Guihulngan 69 kV T/L Project (Negros V)	July 13-14, 2016
4	VIS-AC-16-34	Visayas	Leyte ACC, Matag-ob RS, and Bantigue (Isabel) Passive Repeater Facility	July 25-28, 2016
5	VIS-D2-16-38	District 2 Visayas	Cebu, Naga, Colon, Quiot, Toledo, Calongcalong, Ubay, Compostela, Daanbantayan, Corella & Tagbilaran S/S, Mandaue & Mactan GIS, Pajo, Medellin, Garcia Hernandez, Sogod, Danao, Medellin & Sibonga LES, Garcia Hernandez & Trinidad CBS, and Daanbantayan & Samboan CTS	Aug. 8-12, 2016
6	VIS-D4-16-45	District 4 Visayas	Sta. Barbara, Barotac Viejo, Dingle, Panit-an and Nabas S/Sand San Juan CTS	Sept. 19-23, 2016
7	VIS-D3-16-47	District 3 Visayas	Bacolod, Cadiz, Kabankalan, Sipalay, Amlan & Mabinay S/S, Victorias Capacitor Bank Station and Tomonton & Pondol CTS	Oct. 3-7, 2016
8	VIS-PR-16-11	Visayas	STA. BARBARA S/S AND SAN JOSE S/S (SOUTHERN PANAY BACKBONE PROJECT AND VSRP2)	Oct. 4-7, 2016
9	VIS-D1-16-49	District 1 Visayas	Ormoc, Maasin, Tabango, Babatngon, Calbayog, Paranas & Sta. Rita S/S, Guadalupe CTS, Hilongos PCB Station, Baybay LES, Albuera Electrode Station, Tolosa Capacitor Bank Station and Ormoc HVDC Station	Oct. 17-21, 2016
10	VIS-MB-16-51	Visayas	MTD-B Office in Bacolod City	Oct. 17-21, 2016
<b>MINDANAO</b>				
1	MIN-D2-16-23	District 2 Mindanao	Iligan, Balo-i, Agus 6/7 & Lugait Substations and Agus 5 HEP & Switchyard	May 30-Jun 2, 2016
2	MIN-D6-16-24	District 6 Mindanao	General Santos, Tacurong and Sultan Kudarat Substations	May 30-Jun 2, 2016
3	MIN-PR-16-06	Mindanao	Mindanao Opol 138/69 kV Substation Project	June 8-10, 2016
4	MIN-D5-16-26	District 5 Mindanao	Davao, Nabunturan, Maco, Matanao, Kidapawan, Bunawan and Toril S/S	June 13-17, 2016

No.	Inspection Report No.	Location	Name of Project/ Transmission Facilities	Inspection Date
5	MIN-RS-16-28	Mindanao	Iligan Area Control Center and Talacogon & Manticao Repeater Stations	June 27-30, 2016
6	MIN-D1-16-29	District 1 Mindanao	Pitogo, Zamboanga (Sangali), Naga Min (Sta. Clara) & Aurora Substations and Tumaga (Lunzuran) Switchyard	June 27-30, 2016
7	MIN-AC-16-32	Mindanao	General Santos ACC, Calumpang, Tupi, and Malalag RS	July 11-14, 2016
8	MIN-D4-16-35	District 4 Mindanao	Butuan, Nasipit, Bislig, San Francisco and Placer (Anislagan) S/S	July 25-28, 2016
9	MIN-AC-16-39	District 4 Mindanao	Davao Area Control Center in Mintal, Davao City	Aug. 22-26, 2016
10	MIN-MA-16-40	Mindanao	MTD-A Office in Iligan City, Lanao del Norte	Aug. 22-26, 2016
11	MIN-AC-16-42	Mindanao	Zamboanga Area Control Center (ZACC) in Lunzuran, Zamboanga City	Sept. 5-9, 2016
12	MIN-RS-16-44	Mindanao	Salvacion, Mainit & San Isidro Repeater Stations	Sept. 19-23, 2016
13	MIN-D3-16-46	District 3 Mindanao	Cagayan De Oro, Kibawe, Maramag & Pulangi Tagoloan, Villanueva and Jasaan (Aplaya) S/S	Sept. 19-23, 2016
14	MIN-RS-16-50	Mindanao	Catarman & Gingoog Repeater Stations	Oct. 17-21, 2016

Source: Transco

**Annex 2. TransCo Summary of Inspection Report for Projects Under Construction (PUC)  
(May 2016 to October 2016)**

No.	Observation Report No.	Inspection Date/ Area	Description of Observation (TransCo)	Action Plan / Remarks (NGCP)
<b>LUZON</b>				
1	(NLR-PR-16-08) OR-P-16-0173	San Esteban SS (LSRP1)/ Aug. 9-12, 2016	The San Esteban S/S Project (LSRP1) has been energized without load, however, it is not yet energized with load.	Ready for energization with load.
2	OR-P-16-0174	San Esteban SS (LSRP1)/ Aug. 9-12, 2016	No available copy of Report of Retirement, Transfer & Loss of Property, Plant & Equipment (PPE) for decommissioned and retired equipment for the San Esteban S/S (LSRP1).	For submission.
3	OR-P-16-0175	San Esteban SS (LSRP1)/ Aug. 9-12, 2016	The findings in the Joint Final Inspection Report No. IR/QSMD-16-108/JJB for San Esteban S/S (LSRP1) were not yet corrected.	On-going correction of the findings by the contractor.
4	OR-P-16-0176	San Esteban SS (LSRP1)/ Aug. 9-12, 2016	No available copy of approved Certificate of Completion, and Test & Commissioning for the San Esteban S/S (LSRP1).	For submission.
5	OR-P-16-0177	San Esteban SS (LSRP1)/ Aug. 9-12, 2016	No available copy of approved Certificate of Energization for the San Esteban S/S (LSRP1).	For submission.
6	OR-P-16-0178	San Esteban SS (LSRP1)/ Aug. 9-12, 2016	The San Esteban S/S has not yet turned-over to the North Luzon Operations & Maintenance (NLOM).	Shall be turned-over to O&M after energized with load.
7	OR-P-16-0179	San Esteban SS (LSRP1)/ Aug. 9-12, 2016	No available copy of As-Built Drawings/ Structure List Report for the San Esteban S/S (LSRP1).	For submission.
8	OR-P-16-0180	Bacnotan-Tap Bacnotan 230 kV T/L Upgrading Project/ Aug. 9-12, 2016	The copy of the Report of Retirement, Transfer & Loss of Property, Plant & Equipment (PPE) for the Bacnotan-Tap Bacnotan 230 kV T/L Upgrading Project is for inspection by O&M and signature.	For signature
9	OR-P-16-0181	Bacnotan-Tap Bacnotan 230 kV T/L Upgrading Project/ Aug. 9-12, 2016	The As-Built Drawings for the Bacnotan-Tap Bacnotan 230 kV T/L Upgrading Project were already submitted by the contractor for NGCP's review and approval.	For submission.
10	OR-P-16-0182	Bacnotan-Tap Bacnotan 230 kV T/L Upgrading Project/ Aug. 9-12, 2016	The Certificate of Final Completion for the Bacnotan-Tap Bacnotan 230 kV T/L Upgrading Project is enroute for approval.	For submission.
11	OR-P-16-0183	Bacnotan-Tap Bacnotan 230 kV T/L Upgrading Project/ Aug. 9-12, 2016	The energized Bacnotan-Tap Bacnotan 230 kV T/L Upgrading Project has not yet turned-over to the North Luzon Operations & Maintenance (NLOM).	For submission.
12	(SLR-PR-16-09) OR-P-16-0184	Las Piñas (Zapote) Substation Expansion Project/ Aug. 24-27, 2016	The contractor was not able to complete the works within the contract period of 450 calendar days for the Las Piñas S/S Expansion Project as stated under Contract No. Sp.13.LPSEP.Lt-0153 and issued Contract Time Extension (CTE) No. 1. However, to prepare CTE No. 2.	CTE No. 1 already approved. For preparation CTE No. 2.
13	OR-P-16-0185	Las Piñas (Zapote) Substation Expansion Project/ Aug. 24-27, 2016	The installation of Gas Insulated Switchgear (GIS) under the Las Piñas S/S Expansion Project is not yet completed.	On-going assembly/installation of the GIS.
14	OR-P-16-0186	Las Piñas (Zapote) Substation Expansion Project/ Aug. 24-27, 2016	Six (6) out of the 6 sets of 230 kV Voltage Transformer under the Las Piñas S/S Expansion Project are not yet installed.	Delivered. On-going erection of steel support. For re-installation of VT.
15	OR-P-16-0187	Las Piñas (Zapote) Substation Expansion Project/ Aug. 24-27, 2016	Nine (9) out of the 12 sets of 115 kV Voltage Transformer under the Las Piñas S/S Expansion Project are not yet installed.	Delivered. Steel supports were already erected. For installation.
16	OR-P-16-0188	Las Piñas (Zapote) Substation Expansion Project/ Aug. 24-27, 2016	Nine (9) out of the 12 sets of 192 VRMS Surge Arrester under the Las Piñas S/S Expansion Project are not yet installed.	Delivered. Three (3) SA will be installed at Pasay S/S expansion. Six (6) for reinstallation.

**Annex 2. TransCo Summary of Inspection Report for Projects Under Construction (PUC)  
(May 2016 to October 2016)**

No.	Observation Report No.	Inspection Date/ Area	Description of Observation (TransCo)	Action Plan / Remarks (NGCP)
17	OR-P-16-0189	Las Piñas (Zapote) Substation Expansion Project/ Aug. 24-27, 2016	The installation of 1-13.8 kV Metalclad Switchgear under the Las Piñas S/S Expansion Project is not yet completed.	Delivered. For installation.
18	OR-P-16-0190	Las Piñas (Zapote) Substation Expansion Project/ Aug. 24-27, 2016	Steel Tower Type ST4de90Z1-230 (compact) already erected, however, line hardwares, line insulators, grounding, power conductor and overhead ground wire (OHGW) under the Las Piñas S/S Expansion Project were not yet installed.	For delivery of line hardware & installation materials.
19	OR-P-16-0191	Las Piñas (Zapote) Substation Expansion Project/ Aug. 24-27, 2016	The installation of six (6) sets of GIS Local Control Cabinet under the Las Piñas S/S Expansion Project is not yet completed.	Already delivered. For installation.
20	OR-P-16-0192	Las Piñas (Zapote) Substation Expansion Project/ Aug. 24-27, 2016	The installation of DC Auxiliary Switchboard (4-125 & 2-48 VDC Main Distribution Board) under the Las Piñas S/S Expansion Project is not yet completed.	Already delivered. For installation.
21	OR-P-16-0193	Las Piñas (Zapote) Substation Expansion Project/ Aug. 24-27, 2016	The installation of 2-125 VDC & 2-48 VDC Battery Banks including the Battery Monitoring System under the Las Piñas S/S Expansion Project is not yet installed.	Already delivered. For installation.
22	OR-P-16-0194	Las Piñas (Zapote) Substation Expansion Project/ Aug. 24-27, 2016	The installation of 2-125 VDC & 2-48 VDC Battery Charger/ Rectifier under the Las Piñas S/S Expansion Project are not yet completed.	Already delivered. For installation.
23	OR-P-16-0195	Las Piñas (Zapote) Substation Expansion Project/ Aug. 24-27, 2016	The installation of Uninterruptible Power Supply (UPS) under the Las Piñas S/S Expansion Project is not yet completed.	Already delivered. For installation
24	OR-P-16-0196	Las Piñas (Zapote) Substation Expansion Project/ Aug. 24-27, 2016	The installation of 2-230 kV, 3000A (CVT mounted) Line Trap under the Las Piñas S/S Expansion Project are not yet completed.	Already delivered. For re-installation
25	OR-P-16-0197	Las Piñas (Zapote) Substation Expansion Project/ Aug. 24-27, 2016	The installation of Transformer Remote Control Panels for T01, T02 & T03 under the Las Piñas S/S Expansion Project is yet completed.	Already delivered. For installation
26	OR-P-16-0198	Las Piñas (Zapote) Substation Expansion Project/ Aug. 24-27, 2016	The decommissioning of the existing/retired equipment/matts. such as bus/transformer/line protections, battery banks/ chargers, & other equipment/ panels under the Las Piñas S/S Expansion Project is not yet started.	For decommissioning.
27	OR-P-16-0199	Las Piñas (Zapote) Substation Expansion Project/ Aug. 24-27, 2016	The construction of the Oil Water Separation System under the Las Piñas S/S Expansion Project is not yet completed.	On-going construction.
28	OR-P-16-0200	Las Piñas (Zapote) Substation Expansion Project/ Aug. 24-27, 2016	The installation of Fire Detection and Alarm System for Control House Building under the Las Piñas S/S Expansion Project is not yet completed.	On-going.
29	OR-P-16-0201	Las Piñas (Zapote) Substation Expansion Project/ Aug. 24-27, 2016	The installation of Transformer Explosion and Fire Protection System for the new 300 MVA transformer under the Las Piñas S/S Expansion Project is not yet completed.	Already delivered. For installation.
30	OR-P-16-0202	Las Piñas (Zapote) Substation Expansion Project/ Aug. 24-27, 2016	The installation of deluge valve for the existing transformer under the Las Piñas S/S Expansion Project has not yet started.	Already delivered. For installation.
31	OR-P-16-0203	Las Piñas (Zapote) Substation Expansion Project/ Aug. 24-27, 2016	The installation of fire detection and alarm for the Control House Building under the Las Piñas S/S Expansion Project has not yet started.	Already delivered. For installation.
32	OR-P-16-0204	Las Piñas (Zapote) Substation Expansion	The installation of outdoor hydrant cabinet under the Las Piñas S/S Expansion Project has not yet started.	Already delivered. For installation.

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No.	Observation Report No.	Inspection Date/ Area	Description of Observation (TransCo)	Action Plan / Remarks (NGCP)
		Project/ Aug. 24-27, 2016		
33	OR-P-16-0205	Las Piñas (Zapote) Substation Expansion Project/ Aug. 24-27, 2016	The expansion of the existing GIS Building under the Las Piñas S/S Expansion Project is not yet completed.	On-going expansion works.
34	(NLR-PR-16-10) OR-P-16-0206	Binga & Ambuklao S/S Project/ Sep. 6-9, 2016	The contractor failed to complete the upgrading of Ambuklao S/S (Ambuklao-Binga 230 kV T/L Project) on the original completion date of 14 November 2014.	NGCP instructed the contractor to submit a commitment schedule for the project completion.
35	OR-P-16-0207	Binga & Ambuklao S/S Project/ Sep. 6-9, 2016	The copy of Factory Acceptance Test (FAT)/ Certificate of Test and Inspection (CTI) of substation equipment for the upgrading of Ambuklao S/S (Ambuklao-Binga 230 kV T/L Project) was not presented/ provided.	For submission c/o QSMD.
36	OR-P-16-0208	Binga & Ambuklao S/S Project/ Sep. 6-9, 2016	One (1) set of 230 Compact Air-Insulated Switchgear (CAIS) at Ambuklao S/S (Ambuklao-Binga 230 kV T/L Project) is not yet installed.	For installation. Steel supports already erected.
37	OR-P-16-0209	Binga & Ambuklao S/S Project/ Sep. 6-9, 2016	The proposed six (6) sets of 230 kV Power Circuit Breaker (PCB) at Ambuklao S/S (Ambuklao-Binga 230 kV T/L Project) are not yet installed.	Installation will be done after the decommissioning/dismantling of the existing 230 kV PCBs which will be carried out one breaker at a time at a given shutdown.
38	OR-P-16-0210	Binga & Ambuklao S/S Project/ Sep. 6-9, 2016	Fourteen (14) out of the 15 units of 230 kV Disconnect Switch (DS) at Ambuklao S/S (Ambuklao-Binga 230 kV T/L Project) are not yet installed.	Installation of the remaining 230 kV DS will be done after the decommissioning/dismantling of the existing 230 kV DSs which will be carried out one at a time at a given shutdown.
39	OR-P-16-0211	Binga & Ambuklao S/S Project/ Sep. 6-9, 2016	The proposed 21 units of 230 kV Current Transformer (CT) at Ambuklao S/S (Ambuklao-Binga 230 kV T/L Project) are not yet installed.	Installation will be done after the decommissioning/dismantling of the existing 230 kV CTs which will be carried out one at a time at a given shutdown.
40	OR-P-16-0212	Binga & Ambuklao S/S Project/ Sep. 6-9, 2016	The proposed 12 units of 230 kV Voltage Transformer (VT) at Ambuklao S/S (Ambuklao-Binga 230 kV T/L Project) are not yet installed.	For installation. Nine (9) units of steel supports for the 230 kV VT were completed.
41	OR-P-16-0213	Binga & Ambuklao S/S Project/ Sep. 6-9, 2016	Seven (7) out of the 9 units of 230 kV Surge Arrester (SA) at Ambuklao S/S (Ambuklao-Binga 230 kV T/L Project) are not yet installed.	For installation. Completed the erection of six (6) units of steel support. Three (3) units will be installed at the existing gantry.
42	OR-P-16-0214	Binga & Ambuklao S/S Project/ Sep. 6-9, 2016	Seven (7) sets of existing 230 kV Power Circuit Breaker (PCB) at Ambuklao S/S (Ambuklao-Binga 230 kV T/L Project) are not yet decommissioned/dismantled.	For decommissioning and dismantling.
43	OR-P-16-0215	Binga & Ambuklao S/S Project/ Sep. 6-9, 2016	Fourteen (14) sets of existing 230 kV Disconnect Switch (DS) at Ambuklao S/S (Ambuklao-Binga 230 kV T/L Project) are not yet decommissioned/dismantled.	For decommissioning and dismantling.
44	OR-P-16-0216	Binga & Ambuklao S/S Project/ Sep. 6-9, 2016	Twenty-one (21) units of existing 230 kV Current Transformer (CT) at Ambuklao S/S (Ambuklao-Binga 230 kV T/L Project) are not yet decommissioned/dismantled.	For decommissioning and dismantling.
45	OR-P-16-0217	Binga & Ambuklao S/S Project/ Sep. 6-9, 2016	Eight (8) units of existing 230 kV Voltage Transformer (VT) at Ambuklao S/S (Ambuklao-Binga 230 kV T/L Project)	For decommissioning and dismantling.



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			are not yet decommissioned/dismantled.	
46	OR-P-16-0218	Binga & Ambuklao S/S Project/ Sep. 6-9, 2016	Six (6) units of existing 192 kV Surge Arrester (SA) at Ambuklao S/S (Ambuklao-Binga 230 kV T/L Project) are not yet decommissioned/dismantled	For decommissioning and dismantling.
47	OR-P-16-0219	Binga & Ambuklao S/S Project/ Sep. 6-9, 2016	One (1) unit of existing Steel Pole (SP) Ambuklao S/S (Ambuklao-Binga 230 kV T/L Project) are not yet dismantled.	For dismantling.
48	OR-P-16-0220	Binga & Ambuklao S/S Project/ Sep. 6-9, 2016	One (1) set of existing 230 kV Compact Air-Insulated Switchgear (CAIS) at Ambuklao S/S (Ambuklao-Binga 230 kV T/L Project) is not yet relocated.	For relocation.
49	OR-P-16-0221	Binga & Ambuklao S/S Project/ Sep. 6-9, 2016	Three (3) units of existing 230 kV Current Transformer (CT) at Ambuklao S/S (Ambuklao-Binga 230 kV T/L Project) are not yet relocated.	For relocation.
50	OR-P-16-0222	Binga & Ambuklao S/S Project/ Sep. 6-9, 2016	Two (2) units of existing 230 kV Line Trap & Line Matching Unit (LMU) at Ambuklao S/S (Ambuklao-Binga 230 kV T/L Project) are not yet relocated.	For relocation.
51	OR-P-16-0223	Binga & Ambuklao S/S Project/ Sep. 6-9, 2016	The proposed two (2) sets of existing gantry beam at Ambuklao S/S (Ambuklao-Binga 230 kV T/L Project) are not yet relocated.	For relocation.
52	OR-P-16-0224	Binga & Ambuklao S/S Project/ Sep. 6-9, 2016	The proposed three (3) sets of Switchyard Marshalling Kiosk at Ambuklao S/S (Ambuklao-Binga 230 kV T/L Project) are not yet installed.	For installation.
53	OR-P-16-0225	Binga & Ambuklao S/S Project/ Sep. 6-9, 2016	Two (2) sets of 230 kV Line Trap at Ambuklao S/S (Ambuklao-Binga 230 kV T/L Project) are not yet installed.	For installation.
54	OR-P-16-0226	Binga & Ambuklao S/S Project/ Sep. 6-9, 2016	The contractor failed to complete the upgrading of Binga S/S - Stage 2 (Binga-San Manuel 230 kV T/L Project) on the original completion date of 14 November 2014.	NGCP instructed the contractor to submit a commitment schedule for the project completion.
55	OR-P-16-0227	Binga & Ambuklao S/S Project/ Sep. 6-9, 2016	The copies of Factory Acceptance Test (FAT) of substation equipment for Binga S/S- Stage 2 (Binga-San Manuel 230 kV T/L Project) were not presented/provided.	For submission c/o QSMD.
56	OR-P-16-0228	Binga & Ambuklao S/S Project/ Sep. 6-9, 2016	The proposed three (3) units of 192 kV Surge Arrester (SA) for the existing gantry beam at Binga S/S - Stage 2 (Binga-San Manuel 230 kV T/L Project) were not yet installed.	For installation.
57	OR-P-16-0229	Binga & Ambuklao S/S Project/ Sep. 6-9, 2016	Three (3) units of existing 230 kV Voltage Transformer (VT) at Binga S/S - Stage 2 (Binga-San Manuel 230 kV T/L Project) are not yet dismantled.	For dismantling.
58	OR-P-16-0230	Binga & Ambuklao S/S Project/ Sep. 6-9, 2016	Three (3) units of existing 192 kV Surge Arrester (SA) at Binga S/S - Stage 2 (Binga-San Manuel 230 kV T/L Project) are not yet dismantled.	For dismantling.
59	OR-P-16-0231	Binga & Ambuklao S/S Project/ Sep. 6-9, 2016	No activities for the upgrading of Binga S/S – Stage 1 (Binga-San Manuel 230 kV T/L Project) after the energization of the 50 MVA transformer.	NGCP management to evaluate TBEA's contract to come-up with a conclusive decision.
<b>VISAYAS</b>				
1	(VIS-PR-16-05) OR-P-16-0119	Amlan & Samboan SS Project 1/ May 18-19, 2016	The Amlan S/S, components of the Visayas Substation Reliability Project 1, was not completed within the original contract period of 450 calendar days due to late mobilization of the contractor at site, late delivery of equipment/materials and late submission of drawings.	The contractor already submitted a revised Implementation Schedule for approval wherein the new project completion is February 2017.
2	OR-P-16-0120	Amlan & Samboan SS	No approved Revised Implementation Schedule (IS) for Visayas Substation	The contractor already submitted a revised

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		Project 1/ May 18-19, 2016	Reliability Project 1 to monitor the activities.	Implementation Schedule for approval.
3	OR-P-16-0121	Amlan & Samboan SS Project 1/ May 18-19, 2016	The 1x50 MVA Power Transformer is not yet installed at Bay 75 in Amlan S/S.	For installation after the swinging of NASUJI Line 1.
4	OR-P-16-0122	Amlan & Samboan SS Project 1/ May 18-19, 2016	Two (2) out of the 2 sets of 138 kV Power Circuit Breaker, live-tank, at Bay 76 in Amlan S/S are not yet installed.	Foundations and steel supports already completed. Ready for installation.
5	OR-P-16-0123	Amlan & Samboan SS Project 1/ May 18-19, 2016	Twelve (12) out of the 12 units of 138 kV Current Transformer are not yet installed at Bay 76 in Amlan S/S.	Foundations and steel supports already completed. Ready for installation.
6	OR-P-16-0124	Amlan & Samboan SS Project 1/ May 18-19, 2016	Three (3) out of the 6 units of 138 kV Voltage Transformer are not yet installed at Bay 75 in Amlan S/S.	The foundations and steel supports of the remaining VTs already completed. Ready for installation.
7	OR-P-16-0125	Amlan & Samboan SS Project 1/ May 18-19, 2016	Three (3) out of the 6 units of 120 kV Surge Arrester are not yet installed at Bay 75 in Amlan S/S.	The foundations and steel supports of the remaining VTs already completed. Ready for installation.
8	OR-P-16-0126	Amlan & Samboan SS Project 1/ May 18-19, 2016	Three (3) out of the 3 sets of 69 kV Power Circuit Breaker, live-tank type, are not yet installed at Amlan S/S.	On-going foundation works.
9	OR-P-16-0127	Amlan & Samboan SS Project 1/ May 18-19, 2016	Seven (7) out of the 7 sets of 69 kV Disconnect Switch are not yet installed at Amlan S/S.	On-going foundation works.
10	OR-P-16-0128	Amlan & Samboan SS Project 1/ May 18-19, 2016	Eighteen (18) out of the 18 units of 69 kV Current Transformer are not yet installed at Amlan S/S.	On-going foundation works.
11	OR-P-16-0129	Amlan & Samboan SS Project 1/ May 18-19, 2016	Nine (9) out of the 9 units of 69 kV Voltage Transformer are not yet installed at Amlan S/S.	On-going foundation works.
12	OR-P-16-0130	Amlan & Samboan SS Project 1/ May 18-19, 2016	Installation of 230 VAC & 125 VDC Distribution Boards at Amlan S/S has not yet started.	To be installed at the BCU building. The construction of the BCU is still on-going.
13	OR-P-16-0131	Amlan & Samboan SS Project 1/ May 18-19, 2016	Dismantling of existing 34.5 kV H-Frame/Take-off Structure at Amlan S/S has not yet started.	Dismantling will start after the installation of 34.5 kV AHEP by-pass line
14	OR-P-16-0132	Amlan & Samboan SS Project 1/ May 18-19, 2016	Dismantling of the following has not yet started at Bay 75 in Amlan S/S: a) 1-138 kV DS; b) 3-138 kV VT; c) 3-120 kV SA; & d) 2-138 kV LT.	Dismantling will start after the swinging of NASUJI Line 1.
15	OR-P-16-0133	Amlan & Samboan SS Project 1/ May 18-19, 2016	Erection/Installation of 34.5 kV By-Pass Structures and Transmission Line Materials at Amlan S/S has not yet started.	Erection/Installation will start after the erection of the 3 steel poles.
16	OR-P-16-0134	Amlan & Samboan SS Project 1/ May 18-19, 2016	Three (3) 34.5 kV Single Circuit Self Supporting Steel Poles, Dead-End Type for Amlan S/S were not yet delivered	For delivery.
17	OR-P-16-0135	Amlan & Samboan SS Project 1/ May 18-19, 2016	Swinging of NASUJI Line 1 at Amlan S/S has not yet started.	Swinging will start after the energization of Bay 76.
18	OR-P-16-0136	Amlan & Samboan SS Project 1/ May 18-19, 2016	Substation Protection equipment and Network Disturbance Monitoring Equipment (NDME) for Amlan S/S were not yet installed.	To be installed at the BCU building. The construction of the BCU is still on-going.
19	OR-P-16-0137	Amlan & Samboan SS Project 1/ May 18-19, 2016	Modification of Existing Protection Panel at Amlan S/S has not yet started.	Modification will start after the energization.
20	OR-P-16-0138	Amlan & Samboan SS Project 1/ May 18-19, 2016	Reconfiguration/Integration and Modification of the Existing SAS (Siemens SICAM PAS) at Amlan S/S has not yet started.	Modification will start after the energization.

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21	OR-P-16-0139	Amlan & Samboan SS Project 1/ May 18-19, 2016	Replacement / modification of existing Gantry Steel Structures including foundations at Amlan S/S has not yet completed.	Replacement / modification on-going.
22	OR-P-16-0140	Amlan & Samboan SS Project 1/ May 18-19, 2016	Construction of new BCU Building at Amlan S/S has not yet completed.	Construction works on-going
23	OR-P-16-0141	Amlan & Samboan SS Project 1/ May 18-19, 2016	BCU Building Expansion at Amlan S/S has not yet completed	Expansion works on-going.
24	OR-P-16-0142	Amlan & Samboan SS Project 1/ May 18-19, 2016	Installation of Deluge Water Spray System for the 3-50 MVA PT at Amlan S/S has not yet started	For installation.
25	OR-P-16-0143	Amlan & Samboan SS Project 1/ May 18-19, 2016	Air Conditioning units for Amlan S/S were not yet delivered	For delivery.
26	OR-P-16-0144	Amlan & Samboan SS Project 1/ May 18-19, 2016	The Samboan Substation, one of the components of the Visayas Substation Reliability Project 1, was not completed within the original contract period of 450 calendar days due to late mobilization of the contractor at site, late submission of construction drawings & late delivery of substation equipment/materials.	The contractor already submitted a revised Implementation Schedule (IS) for approval wherein the new project completion is December 2016.
27	OR-P-16-0145	Amlan & Samboan SS Project 1/ May 18-19, 2016	No approved Revised Implementation Schedule (IS) for Visayas Substation Reliability Project 1 to monitor the activities	The contractor already submitted a revised Implementation Schedule (IS) for approval.
28	OR-P-16-0146	Amlan & Samboan SS Project 1/ May 18-19, 2016	The installation of 1-50 MVA Power Transformer at Bay 72 in Samboan S/S was not yet completed	The Power Transformer intended for Samboan S/S was utilized for other urgent project as per instruction of the P&E-Design Group. The replacement is for delivery
29	OR-P-16-0147	Amlan & Samboan SS Project 1/ May 18-19, 2016	One (1) 138 kV Compact Air Insulated Switchgear at Bay 72 in Samboan S/S has not yet installed.	Foundations completed. Installation of steel supports still on-going.
	OR-P-16-0148	Amlan & Samboan SS Project 1/ May 18-19, 2016	Three (3) out of the 3-138 kV Voltage Transformer at Bay 72 in Samboan S/S has not yet installed	Foundations and steel supports already completed. Ready for installation
30	OR-P-16-0149	Amlan & Samboan SS Project 1/ May 18-19, 2016	One (1) 69 kV Compact Air Insulated Switchgear in Samboan S/S has not yet installed.	Foundations completed. Installation of steel supports still on-going.
31	OR-P-16-0150	Amlan & Samboan SS Project 1/ May 18-19, 2016	Three (3) out of the 3-69 kV Voltage Transformer in Samboan S/S has not yet installed.	Foundations and steel supports already completed. Ready for installation.
32	OR-P-16-0151	Amlan & Samboan SS Project 1/ May 18-19, 2016	Two (2) sets of 15 kV Metalclad Switchgear at Samboan S/S are not yet installed.	For installation.
33	OR-P-16-0152	Amlan & Samboan SS Project 1/ May 18-19, 2016	Two (2) sets of 400 kVA, 13.7/0.48 kV Station Service Transformer at Samboan S/S are not yet installed	To be installed at the Auxiliary Building. The construction of the Auxiliary Building is still on-going
34	OR-P-16-0153	Amlan & Samboan SS Project 1/ May 18-19, 2016	The following Station AC & DC Auxiliary Distribution System at Samboan S/S were not yet installed: a) 1-150 kVA, 460/230 VAC Sub-distribution Transformer; b) 460 VAC Distribution Boards; c) 230 VAC Distribution Boards; & d) 125 VDC Distribution Boards.	To be installed at the Auxiliary Building. The construction of the Auxiliary Building is still on-going.
35	OR-P-16-0154	Amlan & Samboan SS Project 1/ May 18-19, 2016	The existing 1-15 kV Metalclad Switchgear at Samboan S/S has not yet dismantled.	To be dismantled after the commissioning of the new Metalclad Switchgears
36	OR-P-16-0155	Amlan & Samboan SS Project 1/ May 18-19, 2016	One (1) Station Service Transformer including cables at Samboan S/S is not yet dismantled.	To be dismantled after the commissioning of the new

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				Station Service Transformers.
37	OR-P-16-0156	Amlan & Samboan SS Project 1/ May 18-19, 2016	The following Protection Equipment at Samboan S/S were not yet installed; a) Transformation Protection (M1 & M2); & b) 69 kV Bus Protection System	For installation.
38	OR-P-16-0157	Amlan & Samboan SS Project 1/ May 18-19, 2016	The following existing secondary devices at Samboan S/S were not yet modified/reconfigured/ integrated: a) Protection Panel; & b) SAS (Siemens SICAM PAS).	Works will start after the commissioning works of the primary devices.
39	OR-P-16-0158	Amlan & Samboan SS Project 1/ May 18-19, 2016	The construction of New Auxiliary Building (Gallery Type) at Samboan S/S has not yet completed	The construction of the Auxiliary Building is still on-going.
40	OR-P-16-0159	Amlan & Samboan SS Project 1/ May 18-19, 2016	The Deluge Water Spray System for the 2-50 MVA PT at Samboan S/S has not yet installed.	For installation.
41	OR-P-16-0160	Amlan & Samboan SS Project 1/ May 18-19, 2016	Installation of Air Conditioning Units & Ventilation System for the Auxiliary Building at Samboan S/S has not yet started.	To be installed at the Auxiliary Building. The construction of the Auxiliary Building is still on-going.
42	(VIS-PR-16-07) OR-P-16-0167	San Carlos-Guihulngan 69 kV T/L Project/ July 13-14, 2016	The contractor was not able to complete the San Carlos-Guihulngan 69 kV T/L Project (Sp13.SCGTP(TL).Vt-0150R) on the original contract expiry date of April 11, 2015 and no approved Contract Time Extension (CTE) has been issued.	The project was hampered by ROW problems. The contractor's proposed CTE No. 1 is being evaluated at the NGCP Head Office.
43	OR-P-16-0168	San Carlos-Guihulngan 69 kV T/L Project/ July 13-14, 2016	No revised Implementation Schedule (IS) has been approved for the expired contract of the San Carlos-Guihulngan 69 kV T/L Project (Sp13.SCGTP(TL).Vt-0150R).	The contractor already submitted a revised Implementation Schedule for review and approval of Engineering Construction Department (ECD).
44	OR-P-16-0169	San Carlos-Guihulngan 69 kV T/L Project/ July 13-14, 2016	One hundred fifty-six (156) out of the 236 steel structures (towers & poles) for the San Carlos-Guihulngan 69 kV T/L Project are not yet erected.	The erection of steel structures is on-going. The progress of the erection work was affected by the ROW problems.
45	OR-P-16-0170	San Carlos-Guihulngan 69 kV T/L Project/ July 13-14, 2016	Stringing of power conductor and Overhead Ground Wire (OHGW) for the San Carlos-Guihulngan 69 kV T/L Project has not yet started.	Stringing works will start on.
46	OR-P-16-0171	San Carlos-Guihulngan 69 kV T/L Project/ July 13-14, 2016	Two (2) sets of 72.5 kV 3-way Air Break Switch (ABS) with Continuous Current Rating of 1200A at San Carlos and Guihulngan side were not yet delivered at site.	Two (2) sets of 72.5 kV 3-way Air Break Switch (ABS) were already at the Manila Port and ready for delivery at site.
47	OR-P-16-0172	San Carlos-Guihulngan 69 kV T/L Project/ July 13-14, 2016	Ninety-four (94) out of the 236 tower sites of the San Carlos-Guihulngan 69 kV T/L Project are still not workable wherein 39 are under expropriation	On-going negotiations with the affected landowners and waiting for court resolution for the tower sites under expropriation.
48	(VIS-PR-16-11) OR-P-16-0232	San Jose & Sta. Barbara SS/Oct. 4-7, 2016	The contractors have not yet turned-over the Spares & Spare Parts / Excess Equipment / Materials for San Jose and Sta. Barbara S/S (SPBP).	On-going segregation.
49	OR-P-16-0233	San Carlos-Guihulngan 69 kV T/L Project/ July 13-14, 2016	The findings covered by the Joint Final Inspection Report & Correction Report (QSDM) for San Jose and Sta. Barbara S/S (SPBP) were not yet closed.	On-going correction of punchlist.
50	OR-P-16-0234	San Carlos-Guihulngan 69 kV T/L Project/ July 13-14, 2016	The As-Built Drawing/Structure List Report for San Jose and Sta. Barbara S/S (SPBP) were not yet approved.	Already submitted by the contractor. Review/evaluation is on-going.

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51	OR-P-16-0235	San Carlos-Guihulngan 69 kV T/L Project/ July 13-14, 2016	The Certificates of Energization for the new San Jose and Sta. Barbara Substations were not yet approved.	On process for approval.
52	OR-P-16-0236	San Carlos-Guihulngan 69 kV T/L Project/ July 13-14, 2016	The Certificate of Final Completion for SPBP (S/S Portion) was not yet approved.	On process for approval.
53	OR-P-16-0237	San Carlos-Guihulngan 69 kV T/L Project/ July 13-14, 2016	The generator set in San Jose S/S has No Permit to Operate. Ref: R.A. 8479 (Philippine Clean Air Act of 1990)	On-going compliance.
54	OR-P-16-0238	San Carlos-Guihulngan 69 kV T/L Project/ July 13-14, 2016	The deep well water tank in San Jose Substation has No Permit to Operate.	On-going compliance.
55	OR-P-16-0239	San Carlos-Guihulngan 69 kV T/L Project/ July 13-14, 2016	No approved Revised Implementation Schedule (IS) for Sta. Barbara S/S (VSRP2) to monitor the activities and to establish the completion of the project.	Under review for approval.
56	OR-P-16-0240	San Carlos-Guihulngan 69 kV T/L Project/ July 13-14, 2016	No Variation Order (V. O.) has been issued for Sta. Barbara S/S (VSRP2).	Variation Order was submitted for evaluation and approval.
57	OR-P-16-0241	San Carlos-Guihulngan 69 kV T/L Project/ July 13-14, 2016	The following equipment were not yet relocated at Bay 71 (new) in Sta. Barbara (VSRP2): a. 138 kV PCB – 2 sets b. 138 kV DS – 3 sets c. 138 kV LT – 2 units d. 138 kV Combined CT/VT – 3 units	Energization and loading of TR1 and TR2.
58	OR-P-16-0242	San Carlos-Guihulngan 69 kV T/L Project/ July 13-14, 2016	The following equipment were not yet relocated at Bay 72 (new) in Sta. Barbara (VSRP2): a. 138 kV PCB – 1 set b. 138 kV DS – 4 sets c. 138 kV VT – 3 units d. 138 kV SA – 3 units e. 138 kV LT – 2 units	Energization and loading of TR1 and TR2.
59	OR-P-16-0243	San Carlos-Guihulngan 69 kV T/L Project/ July 13-14, 2016	Two (2) units of 138 kV LT were not yet relocated at Bay 73 (new) in Sta. Barbara (VSRP2).	Energization and loading of TR1 and TR2.
60	OR-P-16-0244	San Carlos-Guihulngan 69 kV T/L Project/ July 13-14, 2016	The following equipment were not yet relocated at Bay 74 (new) in Sta. Barbara (VSRP2): a. 138 kV PCB – 2 sets b. 138 kV VT – 3 units c. 138 kV SA – 3 units	Energization and loading of TR1 and TR2.
61	OR-P-16-0245	San Carlos-Guihulngan 69 kV T/L Project/ July 13-14, 2016	The following equipment were not yet relocated at Bay 75 (new) in Sta. Barbara (VSRP2): a. 138 kV PCB – 2 sets b. 138 kV DS – 2 sets c. 138 kV VT – 3 units d. 138 kV SA – 3 units	Energization and loading of TR1 and TR2.
62	OR-P-16-0246	San Carlos-Guihulngan 69 kV T/L Project/ July 13-14, 2016	One (1) existing 50 MVA Power Transformer (TR3) was not yet relocated at Bay 75 (new) in Sta. Barbara (VSRP2) from the old switchyard.	Energization and loading of TR1 and TR2.
63	OR-P-16-0247	San Carlos-Guihulngan 69 kV T/L Project/ July 13-14, 2016	The following equipment were not yet relocated at Bay 51 (new) in Sta. Barbara (VSRP2): a. 69 kV PCB – 1 set b. 69 kV DS – 1 set c. 69 kV SA – 3 units d. 69 kV Neutral CT – 1 unit e. 1-7.5MVAR Capacitor Bank No. 1	Energization and loading of TR1 and TR2.
64	OR-P-16-0248	San Carlos-Guihulngan 69 kV T/L Project/ July 13-14, 2016	The following equipment were not yet relocated at Bay 52 (new) in Sta. Barbara (VSRP2): a. 69 kV PCB – 1 set b. 69 kV DS – 1 set c. 69 kV SA – 3 units d. 69 kV Neutral CT – 1 unit	Energization and loading of TR1 and TR2.

**Annex 2. TransCo Summary of Inspection Report for Projects Under Construction (PUC)  
(May 2016 to October 2016)**

No.	Observation Report No.	Inspection Date/ Area	Description of Observation (TransCo)	Action Plan / Remarks (NGCP)
			e. 1-7.5MVAR Capacitor Bank No. 2	
65	OR-P-16-0249	San Carlos-Guihulngan 69 kV T/L Project/ July 13-14, 2016	Two (2) sets of 69 kV PCB were not yet relocated at Bay 54 (new) in Sta. Barbara (VSRP2)	Energization and loading of TR1 and TR2.
66	OR-P-16-0250	San Carlos-Guihulngan 69 kV T/L Project/ July 13-14, 2016	The following equipment were not yet relocated at Bay 55 (new) in Sta. Barbara (VSRP2): a. 69 kV PCB – 2 sets b. 69 kV DS – 2 sets c. 138 kV VT – 3 units	Energization and loading of TR1 and TR2.
67	OR-P-16-0251	San Carlos-Guihulngan 69 kV T/L Project/ July 13-14, 2016	The Fiber Optic Communication System for Sta. Barbara S/S (VSRP2) is not yet installed.	For installation.
68	OR-P-16-0252	San Carlos-Guihulngan 69 kV T/L Project/ July 13-14, 2016	Two (2) steel poles (MDCSPT2) including the 795MCM ACSR/AS “Condor” power conductor at Sta. Barbara S/S (VSRP2) are not yet erected.	Foundation design is under review of Engineering Design Department.
69	OR-P-16-0253	San Carlos-Guihulngan 69 kV T/L Project/ July 13-14, 2016	Swinging of the existing San Jose Line from Bay 71 to Bay 73 (including OHGW & OPGW) at Sta. Barbara S/S (VSRP2) has not yet started.	Energization of associated high voltage equipment and line protection system for Bay 73.
70	OR-P-16-0254	San Carlos-Guihulngan 69 kV T/L Project/ July 13-14, 2016	The existing ILECO/Sibalom, Gen. Luna and INGORE 69kV Feeder Lines are not yet terminated from the old switchyard to Bay 53-55 of the new 69kV Switchyard of Sta. Barbara S/S (VSRP2).	1. Energization and loading of TR1 & TR2. 2. Completion of 69 kV take off structures and transmission lines
71	OR-P-16-0255	San Carlos-Guihulngan 69 kV T/L Project/ July 13-14, 2016	Transferring, reinstallation, testing and commissioning of Dingle and PEDC line protection panel at Sta. Barbara S/S (VSRP2) are not yet completed.	Completion/installation of relocated equipment for Bays 71 & 72.
72	OR-P-16-0256	San Carlos-Guihulngan 69 kV T/L Project/ July 13-14, 2016	Presence of grass/vegetation at the 138 kV switchyard of Sta. Barbara S/S (VSRP2).	Removal of vegetation.
73	OR-P-16-0257	San Carlos-Guihulngan 69 kV T/L Project/ July 13-14, 2016	Laying of gravel surfacing at 69 and 138 kV switchyard of Sta. Barbara S/S (VSRP2) is not yet completed.	Completion of finish grade elevation.
<b>MINDANAO</b>				
1	(MIN-PR-16-06) OR-P-16-0161	Opol Substation Project/ June 8-10, 2016	The existing 84.08 linear km. OHGW of the Lugait-Tagoloan 138 kV T/L should be replaced with OPGW. However, only 58 linear km. of OPGW was included in the contract.	The remaining 26.08 linear km. OPGW was already purchased under a Variation Order and the installation started last June 3, 2016.
2	OR-P-16-0162	Opol Substation Project/ June 8-10, 2016	The construction/erection of the cut-in line to Lugait-Tagoloan 138 kV T/L (Line 1 & Line 2) has been completed but not yet energized and commissioned.	Still waiting for the completion/ energization of the Opol S/S.
3	OR-P-16-0163	Opol Substation Project/ June 8-10, 2016	The contractor failed to complete the Opol S/S Project despite the issuance of a Contract Time Extension (CTE) No. 1 which moves the contract expiry from May 7, 2015 to October 11, 2015.	The contractor is preparing CTE No. 2.
4	OR-P-16-0164	Opol Substation Project/ June 8-10, 2016	No revised Implementation Schedule (IS) No. 2 for Opol S/S Project to monitor the construction activities of the contractor.	The revised IS will be prepared upon the approval of CTE No. 2.
5	OR-P-16-0165	Opol Substation Project/ June 8-10, 2016	Test & Commissioning Reports of substation equipment for Opol 138/69 kV Substation Project were not yet available.	To be provided after Test & Commissioning scheduled on September 2016.
6	OR-P-16-0166	Opol Substation Project/ June 8-10, 2016	Presence of grass/vegetation at the 138 kV switchyard of Opol Substation.	Removal of vegetation.

**Annex 3. NGCP Related Petitions to ERC as of 31 October 2016**

DECISION/CASE NO./ DATE OF FILING	NATURE OF PETITION	GROUND FOR FILING	STATUS
ERC Case 2016-179RC/ October 10, 2016	In the Matter of the Application of the National Grid Corporation of the Philippines for the Approval of Force Majeure Event Regulated FM Pass-Through for Typhoon Lando in Luzon and Sabotage Incidents in Mindanao, in Accordance with the Rules for Setting Transmission Wheeling Rates, with Prayer for Provisional Authority.	<ol style="list-style-type: none"> <li>4. DECLARE Typhoon Lando in Luzon and Sabotage incidents in Mindanao as Force Majeure Events (FMEs);</li> <li>5. Immediately GRANT Provisional Approval to implement and bill the FM Pass-Through Amounts to Luzon and Mindanao customers starting November 2016 billing month to December 2020 billing month or until such time that the amount incurred is fully recovered;</li> <li>6. APPROVE the CAPEX and OPEX amounting to PhP13,448,010.87 incurred by NGCP for the repair, restoration and rehabilitation of the damaged transmission assets and other related facilities due to FMEs Typhoon Lando and sabotage incidents in Mindanao;</li> <li>7. APPROVE after due notice and hearing, the proposed FM Pass-Through Amount to be collected from the Luzon and Mindanao customers starting November 2016 billing month to December 2020 billing month or until such time that the amount incurred is fully recovered;</li> <li>8. APPROVE and ALLOW the recovery of the Net Fixed Asset Value of the transmission assets and other related facilities damaged by the FMEs Typhoon Lando in Luzon amounting to Php2,184,071.30 given that it would have been fully recovered by NGCP if these transmission assets and other related facilities have not been damaged or destroyed by said FME; and</li> <li>9. EXCLUDE the proposed Pass-Through Amount from the side constraint calculation.</li> </ol>	Awaiting ERC Order and Notice of Hearing.
ERC Case No. 2016-164RC/ August 24, 2016	In the Matter of the Application for Approval of the Ancillary Services Procurement Agreement (ASPA) Between the National Grid Corporation of the Philippines and SN Aboitiz Power - Magat, Inc., with Prayer for the Issuance of Provisional Authority.	<ol style="list-style-type: none"> <li>10. Immediately ISSUE a provisional authority to Implement the subject ASPA;</li> <li>11. APPROVE, after notice and hearing, the subject ASPA.</li> </ol>	Awaiting ERC Order and Notice of Hearing.
ERC Case No. 2016-165RC/ August 24, 2016	In the Matter of the Application for Approval of the Ancillary Services Procurement Agreement (ASPA) Between the National Grid Corporation of the Philippines and SN Aboitiz	<ol style="list-style-type: none"> <li>12. ISSUE a provisional authority to Implement the subject ASPA;</li> <li>13. After notice and hearing, APPROVE the subject ASPA.</li> </ol>	Awaiting ERC Order and Notice of Hearing.

DECISION/CASE NO./ DATE OF FILING	NATURE OF PETITION	GROUNDS FOR FILING	STATUS
ERC Case No. 2016-163RC/ August 22, 2016	<p>Power - Benguet, Inc., with Prayer for the Issuance of Provisional Authority.</p> <p>In the Matter of the Application of the National Grid Corporation of the Philippines for the Approval of Force Majeure Event Regulated FM Pass Through for Typhoon Ineng in Luzon, in Accordance with the Rules for Setting Transmission Wheeling Rates, with Prayer for Provisional Authority.</p>	<p>14. DECLARE Typhoon Ineng as Force Majeure Events (FME);</p> <p>15. Immediately GRANT Provisional Approval to implement and bill the FM Pass-Through Amount to Luzon customers starting September 2016 billing month to December 2020 billing month or until such time that the amount incurred is fully recovered;</p> <p>16. APPROVE the Capital Expenditure (CAPEX) amounting to PhP1,561,298.74 incurred by NGCP for the repair, restoration and rehabilitation of the damaged transmission assets and other related facilities due to Typhoon Ineng as FME;</p> <p>17. APPROVE after due notice and hearing, the proposed FM Pass- Through Amount to be collected from the Luzon customers starting September 2016 billing month to December 2020 billing month or until such time that the amount incurred is fully recovered;</p> <p>18. APPROVE and ALLOW the recovery of the Net Fixed Asset Value of the transmission assets and other related facilities damaged by the FME Typhoon Ineng amounting to Php1,578,209.42 given that it would have been fully recovered by NGCP if these transmission assets and other related facilities have not been damaged or destroyed by FME Typhoon Ineng; and</p> <p>19. EXCLUDE the proposed Pass-Through Amount from the side constraint calculation.</p>	Awaiting ERC Order and Notice of Hearing
ERC Case No. 2016-003RC/ August 22, 2016	<p>Application of the National Grid Corporation of the Philippines for the Approval of Force Majeure Event Regulated FM Pass-Through for Tropical Storm Amang in Visayas and Sabotage Incidents in Mindanao</p>	<p>20. DECLARE the Tropical Storm Amang and Sabotage incidents in Mindanao as Force Majeure Events (FME);</p> <p>21. GRANT Provisional Approval to implement and bill the FM Pass-Through Amounts to Visayas and Mindanao customers starting February 2016 billing month to December 2020 billing month or until such time that the amount incurred is fully recovered;</p> <p>22. APPROVE the Capital Expenditure (CAPEX) amounting to PhP23,688,607.80 incurred by NGCP for</p>	<p>26. On July 1, 2016, ERC posted on its websites an Order dated June 21, 2016 setting the jurisdictional, expository, pre-trial and evidentiary hearing schedules.</p> <p>27. Jurisdictional and expository presentation for Mindanao stakeholders were conducted in Davao on August 31, 2016 and for Visayas stakeholders, the expository presentation was conducted in Cebu on September 1, 2016.</p> <p>28. On September 5, 2016, the Pre-Trial and Evidentiary hearing was suspended until the Commission received and ruled on</p>



DECISION/CASE NO./ DATE OF FILING	NATURE OF PETITION	GROUNDS FOR FILING	STATUS
		<p>the repair, restoration and rehabilitation of the damaged transmission assets and other related facilities due to Tropical Storm Amang and sabotage incidents in Mindanao as FMEs;</p> <p>23. APPROVE after due notice and hearing, the proposed FM Pass-Through Amount to be collected from the Visayas and Mindanao customers starting February 2016 billing month to December 2020 billing month or until such time that the amount incurred is fully recovered;</p> <p>24. APPROVE and ALLOW the recovery of the Net Fixed Asset Value of the transmission assets and other related facilities damaged by the FME Tropical Storm Amang and sabotage incidents in Mindanao amounting to Php1,049,732.95, given that it would have been fully recovered by NGCP if these transmission assets and other related facilities have not been damaged or destroyed by FME Tropical storm Amang and sabotage incidents in Mindanao; and</p> <p>25. EXCLUDE the proposed Pass-Through Amount from the side constraint calculation.</p>	<p>the petition for intervention of Visayan Electric Company (VECO).</p> <p>29. On October 5, 2016, the evidentiary hearing was conducted and will be continued on the next hearing.</p>
ERC Case No. 2015-210 RC/ December 11, 2015	In the Matter of the Application for the Approval of the Implementation of Capital Expenditures for Calendar Year 2016, with Prayer for the Issuance of Provisional Authority	Immediately ISSUE a provisional Authority to Implement the proposed CAPEX projects; and APPROVE, after notice and hearing, the proposed CAPEX projects.	<p>On May 2, 2016, meeting among ERC, NGCP and TransCo was conducted at the ERC Office. All technical questions of TransCo to NGCP were discussed and NGCP promised to submit its compliance within fifteen (15) calendar days.</p> <p>On August 23, 2016 ERC Docketed and posted on its website an order dated February 22, 2016 wherein the commission Provisionally Approves the implementation of seven (7) Capital Expenditures, amounting to PhP1,118,580,000.00 for the Regulatory year 2016, subject to Optimization.</p>
ERC Case No. 2014-163 RC/ November 5, 2014	Application of the National Grid Corporation of the Philippines for the Approval of Force Majeure (FM) Event Regulation FM Pass Through for Typhoon Yolanda in Accordance with the Rules for Setting Transmission Wheeling Rates	GRANT Provisional Approval to implement and bill the FM Pass Through Amounts to Visayas customers starting January 2015 billing month to December 2020 billing month or until such time that the amount is fully recovered;	<p>On June 6, 2016, the Cross-examination was conducted;</p> <p>On July 8, 2016, the scheduled continuation of hearing was reset to August 11, 2016.</p> <p>On August 11, 2016, the Evidentiary Hearing was terminated and the Parties</p>

DECISION/CASE NO./ DATE OF FILING	NATURE OF PETITION	GROUNDS FOR FILING	STATUS
		<p>DECLARE the Typhoon Yolanda as Force Majeure Event (FME);</p> <p>APPROVE the Capital Expenditure (CAPEX) incurred by NGCP for the repair, restoration and rehabilitation of the damaged transmission assets and other related facilities due to the FME Typhoon Yolanda;</p> <p>APPROVE, after due notice and hearing, the proposed FM Pass Through Amount to be collected from the Visayas customers starting January 2015 billing month to December 2020 billing month or until such time that the amount incurred is fully recovered;</p> <p>APPROVE and ALLOW the recovery of the Net Fixed Asset Value of the transmission assets and other related facilities damaged by the FME Typhoon Yolanda in the amount of One Billion One Hundred Fourteen Million Six Hundred Seventy-Seven Thousand Two Hundred Eighty-Two Pesos and 90/100 (PhP1,114,677,282.90) as part of the FM Pass Through Amount given that the said amount would have been fully recovered by NGCP if these transmission assets and other related facilities have not been damaged or destroyed by Typhoon Yolanda as FME;</p> <p>EXCLUDE the proposed Pass-Through Amount from the side constraint calculation.</p>	<p>are given Thirty (30) days to submit written memoranda. Also, applicant NGCP was ordered to submit its Formal Offer of Evidence within 30 days.</p>

Source: Transco

**Annex 4. Private Sector Initiated Power Projects in Luzon (COMMITTED) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION/PROJECT COST	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
<p><b>COAL</b></p> <p>300 MW Limay Power Plant Project Phase I (2x150MW)/ SMC Consolidated Power Corporation/ Brgy. Lamao, Limay, Bataan</p> <p><b>Cost: \$622.15M / Php25.508B</b></p>	<p><b>2,720.00</b></p> <p>300</p>	<p>FEASIBILITY STUDY: Completed</p> <p>ARRANGEMENT FOR SECURING THE REQUIRED LAND: Completed;</p> <p>MARKETING OF GENERATING CAPACITIES:</p> <ul style="list-style-type: none"> <li>• On-going electric power supply contract negotiation with prospective off-takers (DUs);</li> <li>• For Unit 1 - ISECO-10MW, TARELCO I-10MW, TARELCO II-15MW, PENELCO-10MW, REAL STEEL-7MW, SMC (Various Facilities)-60.3MW; For Unit 2 – PENELCO-10MW, OCEANA GOLD-12.5MW, REAL STEEL-17MW, SMC (Various Facilities)-37.1MW; 188.9 TOTAL</li> </ul> <p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Environmental Impact Assessment completed;</li> <li>• Topographic and Hydrographic completed;</li> <li>• Soil Investigation completed;</li> <li>• GIS/SIS submitted last 12 July 2013, under review of NGCP;</li> <li>• Facility Study already sent to NGCP for review;</li> <li>• EPC was executed in January 2013; awarded;</li> <li>• ECC was issued on 17 September 2013;</li> <li>• SEC issued last 19 August 2011</li> <li>• Clearance to Undertake GIS from DOE issued on 13 February 2013;</li> <li>• Addendum for the re run of SIS was submitted to NGCP last Jan 30, 2015 for review</li> </ul> <p>GROUNDBREAKING SCHEDULES:</p> <ul style="list-style-type: none"> <li>• Groundbreaking was held September 2014</li> </ul> <p>FINANCING ARRANGEMENTS:</p> <ul style="list-style-type: none"> <li>• Financial Arrangement Secured (65% Loan / 35% Equity);</li> <li>• Project cost is \$622.15M / Php25.508B</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• Construction of the Project has been underway since January 2014;</li> <li>• Construction Activities of Unit 1&amp;2 2 x 150MW Power Plant - 2.30%;</li> <li>• Design and Construction of Pier and Jetty Structure is 99.55%;</li> <li>• Overall Piling Works is 52.29%;</li> <li>• Turbine and Generator Building is 58.47%;</li> <li>• Ash Dump Design and Construction - 100%</li> </ul> <p>COMMENCEMENT OF CONSTRUCTION:</p> <ul style="list-style-type: none"> <li>• March 2014</li> </ul>	<p>Unit 1 - 150 MW -Oct 2016 Unit 2 - 150 MW -Apr 2017</p>	<p>Unit 1 - 150 MW -Nov 2016 Unit 2 - 150 MW -July 2017</p>
<p>1 x 420 MW Pagbilao Coal-Fired Thermal Power Plant/ Pagbilao Energy Corporation/ Pagbilao</p>	<p>420</p>	<p>FEASIBILITY STUDY:</p> <ul style="list-style-type: none"> <li>• Feasibility Study completed;</li> <li>• Estimated Net Capacity: 400MW</li> </ul>	<p>Between May to November 2017</p>	<p>November 2017</p>

**Annex 4. Private Sector Initiated Power Projects in Luzon (COMMITTED) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION/PROJECT COST	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
<p>Power Station, Nrgy. Ibabang Polo, Pagbilao, Quezon</p> <p><b>Cost: US\$ 1,000,000,000.00</b></p>		<p>ARRANGEMENT FOR SECURING THE REQUIRED LAND: Completed</p> <p>MARKETING OF GENERATING CAPACITIES:</p> <ul style="list-style-type: none"> <li>• Contract with off-takers completed, Supply agreement executed;</li> <li>• 50% of the plant's capability will be sold to Therma Luzon Inc.</li> <li>• 50% will be sold to TeaM (Phils.) Energy Corporation</li> </ul> <p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Environmental Compliance Certificate was issued on 18 June 2013;</li> <li>• Secured endorsement from Sangguniang Barangay of Ibabang Polo, Sangguniang Bayan of Pagbilao, Sangguniang Panlalawigan of Quezon;</li> <li>• ECC issued on 18 June 2013</li> <li>• In final negotiations with NPC, PSALM, TeaM Energy Corporation and Therma Luzon, Inc. to co-locate the plant in the existing Pagbilao Power Station</li> </ul> <p>GROUNDBREAKING SCHEDULES:</p> <ul style="list-style-type: none"> <li>• 23 July 2014</li> </ul> <p>FINANCING ARRANGEMENTS:</p> <ul style="list-style-type: none"> <li>• Financial Arrangement Secured with various lenders on 30 July 2014; On-going draw downs for planned milestones and progress payments;</li> <li>• Estimated Project Cost: US\$ 1,000,000,000.00</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• Construction Contracts for Plant &amp; Equipment: Completed and executed;</li> <li>• Notice to Proceed and Commencement</li> <li>• Notice issued to EPC Contractor; Down Payment already released to EPC contractor;</li> <li>• Commencement of EPC and Construction: May 2014; Approximately 71% completed as of February 2016;</li> <li>• 84.32% completion as of 25 July 2016</li> <li>• 86.49% completion as of 26 August 2016</li> </ul>		
<p>San Buenaventura Power Ltd. Co. (SBPL) Project/ San Buenaventura Power Ltd. Co. (SBPL)/ Mauban, Quezon</p> <p><b>Cost: Php37.8B</b></p>	460	<p>FEASIBILITY STUDY: Completed</p> <ul style="list-style-type: none"> <li>• Completed Selection Study in 2012; Technology selection study completed 2012</li> <li>• Coal Sourcing Study completed in 2012</li> <li>• Facility Study to be done in 2014; System Impact Study completed 2007 and revalidated 2013</li> </ul> <p>ARRANGEMENT FOR SECURING THE REQUIRED LAND:</p> <ul style="list-style-type: none"> <li>• Project will be located within the existing site</li> </ul> <p>MARKETING OF GENERATING CAPACITIES:</p> <ul style="list-style-type: none"> <li>• 20 years + 5-year extension PSA with MERALCO as offtaker;</li> <li>• Awaiting for the ERC approval of their PSA with MERALCO;</li> <li>• SBPL has signed a PSA with Meralco on 29 May 2014; PSA approved by ERC on March 27, 2015 and released May 19, 2015</li> </ul>	December 2018	December 2019

**Annex 4. Private Sector Initiated Power Projects in Luzon (COMMITTED) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION/PROJECT COST	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
		<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Clearance to Undertake GIS from DOE issued on 7 March 2013;</li> <li>• System Impact Study completed in 2007 and is being revalidated in 2013;</li> <li>• ECC (Ref.Code 0610-012-4021) issued on 4 June 2007;</li> <li>• ECC extension of validity issued on 31 May 2012 and valid until 4 June 2015; ECC for SBPL issued on 11 November 2014</li> <li>• Request for Amendment to upgraded technology submitted to EMB on 17 February 2014</li> <li>• Request to assign the ECC for new project was requested on 2 June 2014;</li> <li>• Additional information requested by EMB on 7 August 2014; QPL is in the process of preparing the documents;</li> <li>• Secured Sanggunian Bayan Resolution No. 2014-269 endorsing the project to expand;</li> <li>• SIS completed in 2007 and is being revalidated;</li> <li>• Municipal LGU endorsement issued April 19, 2005;</li> <li>• Certificate of Non-Overlap was issued by the NCIP to Quezon Power on 5 February 2014; Request to assign the CNO was endorsed by the DOE and submitted to the NCIP on 15 July 2014; Certificate of Non-overlap issued on 29 August 2014</li> <li>• ERC application was filed on 2 June 2014; Financing arrangements is expected to be secured only after the ERC issues the final approval; BOI Certificate of Registration issued on 15 October 2015</li> </ul> <p>FINANCING ARRANGEMENTS:</p> <ul style="list-style-type: none"> <li>• Financing arrangements is expected to be secured only after the ERC issues the final approval; Financially closed December 1, 2015</li> <li>• Project cost is Php37.8B</li> </ul> <p>GROUNDBREAKING SCHEDULES:</p> <ul style="list-style-type: none"> <li>• December 10, 2015</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• Owner's Engineer selected; EPIC bids received in November 2013</li> <li>• EPC Contract signed October 2014;</li> </ul> <p>COMMENCEMENT OF CONSTRUCTION:</p> <ul style="list-style-type: none"> <li>• Award EPC contract estimate September 2013;</li> <li>• End of 2014</li> <li>• Expect to commence construction only after the ERC issues the final approval</li> <li>• 4 years to fully complete the construction of the plant;</li> </ul>		
Masinloc Expansion Project/AES Masinloc Power Partners Co., Inc./ Zambales	300	<p>FEASIBILITY STUDY:</p> <ul style="list-style-type: none"> <li>• Completed February 2011</li> </ul> <p>ARRANGEMENT FOR SECURING THE REQUIRED LAND:</p> <ul style="list-style-type: none"> <li>• No additional land will be acquired as the expansion will be inside the existing Masinloc Power Plant Complex.</li> <li>• NPC/PSALM, however, is still continuing the titling process and land registration for some parcels of land</li> </ul>	Unit 3 – September 2013	December 2013 (Target Testing and Commissioning)

**Annex 4. Private Sector Initiated Power Projects in Luzon (COMMITTED) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION/PROJECT COST	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
		<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Grid Impact Studies obtained on 7 January 2011</li> <li>• ECC Amendment was released by DENR on April 23, 2012</li> <li>• The amended DOE Certificate of Endorsement for BOI was released on May 7, 2012</li> <li>• Secured CoE for ERC on September 2011</li> <li>• On-going processing of Certificate of Precondition from NCIP</li> <li>• SAPA amendment is still pending with DENR</li> </ul> <p>FINANCING ARRANGEMENTS:</p> <ul style="list-style-type: none"> <li>• Provided bank certification for financial closing status to DOE dated 24 August 2016;</li> <li>• Project cost is Php49.45B</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• Selection of EPC Contractor on going</li> </ul> <p>COMMENCEMENT OF CONSTRUCTION:</p> <ul style="list-style-type: none"> <li>• 2nd Qtr 2014</li> </ul>		
<p>2 X 600 MW Dinginin Expansion Project/ GNPower Dinginin Coal Plant Ltd. Co./ Mariveles, Bataan</p> <p><b>Cost: \$1B</b></p>	1,200.00	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• On-going presentation/proposal submissions to potential customers</li> <li>• Clearance to Undertake GIS from DOE issued on 26 June 201;</li> <li>• Obtained LGU endorsements; BOI registration for 600 MW pre-approve</li> <li>• On-going SI;</li> <li>• On-going EIS for ECC application</li> <li>• On-going securing DOE of Endorsement for DENR-ECC Arrangements for securing the required land will be acquired by an affiliate Filipino company of GNPower;</li> <li>• On-going negotiation with tenders</li> </ul> <p>FINANCING ARRANGEMENTS:</p> <ul style="list-style-type: none"> <li>• Project cost is \$1B</li> <li>• Provided bank certification which was received by DOE-EPIMB-PPDD on 18 March 2016</li> <li>• With Financial Closing, agreed by GNPD and banks/financial institutions on 17 December 2015</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• On-going finalization of EPC Contract</li> <li>• EPC Contract was signed on Oct 27, 2015</li> </ul>	<p>Unit I - October 2018</p> <p>Unit II - 2019</p>	<p>Unit I - March 2019</p> <p>Unit II -January 2020</p>
<b>NATURAL GAS</b>	<b>1,100.00</b>			
<p>1x450 San Gabriel Power Plant (Phase II)/ First NatGas Power Corp./ Santa Rita, Batangas</p> <p><b>Cost: US\$600 Million</b></p>	450	<p>MARKETING OF GENERATING CAPACITIES:</p> <ul style="list-style-type: none"> <li>• Discussion with target off takers targeted for the first half of 2014; still on-going (17 June 2015); looking at teaming up with MERALCO and other potential offtakers and/or offer the available capacity to the spot market (WESM).</li> </ul> <p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Secured Clearance from DOE for the conduct of GIS on 18 February 2013</li> </ul>	April 2016	October 2016 (Awaiting ERC-COC)

**Annex 4. Private Sector Initiated Power Projects in Luzon (COMMITTED) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION/PROJECT COST	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
		<ul style="list-style-type: none"> <li>• Engineering, Procurement and Construction (EPC) and Operations Maintenance (O&amp;M) contracts already awarded on December 16, 2013</li> <li>• Ongoing application for the Permit to operate mechanical equipment such as boilers, pressure vessels etc from City Engineers office of Batangas;</li> <li>• Ongoing application for COE and MOA from DOE;</li> <li>• Ongoing application for ERC point to point connection of transmission lines for Sta. Rita, San Lorenzo switchyard;</li> <li>• Ongoing negotiations with NGCP for contract metering and Transmission Service Agreement;</li> <li>• SIS was approved by NGCP on 11 December 2013.</li> <li>• Processing of the application of COC with ERC is ongoing. Technical inspection is targeted to be done in the 3rd week of May 2016</li> <li>• The application of First NatGas Power Corp (FNPC) to be a direct member of WESM was approved on 26 February 2016</li> <li>• San Gabriel achieved its first GT firing on 11 April 2016</li> <li>• First synchronization to the grid was achieved on 13 April 2016</li> <li>• Targeting to conduct its first combined-cycle operation on 04 May 2016</li> <li>• Awaiting approval from DENR Central Office of the assignment of foreshore lease between First Gas Power Corp and FNPC</li> <li>• Permit to Operate application to the City Engineer's Office is ongoing.</li> </ul> <p>FINANCING ARRANGEMENTS:</p> <ul style="list-style-type: none"> <li>• Financial Arrangement with kfW Secured on 4 September 2014</li> <li>• Project cost is US\$600 Million; bilateral contracts on the grid and NGCP for station-use/feed-back power</li> </ul> <p>COMMENCEMENT OF CONSTRUCTION:</p> <ul style="list-style-type: none"> <li>• 16 December 2013;</li> <li>• 98.8% completed as of March 2016</li> </ul>		
<p>Pagbilao 600 MW Combined Cycle Gas Fired Power Plant/Proposed 3x200 MW CCGT Power Plant/ Energy World Corporation/ Brgy. Ibabang Polo, Grande Island, Pagbilao, Quezon</p> <p><b>Cost:\$300M</b></p>	650	<p>FEASIBILITY STUDY:</p> <ul style="list-style-type: none"> <li>• Completed</li> </ul> <p>ARRANGEMENT FOR SECURING THE REQUIRED LAND:</p> <ul style="list-style-type: none"> <li>• Land is already secured with a long lease entered into since 2007</li> </ul> <p>MARKETING OF GENERATING CAPACITIES:</p> <ul style="list-style-type: none"> <li>• No specific off taker yet but already have a discussion with Federation of Philippine Industries, intended to supply power into the Wholesale Electricity Spot Market but is also open to discussing potential off take arrangements as well</li> <li>• 100% WESM</li> </ul> <p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• GIS for 300MW issued by NGCP on 8 August 2013 and revised on 3 July 2013 for 600MW</li> <li>• Issued DOE Endorsement for Revised Capacity on 3 July 2013;</li> <li>• Revised DOE clearance for GIS submitted to NGCP on January 2014</li> <li>• GIS from NGCP for the 600MW was released on August 2014;</li> </ul>	<p>U1 - Feb 2017 U2 - May 2017 U3 - Aug 2017</p>	<p>U1 - Feb 2017 U2 – May 2017 U3 - Aug 2017 (Target Testing and Commissioning)</p>

**Annex 4. Private Sector Initiated Power Projects in Luzon (COMMITTED) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION/PROJECT COST	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
		<ul style="list-style-type: none"> <li>Several Resolutions has been issued on May 2014 (Sangguniang Barangay Resolution, Sangguniang Bayan Resolution and Sangguniang Panlalawigan Resolution) interposing no objection for the construction of a 600 MW Liquefied Natural Gas (LNG) Power Plant;</li> <li>On-going processing of ECC for power plant</li> </ul> <p>FINANCING ARRANGEMENTS:</p> <ul style="list-style-type: none"> <li>Financial Arrangement Secured</li> <li>Syndicated Loan</li> <li>Project Cost:\$300M</li> <li>Signing of loan agreement last 18 Sep 2015</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>Entered into a Sale and Purchase Agreement last October 2012 with Siemens Energy for two 200 MW gas turbines and the first 200MW turbine is expected to arrive by September 2014;</li> <li>LNG Tank is currently at 50% construction completed as of August 2014;</li> </ul> <p>COMMENCEMENT OF CONSTRUCTION:</p> <ul style="list-style-type: none"> <li>December 2013</li> <li>Completed</li> </ul>		
<b>HYDROPOWER</b>	<b>62.50</b>			
Kapangan/ Cordillera Hydro Electric Power Corporation/ Kapangan & Kibungan, Benguet	60.0	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>Issued Confirmation of Commerciality on 13 February 2014</li> </ul> <p>COMMENCEMENT OF CONSTRUCTION:</p> <ul style="list-style-type: none"> <li>On-going civil works of hydro facilities</li> </ul>	February 2019	February 2019
Prismc/ PNOC-Renewables Corporation/ Rizal, Nueva Ecija	1.0	<p>GROUNDBREAKING SCHEDULES:</p> <ul style="list-style-type: none"> <li>Ground breaking held on 11 July 2014; Confirmed DOC on 4 September 2014; Rehabilitation</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>On-going construction activities</li> </ul>	September 2019	September 2019
Tubao/ Tubao Mini-Hydro Electric Corporation/ Tubao, La Union	1.5	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>Issued Confirmation of Commerciality on 19 March 2015</li> </ul> <p>GROUNDBREAKING SCHEDULES:</p> <ul style="list-style-type: none"> <li>Ground breaking held on 8 November 2014</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>Pending submission of requirements for construction</li> </ul>	March 2020	March 2020
<b>SOLAR</b>	<b>52.975</b>			
Bataan Solar Power Project/ Next Generation Power Technology Corp. (NGPT)/ Brgy. Alas-asin, Mariveles, Bataan	18	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>Awarded with RE Service Contract (SESC No. 2014-04-076) on 12 May 2014</li> <li>Certificate of Commerciality No. SCC- 2016-03-048 dated 11 March 2016</li> </ul>	March 2016 (On-going Testing and Commissioning)	October 2016



**Annex 4. Private Sector Initiated Power Projects in Luzon (COMMITTED) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION/PROJECT COST	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
Dalayap Solar Power Project/ NV Vogt Philippines Solar Energy Four, Inc. (NV VOGT 4)/ Brgy. Dalayap, Tarlac City, Tarlac	7.48	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Awarded with RE Service Contract (SESC No. 2016-02-278) on 19 Feb 2016</li> <li>• Certificate of Commerciality No. SCC- 2016-03-049 dated 14 March 2016</li> </ul>	'April 2016 (On-going Testing and Commissioning)	October 2016
Armenia Solar Power Project/ NV Vogt Philippines Solar Energy Three, Inc. (NV VOGT 3)/ Brgy. Armenia, Tarlac City, Tarlac	8.84	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Awarded with RE Service Contract (SESC No. 2016-02-227) on 19 Feb 2016</li> <li>• Certificate of Commerciality No. SCC- 2016-03-050 dated 14 March 2016</li> </ul>	'April 2016 (On-going Testing and Commissioning)	October 2016
CW Home Depot Solar Power Project/CW Marketing & Development Corp. (CW) CW Home Depot, Brgy. Pulong, Sta. Rosa City, Laguna	1.675	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Awarded with RE Service Contract (SESC No. 2016-02-228) on 07 Mar 2016</li> <li>• Certificate of Commerciality No. SCC- 2016-03-054 dated 31 March 2016</li> </ul>	September 2016 (On-going Testing and Commissioning)	October 2016
San Rafael Solar Power Plant/ SPARC Solar Powered Agri-Rural Communities Corporation/ San Rafael, Bulacan	3.82	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Awarded with Solar Energy Service Contract (SESC No. 2012-03-012) on 03 May 2012; and</li> <li>• Certificate of Commerciality No. SCC- 2015-10-035 dated 10 November 2015</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• On-going construction (see FIT Monitoring Board)</li> </ul>	July 2016 (On-going Testing and Commissioning)	October 2016
Morong Solar Power Plant/ SPARC Solar Power Agri-Rural Communities/ Morong, Bataan	5.02	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Awarded with Solar Energy Service Contract (SESC No. 2012-03-012) on 03 May 2012; and</li> <li>• Certificate of Commerciality No. SCC- 2015-10-037 dated 10 November 2015</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• On-going construction (see FIT Monitoring Board)</li> </ul>	June 2016 (On-going Testing and Commissioning)	October 2016
Sta. Rita Solar Power Project/ Jobin-Sqm Inc./ Morong and Hermosa, Bataan	7.14	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Awarded with Solar Energy Service Contract (SESC No. 2013-10-039) on 30 October 2013; and</li> <li>• Certificate of Commerciality No. SCC- 2015-09-021 dated 28 August 2015;</li> </ul> <p>CONSTRUCTION:</p> <ul style="list-style-type: none"> <li>• On-going construction (see FIT Monitoring Board)</li> </ul>	October 2016	December 2016
Sarrat Solar Power Project/ Bosung Solartec, Inc. (BOSUNG)/ Brgy. 21 San Marcos, Sarrat, Ilocos Norte	1	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Awarded with RE Service Contract (SESC No. 2016-02-276) on 19 Feb 2016</li> <li>• Certificate of Commerciality No. SCC- 2016-03-052 dated 22 March 2016</li> </ul>	October 2016	December 2016
<b>WIND</b>	-			
<b>GEOHERMAL</b>	<b>43.00</b>			
Bacman 3 (Tanawon) Geothermal Project/ Energy Development Corporation/ Guinlajon, Sorsogon	31.00	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• DOE Service Contract within GRESC # 2009-10-003;</li> <li>• LGU endorsement</li> <li>• Land Use Permits,</li> <li>• DENR-ECC</li> <li>• Water Rights obtained;</li> </ul>	December 2018	December 2018 (Target Testing and Commissioning)

**Annex 4. Private Sector Initiated Power Projects in Luzon (COMMITTED) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION/PROJECT COST	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
<b>Cost: \$140M-180M</b>		<ul style="list-style-type: none"> <li>• Turnkey Contract pending result of feasibility study under negotiation;</li> <li>• Submitted Declaration of Commerciality (DOC) on 17 June 2014, evaluation by DOE of the DOC is still on-going;</li> </ul> <p>FINANCING ARRANGEMENTS:</p> <ul style="list-style-type: none"> <li>• Project to be finance by EDC;</li> <li>• Project cost estimated \$140M-180M</li> </ul>		
Maibarara 2 Geothermal Project/ Maibarara Geothermal Inc./ Batangas  <b>Cost: PhP 1,848.30 Million</b>	12.00	<p>FEASIBILITY STUDY: On-going</p> <p>MARKETING OF GENERATING CAPACITIES:</p> <ul style="list-style-type: none"> <li>• The off-taker for generated power is still under negotiation</li> </ul> <p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Project is within the existing DOE Service Contract within GRESC # 2010-02-012</li> <li>• LGU endorsement</li> <li>• Land Use permits</li> <li>• DENR-ECC and water rights obtained</li> <li>• Secured Certificate of Non-overlap from NCIP regional Office IV</li> <li>• Confirmation of Commerciality obtained from DOE on 21 September 2015;</li> </ul> <p>FINANCING ARRANGEMENTS:</p> <ul style="list-style-type: none"> <li>• Project cost estimated PhP 1,848.30 Million</li> </ul>	August 2017	August 2017
<b>BIOMASS</b>	<b>22.90</b>			
2 MW ACNPC WTE Biomass Power Plant Project/ Asian Carbon Neutral Power Corporation/ Tarlac	1.50	<p>FINANCING ARRANGEMENTS: Closed</p> <p>CONSTRUCTION:</p> <ul style="list-style-type: none"> <li>• On-going construction</li> </ul>	Phase 1 - October 2016 Phase 2 - TBD	Phase 1 - October 2016 (Target Testing and Commissioning) Phase 2 - TBD
Bicol Biomass Energy Corporation/Bicol Biomass Energy Corporation/Camarines Sur	4.50	<p>FINANCING ARRANGEMENTS: Closed</p> <p>CONSTRUCTION:</p> <ul style="list-style-type: none"> <li>• On-going construction</li> </ul>	October 2016	October 2016 (Target Testing and Commissioning)
AseaGas Biogas Power Plant Project/AseaGas Corporation/Batangas	6.1	<p>CONSTRUCTION:</p> <ul style="list-style-type: none"> <li>• On-going construction</li> </ul>	October 2016	October 2016 (Target Testing and Commissioning)
24 MW SJCiPower Rice Husk-Fired Biomass power Plant Project (Phase 1 - 12MW San Jose City I Power Corporation Phase 2 - 12 MW)/ Brgy. Tulat, San Jose, Nueva Ecija	10.80	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• BREOC No. 2011-01-013;</li> <li>• ECC, LGU, Land Use Permit;</li> <li>• Secured Clearance from DOE for the conduct of GIS on 21 July 2011; and</li> <li>• Issued Certificate Confirmation of Commerciality on 2 Sept 2013</li> </ul> <p>GROUNDBREAKING SCHEDULES:</p>	June 2017 (Subject to FIT)	July 2017 (Subject to FIT)

**Annex 4. Private Sector Initiated Power Projects in Luzon (COMMITTED) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION/PROJECT COST	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
<p><b>Cost: Php1.234B</b></p>		<ul style="list-style-type: none"> <li>• Groundbreaking on 12 Oct 2013</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• EPC w/ Engcon of Singapore;</li> <li>• Pre-construction (100% completed as of 31 August 2014 );</li> <li>• Phase I - Estimated Accomplishment of Construction 98 % completed as of 31 August 2014 )</li> <li>• Remaining major equipment in-progress is the installation of travelling gate;</li> <li>• On-going installations of the feed water piping system, chemical dosing pipeline, three control elements of the boiler and other field instruments;</li> <li>• Expected arrival of switchyard is on May 2014;</li> <li>• Interconnection (100% completed as of 31 August 2014);</li> <li>• On-going construction as of 30 September 2014; and</li> <li>• Pre-Construction - 100%; Construction-98%; Interconnection-100%)</li> </ul>		
<p><b>BATTERY</b></p> <p>AES Battery Storage - Masinloc Project/AES Philippines Power Partners Co., LTD./ Masinloc, Zambales</p>	<p><b>10</b></p> <p>10</p>	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Secured GIS on June 2, 2015; COE issued 16 December 2015 (10MW BESS)</li> </ul> <p>GROUNDBREAKING SCHEDULES:</p> <ul style="list-style-type: none"> <li>• Ground breaking ceremony 15 December 2015</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• Construction on going</li> </ul> <p>COMMENCEMENT OF CONSTRUCTION:</p> <ul style="list-style-type: none"> <li>• Target Commencement of Construction: June 2016</li> </ul>	<p>December 2016</p>	<p>December 2017</p>

**Total Committed Rated Capacity:**

**4,001.4**

Source: DOE



**Annex 5. Private Sector Initiated Power Projects in Luzon (INDICATIVE) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
<p>1x300 MW Coal Power Plant/ Lucidum Energy, Inc./ Silanguin Bay, Zambales</p> <p><b>Cost: US\$ 600,000,000.00</b></p>	<p>300</p>	<p>FEASIBILITY STUDY: Completed</p> <ul style="list-style-type: none"> <li>• Pacifictech Solutions has completed Feasibility Study as of November 2014</li> </ul> <p>ARRANGEMENT FOR SECURING THE REQUIRED LAND:</p> <ul style="list-style-type: none"> <li>• Lucidum have decided to purchase the land rather than to lease; and</li> <li>• Additional land area has been decided upon to be leased as right of way for the conveyor belt from the port</li> </ul> <p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Initial talks between Lucidum and respective DUs, large scale power consumers and cooperatives have been initiated;</li> <li>• Several structures are being considered to comply with the PPA or commercial guarantees;</li> <li>• Several structures are being considered to comply with the PPA or commercial guarantees;</li> <li>• Complete corporate documentation for SEC and DOE Endorsement for SEC has been complied;</li> <li>• On-going processing of other regulatory requirements;</li> <li>• LGU permits, among others;</li> <li>• Approval for the grid impact study has been obtained from the DOE to be submitted to NGCP; and</li> <li>• On-going processing of ECC requirements</li> </ul> <p>FINANCING ARRANGEMENTS:</p> <ul style="list-style-type: none"> <li>• Financing arrangements are currently negotiating with two lenders and they're waiting for the completion of the feasibility study for their validation;</li> <li>• Initial talks have been geared towards a 60-40 debt-equity ratio;</li> <li>• Current talks with a serious private equity, with the intentions of a turn-key relationship with the assistance of Lucidum group; and</li> <li>• Additional due diligence requirements are being complied for by Lucidum to for the above mentioned new additional parties</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• Construction Contracts for Plants and Equipment are on hold pending the completion of detailed Engineering Studies; and</li> <li>• Decided upon the board as per advices by Stanley Consultants, that the incoming EPC contractor shall bear the expenses to allocate land of double size to reassemble the incoming coal turbine</li> </ul> <p>COMMENCEMENT OF CONSTRUCTION:</p> <ul style="list-style-type: none"> <li>• Commencement of Construction will be based upon completion of the Feasibility Study and the Assessments of the financing companies involved</li> </ul>	<p>June 2017 (will be available upon completion of feasibility study and the assessments of the financing companies involved)</p>	<p>June 2017 (Target Testing &amp; Commissioning; will be available upon completion of feasibility study and the assessments of the financing companies involved)</p>
<p>SRPGC 2x350MW Coal-Fired Power Plant Project/St. Raphael Power Generation</p>	<p>700</p>	<p>MARKETING OF GENERATING CAPACITIES:</p> <ul style="list-style-type: none"> <li>• On-going negotiations with prospective off-takes (DUs and those currently with PSAs and contestable market under Open Access Regime</li> </ul>	<p>July 2019</p>	<p>December 2019</p>

**Annex 5. Private Sector Initiated Power Projects in Luzon (INDICATIVE) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
Corporation/Brgy. San Rafael, Calaca, Batangas		<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <p>FINANCING ARRANGEMENTS:</p> <ul style="list-style-type: none"> <li>• Project cost is Php58.3B</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• Target project construction: within 2017</li> </ul>		
JGS Coal Fired Thermal Power Plant/JG Summit Holdings, Inc./ Brgy. Pinamukan Ibaba, Batangas City	600	<p>ARRANGEMENT FOR SECURING THE REQUIRED LAND:</p> <ul style="list-style-type: none"> <li>• Property is currently under Land Lease Agreement (LLA) between Sem-Calaca Power Corporation (SCPC) with PSALM</li> </ul> <p>MARKETING OF GENERATING CAPACITIES:</p> <ul style="list-style-type: none"> <li>• On-going negotiations with prospective off-takes (DUs and those currently with PSAs and contestable market under Open Access Regime)</li> </ul> <p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Conduct of EIA Study and Preparation of EIS - November 2013 to February 2014</li> <li>• Draft EIS Submission and Preliminary Review - Middle of 2014</li> <li>• Public Hearing - 1 month after submission of EIS</li> <li>• EMB Review - 55 days;</li> <li>• ECC Decision - Target before end of 2014</li> <li>• Awaiting ECC Decision - In its latest ruling SC upheld the CA decision to deny "for insufficiency of evidence," the request to issue a writ of kalikasan. The CA still invalidated the ECCs and the LDA. The respondents eventually filed a motion for reconsideration, which had just been denied with CA's latest ruling</li> <li>• Secured Clearance from DOE for the conduct of GIS on 21 February 2014;</li> <li>• Secured Endorsement from DOE for Certificate of CNO from NCIP on 14 July 2014</li> </ul> <p>FINANCING ARRANGEMENTS:</p> <ul style="list-style-type: none"> <li>• On-going negotiations for the financing arrangements and other permits</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• Pre-Construction Phase (8 months)</li> <li>• Construction of EIA study and permitting</li> <li>• Design and Engineering</li> <li>• Commissioning of EPC Contractor (Phase 1 and Phase2)</li> <li>• Construction Phase (12 months) Civil Works and plant equipment installation</li> <li>• Operation Phase (design life)</li> <li>• Start-up and unit synchronization</li> <li>• Conduct of public Scoping with Stakeholder representatives 10 October 2013</li> <li>• Conduct of Technical Scoping with EMB and EIA Rev Com - 6 November 2013</li> <li>• On-going securing of regulatory requirements</li> </ul>	<p>Unit 1 - June 2018</p> <p>Unit 2 - Dec 2018</p> <p>Unit 3 - June 2019</p> <p>Unit 4 - Dec 2019</p>	<p>Unit 1 - June 2018</p> <p>Unit 2 - Dec 2018</p> <p>Unit 3 - June 2019</p> <p>Unit 4 - Dec 2019 (Target Testing &amp; Commissioning Date)</p>
RPEI Coal-Fired Power Plant/Redondo Peninsula Energy, Inc./ Sitio Naglatore,	600	<p>FEASIBILITY STUDY: Completed</p> <p>ARRANGEMENT FOR SECURING THE REQUIRED LAND:</p> <ul style="list-style-type: none"> <li>• Project Site is leased from the Subic Bay Metropolitan Authority</li> </ul>	<p>Unit I - October 2018</p> <p>Unit II - December 2018</p>	2019

**Annex 5. Private Sector Initiated Power Projects in Luzon (INDICATIVE) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
Cawag, Subic Bay Freeport Zone		<p>MARKETING OF GENERATING CAPACITIES:</p> <ul style="list-style-type: none"> <li>Started discussions with the Manila Electric Company for sale of power</li> <li>52% owned by Meralco PowerGen Corp. (MPGC)</li> <li>Target signing RP Energy and MERALCO PSA June 2015</li> <li>Filing of application for PSA with ERC June 2015</li> </ul> <p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>Amended ECC (3rd Amendment) secured last 15 November 2012</li> <li>The Connection Agreement has been executed last October 24, 2014.</li> <li>Execution after completion of NGCP's review of the revised System Impact Study and Facilities Study prepared by RPE</li> <li>NGCP's application to ERC for approval of Transmission Asset has been completed and is currently awaiting decision.</li> <li>RPE's application to the ERC for the Connection Asset has been deemed sufficient in form and substance</li> <li>Revised System Impact GIS review by NGCP completed 10 May 2012</li> <li>Any further development dependent on Supreme Court decision on Writ of Kalikasan case;</li> <li>Public consultations conducted in Subic on 29 June 2012</li> <li>Site Preparation completed in 2013;</li> <li>Target Commencement of Construction will be Dependent on Supreme Court decision on Writ of Kalikasan Case</li> </ul> <p>FINANCING ARRANGEMENTS:</p> <ul style="list-style-type: none"> <li>On-going financing arrangements</li> <li>Project cost Php50B / \$1.2B</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>Engineering, Procurement and Construction (EPC) contract negotiations finalized</li> <li>Site preparation construction on-going, construction commenced on Q3 2013</li> </ul>	(Target Commencement of Construction will be Dependent on Supreme Court decision on Writ of Kalikasan Case.)	
<p>2 X 300 MW Masinloc Expansion/ AES Masinloc Power Partners Co., Inc./ Zambales</p> <p><b>Cost: PhP49.45B</b></p>	300	<p>FEASIBILITY STUDY:</p> <ul style="list-style-type: none"> <li>Completed February 2011</li> </ul> <p>ARRANGEMENT FOR SECURING THE REQUIRED LAND:</p> <ul style="list-style-type: none"> <li>No additional land will be aquired as the expansion will be inside the existing Masinloc Power Plant Complex.</li> <li>NPC/PSALM, however, is still continuing the titling process and land registration for some parcels of land</li> </ul> <p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>Grid Impact Studies obtained on 7 January 2011</li> <li>ECC Amendment was released by DENR on April 23, 2012</li> <li>The amended DOE Certificate of Endorsement for BOI was released on May 7, 2012</li> <li>Secured CoE for ERC on September 2011</li> </ul>	Unit 4 - June 2020	December 2020 (Target Testing and Commissioning)

**Annex 5. Private Sector Initiated Power Projects in Luzon (INDICATIVE) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
		<ul style="list-style-type: none"> <li>• On-going processing of Certificate of Precondition from NCIP</li> <li>• SAPA amendment is still pending with DENR</li> </ul> <p>FINANCING ARRANGEMENTS:</p> <ul style="list-style-type: none"> <li>• Undergoing consultation with international / local banks;</li> <li>• Project cost is Php49.45B</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• Selection of EPC Contractor on going</li> </ul> <p>COMMENCEMENT OF CONSTRUCTION:</p> <ul style="list-style-type: none"> <li>• 2nd Qtr 2014</li> </ul>		
<p>2 x 600 MW (net) Coal-Fired Power Plant/ Meralco PowerGen Corporation (Project Company: Atimonan One Energy/ Atimonan, Quezon</p>	<p>1,200</p>	<p>FEASIBILITY STUDY:</p> <ul style="list-style-type: none"> <li>• Completed 21 January 2015</li> </ul> <p>ARRANGEMENT FOR SECURING THE REQUIRED LAND:</p> <ul style="list-style-type: none"> <li>• Acquisition of the parcels of the land in the target plant site in Atimonan, Quezon is on-going (expanding)</li> </ul> <p>MARKETING OF GENERATING CAPACITIES:</p> <ul style="list-style-type: none"> <li>• Energy to be sold to DUs and electric cooperatives; and</li> <li>• Discussion of PSA with potential off-takers on-going</li> </ul> <p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• On-going securing of ECC;</li> <li>• SEC already amended;</li> <li>• Clearance to Undertake GIS from DOE issued on June 2014;</li> <li>• GIS on-going;</li> <li>• Ongoing discussion with LGU and there was no violent reaction from them on this proposed changes;</li> <li>• EIS draft submitted to DENR in Nov. 2014;</li> <li>• Foreshore Lease Application (FLA) submitted to DENR last March 2013 (currently on hold as the DENR does its internal organizational restructuring); and</li> <li>• Applied Certificate of Non-Overlap with National Commission on Indigenous Peoples (NCIP)</li> </ul> <p>FINANCING ARRANGEMENTS:</p> <ul style="list-style-type: none"> <li>• Financing discussion on-going;</li> <li>• Informal discussions have begun with several banks with respect to the financing of the project; and</li> <li>• On-going negotiations with lenders</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• Owner's Engineer has been appointed; EPC pre-qualification process on-going;</li> <li>• EPC pre-qualification process on-going;</li> <li>• No contracts have been awarded to date re: EPC still on-going; and</li> </ul>	<p>Unit 1 - December 2020 Unit 2 - May 2021</p>	<p>Unit 1 - December 2020 Unit 2 - May 2021</p>



**Annex 5. Private Sector Initiated Power Projects in Luzon (INDICATIVE) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
		<ul style="list-style-type: none"> <li>On-site works targeted to start in 2016</li> </ul> <p>COMMENCEMENT OF CONSTRUCTION:</p> <ul style="list-style-type: none"> <li>The parties have yet to agree on when construction will commence.</li> </ul>		
2 x 350 MW PCB Subcritical Coal-Fired Power Plant/ H & WB ASIA PACIFIC (PTE LTD) CORPORATION/ Jose Panganiban, Camarines Norte	700	<p>FEASIBILITY STUDY:</p> <ul style="list-style-type: none"> <li>Pre-feasibility studies have conducted to determine the viability of the project- Completed in 2014; and</li> <li>Feasibility study is expected to be completed by the end of 2nd Quarter 2016</li> </ul> <p>ARRANGEMENT FOR SECURING THE REQUIRED LAND:</p> <ul style="list-style-type: none"> <li>Land already secured and it has been re-classified as industrial; being resurveyed for titling (6/12/2015)</li> </ul> <p>MARKETING OF GENERATING CAPACITIES:</p> <ul style="list-style-type: none"> <li>On-going negotiations with MERALCO and Electric Cooperatives will be held on 3rd week of March;</li> <li>H&amp;WB prepares PSA March 25, 2015; and</li> <li>H&amp;WB is reviewing the term sheet provided by MERALCO</li> </ul> <p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>Issued clearance to undertake GIS on February 12, 2015;</li> <li>On-going securing of permits and other regulatory requirements;</li> <li>LGU endorsement secured 10 June 2014;</li> <li>NGCP issued "Offer of Service" for SIS on 31 March 2015- completed on 23 September 2015;</li> <li>Currently undergoing NGCP's review process;</li> <li>On-going processing of ECC requirements; and</li> <li>Environmental Impact Assessment will be submitted in the 1st Quarter of 2016</li> </ul> <p>FINANCING ARRANGEMENTS:</p> <ul style="list-style-type: none"> <li>On-going discussions with major banks and capital companies for debt-financing</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>Ongoing discussion with four potential co-developers and equity partners; and</li> <li>Ongoing sourcing of potential EPC Contractors</li> </ul> <p>COMMENCEMENT OF CONSTRUCTION:</p> <ul style="list-style-type: none"> <li>Construction to commence on the 4th Quarter 2017</li> </ul>	Unit 1 - 2021 Unit 2 - 2025	Unit 1 - 4th Quarter 2021 Unit 2 - 4th Quarter 2025
SMC Circulating Fluidized Bed Coal-Fired Power Plant/SMC Global Power/Brgy. Ibabang Polo, Pagbilao, Quezon	600	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>Issued with GIS on 8 June 2016 (DOE-EPIMB-SIS No. 2016-05-006)</li> </ul>	To be determined	To be determined
Global Luzon Coal-Fired Power Plant/ Global Luzon Energy Development	670	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>Issued with GIS on 11 July 2016 (DOE-EPIMB-SIS No. 2016-07-001)</li> </ul>	To be determined	To be determined

**Annex 5. Private Sector Initiated Power Projects in Luzon (INDICATIVE) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
Corporation/ Brgys. Carisquis and Nalvo Sur, Luna, La Union				
<b>OIL</b>	<b>196.00</b>			
Aero Derivative Combined Cycle Power Plant/ Calamba Aero Power Corporation/ Calamba, Laguna  <b>Cost: PhP5.67B</b>	150	PERMITS AND OTHER REGULATORY REQUIREMENTS: <ul style="list-style-type: none"> <li>On-going securing of permits and other regulatory requirements; and</li> <li>Granted clearance by DOE for the conduct of GIS</li> </ul>	To be determined	To be determined
SLPGC Gas Turbine Power Project Phase 1 / Southwest Luzon Power Generation Corporation (SLPGC)/ San Rafael, Calaca, Batangas	23	PERMITS AND OTHER REGULATORY REQUIREMENTS: <ul style="list-style-type: none"> <li>Issued with GIS 2/24/2016 (DOE-EPIMB-SIS No. 2016-02-005)</li> </ul>	To be determined	To be determined
SLPGC Gas Turbine Power Project Phase 2/ Southwest Luzon Power Generation Corporation (SLPGC)/ San Rafael, Calaca, Batangas	23	PERMITS AND OTHER REGULATORY REQUIREMENTS: <ul style="list-style-type: none"> <li>Issued with GIS 2/24/2016 (DOE-EPIMB-SIS No. 2016-02-005)</li> </ul>	To be determined	To be determined
<b>NATURAL GAS</b>	<b>1,950.00</b>			
400 MW (8 x 50) VIRES LNG-FIRED Power Barge Project/ VIRES Energy Corporation/ Batangas Bay area, Batangas	400	PERMITS AND OTHER REGULATORY REQUIREMENTS: <ul style="list-style-type: none"> <li>Issued with GIS 9/10/2015 (DOE-EPIMB-GIS No. 2015-09-002)</li> </ul>	March 2018	March 2018 (Target Testing and Commissioning)
1x450 Sta. Maria Power Plant (Phase II)/ First Gen Ecopower Solutions Inc./ Santa Rita, Batangas/450	450	FEASIBILITY STUDY: <ul style="list-style-type: none"> <li>On-going Feasibility Study</li> </ul> ARRANGEMENT FOR SECURING THE REQUIRED LAND: <ul style="list-style-type: none"> <li>Parcels of land to be used by the Project shall be purchased from FGHC and FGP Corp.</li> </ul> MARKETING OF GENERATING CAPACITIES: <ul style="list-style-type: none"> <li>Discussion on targeted off takers on-going</li> </ul> PERMITS AND OTHER REGULATORY REQUIREMENTS: <ul style="list-style-type: none"> <li>Power Plant options update completed as of 17 June 2015</li> <li>City and Barangay endorsements acquired in 2013</li> <li>Secured Clearance from DOE for the conduct of GIS on 18 February 2013</li> <li>Environmental compliance Certificate application is on-going (targeted to be acquired by July 2015)</li> <li>Importation permit application is on-going</li> <li>Accreditation from the BOI (targeted on December 2015)</li> <li>Importation permit is on-going</li> <li>BOI Accreditation target is December 2015</li> </ul>	December 2019	June 2020

**Annex 5. Private Sector Initiated Power Projects in Luzon (INDICATIVE) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
		<ul style="list-style-type: none"> <li>DENR ECC on going; Certificate is expected in September 2015</li> <li>Issuance of ECC from DENR expected by October 2015</li> <li>BOI targeted January 2016</li> <li>On-going coordination with affected barangays</li> </ul> <p>FINANCING ARRANGEMENTS:</p> <ul style="list-style-type: none"> <li>Discussion with International Financing outfits and local banks on-going</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>EPC and Operation Maintenance contracts targeted to be awarded on December 2015</li> </ul>		
Batangas CCGT Plant Unit 1/ Therma Batangas Gas, Inc./ Brgy. Libjo, Batangas City	300	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>Issued with GIS 5 July 2016 (DOE-EPIMB-GIS No. 2015-06-012)</li> </ul>	To be determined	To be determined
Batangas CCGT Plant Unit 2/Therma Batangas Gas, Inc./ Brgy. Libjo, Batangas City	400	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>Issued with GIS 5 July 2016 (DOE-EPIMB-GIS No. 2015-06-012)</li> </ul>	To be determined	To be determined
Batangas CCGT Plant Unit 3/Therma Batangas Gas, Inc./ Brgy. Libjo, Batangas City	400	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>Issued with GIS 5 July 2016 (DOE-EPIMB-GIS No. 2015-06-012)</li> </ul>	To be determined	To be determined
<b>GEOTHERMAL</b>	<b>80.00</b>			
Bacman 4 Botong - Rangas Geothermal Project/ Energy Development Corporation/ Bacon District, Sorsogon, Sorsogon City	40	<p>FEASIBILITY STUDY:</p> <ul style="list-style-type: none"> <li>On-going Feasibility Study</li> </ul> <p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>DOE Service Contract within GRESC # 2009-10-003;</li> <li>LGU endorsement, Land Use Permits, and DENR-ECC obtained;</li> <li>Permits for the TCP and Water Rights are on-going; and</li> <li>Turnkey Contract pending result of feasibility study</li> </ul> <p>FINANCING ARRANGEMENTS:</p> <ul style="list-style-type: none"> <li>Project cost is subject to the result of the feasibility study.</li> </ul> <p>COMMENCEMENT OF CONSTRUCTION:</p> <ul style="list-style-type: none"> <li>Target commencement of construction on 1st half of 2015</li> </ul>	June 2021	June 2021 (Target Testing and Commissioning)
Kayabon Geothermal Project/ Energy Development Corporation/ Manito, Albay	40	<p>FEASIBILITY STUDY:</p> <ul style="list-style-type: none"> <li>On-going Feasibility Study</li> </ul> <p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>On-going Feasibility Study and resource assessment;</li> <li>DOE Service Contract within GRESC # 2009-10-003</li> <li>LGU endorsement</li> <li>DENR-ECC, and Water Rights obtained</li> <li>On-going application for land-use permits and negotiations with lot owners</li> <li>On-going application for SLUP and TCP permits</li> <li>Clearance to Undertake GIS from DOE issued on 7 October 2011</li> </ul>	June 2022	June 2022 (Target Testing and Commissioning)

**Annex 5. Private Sector Initiated Power Projects in Luzon (INDICATIVE) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
		<p>FINANCING ARRANGEMENTS:</p> <ul style="list-style-type: none"> <li>• Project cost is subject to the result of the feasibility study</li> </ul> <p>COMMENCEMENT OF CONSTRUCTION:</p> <ul style="list-style-type: none"> <li>• Target commencement of construction on 2nd half of 2017</li> </ul>		
<b>HYDROPOWER</b>	<b>770.65</b>			
Ibulao Hydroelectric Power Project/ Hydrocore, Inc./ Lagawe, Ifugao	4.5	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Issued Confirmation of Commerciality on 26 June 2013;</li> <li>• Already secured LGU Endorsements;</li> <li>• DENR Environmental Compliance Certificate;</li> <li>• NCIP Certificate of Precondition;</li> <li>• Land Lease agreement and NWRB Permit;</li> <li>• Submitted Feasibility Study, Detailed Engineering Design and 5-Yr Work Plan and Grid Impact Study; and</li> <li>• Clearance to Undertake GIS from DOE issued on 17 October 2011</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• On-going construction (Pre-construction - 100%, Construction-0%, Interconnection-0%) completed as of 30 September 2014</li> </ul>	June 2018	June 2018 (Target Testing and Commissioning)
Dupinga Hydroelectric Power Project/ Constellation Energy Corporation/Gabaldon, Nueva Ecija	3	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Issued Confirmation of Commerciality on 26 June 2013;</li> <li>• Already secured LGU Endorsements;</li> <li>• DENR Environmental Compliance Certificate;</li> <li>• NCIP Certificate of Compliance, and NWRB Permit;</li> <li>• Submitted Feasibility Study and 5-Yr Work Plan;</li> <li>• Submission of lacking requirements e.g. permits in progress;</li> <li>• On-track with the schedule with regards to the permitting on-going conduct of pre-construction activities such as permitting; and</li> <li>• Issued confirmation of Commerciality on 26 June 2013 e.g. permits in progress</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• Construction Progress (Pre-construction -0%, Construction-0%, Interconnection-0%) completed as of 30 September 2014</li> </ul>	June 2018	June 2018 (Target Testing and Commissioning)
Tinoc 1/ Philnew Hydro Power Corporation/ Tinoc, Ifugao	4.1	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Pending submission of requirements for construction; and</li> <li>• Issued Confirmation of Commerciality on 9 August 2013</li> </ul>	August 2018	August 2018 (Target Testing and Commissioning)
Tinoc 4/ Philnew Hydro Power Corporation/ Tinoc, Ifugao	5.0	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Issued Confirmation of Commerciality on 09 August 2013;</li> <li>• Submission of lacking requirements e.g. permits in progress; and</li> <li>• Clearance to Undertake GIS from DOE issued on 11 July 2011</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• Construction Progress (On going Pre-construction, Construction-0%, Interconnection-0%) completed as of 30 September 2014</li> </ul>	August 2018	August 2018 (Target Testing and Commissioning)

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NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
Pinacanauan/ Sunwest Water & Electric Co., Inc./ Peñablanca, Cagayan	6.0	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Issued Confirmation of Commerciality on 18 September 2013;</li> <li>• Already secured LGU Endorsement;</li> <li>• DENR ECC, NWRB CWP and NCIP CNO;</li> <li>• Submitted Feasibility Study, Detailed Engineering Design and 5-Yr Work Plan; and</li> <li>• Clearance to Undertake GIS from DOE issued on 25 March 2013</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• Construction Progress (Pre-construction - 0%, Construction-0%, Interconnection-0%) completed as of 30 September 2014</li> </ul>	September 2018	September 2018 (Target Testing and Commissioning)
Tinoc 2/ Philnew Hydro Power Corporation/ Tinoc, Ifugao	11.0	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Issued Confirmation of Commerciality on 06 January 2014;</li> <li>• Submission of lacking requirements e.g. permits in progress; and</li> <li>• Clearance to Undertake GIS from DOE issued on 11 July 2011</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• Construction Progress (Pre-construction - 0%, Construction-0%, Interconnection-0%) completed as of 30 September 2014</li> </ul>	January 2019	January 2019 (Target Testing and Commissioning)
Tinoc 3/ Quadriver Energy Corp./ Tinoc, Ifugao	8.0	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Issued Confirmation of Commerciality on 06 January 2014;</li> <li>• Submission of lacking requirements e.g. permits in progress; and</li> <li>• Clearance to Undertake GIS from DOE issued on 11 July 2011</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• Construction Progress (Pre-construction - 0%, Construction-0%, Interconnection-0%) completed as of 30 September 2014</li> </ul>	January 2019	January 2019 (Target Testing and Commissioning)
Colasi/ Colasi Mini Hydro Electric Power Plant Corporation/ Mercedes, Camarines Norte	1.0	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Submission of lacking requirements e.g. permits in progress; and</li> <li>• Clearance to Undertake GIS from DOE issued on 3 December 2012</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• On-going rehabilitation</li> </ul>	February 2019	February 2019 (Target Testing and Commissioning)
Kabayan 2 (Natalang HEP)/Hedcor Benguet, Inc./ Kabayan, Benguet	52	<p>FEASIBILITY STUDY:</p> <ul style="list-style-type: none"> <li>• On going</li> </ul> <p>ARRANGEMENT FOR SECURING THE REQUIRED LAND:</p> <ul style="list-style-type: none"> <li>• To secure contract of lease with the landowners</li> </ul> <p>MARKETING OF GENERATING CAPACITIES:</p> <ul style="list-style-type: none"> <li>• FIT or PSA</li> </ul> <p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• With Renewable Energy Service Contract</li> <li>• With on going application for HSC amendment: Increase in capacity from 45 MW to 52 MW</li> <li>• Still on process in securing other regulatory requirements</li> </ul>	March 2019	March 2019 (Target Testing and Commissioning)

**Annex 5. Private Sector Initiated Power Projects in Luzon (INDICATIVE) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
		<p>GROUNDBREAKING SCHEDULES:</p> <ul style="list-style-type: none"> <li>• 4th Quarter of 2016</li> </ul> <p>FINANCING ARRANGEMENTS:</p> <ul style="list-style-type: none"> <li>• Parent company will undertake to provide financial support</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• To be undertaken after acquisition of permits</li> </ul> <p>COMMENCEMENT OF CONSTRUCTION:</p> <ul style="list-style-type: none"> <li>• 4th Quarter of 2016</li> </ul>		
Kabayan 3/Hedcor Benguet, Inc./ Kabayan, Benguet	27	<p>FEASIBILITY STUDY:</p> <ul style="list-style-type: none"> <li>• On going</li> </ul> <p>ARRANGEMENT FOR SECURING THE REQUIRED LAND:</p> <ul style="list-style-type: none"> <li>• To secure contract of lease with the landowners</li> </ul> <p>'MARKETING OF GENERATING CAPACITIES:</p> <ul style="list-style-type: none"> <li>• FIT or PSA</li> </ul> <p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• With Renewable Energy Service Contract</li> <li>• With on going application for HSC amendment: Increase in capacity from 14.3 MW to 27 MW</li> <li>• Still on process in securing other regulatory requirements</li> </ul> <p>GROUNDBREAKING SCHEDULES:</p> <ul style="list-style-type: none"> <li>• 4th Quarter of 2016</li> </ul> <p>FINANCING ARRANGEMENTS:</p> <ul style="list-style-type: none"> <li>• Parent company will undertake to provide financial support</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• To be undertaken after acquisition of permits</li> </ul> <p>COMMENCEMENT OF CONSTRUCTION:</p> <ul style="list-style-type: none"> <li>• 4th Quarter of 2016</li> </ul>	March 2019	March 2019 (Target Testing and Commissioning)
Bineng 1-2b Combination HEPP/Hedcor, Inc./ La Trinidad, Benguet	19	<p>FEASIBILITY STUDY:</p> <ul style="list-style-type: none"> <li>• On going</li> </ul> <p>ARRANGEMENT FOR SECURING THE REQUIRED LAND:</p> <ul style="list-style-type: none"> <li>• To secure contract of lease with the landowners</li> </ul> <p>'MARKETING OF GENERATING CAPACITIES:</p> <ul style="list-style-type: none"> <li>• FIT or PSA</li> </ul>	March 2019	March 2019 (Target Testing and Commissioning)

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NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
		<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• With Renewable Energy Service Contract</li> <li>• With on going application for HSC amendment: Increase in capacity from 16.5 MW to 19 MW</li> <li>• Still on process in securing other regulatory requirements</li> </ul> <p>GROUNDBREAKING SCHEDULES:</p> <ul style="list-style-type: none"> <li>• 4th Quarter of 2016</li> </ul> <p>FINANCING ARRANGEMENTS:</p> <ul style="list-style-type: none"> <li>• Parent company will undertake to provide financial support</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• To be undertaken after acquisition of permits</li> </ul> <p>COMMENCEMENT OF CONSTRUCTION:</p> <ul style="list-style-type: none"> <li>• 4th Quarter of 2016</li> </ul>		
Majayjay/ Majayjay Hydro Power Company, Inc./ Majayjay, Laguna	3	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Submission of lacking requirements e.g. permits in progress</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• On-going pre construction activities</li> </ul>	April 2019	April 2019 (Target Testing and Commissioning)
Ranggas/ Clean and Green Energy Solutions, Inc./ Goa & Tigaon, Camarines Sur	1.5	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Submission of lacking requirements e.g. permits in progress</li> </ul>	June 2019	July 2019
Tignoan HEP/ Aurora All Asia Energy Corp./ Real, Quezon	20.0	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Currently on-going Preparation of Business Plan;</li> <li>• On-going negotiations of Business Financing Arrangement; and</li> <li>• Clearance to Undertake GIS from DOE issued on December 2014</li> </ul>	July 2019	July 2019 (Target Testing and Commissioning)
Biyao/ AV Garcia Power Systems Corp./ Balbalan, Kalinga	0.8	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Issued Confirmation of Commerciality on 01 August 2014; and</li> <li>• Submission of lacking requirements e.g. permits in progress</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• Construction Progress (Pre-construction - 0%, Construction-0%, Interconnection-0%) completed as of 30 September 2014; and</li> <li>• Ongoing construction</li> </ul>	August 2019	August 2019 (Target Testing and Commissioning)
Barit (Irrigation Discharge) Hydroelectric Power Project/ Nascent Technologies/ Buhi, Camarines Sur	0.4	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Issued Confirmation of Commerciality on 12 September 2014; and</li> <li>• Submission of Lacking requirements e.g. permits in progress</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• On-going construction (Pre-construction -0%, Construction-0%, Interconnection-0%) completed as of 30 September 2014; and</li> <li>• Pending submission of requirements for construction</li> </ul>	September 2019	September 2019 (Target Testing and Commissioning)

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NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
Abdao HEP/ AV Garcia Power Systems Corp./ Tabaan Sur, Tuba, Benguet	1.0	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Issued Confirmation of Commerciality on 25 September 2014; and</li> <li>• Submission of Lacking requirements e.g. permits in progress</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• On-going pre construction (Pre-construction -0%, Construction-0%, Interconnection-0%) completed as of 30 September 2014; and</li> <li>• Pending submission of requirements for construction</li> </ul>	September 2019	September 2019 (Target Testing and Commissioning)
Tumauni (Lower Cascade)/ Quadriver Energy Corp./ Tumauni, Isabela	7.8	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Submission of Lacking requirements e.g. permits in progress</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• On-going pre construction activities</li> </ul>	October 2019	October 2019 (Target Testing and Commissioning)
Tumauni (Upper Cascade)/ Quadriver Energy Corp./ Tumauni, Isabela	14.0	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Submission of Lacking requirements e.g. permits in progress</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• On-going pre construction activities</li> </ul>	October 2019	October 2019 (Target Testing and Commissioning)
Tinoc 5/ Philnew Hydro Power Corporation/ Tinoc, Ifugao	6.9	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Submission of Lacking requirements e.g. permits in progress</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• On-going pre construction activities</li> </ul>	December 2019	December 2019 (Target Testing and Commissioning)
Tinoc 6/ Philnew Hydro Power Corporation/ Tinoc, Ifugao	8.0	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Submission of Lacking requirements e.g. permits in progress</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• On-going pre construction activities</li> </ul>	December 2019	December 2019
Alilem/ Philnew Hydro Power Corporation/ Alilem, Ilocos Sur	16.2	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Submission of Lacking requirements e.g. permits in progress</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• On-going pre construction activities</li> </ul>	December 2019	December 2019 (Target Testing and Commissioning)
Ilaguen/ Isabela Power Corporation/ San Mariano & San Guillermo	19.0	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Issued Confirmation of commerciality on 18 February 2015;</li> <li>• On-going permitting</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• Pending submission of requirements for construction</li> </ul>	February 2020	February 2020 (Target Testing and Commissioning)
Cawayan 2/ Sunwest Water & Electric Co., Inc./ Sorsogon, Sorsogon	1.0	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Issued Confirmation of commerciality on 15 April 2015;</li> <li>• On-going permitting</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• Pending submission of requirements for construction</li> </ul>	April 2020	April 2020 (Target Testing and Commissioning)



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NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
Ilaguen 2/ Isabela Power Corporation/ Dinapigue, Isabela	14.0	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Issued Confirmation of commerciality on 22 May 2015; and</li> <li>• On-going permitting</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• Pending submission of requirements for construction</li> </ul>	May 2020	May 2020 (Target Testing and Commissioning)
Danac/ Philnewriver Power Corp./ Sugpon, Ilocos Sur	13.2	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Issued Confirmation of commerciality on 29 June 2015; and</li> <li>• On-going permitting</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• Pending submission of requirements for construction</li> </ul>	June 2020	June 2020 (Target Testing and Commissioning)
Matuno/ Epower Technologies Corporation/ Bambang, Nueva Ecija	8.0	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Issued Confirmation of commerciality on 24 June 2015;</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• Pending submission of requirements for construction</li> </ul>	June 2020	June 2020 (Target Testing and Commissioning)
Dibuluan/ Greenpower Resources Corp./ San Agustin, Isabela	5.0	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Issued Confirmation of commerciality on 24 June 2015</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• Pending submission of requirements for construction</li> </ul>	June 2020	June 2020 (Target Testing and Commissioning)
Man-Asok/ Benguet Electric Cooperative/ Buguias, Benguet	3.0	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Issued Confirmation of commerciality on 22 September 2015</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• Pending submission of requirements for under development stage</li> </ul>	September 2020	September 2020 (Target Testing and Commissioning)
Quirino/ Philnewriver Power Corp./ Quirino, Ilocos Sur	11.5	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Issued Confirmation of commerciality on 7 September 2015</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• Pending submission of requirements for under development stage</li> </ul>	September 2020	September 2020 (Target Testing and Commissioning)
Laguio Malaki 1/ Enervantage Suppliers Co., Inc./ Mauban, Quezon	1.6	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Issued Confirmation of commerciality on 9 October 2015</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• Pending submission of requirements for under development stage</li> </ul>	October 2020	October 2020 (Target Testing and Commissioning)
Laguio Malaki 2/ Enervantage Suppliers Co., Inc./ Mauban, Quezon	3.1	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Issued Confirmation of commerciality on 9 October 2015</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• Pending submission of requirements for under development stage</li> </ul>	October 2020	October 2020 (Target Testing and Commissioning)
Davidavilan/ PTC Energy, Inc./ Mauban, Quezon	1.0	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Issued Confirmation of commerciality on 9 October 2015</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p>	October 2020	October 2020 (Target Testing and Commissioning)

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Bansud/ PTC Energy, Inc./ Mauban, Quezon	1.0	<ul style="list-style-type: none"> <li>Pending submission of requirements for under development stage</li> </ul> PERMITS AND OTHER REGULATORY REQUIREMENTS: <ul style="list-style-type: none"> <li>Issued Confirmation of commerciality on 2 October 2015</li> </ul> CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT: <ul style="list-style-type: none"> <li>Pending submission of requirements for under development stage</li> </ul>	October 2020	October 2020 (Target Testing and Commissioning)
Matuno 1/ Smith Bell Mini Hydro Corporation/ Ambaguio, Nueva Vizcaya	7.4	PERMITS AND OTHER REGULATORY REQUIREMENTS: <ul style="list-style-type: none"> <li>Issued Confirmation of commerciality on 29 December 2015</li> </ul> CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT: <ul style="list-style-type: none"> <li>Pending submission of requirements for under development stage</li> </ul>	December 2020	December 2020 (Target Testing and Commissioning)
Matuno 2/ Smith Bell Mini Hydro Corporation/ Bambang, Nueva Ecija	7.9	PERMITS AND OTHER REGULATORY REQUIREMENTS: <ul style="list-style-type: none"> <li>Issued Confirmation of commerciality on 29 December 2015</li> </ul> CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT: <ul style="list-style-type: none"> <li>Pending submission of requirements for under development stage</li> </ul>	December 2020	December 2020 (Target Testing and Commissioning)
3.0 MW Lalawinan Mini-Hydro Power Project/ Repower Energy Development/ Real, Quezon	3.0	PERMITS AND OTHER REGULATORY REQUIREMENTS: <ul style="list-style-type: none"> <li>Issued Confirmation of commerciality on 29 December 2015</li> </ul>	December 2020	December 2020 (Target Testing and Commissioning)
2.6 MW Maapon River Mini-Hydro Power Project (MHP)/ Renesons Energy Corporation/ Brgy. Piis, Lucban, Quezon	2.6	PERMITS AND OTHER REGULATORY REQUIREMENTS: <ul style="list-style-type: none"> <li>Issued Confirmation of commerciality on May 2014</li> </ul>	December 2020	December 2020 (Target Testing and Commissioning)
100 Alimit/ SN Aboitiz Power-Ifugao/ Lagawe, Ifugao	100.0	FEASIBILITY STUDY: <ul style="list-style-type: none"> <li>Completed Pre-FS</li> </ul> PERMITS AND OTHER REGULATORY REQUIREMENTS: <ul style="list-style-type: none"> <li>Project capacity of 120 MW;</li> <li>Preparing Business Plan;</li> <li>Financing Arrangement in progress;</li> <li>Application for NCIP FPIC CCA1 Concluded, CCA 2 commencement on 5/15/15; and</li> <li>DENR permit under process; NGCP studies under process</li> </ul>	January 2021	January 2021 (Target Testing and Commissioning)
240 MW Alimit/ SN Aboitiz Power-Ifugao/ Lagawe, Ifugao	240.0	FEASIBILITY STUDY: <ul style="list-style-type: none"> <li>Completed Pre-FS</li> </ul> PERMITS AND OTHER REGULATORY REQUIREMENTS: <ul style="list-style-type: none"> <li>project capacity of 120 MW;</li> <li>Preparing Business Plan;</li> <li>Financing Arrangement in progress;</li> <li>Application for NCIP FPIC CCA1 Concluded, CCA 2 commencement on 5/15/15; and</li> <li>DENR permit under process; NGCP studies under process</li> </ul>	January 2021	January 2021 (Target Testing and Commissioning)

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10 MW Oilicon HEPP/ SN Aboitiz Power-Ifugao/ Lagawe, Ifugao	10.0	<p>FEASIBILITY STUDY:</p> <ul style="list-style-type: none"> <li>Completed Pre-FS</li> </ul> <p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>Project capacity of 120 MW;</li> <li>Preparing Business Plan;</li> <li>Financing Arrangement in progress;</li> <li>Application for NCIP FPIC CCA1 Concluded, CCA 2 commencement on 5/15/15; and</li> <li>DENR permit under process; NGCP studies under process</li> </ul>	January 2021	January 2021 (Target Testing and Commissioning)
Maris Main Canal 1 HEP/ SN Aboitiz Power Generation/ Ramon, Isabela	6.0	<p>FEASIBILITY STUDY:</p> <ul style="list-style-type: none"> <li>Feasibility design completed; and</li> <li>Technical studies completed</li> </ul> <p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>NIA agreement for pre-development activities secured;</li> <li>LGU endorsement completed;</li> <li>NCIP field based Investigation completed; awaiting release of CNO;</li> <li>DENR permitting completed; draft ECC for power plant issued;</li> <li>CNC for transmission line issued; NGCP studies completed;</li> <li>Environmental and Social Studies completed; and</li> <li>Water right and right of way acquisition on-going</li> </ul>	January 2021	January 2021 (Target Testing and Commissioning)
Majayjay/Majayjay Hydro Power Company, Inc./ Majayjay, Laguna	2.0	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>Issued Confirmation of commerciality on 29 January 2016</li> </ul>	January 2021	January 2021 (Target Testing and Commissioning)
Didipio 1/AT Dinum Company/Kasibu, Nueva Vizcaya	2.1	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>Issued Confirmation of commerciality on 3 March 2016;</li> </ul>	March 2021	March 2021 (Target Testing and Commissioning)
Matibuey/Sta. Clara Power Corporation/Matibuey, Ilocos Sur	16.0	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>Issued Confirmation of commerciality on 12 April 2016;</li> </ul>	April 2021	April 2021 (Target Testing and Commissioning)
Maris Main Canal2 HEP/ SN Aboitiz Power Generation/ Alfonso Lista, Ifugao	1.8	<p>FEASIBILITY STUDY:</p> <ul style="list-style-type: none"> <li>Feasibility design completed; and</li> <li>Technical studies completed</li> </ul> <p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>NIA agreement for pre-development activities secured;</li> <li>LGU endorsement completed;</li> <li>NCIP field based Investigation completed; awaiting release of CNO;</li> <li>DENR permitting completed; draft ECC for power plant issued;</li> <li>CNC for transmission line issued; NGCP studies completed;</li> <li>Environmental and Social Studies completed; and</li> <li>Water right and right of way acquisition on-going</li> </ul>	To be determined	To be determined

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Talubin Hydropower Project/ Mountain Province Electric Cooperative, Inc./ Bontoc, Mountain Province	5.4	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Issued with GIS on 11 December 2015	To be determined	To be determined
Ibulao I Hydroelectric Power Project/Kiangan Mini-Hydro Corporation/Kiangan, Ifugao	6.0	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Issued with GIS on 28 December 2015 (DOE-EPIMB-SIS No. 2015-12-003)	To be determined	To be determined
Cervantes-Mankayan-Bakun HEPP/Hedcor, Inc./ Benguet	27.0	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Issued with GIS on 8 January 2014 (DOE-EPIMB-SIS No. 2013-12-001)	To be determined	To be determined
<b>SOLAR</b>	<b>1.023.68</b>			
Botolan Solar Power Project/Solar Power Utilities Generator Corporation/Brgy. San Juan, Botolan, Zambales	39.27	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Awarded with RE Service Contract (SESC No. 2015-05-227) on 21 May 2015 • Certificate of Commerciality No. SCC- 2016-02-043 dated 07 March 2016	June 2017	June 2017 (Target Testing and Commissioning)
Macabud Solar Photovoltaic Power Project/ATN Philippines Solar Energy Group, Inc./ Brgy. Macabud, Rodriguez, Rizal	30	FEASIBILITY STUDY: Completed  MARKETING OF GENERATING CAPACITIES: • On-going negotiations PPA with MERALCO in the absence of REPA  PERMITS AND OTHER REGULATORY REQUIREMENTS: • Awarded with Solar Energy Service Contract (SESC No. 2011-05-002) on 12 May 2011; • Secured NGCP Review of Third Party SIS, • ECC from DENR • CNO from NCIP • Provincial Resolution of Support • Clearances from Land Registration Authority • DAR Certification • Acquired the DOE Certificate of Confirmation of Commerciality on 27 Jun 2013; • Clearance to Undertake GIS from DOE issued on 17 October 2011 • On-going negotiations or connection agreement, project financing and Right of Way  FINANCING ARRANGEMENTS: • Proofs of negotiations/certifications with financial institutions for project financing • Negotiations for financial closing is on-going • Total project cost is US\$70.0 Million  CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT: • Construction Stage as of 30 September 2014 (Pre-Construction -80% completed, Construction-0% completed, Interconnection - 0% completed)	June 2017	June 2017 (Target Testing and Commissioning)
Sta. Rita Solar Power Project - Phase II/Jobin-Sqm Inc. (JOBIN)/ Mt. Sta. Rita, Morong and Hermosa, Bataan	92.86	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Awarded with RE Service Contract (SESC No. 2013-10-039) on 20 Nov 2013 • Certificate of Commerciality No. SCC- 2015-09-021-A2 dated 11 March 2016	December 2017	December 2017 (Target Testing and Commissioning)

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Concepcion Solar Power Project/Enfinity Philippines Renewable Resources, Inc./ Brgy. Sta. Rosa, Concepcion Tarlac	50.55	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Awarded with Solar Energy Service Contract (SESC No.2015-02-101) on 28 January 2015 • Acquired the DOE Certificate of Confirmation of Commerciality on 11 June 2015	December 2017	December 2017 (Target Testing and Commissioning)
Cavite Solar Power Project/Enfinity Philippines Renewable Resources, Inc./ Cavite Economic Zone, Rosario Cavite	3.0	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Awarded with Solar Energy Service Contract (SESC No. 2011-12-006) on 16 December 2011 • Acquired the DOE Certificate of Confirmation of Commerciality on 23 March 2015	December 2017	December 2017 (Target Testing and Commissioning)
V-Mars Solar Power Project/V-Mars Solar Energy Corporation/San Jose/Lupao, Nueva Ecija	10.0	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Issued with GIS on 11 January 2016	To be determined	To be determined
SJC Solar Power Project/SJC Solar Power Corporation/San Jose City, Nueva Ecija	10.0	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Issued with GIS on 3 February 2016 (DOE-EPIMB-SIS No. 2016-02-003)	To be determined	To be determined
RGEC Solar Power Project/Roxas Green Energy Corporation/Nasugbu and Tuy, Province of Batangas	30.0	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Issued with GIS on 10 February 2016 (DOE-EPIMB-SIS No. 2016-02-006)	To be determined	To be determined
Calabanga Solar Power Project/Calabanga Renewable Energy Inc./ Calabanga, Camarines Sur	50.0	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Issued with GIS on 11 March 2016 (DOE-EPIMB-SIS No. 2016-03-001)	To be determined	To be determined
Sta. Maria Solar Power Project/East Coast Fas Renewable Energy and Industrial Corporation/Sta. Maria, Isabela	30.0	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Issued with GIS on 6 April 2016 (DOE-EPIMB-SIS No. 2016-04-001)	To be determined	To be determined
Cordon Solar PV Power Project/Greenergy Solutions, Inc./ Cordon, Isabela	50.0	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Issued with GIS on 4 April 2016 (DOE-EPIMB-SIS No. 2016-04-004)	To be determined	To be determined
FPI Solar PV Power Project/Firmgreen Phils. Inc./ Tarlac City, Tarlac	50.0	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Issued with GIS on 6 April 2016 (DOE-EPIMB-SIS No. 2016-04-005)	To be determined	To be determined
Nueva Ecija Solar Power Project/Firmgreen Phils. Inc./ Pantabangan, Nueva Ecija	100.0	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Issued with GIS on 6 April 2016 (DOE-EPIMB-SIS No. 2016-04-005)	To be determined	To be determined

**Annex 5. Private Sector Initiated Power Projects in Luzon (INDICATIVE) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
Solana Solar Power Plant/Solana Solar Alpha, Inc./ Hermosa, Bataan	20.0	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Issued with GIS on 21 April 2016 (DOE-EPIMB-SIS No. 2016-03-005)	To be determined	To be determined
Santa Solar Power Project/Satrap Power Corporation/Brgy. Nagpanaoan, Santa, Ilocos Sur	20.0	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Issued with GIS on 5 May 2016 (DOE-EPIMB-SIS No. 2016-04-011)	To be determined	To be determined
Talugtug Solar PV Power Project/Greenergy Solutions, Inc./ Talugtug, Nueva Ecija	125.0	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Issued with GIS on 6 April 2016 (DOE-EPIMB-SIS No. 2016-06-006)	To be determined	To be determined
Capas Solar PV Power Project/Greenergy Solutions, Inc./ Capas, Tarlac	50.0	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Issued with GIS on 6 April 2016 (DOE-EPIMB-SIS No. 2016-06-006)	To be determined	To be determined
Ilagan II Solar PV Power Project/Greenergy Solutions, Inc./ Ilagan City, Isabela	100.0	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Issued with GIS on 21 April 2016 (DOE-EPIMB-SIS No. 2016-06-006)	To be determined	To be determined
Sta. Maria Solar PV Power Project/Greenergy Solutions, Inc./ Sta. Maria, Isabela	125.0	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Issued with GIS on 5 May 2016 (DOE-EPIMB-SIS No. 2016-06-006)	To be determined	To be determined
Solana Solar Photovoltaic (PV) Plant Phase I/Solana Solar Alpha, Inc./ Hermosa, Bataan	24.0	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Issued with GIS on 20 September 2016 (DOE-EPIMB-SIS No. 2016-09-001)	To be determined	To be determined
Solana Solar Photovoltaic (PV) Plant Phase II/Solana Solar Alpha, Inc./ Hermosa, Bataan	14.0	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Issued with GIS on 20 September 2016 (DOE-EPIMB-SIS No. 2016-09-001)	To be determined	To be determined
<b>WIND</b>	<b>997.0</b>			
Phase 1: Pasuquin East Wind Power Project/ Energy Logics Philippines, Inc./ Pasuquin, Ilocos Norte  <b>Cost: PhP6.048B</b>	48	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Awarded with Wind Energy Service Contract (WESC No. 2009-09-001) on 14 Sept 2009; • Acquired Forest Land-Use Agreement with DENR; • On-going wind resource assessment; • Acquired various LGU permits and resolutions of support; • ECC secured 15 Jun 2010; • GIS secured Dec 2010; • On-going negotiation with the Dept. of National Defense for the clearance to construct wind farm within the vicinity of Pasuquin Radar Station; • Equity Investors commitment secured;	November 2016	November 2016 (Target Testing and Commissioning)

**Annex 5. Private Sector Initiated Power Projects in Luzon (INDICATIVE) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
		<ul style="list-style-type: none"> <li>• Selected Preferred EPC Turn-key Tenderer for both the wind energy farm and the connection assets;</li> <li>• Submitted the Declaration of Commerciality (DOC) with incomplete documentary requirements;</li> <li>• The DOE is waiting for the final Work Plan of the project for further evaluation;</li> <li>• On-going negotiations for project financing and acquisition of TL-ROW as per Work plan; and</li> <li>• Acquired DOE Certificate of Confirmation of Commerciality on 02 December 2013</li> </ul> <p>FINANCING ARRANGEMENTS:</p> <ul style="list-style-type: none"> <li>• Negotiation for financial closing is on-going</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• On-going construction;</li> <li>• Construction Stage as of 30 September 2014( Pre-Construction - 39% completed, Construction-0%, Interconnection-0%); and</li> <li>• On-going negotiation for project financing and acquisition of TL-ROW as per Work Plan</li> </ul>		
<p>Balaoi Wind Power Project/ Northern Luzon UPC Asia Corporation/ Brgy. Balaoi, Pagudpud, Ilocos Norte</p> <p><b>Cost: US\$139.5Million</b></p>	<p>45</p>	<p>FEASIBILITY STUDY:</p> <ul style="list-style-type: none"> <li>• Completed detailed feasibility study</li> </ul> <p>ARRANGEMENT FOR SECURING THE REQUIRED LAND:</p> <ul style="list-style-type: none"> <li>• Land Rights Acquisition for WTG or PV, Access Road, and TL: 12% completed as of December 2014 (all land rights secured through Flags and private agreements; TL ROW permitting on going)</li> </ul> <p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Awarded with Wind Energy Service Contract (WESC No. 2010-02-038) on 1 Feb 2010</li> <li>• Conducted detailed wind resource assessment</li> <li>• Acquired various LGU permits and resolutions of support</li> <li>• NCIP Certificate of Non-Overlap on 15 Jan 2007</li> <li>• Forest Land use Agreement with DENR on 20 May 2009</li> <li>• DENR Environmental Compliance Certificate on 23 Jul 2009, DPWH Road Right-of-Way for T/L construction</li> <li>• CAAP Height Clearance permit</li> <li>• Final Report of SIS and Connection Agreement with NGCP secured on 4 Jan 2011</li> <li>• BOI Registered on 23 Jun 2011</li> <li>• Acquired DOE Certificate of Confirmation of Commerciality on 02 December 2013</li> </ul> <p>FINANCING ARRANGEMENTS:</p> <ul style="list-style-type: none"> <li>• Submitted proofs of negotiations/certifications from banks for project financing</li> <li>• Financial Closing - 10% completed as of December 2014 (Project substantially permitted but funders will require clarity on Feed-in-Tariff installation targets before committing funding</li> <li>• Financial Closing - 20% as of Feb report</li> </ul>	<p>October 2017</p>	<p>October 2017 (Target Testing and Commissioning)</p>

**Annex 5. Private Sector Initiated Power Projects in Luzon (INDICATIVE) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
		<p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• On-going construction - 17.33% as of 30 March 2015</li> <li>• Construction Stage as of March 2015( Pre-Construction - 52% completed, Construction of Wind Farm-0%, Interconnection Facilities - 0%); Construction shall commence upon completion of Caparispisan Project</li> <li>• Development works shall commenced upon completion of Caparispisan Project</li> <li>• EPC, O&amp;M, Owner's Engineer Contract/Agreement: 30% completed as of December 2014 (detailed Design Complete, Environmental Studies Complete);</li> <li>• NGCP is conducting SIS prior to signing of Connection Agreement</li> </ul>		
<p>Sembrano Wind Power Project (Formerly: Phase 2: Mabitac Wind Power Project)/ Alternergy Sembrano Wind Corporation/ Mt. Sembrano, Mabitac, Laguna</p> <p><b>Cost: Php7.056B</b></p>	72	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Acquired DOE Certificate of Confirmation of Commerciality on 13 February 2014;</li> <li>• Amended the Contract Area and assigned partially to Alternergy Sembrano Wind; Corporation ASWC-WESC No. 2009-09-018-AP2 on 27 February 2014;</li> <li>• Under the same contract area of WESC No. 2009-09-018;</li> <li>• On-going wind resource assessment;</li> <li>• Acquired various LGU permits and resolutions of support;</li> <li>• Interconnection Agreement with MERALCO last 1 March 2012;</li> <li>• Project Finance Term Sheet with Bank last 27 July 2012; Negotiation for financial closing is on-going; and</li> <li>• Final review of GIS by NGCP last 31 July 2012</li> </ul> <p>FINANCING ARRANGEMENTS:</p> <ul style="list-style-type: none"> <li>• AWOC to finance the implementation of the project with 100% equity; and</li> <li>• Negotiations for financial closing is on-going.</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• EPC and O&amp;M Contract with consortium of Nordex SE and McConnell Donnell last 11 July 2012;</li> <li>• On-going construction;</li> <li>• Construction Stage as of 30 September 2014( Pre-Construction - 22% completed, Construction-0%, Interconnection-0%); and</li> <li>• On-going completion of Pre-construction activities including financial closing Work Plan</li> </ul>	June 2018	June 2018 (Target Testing and Commissioning)
<p>Pagudpud Wind Power Project/ EDC Pagudpud Brgy. Balaoi and Caunayan, Pagudpud, Ilocos Norte Wind Power Corporation</p>	84	<p>FEASIBILITY STUDY:</p> <ul style="list-style-type: none"> <li>• Completed feasibility study</li> </ul> <p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Awarded with Wind Energy Service Contract (WESC No. 2010-02-040) on 19 Feb 2010;</li> <li>• Conducted detailed wind resource assessment;</li> <li>• Acquired various LGU permits and resolutions of support, DENR Environmental Compliance Certificate; and</li> <li>• Acquired DOE Certificate of Confirmation of Commerciality on 13 June 2014</li> </ul> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p>	December 2018	December 2018 (Target Testing and Commissioning)



**Annex 5. Private Sector Initiated Power Projects in Luzon (INDICATIVE) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
		<ul style="list-style-type: none"> <li>On-going construction; and</li> <li>Construction Stage as of 30 September 2014 (Pre-Construction - 20% completed, Construction-0%, Interconnection-0%)</li> </ul> <p>COMMENCEMENT OF CONSTRUCTION:</p> <ul style="list-style-type: none"> <li>Construction shall commence upon completion of Burgos Project</li> </ul>		
Matnog 1 Wind Power Project/Energy Development Corporation/Matnog, Sorsogon	153	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>Issued with GIS on 6April 2016 (DOE-EPIMB-SIS No. 2016-03-003)</li> </ul>	To be determined	To be determined
Matnog 2 Wind Power Project/Energy Development Corporation/Matnog, Sorsogon	206	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>Issued with GIS on 6April 2016 (DOE-EPIMB-SIS No. 2016-03-003)</li> </ul>	To be determined	To be determined
Matnog 3 Wind Power Project/Energy Development Corporation/Matnog, Sorsogon	206	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>Issued with GIS on 6April 2016 (DOE-EPIMB-SIS No. 2016-03-003)</li> </ul>	To be determined	To be determined
Burgos 2 Wind Power Project/Energy Development Corporation/ Burgos, Ilocos Norte	183	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>Issued with GIS on 6April 2016 (DOE-EPIMB-SIS No. 2016-03-003)</li> </ul>	To be determined	To be determined
<b>BIOMASS</b>	<b>58.175</b>			
Pampanga Oxyfuel-Gas Fired Power Plant Project/CENERTEC Philippines, Inc./ Brgy. Balubad, Porac, Pampanga	1.5	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS: Ongoing applications of requirements;</p> <p>COMMENCEMENT OF CONSTRUCTION: For construction</p>	December 2016	December 2016
Balintawak Oxyfuel-Gas Fired Power Plant Project/CENERTEC Philippines, Inc./ Old Samson Roa, Balintawak, Quezon City	4.0	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS: Ongoing applications of requirements;</p> <p>COMMENCEMENT OF CONSTRUCTION: For construction</p>	December 2016	December 2016
Napier Grass-Fired Biomass Power Plant/Grass Gold Renewable Energy Corp/Nueva Ecija	10.8	<p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:</p> <ul style="list-style-type: none"> <li>For construction</li> </ul>	January 2018	January 2018
Central Azucarera Don Pedro, Inc./ Biomass Cogeneration Plant/Brgy. Lumbangan, Nasugbu, Batangas	31.875	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>Issued with GIS on 6 April 2016 (DOE-EPIMB-SIS No. 2016-07-009)</li> </ul>	To be determined	To be determined
Santa Biomass Power Project/Satrap Power Corporation/Brgy. Nagpanaoan, Santa, Ilocos Sur	10.0	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>Issued with GIS on 20 July 2016 (DOE-EPIMB-SIS No. 2016-07-005)</li> </ul>	To be determined	To be determined

**Annex 5. Private Sector Initiated Power Projects in Luzon (INDICATIVE) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
<b>BATTERY</b>	<b>230.0</b>			
AES Battery Storage - Laoag Project/AES Philippines Power Partners Co. Ltd./ Laoag, Ilocos Norte	40.0	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Secured GIS on 18 February 2016 (DOE-EPIMB-SIS No. 2016-02-001)	To be determined	To be determined
AES Battery Storage - Bantay Project/AES Philippines Power Partners Co., LTD./ Bantay, Ilocos Norte	40.0	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Secured GIS on 18 February 2016 (DOE-EPIMB-SIS No. 2016-02-001)	To be determined	To be determined
AES Battery Storage - Masinloc Project Unit 2/AES Philippines Power Partners Co., LTD./ Masinloc, Zambales	10.0	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Secured GIS on June 2, 2015	To be determined	To be determined
AES Battery Storage - Masinloc Project Unit 3/AES Philippines Power Partners Co., LTD./ Masinloc, Zambales	10.0	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Secured GIS on June 2, 2015;	To be determined	To be determined
AES Battery Storage - Masinloc Project Unit 4/AES Philippines Power Partners Co., LTD./ Masinloc, Zambales	10.0	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Secured GIS on June 2, 2015;	To be determined	To be determined
Enerhiya Central Battery Energy Storage Project/SunAsia Energy Inc./ Concepcion, Tarlac	40.0	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Issued with GIS on 8 April 2016 (DOE-EPIMB-SIS No. 2016-04-002)	To be determined	To be determined
Enerhiya Sur I Battery Energy Storage Project/SunAsia Energy Inc./ Lemery and Tuy, Calaca, Batangas	40.0	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Issued with GIS on 8 April 2016 (DOE-EPIMB-SIS No. 2016-04-002)	To be determined	To be determined
Enerhiya Sur II Battery Energy Storage Project/SunAsia Energy Inc./ Lumban, Laguna	40.0	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Issued with GIS on 8 April 2016 (DOE-EPIMB-SIS No. 2016-04-002)	To be determined	To be determined

**Total Indicative Rated Capacity: 11,645.5**

Source: DOE

**Annex 6. Private Sector Initiated Power Projects in Visayas (COMMITTED) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
<p><b>COAL</b></p> <p>PEDC Expansion Project Former report (1x150 MW Circulating Fluidized Bed (CFB) Coal-Fired Power Plant)/ Panay Energy Development Corporation (Global Business Power Corporation)/ Brgy. Ingore, La Paz, Iloilo</p>	<p><b>285.00</b></p> <p>150</p>	<p>FEASIBILITY STUDIES, PERMITS AND OTHER REGULATORY REQUIREMENTS</p> <ul style="list-style-type: none"> <li>-ECC secured</li> <li>-Notice to Proceed (NTP) secured</li> <li>-GIS- secured clearance from DOE for 82MW on 03 March 2011</li> <li>-Feasibility Study: extension to existing plant</li> </ul> <p>OFF-TAKERS</p> <ul style="list-style-type: none"> <li>-Panay-Guimaras Power Supply Consortium (PPSG) - 25yr power supply deal for 24 MW</li> <li>-Other negotiations are ongoing and confidential</li> <li>-MERALCO-PEDC PSA for 70 MW of electrical output with 20 year contract, plus additional 5 years should the parties: effective 26 Aug 2016;</li> <li>-MERALCO-GLEDC PSA for 600 MW of electrical output</li> </ul> <p>FINANCIAL ARRANGEMENTS</p> <ul style="list-style-type: none"> <li>- 26 March 2015 - PEDC signed a PhP11B loan to 6 Financial Institutions</li> <li>-Project cost is Php6.199B (FS submitted on 10/19/2015)</li> </ul> <p>CONTRACTS FOR PLANT AND EQUIPMENT</p> <ul style="list-style-type: none"> <li>-June 2014 - Turnover of project site to Formosa Heavy Industries</li> <li>-EPC Contractors: Formosa Heavy Industry Poyry Energy</li> </ul> <p>COMMENCEMENT OF CONSTRUCTION</p> <ul style="list-style-type: none"> <li>-Construction started last August 14, 2014;</li> </ul> <p>PROJECT PROGRESS</p> <ul style="list-style-type: none"> <li>-07 March 2014 – Ground Breaking</li> <li>-Overall Progress: 72.8% completed vs. 74.8% Planned (as of January 2016)</li> <li>-Overall Progress: 80.6% completed vs 82% Planned (as of Feb 29 2016)</li> </ul>	<p>June 2016 (Ongoing Testing and Commissioning)</p>	<p>October 2016</p>
<p>Palm Concepcion Coal-Fired Power Plant/Palm Concepcion Power Corp. (Formerly DMCI Concepcion Power Corp.)/ Brgy. Nipa, Concepcion, Iloilo</p>	<p>135</p>	<p>FEASIBILITY STUDIES, PERMITS AND OTHER REGULATORY REQUIREMENTS</p> <ul style="list-style-type: none"> <li>-Feasibility Study completed - March 2006</li> <li>-Environmental Impact Statement – June 2006</li> <li>-Hydrology and Flood Release Analyses and Geotechnical Earthquake Risk Analysis – Jun 2011</li> <li>-Geotechnical Foundation &amp; Engineering Geological Investigations – Jun 2011</li> <li>-Geotechnical Foundation and Geohazards Risk Investigations – Aug 2011</li> <li>-Market Study of the Power Requirements in the Visayas</li> <li>-Final SIS Report from NGCP received on July 17, 2012</li> <li>-More confirmatory studies done</li> <li>-DAR Conversion Order-Sept 2008; SEC-22 Nov 2010; DENR Final SIS Report-approved by NGCP on 17 July 2012 BOI-amended 02 Oct 2012; Connection Agreement with NGCP-01 Oct 2012; ECC-03 June 2013; NCIP- issued by DOE on 03 June 2014 for Unit 1; Appraisal Report for the PPA/MLA from the DENR Regional Director-Oct 2014; Endorsements from LGUs and local permits secured; Necessary land requirements secured</li> </ul>	<p>Unit II - March 2018 (will still be firmed up)</p>	<p>Unit II - December 2018</p>

**Annex 6. Private Sector Initiated Power Projects in Visayas (COMMITTED) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
		<p>FINANCIAL ARRANGEMENTS                      -24 July 2013-Financial Closure Secured                      -Project cost is Php26.356B</p> <p>Construction Contracts for Plant and Equipment                      -Signed and awarded various contracts</p> <p>PROJECT PROGRESS                      -15 Jan 2013-Ground Breaking                      -18 July 2013-Commencement of Construction for 1st Unit                      -Feb 2016 - Transmission is 100% completed                      -Overall Progress: 96.80% completed vs. 95.67% planned (as of 31 Jan 2016)</p>		
<p><b>OIL</b></p> <p>Calumangan Diesel Power Plant/Energreen Power Development &amp; Management, Inc./ Brgy. Calumangan, Bago City, Negros Occidental</p>	<p><b>8.0</b></p> <p>8.0</p>	<p>FEASIBILITY STUDIES, PERMITS AND OTHER REGULATORY REQUIREMENTS                      -Feasibility Study-completed                      -Environmental Impact Assessment Study-Sept 2012                      -DOE: w/ MOA and COE - 100%                      -ERC: Approval of Supply Agreement - Provisional Approval dated 10 Nov 2014 - 100%; COC - 95%; Occular inspection conducted on Feb 3-5, 2016; Authority to develop and own or operate dedicated point-to-point limited transmission facilities - 100%; Approved by ERC on Oct. 29, 2015                      -Brgy. Calumangan Endorsement -01 September 2012                      -DENR: ECC - 21 Nov 2013; PTO - 100%; Provisional PTO pending conduct of emission test                      -PEMC: Application for WESM Direct Membership - 29 Jan 2015; required submission of various documents mostly from NGCP and some for ERC - 100%                      -NGCP issued Certificates of Approval to Connect (40MVA Substation-13 Nov 2015; 100m Line-04 Nov 2015; Unit 2 5MW-22 Jan 2016); Connection, Transmission &amp; Metering Service Agreement - signed and transmitted back to NGCP10 Feb 2016 for signature</p> <p>OFF-TAKERS                      -70% of dependable capacity contracted to CENECO</p> <p>Financial Arrangements                      Financially Closed</p> <p>CONTRACTS FOR PLANT AND EQUIPMENT                      -100 % Secured</p> <p>PROJECT PROGRESS                      - Dec 2013-Commencement of Construction</p> <p>ISSUES ENCOUNTERED RE: PROJECT DEVELOPMENT                      -Adverse climatic conditions, transportation interruption or delays, port congestion, general shortage of materials that affected construction and transport of engines and equipment from port of origin to plant site in Bago City and the perplexing bureaucracy and processes that affected and delayed grid connectivity.</p>	<p>Unit 4 - 8 MW                      October 2016</p>	<p>Unit 4- 8 MW                      November 2016</p>

**Annex 6. Private Sector Initiated Power Projects in Visayas (COMMITTED) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
<b>GEOTHERMAL</b>				
Biliran Geothermal Plant Project/ Biliran Geothermal Incorporated/ Biliran, Biliran  <b>Cost: US\$ 208.021 M</b>	50	FEASIBILITY STUDIES, PERMITS AND OTHER REGULATORY REQUIREMENTS Geothermal Service Contract from DOE-obtained ECC-secured for the proposed Geothermal Exploration Drilling and Biliran Power Plant Project on December 06, 2012 and August 23, 2013, respectively. Confirmation of Commerciality-obtained from DOE on 28 December 2014  FINANCIAL ARRANGEMENTS Memorandum of Understanding by and among Envent Holdings Philippines, Inc. (EHPI) and Philippine Associated Smelting and Refining Corp. (PASAR) signed on May 10, 2013	October 2016	Phase 1 - Oct 2016 Phase 2 - Nov 2016 Phase 3 - July 2017 Phase 4 - Nov 2017
<b>HYDROPOWER</b>				
Igbulo (Bais) Hydroelectric Power Project/ Century Peak Energy Corporation/ Igaras, Iloilo	5.1	FEASIBILITY STUDIES, PERMITS AND OTHER REGULATORY REQUIREMENTS Confirmation of Commerciality-issued on 26 June 2013 GIS-issued by DOE on 14 August 2013 Ongoing submission of other reportorial requirements  PROJECT PROGRESS Ongoing Construction	June 2018	June 2018 (Target Testing and Commissioning)
Cantakoy/ Quadraver Energy Corp./ Danao, Bohol	8.00	FEASIBILITY STUDIES, PERMITS AND OTHER REGULATORY REQUIREMENTS GIS-secured clearance from DOE on 11 July 2011  FINANCIAL ARRANGEMENT Financial Arrangement Secured  PROJECT PROGRESS Construction on-hold due to conflict with LGU	June 2018	June 2018 (Target Testing and Commissioning)
<b>SOLAR</b>				
Palo Solar Power Project/Sulu Electric Power and Light (Phils.), Inc. (SEPALCO)/ Brgy. Castila, Palo, Leyte	49.81	FEASIBILITY STUDIES, PERMITS AND OTHER REGULATORY REQUIREMENTS -RE Service Contract (RESC No. 2014-04-073) on 24 April 2014; -DOE Certificate of Confirmation of Commerciality-acquired on 07 March 2016	September 2016 (Ongoing Testing and Commissioning)	October 2016
Miag-ao Solar Power Project/ COSMO Solar Energy, Inc./ Miag-ao, Iloilo	5.67	FEASIBILITY STUDIES, PERMITS AND OTHER REGULATORY REQUIREMENTS Covered by Solar Energy Services (SESC No. 2013-09-036) on 31 October 2013 Declaration of Commerciality- filed on 26 September 2014 DOE Certificate of Commerciality- acquired on 12 January 2015  PROJECT PROGRESS Pre-Construction-100% Construction-100% Interconnection-100%	June 2016 (Ongoing Testing and Commissioning)	October 2016
First Toledo Solar Power Project/ SunAsia Energy, Inc./ Toledo City, Cebu	60.0	PROJECT PROGRESS -Pre-construction 80 % -Construction 50 % -Interconnection 80 %	December 2016	December 2016 (Target Testing and Commissioning)

**Annex 6. Private Sector Initiated Power Projects in Visayas (COMMITTED) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
		FEASIBILITY STUDIES, PERMITS AND OTHER REGULATORY REQUIREMENTS -RESC NO. 2015-05-230 awarded on 5/29/2015 -COCOC NO. SSC-2016-03-046-A issued on 05/24/2016		
<b>WIND</b>	-			
<b>BIOMASS</b>	-			

**Total Committed Rated Capacity: 471.58**

Source: DOE

**Annex 7. Private Sector Initiated Power Projects in Visayas (INDICATIVE) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
<b>COAL</b>	<b>900.00</b>			
300 MW Therma Visayas Energy Project/ Therma Visayas Inc./ Brgy. Bato, Toledo City, Cebu	300	<p>FEASIBILITY STUDIES, PERMITS AND OTHER REGULATORY REQUIREMENTS</p> <ul style="list-style-type: none"> <li>-GIS-clearance from DOE issued on 16 June 2012 (GIS study-approved)</li> <li>-ECC issued last May 2013</li> <li>-BOI-registered</li> <li>- July 23, 2014 - SAPA issued for foreshore development works for coal jetty</li> <li>-Site feasibility - completed on May 2015</li> <li>-Land Acquisition for Completion</li> <li>-Applied CAAP Height Clearance permit</li> <li>-Transmission EPC has been awarded</li> </ul> <p>CONTRACTS FOR PLANT AND EQUIPMENT</p> <ul style="list-style-type: none"> <li>-EPC Contract awarded last 30 May 2014</li> </ul> <p>FINANCIAL ARRANGEMENTS</p> <ul style="list-style-type: none"> <li>-Self-funded with on-going negotiations with financing institutions; awaiting closure; March 2016 - 3rd draw down; 4th draw Partial on 2 May 2016; 5th drawdown is scheduled on Aug 2016</li> <li>-Project cost is Php23B</li> </ul> <p>OFF-TAKERS</p> <ul style="list-style-type: none"> <li>-On-going discussions with target off-takers</li> </ul> <p>CONTRACTS FOR PLANT AND EQUIPMENT</p> <ul style="list-style-type: none"> <li>-EPC Contract awarded to Hyundai Engineering Co., Ltd. and Galing Power &amp; Energy Co., Inc. last May 30, 2014</li> </ul> <p>PROJECT PROGRESS</p> <ul style="list-style-type: none"> <li>- May 2015-site development works completed</li> <li>- Aug 2015-Piling works for the Coal Unloading Jetty commenced</li> </ul>	June 2017	<p>Unit 1: December 2017</p> <p>Unit 2: March 2018</p>
SPC Expansion Coal Power Plant Project/SPC Power Corporation/Brgy. Colon, Naga City, Cebu	300	<p>FEASIBILITY STUDIES, PERMITS AND OTHER REGULATORY REQUIREMENTS</p> <ul style="list-style-type: none"> <li>SIS-clearance from DOE issued on 09 March 2015</li> </ul>	To be determined	To be determined
Ludo Coal-Fired Thermal Power Plant/ Ludo Power Corporation/ Cebu City	300	<p>FEASIBILITY STUDIES, PERMITS AND OTHER REGULATORY REQUIREMENTS</p> <ul style="list-style-type: none"> <li>SIS-clearance issued by DOE issued on 11 Dec 2015</li> </ul>	To be determined	To be determined
<b>OIL</b>	<b>10.00</b>			
Datam Energy Northern Samar Diesel Power Plant Project/ Datam Energy Corporation/ Northern Samar	10	<p>FEASIBILITY STUDIES, PERMITS AND OTHER REGULATORY REQUIREMENTS</p> <ul style="list-style-type: none"> <li>SIS-clearance issued by DOE on 12 Nov 2015</li> </ul>	To be determined	To be determined

**Annex 7. Private Sector Initiated Power Projects in Visayas (INDICATIVE) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
<b>GEOTHERMAL</b>	<b>40.00</b>			
Dauin Geothermal Project/ Energy Development Corporation/ Dauin, Negros Oriental	40	FEASIBILITY STUDIES, PERMITS AND OTHER REGULATORY REQUIREMENTS Land-use permits for areas on public land-obtained (*site on public land but portions of access road leading to Site sits on private land); DOE Service Contract Project Project within GRESC # 2009-10-002; LGU endorsement obtained; SLUP Obtained (subject for renewal); TCP Obtained; RRW Obtained; Water rights obtained; and DENR-ECC obtained  FINANCIAL ARRANGEMENTS Ongoing negotiations on the financing	December 2021	December 2021 (Target Testing and Commissioning)
<b>HYDROPOWER</b>	<b>401.74</b>			
Timbaban Hydroelectric Power Project/ Oriental Energy and Power Generation Corporation/ Madalag, Aklan	18	FEASIBILITY STUDIES, PERMITS AND OTHER REGULATORY REQUIREMENTS Confirmation of Commerciality-issued on 28 May 2013; and Submission of lacking requirements in progress	August 2017	May 2018
Loboc Hydroelectric Power Project/ Sta. Clara Power Corporation/ Loboc, Bohol	1.2	FEASIBILITY STUDIES, PERMITS AND OTHER REGULATORY REQUIREMENTS Confirmation of Commerciality-issued on 3 June 2013; and Submission of lacking requirements in progress	June 2018	June 2018 (Target Testing and Commissioning)
Hilabangan (Lower Cascade)/ Century Peak Energy Corporation/ Kabankalan, Negros Occidental/	3.0	FEASIBILITY STUDIES, PERMITS AND OTHER REGULATORY REQUIREMENTS GIS-clearance to undertake issued by DOE on August 2013 Confirmation of Commerciality-issued on 28 August 2013; and Submission of lacking requirements in progress	August 2018	August 2018 (Target Testing and Commissioning)
Hilabangan (Upper Cascade)/ Century Peak Energy Corporation/ Kabankalan, Negros Occidental	4.8	FEASIBILITY STUDIES, PERMITS AND OTHER REGULATORY REQUIREMENTS GIS-clearance issued by DOE on August 2013; Confirmation of Commerciality-issued on 28 August 2013; and Submission of lacking requirements in progress	August 2018	August 2018 (Target Testing and Commissioning)
Main Aklan River Hydroelectric Power Project/ Sunwest Water & Electric Company, Inc./ Libacao, Aklan	15	FEASIBILITY STUDIES, PERMITS AND OTHER REGULATORY REQUIREMENTS Confirmation of Commerciality-issued on 19 September 2013; and Submission of lacking requirements in progress	September 2018	September 2018 (Target Testing and Commissioning)
Maninila (Lower Cascade)/ Century Peak Energy Corporation/ San Remigio, Antique	4.5	FEASIBILITY STUDIES, PERMITS AND OTHER REGULATORY REQUIREMENTS GIS-clearance from DOE issued on August 2013; Confirmation of Commerciality-issued on 02 October 2013; and Submission of lacking requirements in progress	October 2018	October 2018 (Target Testing and Commissioning)



**Annex 7. Private Sector Initiated Power Projects in Visayas (INDICATIVE) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
				Commissioning)
Maninila (Upper Cascade)/ Century Peak Energy Corporation/ San Remigio, Antique	3.1	FEASIBILITY STUDIES, PERMITS AND OTHER REGULATORY REQUIREMENTS GIS-clearance from DOE issued on August 2013 Confirmation of Commerciality-issued on 02 October 2013; and Submission of lacking requirements in progress	October 2018	October 2018 (Target Testing and Commissioning)
Sibalom (Upper Cascade)/ Century Peak Energy Corporation/ San Remigio, Antique	4.2	FEASIBILITY STUDIES, PERMITS AND OTHER REGULATORY REQUIREMENTS GIS-clearance from DOE issued on August 2013; Confirmation of Commerciality-issued on 02 October 2013; and Submission of lacking requirements in progress	October 2018	October 2018 (Target Testing and Commissioning)
Sibalom (Middle Cascade)/ Century Peak Energy Corporation/ San Remigio, Antique	4.0	FEASIBILITY STUDIES, PERMITS AND OTHER REGULATORY REQUIREMENTS GIS-Clearance from DOE issued on August 2013 Confirmation of Commerciality-issued on 02 October 2013; and Submission of lacking requirements in progress	October 2018	October 2018 (Target Testing and Commissioning)
Sibalom (Lower Cascade)/ Century Peak Energy Corporation/ San Remigio, Antique	4.0	Feasibility Studies, Permits and Other Regulatory Requirements - GIS-Clearance from DOE issued on August 2013 -Confirmation of Commerciality issued on 02 October 2013	October 2018	October 2018 (Target Testing and Commissioning)
Basak II/ Meadowland Developers, Inc./ Badian, Cebu	0.5	CONFIRMATION OF COMMERCIALITY-ISSUED ON 30 APRIL 2014 Submission of lacking requirements e.g. permits in progress  PROJECT PROGRESS 16 February 2013-Groudbreaking	April 2019	April 2019 (Target Testing and Commissioning)
Amlan (Plant B)/ Natural Power Sources Integration, Inc./ Amlan, Negros Oriental	1.5	FEASIBILITY STUDIES, PERMITS AND OTHER REGULATORY REQUIREMENTS Confirmation of Commerciality-issued on 11 July 2014; and Submission of lacking requirements in progress	July 2019	July 2019 (Target Testing and Commissioning)
Amlan (Plant A)/ Natural Power Sources Integration, Inc./ Amlan, Negros Oriental	3.2	FEASIBILITY STUDIES, PERMITS AND OTHER REGULATORY REQUIREMENTS Confirmation of Commerciality-issued on 25 September 2014; and Submission of lacking requirements in progress	September 2019	September 2019 (Target Testing and Commissioning)
Amlan (Plant C)/ Natural Power Sources Integration, Inc./ Amlan, Negros Oriental	0.8	FEASIBILITY STUDIES, PERMITS AND OTHER REGULATORY REQUIREMENTS Confirmation of Commerciality-issued on 25 September 2014; and Pending submission of requirements under development stage	September 2019	September 2019 (Target Testing and Commissioning)
Malugo/ Vivant-Malogo Hydropower, Inc./ Slay City, Negros	6	FEASIBILITY STUDIES, PERMITS AND OTHER REGULATORY REQUIREMENTS Confirmation of Commerciality-issued on 15 October 2014; and Submission of lacking requirements in progress	October 2019	October 2019 (Target Testing and Commissioning)
Lower Himogaan/ LGU Sagay/ Sagay, Negros Occidental	4	On-going pre construction activities; and Submission of lacking requirements e.g. permits in progress	September 2020	September 2020 (Target Testing and Commissioning)

**Annex 7. Private Sector Initiated Power Projects in Visayas (INDICATIVE) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
Caroan/ Antique electric Cooperative/ Sebaste, Antique	0.84	FEASIBILITY STUDIES, PERMITS AND OTHER REGULATORY REQUIREMENTS Confirmation of Commerciality-issued on 30 September 2015; and Submission of lacking requirements in progress  PROJECT PROGRESS On-going pre construction activities	September 2020	September 2020 (Target Testing and Commissioning)
Ipayo/ Antique electric Cooperative/ Sebaste, Antique	11.6	FEASIBILITY STUDIES, PERMITS AND OTHER REGULATORY REQUIREMENTS Confirmation of Commerciality-issued on 02 October 2016; and Submission of lacking requirements in progress  PROJECT PROGRESS On-going pre construction activities	September 2020	September 2020 (Target Testing and Commissioning)
Ilaguen 4/ Isabela Power Corporation/ Echague	10	FEASIBILITY STUDIES, PERMITS AND OTHER REGULATORY REQUIREMENTS Issued Confirmation of Commercialization on October 02, 2015	October 2020	October 2020 (Target Testing and Commissioning)
Bansud/ Sunwest Water & Electric Company, Inc./ Bansud & Gloria, Oriental Mindoro	1.5	FEASIBILITY STUDIES, PERMITS AND OTHER REGULATORY REQUIREMENTS Issued Confirmation of Commercialization on October 02, 2015	October 2020	October 2020 (Target Testing and Commissioning)
Aklan Pumped-Storage Hydropower/Strategic Power Development Corp./ Malay, Aklan	300.0	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Issued with GIS on 25 July 2016 (DOE-EPIMB-SIS No. 2016-07-007)	To be determined	To be determined
<b>SOLAR</b>	<b>349.63</b>			
Grid Tied Solar Farm/ E & P Green Energy, Inc./ Biliran, Biliran	25.0	FEASIBILITY STUDIES, PERMITS AND OTHER REGULATORY REQUIREMENTS - GIS- secured on April 2015 -Building Permit-21 Aug 2015 -HLURB Certification and NIA for DAR Conversion-21 Aug 2015 and 21 Sept 2016 -NCIP-28 August 2015 -DOE Certificate of Confirmation of Commerciality-28 Aug 2015 -BOI-11 Sept 2016  CONTRACTS FOR PLANT AND EQUIPMENT -Ongoing  PROJECT PROGRESS Start of Construction -April 2016 (Target) End of Construction -Nov 2016	March 2017	March 2017 (Target Testing and Commissioning)
Biliran Solar Power Project/ E & P Green Energy, Inc./ Biliran, Biliran	25.0	FEASIBILITY STUDIES, PERMITS AND OTHER REGULATORY REQUIREMENTS -Covered by Solar Energy Service Contract (SESC No. 2015-03-117) on 25 March 2015; -RESC NO. 2015-03-117 awarded on 3/25/2015	December 2017	December 2017

**Annex 7. Private Sector Initiated Power Projects in Visayas (INDICATIVE) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
		-COCOC NO. SSC-2015-09-022 issued on 08/28/2015		(Target Testing and Commissioning)
Tigbauan Solar Power Project/ Solexar Energy International, Inc./ Brgy. Cordova Norte and Bantud, Tigbauan, Iloilo	34.3	FEASIBILITY STUDIES, PERMITS AND OTHER REGULATORY REQUIREMENTS -Covered by Solar Energy Service Contract (SESC No. 2014-06-082) on 14 July 2014; -RESC NO. 2014-06-082 awarded on 7/14/2014 -COCOC NO. SSC-2015-10-032 issued on 12/09/2015	December 2018	December 2018 (Target Testing and Commissioning)
Victorias Solar Power Project / VictoriaSolar Energy Corp./ Brgy. XII, Victorias City, Negros Occidental	30.63	FEASIBILITY STUDIES, PERMITS AND OTHER REGULATORY REQUIREMENTS -RESC NO. 2015-03-118 awarded on 3/25/2015 -COCOC NO. SSC-2016-01-041 issued on 2/16/2016	December 2018	December 2018 (Target Testing and Commissioning)
Ceko Solar PV Project (Daanbantayan Solar PV Power Project)/ CEKO Solar Farm Systems Corp./ Brgy. Tominjao, Daanbantayan, Cebu	100	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Issued with GIS on 5 November 2015 (DOE-EPIMB-SIS No. 2015-10-010)	To be determined	To be determined
Mabinay Solar Power Project/ Lohas and Soul Lighting, Inc./ Mabinay, Negros Oriental	90	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Issued with GIS on 11 May 2016 (DOE-EPIMB-SIS No. 2016-04-001)	To be determined	To be determined
Bogo V Solar Power Project/Sun Premier Bogo Philippine Corporation/Bogo, Cebu	16.7	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Issued with GIS on 30 June 2016 (DOE-EPIMB-SIS No. 2016-06-013)	To be determined	To be determined
Silay Phase II Solar Power Project/Silay Solar Power Inc./ Silay City, Negros Occidental	10.0	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Issued with GIS on 25 July 2016 (DOE-EPIMB-SIS No. 2016-07-004)	To be determined	To be determined
Monte Solar Energy, Inc./ Brgy. Tamisu, Bais City, Negros Occidental	18.0	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Issued with GIS on 27 July 2016 (DOE-EPIMB-SIS No. 2016-07-003)	To be determined	To be determined
<b>WIND</b>	<b>1,148.6</b>			
Pulupandan Wind Power Project/First Maxpower International Corporation/Pulupandan, Negros Occidental	50.0	FEASIBILITY STUDIES, PERMITS AND OTHER REGULATORY REQUIREMENTS Secured the ff: - Feasibility study; Wind Energy Service Contract-01 February 2010; Detailed Wind Resource Assessment; GIS; Various LGU permits and Resolutions of Support; DENR ECC permit; NCIP Certificate on Non-Overlap-07 Jan 2013; Clearances from MARINA, BFAR, Philippine Coast Guard; DPWH Road Right-of-Way for overhead T/L; Third Party System Impact Study; Certificate of Confirmation of Commerciality-acquired from DOE on 17 September 2013; Proof of Consent from different Lot Owner	July 2018	July 2018 (Target Testing and Commissioning)

**Annex 7. Private Sector Initiated Power Projects in Visayas (INDICATIVE) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
		<p>FINANCIAL ARRANGEMENTS</p> <ul style="list-style-type: none"> <li>-Ongoing</li> <li>-Project cost is \$124,475,000.00</li> </ul> <p>CONSTRUCTION PROGRESS</p> <p>Pending due to ROW and Transmission Line Issues</p>		
Nabas Wind PetroWind Energy Corporation Power Project Phase II/Brgy. Pawa, Nabas, Aklan	14.0	<p>FEASIBILITY STUDIES, PERMITS AND OTHER REGULATORY REQUIREMENTS</p> <ul style="list-style-type: none"> <li>- Wind Energy Service Contract-14 Sept 2009;</li> <li>- Detailed Wind Resource Assessment-conducted</li> <li>- GIS-secured clearance from DOE on 16 September 2011</li> <li>- ECC-acquired from DENR dated 4 Jun 2012</li> <li>- Final Feasibility Study-Aug 2012</li> <li>-SIS Final Report from NGCP- 01 Oct 2012</li> <li>- CNO-acquired from NCIP</li> <li>- Barangay, Municipal, and Provincial Resolutions of Support-secured</li> <li>- DOE Certificate of Confirmation of Commerciality-acquired the on 31 May 2013</li> </ul> <p>FINANCIAL ARRANGEMENTS</p> <ul style="list-style-type: none"> <li>-Financial Arrangement Secured-submitted certification dated 31 August 2012 from Lead Arranger, ensuring the required financing is already available if needed; Total project cost is US\$118.44M</li> </ul> <p>CONTRACTS FOR PLANT AND EQUIPMENT</p> <ul style="list-style-type: none"> <li>-EPC Contract with EEI Corp. secured 31 Jul 2012</li> </ul> <p>OFF-TAKERS</p> <ul style="list-style-type: none"> <li>-Heads of Agreement with AKELCO for T/L construction secured 28 Nov 2012</li> </ul> <p>PROJECT PROGRESS</p> <ul style="list-style-type: none"> <li>-Ongoing Construction</li> </ul>	<p>Phase 1 (36 MW) - Mar 2015 (Operational since June 10, 2015) Phase 2 (14 MW) – To be determined</p>	<p>Phase 1 (36 MW) - Jun 2015 (Operational since June 10, 2015) Phase 2 (14 MW) –To be determined</p>
Iloilo 1 Wind Power Project/Energy Development Corporation/Batad & San Dionisio, Iloilo	213.0	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Issued with GIS on 6April 2016 (DOE-EPIMB-SIS No. 2016-03-003)</li> </ul>	To be determined	To be determined
Iloilo 2 Wind Power Project/ Energy Development Corporation/ Concepcion, Iloilo	500.0	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Issued with GIS on 6April 2016 (DOE-EPIMB-SIS No. 2016-03-003)</li> </ul>	To be determined	To be determined
Negros Wind Power Project/Energy Development Corporation/Manapla & Cadiz, Negros Occidental	262.0	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Issued with GIS on 6April 2016 (DOE-EPIMB-SIS No. 2016-03-003)</li> </ul>	To be determined	To be determined

**Annex 7. Private Sector Initiated Power Projects in Visayas (INDICATIVE) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
Bronzeoak Wind Power Project/Bronzeoak Philippines, Inc./ Calatrava, Salvador Benedicto and San Carlos, Negros Occidental	100.0	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Issued with GIS on 6 June 2016 (DOE-EPIMB-SIS No. 2016-06-001)	To be determined	To be determined
Monte Solar Energy, Inc./ Bais City, Manjuyod and Mabinay, Negros Oriental	9.6	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Issued with GIS 9 August 2016 (DOE-EPIMB-SIS No. 2016-08-001)	To be determined	To be determined
<b>BIOMASS</b>	<b>78.0</b>			
Boracay Oxyfuel-Gas Fired Power Plant Project/CENERTEC Philippines, Inc./ Brgy. Yapak, Malaya, Aklan	3.0	PERMITS AND OTHER REGULATORY REQUIREMENTS: Clearance to Undertake GIS (2015-09-004) from DOE released on 4 February 2016;	December 2016	December 2016 (Target Testing and Commissioning)
MCEI Multi-Feedstock Biomass Power Plant Project/Megawatt Clean Energy, Inc./ Negros Occidental	12.0	For construction	May 2018	May 2018 (Target Testing and Commissioning)
VMC Biomass Co-generation Plant/Victorias Milling Company, Inc. (Amendment)/ Victoria, Negros Occidental	63.0	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Issued with GIS on 20 May 2016 (DOE-EPIMB-SIS No. 2016-05-001)	To be determined	To be determined
<b>BATTERY</b>	<b>100.00</b>			
40 MW Battery Storage Project/ AES Philippines Power Partners Co., LTD./ Kabankalan, Negros Occidental	40	FEASIBILITY STUDIES, PERMITS AND OTHER REGULATORY REQUIREMENTS GIS-clearance from DOE issued on 31 January 2013; Option to lease-secured on 18 September 2013; Sangguniang Panlalawigan issued Resolution 98-2077 declaring the lot as industrial; Agreement for Easement Right of Way on Adjacent private land (for transmission)- executed on 14 January 2014; DOE COE-issued; GIS- approved on Aug 2014; DENR-ECC-approved on 28 Oct 2014; and Facility Study submitted on 12 Dec 2014  FINANCIAL ARRANGEMENT On-going negotiations with International/Local banks; and Proponent is planning to equity fund the Project  CONTRACTS FOR PLANT AND EQUIPMENT On-going selection of Owner's Engineer for the Construction Contracts for Plants and Equipment	June 2018	June 2018 (Target Testing and Commissioning)

**Annex 7. Private Sector Initiated Power Projects in Visayas (INDICATIVE) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
Enerhiya Delas Islas I Battery Energy Storage Project/SunAsia Energy Inc./ Amlan, Negros Oriental	15.0	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Issued with GIS on 8 April 2016 (DOE-EPIMB-SIS No. 2016-04-002)	To be determined	To be determined
Enerhiya Delas Islas II Battery Energy Storage Project/SunAsia Energy Inc./ Ormoc, Leyte	15.0	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Issued with GIS on 8 April 2016 (DOE-EPIMB-SIS No. 2016-04-002)	To be determined	To be determined
Enerhiya Delas Islas III Battery Energy Storage Project/SunAsia Energy Inc./ Compostela, Cebu	15.0	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Issued with GIS on 8 April 2016 (DOE-EPIMB-SIS No. 2016-04-002)	To be determined	To be determined
Cadiz Energy Storage Project/EQ Energy Storage Inc./ Cadiz City, Negros Occidental	15.0	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Issued with GIS on 24 May 2016 (DOE-EPIMB-SIS No. 2016-05-004)	To be determined	To be determined

**Total Indicative Rated Capacity: 3,027.97**

Source: DOE

**Annex 8. Private Sector Initiated Power Projects in Mindanao (COMMITTED) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
<b>COAL</b>	<b>1,610.00</b>			
2 X 100 MW Southern Mindanao Coal Fired Power Station/ Sarangani Energy Corporation/ Brgy. Kamanga, Maasim, Sarangani  <b>Cost: \$450M</b>	200	<p>FEASIBILITY STUDY: Completed</p> <p>ARRANGEMENT FOR SECURING THE REQUIRED LAND: On-going processing of the land conversion from agricultural lands where the plant is located to industrial use as declared by the Municipality of Maasim; Out of 28 hectares occupied by the power plant, 19 hectares were already converted and the balance of 9 hectares (for coal conveying system and ash ponds) is undergoing the process of conversion with DAR and other government entities.</p> <p>MARKETING OF GENERATING CAPACITIES: Power Sales Agreement for 105MW between Sarangani Energy Corporation and South Cotabato II is 70MW (SOCOTECO II), Davao del Norte is 15MW (DANECO), Agusan del Norte is 10MW (ANECO), and Agusan del Sur is 10MW (ASELCO) was executed 2011-2012; Please note that except for SOCOTECO1, all these offtakers will be supplied by Phase 1 of the SEC project in Maasim, Sarangani. Hence, Phase 1 is already fully contracted; SOCOTECO II Power Sales Agreement already has ERC final approval while those of ASELCO and ANECO have provisional approvals; and Still working on DANECO; SOCOTECO1 on the other hand will be supplied by Phase 2 of SEC.</p> <p>PERMITS AND OTHER REGULATORY REQUIREMENTS: ECC issued on April 2009</p> <p>FINANCING ARRANGEMENTS: Financial Arrangement Secured on 12 December 2012</p> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT: EPC Contract between Owner and Daelim Philippines, Inc. executed on 30 March 2011; Notice to Proceed to EPC Contractor issued on 28 December 2012; and SEC has complete and full support of its subsidiary companies, Conal Holdings Corporaion (CHC) and Alsons Consolidated Resources(ACR)</p> <p>COMMENCEMENT OF CONSTRUCTION: On-going Civil Works</p>	Phase II - 2018	Phase II - 2018
300 MW SMC Davao Power Plant Project (Phase I- 1x150MW; Phase II- 1x150MW)/ San Miguel Consolidated Power Corporation/ Brgy. Culaman, Malita, Davao del Sur  <b>Cost:\$630M / Php25.8B</b>	300	<p>FEASIBILITY STUDY: Completed</p> <p>ARRANGEMENT FOR SECURING THE REQUIRED LAND: Land acquisition completed</p> <p>MARKETING OF GENERATING CAPACITIES: On-going electric power supply contract negotiation with prospective off-takers</p>	Unit 1 - Jul 2016 (Ongoing Testing and Commissioning) Unit 2 -Oct 2016	Unit 1 - Oct 2016  Unit 2 -Nov 2016

**Annex 8. Private Sector Initiated Power Projects in Mindanao (COMMITTED) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
		<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:                      Environmental Impact Assessment completed; Topographic and Hydrographic completed; Soil Investigation completed;                      Clearance to Undertake GIS from DOE issued on 29 August 2011;                      GIS/SIS already submitted to NGCP for review;                      NGCP returned the report to SMC GPHC with comments;                      Facility Study Status- Final report submitted last 27 Dec. 2013;                      Results are being used by NGCP for pre-construction works while SMC GPHC for right-of-way; and                      SEC issued last 26 August 2011; ECC issued in June 2013</p> <p>GROUNDBREAKING SCHEDULES:                      Groundbreaking held last 15 July 2013.</p> <p>FINANCING ARRANGEMENTS:                      Financial Arrangement Secured from various banks on 12 May 2014.</p> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:                      EPC Contract executed on January 2013 and already awarded;                      Construction of the Project has been underway since August 2013; and                      Contracts for relative Works (Site Development, Pier and Jetty, Ship Unloader, Coal Conveying System already awarded)</p> <p>COMMENCEMENT OF CONSTRUCTION:                      On-going civil works construction/installation; and                      Target Completion Date of Transmission Connection on March 2016</p>		
<p>3 X 135 MW FDC-Misamis Circulating Fluidized Bed (CFB) Coal-Fired Power Plant Project/ FDC Utilities, Inc./ Phividec Industrial Estate, Villanueva, Misamis Oriental</p> <p><b>Cost: Php 30.019B</b></p>	<p>405</p>	<p>FEASIBILITY STUDY:                      -Project information Memorandum Completed</p> <p>ARRANGEMENT FOR SECURING THE REQUIRED LAND:                      -Land acquisition completed (Leased Contract with PHIVIDEC Industrial Authority)</p> <p>MARKETING OF GENERATING CAPACITIES:                      -Contracted approximately 88% of the total net output of the 3 units of the project; Assumed Total Rated Output less Station-Use at 11% and Outage Allowance: 320MW;                      -Ongoing electric power purchase agreement negotiation with offtakers for the remaining capacity for the 3rd unit; MORESCO II - 25MW, MOELCI II-25MW, FIBECO-35MW; SOCOTECO I - 10MW; DASURECO-12MW, MORESCO I - 22MW, ANECO - 12MW, LANECO - 10MW, MOELCI I - 16MW, CAMELCO-4MW, SURNECO - 13MW, DORECO-6MW, SURSECO II - 10MW, DANECO - 15MW, BUSECO - 8MW, SOCOTECO II - 45MW, MCCI - 10 MW, COTELCO - 5 MW (TOTAL CONTRACTED CAPACITY -283MW)</p>	<p>1st Unit -May 2016                      2nd Unit -August 2016                      3rd Unit- September 2016                      (Ongoing Testing and Commissioning)</p>	<p>1st Unit - October 2016                      2nd Unit - October 2016                      3rd Unit - November 2016</p>



**Annex 8. Private Sector Initiated Power Projects in Mindanao (COMMITTED) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
		<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:                      -Secured Clearance from DOE for the conduct of GIS on 12 September 2011;                      -Grid Impact Study (GIS) Review by NGCP completed;                      -ECC for power plant issued on May 2013;                      -ECC for transmission line was issued on August 2013;                      -NWRB water permit for Tagoloan issued on September 2013;                      -NWRB conditional water permit for cooling water at Macajalar Bay was issued;                      -NCIP Certificate of Non-Overlap issued on February 2014;                      -LGU endorsements from concerned provincial, municipality and barangays;Registered with the Board of Investments on August 2013;                      -Secured Locational Clearance from Villanueva;Negotiation for Foreshore Lease was completed;Right of Entry Permit was secured from Phividec;                      -Right-of-Way clearance and acquisition are for issuance;</p> <p>GROUNDBREAKING SCHEDULES:                      -Groundbreaking ceremony was held in November 2013</p> <p>FINANCING ARRANGEMENTS:                      -Financial Arrangement Secured on 27 December 2013 with various Banks for phase I (Units 1 and 2) and phase II (Unit 3) of the project;                      PROJECT COST:                      -PhP 30.019B;</p> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:                      -Contract for Engineering, Procurement and Construction (EPC) was awarded in September 2013;Tendering process of the first and most of second batch auxiliary equipment has been completed;</p> <p>COMMENCEMENT OF CONSTRUCTION:                      -Ongoing construction works;                      -Structural works and electro-mechanical equipment installation ongoing;                      -Finished construction of Transmission Line; Energized the Transmission Line</p>		
<p>3x55 MW Balingasag Thermal Power Plant (Circulating Fluidized Bed Combustion (CFBC) Coal-Fired Power Plant Plant)/ Minergy Coal Corporation/ Brgy. Mandangoa, Balingasag, Misamis Oriental</p> <p><b>Cost: PhP23.9B</b></p>	<p>165</p>	<p>FEASIBILITY STUDY:                      Conducted Feasibility study from February to September 2013</p> <p>ARRANGEMENT FOR SECURING THE REQUIRED LAND:                      Land acquisition completed at Brgy. Mandangoa Balingasag, Misamis Oriental; Processing land titling on the acquired lots</p> <p>MARKETING OF GENERATING CAPACITIES:                      Provisional Approval was issued on September 2013 for PSA between the Owner and CEPALCO (embedded via double ckt 138 kV line)</p>	<p>Unit 1: October 2016                      Unit 2: November 2016                      Unit 3: December 2016</p>	<p>Unit 1: January 2017                      Unit 2: March 2017                      Unit 3: May 2017</p>

**Annex 8. Private Sector Initiated Power Projects in Mindanao (COMMITTED) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
		<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:            SEC Registered on February 2013;            Certificate of Endorsement (No. 2013-07-007) issued on 1 August 2013;            Issued the following regulatory:</p> <ul style="list-style-type: none"> <li>o Business Permit/Mayor's permit - 16 January 2013;</li> <li>o SEC Certificate of Incorporation-18 February 2013;</li> <li>o DOE Certificate of Endorsement for ERC (No. 2013-07-007)-1 August 2013;</li> <li>o DPWH Excavation Permit-3 September 2013;</li> <li>o Balingasag SB Endorsement-7 October 2013;</li> <li>o Building permit (Access Road)-13 November 2013;</li> <li>o Permit to cut coconut trees-17 November 2013;DENR-ECC- 17 November 2013;</li> <li>o Zoning certification-25 November 2013;BOI Registration-4 December 2013;</li> <li>o Barangay Clearance-15 January 2014;</li> <li>o Mayor's Permit-16 January 2014;</li> <li>o BOC COR &amp; Certification of Accreditation - 6 February 2014;</li> <li>o Building Permit (Power Plant)-19 June 2014;</li> <li>o Locational Clearance - 1 July 2014;</li> <li>o PPA Permit to construct private port facility-16 September 2014; and</li> <li>o Plumbing permit/Sanitary permit (power plant)-2014</li> </ul> <p>ECC issued on 17 November 2013</p> <p>FINANCING ARRANGEMENTS:            Financial arrangement Secured from various banks (2x55MW secured on 22 January 2014, Additional 1x55MW secured on 26 May 2014</p> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:            EPC contract was signed on September 2013 for 2x55MW (Supplemental Agreement to EPC Contract signed on 10 March 2014 for 1x55MW (NTP for 2x55MW on 30 Jan 2014,NTP for 1x55MW on 29 May 2014);            Site Evaluation completed on 14 August 2002; and            Main EPC Contractor: Mitsubishi Corporation; Main Sub-contractor: Toshiba Plants Systemes * Services Corp. (TPSC)</p> <p>COMMENCEMENT OF CONSTRUCTION:            On-going construction</p>		
GNPowder Kauswagan Ltd. 540MW Clean Coal-Fired Power Plant/ GN Power Kauswagan Ltd. Co./ Kauswagan, Lanao del Norte	540	<p>FEASIBILITY STUDY:            Completed</p> <p>ARRANGEMENT FOR SECURING THE REQUIRED LAND:            GNPK and the land owners of the Project site are in the final stages of satisfying their respective obligations under the land purchase agreements</p>	December 2017	March 2018

**Annex 8. Private Sector Initiated Power Projects in Mindanao (COMMITTED) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
<p><b>Cost: US\$740 Million</b></p>		<p>MARKETING OF GENERATING CAPACITIES:                      Provisional Authority dated 28 April 2014 was issued for the approval of the Power Purchase and Sale Agreement among GN Power, AMRECO PSAG Corp. and 20 participating ECs; 330MW sold to ECs arranged by AMRECO PSAG;GNPK is currently negotiating with other ECs as well as non-DU customers for sale of additional capacity; received provisional authority from the ERC for all 20 participating ECs</p> <p>PERMITS AND OTHER REGULATORY REQUIREMENTS:                      ECC issued on 14 March 2014; A multipartite monitoring team is being established pursuant to the ECC; Clearance to Undertake GIS from DOE issued on 28 June 2013; NGCP has completed the System Impact Study for 4x150MW (gross capacity); Facility study to be performed next; Granted LGU Endorsement;                      Permits and Other Regulatory Requirements: All permits obtained under the name of of GNPowder Ltd. Co (Permits assigned from GNPowder Ltd.Co. to GNPowder Kauswagan Ltd.Co., DENR Environmental Compliance Certificate, CAAP Height Clearance,DOE Clearance to undertake SIS for 3x125MW, DOE Certificate of Endorsement for NCIP Application for Certificate of Non-Overlap, Mindanao Development Authority Endorsement, LGU Endorsements); and                      Other permits obtained for the project: Clearance to Develop Port Facility;Permit to Drill) were transferred and assigned to the Project Company, GN Power Kauswagan Ltd. Co. by virtue of a Project Assignment/Agreement</p> <p>FINANCING ARRANGEMENTS:                      Financial Arrangement Secured on 28 May 2014; and                      Commitments from several lenders have been obtained and signed 23 December 2014</p> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:                      EPC contract was signed on 15 May 2014; and                      Construction Contracts for Plant and Equipment: Significant pre-Notice to proceed activities are being done by the EPC contractor at the site in China</p> <p>COMMENCEMENT OF CONSTRUCTION:                      NTP issued to the EPC contractor on November 2014;On-going construction; and                      Construction of temporary facilities, housing facilities and foundation design validation activities are on-going</p>		
<b>OIL</b>	<b>29.54</b>			
<p>Peakpower Soccsargen, Inc. Bunker Fired Power Plant (PSI Expansion Project)/ Peakpower Soccsargen, Inc./ General Santos City, South Cotabato</p>	<p>13.94</p>	<p>FEASIBILITY STUDY:                      -Completed</p> <p>FINANCING ARRANGEMENTS:                      -Financial arrangement Secured with bank certification</p>	<p>November 2016</p>	<p>December 2016</p>

**Annex 8. Private Sector Initiated Power Projects in Mindanao (COMMITTED) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
		<p>MARKETING OF GENERATING CAPACITIES:                      - Power Purchase and Transfer Agreement (PPTA) for the Additional Generating Units was entered into by PSI and South Cotabato II Electric Cooperative, Inc. (SOCOTECO II) on 06 February 2015                      -off-taker: SOCOTECO II (13.9MW)</p> <p>PERMITS AND OTHER REGULATORY REQUIREMENTS:                      • Clearance to Undertake a Grid Impact Study (GIS) from DOE was issued on 11 August 2015;                      • Amended ECC was issued on 28 August 2015;                      • Building Permit from the Local Government was secured on 06 May 2016</p> <p>COMMENCEMENT OF CONSTRUCTION:                      • Power Plant Equipment Supply Contract between PSI and Wärtsilä Finland Oy was executed on 23 October 2015                      • EPC Contract between PSI and PMM Works, Inc. was executed on 25 January 2016                      • On-going construction is at 55.78% as of Aug 2016</p>		
Peakpower San Francisco, Inc. Bunker Fired Power Plant (PSI Expansion Project)/ Peakpower San Francisco, Inc./ San Francisco, Agusan del Sur	5.2	<p>FEASIBILITY STUDY:                      -Completed</p> <p>FINANCING ARRANGEMENTS:                      -Financial arrangement Secured with bank certification</p> <p>PERMITS AND OTHER REGULATORY REQUIREMENTS:                      • Clearance to Undertake a Grid Impact Study (GIS) from DOE was issued on 07 August 2015                      • Amended ECC was issued on 26 November 2015                      • Building Permit from the Local Government was secured on 08 March 2016</p> <p>MARKETING OF GENERATING CAPACITIES:                      • Power Purchase and Transfer Agreement (PPTA) for the Additional Generating Unit was entered into by PSFI and Agusan del Sur Electric Cooperative, Inc. (ASELCO) on 17 March 2015                      -off-taker: ASELCO (5.2MW)</p> <p>COMMENCEMENT OF CONSTRUCTION:                      • Power Plant Equipment Supply Contract between PSFI and Wärtsilä Finland Oy was executed on 29 October 2015                      • EPC Contract between PSFI and PMM Works, Inc. was executed on 25 January 2016                      • On-going construction is at 41.76%</p>	February 2017	March 2017
2x5.2 MW Peakpower Budiknon, Inc. Bunker Fired Power Plant/ Peakpower Bukidnon, Inc./ Manolo Fortich, Bukidnon	10.4	<p>FEASIBILITY STUDY:                      -Completed</p> <p>FINANCING ARRANGEMENTS:                      -Financial arrangement Secured with bank certification</p>	May 2017	June 2017

**Annex 8. Private Sector Initiated Power Projects in Mindanao (COMMITTED) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
		<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>• Clearance to Undertake a Grid Impact Study (GIS) from DOE was issued on 07 May 2015</li> <li>• ECC was issued on 21 September 2015</li> <li>• On going application for Building Permit from the Local Government</li> </ul> <p>MARKETING OF GENERATING CAPACITIES:</p> <ul style="list-style-type: none"> <li>• Power Purchase and Transfer Agreement (PPTA) was entered into by PBI and Bukidnon II Electric Cooperative, Inc. (BUSECO) on 22 August 2014</li> <li>-off-taker: ASELCO (10.4MW)</li> </ul> <p>COMMENCEMENT OF CONSTRUCTION:</p> <ul style="list-style-type: none"> <li>• Power Plant Equipment Supply Contract between PBI and Wärtsilä Finland Oy was executed on 29 October 2015</li> <li>• EPC Contract between PBI and PMM Works, Inc. was executed on 25 January 2016</li> <li>• On-going construction is at 10.69%</li> </ul>		
<b>HYDROPOWER</b>	<b>134.2</b>			
New Bataan/Euro Hydro Power (Asia) Holdings, Inc./ New Bataan, Compostela Valley	2.4	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>-Issued Confirmation of Commerciality on 24 April 2014;</li> <li>-Submission of lacking requirements e.g. permits in progress;</li> </ul> <p>COMMENCEMENT OF CONSTRUCTION:</p> <ul style="list-style-type: none"> <li>-On-going Pre-construction activities</li> </ul>	January 2017	January 2017 (Target Testing and Commissioning)
Lake Mainit/ Agusan Power Corporation/ Jabonga, Agusan del Norte	25.0	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>Clearance to Undertake GIS from DOE issued on 7 October 2012; and</li> <li>Submission of lacking requirements e.g. permits in progress.</li> </ul> <p>FINANCING ARRANGEMENTS:</p> <ul style="list-style-type: none"> <li>Financial Arrangement Secured</li> </ul> <p>COMMENCEMENT OF CONSTRUCTION:</p> <ul style="list-style-type: none"> <li>On-going construction</li> </ul>	December 2017	December 2017
Puyo Hydroelectric Power Project/ First Gen Mindanao Hydropower Corp./ Jabonga, Agusan del Norte	30	<p>FEASIBILITY STUDY:</p> <ul style="list-style-type: none"> <li>Also submitted Feasibility Study and 5-Yr Work Plan</li> </ul> <p>ARRANGEMENT FOR SECURING THE REQUIRED LAND:</p> <ul style="list-style-type: none"> <li>HSC NO. 2009-10-005</li> </ul> <p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>Issued Confirmation of Commerciality on 12 July 2013; and</li> <li>Already secured LGU Endorsements, DENR Certificate of Non-Coverage, NCIP Certificate and NWRB Permit</li> </ul>	July 2018	July 2018 (Target Testing and Commissioning)

**Annex 8. Private Sector Initiated Power Projects in Mindanao (COMMITTED) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
		<p>GROUNDBREAKING SCHEDULES: Ground breaking held on 17 April 2013</p> <p>FINANCING ARRANGEMENTS: Financial Arrangement Secured</p> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT: EPC for main facilities for tender</p> <p>COMMENCEMENT OF CONSTRUCTION: Construction on hold as of April 2015 due to security threat in the area; and Project implementation on hold due to security threat in the area</p>		
Asiga/ Asiga Green Energy Corp./ Santiago, Agusan del Norte	8.0	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS: Issued Confirmation of Commerciality on 1 August 2014; Submission of lacking requirements e.g. permits in progress; and Secured DOE Endorsement to DAR to facilitate the processing of application for Land Use Conversion</p> <p>GROUNDBREAKING SCHEDULES: Groundbreaking held on 22 April 2015</p> <p>FINANCING ARRANGEMENTS: Financial Arrangement Secured</p> <p>COMMENCEMENT OF CONSTRUCTION: On-going construction is 25% as of November 2015</p>	August 2019	August 2019 (Target Testing and Commissioning)
Manolo Fortich II/ Hedcor Bukidnon, Inc./ Santiago, Bukidnon	43.40	<p>FEASIBILITY STUDY: -Completed;</p> <p>ARRANGEMENT FOR SECURING THE REQUIRED LAND: -HSC No. 2013-11-326; 332 out of 341 indentified ROW were already secured (with lease of contracts with landowners)</p> <p>PERMITS AND OTHER REGULATORY REQUIREMENTS: -On-going Pre-construction activities; -Submission of lacking requirements e.g. permits in progress; -Secured DOE Endorsement to DAR to facilitate the processing of application for Land Use Conversion; Secured the following requirements: Renewable Energy Service Contract, Certificate of Commerciality, Environmental Compliance Certificate, Conditional Water Permit, SIS, Registered with the BOI, With ER 1-94 MOA between HBI and DOE, Done with the FPIC process, with IP and LGU Endorsements, with SLUP issued by DENR, with tree cutting permit, with Locational Clearance and Building permit; -On-going DAR Conversion still on process in securing other regulatory requirements</p>	June 2017	June 2017

**Annex 8. Private Sector Initiated Power Projects in Mindanao (COMMITTED) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
		<p>GROUNDBREAKING SCHEDULES: -Groundbreaking held on 22 April 2015;</p> <p>FINANCING ARRANGEMENTS: -Financial Arrangement Secured;</p> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT: -Done with negotiation on Civil works and Electro Mechanical; -On-going negotiation on electrical works</p> <p>COMMENCEMENT OF CONSTRUCTION: -On-going construction is 52% as of June 2016</p>		
Manolo Fortich 2/ Hedcor Bukidnon, Inc./ Santiago, Bukidnon	25.40	<p>FEASIBILITY STUDY: -Completed</p> <p>ARRANGEMENT FOR SECURING THE REQUIRED LAND: -HSC No. 2013-11-327; 332 out of 341 indentified ROW were already secured (with lease of contracts with landowners)</p> <p>PERMITS AND OTHER REGULATORY REQUIREMENTS: -On-going Pre-construction activities; Submission of lacking requirements e.g. permits in progress; Secured DOE Endorsement to DAR to facilitate the processing of application for Land Use Conversion; Secured the following requirements: Renewable Energy Service Contract, Certificate of Commerciality, Environmental Compliance Certificate, Conditional Water Permit, SIS, Registered with the BOI, With ER 1-94 MOA between HBI and DOE, Done with the FPIC process, with IP and LGU Endorsements, with SLUP issued by DENR, with tree cutting permit, with Locational Clearance and Building permit; -On-going DAR Conversion still on process in securing other regulatory requirements</p> <p>GROUNDBREAKING SCHEDULES: Groundbreaking held on 22 April 2015</p> <p>FINANCING ARRANGEMENTS: -Financial Arrangement Secured</p> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT: -Done with negotiation on Civil works and Electro Mechanical; -On-going negotiation on electrical works</p> <p>COMMENCEMENT OF CONSTRUCTION: -On-going construction is 37% as of June 2016</p>	June 2017	June 2017

**Annex 8. Private Sector Initiated Power Projects in Mindanao (COMMITTED) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
<b>SOLAR</b>	-			
<b>BIOMASS</b>	<b>14.20</b>			
PTCI Rice Husk-Fired Biomass Cogeneration Facility/Philippine Trade Center, Inc./ Sultan Kudarat, Maguindanao	1.6	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS: -Secured Clearance from DOE for the conduct of GIS on 13 March 2014;</p> <p>FINANCING ARRANGEMENTS: -Financial Arrangement Secured;</p> <p>COMMENCEMENT OF CONSTRUCTION: -Operating for Own-Use;</p>	February 2016 (On-going Testing and Commissioning)	October 2016
GEEC Biomass Cogeneration System/Green Earth Enersource Corporation/Maguindanao	2.6	<p>FINANCING ARRANGEMENTS: -Financial Arrangement Secured;</p> <p>COMMENCEMENT OF CONSTRUCTION: -Operating for Own-Use</p>	October 2016	October 2016 (Target Testing and Commissioning)
LPC Rice Husk-Fired Biomass Power Plant Project /Lamsan Power Corporation/Sultan Kudarat, Maguindanao	10.0	<p>FINANCING ARRANGEMENTS: -Financial Arrangement Secured;</p> <p>COMMENCEMENT OF CONSTRUCTION: -On-going construction;</p>	October 2016	October 2016 (Target Testing and Commissioning)

**Total Committed Rated Capacity: 1,687.94**

Source: DOE



**Annex 9. Private Sector Initiated Power Projects in Mindanao (INDICATIVE) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
<b>COAL</b>	<b>1,733.00</b>			
Bislig 1 Oxyfuel-Gas Fired Power Plant Project/CENERTEC Philippines, Inc./ Brgy. Kahayag, Bislig City Surigao del Sur	1.0	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS: -Clearance to Undertake GIS (2015-09-005) from DOE released on 4 February 2016;</p> <p>COMMENCEMENT OF CONSTRUCTION: -For construction</p>	December 2016	December 2016 (Target Testing and Commissioning)
Bislig 2 Oxyfuel-Gas Fired Power Plant Project/CENERTEC Philippines, Inc./ Brgy. Kahayag, Bislig City Surigao del Sur	4.0	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS: -Clearance to Undertake GIS (2015-09-006) from DOE released on 4 February 2016;</p> <p>COMMENCEMENT OF CONSTRUCTION: -For construction</p>	December 2016	December 2016 (Target Testing and Commissioning)
SMC Davao Power Plant Project Phase II/ San Miguel Consolidated Power Corporation/ Brgy. Culaman, Malita, Davao del Sur	300.0	<p>FEASIBILITY STUDY: -Completed;</p> <p>ARRANGEMENT FOR SECURING THE REQUIRED LAND: -Land acquisition completed;</p> <p>PERMITS AND OTHER REGULATORY REQUIREMENTS: -On-going processing of ECC requirements; -On-going securing of permits and other regulatory requirements;</p> <p>FINANCING ARRANGEMENTS: -On-going negotiations for financing arrangements</p>	December 2018	December 2018 (Target Testing and Commissioning)
<p>Ozamis Coal Fired Power Plant (Phase 1 - 1 x 150 MW; Phase 2 - 1 x 150 MW)/ Ozamiz Power Generation, Inc. (wholly owned subsidiary of Avesco Marketing Corporation/Brgy. Pulot,Ozamiz City,Misamis Occidental</p> <p><b>Project Cost: PhP37.07 Billion</b></p>	300.0	<p>FEASIBILITY STUDY: Final revised copy of Feasibility Study submitted on 15 July 2015;</p> <p>ARRANGEMENT FOR SECURING THE REQUIRED LAND: -Land acquisition is 95% complete; 5% of which are in the final process of negotiation; Conversion of land from Agricultural to Industrial is on-going (as of 29 March 2016);</p> <p>MARKETING OF GENERATING CAPACITIES: -As of March 2016, still preparing all the necessary documents that can be required for purposes of complying with the directive of ERC and the DOE on CSP; -Still in the process of marketing the electricity to the different cooperatives and were able to secure commitments with the various DUs (List of DUs with commitments: MAGELCO - 6MW; COTELCO-4MW;MOELCI 1 - 12MW, MOELCI 2- 11MW, SUKELCO - 5MW, BUSECO - 7MW, LANECO - 5MW, ZANECO- 6MW, ZAMSURECO 1 - 8MW, ZAMSURECO 2 - 5MW, MORESCO 1 - 8MW, MORESCO 2 - 8MW, ANECO - 7MW, CAMELCO - 5MW, ZAMCELCO - 6MW, TOTAL : 103MW); -Projections is to secure a minimum of 30MW of Contracts every 3 months starting October 2016.</p> <p>PERMITS AND OTHER REGULATORY REQUIREMENTS:</p>	<p>Phase 1 - 1 x 150MW - Dec 2019 Phase 2 - 1 x 150MW - Jun 2020 Note: Still under study</p>	<p>Phase 1 - 1 x 150 MW - June 2020 Phase 2 - 1 x 150 MW- June 2020</p>

**Annex 9. Private Sector Initiated Power Projects in Mindanao (INDICATIVE) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
		<p>-Certificate of Endorsement (CoE) released on June 4, 2015;                      -Environmental Clearance Certificate released on 15 October 2015 (ECC-CO-1502-0002);                      -Approved Grid/System Impact Study released on 7 January 2016;                      -Awaiting DOE issuance for Land-Use- Conversion Certificate of Urgency for DAR;                      -Awaiting release of Certificate of Non-Coverage from NCIP, expected release on May 2016                      -NWRB Water Permit Application on-going, expected completion on May 2016                      -Certificate of Edorsement to BOI released on 5 February 2016;                      -CAAP Certificate of Height Clearance released on 10 March 2015;                      -Facilities Study for Transmission Service Agreement for the Open Access Rules on-going;                      -Applications for BOI, Bureau of Customes, Foreshore Lease Agreement, Tree Cutting Permit, PPA Clearance to Develop Private Port Facility, LGU Permits (Business,Fencing and Zoning Permits) all on-going;</p> <p>GROUNDBREAKING SCHEDULES:                      -Target date of groundbreaking for finalization, but site clearing and preparation works on-going;</p> <p>FINANCING ARRANGEMENTS:                      -Finalizing financing arrangements with different local and foreign banks;</p> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT:                      -Completed Terms of Reference for Preliminary Design and Technical Provision for Detailed Design; Detailed Site Development Plans and Detailed Engineering plans completed;</p> <p>COMMENCEMENT OF CONSTRUCTION:                      -Simultaneous construction of Unit No. 1 and 2 will commence upon financial closure with 34 months construction contract</p>		
Sibuguey Power Plant Project/ Philippine National Oil Company (PNOC-EC)/ Sibugay, Zamboanga	100	<p>FEASIBILITY STUDY:                      Technical and economic feasibility study was completed in July 2011</p> <p>PERMITS AND OTHER REGULATORY REQUIREMENTS:                      Eligible bidder for Transaction Advisor on 8 August 2012;                      On-going bid processing for the EIS consultancy leading to ECC application and other permits;                      processing of ECC requirements; and                      Clearance to Underatake GIS from DOE issued on14 October 2011</p> <p>FINANCING ARRANGEMENTS:                      On-going negotiations for financing arrangements</p>	To be determined	To be determined

**Annex 9. Private Sector Initiated Power Projects in Mindanao (INDICATIVE) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
ZAM 100 MW Circulating Fluidized Bed (CFB) Coal-Fired Power Station/ San Ramon Power Inc./ Sitio San Ramon, Brgy. Talisayan, Zamboanga City  <b>Project Cost: \$292 Million</b>	100	FEASIBILITY STUDY: On-going Feasibility Study;  ARRANGEMENT FOR SECURING THE REQUIRED LAND: Land Lease Agreement with ZamboEcozone signed on 28 January 2013;  MARKETING OF GENERATING CAPACITIES: On-going negotiations with ZAMCELCO for baseload supply; Power Sales Agreement for ZAMCELCO is 85MW, and ZAMSURECO 1 is 10MW; Awaiting for the ERC approval of PSAL with ZAMCELCO;  PERMITS AND OTHER REGULATORY REQUIREMENTS: Environmental Clearance Certificate released on 20 March 2012 (ECC-CO-1112-0021); On-going securing permits;  GROUNDBREAKING SCHEDULES: Ground breaking held on 27 January 2013;  FINANCING ARRANGEMENTS: On-going sourcing of financing the project;  CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT: EPC Contract between Owner and Daelim Philippines, Inc. executed on 27 December 2012	To be determined	To be determined
SMC Davao Power Plant Project Phase III (Unit 1 - 150 MW; Unit 2 – 150 MW; Unit 3 – 300 MW)/ San Miguel Consolidated Power Corporation/Brgy. Culaman, Malita, Davao del Sur	600.0	FEASIBILITY STUDY: -Completed;  ARRANGEMENT FOR SECURING THE REQUIRED LAND: -Land acquisition completed;  PERMITS AND OTHER REGULATORY REQUIREMENTS: -Secured DENR ECC (ECC-CO-1304-0010) on 18 June 2013; -On-going securing of permits and other regulatory requirements  FINANCING ARRANGEMENTS: -On-going negotiations for financing arrangements;  COMMENCEMENT OF CONSTRUCTION: -On-going civil works construction/installation	To be determined	To be determined
SMC Global Power ( 4 x 82 MW)/ SMC Global Power/SMC Global Power/Brgy. Darong, Santa Cruz, Davao del Sur	328.0	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Issued with GIS on 8 June 2016 (DOE-EPIMB-SIS No. 2016-05-006)	To be determined	To be determined
<b>OIL-BASED</b>	<b>30.9</b>			
Nickel Asia Diesel Power Project/Nickel Asia Corporation/Surigao City, Surigao del Norte	10.9	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Issued with GIS on 30 May 2016 (DOE-EPIMB-SIS No. 2016-05-005)	To be determined	To be determined

**Annex 9. Private Sector Initiated Power Projects in Mindanao (INDICATIVE) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
Panasia Malita Diesel Power Plant/Panasia Energy, Inc./ Malita, Davao	20.0	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Issued with GIS on 21 September 2016 (DOE-EPIMB-SIS No. 2016-09-006)	To be determined	To be determined
<b>GEOHERMAL</b>	<b>40.00</b>			
Mindanao 3 Geothermal Power Project/ Energy Development Corporation/ Kidapawan, North Cotabato	40.0	FEASIBILITY STUDY: On-going Feasibility Study; Resource assessment and studies in optimal power plant capacity  ARRANGEMENT FOR SECURING THE REQUIRED LAND: The project is within the DOE Service Contract -GRES# 009-10-004  PERMITS AND OTHER REGULATORY REQUIREMENTS: DENR ECC obtained; Land use permits obtained; LGU Endorsement on-going; Water right secured; On-going preparation of DENR requirements for TL FLAG; Water rights secured; Turnkey Contracts pending result of feasibility study; Clearance to Undertake GIS from DOE issued on 7 June 2012  FINANCING ARRANGEMENTS: On-going sourcing of financing the project  PROJECT COST: Project cost is subject to the result of the feasibility study	June 2020	June 2020 (Target Testing and Commissioning)
<b>HYDROPOWER</b>	<b>522.74</b>			
Bubunawan Hydroelectric Power Project/ First Gen Mindanao Hydropower Corp./ Baungon and Libona, Bukidnon	23	FEASIBILITY STUDY: Submitted Feasibility Study and 5-Yr Work Plan  PERMITS AND OTHER REGULATORY REQUIREMENTS: Issued Confirmation of Commerciality on 02 July 2013; and Already secured LGU Endorsements, DENR Environment Compliance Certificate , NCIP Certificate and NWRB Permit; Clearance to Undertake GIS from DOE issued on 28 September 2012; Bids and tendering for the EPC started on April 2014  CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT: On-going Pre-construction activities	2021	2021 (Target Testing and Commissioning)
Limbatangon Hydroelectric Power Project/ Turbines Resource & Development Corp./ Cagayan de Oro City, Misamis Oriental	9	FEASIBILITY STUDY: Submitted Feasibility Study, Detailed Engineering Design, and 5-Yr Work Plan  PERMITS AND OTHER REGULATORY REQUIREMENTS: Issued Confirmation of Commerciality on 12 July 2013; and Already secured LGU Endorsements, DENR ECC, and NCIP Certificate	January 2018 (Target Testing and Commissioning)	January 2018 (Target Testing and Commissioning)

**Annex 9. Private Sector Initiated Power Projects in Mindanao (INDICATIVE) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
		<p>FINANCING ARRANGEMENTS: Financial Arrangement Secured</p> <p>COMMENCEMENT OF CONSTRUCTION: On-going construction; and Construction of Access Road completed</p>		
Tagoloan/ First Gen Mindanao Hydropower Corp./ Impasugong & Sumilao, Bukidnon	39	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS: Issued Confirmation of Commerciality on 02 July 2013</p> <p>CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT: Pending submission of requirements for construction</p>	June 2018	June 2018
Culaman Hydroelectric Power Project/ Oriental Energy and Power Generation Corporation/ Manolo Fortich, Bukidnon	10	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS: Issued Confirmation of Commerciality on 03 June 2013; Clearance to Undertake GIS from DOE issued on 5 October 2012; and Submission of lacking requirements e.g. permits in progress</p> <p>COMMENCEMENT OF CONSTRUCTION: On-going Pre-construction activities</p>	June 2018	June 2018 (Target Testing and Commissioning)
Cabadbaran Hydroelectric Power Project/ First Gen Mindanao Hydropower Corp./ Impasugong & Sumilao, Bukidnon	9.75	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS: Issued Confirmation of Commerciality on 02 July 2013; and Already secured LGU Endorsements, DENR Environment Compliance Certificate, NCIP Certificate of Non-Coverage, NCIP Certificate and NWRB Permit ' -Submission of lacking requirements e.g. permits in progress</p> <p>COMMENCEMENT OF CONSTRUCTION: On-going Pre-construction activities</p>	July 2018	July 2018 (Target Testing and Commissioning)
Tumalaong Hydroelectric Power Project/ First Gen Mindanao Hydropower Corp./ Baungon, Bukidnon	9	<p>FEASIBILITY STUDY: Submitted Feasibility Study and 5-Yr Work Plan</p> <p>PERMITS AND OTHER REGULATORY REQUIREMENTS: Issued Confirmation of Commerciality on 2 July 2013; Already secured LGU Endorsements DENR Certificate of Non-Coverage, and Conditional Water Permit</p> <p>COMMENCEMENT OF CONSTRUCTION: On-going Pre-construction activities</p>	July 2018	July 2018 (Target Testing and Commissioning)
Pasonanca/ Philcarbon, Inc./ Zamboanga City	0.50	<p>PERMITS AND OTHER REGULATORY REQUIREMENTS: Issued Confirmation of Commerciality on 09 January 2014; and Submission of lacking requirements e.g. permits in progress</p> <p>COMMENCEMENT OF CONSTRUCTION: On-going Pre-construction activities</p>	January 2019	January 2019 (Target Testing and Commissioning)

**Annex 9. Private Sector Initiated Power Projects in Mindanao (INDICATIVE) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
10 MW Cabulig-2 Hydroelectric Power Plant Project/ Mindanao Energy Systems, Inc./ Jasaan, Misamis Oriental	10.00	PERMITS AND OTHER REGULATORY REQUIREMENTS: On-going permits and other regulatory requirements completion	December 2018	March 2019
Clarin/ Philnew Hydro Clarin, Misamis Occidental Power Corporation/ Clarin, Misamis Occidental	5.00	PERMITS AND OTHER REGULATORY REQUIREMENTS: Issued Confirmation of Commerciality on 09 April 2014; and Submission of lacking requirements e.g. permits in progress  COMMENCEMENT OF CONSTRUCTION: On-going Pre-construction activities	April 2019	April 2019 (Target Testing and Commissioning)
Mat-i-/ Philnew Hydro Power Corporation/ Claveria, Cagayan de Oro	2.00	PERMITS AND OTHER REGULATORY REQUIREMENTS: Issued Confirmation of Commerciality on 09 April 2014; and Submission of lacking requirements e.g. permits in progress  COMMENCEMENT OF CONSTRUCTION: On-going Pre-construction activities	April 2019	April 2019 (Target Testing and Commissioning)
Mangima Hydroelectric Power Project/ Philnew Hydro Power Corp./ Manolo Fortich, Bukidnon	10	PERMITS AND OTHER REGULATORY REQUIREMENTS: Issued Confirmation of Commerciality on 3 September 2014; and Pending submission of requirements for construction	September 2019	September 2019 (Target Testing and Commissioning)
Mat-i-2/ Philnew Hydro Power Corporation/ Cagayan de Oro, Misamis Oriental	1.60	PERMITS AND OTHER REGULATORY REQUIREMENTS: Issued Confirmation of Commerciality on 3 September 2014; and Submission of lacking requirements e.g. permits in progress  COMMENCEMENT OF CONSTRUCTION: On-going Pre-construction activities	September 2019	September 2019 (Target Testing and Commissioning)
Mat-i-3/ Philnew Hydro Power Corporation/ Cagayan de Oro, Misamis Oriental	3.25	PERMITS AND OTHER REGULATORY REQUIREMENTS: Issued Confirmation of Commerciality on 3 September 2014; and Submission of lacking requirements e.g. permits in progress  COMMENCEMENT OF CONSTRUCTION: On-going Pre-construction activities	September 2019	September 2019 (Target Testing and Commissioning)
Maladugao River (Upper Cascade)/ UHPC Bukidnon Hydro Power I Corporation/ Wao, Bukidnon	5.50	PERMITS AND OTHER REGULATORY REQUIREMENTS: Issued Confirmation of Commerciality on 12 January 2015; and On-going permitting	January 2020	January 2020 (Target Testing and Commissioning)
Maladugao River (Lower Cascade)/ UHPC Bukidnon Hydro Power I Corporation/ Kallangan & Wao, Bukidnon	10.00	PERMITS AND OTHER REGULATORY REQUIREMENTS: Issued Confirmation of Commerciality on 14 April 2015; and On going permitting  CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT: Pending submission of requirements for construction	April 2020	April 2020 (Target Testing and Commissioning)

**Annex 9. Private Sector Initiated Power Projects in Mindanao (INDICATIVE) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
Lanon (Lam-alu)/ Euro Hydro Power (Asia) Holdings, Inc./ Lake Sebu, South Cotabato	9.50	PERMITS AND OTHER REGULATORY REQUIREMENTS: Issued Confirmation of Commerciality on 14 April 2015; and On going permitting  CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT: Pending submission of requirements for construction	May 2020	May 2020 (Target Testing and Commissioning)
Silo-o/ Philnewriver Power Corp./ Malitbog, Bukidnon	3.29	PERMITS AND OTHER REGULATORY REQUIREMENTS: Issued Confirmation of Commerciality on 5 June 2015; and On going permitting  CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT: Pending submission of requirements for construction	June 2020	June 2020 (Target Testing and Commissioning)
Agus III/ Maranao Energy Corporation/ Pantar & Balo-I, Lanao del Sur & Lanao del Norte	225.00	CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT: Pending submission of requirements for construction	July 2020	July 2020 (Target Testing and Commissioning)
Malitbog/ Philnewriver Power Corp./ Malitbog, Bukidnon	17.85	CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT: Pending submission of requirements for construction	September 2020	September 2020 (Target Testing and Commissioning)
Maramag/ Maramag Mini-Hydro Corp./ Maramag, Bukidnon	1.40	CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT: Pending submission of requirements for construction	September 2020	September 2020 (Target Testing and Commissioning)
Manupali/ Matic Hydropower Corp./ Valencia, Bukidnon	9.00	CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT: Pending submission of requirements for construction	September 2020	September 2020 (Target Testing and Commissioning)
Pulanai/ Repower Energy Development/ Valencia, Bukidnon	10.6	CONSTRUCTION CONTRACTS FOR PLANTS AND EQUIPMENT: Pending submission of requirements for construction	December 2020	December 2020 (Target Testing and Commissioning)
Upper Manupali/Bukidnon II Electric Cooperative, Inc./ Valencia City, Bukidnon	4.4	PERMITS AND OTHER REGULATORY REQUIREMENTS: -Issued Confirmation of commerciality on 16 February 2016	February 2021	February 2021 (Target Testing and Commissioning)
Lower Maladugao River Mini-Hydropower Project/Bukidnon Maladugao Hydro Power Corporation/Kalilangan and Wao, Bukidnon	15.7	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Issued with GIS on 30 May 2016 (DOE-EPIMB-SIS No. 2016-08-002)	To be determined	To be determined
Maladugao (Upper Cascade) Hydroelectric Power Project/UHPC	8.4	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Issued with GIS on 30 May 2016 (DOE-EPIMB-SIS No. 2016-08-003)	To be determined	To be determined

**Annex 9. Private Sector Initiated Power Projects in Mindanao (INDICATIVE) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
Bukidnon Hydro Power I Corporation/Kalilangan, Bukidnon				
<b>SOLAR</b>	<b>238.00</b>			
San Francisco Solar Power Project/GPower Inc./ San Francisco, Agusan del Sur  <b>Project Cost Including Pre-Operating Expenses: PhP641 Million or \$14.2 Million</b>	10.0	ARRANGEMENT FOR SECURING THE REQUIRED LAND: -Covered by Solar Energy Services (SESC No. 2015-09-252) on 29 December 2015; -To be located from the existing primary transmission line of the local distribution utility, the ASELCO and 6 KM from the San Francisco substation and ASELCO main office; -Currently completing documentation for selected location for the project;  PERMITS AND OTHER REGULATORY REQUIREMENTS: -Requested DOE Endorsement to NCIP for Certificate of Non-Overlap on 29 January 2016; -ECC approved on March 2016  MARKETING OF GENERATING CAPACITIES: -On-going negotiation for Bilateral Contract Arrangement with ASELCO through CSP;  FINANCING ARRANGEMENTS: -On-going finalization for financing arrangements;	December 2016	December 2016 (Target Testing and Commissioning)
GenSan Solar Power Project Phase I/ Del Sol Energy CGS, Inc./ General Santos City, South Cotabato	48.0	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Awarded with RE Service Contract (SESC No. 2015-02-106) on 28 Jan 2015 • Certificate of Commerciality No. SCC- 2015-09-024 dated 22 Sep 2015	December 2018	December 2018 (Target Testing and Commissioning)
GenSan Solar Power Project Phase II/ Del Sol Energy CGS, Inc./ General Santos City, South Cotabato	48.0	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Awarded with RE Service Contract (SESC No. 2015-02-106) on 28 Jan 2015 • Certificate of Commerciality No. SCC- 2015-09-024 dated 22 Sep 2015	December 2018	December 2018 (Target Testing and Commissioning)
60 MW General Santos City Solar Power Project/Astroenergy Gensan Inc./ General Santos City, South Cotabato	60.0	Feasibility Studies, Permits and Other Regulatory Requirements -Issued with GIS on 23 Nov 2015, GIS #2015-11-001	To be determined	To be determined
San Francisco Solar Power Project/Gpower Inc./ San Francisco, Agusan del Sur	10.0	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Issued with GIS on 4 April 2016 (DOE-EPIMB-SIS No. 2016-04-006)	To be determined	To be determined
Jasaan Solar Power Project/Lohas and Soul Lighting, Inc./ Jasaan, Misamis Oriental	60.0	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Issued with GIS on 11 May 2016 (DOE-EPIMB-SIS No. 2016-04-001)	To be determined	To be determined
Sumilao Solar Power Project/Sunasia Energy, Inc./ San Vicente, Sumilao, Bukidnon	2.0	PERMITS AND OTHER REGULATORY REQUIREMENTS: • Issued with GIS on 7 June 2016 (DOE-EPIMB-SIS No. 2016-05-008)	To be determined	To be determined
<b>BIOMASS</b>	<b>46.3</b>			
10MW Malay-balay Bio-Energy Corporation Multi Feedstock Generating	9.0	PERMITS AND OTHER REGULATORY REQUIREMENTS: -Secured Clearance from DOE for the conduct of GIS on 28 February 2014;	December 2017	December 2017



**Annex 9. Private Sector Initiated Power Projects in Mindanao (INDICATIVE) as of 30 September 2016**

NAME OF THE PROJECT/PROJECT PROPONENT/LOCATION	RATED CAPACITY (MW)	PROJECT STATUS	TARGET TESTING & COMMISSIONING	TARGET COMMERCIAL OPERATION
Facility/Malaybalay Bio-Energy Corporation/Bukidnon		FINANCING ARRANGEMENTS: -Financial Arrangement Secured;  COMMENCEMENT OF CONSTRUCTION: -Operating for Own-Use; -On-going construction		(Target Testing and Commissioning)
23.5 MW EPC Woody Biomass Power Plant Project/Eastern Petroleum Corporation/Agusan del Norte	21.0	FINANCING ARRANGEMENTS: -Financial Arrangement Secured;  COMMENCEMENT OF CONSTRUCTION: -For construction	December 2017	December 2017 (Target Testing and Commissioning)
12 MW Napier Grass-Fired Biomass Power Plant Project/Manolo Fortich Biomass Energy Corporation/Bukidnon	10.8	FINANCING ARRANGEMENTS: -Financial Arrangement Secured;  COMMENCEMENT OF CONSTRUCTION: -For construction	January 2018	January 2018 (Target Testing and Commissioning)
LPC Biomass Power Plant Project/Lamsan Power Corporation/Maguindanao	5.5	COMMENCEMENT OF CONSTRUCTION: -For construction	December 2018	December 2018 (Target Testing and Commissioning)

**Total Indicative Rated Capacity: 2,610.94**

Source: DOE

**Annex 10. ERC Approved Capital Expenditure Projects as of August 2016**

APPLICANT	PROJECT DESCRIPTION	RATIONALE	PROJECT COST (PhP)	DATE FILED/ APPROVED
<b>Occidental Mindoro Electric Cooperative, Inc. (OMEKO)</b>  <b>ERC Case No. 2014-038 RC</b>	Repair, restoration, replacement and/or rehabilitation of the cooperative's damaged poles and accessories, transformers and protection, kWh meters and consumers' service drops.	To restore electric power and achieve a safe and reliable power supply in the affected areas.	6,037,396.98	07 April 2014/19 July 2016
<b>Nueva Ecija I Electric Cooperative, Inc. (NEECO I)</b>  <b>ERC Case No. 2014-008 RC</b>	NEECO I undertook repair and restoration works in its distribution lines and facilities destroyed by Typhoon Santi. On 12 October 2013, NEECO I started the repair and restoration in its franchise area and fully restored the power on 15 November 2013.	To continue serving electricity within NEECO I's franchise area	18,677,921.89	03 February 2014/12 July 2016
<b>Don Orestes Romualdez Electric Cooperative, Inc. (DORELCO)</b>  <b>ERC Case No. 2014-039 RC</b>	Force majeure event capital expenditure project consists of the repair, restoration, replacement, and/or rehabilitation of its heavily damaged distribution lines and facilities as well as Main Office Headquarters and Sub-offices caused by Super Typhoon Yolanda.  Among the damages are as follows: DORELCO's 10 MVA Power Transformer and its primary protection were damaged; Primary and Secondary Bushings were broken; Oil leakage from the tank was seen; Distribution lines suffered tremendous damages; All 3-phase or backbone lines were toppled down and conductors were cut-off; Due to toppled down poles, most of the kWhr meters mounted on it were broken and out of 59,252 consumers, 50,364 were affected or 85% of the consumers served;	To restore electric power and achieve a safe and reliable power supply in the cooperative's franchise area.	619,145,169.00	07 April 2014/ 21 June 2016

**Annex 10. ERC Approved Capital Expenditure Projects as of August 2016**

APPLICANT	PROJECT DESCRIPTION	RATIONALE	PROJECT COST (PhP)	DATE FILED/ APPROVED
	<p>Line Protectors such as Line Reclosers, Fuse Cutouts, Line Equipment such as Capacitors were also damaged;                      IT communication equipment, engineering tools and testing equipment, lineman tools and equipment, vehicle parts and motor pole equipment, and office buildings were heavilydamaged;                      Since the backbone lines and lateral lines in all of the covered municipalities and barangays were affected along with heavy damage on the NGCP's transmission lines, total system blackout was experienced by DORELCO.</p>			
<p><b>Agusan Del Sur Electric Cooperative, Inc. (ASELCO)</b>   <b>ERC Case No. 2013-163 RC</b></p>	<p>Upgrading of Backbone Distribution Line:</p> <ol style="list-style-type: none"> <li>1. Conversion of 1-phase to three-phase of the line from Dona Maxima to Wegguam, San Luis;</li> <li>2. Conversion of V-phase to three-phase of the line from Buena Gracia, Talacogon to Panagangan La Paz, Agusan del Sur;</li> <li>3. Conversion of 1-phase to three-phase of the line from Sampaguita to Sinobong, Agusan del Sur;</li> <li>4. Conversion of V-phase to three-phase of the line from Sampaguita to Veruela, Agusan del Sur;</li> <li>5. Conversion of 1-phase to three-phase of the line from Panagangan to Loreto, Agusan del Sur;</li> </ol>	<p>To improve power quality particularly the farthest end of the lines that will also redound to better reliabili and reduce s stem loss.</p>	<p>9,959,315.00</p>	<p>July 17, 2013/ June 8, 2016</p>

**Annex 10. ERC Approved Capital Expenditure Projects as of August 2016**

APPLICANT	PROJECT DESCRIPTION	RATIONALE	PROJECT COST (PhP)	DATE FILED/ APPROVED
	6. Conversion of V-phase to three-phase of the line from Sibagat to Tabon-tabon, Agusan del Sur; and 7. Interconnection of Feeders.			
	Installation of SCADA with Fiber Optic Cable  - The system being offered to ASELCO is an open system using state of the art SCADA devices. This is equipped with SEL (System Event Log) microprocessors-based relays used for networking, control and communication solutions to integrate devices for data acquisition plus remote and local control. Likewise, included were real-time automation controllers (RTACs) and tough computers with appropriate software.	To fully automate, monitor and control the processes in the substation; To improve system reliability due to state of the art and computerized technology and to detect abnormalities in the distribution system; and To facilitate immediate response to technical problems within its coverage area.	17,235,452.00	
	Replacement of Dilapidated Wood Poles within the franchise area of ASELCO	To protect lives and public properties and improve service reliability	54,093,773.00	
	Upgrading of Lateral Primary and Secondary Lines  - The project deals with the upgrading of primary and secondary distribution lines. Included in the project are the conversion of service drop wires to open or underbuilt secondary line, from single to v-phase or three phase line, upgrading from smaller conductor to bigger size of wire, reconductorin and extension of lines.	To address load growth and system loss reduction	1,653,557.00	

**Annex 10. ERC Approved Capital Expenditure Projects as of August 2016**

APPLICANT	PROJECT DESCRIPTION	RATIONALE	PROJECT COST (PhP)	DATE FILED/ APPROVED
	<p>Replacement and Upgrading of Distribution Transformers from Silicon Core to Amorphous Core</p> <ul style="list-style-type: none"> <li>- Upgrading/replacement of overloaded and less efficient distribution transformers through installation of amorphous core distribution transformers.</li> </ul>	To reduce the systems loss through the usage of amorphous core distribution transformers.	50,375,511.00	
	<p>Replacement of kWh Meters</p> <ul style="list-style-type: none"> <li>- The project involves the purchase of brand new electronic kWh meters to replace those that are defective old dilapidated and not functioning properly.</li> </ul>	To replace inefficient kilowatt-hour meters to determine the real consumption of each customer. Inefficient kilowatt hour meters contribute to high system loss due to inaccurate registration. This will result to unreliable and inefficient service if not properly addressed.	24,000,000.00	
	<p>Installation of kWh Meter and Service Drop Wire</p> <ul style="list-style-type: none"> <li>- Procurement of additional kWh meters and service drop wires for new customers.</li> </ul>	To accommodate new customers and to address load growth	26,385,027.00	
	<p>Other Network CAPEX Projects</p> <p>The project involves the following:</p> <ol style="list-style-type: none"> <li>1. Renovation of substation building;</li> <li>2. Purchase of boom trucks and utility trucks;</li> <li>3. Purchase of linemen tools and equipment; and</li> <li>4. Purchase of rehabilitation materials and hardware.</li> </ol>	To ensure the quality, reliability, efficiency and customer service in accordance to the key performance standards of ASELCO	23,196,309.00	
	<p>Non-Network CAPEX Projects</p> <p>The project involves the following:</p> <ol style="list-style-type: none"> <li>1. Procurement of Fiber Optic Lines for Billing (175 kms);</li> <li>2. Computer Hardware and Software Programs;</li> <li>3. Acquisition of Office furniture;</li> <li>4. Safety Gadgets and Materials;</li> </ol>	To ensure efficient, effective and better quality of service to member-consumers	24,715,121.00	

**Annex 10. ERC Approved Capital Expenditure Projects as of August 2016**

APPLICANT	PROJECT DESCRIPTION	RATIONALE	PROJECT COST (PhP)	DATE FILED/ APPROVED
	5. Transportation/Vehicles/ Overhauling 6. Land Improvements and Construction of Engineering and Corplan/IT Bldg.; and 7. Shop Tools.			
<b>Confirmation of Implemented CAPEX Projects (2013-2015)</b>				
<b>Davao Del Sur Electric Cooperative, Inc. (DASURECO)</b>  <b>ERC Case No. 2013-073 RC</b>	Installation of new 20 MVA Substation at Sta. Ana Avenue, Lower Taguman, Digos City and two (2) kilometers 69 kV subtransmission line to feed the said S/S.	To address the existing problem of overloading of Cogon Substation	55,093,707.00	April 11, 2013/ June 21, 2016
	Installation of Downline Protective Device at Feeder 1 Cogon Substation	The equipment shall be crucial for the protection coordination of the entire system and to improve DASURECO's reliability performance.	700,000.00	
	Installation of Downline Protective Device at Feeder 5 Cogon Substation		700,000.00	
	Installation of Downline Protective Device at Feeder 6 Cogon Substation		700,000.00	
	Installation of Downline Protective Device at Feeder 2 Paligue Substation		700,000.00	
	Installation of Downline Protective Device at Feeder 2 Matanao Substation		700,000.00	
	Installation of Downline Protective Device at Feeder 3 Paligue Substation		700,000.00	
	Installation of Downline Protective Device at Feeder 1 Astorga Substation		700,000.00	

**Annex 10. ERC Approved Capital Expenditure Projects as of August 2016**

APPLICANT	PROJECT DESCRIPTION	RATIONALE	PROJECT COST (PhP)	DATE FILED/ APPROVED
	Relocation of 7.65 kms. Primary Line to RROW from Astorga to Inawayan	In consonance with the government's road widening project requirements, the obstructing power distribution lines along the road network must be immediately relocated by DASURECO beyond fifteen (15) meters setback from the roads' centerline.  The relocation of the affected distribution lines shall give way to the full implementation of the road widening projects of the DPWH in Davao Del Sur, which is beneficial to the development of the province.	8,107,487.58	
	Relocation of 8.6 kms. Primary Line to RROW from Cogon to Tagabuli		9,250,728.76	
	Relocation of 5.7 kms Primary Line to RROW from Lubo to Tagabuli		6,132,330.91	
	Spare provision for Station Class 69 kV Lightning Arrester	The purpose of these spares is to provide an insurance against the relatively remotely possible breakdown or failure of an insurance against the relatively remotely possible breakdown or failure of an equipment/component. Having a spare will minimize interruptions.	165,000.00	
	Spare provision for Protective Relays		593,070.00	
	Spare provision for Differential Protective Relay		130,000.00	
	Spare provision 69 kV SF6 Circuit Breaker		3,200,000.00	
	Spare provision 15 kV Automatic Circuit Recloser		1,400,000.00	
	Spare provision 35 kV Automatic Circuit Recloser		1,200,000.00	
	Spare provision 72 kV Current Transformer		825,000.00	

**Annex 10. ERC Approved Capital Expenditure Projects as of August 2016**

APPLICANT	PROJECT DESCRIPTION	RATIONALE	PROJECT COST (PhP)	DATE FILED/ APPROVED
	Spare provision 72 kV Potential Transformer		885,000.00	
	Rehab and Uprating of 3.5 kms. 3-phase primary line from Cogon S/S to Rizal Avenue	To ensure safety and reliability of service by rehabilitating the old and dilapidated primary backbone line and uprating the existing conductor of 2/0 ACSR to 336.5 ACSR. The rehabilitation will also be in preparation of road widening projects since most of the existing lines are within the Right-of-Way (ROW) of the Department of Public Works and Highways (DPWH).	3,690,950.00	
<b>Unimplemented CAPEX Projects</b>				
	Rehab and Uprating of 6.9 kms 3-phase primary line from Matanao S/S to Matanao Poblacion, Davao Sur	Increase the conductor capacity, reliability level of the area and the efficiency of the system thru the reduction of the technical losses.	7,509,034.82	
	Relocation of 15 kms Primary Line to RROW from Km. 71 Matanao to Kinuskusan	In consonance with the government's road widening project requirements, the obstructing power distribution lines along the road network must be immediately relocated by DASURECO beyond fifteen (15) meters setback from the roads' centerline.  The relocation of the affected distribution lines shall give way to the full implementation of the road widening projects of the DPWH in Davao Del Sur, which is beneficial to the development of the province.	16,145,687.54	
	Relocation of 6.5 kms. Primary Line to RROW from Paligue to Balutakay		6,990,691.83	
	Relocation of 9.5 kms Primary Line to RROW from Paligue to Km. 80 Sulop		10,217,073.00	
	Replacement of Rotten Wood Poles on Primary Distribution Line	Replacing rotten wood poles will ensure safety and at the same time address unreliable supply of electric power due to defective materials/equipment.	63,376,792.52	
	Replacement of 69 kV SF6 Circuit Breaker for Paligue Substation	The existing circuit breaker is no longer in reliable condition due to its defective operating mechanism. If this project will not be implemented, power restoration during fault occurrence will take a longer time. Considering its historical conditions, its being an "old model" physical appearance, and several repairs undertaken, the existing circuit breaker has undergone high maintenance costs. Said equipment, if not replaced, would result in the unsafe protection of the system that might result in damage to property or danger to public safety and eventual loss of revenue to the coop.	3,200,000.00	
	Replacement of 3-Phase Reclosers with Vacuum Circuit Breakers for Paligue Substation	The purpose of these replacements is to provide certainty and assurance in continued service against the possibility of breakdown or failure of an equipment/component of the old circuit breakers. Gas type circuit breakers will be replaced with vacuum circuit breaker for its advantage with respect to life and maintenance due to the lower energy requirements mechanisms, as less force and less than contact separation is required.	4,558,958.00	



**Annex 10. ERC Approved Capital Expenditure Projects as of August 2016**

APPLICANT	PROJECT DESCRIPTION	RATIONALE	PROJECT COST (PhP)	DATE FILED/ APPROVED	
	Rehab and Uprating of 4.3 kms, 3-phase primary line from Cogon S/S to Tres de Mayo via McArthur Highway	To ensure safety and reliability of service by rehabilitating the old and dilapidated primary backbone line and uprating the existing conductor of 2/0 ACSR to 336.5 ACSR. The rehabilitation will also be in preparation of road widening projects since most of the existing lines are within the Right-of-Way (ROW) of the Department of Public Works and Highways (DPWH).	4,532,305.00		
	Rehab and Uprating of 8.0 kms. 3-phase primary line from Cogon S/S to Diversion Road		8,436,047.00		
	Rehab and Uprating of 11.2 kms. 3-phase primary line from Matanao S/S to Tres de Mayo, Digos		11,812,563.00		
	Distribution Transformers for future load growth	The electric cooperative has the obligations to provide distribution services and connections to its distribution system end users within its franchise area.	14,373,000.00		
	Customer Service Drop Materials		16,043,740.00		
	Kwh meter for new Customer Connections		11,300,000.00		
	Primary Line Extension		71,655,190.95		
	Secondary Line Extension		37,777,096.00		
	Substation SCADA		To monitor remotely at real time and control large amount of data necessary to operate the distribution systems efficiently.		32,580,000.00
	Wireless Communication System		To serve as the amin backbone or medium of communication for sharing data and information, voice, and video across the network.		5,220,000.00

**Annex 10. ERC Approved Capital Expenditure Projects as of August 2016**

APPLICANT	PROJECT DESCRIPTION	RATIONALE	PROJECT COST (PhP)	DATE FILED/ APPROVED
	Maintenance and Collection Branch Offices	To increase efficiency and profitability of operations of DASURECO. Since these areas are heavily populated and located far from the existing main and sub-offices, the cost of operation is high. Also, with the presence of these sub-offices, it offers convenience to consumers and satisfaction thru prompt and satisfying service.	6,800,000.00	
	Boomtruck	This equipment is very essential in the day to day operations of a utility either for maintenance or construction of new electric distribution lines. This truck usually has a cab, where the driver sits and steers, and an ctuator arm for lifting the boom, and a bucket where a worker can stand or a winch for lifting. These vehicles help lift workers to otherwise inaccessible heights. The function of cranes is to lift heavy equipment or materials from one spot to another.  By using this type of equipment, linemen can complete their work in a comfortable, safe, and efficient manner, primarily, where steel or concrete poles are used.	15,000,000.00	
	Kilowatthour Meter Test Bench	This project is to purchase a 24-position kilowatt-hour meter test bench. The advantage of testing meters with meter test bench are the efficiency and propser testing of a large number of meters within a minimum time. At present, DASURECO is only using a single phantom load in calibrating and testing meters. Based on actual performance, there are only 17 kilowatt-hour meters that can be tested daily. With increasing number of new consumers and meter complaints annually, there is an average of 28 kilowatt-hour meters that needs to be tested daily. In this scenario, it is really impossible to accommodate these numbers of meters that needs testing and calibration.  Stationary meter test benched are used to meet large testing volume of meters. Its other objectives are solving consumer complaints, ensuring propoer functioning of meter and to form a basis for replacement, continuation, maintenance, and calibration.	1,500,000.00	
	Protective Relay Tester	The proposed project is to procure a Tester to be used in determining the conditions of protective relays. This is intended to maximize the performance of ots distribution system by ensuring that its protective relays are operating properly, thus, avoiding unwanted failures or system interruption.	2,555,613.00	
	Utility Service Vehicle	This project aims to purchase 4-wheeled utility vehicles for the consumer service, operation and maintenance use. Due to the growing number of consumers that have to be served, adding service vehicles is necessary. These light 4-wheeled maintenance vehicles will carry the night and day shift crews or personnel including their tools and equipment that will be used to serve and address the day to day complaints and request from our member consumers.	12,600,000.00	
<b>South Cotabato II Electric Cooperative, Inc. (SOCOTECO II)</b>	<b>Network Projects</b>			November 27, 2012/ May 24, 2016
	Installation of the second 35/43.75 MVA Transformer Bank at Lagao Substation	SOCOTECO II's proposed installation of 2-35/43.75 MVA Substation in Lagao is due to the increasing demand of power in General Santos City brought about by the development of business establishments. The existing 20 MVA in Lagao will be replaced by 2-35/43.75 MVA and the said 20 MVA will be transferred to Polomolok to address the location'spower requirement.	62,604,093.00	

**Annex 10. ERC Approved Capital Expenditure Projects as of August 2016**

APPLICANT	PROJECT DESCRIPTION	RATIONALE	PROJECT COST (PhP)	DATE FILED/ APPROVED
ERC Case No.. 2012-128 RC	Installation of 2-69 kV Sectionalized Circuit Breaker	The proposed installation of 2 units - 69 kV circuit breakers will mitigate the continuous line tripping resulting in the improvement of the reliability of electric service in the municipality of Maasim, Kiamba, Maitum, Alabel and Glan.	4,900,000.00	
	<b>Non-Network Projects</b>			
	Relocation of SOCOTECO II's Proposed New Headquarters	The proposed project will improve the efficiency of the employees, particularly the Maintenance Crew, in delivering prompt and quality service to the customer.	55,000,000.00	
Bohol ! Electric Cooperative, Inc. (BOHECO I)  ERC Case No. 2014-139 RC	Feeder Re-configuration, Panglao Substation which involves the uprating of the existing primary distribution line of Feeder 20 and Feeder 19 (from #2/0 to #4/0 ACSR) and allocation of an additional Feeder 20A.	To improve the power quality of Feeder 20	5,460,216.51	September 22, 2014/ August 24, 2016
	Line Rehabilitation/Upgrading at Coverage Area which involves the following activities: a. Rehabilitation of 3-phase and 1-phase primary lines; and b. Installation of underbuilt and open secondary lines.	To accpmmodate the increasing demand and new consumers of BOHECO I.	26,672,635.32	
	CAPEX on Public Protection and Safety which involes the following activities: a. Replacement of the 69 kV power circuit breaker and its control including the transformer monitoring panel of BOHECO I's Maribojoc Substation; b. Replacement of the control unit and monitoring panel of the 69 kV power circuit breaker of BOHECO I's Dampas and Carmen Substations; and c. Replacement of the 15 kV main feeder recloser bypass switches of BOHECO I's Loay Substation.	To provide a safe and reliable distribution system.	4,550,000.00	

**Annex 10. ERC Approved Capital Expenditure Projects as of August 2016**

APPLICANT	PROJECT DESCRIPTION	RATIONALE	PROJECT COST (PhP)	DATE FILED/ APPROVED
	Yearly forecasted cost of distribution transformer – procurement of distribution transformer.	To address the increasing demand of BOHECO I.	42,700,105.00	
	Yearly forecasted cost of service drop wire and kilowatt-hour meter – Procurement of service drop wires and kilowatt-hour meters	To cater the needs of new customers.	49,538,202.44	
	Annual meter replacement cost of aging, dilapidated, and defective kilowatt-hour meter.	To provide accurate measurement of enrgy consumed by each member-consumer.	11,250,000.00	
	Prepaid metering service such as installation of prepaid kilowatt-hour meters	To accommodate consumers who are interested in availing the prepaid electric service of BOHECO I pursuant to Commission Resolution No. 15 series of 2009 as amended by Resolution No. 17 Series of 2012 entitled “ A Resolution Adopting the Rulkes for Prepaid Retail Electric service using a Prepaid Metering System.	10,500,000.00	
	Maintenance vehicle, service vehicle and boom/bucket truck which involes the procurement of the following equipment:  a. 6-unit maintenance vehiclle; b. 3-unit all purpose utility/service vehicle; c. 1-unit 5 tonners boom truck; and d. 1-unit 20 tonners boom truck.	To improve service efficiency	27,600,000.00	
	IT & Communication network enhancement which involes the following activities: a. Acquisition of servers and its needed accessories; b. Acquisition of network routers and switches; c. Acquisition of appliance firewall for complete and proactive internet connection; and d. Construction/installation of repeater station structures and wireless brdges.	To enhance the communication network within the coverage area of BOHECO I; and To improve efficiency.	10,063,499.99	
	Software development	To improve service efficiency	7,000,000.00	

**Annex 10. ERC Approved Capital Expenditure Projects as of August 2016**

APPLICANT	PROJECT DESCRIPTION	RATIONALE	PROJECT COST (PhP)	DATE FILED/ APPROVED
	Installation of SCADA system for Maribojoc and Panglao Substations	To improve service efficiency	6,000,000.00	
	Distribution planning software upgrading and maintenance	To improve service efficiency	900,000.00	
	Construction of the Phase III of BOHECO I's Administration Building (continuation of the parking area, warehouse, motor pool, etc.)	To provide a more spacious and more convenient facilities to the personnel and member-consumers of BOHECO I.	24,838,481.00	
	Construction of BOHECO I's satellite office (sub-office) at Tagbilaran City, Bohol	To provide a more spacious and more convenient facilities to the personnel and member-consumers of BOHECO I.	10,000,000.00	
	Procurement of Infrared thermal scanner	To improve service efficiency and to provide a safe and reliable distribution system.	800,000.00	
	Procurement of winding resistance tester	To provide a safe and reliable distribution system.	300,000.00	
	Procurement of distribution transformer efficiency tester	To provide a safe and reliable distribution system.	1,000,000.00	
	Procurement of three phase meter standard	To improve service efficiency.	3,000,000.00	
	Refund of capital projects (non-standard connection facilities) that were funded by BOHECO I's consumers	To settle its financial obligation with respect to capital projects (non-standard connection facilities) that was funded by its customers.	7,335,192.04	

Source: ERC website