

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

(For the Report Period October 2020)

*Prepared by the*  
Department of Energy

*With Contributions from*

Energy Regulatory Commission  
Philippine Electricity Market Corporation  
National Power Corporation  
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Power Sector Assets and Liabilities Management Corporation  
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## I. EXECUTIVE SUMMARY

The 37<sup>th</sup> Status Report on Republic Act No. 9136 titled “Electric Power Industry Reform Act (EPIRA) of 2001” covers the implementation period May 2020 to October 2020. This highlights significant accomplishments, strategies and policies undertaken by the Department of Energy (DOE), the Energy Regulatory Commission (ERC), the DOE Attached Agencies as well as other private sector instrumentalities so mandated by the EPIRA.

As the country continues to battle the Corona Virus Disease (COVID-19) pandemic which started in the month of March 2020, the DOE and the Energy Regulatory Commission (ERC) continued to adopt and implement authorized COVID19 response and recovery intervention during the community quarantine period in line with the EPIRA and applicable laws and guidelines, to assist and give relief to the electricity consumers in the country.

Despite the pandemic, the power sector continued to accomplish significant developments and battle challenges thru the DOE, its attached agencies and the private sector as mandated under the EPIRA as follows:

1. With the declaration of failure of the third round of public bidding for the sale of the 650-megawatt Malaya Thermal Power Plant (MTPP) and its underlying land, the Power Sector Assets and Liabilities Management Corporation (PSALM) shall immediately pursue the negotiated process of privatization of the said assets.
2. There was a reduction in peak demand compared to 2019 level due to the pandemic that hit the three major grids, Luzon, Visayas and Mindanao of about 241 MW from peak demand of 11,344 MW, 23 MW from the recorded 2,224 MW, and 36 MW decline from peak demand of 2,013 MW, respectively.
3. The WESM continues to operate under normal conditions with electricity demand plus a reserve schedule to gradually regain normalcy and to increase in level since the country’s transition to General Community Quarantine (GCQ). The WESM registered capacity for the month of September 2020 is recorded at 20,207.47 MW, an increase of 15.5 MW compared from a total of 20,191.97 MW registered in April 2020. Of the said total capacity, only about 64% or an average of 12,973 MW were offered in the market. Average market price is at PhP2,621/MWh with the lowest rate of PhP2,040/MWh in May 2020 and highest rate of PhP3,657/MWh in September 2020.
4. Regarding market share limitations, no power generation entity has exceeded the installed generating capacity and market share limitation of 30% per grid and 25% for the national grid. The country’s electricity market reflected a moderately concentrated market indicating a competitiveness power industry in the country;
5. In relation to the implementation of Retail Competition and Open Access (RCOA), even during the MECQ and GCQ periods, the retail market showed signs of recovery, as there was a recorded increase of 7% on the number of registered Contestable Customers (CCs) as compared from September 2019. 90% of the Contestable Customers (CCs) are located within Luzon and 76% of the total number of CCs are currently being served by Manila Electric Company (MERALCO). While, the National Grid Corporation of the Philippines (NGCP) served the 3% accounted for 33 Directly Connected CC. In retail market performance, MERALCO holds the most number of contestable customers and the largest share of energy sales. The average metered quantity from June 2020 to September 2020 is 1,483 GWh of which 95% of the contracted energy was accounted through bilateral contracts and the remaining 5% was transacted through the spot market.

6. In terms of electricity pricing as of June 2020, the country's average electricity rate was around PhP8.25/kwh, 22 centavos lower compared with March 2020 level national average system rate.
7. For the report period, the household electrification level is around 92.96% based on the latest status of energization provided by the National Electrification Administration, Local Government Unit-Owned Utilities and Private-Investor Owned Utilities. Said level corresponds to 23.23 million energized households, surpassing the 22.98 million identified and targeted household population based from the 2015 Census of the Philippine Statistics Authority (PSA).
8. Finally, in keeping with its mandates under EPIRA, the DOE promulgated three (3) policies regarding WESM Rules and Market Manual and utilization of ER 1-94 Funds which were also published in (3) newspapers for general circulation. Also, around 15 policy proposals are drafted mostly on further amendments to WESM Rules and Market Manual which shall be primarily subject to virtual consultation involving participation of the concerned electric power industry players in the country.

## II. PRIVATIZATION

### A. Generating Assets and Independent Power Producer (IPP) Contracts

On 23 September 2020, PSALM declared a failure of the third round of public bidding for the sale of the 650-megawatt Malaya Thermal Power Plant (MTPP) and its underlying land in Pililla, Rizal, after none of the pre-qualified bidders submitted any bid. The two pre-qualified bidders were Panasia Energy, Inc. (Panasia) and AC Energy Philippines, Inc. (AC Energy).

As approved by the Commission on Audit, the minimum bid price of MTPP and its underlying land was already lowered and was published in public to interested bidders in the hope that the bidders would be encouraged to submit their bids. Said minimum bid price that the PSALM Board set for the third round considered various factors such as the book value of the plant and its underlying land, the zonal value of the land, the substantial losses continuously incurred by PSALM in maintaining the Malaya plant, marketability impacted by the Covid-19 pandemic, and electricity demand.

PSALM shall proceed and get Board approval to immediately commence the negotiated process of privatization. PSALM pursues to dispose of said assets due to increasing substantial losses in continuously maintaining it.

Based on the losses for the last 10 years (2010 to 2019), the average annual net loss of PSALM in maintaining MTPP is PhP1.2 billion. It was declared a "must run unit" in 2014. The average annual net loss of PSALM if based on the years that it is running as a must run unit (2015 to 2019) is PhP556.2 million.

In 2019, PSALM conducted two (2) rounds of bidding for the sale of said assets which were declared "failed" due to lack of interested bidders. It can be noted that PSALM proceeded to a negotiated sale with the lone bidder of the then second round of bidding but it was also declared a failure because the bid offer was below the minimum bid price set for the said assets.

For the remaining generating assets, the latest privatization target is indicated in Table 1.

*Table 1. Schedule of Privatization for Generating Assets as of 30 June 2020*

Asset Type/ Plant Name	Rated Capacity (MW)	Bid Date	Turnover Date
Owned Generating Plants			
Malaya Thermal Power Plant	650.00		2020 <sup>1/</sup>
Agus 1 & 2 Hydro	260.00		For Rehabilitation Privatization is subject to consultation with Congress and PSALM Board's policy direction
Agus 4 & 5 Hydro	213.10		
Agus 6 & 7 Hydro	273.00 <sup>2/</sup>		
Pulangi Hydro	255.00		

*1/ The three (3) Rounds of Public Bidding conducted for the Malaya TPP privatization in 2019 were unsuccessful.*

*2/ Capacity increased by 19 MW as a result of Agus VI Units 1 & 2 Uprating*

*Source: PSALM*

For the selection and appointment of IPP Administrators, the latest privatization target is indicated in Table 2.

*Table 2. Indicative Privatization Schedule for the Appointment of IPPAs as of 30 June 2020*

Grid	Plant Name	Contracted Capacity (MW)/Energy (GWh)	Commencement of Privatization Process	Turnover Date
<b>Luzon Grid</b>	Casecnan Multi-Purpose Hydro	228.00 GWh	2021	2022
	Caliraya-Botocan-Kalayaan (CBK) Hydro	797.92 MW	2021	2022
<b>Mindanao Grid</b>	Mindanao Coal-Fired	200.00 MW	2022	2022-2023

Source: PSALM

During the report period, The Asian Development Bank (ADB) received the endorsement of the Department of Finance (DOF) to proceed with the study of CBK and Casecnan Hydroelectric Power Plants (HEPPs), as such, the process on the hiring of a technical consultant commenced despite the declaration of Enhanced Community Quarantine brought about by the pandemic. Also, a technical expert was selected by ADB out of a shortlist. The contract has been finalized and conferred with the selected technical expert for its acceptance. Upon acceptance, engagement will commence in July 2020.

The privatization process for the CBK and Casecnan HEPPs will commence in 2021.

PSALM tapped ADB in the conduct of a study that will determine sound privatization options for PSALM's remaining IPP contracts.

## B. Other Disposable Assets

For the sale of other disposable assets which include real estate and unserviceable assets, waste and junk materials, following are the updates on PSALM's bidding activities:

### 1. Disposal of Real Estate Assets (REA) through Public Bidding

- a. The Manila Thermal Power Plant (MTPP) land, located in Isla de Provisor, Paco Manila, comprises 8 lots with an aggregate area of 20,975.70 square meters. It is now called Paco-Manila property. With two (2) failed biddings in 2018 and a failed negotiated sale in January 2019, the asset is targeted for another round of public bidding in 2020.

The Agency Appraisal Report (ARR) for the 3rd round of public bidding for the sale of this real estate asset, was updated in February 2020. The updated ARR for the 3rd round of bidding was submitted to COA in March 2020. PSALM is awaiting OGCC review of the Deed of Absolute Sale (DOAS) which was transmitted to the OGCC on 05 March 2020. The ITB is scheduled to be published in July 2020.

- b. The Sudipen Property, comprising 2 lots with an aggregate area of 1,649 square meters, is for disposal through public bidding in 2020. The review of the revised appraisal report of AACI is on-going.

The Puerto Azul Property, comprising two (2) condominium units and club share, is for disposal through public bidding. With the receipt of the final report by PSALM on 23 December 2019, the 3rd party appraisal services provided by AVISO and Asian

Appraisal was completed. The report will serve as PSALM's guide in setting the Minimum Bid Price for the disposal of said assets.

PSALM used the results of the valuation of third-party appraisers in updating the profile of the assets and proceeded with the drafting of the AAR and the bidding documents. PSALM reported to the Board in February 2020 on the bidding documents, disposal timeline and Minimum Bid Price (MBP) for the asset while the Agency Appraisal Report (AAR) was submitted to COA on 28 February 2020.

The commencement of the disposal is pending due to ECQ.

PSALM received OGCC's comments/recommendations on the draft bidding procedures in May 2020 and these were revised accordingly. The OGCC's review of the DOAS was received on 25 June 2020.

- c. The procurement of consultancy services for the conduct of the Feasibility Study as required for the Master Planning of Diliman Property, was completed after a successful negotiation with PwC Philippines/Isla Lipana & Co. (PwC) which was proclaimed the bidder with Single Rated Bid.

As part of its consultancy services, PwC was required to submit its initial assessment and preliminary reports which were discussed in depth between PSALM and PwC. PwC submitted its final report (Phase 3) to PSALM in May 2020.

PSALM requested the OGCC to assign a lawyer to assist in the Feasibility Study and also requested for a meeting to discuss the propriety of PSALM crafting its own Joint Venture (JV) guidelines or adopting the NEDA JV guidelines which was discussed in detail in a coordination meeting between PSALM and OGCC in March 2020. PSALM, likewise, requested for the OGCC's opinion on whether PSALM is exempted from the coverage of the 2013 Revised NEDA JV Guidelines.

PSALM received the OGCC opinion on 09 June 2020 which conveys that PSALM is exempted from the 2013 NEDA JV Guidelines, thus, PSALM can craft its own JV guidelines.

- d. Nasipit Property

PSALM reported to the Board in February 2020 on the Bidding Document, Disposal timeline; and Minimum Bid Price (MBP). Subsequently, the Board approved on 26 February 2020 the commencement of sale. The Agency Appraisal Report was submitted to the COA on 28 February 2020. The publication of the ITB will be done upon the lifting of the ECQ. PSALM received the OGCC's comments/recommendations on the draft bidding procedures in May 2020 and these were revised accordingly. The OGCC's review of the DOAS was received on 25 June 2020.

- e. Maco and Agusan Properties

PSALM reported to the Board in February 2020 on the Bidding Document, Disposal timeline; and Minimum Bid Price (MBP). Subsequently, the Board approved on 26 February 2020 the commencement of sale. The Agency Appraisal Report was submitted to the COA on 28 February 2020. The publication of the ITB will be done upon the lifting of ECQ.

PSALM received the OGCC's comments/recommendations on the draft bidding procedures in May 2020 and these were revised accordingly. The OGCC's review of the DOAS was received on 25 June 2020.

f. Camalaniugan Property

The asset profile has been prepared and the bidding procedures were drafted in accordance with the OGCC's comments/ recommendations. Further, PSALM has coordinated the disposal of the property with Cagayan Electric Company (CAGELCO) which is currently the occupant/lessee of the property. To pursue the property's sale, it will be necessary for PSALM to issue a Notice to Vacate to CAGELCO.

g. Mexico Property

The asset profile has been prepared and the bidding procedures were drafted in accordance with the OGCC's comments/ recommendations.

2. Disposal of REA through Other Modes

a. The asset profile of the Bagac Property was drafted based on the gathered documents during site visit and internal resources/references. The bidding procedures were drafted in accordance with the OGCC's comments/recommendations.

b. Reconveyance of Gensan Property

On 19 May 2020, PSALM received from the BIR RDO No. 110, General Santos, a certified Zonal Values Schedule for the lots located in Calumpang General Santos City. However, the certification did not specifically state the applicable zonal value for the subject property. Hence, PSALM immediately requested for further clarification or confirmation of the Zonal value. The BIR RDO No. 110 is scheduled to conduct an inspection of the property on 01 July 2020.

C. Privatization Proceeds

As of 30 June 2020, PSALM, through the privatization of generation assets, the transmission business, and the IPP contracted capacities, has generated a total of PhP915 billion. The actual collection to date amounted to PhP625 billion.

Table 3. Privatization Proceeds Generation and Collection as of 30 June 2020, (in PhP Billion)

Privatization Assets	Generated	Collected	Balance
Generating Assets	163.88	163.88	-
Appointment of IPPAs	482.50	271.05	193.40
Transmission Concession	264.80	185.87	78.93*
Decommissioned Plants	0.66	0.66	-
Other Priva-Related	3.09	3.09	-
<b>TOTAL</b>	<b>914.93</b>	<b>624.55</b>	<b>272.33</b>

\* Exclusive of estimated foregone interest resulting from the advance payment made by NGCP to PSALM in 2013 which is now subject of an Arbitration Case between NGCP and PSALM/TRANSCO.  
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.

Table 4. Privatization Proceeds Utilization as of 30 June 2020

Particulars	Amount
Debt Prepayment	64.68
Regular Debt Service	402.37
Lease Obligations	204.64
<i>Subtotal</i>	<i>671.69</i>
Others	4.98
TRANSCO Opex	0.05
<b>TOTAL</b>	<b>676.72</b>

USD1:PhP49.851(BSP Guiding Rate dated 30 June2020)

Source: PSALM

Total collections of PhP625 billion as of June 2020, including interest income on placements, were exclusively utilized for the liquidation of financial obligations amounting to PhP677 billion as of June 2020.

#### D. 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 (RA) 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.

During the report period, relative to the inspection of Financial Records which was completed in December 2019, the Joint PSALM-TransCo Technical, Regulatory, Financial and Legal Compliance Assessment Team (TRFLAT) provided NGCP checklists for the different areas and corresponding schedules for the conduct of inspection as reflected in the table below.

Areas of Responsibility	Schedule of Inspection	
	Technical Document Center 1 (NGCP Head Office)	Technical Document Center 2 (Mexico, Pampanga)
1. Technical	November 17-18, 2020	November 19-20, 2020
• Philippine Grid Code	November 24-25, 2020	November 26,27, 2020
• System Operations	October 27-30, 2020	November 3-6, 2020
• Operation and Maintenance	October 27-30, 2020	November 3-6, 2020
• Planning, Engineering, and Construction	November 24-25, 2020	November 26-27, 2020
• Environmental	October 27-28, 2020	October 29-30, 2020
2. Regulatory	October 22, 2020	October 23, 2020
3. Financial		
• Financial Records	October 8, 2020	October 9, 2020
• Transmission Assets	October 8, 2020	October 9, 2020
4. Legal	November 19, 2020	November 20, 2020
5. Right-of-Way	October 27-28, 2020 November 17-18, 2020	October 29-30, 2020 November 19-20, 2020
6. Administrative, IT, QA, Safety and Security	November 5-6, 2020	November 12-13, 2020

In view of the above, the NGCP has yet to respond to the request of PSALM and Transco or coordinate with the TRANSCO and PSALM Inspection of Book Records Team Heads.

Meanwhile, TransCo continues on the conduct of inspection of the assets condition consistent with the inspection protocol established with the concessionaire. Annex 1 shows the summary of the TransCo Inspection Report based on CA.

## A. Sale of Sub-Transmission Assets (STAs)

The sale of TransCo's sub-transmission assets involves 198 sale contracts with 107 interested distribution utilities (DUs), most of which are electric cooperatives. The sub-transmission assets include around 4,092 ckt-km. of mostly 69 kV transmission lines and 860 MVA of substation capacity.

As of 30 August 2020, TransCo has signed 116 sale contracts with 95 DUs/ECs/consortia amounting to PhP6 billion. These sales cover an aggregate length of 3,836 ckt-kms of sub-transmission lines and 34,184 sub-transmission structures and 835 MVA of substation capacity. Of the 116 sale contracts, 64 contracts with total sale price of PhP4.1<sup>1</sup> billion have been approved, approved with modification, and disapproved. Included in the said 64 contracts are nine (9) contracts amounting to PhP373.3 million disapproved as of August 30, 2020 and 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 Agreements (LPAs) with an amortization period of 20 years. Of the 116 sale contracts already signed, 79 are mostly under LPAs with 68 ECs/consortia, valued at around PhP4.136 billion. The remaining 37 involved sales to private DUs/consortia.

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<sup>1</sup> The total ERC approved amount of PhP3.005 Billion is lower compared to the total approved/disapproved/dismissed contract amount of PhP4.074 Billion due to the following reasons:

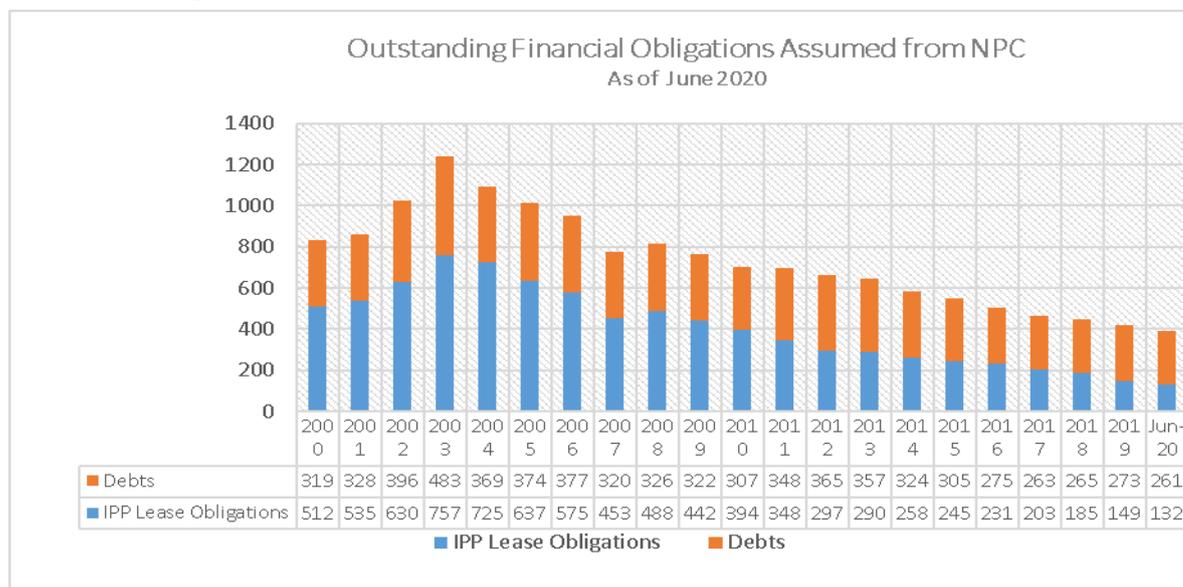
- a. Exclusion of some assets from the ERC approval due to reclassification from sub-transmission to transmission assets;
- b. The lower amount of valuation was used as basis of the ERC approval;
- c. Exclusion of some assets from the ERC approval since said assets are not yet connected to the sold assets;
- d. Exclusion of some assets from the ERC approval due to decommissioning;
- e. DU withdrawal from the Joint Application pertaining to the divestment of sub-transmission assets; and
- f. The STAs in the sale contract/s should have been sold to a consortium instead of a single DU because the STAs were in a super loop configuration.

### III. PSALM LIABILITY MANAGEMENT

As of June 2020, PSALM's financial obligations was reduced to PhP393.3 billion or a decrease of PhP847.3 billion from the 2003 level of PhP1,241 billion from 2003 peak level of PhP1.2 trillion. In terms of currency, more than half (67.5%) of PSALM's Financial Obligations (FOs) is denominated in dollars, amounting to PhP265.3 billion. Peso-denominated FOs of PhP99.4 billion accounts to 25.3%, while the remaining FOs amounting to PhP28.60 billion equivalent to 7.3% is in Japanese Yen.

Figure 1 below shows the movement of the financial obligations of PSALM from 2000 to 30 June 2020.

Figure 1 - PSALM's Outstanding Financial Obligations Assumed from NPC



Source: PSALM

Table 5. Financial Obligations (FOs) as of 30 June 2020

	PhP Equivalent (In Billions)
Debts	261.20
IPP Lease Obligations	132.10
<b>Total</b>	<b>393.30</b>

Source: PSALM

Table 6. Financial Obligations by Currency as of 30 June 2020

Currency	Amount in PhP Equivalent (In Millions)	% to Total
USD	265,262.52	67.5%
PHP	99,379.74	25.3%
JPY	28,608.90	7.3%
<b>Total</b>	<b>393,251.16</b>	<b>100%</b>

Exchange Rates Used: BSP Guiding Rate dated 30 June 2020

USD: PhP 1.00 = 9.8510 JPY: PhP 1.00 = 0.4635

Source: PSALM

With regard to PSALM Debt Financing/Loan Financing the PHP43.0 Billion Loan Agreement between PSALM and the Development Bank of the Philippines (DBP) was signed on 14 May 2020. On the same day, the DBP issued the Guarantee Letter for the PhP43 Billion loan. This kind of financing is incurred by PSALM to finance maturing obligations while collections are still yet to be received.

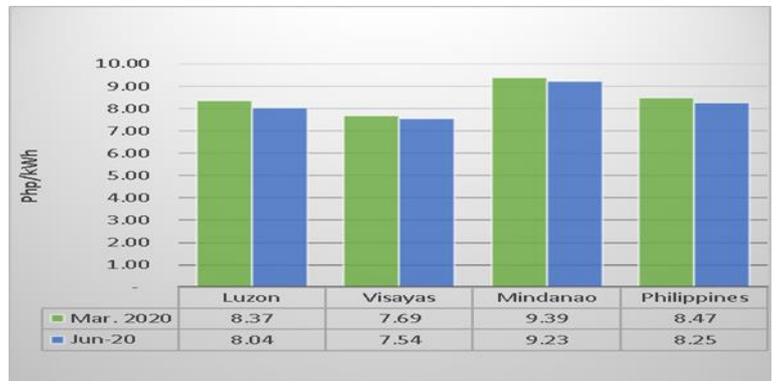
#### IV. ELECTRICITY RATES

The information contained in the DOE’s EPIRA Reports are intended only to provide the JCEC and the public an idea on the level of electricity prices. The average values are indicative values of available data gathered by the DOE. The relevant movement in prices should be examined more closely on a per utility basis. In this regard, the data cannot be used or attributed directly to the policies being adopted by the DOE.

##### A. Average Electricity Rates

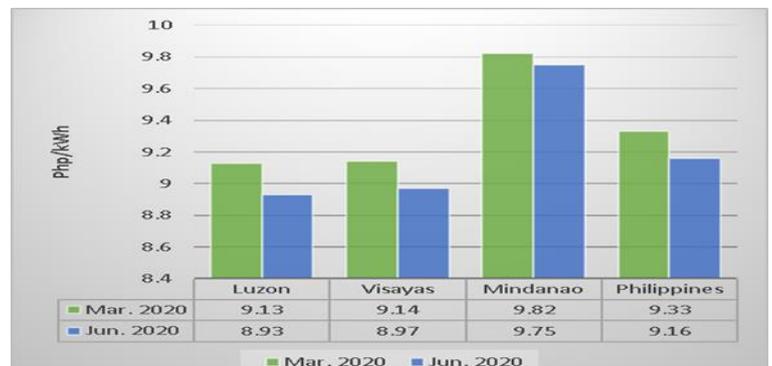
The country’s average electricity rates as of June 2020 is around PhP8.25/kwh, 22 centavos lower compared with the March 2020 national average systems rate. All the grids decrease in rate: Luzon Grid rate showed a decline from PhP8.37/kWh in March 2020 to PhP8.04/kWh in June 2020 or a decrease of 33 centavos/kwh, the Visayas and Mindanao grid decreased by both 15 centavos/kwh from PhP7.69/kwh to PhP7.54/kwh and PhP9.39/kwh to PhP9.23/kwh.

Figure 2 - National Average Systems Rate



Source: NEA and Monthly Operations Report of PDUs

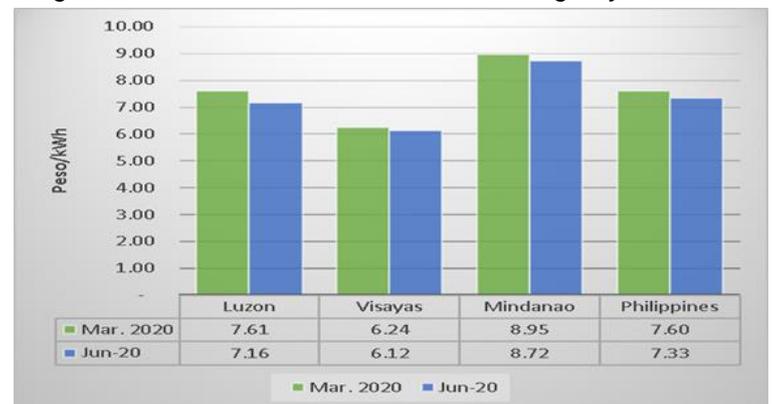
Figure 3 - Electric Cooperatives’ Average Systems Rate



Source: Monthly Operations Report of PDUs

Meanwhile, the ECs’ average systems rate for June 2020 is at PhP9.16/kWh, PhP0.17 centavos lower compared to March 2020 rate. All the three grids, decreased in rate by only 20 centavos/kwh for Luzon, 17 centavos/kwh for Visayas and 7 centavos/kwh for Mindanao.

Figure 4 - Private Distribution Utilities’ Average Systems Rate



The national average systems rates of Private Distribution Utilities (PDUs) posted an overall increase by 27 centavos/kWh from PhP7.60 per kWh in March 2020 to PhP7.33/kWh in June 2020. The average PDU rates in all grids went down as Luzon posted a decrease of 45 centavos /kwh, 13 centavos/kwh for Visayas and 24 centavos/kwh for Mindanao. The low average rates for PDUs can be attributed to the low rates of economic zones where customer base are mostly industrial and commercial.

As reflected in Table 7, the ECs' national average unbundled residential electricity rate for June 2020 was PhP8.91/kWh. Mindanao grid still has the highest average unbundled residential electricity rates at around PhP9.38kWh of which generation costs comprise 56.8%. On the average, generation costs comprise the bulk of ECs residential rates at around 56.8% followed by distribution, supply and metering charges (DSM) at 19.6%.

Table 7. ECs' Unbundled Average Residential Electricity Rates, June 2020

Bill Subgroup	LUZON		VISAYAS		MINDANAO		NATIONAL	
	PhP/kwh	% share						
<b>Generation</b>	4.72	54.1	4.59	52.8	5.32	56.8	4.85	54.4
<b>Transmission</b>	1.03	11.8	0.90	10.4	0.92	9.8	0.96	10.8
<b>System Loss</b>	0.62	7.1	0.60	7.0	0.78	8.3	0.66	7.4
<b>DSM<sup>1</sup></b>	1.71	19.6	1.83	21.1	1.69	18.0	1.74	19.5
<b>RFSC<sup>2</sup></b>	0.38	4.4	0.35	4.0	0.49	5.3	0.40	4.5
<b>Other Charges<sup>3</sup></b>	(0.11)	(1.2)	0.08	0.9	(0.13)	(1.4)	(0.04)	(0.5)
<b>Subsidy Charges<sup>4</sup></b>	0.02	0.2	0.05	0.6	0.02	0.2	0.03	0.3
<b>Universal Charges<sup>5</sup></b>	0.29	3.3	0.26	3.0	0.26	2.8	0.27	3.1
<b>Other Taxes<sup>6</sup></b>	0.08	0.9	0.02	0.2	0.02	0.2	0.04	0.4
<b>Total</b>	<b>8.73</b>	<b>100.0</b>	<b>8.69</b>	<b>100.0</b>	<b>9.38</b>	<b>100.0</b>	<b>8.91</b>	<b>100.0</b>

Source: NEA

<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

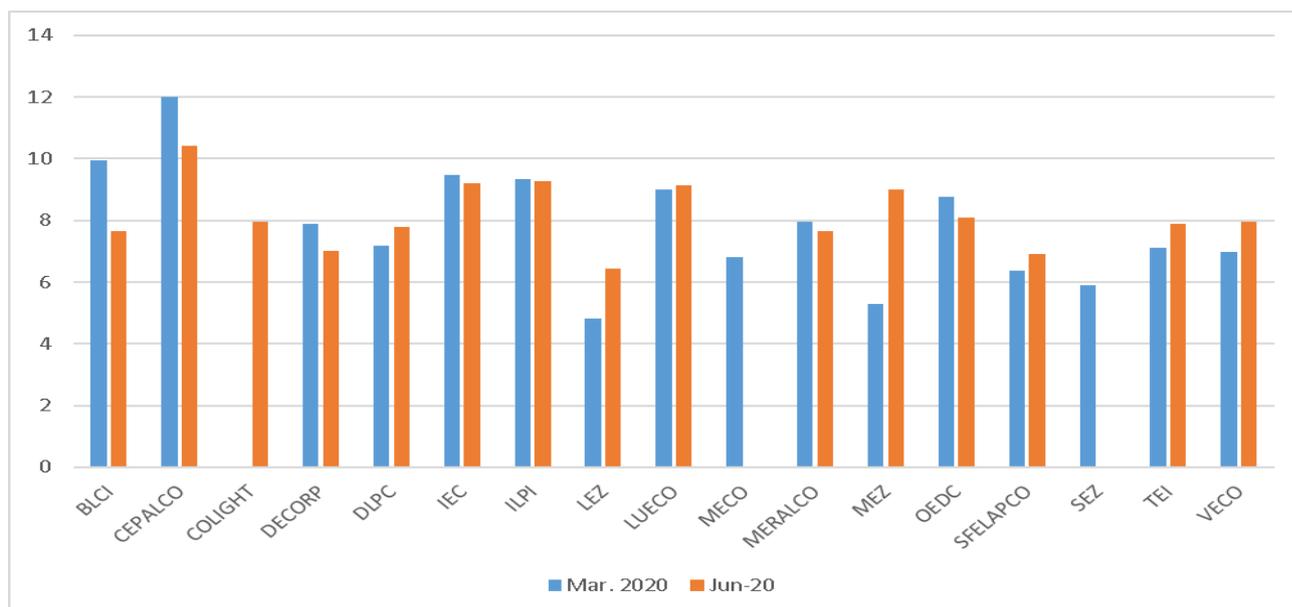
Among the PDUs, Cagayan Electric Power and Light Company in Mindanao posted the highest average power rates for the billing month of June 2020 PhP10.4/kwh followed by Iligan Light and Power Inc. at PhP9.3/kwh. On the other hand, the lowest average rate was noted for Lima Enerzone (LEZ) in Luzon at PhP6.5/kwh, higher by PhP1.6/kWh compared to its March 2020 average systems rate. Also LEZ posted the highest increase in rate of 33.7% from its PhP4.8/kwh in March 2020. Majority of LEZ customers are industrial entities, hence, the low average rates.

The average systems rate of MERALCO, the largest distribution utility in the country, went down by 4.0% from PhP8.0/kwh in March 2020 to PhP7.7/kwh in June 2020. Based on MERALCO's reports, the downward trend in their rates from May to July 2020 was due to the MERALCO's invoking the Force Majeure provision in its power supply agreements for the duration of the lockdown, reducing fixed charges for generation capacity that would have been charged by suppliers. However, in August 2020, MERALCO's average rates moved upward by 13 centavos/kwh due to higher generation cost of their power supply agreements with Independent Power Producers (IPPs).

Also, on 29 May 2020, the ERC issued MERALCO a Show Cause Order upon the latter's alleged violation of certain directives contained in the ECQ and MECQ measures. The alleged violations are the following among others: 1) the word "ESTIMATE" was not written on the April bill, 2) the cumulative amount of electricity bill was supposed to have fallen due within the ECQ was not amortized in four (4) equal monthly installments, payable in the four (4) succeeding billing months following the end of the ECQ and 3) payments thereof by customers in areas covered by ECQ extension until 15 May 2020 shall commence no earlier than 30 May 2020.

On 20 August 2020, the ERC imposed a PhP19 Million fine on MERALCO for violating the regulatory agency's Advisories that it issued during the community quarantine period starting in March until July 2020. MERALCO, in particular, violated the following ERC directives: (1) Failure to clearly indicate that the bills were estimated; and 2) Failure to comply with the mandated installment payment arrangement.

Figure 5 - Private Investor-Owned Distribution Utilities Average Electricity Rates



Source: Monthly Operations Report of PDUs

As of September 2020, MERALCO's residential customers pay the highest electricity rates at PhP9.05/kwh followed by commercial at PhP7.46/kwh and industrial customers with PhP6.21/kwh.

Table 8. Summary of MERALCO Unbundled Power Rates, September 2020 (PhP/kWh)

Bill Sub-Group	Residential	%	Commercial	%	Industrial	%
Generation	4.11	45.4	4.10	54.9	4.08	65.6
Transmission	0.78	8.7	0.88	11.7	0.69	11.1
Systems Loss	0.41	4.5	0.31	4.2	0.22	3.6
DSM	2.62	28.9	1.22	16.4	0.61	9.8
Cross Subsidies	(0.09)	-0.9	0.07	0.9	0.07	1.1
Universal Charges	0.20	2.2	0.20	2.7	0.20	3.2
Gov't Taxes	0.97	10.7	0.64	8.6	0.30	4.8
Fit-All Charges	0.05	0.6	0.05	0.7	0.05	0.8
<b>TOTAL</b>	<b>9.05</b>	<b>100.0</b>	<b>7.46</b>	<b>100.0</b>	<b>6.21</b>	<b>100.0</b>

Source: MERALCO

For October 2020, MERALCO's average residential electricity rates in the amount of PhP8.55/kwh for its 0-200kwh residential customers was lower by 54 centavos/kwh compared to its year ago level of PhP9.09/kwh. The decline was brought mainly by lower generation, transmission and universal charges as well as taxes and subsidies. MERALCO's average effective residential rates in October 2020 ranged from PhP8.55/kwh to PhP9.76/kwh of which the highest component was generation costs at PhP4.22/kwh. Meanwhile, MERALCO distribution charges for its different residential customer classes comprised 22.9% to 31.0% 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 41-centavos/kwh.

Table 9. Summary of MERALCO Residential Unbundled Power Rates as of October 2020 (PhP/kWh)

BILL SUBGROUP	0 to 200 kWh	% Share	201 to 300 kWh	% Share	301 to 400 kWh	% Share	Over 400 kWh	% Share
Generation	4.22	49.4%	4.22	47.6%	4.22	46.0%	4.22	43.3%
Transmission	0.77	9.1%	0.77	8.7%	0.77	8.4%	0.77	7.9%
System Loss	0.41	4.8%	0.41	4.6%	0.41	4.4%	0.41	4.2%
Distribution	1.96	22.9%	2.24	25.2%	2.52	27.4%	3.03	31.0%
Subsidies*	0.06	0.7%	0.06	0.7%	0.06	0.7%	0.06	0.6%
Government Taxes	0.88	10.3%	0.92	10.3%	0.95	10.4%	1.01	10.4%

BILL SUBGROUP	0 to 200 kWh	% Share	201 to 300 kWh	% Share	301 to 400 kWh	% Share	Over 400 kWh	% Share
Universal Charge	0.20	2.3%	0.20	2.2%	0.20	2.2%	0.20	2.0%
Fit-All Renewable	0.05	0.6%	0.05	0.6%	0.05	0.5%	0.05	0.5%
<b>TOTAL</b>	<b>8.55</b>	<b>100%</b>	<b>8.87</b>	<b>100.0%</b>	<b>9.18</b>	<b>100.0%</b>	<b>9.76</b>	<b>100.0%</b>

Source: MERALCO

Table 10 provides information on generation costs in reference with MERALCO's power supply agreements, WESM procurement and the regulated generation costs of PSALM. MERALCO's blended generation costs showed a declining trend from May 2020 to October 2020 which can be largely attributed to lower WESM prices specifically during the month of April, July and August 2020. During these months, MERALCO's WESM purchases were around 19.1% of its total supply, significantly lowering MERALCO's blended generation charges.

Table 10. MERALCO/PSALM Generation Costs

Particular	Apr-20	May-20	June-20	July-20	Aug-20	Sept-20	Oct 2020
MERALCO BLENDED GENERATION COST	4.53	4.38	4.34	4.33	4.12	4.09	4.22
QPPL	7.15	5.82	4.95	5.78	6.72	6.65	5.24
FGPC - STA.RITA	4.96	4.52	4.38	4.41	4.22	4.25	4.61
FGP - SAN LORENZO	4.86	4.21	4.14	5.44	3.98	4.12	4.07
MPPCL							
TLI	4.44	3.62	3.51	3.34	3.36	3.67	3.01
First Natural Gas Power Corp. - San Gabriel (FNPC)	4.66	4.66	4.10	4.53	4.58	4.26	6.54
San Buenaventura Power Ltd. Co. (SBPL)	4.47	4.02	4.14	3.88	4.15	3.80	4.21
AC Energy (baseload)	4.24	4.24	4.86	4.58	5.16	4.33	4.28
SMEC	4.01	4.04	4.05	4.13	4.11	4.14	4.15
SPPC (baseload)	4.05	4.05	4.05	4.13	1.15	4.14	4.15
AC Energy (midmerit)	4.24	4.24	4.86	5.90	6.44	6.48	4.89
SPPC (midmerit)				4.05	4.90	5.25	5.25
First Gen Hydro Power Corp. (FGHPC) (midmerit)					4.24	4.24	4.24
Others	5.20	5.53	3.68	4.02	3.96	2.94	3.95
WESM	3.16	5.01	5.32	3.54	2.42	2.41	3.57
Export Energy from Net Metering Customers	4.61	4.59	4.41	2.83	4.32	4.24	7.91
WESM ESSP	1.50						
NPC/PSALM Generation Cost - LUZON	4.39	4.39	4.39	4.39	4.39	4.39	
NPC/PSALM Generation Cost - VISAYAS	3.74	3.74	3.74	3.74	3.74	3.74	
NPC/PSALM Generation Cost - MINDANAO	2.85	2.85	2.85	2.85	2.85	2.85	

Source: MERALCO and PSALM Websites; values were rounded off.

MERALCO's bulk purchase comes from First Gas Power Corp. (FGPC) - Sta. Rita, South Premier Power Corporation (SPPC), and First Gas Power Corp. (FGP) – San Lorenzo, which are all-natural gas-powered plants. Further, MERALCO also sources a considerable amount of supply from WESM.

Also, MERALCO's average bulk power purchase for the month of October 2020 which came from First Gas Power Corp. (FGPC) - Sta. Rita at 15.4%, South Premier Power Corporation (SPPC) at 12.8%, and First Gas Power Corp. (FGP) – San Lorenzo at 10.0% which are all natural gas powered plants. About 19.1% percent of MERALCO's power supply requirement is bought from the WESM.

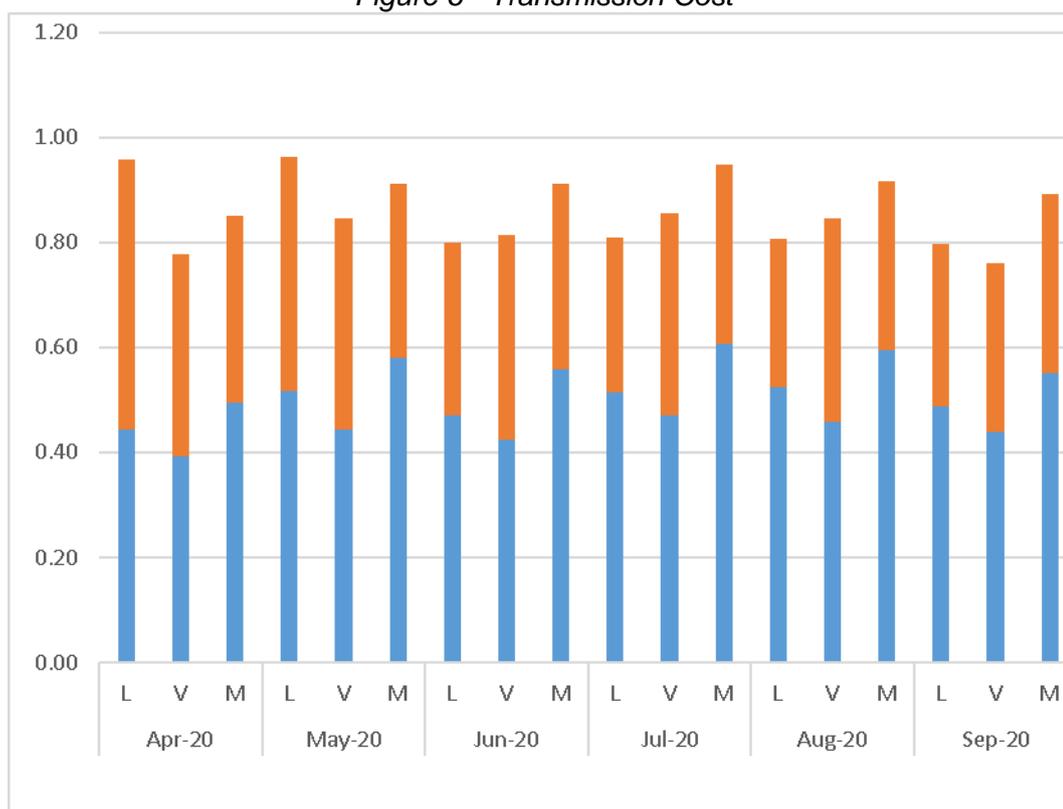
On 06 March 2020 ERC directed distribution utilities, both private and electric cooperatives to refund to their respective consumers the over-recoveries in the Generation Rate (GR), Transmission Rate (TR) System Loss Rate (SLR), Lifeline Subsidy Rate (LSR) and Senior Citizen Subsidy Rate (SrSR), otherwise known as pass through charges implemented for a period of twelve (12) months except for MERALCO and Angeles Electric Corporation (AEC) which prayed for a shorter period of refund, starting the next billing cycle thus decreasing the rate on the next bill.

Meanwhile, transmission charges, on the average, comprised around 7% to 9% of a DU's average electricity rates. Transmission charges have two major components, namely, power delivery charges (PDS) and Ancillary Service (AS) charges. The PDS share around 57.8 to 61.9% on the average of the total transmission costs while ancillary service is around 38.1 to 42.3% of the total transmission costs.

For the period January 2020 to August September 2020, Luzon Grid recorded the highest transmission charges at PhP0.96/kwh of which 52 centavos was paid for the power delivery service while 44 centavos/kwh went to ancillary services. The Visayas grid has the lowest average transmission cost in February 2020 at 76 centavos of which power delivery service was around 41 centavos/kwh while ancillary services cost 34 centavos/kwh. The highest transmission cost for the report period was noted in Luzon Grid at about PhP0.96/kwh in May 2020.

On 20 April 2020, the ERC in a recent Order granted the NGCP an Interim Relief to implement an Interim Maximum Annual Revenue (Imar). The Interim Relief reduced the existing Transmission Charge by PhP0.0413 from PhP0.5114/kwh in 2019 to PhP0.4701/kwh for 2020. This is to provide relief to all electricity consumers during this pandemic time.

Figure 6 - Transmission Cost



Source: NGCP

## **B. Measures Implemented to Provide Relief to Electricity Consumers during the General Community Quarantine (GCQ) Period**

During the report period, following were issued:

1. Department of Energy (DOE)
  - a. DOE Advisory dated 07 May 2020 entitled, "Advisory on Providing Grace Period to All Power Sector Bills Falling Due During the Enhanced Community Quarantine" which will be until 15 May 2020. The advisory provides the following:
    - i. For Electricity Consumers: A grace period in the payment of electricity consumption and allowed amortization of the same for at least 4 months;
    - ii. For Power companies, 4 months grace period in the payment of all obligations and suspension of interests, fees, penalties and charges to the following:
      - Payments due to NPC, PSALM, NGCP;
      - Payment to fuel sources;
      - Payment to IPPs;
      - Grace period in the payment of Universal Charge to PSALM; and
      - Payment to IEMOP;
    - iii. Suspension of the Fit-All;
    - iv. Encouraged negotiations between a contestable customers and Retail Electricity Suppliers relative to obligations falling within the ECQ period; and
    - v. Requesting consideration of the LGUs in the collection of relative taxes, fees and dues among power companies/facilities.
  - b. DOE letter to all distribution utilities (DU) dated 14 August 2020 that urges DUs to lower the cost of electricity services;
  - c. DOE Advisory dated 23 September 2020 provides the implementation of a minimum of thirty (30) day period and staggered payment without interests, penalties and other charges to all payments due within the period of Community Quarantine (CQ) in the entire electric power value chain to include generation companies, transmission utility and distribution utilities. DOE directed the following entities to observe the grace period and staggered payment for unpaid bills provided under the law, to wit:
    - i. Fuel/Resource suppliers with respect to their Generation Company customers being supplies with fuel for the generation of electricity;
    - ii. Generation Companies, whether public or private corporation, with respect to payment of electricity bills for the supply of electricity to Distribution Utilities, Retail Electricity Suppliers and Directly Connected Customers including the Independent Market Operators with regard to spot quantity transactions in the wholesale electricity spot market;
    - iii. Independent Power Producers (IPP) with respect to the payments of the Power Sector Assets and Liabilities Management Corporation (PSALM) of its obligations pursuant to their respective power supply agreements;
    - iv. PSALM with respect to the payments of IPP Administrators (IPPA) pursuant to their IPPA Administration Agreements;

- v. The National Grid Corporation of the Philippines (NGCP) with respect to the transmission services payable by Generation Companies, Distribution Utilities, Directly Connected Customers and other customers;
- vi. Payments due to the independent Electricity Market Operator of the Philippines of total trading amounts and other charges payable by WESM Participants; and
- vii. Retail Electricity Suppliers relative to the bills of their Contestable Customers.

## 2. Energy Regulatory Commission (ERC)

- a. ERC Advisory dated 05 May 2020 was issued in line with the government's directive extended anew the ECQ in the NCR and some areas until 15 May 2020. The Advisory contains the following among others:
  - i. DUs and RES operating in areas that continue to be under the ECQ are directed to further extend the grace period for the payment of their consumers' electricity bills falling due within the ECQ period of 16 March to 15 May 2020, without interest, penalties, fees and other charges. The directive on the amortization payment in four (4) equal monthly installments, payable in the four (4) succeeding billing months following the end of the ECQ shall continue to be observed, but payments thereof by customers in areas covered by ECQ extension until 15 May 2020 shall commence no earlier than 30 May 2020.
  - ii. DUs and RES that are operating in areas under the GCQ shall retain the grace period on the due date of their consumers' electricity bills not earlier than 15 May 2020, without interest, penalties, fees and other charges. Similarly, the directive on the amortization of payments in four (4) EMI payable in the four (4) succeeding billing months is hereby reiterated.
  - iii. Actual payments received by the DU during the said period are still required to be immediately proportionately to the concerned entities. Consequently, DUs are authorized to adopt incentive schemes to encourage early payment of the deferred amount by customers who are able to settle ahead of the four (4) months;
  - iv. The word "ESTIMATE" be clearly written on the consumer bill and that corresponding adjustments be made as soon as practicable.
  - v. Government entities that are contestable customers shall observe the regular payment schedule of their electricity bills starting 16 May 2020.
  - vi. The Generators/Suppliers, PSALM, NPC, TransCo NGCP IPPs and IPPAs and MO shall extend the same payment scheme as provided in the preceding paragraph, to the RES, DU and other customers, depending on whether such customer is operating under an ECQ or GCQ. Availment of PPD will still be in accordance with the parties' approved supply contract;
  - vii. The suspension of the FIT-ALL collection from electricity customers is applicable for March and April billing periods to be implemented on the next electricity bill to be issued by the Collection Agents.

- b. ERC Advisory dated 22 May 2020 was issued in line with the certain areas under MECQ until 31 May 2020. This Advisory contains the following among others:
- i. The collection of Universal Charge-Environmental Charge (UC-EC) equivalent to PhP0.0025/kwh is hereby suspended until further notice;
  - ii. DUs are directed to conduct actual meter readings and thereafter issue a new billing reflecting the actual consumption and corresponding amount due, not later than 08 June 2020, except when actual reading is not possible due to the implementation of community quarantine;
  - iii. DUs are directed to allow their electricity customers with monthly consumption of 200 kwh and below in February 2020, a staggered payment of up to six (6) equal monthly installments for their electricity bills falling due within the ECQ and MECQ period, the first monthly amortization to be made not earlier than 15 June 2020, without penalties, interest and other fees;
  - iv. For electricity customers with monthly consumption of above 200 kwh in February 2020, DUs shall allow a staggered payment of up to four (4) EQI for their electricity bills falling due with the ECQ and MECQ periods, the first monthly amortization to be made not earlier than 15 June 2020, without penalties, interest and other fees; and
  - v. Availment of Prompt Payment Discount (PPD) may be subjected to negotiation between the contracting parties.
- c. ERC Advisory dated 07 July 2020 was issued in connection with previous Advisories issued by the Commission and its initial evaluation of the reports submitted by distribution utilities (DUs)/Electric Cooperatives (ECs) on their compliance on said advisories and following directives are hereby issued:
- i. DUs/ECs that failed to comply with the ERC's directives contained in its Advisories are directed to cause the refund of the following electricity charges:
    - Feed-in-Tariff Allowance (FIT-All) for the billing months of March and April 2020 as directed in the ERC Advisories dated 15 April 2020 and 5 May 2020;
    - Universal Charge – Environmental Charge (UC-EC) as stated in the 22 May 2020 Advisory;
    - Overpayments made by consumers arising from monthly billings issued based on estimated consumption and verified against actual meter reading; and
    - Overpayments resulting from the non-implementation of the installment payment scheme prescribed by the Commission;

The said overpayments shall be accurately and clearly reflected on the billing statement.

- ii. For consumers who are entitled to refunds due to overpayments, they may, in lieu of cash refund, request the DU/EC to apply the amount to be refunded as credits that will be applied in the immediate future billings. For this purpose, the DUs/ECs shall provide the necessary communication facility where such requests may be forwarded by the consumers. Such requests shall be acknowledged by the DU/EC within 48 hours upon receipt of the request;
- iii. For consumers who already paid in full, their monthly billings that fell due during the Enhanced Community Quarantine or Modified Enhanced Community Quarantine

shall also have the option to seek a refund and avail of the mandated installment payment;

- iv. DUs/ECs are required to submit a Report on overbillings, by month, and the pertinent refund undertaken on or before 15 August 2020; and
- v. DUs/ECs in Cebu Province, particularly in places that are still under the Enhanced Community Quarantine, are directed NOT to effect any disconnection on account of unpaid ECQ bills of electricity consumers until September 2020.

### C. 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 30 June 2020, the total collections of Universal Charge amounted to PhP19.1 billion with interest earnings from deposits and placements of UC funds amounted to PhP0.3 Billion. On the other hand, UC fund disbursement amounted to PhP194.1 Billion. Accounting for the inflows and outflows of the UC fund leaves it with a balance of about PhP2.3 billion.

Below are the details of UC remittances, interests and disbursements:

*Table 11. UC Collections as of June 2020 (in Billion PHP)*

Particulars	Remittances	Interests	Disbursements	Balance
Special Trust Fund – Missionary Electrification (ME) NPC-SPUG	104.79	0.05	104.74	0.10
Special Trust Fund – ME Renewable Energy Developer Cash Incentive (REDCI)	0.79	0.02	0.30	0.51
Special Trust Fund – Environmental Charge (EC)	2.53	0.15	1.49	1.18
Special Trust Fund – Stranded Contract Cost (SCC)	80.81	0.07	80.39	0.48
Stranded Debts	7.22	0.00	7.20	0.03
<b>TOTAL</b>	<b>196.14</b>	<b>0.29</b>	<b>194.12</b>	<b>2.30</b>

Source: PSALM

#### 2. UC Remittances

For June 2020, PSALM received PhP1.09 Billion in UC remittances.

#### 3. UC Disbursements

For June 2020, PSALM disbursed PhP5.08 billion to NPC-SPUG to fund the missionary electrification functions, chargeable against the UC-ME fund.

The aforementioned UC disbursement is pursuant to the following ERC Decisions/Orders:

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

In accordance with the ERC decision dated 28 January 2013 under Case No. 2011-091 RC, the amount of PhP0.319 billion was transferred from the UC-SD to the UC-SD Special Fund Account for the period June 2019.

#### 4. ERC-Approved UC Rates

- a. The table below shows the ERC-approved UC rates being implemented as of 30 June 2020:

Type of UC	PhP/kWh
UC-ME	0.1544
ME – REDCI (Renewable Energy Developers Cash Incentive)	0.0017
UC-EC	0.0000 <sup>1/</sup>
UC-SCC	0.0000 <sup>2/</sup>
UC-SD	0.0428
<b>Total</b>	<b>0.1989</b>

1/ Collection of **UC-EC of PhP0.0025/kWh** from all electricity end-users by all collecting entities, including NGCP, has been suspended effective 22 May 2020, until further notice from the ERC.

2/ Collection of **UC-SCC of PhP0.0543/kWh** from all electricity end-users by all collecting entities has ceased effective February 2020 in view of full recovery of ERC-approved SCC amount of PhP5.117 billion.

- b. UC-SCC

In view of the effectivity of the Murang Kuryente Act (MKA) and its implementing Rules and Regulation (IRR), ERC in its Order dated 28 May 2020, dismissed the following PSALM UC-SCC applications:

ERC Case No.	Date Applied	Purpose	Amount Applied
No. 2017-066 RC	06 July 2017	CY 2016 UC-SCC Availment	3,686,192,736.05
No. 2019-048 RC	25 June 2019	CY 2018 UC-SCC Availment	6,121,174,568.47

- c. UC-SD

For UC-SD, the CY 2014 True-Up Adjustment Motion for Reconsideration filed by PSALM on 06 June 2019 amounting to PhP1,578,164,643.22 was declared moot and academic by ERC in its order dated 28 May 2020 as posted in their website.

The following UC-SD True-Up Adjustment applications were likewise dismissed due to the effectivity of the MKA and its IRR:

ERC Case No.	Date Applied	Purpose	Amount Applied
No. 2016-150 RC	30 June 2016	CY 2015 UC-SD True-Up Adjustment	27,670,386,541.73

ERC Case No.	Date Applied	Purpose	Amount Applied
No. 2017-069 RC	31 July 2017	CY 2016 UC-SD True-Up Adjustment	34,642,180,036.26
No. 2018-087 RC	31 July 2018	CY 2017 UC-SC True-Up Adjustment	11,804,635,030.22
No. 2019-047 RC	25 June 2019	CY 2018 UC-SC True-Up Adjustment	4,722,490,975.31

#### D. Lifeline Rate Subsidy Program

As of May 2020, almost all distribution utilities in the country are implementing the lifeline rate at varying thresholds and discount structures. While the threshold are different per DU, it is not clear what are the parameters used in setting the said threshold, although from a closer look, the relevant number of subsidizing customers may have been among the key considerations, i.e. the higher the number of non-lifeline customers, the higher are the thresholds set for the lifeline consumption threshold.

Out of the one-hundred forty-eight (148) distribution utilities implementing the lifeline rate, 79 have a threshold level of 20 kWh and below. On the other hand, the highest lifeline threshold approved by the ERC is up to 100 kWh of consumption per month and it is being implemented by seven (7) DUs which are all privately owned and that includes MERALCO, Davao Light, Iligan Light, CEPALCO and Visayan Electric Company (VECO), in Cebu. It can be noted though that except for Cebu City, none of these franchise areas belong to the top 20 poorest provinces showing potential disparity in the distribution of lifeline rate subsidy.

The smallest amount of subsidized consumption was up to 8 kWh which is being implemented by Cagayan de Sulu Electric Cooperative (CASELCO). The most common threshold of lifeline consumption being implemented is 0-20 kWh which is being implemented by 48 ECs, followed by 0-25 kWh which is being implemented by 25 ECs. There are also 13 ECs that are implementing subsidized consumption of up to 15 kWh.

Looking at Table 12, the Province of Cebu without the Cities of Cebu, Lapu-Lapu and Mandaue has the largest incidence of poverty on the country followed by Sulu, Lanao Del Sur, Negros Occidental without the City of Bacolod. Despite having the largest volume of poor families, it can be noticed that the level of consumption discounted ranged only from 0-20 kWh among the majority except Maguindanao and Lanao Del Sur. This reflects the capability of the other consumers in the areas that could only be limited to a certain level as extending the discounted consumption to a higher threshold will also significantly affect and will be burdensome to the subsidizing segment of the consumers.

Table 12. Top 20 Poorest Cities and Provinces in the Philippines

Region/Province	Annual Per Capita Poverty Threshold (in PhP)	Magnitude of Poor Families	Lifeline Threshold Level
Cebu (w/o the Cities of Cebu, Lapu-Lapu and Mandaue)	25,827	113.0	0-20
Sulu	29,150	110.0	0-15
Lanao del Sur	29,224	109.1	0-50
Leyte (w/o the City of Tacloban)	23,564	104.2	0-18
Negros Occidental (w/o the City of Bacolod)	23,676	103.5	0-25
Camarines Sur	24,271	88.3	0-20
Zamboanga del Norte	28,523	87.2	0-15
Maguindanao	25,368	84.6	0-35
North Cotabato	25,020	83.1	0-25
Bukidnon	25,624	73.4	0-25
Iloilo (w/o the City of Iloilo)	26,069	66.7	0-25
Pangasinan	27,828	66.2	0-20
Negros Oriental	25,113	63.1	0-20

Region/Province	Annual Per Capita Poverty Threshold (in PhP)	Magnitude of Poor Families	Lifeline Threshold Level
Zamboanga del Sur (w/o the City of Zamboanga)	23,761	60.8	0-18
Batangas	33,068	58.4	0-35
Isabela	25,460	51.9	0-15
Masbate	22,911	51.1	0-25
Agusan del Sur	24,655	50.5	0-25
Sarangani	23,282	48.3	0-25
Eastern Samar	29,070	48.0	0-15

Source: 2018 PSA Family Income and Expenditure Survey

Meanwhile, Table 13 provides the information on the average number of poor families per Region and the average Annual Per Capita Poverty Threshold. As of 2018, the average income per poor household per year is PhP25,965.

The disparity in the distribution of lifeline end-users is apparent as areas with lower magnitudes of poor families have the highest number of lifeline electricity end-users such as NCR, Region III and Region 10. On the other hand, those regions with higher magnitudes of poor families have less lifeline customers, particularly ARMM.

Table 13. Updated Annual Per Capita Poverty Threshold, Poverty Incidence and Magnitude of Poor Families with Measures of Precision, by Region, Province and Highly Urbanized Cities: 2018

Region/ Province	Annual Per Capita Poverty Threshold/a (in PhP)	Magnitude of Poor Families/b ('000)	Range of Lifeline Rate Threshold Level*/cl (kWh)		No. of Lifeline Rate Electricity End-Users*/d
			Low	High	
PHILIPPINES	25,813	3,004.6	0-8	0-100	4,760,489
NCR	28,682	47.6	0-100	0-100	2,653,250
CAR	24,907	36.3	0-13	0-45	99,483
Region I	27,055	85.2	0-20	0-70	98,938
Region II	25,099	106.3	0-15	0-20	53,783
Region III	26,954	143.4	0-20	0-100	159,769
Region IV-A	27,928	190.4	0-20	0-100	142,953
MIMAROPA	23,315	77.4	0-10	0-35	40,370
Region V	24,461	256.3	0-15	0-40	136,349
Region VI	24,494	218.3	0-20	0-80	292,974
Region VII	25,745	246.2	0-12	0-100	317,661
Region VIII	24,987	253.3	0-10	0-70	104,391
Region IX	25,650	213.0	0-15	0-70	147,555
Region X	24,835	194.2	0-15	0-100	205,947
Region XI	25,953	178.5	0-20	0-100	174,365
Region XII	25,023	252.8	0-25	0-80	97,264
CARAGA	25,375	149.4	0-15	0-40	34,430
ARMM	27,715	356.2	0-8	0-50	1,007

Notes:

a/ updated; The 2018 estimates were updated following the availability of the final 2018 Family Income and Expenditure Survey (FIES), which now includes the new urban-rural classification based on the results of the 2015 Census of Population (POPCEN 2015), in addition to other changes that were made.

b/FIES as of 2018

c/ lifeline threshold level differ for each distribution utility. Reflected only the smallest and the largest amount of consumption subsidized.

d/ average lifeline consumption as submitted by the ERC

\* No. of Lifeline Rate data is based on the May 2020 submissions of the DUs thru the ERC.

As of May 2020, a total of PhP402,687,524, were collected from non-marginalized customers as lifeline rate subsidy to marginalized end-users. Of the said amount, PhP308,853,863 was provided to lifeline consumers in the MERALCO franchise area while only PhP47,287,921.62 was provided in the ECs franchise areas and PhP46,545,739 from other private DUs.

Private DUs despite being fewer than ECs provide a bigger amount of subsidy than their EC counterparts considering that they mostly operate in highly urbanized areas such as Metro Manila, Cebu, Davao and Cagayan De Oro where the bulk of electricity is consumed.

Table 14. Summary of Lifeline Subsidy as of May 2020

Region	Sum of Total Number of Lifeline Customers	Sum of Lifeline Customers' kWh Consumption	Sum of Total Number of Non-Lifeline Customers	Sum of Non-Lifeline Customers' kWh Consumption	Sum of Total Discounts to Lifeline Customers	Sum of Total Amount of Subsidy by Non-Lifeline Customers
<b>EC</b>	<b>1,615,711.00</b>	<b>22,263,320.82</b>	<b>4,669,263.00</b>	<b>924,990,484.63</b>	<b>45,125,166.77</b>	<b>47,287,921.62</b>
ARMM	1,007	17,397	16,897	3,234,043	45,159	4,528
CAR	99,483	1,179,031	159,187	34,559,994	1,980,470	2,009,008
CARAGA	34,430	263,875	166,670	30,147,891	717,509	642,267
I	50,338	463,795	290,423	43,210,267	1,224,275	720,098
II	53,783	723,176	152,482	16,466,594	1,382,533	1,167,482
III	130,331	2,144,323	593,401	151,323,548	3,528,741	3,388,207
IV-A	138,813	3,029,110	361,011	127,862,381	5,269,130	5,856,147
IX	147,555	2,431,136	369,609	95,724,864	3,383,178	7,732,006
V	136,349	1,464,770	590,406	42,834,170	3,003,066	3,028,730
VI	292,974	5,234,974	591,227	153,834,701	9,857,430	9,867,828
VII	105,261	895,942	370,371	61,140,637	1,791,922	2,302,517
VIII	104,391	721,436	256,816	31,466,285	1,135,033	1,146,915
X	142,626	1,429,624	304,377	49,257,630	5,065,146	3,983,533
XI	51,743	660,215	114,279	28,145,768	2,323,127	2,600,669
XII	86,257	1,186,782	192,842	35,755,189	3,534,938	1,954,465
IV-B	40,370	417,737	139,265	20,026,522	883,509	883,523
<b>PDU</b>	<b>3,144,779</b>	<b>150,019,890</b>	<b>5,269,527</b>	<b>3,418,487,242</b>	<b>372,959,186</b>	<b>355,399,602</b>
I	48,600	1,371,462	125,178	45,591,366	2,981,116	3,337,898
III	29,438	667,301	105,181	60,158,669	2,549,662	2,752,643
IV-A	4,140	104,792	10,583	2,972,485	114,458	-
VI						
VII	212,400	8,980,731	340,955	243,088,636	20,708,186	20,825,335
X	63,321	3,276,228	90,652	100,583,023	7,662,685	7,322,444
XI	122,622	7,104,701	302,081	170,448,256	11,286,259	11,286,259
XII	11,008	495,899	33,068	13,177,570	1,017,997	1,021,159
NCR	2,653,250	128,018,776	4,261,829	2,782,467,238	326,638,823	308,853,863
<b>Grand Total</b>	<b>4,760,490</b>	<b>172,283,211</b>	<b>9,938,790</b>	<b>4,343,477,727</b>	<b>418,084,352</b>	<b>402,687,524</b>

Source: ERC

As of May 2020, the average amount of subsidized consumption in the MERALCO franchise area averaged 48.25 kwh which is way above the minimum subsidized consumption of 20kwh. For other private DUs, the average subsidized consumption is at 44 kwh while about 14 kwh are in the ECs. The average subsidized consumption during the month was at 36 kwh per lifeline customer. The amount of subsidy added to non-lifeline customers per kwh amounted to 12 centavos/kwh in the MERALCO franchise area, 5 centavos/kWh in the ECs franchise areas, for other DUs, at 7 centavos/kwh.

The said subsidy translated to an average discount to lifeline customers of about PhP2.55/kwh in the MERALCO area, P2.03/kwh in the ECs franchise areas, while PhP2.11/kwh in the franchise areas of other private DUs. This is equal to a nationwide average of PhP2.43/kwh. The said discount cuts across all the lifeline threshold levels of all DUs.

*Table 15. Average Monthly Subsidy and Benefits to Lifeline End-Users*

<b>Particulars</b>	<b>MERALCO</b>	<b>Electric Cooperatives</b>	<b>Other PDUs</b>	<b>Grand Total</b>
Average Number of Lifeline Customers per Month	2,653,250	1,615,711	491,529	4,760,490
Average Number of Non-Lifeline Customers per Month	4,261,829	4,669,263	1,007,698	9,938,790
Average Total Monthly Consumption of Lifeline Customers (kWh)	128,018,776	22,263,321	22,001,114	172,283,211
Average Monthly Consumption of Non-Lifeline Customers (kWh)	2,782,467,238	924,990,485	636,020,005	4,343,477,727
Average Total Monthly Subsidy to Lifeline Customers (P/Mo.)	308,853,863	47,287,922	46,545,739	402,687,524
Average Monthly Amount of Subsidy Provided by Non-Lifeline Customers (in PhP)	326,638,823	45,125,167	46,320,363	418,084,352
<b>Average Monthly Consumption per Lifeline Customer (kWh)</b>	<b>48.25</b>	<b>13.78</b>	<b>44.76</b>	<b>36.19</b>
<b>Average Amount of Subsidy Provided to Lifeline Customers, in PhP/kWh</b>	<b>2.55</b>	<b>2.03</b>	<b>2.11</b>	<b>2.43</b>
<b>Average Amount of Subsidy Provided by Non-Lifeline Customers, in PhP/kWh</b>	<b>0.12</b>	<b>0.05</b>	<b>0.07</b>	<b>0.10</b>

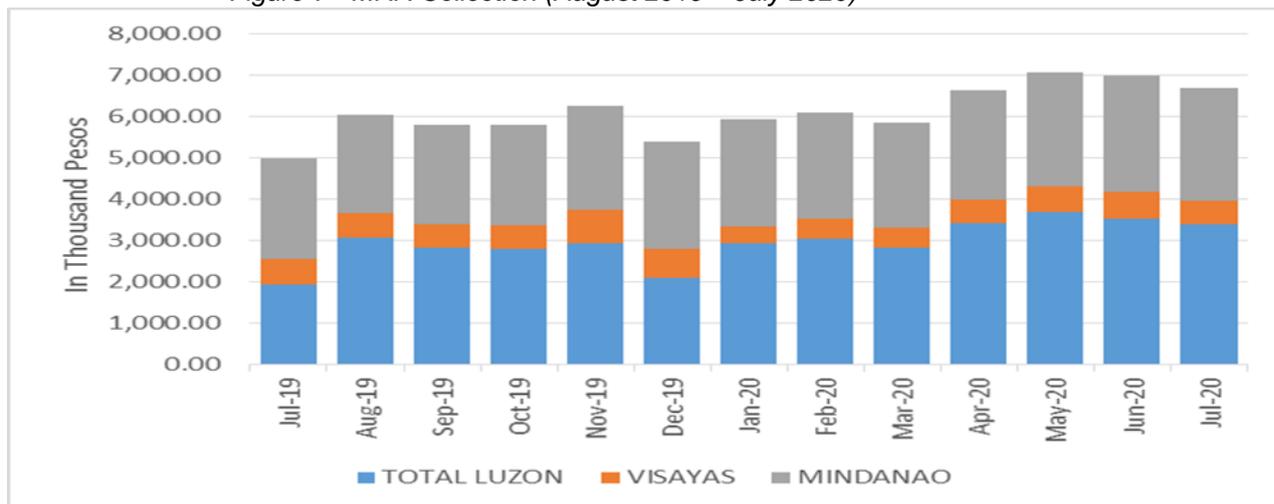
Source: ERC

## **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, mandated rate reduction for Luzon, Visayas and Mindanao including SPUG areas is considered in the report.

For the period April-July 2020, NPC reported an average of 8% increase in the amount of discounts extended pursuant to the Mandated Rate Reduction (MRR). This can be attributed to the increased consumption of residential customers during the imposition of community quarantine nationwide.

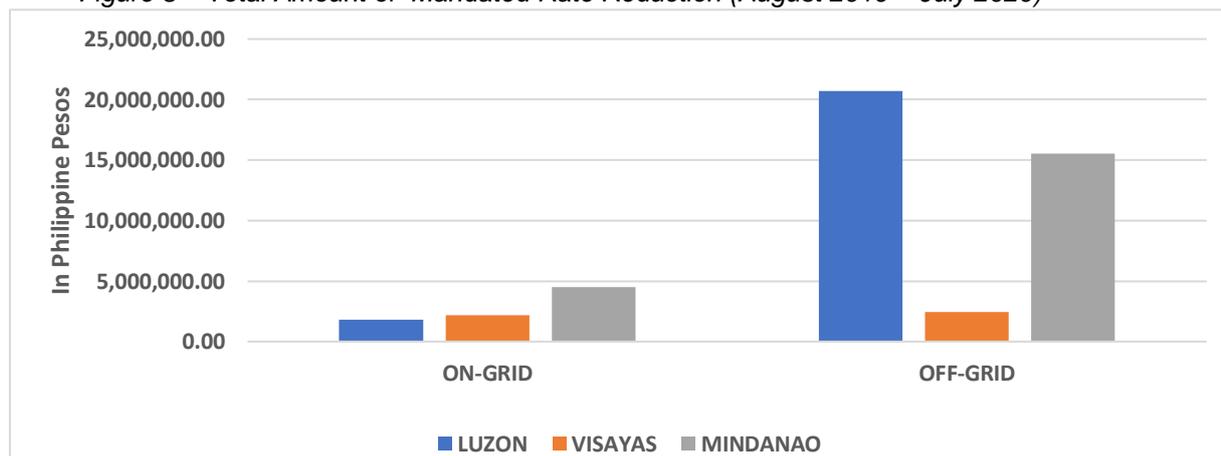
Figure 7 - MRR Collection (August 2019 – July 2020)



Source: NPC

Majority of the rate reduction were applied in the off-grid areas and the largest was recorded in Region IV-B with Marinduque taking the biggest amount of reduction of about PhP10.8 Million from August 2019 to July 2020. In the Visayas, Camotes Island got a fair share of reduction with PhPPHP2.0 Million while Basilan in Mindanao took the highest share of rate reduction with PhP5.8 Million. For On-Grid DUS, Aurora Electric Cooperative (AURELCO) got PhP1.2 Million, Northern Samar Electric Cooperative in the Visayas got PhP641Thousand. In Mindanao, Davao Del Norte Electric Cooperative (DANECO) got the biggest reduction of PhP221Thousand. The MRR is extended only to residential customers of DUs which has a supply contract with PSALM.

Figure 8 – Total Amount of Mandated Rate Reduction (August 2019 – July 2020)



For the period starting August 2019 to July 2020, a total of PhP61 Million amount of MRR has been granted to consumers in Luzon, Visayas and Mindanao areas. From the beginning of implementation of the MRR, a total of PhP31.6 Billion has been given to electricity consumers nationwide until July 2020.

Table 16. NPC Total Amount Incurred Due to Mandatory Rate Reduction

Billing Month	TOTAL LUZON	VISAYAS	MINDANAO	TOTAL
2001-June 2019	3,458,987,375.66	2,462,937,348.15	5,579,719,909.90	31,498,647,971.34
Jul-19	1,935,325.81		2,454,950.33	4,390,276.14
Aug-19	3,061,405.77	589,519.12	2,385,503.31	6,036,428.20
Sep-19	2,817,510.58	571,118.25	2,412,424.80	5,801,053.63

<b>Billing Month</b>	<b>TOTAL LUZON</b>	<b>VISAYAS</b>	<b>MINDANAO</b>	<b>TOTAL</b>
Oct-19	2,809,171.89	562,517.08	2,430,996.05	5,802,685.02
Nov-19	2,920,238.66	829,791.16	2,521,484.06	6,271,513.88
Dec-19	2,107,022.68	701,489.12	2,576,566.59	5,385,078.39
Jan-20	2,941,005.32	398,185.99	2,599,232.61	5,938,423.92
Feb-20	3,048,343.79	472,958.76	2,588,058.23	6,109,360.78
Mar-20	2,813,156.00	502,510.24	2,525,969.56	5,841,635.80
Apr-20	3,433,780.90	558,445.60	2,640,828.06	6,633,054.56
May-20	3,701,995.55	605,201.38	2,774,469.12	7,081,666.05
Jun-20	3,527,103.44	653,215.60	2,806,772.16	6,987,091.20
Jul-20	3,385,213.38	589,463.96	2,723,942.34	6,698,619.68
<b>TOTAL</b>	<b>3,497,488,649.43</b>	<b>2,469,971,764.41</b>	<b>5,613,161,107.12</b>	<b>31,577,624,858.59</b>

Source: NPC

## V. COMPETITION

This section provides an update on key areas of competition covering the period November 2019 to April 2020 on the operation of the Wholesale Electricity Spot Market (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. WESM Operational Highlights

As of 25 September 2020, the total registered participants in the integrated WESM (Luzon and Visayas) is two hundred seventy-four (274), consisting of one hundred and thirty-five (135) generation companies and one hundred thirty-nine (139) customers.

During this period, Bataan 2020, Inc., a generation company in Luzon registered in the market as a direct member, while two (2) customers ceased their operations which include the National Power Corporation, an indirect member and First Gen Energy Solutions, with a wholesale aggregator category.

For the month of August 2020 one (1) generation company, and two Directly Connected Customers (DCC) from Luzon also ceased their WESM registration. These are: CW Marketing and Development Corporation, Purity Ice Plant & Cold Storage and First Philippine Industrial Corporation

Early on, there are two (2) new participants that entered the market in the months of June and July 2020, namely: Philippine Power and Development Company (PPDC), a generation company and Lima Enerzone Corporation (LEZ) a distribution utility, which are both from Luzon.

For June 2020, there are also two (2) DCCs which were delisted due to change in category from DCC to Directly Connected Contestable Customer (DCCU). They are the International Rice Research Institute and San Miguel Yamamura Packaging Corporation.

The breakdown of the Generation Companies and Customer Trading Participants is shown in the table below.

Table 17. Registration Update as of 25 September 2020 (Luzon and Visayas)

CATEGORY	REGISTERED						
	TOT AL	DIRECT			INDIRECT		
		LUZ	VIS	LUZ/VIS <sup>2</sup>	LUZ	VIS	LUZ/VIS
<b>Generation Companies</b>	<b>135</b>	86	45	2	1	0	0
<b>Customers</b>							
Private distribution utilities & Local government utilities	19	9	5	0	5	0	0
Electric cooperatives	71	29	28	0	14	0	0
Directly Connected Customers	49	7	6	1	27	7	1
Wholesale aggregators	0	0	0	0	0	0	0
<b>Total Customer Trading Participants</b>	<b>139</b>	45	39	3	46	7	1
<b>TOTAL PARTICIPANTS</b>	<b>274</b>	<b>131</b>	<b>84</b>	<b>3</b>	<b>47</b>	<b>7</b>	<b>1</b>

Source: PEMC

<sup>2</sup> The Luz/Vis represents generation company which facilities exist in both Luzon and Visayas (PSALM and EDC)

## **Capacity Profile**

The WESM registered capacity for the month of September 2020 is recorded at 20,207.47 MW, an increase of 15.5 MW compared from a total of 20,191.97 MW registered in April 2020. Of the said total capacity, only about 64% or an average of 12,973 MW were offered in the market.

During the report period from May to September 2020, several changes in the registered capacity of power plants in the WESM were recorded as follows:

1. Increase in capacities:
  - a. Bauang DPP from 200 MW to 210 MW;
  - b. Irisan 1 HEP from 3.8 MW to 3.9 MW;
  - c. Calumangan DPP units 3 and 5 from 4.2 MW to 4.3 MW and 6.4 MW to 6.6 MW, respectively;
  - d. Makban GPP units A and B from 126 MW to 126.4 MW each;
  - e. Tiwi GPP unit A from 118 MW to 120 MW;
  - f. Calumangan DPP units 1 and 2 from 4.2 MW to 4.3 MW each; and
  - g. Sabangan HEP from 14.3 MW to 15MW.
2. Decrease in capacities:
  - a. Ecopark Energy Solar plant from 4.4 MW to 4 MW;
  - b. FFHC biomass from 13 MW to 9 MW;
  - c. SCBI biomass from 8.3 MW to 7.4 MW;
  - d. PWEI Nabas wind from 36 MW to 21 MW;
  - e. San Jose I Power Corporation biomass plant from 12 MW to 10.8 MW;
  - f. Therma DPP units 1, 3, 4, 5, and 6 from 7.4 MW to 6.8 MW each; and
  - g. Therma DPP unit 2 from 7.4 MW to 6.7 MW.
3. New entries:
  - a. Philippine Power and Development Corporation's 3.1 MW hydro plants in Luzon; and
  - b. Bataan 2020, Inc.'s 25-MW coal plant.
4. Ceased registration:
  - a. Home Depot Solar plant 1.5-MW.

## **Market Outcome**

During the report period from May to September 2020, the average effective supply and supply margin in the market was recorded at 13,251 MW and 2,326 MW respectively. Lowest supply margin was recorded in September 2020 which was attributed to the notable rise in outages and capacities not offered this month and increased system demand due to improved economic activities.

Average market price is at PhP2,621/MWh with the lowest rate of PhP2,040/MWh in May 2020 and highest rate of PhP 3,657/MWh in September 2020.

For the May 2020 billing month, a resulting drop in demand was seen on 15 May as several 69 kV and 230 kV transmission lines in Luzon and Visayas went on outage due to the passing of the Typhoon Ambo. Demand slowly went back to normal after a few days as the transmission lines were restored.

On 16 May 2020, the Modified Enhanced Community Quarantine (MECQ) was imposed in high-risk parts of Luzon, including Metro Manila, which was previously under ECQ. Meanwhile, the majority of the areas in the country transitioned to the General Community Quarantine (GCQ). In areas under both quarantine categories, protocols are slightly relaxed which led to partial

resumption of operations of some industries but to certain extent. This caused electricity demand plus a reserve schedule to gradually regain normalcy and to increase in level. With this, electricity consumption grew by 11.2% from an average of 9,259 MW in April 2020 to 10,299 MW in May 2020 as higher heat indices were also noted towards the end of the dry season.

Tightness between the supply and demand was observed to persist starting June 1, which eventually recovered, as outages from large capacity generating plants were evident. Additionally, a yellow alert notice was issued by the System Operator (SO) in the Luzon grid due to insufficient operating reserve as supply was low alongside the increasing demand after the easing of the community quarantine. As a result, hourly supply margin reached as low as 114 MW on 04 June 14H.

In general, for the June 2020 billing month, the average effective supply increased by 5.2% from 12,811 MW in May 2020 to 13,475 MW level. This was attributed to the notable decrease in outages this month which occurred in the second week of June. The electricity demand plus reserve schedule continued to increase in level since the country's transition to GCQ. Electricity consumption grew by 9.3% from an average of 10,299 MW in May 2020 to 11,254 MW. Contrary to the pattern in the previous months where demand was seen to peak during evening, the pattern is now starting to resemble its usual peaking hours in the afternoon. However, a resulting drop in demand was seen on 12 June owing to the holiday in celebration of Philippines' Independence Day.

Based on record, in July 2020, the growth rate of demand slowed down and almost retained its average level. With this, electricity consumption with a reserve schedule minimally declined by 0.5% from an average of 11,254 MW in June 2020 to 11,196 MW in July 2020. Although the demand pattern over the previous months was seen to be gradually increasing, this level was still lower than last year's level of average demand at 11,572 MW since the country is still under quarantine protocols.

For the August 2020 billing month, electricity consumption with a reserve schedule declined by 5.3% compared to July 2020. This is due to the reimposition of Modified Enhanced Community Quarantine (MECQ) from 4 to 18 August for the high-risk areas, including Metro Manila because of the alarming and increasing COVID-19 cases.

As a result of the supply-demand mix, average supply margin for the month of September 2020 was at 1,863 MW, which was noted due to high system demand recorded as the highest for the year 2020. Accordingly, electricity demand with consideration of reserve schedules increased by 6.4 percent from an average of 10,599 MW in August 2020 to 11,278 MW in September 2020. On a yearly comparison, this level was higher than last year's level of average demand at 11,154 MW despite the country being under quarantine protocols.

Due to the interaction of the supply and demand, the resulting market prices saw an 81.3 percent surge to an average of PhP3,657/MWh in September 2020 from August 2020's PhP2,017/MWh.

The details of the demand and supply situation and the Average Market Prices are shown in the table below.

*Table 18. Demand and Supply Situation (May to September 2020)*

Month	Demand + Reserve (MW)	Effective Supply (MW)	Supply Margin (MW)	Average Market Price (Php/MWh)
May 2020	10,299	12,811	2,512	2,040
June 2020	11,254	13,475	2,221	3,265
July 2020	11,196	13,577	2,381	2,124
August 2020	10,599	13,251	2,652	2,017
September 2020	11,278	13,141	1,863	3,657
<b>Average</b>	<b>10,925</b>	<b>13,251</b>	<b>2,326</b>	<b>2,621</b>

Source: PEMC

## **Market Transactions**

Customer Spot market transactions (spot market volume) in Luzon and Visayas for the report period were at an average of 814.28 GWh. 84% of these transactions is for Luzon while 16% is for the Visayas grid.

Spot market transactions increased enormously by 85% from 549.83 GWH in May 2020 to 1,015.52 GWH in September 2020. The generator payments in Luzon increased by 302% from PhP 776.86 Million in May 2020 to PhP 3,120 Million in September 2020, while in Visayas, the generator payments decreased by 42% from PhP655.59 Million in May to PhP931.15 Million in September 2020.

For September 2020, Customer Spot market transactions were at 1.015524 TWH which translates to 14.70% of the total energy consumed in Luzon and Visayas. The remaining 85.30% of the total volume was transacted and settled outside the market. Luzon spot market transactions were recorded at 871.187 GWH while Visayas spot market transactions were at 144.338 GWH. Luzon generator payments amounted to PhP 3.12 Billion while Visayas generator payments were recorded at PhP 931.15 Million.

Summary of Market Transactions are shown in the following table.

*Table 19. Summary of Market Transactions for May to September 2020*

Month	Spot Market Transactions for Luzon & Visayas (GWH)	Spot Market Transactions for Luzon (GWH)	Spot Market Transactions for Visayas (GWH)	Luzon Generator Payments (Million PhP)	Visayas Generator Payments (Million PhP)
May 2020	549.83	373.94	175.89	776.86	655.59
June 2020	897.83	785.37	112.46	2,416.13	965.00
July 2020	898.86	790.09	108.78	1,633.94	503.01
August 2020	709.37	595.40	113.98	1,163.40	504.87
September 2020	1,015.52	871.19	144.34	3,120.00	931.15
<b>Average</b>	<b>814.28</b>	<b>683.20</b>	<b>131.09</b>	<b>1,822.07</b>	<b>711.92</b>

Source: PEMC

## **Outage Capacity**

During the report period, an average of 12% of the total registered capacity equivalent to 2,441 MW was on outage.

The May 2020 billing month experienced the highest level of outage at 2,962 MW, of which the majority or 80% was classified as forced outages resulting from transmission lines outages in Luzon and Visayas due to the passing of the Typhoon Ambo on 15 May 2020.

In June 2020, there was a 25% decline in the level of outages from May 2020's average of about 2,962 MW to 2,222 MW this month. Significant decrease in forced outages were noted to comprise only 67%.

Outage levels almost remained the same going into July. About 11% of the total registered capacity or an average of 2,139 MW was on outage. This was a minimal 3.7% decline from May 2020's average of around 2,222 MW.

In August 2020, the majority of the outages or 66% was classified as forced outages, planned outages represented 31% and maintenance outages accounted for 1% of the total outages. Meanwhile, deactivated shutdown comprised the remaining 3% of the total outages.

Lastly in September 2020, outage levels constituted 13% of the total registered capacity or an average of 2,623 MW. This showed an 18.3% increase from August 2020's average of around 2,217 MW.

Based on the type of resource, about 53% or an average of 1,379 MW, was mainly on account of the long outage period from coal plants namely: the planned outage of Masinloc CFTPP unit 1 (315 MW); and forced outages of SLPGC CFTPP unit 1 (150 MW), SLPGC CFTPP unit 2 (150 MW), Sual CFTPP unit 1 (647 MW) SBPL CFTPP (455 MW), Pagbilao CFTPP unit 2 (382 MW), Mariveles CFTPP unit 2 (316 MW), and Sual CFTPP unit 2 (647 MW). Meanwhile, natural gas plants recorded an average of 497 MW or 19% of the total outages coming from 100% availability or no outage in August 2020. Majority of the outage came from the unavailability of the San Gabriel NGPP (420 MW), starting 05 September, due to an electrical fault in the generator based on the initial findings. Geothermal plants also recorded a 25% increase in level of outage from August 2020's average of 282 MW to September 2020's 352 MW. Additionally, hydro plants posted a significant drop in average outage capacity this month from 106 MW in August 2020 to 8 MW in September 2020. Majority of the average outage of oil-based plants at about 387 MW in September consisted of the prolonged outage of Malaya TPP unit 1 (300 MW) due to problems in the unit generator since 03 May 2019.

Capacity Profile in the WESM for the covered period from May to September 2020 is summarized in the following table.

*Table 20. Summary of Capacity Profile for May to September 2020*

Month	Registered Capacity (MW)	Offered Capacity (MW / %)	Outage Capacity (MW / %)	Capacity Not Offered (MW / %)	Capacity of Plants on Commissioning (MW / %)	Must Run Unit Capacity (MW / %)
May 2020	20,191	13,185/ 65%	2,962/ 15%	2,700/ 13%	994/ 5%	350/ 2%
June 2020	20,178	13,738/ 68%	2,222/ 11%	2,874/ 14%	997/ 5%	350/ 2%
July 2020	20,188	13,944/ 69%	2,139/ 11%	2,804/ 14%	995/ 5%	303/ 2%
August 2020	20,182	13,465/ 67%	2,217/ 11%	3,188/ 16%	966/ 5%	350/ 2%
September 2020	20,207	12,973/ 64%	2,623/ 13%	3,289/ 16%	961/ 5%	350/ 2%
<b>Average</b>	<b>20,189</b>	<b>13,461</b> <b>67%</b>	<b>2,433</b> <b>12%</b>	<b>2,971</b> <b>15%</b>	<b>982.60</b> <b>5%</b>	<b>340.6</b> <b>2%</b>

Source: PEMC

## B. Updates on WESM Governance Activities

The DOE monitors the governance of the WESM through its representation from the different technical committees which undertake regular meetings relative to WESM 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 covered report period, the following are the activities accomplished by each WESM Governance Committees:

### 1. Market Surveillance Committee (MSC)

During the covered period, the MSC accomplished the following:

#### a. Assessment of Market Outcomes

The MSC assessed the results of the WESM operations for six (6) billing months or for the period 26 February to 25 August 2020, as reported in the Monthly Market Assessment Report of the MAG (MMAR-2020-03 to 08).

The details of submission of these reports are contained in the following table:

*Table 21. Summary of MMAR Submissions, May to August 2020*

Billing Month	MMAR Number	PEM Board Submission Date	DOE/ERC Submission Date	Publication Date
March 2020	2020-03	06 May 2020	07 May 2020	07 May 2020
April 2020	2020-04	29 May 2020	02 June 2020	02 June 2020
May 2020	2020-05	30 June 2020	03 July 2020	03 July 2020
June 2020	2020-06	03 August 2020	05 August	05 August
July 2020	2020-07	04 September 2020	09 September 2020	09 September 2020
August 2020	2020-08	04 September 2020	09 September 2020	09 September 2020

Source: PEMC

The MSC delved particularly on the unusual decline in the demand and price during these billing months, driven by the prolonged implementation of the Enhanced Community Quarantine (ECQ) as a response to the threat brought about by COVID-19 beginning 15 March 2020.

The demand slightly regained normalcy in May 2020, following the increase in system demand that was observed upon implementation of the Modified Enhanced Community Quarantine (MECQ) in high-risk areas in Luzon, including Metro Manila, and the General Community Quarantine (GCQ) for the remaining areas in the country.

In August 2020, the MSC had an extensive discussion on the effects of line congestion on the WESM outcomes. It was agreed by the Committee to identify and provide prominence to these transmission lines that affect the market outcomes.

The MSC likewise reviewed the highlights of the Annual Market Assessment Report (AMAR) for 2019. The AMAR provides an assessment of results of the integrated Luzon and Visayas operations of the WESM for the period of Cool Dry Season (26 November 2018 to 25 February 2019), Hot Dry Season (26 February to 25 May 2019), and Rainy Season (26 May to 25 November 2019).

The MSC noted the observations discussed by MAG for each of the three (3) seasons. In particular, the MSC noted the record-breaking events that occurred during the rainy season as follows: In June 2019, the market recorded the highest system demand for the year at 12,030MW, as well as the highest monthly LWAP at PhP7,770/MWh. Meanwhile, the highest recorded average system effective supply was recorded in September 2019 at 13,894MW.

The imposition of the secondary price cap was also observed during the year. The same was imposed during the occurrence of sustained high prices in April and May 2019, following its last imposition in September 2014. However, it is noteworthy that the rainy season recorded more secondary price cap impositions, especially in June 2019, compared to the dry season. Overall, this constituted 3% (243 trading intervals in Luzon and 274 trading intervals in Visayas) of the total trading intervals for the 2019 billing year.

Moreover, market intervention events slightly increased this year in the Luzon region, from 0.1% (9 trading intervals) in 2018 to 1% (57 trading intervals) in 2019 while retaining its Visayas share at 0.1% (11 trading intervals) in 2019. It is noted that around 69% of the market intervention events in 2019 (47 trading intervals) was the result of the insufficiency of supply to satisfy the high level of demand that led to a number of alert warnings and the SO's implementation of manual load dropping.

After thorough deliberation, the MSC recommended some improvements in the report format of AMAR, including a suggestion to reformat some of the indices that were discussed in the Report.

- Market Assessment for the Hot-Dry Season (26 February to 25 May 2020)

The MSC deliberated upon the MAG's Market Assessment Report for the Hot-Dry Season covering 26 February to 25 May 2020 (MAG-MAR-HD-2020) in its August Regular Meeting.

The Hot-Dry season was marked by the low level of market prices, driven by the substantial reduction in demand following the implementation of quarantine measures in a bid to combat the spread of coronavirus disease. The MSC agreed that these measures resulted in disruption in economic activity and restricted operations of industries and businesses which weakened electricity demand amidst the onset of the summer months. Consequently, owing to the comfortable supply cushion during the season, prices were mostly below PhP2,000/MWh.

- b. Grid Operation and Maintenance Program (GOMP) for the 2nd Quarter of 2020

The MSC noted the presented revisions on the National Grid Corporation of the Philippines' (NGCP's) GOMP as made available in July 2020. The GOMP was compared with the Market Assessment System (MAS) data which involved information on the schedule of planned, forced and maintenance outages.

Following the presentation, the MSC agreed to have another round of discussion regarding the changes in the GOMP which shall involve the impact of the changes in the supply and demand condition of the market with respect to reserve, price and supply.

- c. Review of Consolidated Report on Interesting Pricing Events

The MSC reviewed the highlights of the MAG Consolidated Report on Interesting Pricing Events from September 2018 to December 2019. It was discussed that most of the interesting pricing events were mainly due to generating unit outages. For the March, April, September and December billing months, high demand likewise caused some of the high prices.

On the other hand, interesting pricing events that breached the lower threshold in January 2019 were mainly due to the low demand that was experienced during the New Year.

The write-up on the consolidated IPER will be reviewed by the MSC, for submission to the PEM Board, the DOE and ERC.

For the billing month of June 2020, the MSC noted that a total of three (3) intervals were found to have breached the approved seasonality threshold for the spot price indices on interesting pricing events. It was further noted that price-setters above the PhP10,000/MWh mark during the subject intervals were also found to have exhibited bid-splitting behavior.

The MSC approved the MAG's analysis on the interesting pricing events for June 2020. The MSC likewise requested MAG to further pursue the bid-splitting analysis and submit recommendation to the MSC regarding this, to include the development of the corresponding guidelines/rule/methodology on bid-splitting.

- d. Assessment of the Retail Market

The MSC assessed the performance of the retail market for the first and second quarter of 2020, as reported under the Annual Retail Market Assessment Report covering the period 26 December 2019 to 25 June 2020 (MAG-RMAR-2020-01 and 02).

As set forth in the Catalogue of Retail Market Monitoring Data and Indices, the Retail Market Assessment Report discusses the results of monitoring indices and provides indications on how the retail market performed during the period in review.

The MSC noted that a total of 2,089 qualified electricity end-users were already issued with the ERC's Certificate of Contestability. Of these, 1,455 contestable customers or about 70% have already registered in the market as of June 2020. Quarter-on-quarter, additional 35 Contestable Customers were issued with ERC's Certificate of Contestability while additional 10 Contestable Customers registered in the market.

In terms of contestability threshold, the market recorded 1,118 registrants or about 77% of the total registered contestable customers in the 1 MW and above contestability threshold. The remaining 337 registrants or about 23% were classified under 750-999 kW contestability threshold.

By the end of June 2020 billing month, about 43% of the consumption of all registrants were supplied by the MERALCO group. This was followed by the Aboitiz group, the San Miguel group and the Ayala group at about 21%, 17% and 9% share, respectively.

The MSC's Retail Market Monitoring Report for the first quarter of 2020, which adopted in full the MAG-RMAR-2020-01 was submitted to the PEM Board on 16 June 2020, while for the second quarter of 2020, or the MAG-RMAR-2020-02 was submitted to the PEM Board on 19 August 2020. The Reports were also submitted to the DOE and the ERC and were likewise published in the PEMC website.

e. MSC Study on the Retail Market

The MSC thoroughly discussed the roadmap on the MSC Study on the Retail Market with the following objectives: (a) to adopt best practices and enhancements on the procedures of the RCOA Market; (b) to promote competition in the retail market.

After discussion, the MSC directed MAG to coordinate with the Retail Electricity Supplier Association (RESA) on the creation of a Technical Working Group (TWG) to complete the Study. This is to ensure that concerns of RES are considered in the Study, as requested by RESA during the MSC-RESA Dialogue that was held earlier in the day.

The MSC also held a Dialogue with the officers and representatives of the Retail Electricity Suppliers Association (RESA) on 13 August 2020, and the ERC Contestable Market Division on 14 August 2020, to solicit inputs and comments on the MSC Study on the Retail Market. PEMC Officers and DOE representatives were also present during the MSC-RESA Dialogue.

The Dialogue was in line with the MSC's recognition that the RESA, being the Suppliers directly involved in the RCOA Market, and the ERC, as the market regulator, have valuable inputs which may lead to enhancements to better the experience in joining/participating in the market. Through the said Dialogues, the MSC likewise expressed its intention to work hand in hand with the RESA and the ERC in the conduct of the Study.

Another Dialogue with the officers and representatives of the various Contestable Customers was held on 28 August 2020 to solicit inputs and comments on the Study. PEMC Officers were also present during the MSC-CC Dialogue.

The Dialogue was in line with the MSC's recognition that the CC, being the Consumers directly involved in the RCOA Market, have valuable inputs which may lead to enhancements to better the experience in joining/participating in the market. Through the said Dialogues, the MSC likewise expressed its intention to work hand in hand with the CCs in the conduct of the Study.

In September 2020, the MSC was apprised that activities relative to the conduct of the Study, specifically on the conduct of Dialogue with the Stakeholders, have been successfully done and documented.

The MSC also took note that the paper for the said study shall be drafted for submission to the Committee.

f. Assessment of Over-riding Constraints

During the report period, the MSC analyzed the over-riding constraints imposed on generators for the five (5) billing months of April to August 2020.

The MSC noted that for all the 5 billing months, the over-riding events were on account of non-security limit events. For April to August 2020, the imposition of over-riding constraints are mainly attributable to the conduct of testing and commissioning of various generation facilities for all the trading intervals which is accounted to 95 to 99% of time. For the July to August 2020 billing month, the MSC took note that the higher number of non-security limit events was mainly due to the increase in the activities of generation facilities related to generating unit limitation and commercial and regulatory requirements.

The details of submission of these over-riding constraints are listed in the following table:

*Table 22. Summary of Over-riding Constraints, May to August 2020*

Billing Month	No. of Over-riding Events	No. of Involved Generaors (Luzon)	No. of Involved Generaors (Visayas)
April 2020	5,411	16	6
May 2020	5,173	20	5
June 2020	5,987	27	9
July 2020	6,073	21	8
August 2020	5,764	12	0

Source: PEMC

- Deliberation on the Prolonged Testing and Commissioning (T&C) of Generator-TPs in the WESM

With regard to MSC's investigation of the prolonged T&C of plants beyond the maximum two (2)-month period allowed under the ERC Resolution No. 16, Series of 2014, the MAG as directed by the MSC sent a letter to IEMOP providing an update on the status of plants on prolonged T&C. This served as a reminder on the provision under the Suspension and Deregistration in the WESM Registration Manual, to strictly impose sanctions among TPs which failed to comply with the WESM registration requirements.

Said letter was responded to by IEMOP informing the MSC that it shall proceed with the issuance of suspension notices among trading participants that are no longer eligible to remain being WESM members due to non-compliance with a membership criteria or requirements under the WESM Registration Manual.

The MSC then directed MAG to coordinate with the IEMOP to request for the regular submission of reports on the status of various Suspension Notices issued due to said non-compliance with a membership criteria requirement.

Likewise, MAG was directed to furnish the DOE Observers with the MSC list of monitored WESM generator-trading participants with non-compliances with WESM registration requirements, relative to its prolonged conduct of testing and commissioning. This is in relation to the DOE's ongoing review of the policy on testing and commissioning.

g. Proposed Rules Change on the Proposed Administered Price Determination Methodology (APDM)

The MSC continued its deliberation on the Administered Price Determination Methodology (APDM), following its series of discussion on the matter. During the MSC Regular Meeting held on 13 August, the MSC discussed the proposed rules change for submission to the Rules Change Committee (RCC).

After discussion, the MSC then approved the submission to the RCC of the proposed amendments to the following:

- WESM Rules;
- WESM Manual on APDM 6.0; and
- WESM Manual on Price Determination Methodology 2.0.

The MSC further agreed to co-author the proposed amendments together with PEMC.

h. Continuing Discussion on the MSC's Monitoring of Unusual TTA Outcomes

In May 2020, the MSC reviewed the Total Trading Amount (TTA) of a customer-trading participant (electric cooperative) for the period October 2019 to March 2020 and found that results for the covered period showed unusual TTA results. As part of its study, the MSC convened a meeting with representatives of the IEMOP for a discussion on the possible ways forward. The MSC then requested the IEMOP for the submission of a report containing the conclusions and measures undertaken by IEMOP on the matter, as well as a summary on similar cases.

In July and August 2020, the MSC continued its discussion on the unusual TTA for some resources, as monitored by the MSC and MAG. The MSC reviewed the response of IEMOP regarding the MSC's earlier request for a list of similar cases on resources which recorded the same unusual TTA results. The MSC likewise requested MAG to coordinate with IEMOP in this regard and to enhance its monitoring and reporting on nodal analysis by conducting its pre-assessment/nodal analysis on the preliminary settlement data within the WESM timetable.

i. Discussion on the ERC Decision regarding Avion NGPP

The MSC discussed the highlights of the Decision on ERC Case No. 2019-005 regarding Prime Meridian Power Corporation (PMPC) – Avion Natural Gas Power Plant. The issue, as identified in the ERC Order, is whether or not PMPC's deviation from its typical offer pattern on 16 August 2017 at 1400H is tantamount to an exercise of market power abuse, or anti-competitive or discriminatory act or behavior (ACB) in violation of Section 45 of the EPIRA.

The MSC took note of the details of the Decision, and regarded the same as an input to its ongoing study on the monitoring framework on Anti-Competitive Behavior (ACB).

j. Review of the Ongoing Study on the Reserve Market

The MSC continued its discussion on the Competitiveness Study on Reserves and have reviewed the additional data and information provided by MAG, following the MSC's instructions.

The MSC reviewed the data on the NGCP SO-Certified Reserve Plants in Luzon and Visayas, including their firm and non-firm contracted capacities; data on potential A/S providers per NGCP SO; and finally, the benchmarking results on the reserve markets in other jurisdictions.

After thorough deliberations, the MSC deferred approval of the Study, and requested the MAG for a discussion on the results of the simulation on the co-optimization of reserves, to determine the ideal reserve capacity level and mix of reserve resources that are needed in the reserve market.

k. Review of Compliance Monitoring and Assessment

Compliances of Generator-Trading Participants (TP) with the Real Time Dispatch (RTD) schedule, the Must Offer Rule (MOR) and the rule on the Nomination of Loading Level and Projected Output (NOM) for the billing months of March to July 2020 were deliberated upon by the MSC. The said compliances were contained in the Compliance Monitoring and Assessment Reports (CMAR) prepared by the Enforcement and Compliance Office (ECO) for the MSC.

Following the MSC's deliberation on the CMAR, the MSC approved the issuance of twenty three (23) requests for investigations (RFI) covering the billing months of March to July 2020 for possible non-compliance with the RTD schedule, and the MOR.

l. Review of ECO Investigation Reports

During the report period, the MSC discussed the ECO Investigation Reports which were consolidated into twenty (20) reports involving nineteen (19) generator-TPs. The MSC reviewed the same with respect to: (a) the ECO's compliance with the procedures set forth in the Market Surveillance Committee Enforcement Manual (MSCEM) for the conduct of investigation, and (b) the validity and completeness of the data and documents upon which factual findings are based, pursuant to Section 10.7 of the MSCEM Manual.

After its deliberation on the matter, the MSC then agreed to submit the result of the MSC's review and recommendation on the ECO IRs, for the PEM Board's approval.

m. Proposed Timeline/Performance Indicator on the ECO's Disposition of Case Backlogs

Following the MSC's series of discussion on the action plan regarding the disposition of pending investigation cases of ECO covering 2014-2018 cases, the MSC, during its August Meeting, reviewed the proposed timeline and performance indicators in the implementation of the said action plan, as presented by the ECO.

The MSC took note of the internal monitoring procedure of the ECO, and likewise noted that the same shall be presented monthly to the MSC beginning November 2020, to allow the MSC to monitor the ECO's progress in the disposition of case backlogs.

n. Review of ECO Recommendation on Motions for Recommendations

On 16 July 2020, the MSC thoroughly discussed the options submitted by the ECO regarding the disposition of backlog cases from year 2014 and agreed to adopt one of the options submitted.

During its Special Meeting on 23 July 2020, the MSC discussed the details of the ECO-proposed action plans on the MSC-approved option/way forward, as presented on 16 July 2020. After due deliberations, the MSC agreed with the action plan presented by ECO and recommended further improvements in the implementation of the same to ensure the timely resolution of pending cases.

o. Proposed Compliance Rating for Generators

The MSC reviewed the result of the ECO's ongoing compliance rating for generators, following the criteria/guidelines that were deliberated upon and approved by the MSC, and also looked at the ECO compliance rating online platform that could be accessed by the public through the PEMC website, which shows the rating and ranking of generators.

The MSC then requested ECO to provide the MSC with monthly updates on the result of the ECO's compliance rating.

The MSC also checked the ranking of the generator-TPs in terms of their compliance rating for the cool dry and hot dry season, based on the MSC-approved Guidelines setting the criteria in determining high compliance rating.

p. Review of the MI Event on 24 October 2019 from 0400H to 0500H

The MSC met with IEMOP representatives for a discussion on the MSC's conclusions and recommendations relative to the MO-initiated market intervention events on 24 October 2019 from 0400H to 0500H.

The MSC Review Report was then submitted for the approval of the PEM Board during its May 2020 Meeting.

q. Review of System Operator (SO) – Initiated Market Intervention (MI) Events

The MSC reviewed the System Operator (SO) – Initiated Market Intervention (MI) Events for CY 2019, until January 2020. It was noted during the discussion that the MSC has requested the NGCP-SO to regularly furnish the MSC with its MI Report during its Meeting with SO representatives in September 2019. However, it was observed that the MSC has yet to receive the MI Reports from the NGCP-SO for MI events in October, December 2019 and January 2020.

The MSC requested MAG to request the submission of the aforementioned MI Reports from the NGCP-SO, as prescribed under Chapter 6 of the WESM Rules. Further, MAG was directed to include in the MI Review Report an analysis on the SO's dispatching of plants during MI events.

r. Monitoring of the Grid Operating Program for Q1 2020

In June 2020, the MSC deliberated upon the result of the MAG's monitoring of the Grid Operating Program (GOP) Revision 1, a copy of which was provided to PEMC by the NGCP-SO on 20 April 2020.

The MSC looked at the difference between the NGCP-SO report from the outage monitoring data being maintained and updated by MAG through the Market Assessment System (MAS). After deliberation, the MSC recommended further improvements on the monitoring of MAG and its analysis on the GOP Revision 1.

s. Review of Offer Pattern Analysis

The MSC also reviewed in June 2020 the result of the MAG's Offer Pattern Analysis (OPA) during the ECQ period. The analysis made-use of the MSC-approved methodology on OPA to evaluate the change in offer behavior based on historical data.

t. Review of the Initial Proposal on Nodal Monitoring

The MSC reviewed the MAG's proposal on the conduct of nodal analysis on settlement data. This involves the monitoring and analysis of total trading amounts (TTA) for all resources, including the ex-ante quantity (EAQ), bilateral contract quantity (BCQ) and metered quantity (MQ).

During the discussion, the MSC noted the unusual MQ data with one of the generator-trading participants. The MSC then requested MAG to come-up with an analysis of the same, in coordination with the IEMOP.

u. Discussion on the Study regarding the Concerns Raised by PIPPA

The MSC deliberated upon the Study on the Concerns of the Philippine Independent Power Producers' Association's (PIPPA) on the Economic Viability of the Generation Sector. The Study, which focused on the following scenarios that were raised by the PIPPA: (a) Removal of the Must Offer Rule (MOR), (b) Setting the Minimum Stable Load (Pmin) at zero (0), and (c) Rotational Shutdown of Generators, was approved by the MSC for submission to the DOE and the ERC. The Study was likewise presented to the PEM Board for information.

2. Technical Committee (TC)

During the covered period, the TC accomplished the following:

a. Study on Embedded Generation for Mindanao

The TC approved the draft MO-SO-DU-EG Coordination Protocol. The subject Protocol will be finalized as soon as the TC secured the approval of NGCP to the PEMC Standard Release Form on the inclusion to the Coordination Protocol of the NGCP Dispatch Protocol for Embedded Generators providing Ancillary Service.

b. TC Study on Demand-Side Participation

The TC finalized the outline for the proposed discussion paper, including the draft methodology on Demand-Side Participation. The TC will conduct online discussions and invite resource speaker/s who are knowledgeable on the subject matter in the coming months.

c. DOE Study Request on the Reclassification of Impounding Hydroelectric Power Plant

In July 2020, the TC published a summarized version of their study on the reclassification of impounding HEPPs as Non-Scheduled Generating Units.

Previously on 16 June 2020, the TC presented their study on the reclassification of impounding HEPPs as non-scheduling generating units to the DOE via online video conference.

The meeting focused on the recommendations of the TC on the subject matter wherein HEPPs cannot be re-classified as Non-Scheduled Generating Units. The DOE also provided suggestions to the study that the TC may look into in their future studies.

d. Proposed framework for Battery Energy Storage System (BESS) including requirements for Variable Renewable Energy (VRE)

The TC discussed the concepts and features that may be part of their study on the proposed framework for BESS such as capacity market. As highlighted during the discussion, the

benefits from BESS being connected to VRE generation is more significant when there is a capacity market.

The study will also cover the value of a capacity market and how the market could operate in the Philippines in the context of BESS as support to VRE.

- e. RCC-TC Joint Resolution on the PEM Board Directive on the Joint Review of GRM 9.2.3.2 of the 2016 Philippine Grid Code (PGC)

On 05 May 2020, the TC together with the RCC Sub-committee conducted a meeting with NGCP and MERALCO to discuss their respective positions on the Proposed Amendments to the WESM Manual on Metering Standards and Procedures (Issues 11.0 and 12.0) regarding Current Transformer Requirements.

Based on the meeting of the RCC-TC Technical Working Group, the RCC and the TC finalized their joint resolution in compliance to the PEM Board Directive.

- f. MSC Study Request on the Appropriateness of the Price Trigger Factor (PTF) in the current Price Substitution Methodology (PSM) Manual

On 07 May 2020, the TC received the MSC response letter clarifying their study request. The TC then finalized their next steps on the MSC Study Request during the TC Regular Meeting No. 2020-05 held on 13 May 2020. The TC is expected to finish the study by 3rd Quarter of 2020.

- g. Call for Comments to the Rules Change Proposal (ORCP-WR-WM-20-12)

The TC submitted to the RCC their response to the proposed amendments to the WESM Rules and WESM Manual on Billing and Settlement Issue 5.1 on Enhancements to Prudential Requirements Procedures.

### 3. Rules Change Committee (RCC)

During the covered period, the RCC accomplished the following:

	Proposal	Description	Status
1	New proposed amendments to the WESM Manual on Billing and Settlement Issue 5.1 (version for enhanced market design)	The proposal essentially intends to establish a default or standing BCQ that shall be considered by the Market Operator in settlement in case the seller Trading Participant is unable to declare a BCQ or the buyer Trading Participant fails to confirm the BCQ declared. It was submitted by Pagbilao Energy Corporation regarding bilateral contract quantity (BCQ) declaration.	Published in the PEMC website to solicit comments from Market Participants and stakeholders. The 30-working day commenting period is until 04 September 2020.

	Proposal	Description	Status
2	Amendments to the Membership composition of the Technical Committee under the Proposed Amendments to the Guidelines Governing Constitution of the PEM Board Committees	<p>The RCC originally endorsed to the PEM Board, per RCC Resolution No. 2020-07 dated 21 May 2020, the proposed changes to the WESM Manual on Guidelines to the Constitution of PEM Committees regarding, among others, the number and composition of Technical Committee members. The RCC proposed that the TC be composed of five (5) independent members and one (1) representative each for the Generation sector, Distribution Utility sector, System Operator and Market Operator.</p> <p>The PEM Board remanded the matter to the RCC twice to further decrease the proposed number of independent members. The RCC first re-submitted to decrease the number to three (3) independent members, and finally, upon further guidance from the PEM Board, to (1) one independent member in consideration of future budgetary requirements. The RCC issued RCC Resolution No. 2020-15 dated 27 July 2020 documenting the development of the proposal.</p>	Approved by the PEM Board on 29 July 2020 and was submitted to DOE on 20 August 2020.
3	Proposed Abolition of Relevant WESM Manuals in View of the Implementation of Enhanced WESM Design and Operations	Aims to terminate relevant WESM Manuals for the implementation of Enhanced WESM Design and Operations	Adopted by the PEM Board (PEM Board Resolution No. 2020-24-06 and was subsequently submitted to the DOE on 16 June 2020.
4	Proposed Amendments to the WESM Manual on Registration, Suspension, and De-Registration Criteria and Procedures to Clarify Bilateral Contracts Accounted for In Settlements	Aims to clarify the types of bilateral contract transactions that will be accounted for in settlements in the Wholesale Electricity Spot Market (WESM).	Adopted by the PEM Board (PEM Board Resolution No. 2020-24-07) and was subsequently submitted to the DOE on 16 June 2020.
5	Proposed Amendments to the WESM Rules and WESM Manual on the Management of Net Settlement Surplus (NSS) for the Implementation of ERC Resolution No. 07 Series of 2019	Aims to to harmonize the WESM Rules and NSS Manual with the ERC Resolution No. 07 Series of 2019.	Adopted by the PEM Board (PEM Board Resolution No. 2020-24-08) and was subsequently submitted to the DOE on 16 June 2020.
6	Proposed Amendments to the WESM Manual on Load Forecasting Methodology for the	Aims to include the procedures for the preparation and updating of load distribution factors	Adopted by the PEM Board (PEM Board Resolution No. 2020-24-09) and was subsequently submitted to the DOE on 16 June 2020.

	Proposal	Description	Status
	Inclusion of the Procedures for Preparation and Updating of Nodal Load Distribution Factors		
7	Proposed Amendments to the WESM Rules and relevant WESM Manual on Management of Must-Run and Must-Stop Units regarding Settlement of Displaced Generators	Pursuant to the DOE's directive for PEMC to submit proposed amendments to the current WESM Rules and relevant Market Manual resulting from the ERC Order dated 17 April 2018 dismissing ERC Case No. 2016-159RC regarding the settlement for Displaced Generators	Adopted by the PEM Board (PEM Board Resolution No. 2020-24-10) and was subsequently submitted to the DOE on 16 June 2020.
8	Proposed Amendment to WESM and Retail Rules for Operation of Renewable Energy Market	Aims to harmonize the WESM Rules and the Retail Rules with the policies stipulated in Section 8 of the Renewable Energy Act of 2008 (RA 9513) and the Renewable Energy Market (REM) Rules promulgated under DOE Department Circular no. DC2019-12-0016 in relation to the implementation of the REM.	Adopted by the PEM Board (PEM Board Resolution No. 2020-24-12) and was subsequently submitted to the DOE on 16 June 2020.
9	Proposed Amendments to the WESM Rules and Procedures for Changes to the WESM Rules, Retail Rules and Market Manuals, Issue 3.0	Aims to enhance the rules change process and incorporate policies under the DOE Circulars issued on WESM governance	Adopted by the PEM Board (PEM Board Resolution No. 2020-24-13) and was subsequently submitted to the DOE on 16 June 2020.
10	Proposed amendments to the WESM Manual on Billing and Settlement on Enhancements to Prudential Requirements Procedures	The proposal intends to provide more accurate determination of exposure and amount of security, resulting in a more appropriate level of cost for PR compliance on the part of Trading Participants. It also proposes to provide for clearer requirements of security forms.	Published in the PEMC website to solicit comments from Market Participants and stakeholders. The 30-working day commenting period is until 30 September 2020.
11	Proposed Amendments to the WESM Manual on Administered Price Determination Methodology (APDM)	The proposal aims to incorporate market conditions (i.e., supply/demand levels and supply margins) as consideration for determining administered price.	PEMC withdrew its supposed submission of proposed amendments noting the imminent decision of the ERC on the Price Determination Methodology, which includes the APDM, for the enhanced WESM design.
12	Proposed amendments to the WESM Manual on Billing and Settlement Issue 5.1 (version for enhanced market design)	Submitted by Pagbilao Energy Corporation (PEC) regarding procedures covering instances of non-submission, non-confirmation and nullification by the Trading Participant of bilateral contract quantity (BCQ).	Deferred the endorsement of the proposal to PEM Board pending PEC's submission of additional proposed amendments and illustration on the BCQ declaration timeline related to their proposal.
13	New Proposed Amendments to the	The proposal aims to reduce the duration of the financial risks from billing	Published in the PEMC website to solicit comments

	Proposal	Description	Status
	WESM Rules and WESM Manuals on the Rationalization of Billing Adjustment Timelines by IEMOP.	adjustments to the WESM trading participants by providing shorter and clearer timelines in reporting and correcting errors or discrepancies in settlement.	from Market Participants and stakeholders. The 30-working day commenting period is until 02 November 2020.

Also during the period, the RCC submitted its Semestral Report to the PEM Board covering its completed and on-going activities from January to June 2020. The Report was published on the PEMC website for public access.

Earlier on, the RCC conducted a Coordination Meeting in May 2020 with the Technical Committee (TC), with representatives from MERALCO and NGCP in attendance. The purpose of the meeting was to clarify the Interpretation of Philippine Grid Code (PGC) 2016 GRM 9.2.3.2, which provides the accuracy class of load metering service and current transformers, as instructed by the PEM Board.

#### 4. Dispute Resolution Administrator (DRA)

Atty. Jesusito G. Morillos is the Dispute Resolution Administrator (DRA) who is tasked to administer and ensure the effective implementation and operation of the WESM dispute resolution process, as well as facilitate in the resolution of disputes within the objectives established under the WESM Rules.

##### a. WESM Dispute Resolution Training Materials

The DRA has submitted training materials for inclusion in the PEMC Training Program and Plan. This is in line with the DRA's goal to contribute to the awareness of the WESM Dispute Resolution Framework.

##### b. Annual Updating of the List of Dispute Management (DMP) Focal Persons

Pursuant to its duty to coordinate with WESM Members and provide them access to information, updates and other relevant matters in connection with the WESM Dispute Resolution Processes, the DRA has prepared the notices to be published and to be sent to the WESM Members for them to update the list of their DMP Focal Persons, who are the first point of contact for the notification of disputes relating to the WESM.

In response to the DRA's call for updates, the WESM Members actively participated and submitted the names and / or updated contact details of their respective of the list of the Dispute Management Protocol (DMP) Focal Persons who will be their first point of contact for the notification of disputes relating to the WESM.

The DRA is now collating the notices submitted by the WESM Members in preparation for the publication of the updated list of the DMP Focal Persons in the WESM website.

##### c. Contribution in the Submission for Approval of the Renewable Energy Market Dispute Resolution Manual Issue No. 1

The DRA rendered assistance to the Renewable Energy Market (REM) Governance Committee by reviewing the provisions and providing valuable comments to the Proposed New Manual on REM Dispute Resolution Issue 1.0 which was approved by the PEM Board last 26 August 2020 and subsequently endorsed to the Department of Energy.

d. Proposed Amendments to the WESM Dispute Resolution Manual Issue No. 6

The DRA has finalized the first part of the proposed amendments to the WESM Dispute Resolution Manual which involves Dispute Resolution Processes under the Retail Rules for submission to the Rules Change Committee (RCC) to undergo the rules change process.

The DRA is now finalizing the other proposal to incorporate into the Dispute Resolution Market Manual the protocol and/or guidelines on the conduct of video conferencing for remote hearings during arbitration and conferences which will also be submitted to the RCC for the rules change process.

e. Activities in line with the objective to implement an awareness campaign for the WESM Dispute Resolution Process among Market Participants and continuous education and training for the accredited pool of Mediators, Arbitrators and Dispute Management Protocol (DMP) Focal Persons

On 24 September 2020, the DRA participated in the WESM Compliance Officers' (WCO) Summit (Day 4) by giving a brief lecture on Dispute Resolution Updates.

The DRA has also completed its updated list of Frequently Asked Questions (FAQs) on the WESM Dispute Management Framework for publication in the new PEMC website.

The DRA has created proposals for consideration of PEMC Management in terms of the logistical and financial requirements of the possible conduct of virtual seminars as part of its awareness campaign among the Market Participants. There are continuous plans to regularly collaborate with various networks and the country's top alternative dispute resolution practitioners for the conduct of trainings and seminars for the DMP Focal Persons and the continuing education of the WESM-Accredited Mediators and Arbitrators. These activities and plans include:

- Continuous coordination with Philippine Institute of Arbitrators (PIArb) for alternative methods to showcase the processes of WESM Arbitration;
- Continuous coordination with various entities to consider the possibility of featuring WESM Arbitration in Arbitration Conventions and participation in other ADR-related programs, lectures or events organized by external strategic partners for the continuing education of WESM-accredited Mediators/Arbitrators; and
- Preparation for the conduct of seminars for the WESM Pool of Accredited WESM Mediators and Arbitrators on the topics of Negotiation and Mediation, Emergency Arbitration, Dispute Avoidance Modes and facilitation of training on the Retail Market and the Reserve Market as well as updates on changes in the WESM Dispute Resolution Process.

5. PEM Audit Committee (PAC)

During the report period, the PAC supervised the following activities:

a. Conduct of Market Readiness Assessment for the Implementation of the Enhanced WESM Design and Operations in Luzon and Visayas and WESM in Mindanao

The Market Readiness Assessment activity is conducted to assess the readiness of the Market Operator (MO), System Operator (SO), PEMC, Metering Services Providers (MSPs), and

WESM participants for the implementation of the enhanced WESM design and operations in Luzon and Visayas, and WESM in Mindanao.

The Market Readiness Steering Committee (MRSC), which is led by PEMC President and composed of members from IEMOP, NGCP, PEMC and PIPPA, conducts regular meetings with the Work Stream Champions to discuss updates on their respective action plans. It is noted that while the PAC oversees the MRA activity, the action plans and activities of the MRSC to address issues arising from the MRA are independent from the PAC.

Based on the discussion and updates during its meeting on 26 May 2020, the PEMC President, as the MRSC chairperson, recommended during the PEM Board meeting on 27 May 2020 that the Go-live date for the commercial operations of the enhanced WESM design in Luzon and Visayas, and WESM Mindanao will be tentatively set on 26 December 2020. The commercial operations are subject to full participation of all generator-TPs, ERC approval of the PDM and DOE approval of the submitted amendments to the Market Rules and Manuals. Further, it will proceed after the official report by the PEM Board that all Go-live conditions have been completed.

The PEM Board approved the MRSC recommendation and thereafter sent a letter to the DOE providing the status of the Go-live conditions including the recommendation to move the Go-live tentative date to 26 December 2020.

The status of remaining Go-live conditions as discussed during the MRSC meeting held on 29 September 2020 was relayed to the DOE on 08 October 2020.

On the other hand, the PAC participated in the Market Participants' Update conducted by IEMOP on 03 July 2020.

- b. Audit of the New Market Management System (NMMS) and Central Registration and Settlement System (CRSS)

As of July 2020, the audit of the New Market Management System (NMMS) and the Central Registration and Settlement System (CRSS) have been completed by Intelligent Energy Systems Ltd. Pty. (IES) through the supervision of the PAC.

The table below summarizes the dates of completion of the systems including modules/ tools/ enhancements audited by IES:

*Table 23. IES Dates of Completion*

Items	Date Completed
<b>1. New Market Management System (NMMS)</b>	
a. Critical modules	Completed in November 2019
b. Fixes and Enhancements	Completed in May 2020 and July 2020, respectively
c. Trading Operations and Central Management System (TOCMS) enhancements	Completed in May 2020
d. Reassessment of DAP and WAP Load Forecasts for Luzon and Visayas (26 October 2019 to 25 January 2020) <sup>3</sup>	Completed in March 2020

<sup>3</sup> In compliance to ERC order dated 10 March 2020, PAC-approved final report and software certificate was submitted on 16 March 2020

Items	Date Completed
e. Assessment of RTD, HAP, DAP and WAP Load Forecasts for Mindanao (02 Dec 2019 to 01 Mar 2020 <sup>4</sup> )	Completed in June 2020
<b>2. Central Registration and Settlement System (CRSS)</b>	
a. Remaining critical modules and enhancements	Completed in March 2020
b. Interim Metering Macro Tools on Site Specific Loss Adjustment (SSLA) calculation	Completed in January 2020

Source: PEMC

On 06 August 2020, updates on the completion of the market system's audit was provided to the ERC for their information.

On 24 September 2020, PAC issued a certificate indicating its acceptance of the final reports and software certificates for the independent software audit of the Enhancements to the NMMS and CRSS.

- c. Audit of the Enhancements to the NSS Module (5-Min System) and Enhanced NSS Tool (1-Hr System)

As of July 2020, the IES, through the supervision of the PAC, has completed the audit of the systems and tools developed and/or enhanced by the IEMOP, in compliance with the ERC Resolution No. 7 Series of 2019, entitled "A Resolution Adopting Amendments to the Rules for the Distribution of Net Settlement Surplus," (2019 NSS Rules).

The final audit report and software certificate for the enhancements to CRSS - NSS module (5-minute system) was issued by IES on 03 July 2020, while the final audit report and software certificate for the enhanced NSS/NSD tool (1-hour system) was issued by IES on 29 July 2020.

On 04 August 2020, PAC issued a certificate indicating its acceptance of the final reports and software certificates, while updates on the completion of the audit of NSS allocations based on the 2019 NSS Rules was provided to the ERC on 10 August 2020.

- d. Joint 7th Market Operations Audit and 4th Review of Metering Installations and Arrangements

Following their submission of documents on 16 July 2020, RSM Australia (External Auditor) presented the updated draft Inception Reports, particularly the changes in schedule and remote audit implications in accordance with the PAC and PEMC Management prescribed Option 1 audit timeline (Market Operations Audit fieldwork to be conducted remotely in 2020 and RMIA to commence in 2021). Here are the notable implications:

- i. According to the proposed schedule, RSM shall undertake the Market Operations Audit remotely during the second half of calendar year 2020 from August to October;
- ii. All tasks for the RMIA will be conducted on site and over four main site visits to each of the 47 MSPs during the first half of calendar year 2021, from January to April (provided international and domestic travel restrictions are lifted in both Australia and Philippines);

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<sup>4</sup> In compliance to ERC order dated 10 March 2020, PAC-approved final report and software certificate was submitted on 17 June 2020

- iii. The MO Audit remote fieldwork is initially set to commence in 03 August 2020 but was changed to within 10-14 August 2020 in consideration of the commenting period for the parties to be audited;
- iv. For Task 3 – Market Monitoring and Assessment and Compliance of Monitoring Review, Task 3.1 – Procedure/Process and Compliance Review of PEMC may proceed as proposed (September 2020) while Task 3.2 – Software Certification Audit of PEMC systems intended for enhanced WESM design is moved from Sept 2020 to Oct 2020 per the auditees’ request in consideration of the readiness of the systems (CPEMS and NMAS);
- v. All required meetings will be held through video conference via Microsoft Teams where sharing screens may be necessary; and
  - If Philippines COVID-19 restrictions are eased, RSM Reyes Tacandong will attend interviews in person (with RSM Australia on video conference) and complete testing onsite. This will be dependent and in adherence to PEMC, IEMOP, RSM Reyes Tacandong and building management security and safety protocols; and
  - If attending the MO Offices is not feasible, all testing will be conducted securely at RSM Australia and/or RSM Reyes Tacandong offices.
- vi. Remote audit implications, including COVID-19 protocols for RMIA site inspection, have been included in the Inception Report’s detailed risk assessments.

To consult the parties to be audited/reviewed, the updated draft inception reports were presented upon them and circulated for review and comments. The activities that were undertaken are as follows:

*Table 24. Audit Activity Timeline*

Activity	Date
PAC clearance on the distribution to parties to be audited of updated Inception Report for their review and comments	17 July 2020
Commenting period (for IEMOP and NGCPMSP) on the draft Inception report	20-31 July 2020 (10 working days)
Presentation of Draft Inception Report to IEMOP	24 July 2020
Presentation of Draft Inception Report to NGCPMSP	27 July 2020
General presentation to other Retail MSPS	28 July 2020

*Source: PEMC*

The revised and updated 7th MO Audit Inception Report submitted by RSM on 10 August 2020 incorporating its actions/responses in addressing IEMOP’s comments was presented to and approved by the PAC on 14 August 2020 during its regular meeting.

With the acceptance of the 7th MO Audit Inception Report dated 14 Aug 2020 and PAC’s formal notification to IEMOP along with the copy of PAC Approved Inception Report and requirements listing, the 7th MO audit has officially begun.

Regarding the 4th RMIA Inception Report, RSM provided on 25 Aug 2020 the revised RMIA4 inception report including matrix of NGCP and Meralco comments that require discussion and confirmation from the PEMC. This is under ongoing perusal by MAG in parallel with PAC while waiting for RSM’s ongoing review of the previous metering review’s metering inspection forms.

The remote conduct of the 7th Market Operations Audit is ongoing. At most, 60% of the documentary requirements has been provided by auditees for both PEMC and IEMOP scope.

- e. Re-assessment of Luzon and Visayas Load forecasts (WAP and DAP) and Assessment of Mindanao Load Forecasts (WAP, DAP, HAP, and RTD)

The PAC completed its supervision on the additional testing required by the ERC to re-assess the load forecast for Luzon and Visayas, and assessment of load forecast for Mindanao. The PAC approved the final reports and software certificates for the following audit:

- Re-assessment of DAP and WAP forecasts for Luzon and Visayas– approved in March 2020; and
- Assessment of RTD, HAP, DAP and WAP forecasts for Mindanao – approved on 08 June 2020.

- f. Market Operator Performance Monitoring Status Report for 26 September 2019 - 25 June 2020

On 18 August 2020, the PAC reviewed and endorsed the results of MO Performance Monitoring covering the period 26 September 2019 – 25 June 2020 to the PEM Board for approval.

It was approved by the PEM Board and was submitted to the DOE on 26 and 27 August 2020 respectively.

- g. Proposed Market Operator Performance Standards (MOPS) under the Enhanced WESM Operations

The PAC discussed the comments of the Office of the Chief Governance Officer (OCGO)-TWG on the proposed MOPS during its August 2020 regular meeting. Consequently, on 20 August 2020, the PAC finalized and endorsed the Proposed MOPS, including IEMOP's comments, to the PEM Board.

On 26 August 2020, the PEM Board directed the PAC to further discuss the proposed MO performance metrics with IEMOP. Coordination meetings were held on 16 and 28 September 2020 to come up with a set of performance standards agreeable among PEMC, PAC and IEMOP.

### **C. Market Development Updates**

Establishment of the Wholesale Electricity Spot Market (WESM) in Mindanao

The DOE conducts regular monitoring of the on-going activities related to the preparation for WESM Mindanao commercial operations.

As reported by the IEMOP, it has completed all the major systems fine-tuning activities to improve the new market systems' performance and reliability. IEMOP has been able to regularly provide complete daily market runs starting 18 July 2020. To add, IEMOP has just completed the 2nd month of the re-launched Trial Operations Program (TOP). Latest TOP information shows the following participation rates:

1. 63% of Scheduled (Conventional) Generators have submitted offers in the New MMS;
2. 43% of Self-Scheduled (i.e. small generators and VREs) Generators have submitted nominations in the New MMS; and
3. Only 69% of MSP Data has been processed appropriately by IEMOP. This is currently being coordinated with the Metering Services Provider (NGCP).

The re-launch of the Mindanao TOP provides a set of activities that aims to re-assess all Mindanao Stakeholders, specifically PEMC, IEMOP (as Market Operator), NGCP (as System Operator and Metering Service Provider), Generation Companies, Private Distribution Utilities, Electric Cooperatives, and Directly Connected Customers for their readiness to implement the WESM in Mindanao.

IEMOP continues to accept and evaluate registration requirements from WESM Mindanao participants. As of 25 September 2020, still the same 83 out of the expected 88 participants (94.3%) have participated in registering for WESM Mindanao. Furthermore, the following table shows the breakdown of the WESM registration status in Mindanao.

*Table 25. WESM Registration Status in Mindanao, September 2020*

Membership Type	Expected Participants	Have Not Yet Applied	Signed-Up and Pending Submission of Requirements	On-going Completion of Requirements	Pending Completion of PR (Customers Only)	Registered
Grid Connected Generator	14			2		12
Embedded Generator	29		10	15		4
Electric Cooperative	28	1	6	15	6	
Private Distribution Utility	4			1	3	
Directly Connected Customer	12	4	3	3		1
<b>Total Participants</b>	<b>87</b>	<b>5</b>	<b>19</b>	<b>36</b>	<b>9</b>	<b>17</b>

Source: PEMC

The twelve (12) grid-connected Generators registered as WESM Members are:

- Power Sector Assets and Liabilities Management Corporation (PSALM);
- GN Power Kauswagan;
- Therma South, Inc. (TSI);
- Alterpower Digos Solar, Inc. (APDIGOS);
- Hedcor Tudaya, Inc. (HTI2);
- Hedcor Bukidnon, Inc. (HEDBUK);
- Asian Greenenergy Corp. (AGECO);
- Lamsan Power Corporation (LAMSAN);
- Therma Marine, Inc (TMI);
- San Miguel Consolidated Power Corporation (SMCPC);
- Western Mindanao Power Corporation (WMPC); and
- Mapalad Power Corporation (MPC).

*Note: EEI Power Corporation (EEIPC) ceased its registration in the WESM since it recently transferred its facilities to Strategic Energy Development Inc. (SEDI), which in turn is currently completing its registration requirement.*

The four (4) embedded Generators registered as WESM Members are:

- Euro Hydro Power (Asia) Holdings, Inc. (EUROHYDRO);
- Astronergy Development Gensan Inc. (ADGI);
- Surallah Power Generation Inc. (SPGI); and
- HEDCOR Sibulan Inc. (SIBULAN).

There are five (5) participants that should register (mandatory) in the WESM but have yet to file their applications. These are namely:

- PNOC Exploration Corporation;
- BUSCO Sugar Milling Company;
- MENZI Agricultural Corporation;
- Mindanao State University; and
- Lanao del Sur Electric Cooperative, Inc.

There are no new updates on the approval of the price determination methodology (PDM) for the enhanced WESM design. The last evidentiary hearing held by the ERC was on 04-05 December 2019, which focused on the discussion of the audit results of the remaining components of the New Market Management System (NMMS), specifically the Compliance Monitoring and Load Forecasting. Although there have been discussions and clarifications among IEMOP, PEMC, and ERC on the different provisions of the PDM this month.

IEMOP has also completed the audit certification for the additional fixes and enhancements on the New MMS and the Central Registration and Settlement System (CRSS).

#### Enhanced WESM Design Operation (EWDO)

Due to the Covid-19 pandemic, some of the critical targets and schedules for the commercial operations of EWDO have been significantly affected. Mobility and manpower limitations have caused unforeseen delays particularly with the service delivery of the IEMOP's third-party partners. The participation of WESM participants in the Parallel Operations Program (POP) was also observed to be significantly lower than the participation target.

In line with the foregoing, the IEMOP recommended to defer the commercial operations from 26 June 2020 to a later date, in which the Department of Energy (DOE) also conformed with, yet the latter emphasized that the revised target should determine a realistic date.

In a letter dated 28 May 2020, the PEM Board recommended the revised commercial operations date for the EWDO to be on 26 December 2020. Nevertheless, the PEM Board stressed that the said commercial operations date will still be contingent to the active participation of all Generator-Trading Participants (TPs), the Energy Regulatory Commission's (ERC) approval of Price Determination Methodology (PDM) and the DOE's approval of necessary amendments to the WESM rules and WESM manuals.

As to date, only few of the identified go-live conditions were not met. Based on the IEMOP's letter dated 16 October 2020, it indicated that the New Market Management System (NMMS) and the Central Registration and Settlement Systems are now ready for commercial use. Critical system performance fine-tuning and testing activities have already been completed. Nonetheless, performing system regression testing, as part of the monitoring and evaluation process, will be continued until Go-Live to ensure that the deployment of the non-critical enhancements and fixes would not affect the systems.

With regards to the low level of participation by TPs in the POP, which affects the accuracy of the NMMS' market results, IEMOP continues to coordinate with the System Operator, Market Services Providers and the TPs to monitor and evaluate their participation.

Moreover, on the policy approval, out of five (5) proposed amendments related to WESM, the DOE has already approved and promulgated the proposed amendments on the WESM Market Manual on Dispatch Protocol for the Implementation of Enhancements to WESM Design and Operations (Provisions for the WESM Timetable) through Department Circular No. DC2020-10-0020. Three

(3) of which were already subjected to Public Consultations and currently under the finalization stage while the other one (1) will be subjected to further clarifications from the IEMOP.

On the other hand, the PDM which will set forth the specific details on how the dispatch schedules and locational marginal prices will be calculated during the implementation of EWDO, is currently being reviewed by the ERC and still subject to the latter's approval.

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

The implementation of Enhanced Community Quarantine (ECQ) in the Philippines from 17 March 2020 extending to April 30, 2020, affected the performance of the retail market. The consumption shifted from a constantly increasing trend to a sudden drop. With the surge from impending economic downfall due to hampered business activities and citizen's mobility brought by ECQ, the Government decided to lift the quarantine guidelines to a less strict Modified ECQ (MECQ) to some parts of the Philippines on 16 May 2020. It was later eased out to General Community Quarantine (GCQ) on 01 June 2020 until 31 July 2020. However, due to the continuous rising number of cases seen in the latter weeks of July, the Government decided to place Metro Manila and adjacent provinces back to MECQ. It was later reverted to GCQ after 18 August 2020.

There was a 7% increase in the number of prospective participants in September 2020 as compared from September 2019. However, there was only 0.5% change on the number of prospective participants in June and September 2020.

Table 26. Summary of RCOA Prospective Participant

Membership Category		Prospective						
		Jun-13	Sep-19	Jun-20	Sep-20	June 2013 vs. Sep 2020	Sep 2019 vs. Sep 2020	June 2020 vs. Sep 2020
Contestable Customers	D ≥ 1MW	892	1,444	1,448	1,449	62%	0.35%	0.07%
	750kW ≥ D > 1MW	-	579	641	646	-	12%	0.8%
	Total	892	2,023	2,089	2,095	138%	5%	0.29%
Suppliers	RES	19	30	37	43	126%	43%	14%
	LRES	13	25	25	25	92%	0%	0%
	Total	32	55	62	68	113%	24%	10%
SOLR		9	47	47	47	422%	0%	0%
RMSP		28	54	54	54	93%	0%	0%
Grand Total		961	2,123	2,252	2,264	136%	7%	0.5%

Source: ERC, PEMC

As of September 2020, the total number of RCOA prospective participants gradually improved, noting significant increase during the GCQ period. The total Contestable Customer (CCs) comprises 76% customers on 1-MW threshold while 24% is at 750 MW – 1 MW threshold. Within the observed period from June to September 2020, there were 27 registered entrants. No new participants were enlisted on the Suppliers, Supplier of Last Resort (SOLR) and Retail Metering Service Providers (RMSP).

Table 27. Summary of RCOA Registration

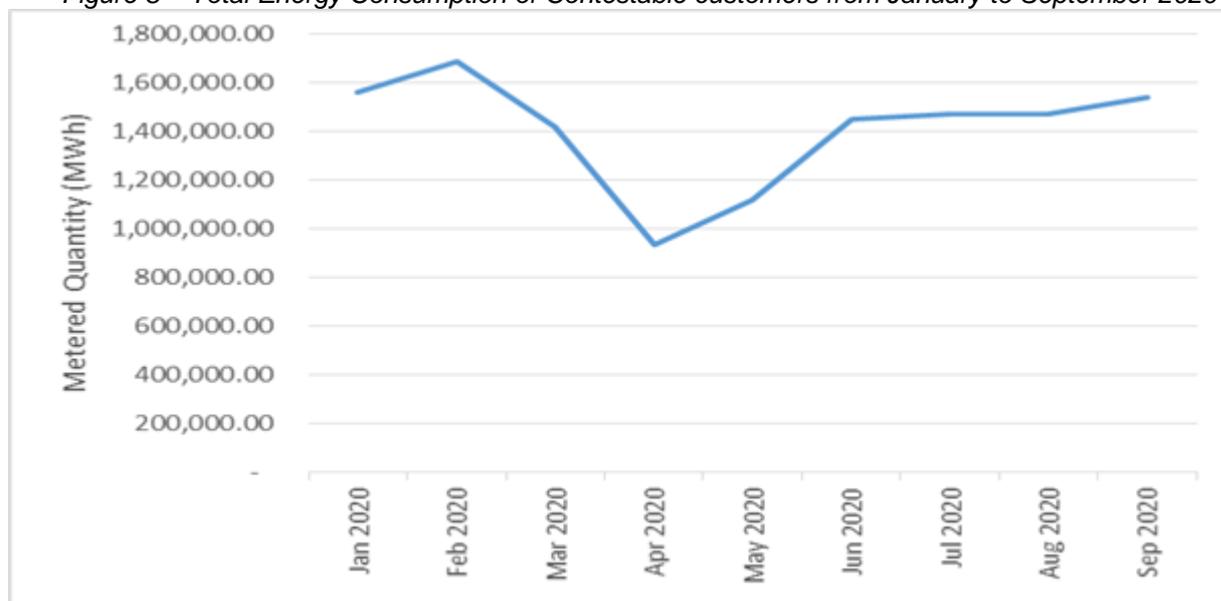
Membership Category		Registered						
		Jun-13	Aug-19	Jun-20	Aug-20	June 2013 vs. Aug 2020	Aug 2019 vs. Aug 2020	June 2020 vs. Aug 2020
Contestable Customers	D ≥ 1MW	240	1,120	1,122	1,124	368%	0.36%	0.18%
	750kW ≥ D > 1MW	-	335	341	355	-	6%	4%
	Total	240	1,455	1,463	1,479	516%	21%	1%
Suppliers	RES	15	33	33	33	120%	0%	0%
	LRES	3	14	14	14	367%	0%	0%
	Total	18	47	47	47	161%	0%	0%
SOLR		0	25	25	25	-	0%	0%
RMSP		29	54	54	54	86%	0%	0%
<b>Grand Total</b>		<b>287</b>	<b>1,581</b>	<b>1,589</b>	<b>1,605</b>	<b>456%</b>	<b>2%</b>	<b>1%</b>

Source: ERC, PEMC

Actual participation in the RCOA as reflected in the list of registered participants from the Central Registration Body (CRB), increased by 2% from 1,528 registered CCs in September 2019 to 1,611 in September 2020. As of September 2020, the total registered participants are composed of 92% Contestable Customers, 3% Suppliers, 2% SOLR and about 3% RMSP.

There was a ladder-step increase in the CC's energy consumption, measured through Metered Quantity (MWh) from April 2020 to June 2020 after the decline experienced in February (before ECQ) and March 2020 (initial implementation of ECQ). There was a seen recovery after transitioning to MECQ in May and GCQ in June from the strictest among guidelines - the full ECQ implementation in April 2020. The change in quarantine rules provided an avenue for continuation of, if not most, commercial, and industrial establishments particularly in Metro Manila. The slight increase was steadily observed between the months of July to September of 2020.

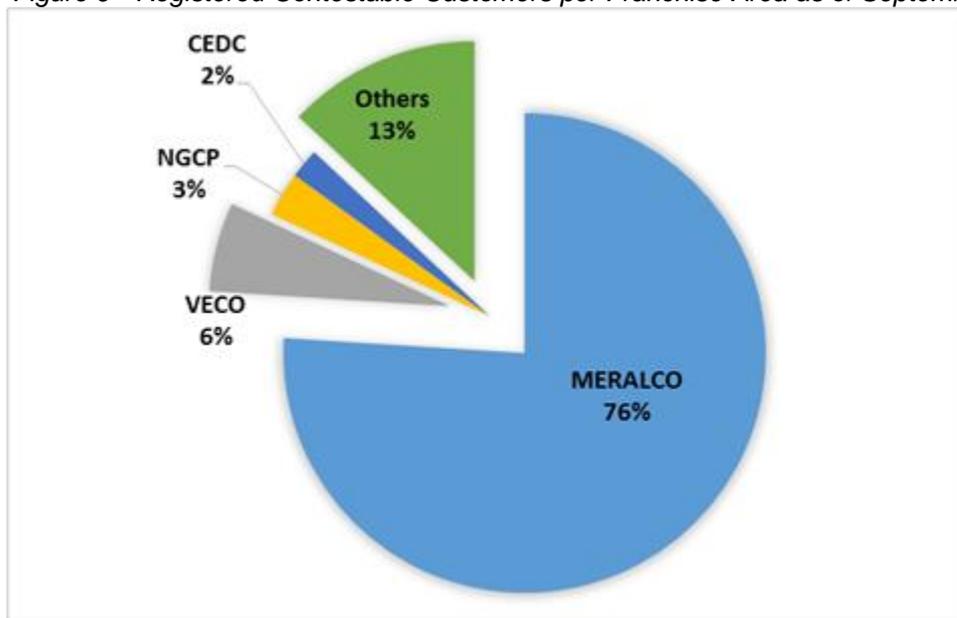
Figure 8 – Total Energy Consumption of Contestable customers from January to September 2020



Source: PEMC

Figure 9 illustrates that the majority of the CCs are situated within the franchise area of MERALCO at 76%. 6% is in the franchise area of VECO, while NGCP has accounted for the 3% from the Directly Connected Contestable Customers (DCCC). The Clark Electric Distribution Corporation (CEDC) has 2% as well, and the remaining 13% were distributed among the 46 other franchises.

Figure 9 - Registered Contestable Customers per Franchise Area as of September 2020



Source: PEMC

Of the 45 registered Retail Electricity Suppliers, 32 are currently transacting with CCs, most associated with the four biggest groups of companies having more than one RES or Local RES. These affiliated RES/LRES accounts to 71% of the total registered suppliers.

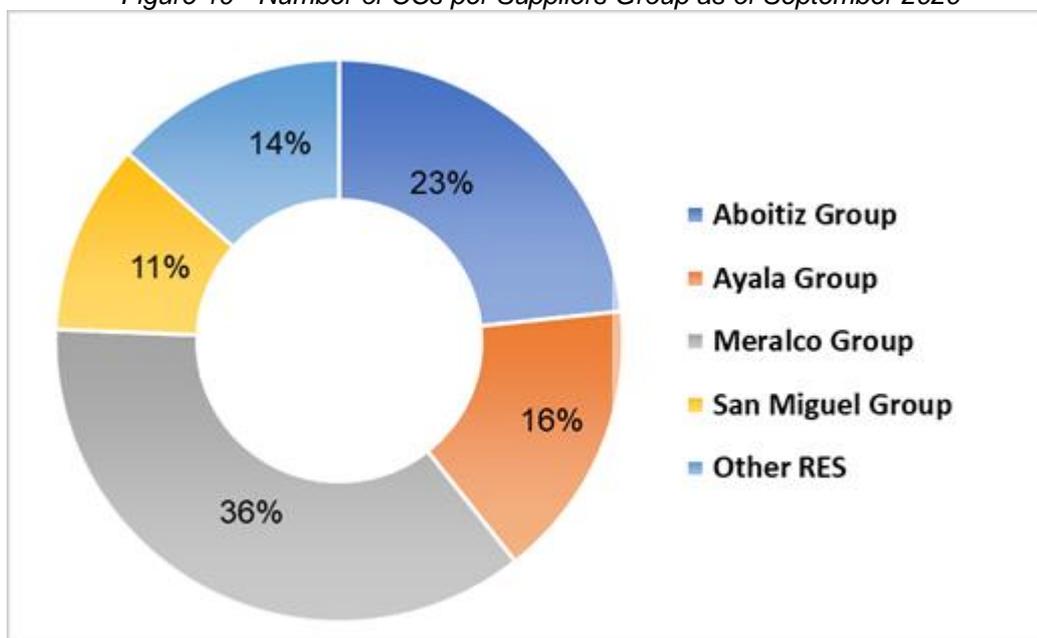
Table 28. List of Suppliers with Contestable Customers as of September 2020

Supplier Group	Number of CCs
<b>Aboitiz Group</b>	
Aboitiz Energy Solutions, Inc.	202
AdventEnergy, Inc.	59
SN Aboitiz Power – RES Inc.	37
San Fernando Light & Power	1
PRISM Energy, Inc.	41
Mazzaraty Energy Corporation	2
<b>Ayala Group</b>	
Ecozone Power Management, Inc.	42
DirectPower Management, Inc.	45
AC Energy, Inc.	94
AC Energy Phils., Corp. (formerly Phinma)	55
<b>San Miguel Group</b>	
San Miguel Electric Corp.	22
SMC Consolidated Power Corp.	109
Masinloc Power Partners Co., Ltd.	25
<b>MERALCO Group</b>	
Manila Electric Co. (MPower)	472
Vantage Energy Solution and Management, Inc.	54
Clark Electric Distribution Corporation	9
MeridianX Inc.	1
<b>Others</b>	
First Gen Energy Solutions	6
Global Energy Supply Corp.	21

GNPower Ltd. Co.	4
TEAM (Phils.) Energy Corp.	24
Manta Energy, Inc.	1
KEPCO SPC Power Corporation	6
Premier Energy Resource Corp.	12
FDC Retail Electricity Sales Corporation	17
Kratos RES Inc.	29
Bac-Man Geothermal, Inc.	55
Citicore Energy Solutions	7
Corenergy, Inc.	5
Anda Power Corporation	4
SEM-Calaca RES Corporation	8
Batangas II Electric Cooperative, Inc. – Local RES	1
Mactan Electric Company	2

MERALCO group has the most number of contracted CCs with 36% of the total share as of September 2020. Consolidated number of CCs for the Aboitiz group ranked second with 23% and followed by the Ayala Group with 16%. San Miguel Group garnered 11% while the RES/LRES without affiliation accounted for the remaining 14%.

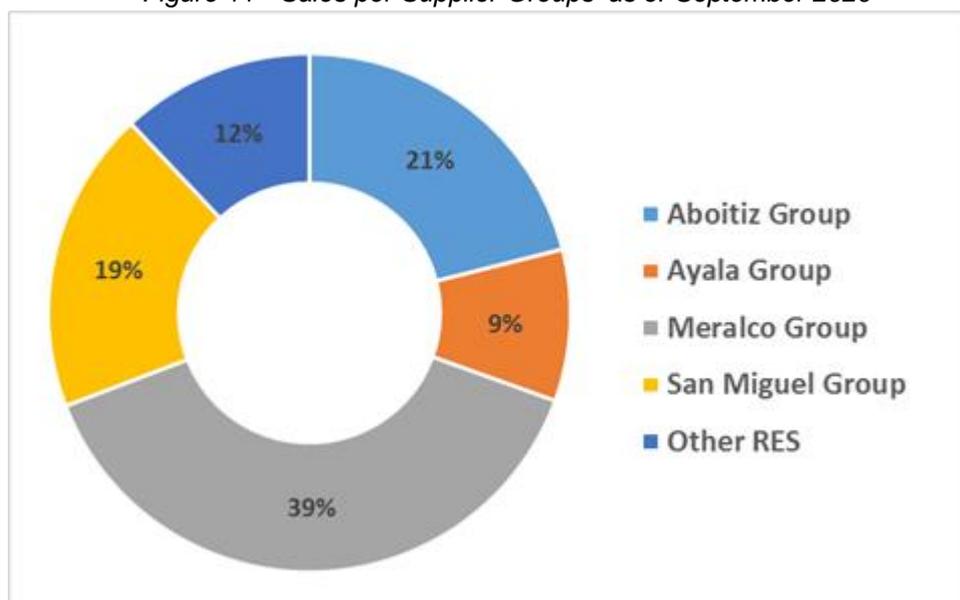
Figure 10 - Number of CCs per Suppliers Group as of September 2020



Source: ERC, PEMC

Similarly, MERALCO group has the largest share of energy sales with 39% as of September 2020. Aboitiz and San Miguel group have 21% and 19% energy shares, respectively, while Ayala group has 9% of the total energy sales from CCs. The remaining 12% of the share were from Other Suppliers.

Figure 11 - Sales per Supplier Groups' as of September 2020



Source: PEMC

The average metered quantity from June 2020 to September 2020 is 1,483 GWh of which 95% of the contracted energy was accounted through bilateral contracts and the remaining 5% was transacted through the spot market. The average monthly metered quantities during the ECQ period was recorded at 1,176 GWh which increased by 184 GWh (20%) during MECQ in May 2020 and 286 GWh (30%) during the GCQ in June and July 2020. It only increased by 1.052 GWh (0.07%) in August 2020 after placing back to MECQ. The reverting of quarantine rules to GCQ in September 2020 resulted in a 66 GWh (5%) increase in the metered quantities.

There were 81 CCs switching to other Suppliers from June 2020 to September 2020. Among these, 79 out of 81 CCs (98%) can be found in Luzon. The highest number of customers switching were recorded in the month of June 2020 with 27 switches. Interestingly, there were four instances of customer switching during the MECQ in May 2020 and 48 during GCQ in June and July 2020. Constantly, more customers switching in August and September 2020 with 33 CCs involved.

#### E. Generating Capacity Market Share and Concentration

The market share during the report period was based on the installed capacity indicated in the Annexes of the ERC Resolution No.02 Series of 2020 entitled "A Resolution Setting the Installed Generating Capacity and Market Share Limitation per Grid and National Grid for 2020" as well as the DOE list of existing power plants.

The market share percentage was calculated by identifying the major shareholder of the listed power generators in the said ERC Resolution which was also compared to the DOE list of existing power plants. Most of the reference used on ownership were from the respective websites of the power generators. No distinctions were made even if the company is not the full owner but if it is the majority shareholder, that capacity is considered already as part of its portfolio. This is to consider that the major shareholders in many cases manage the day to day operations of a company and undertake major decisions.

Relatively, following are the updates on the compliances of the generation sector to market share limitations:

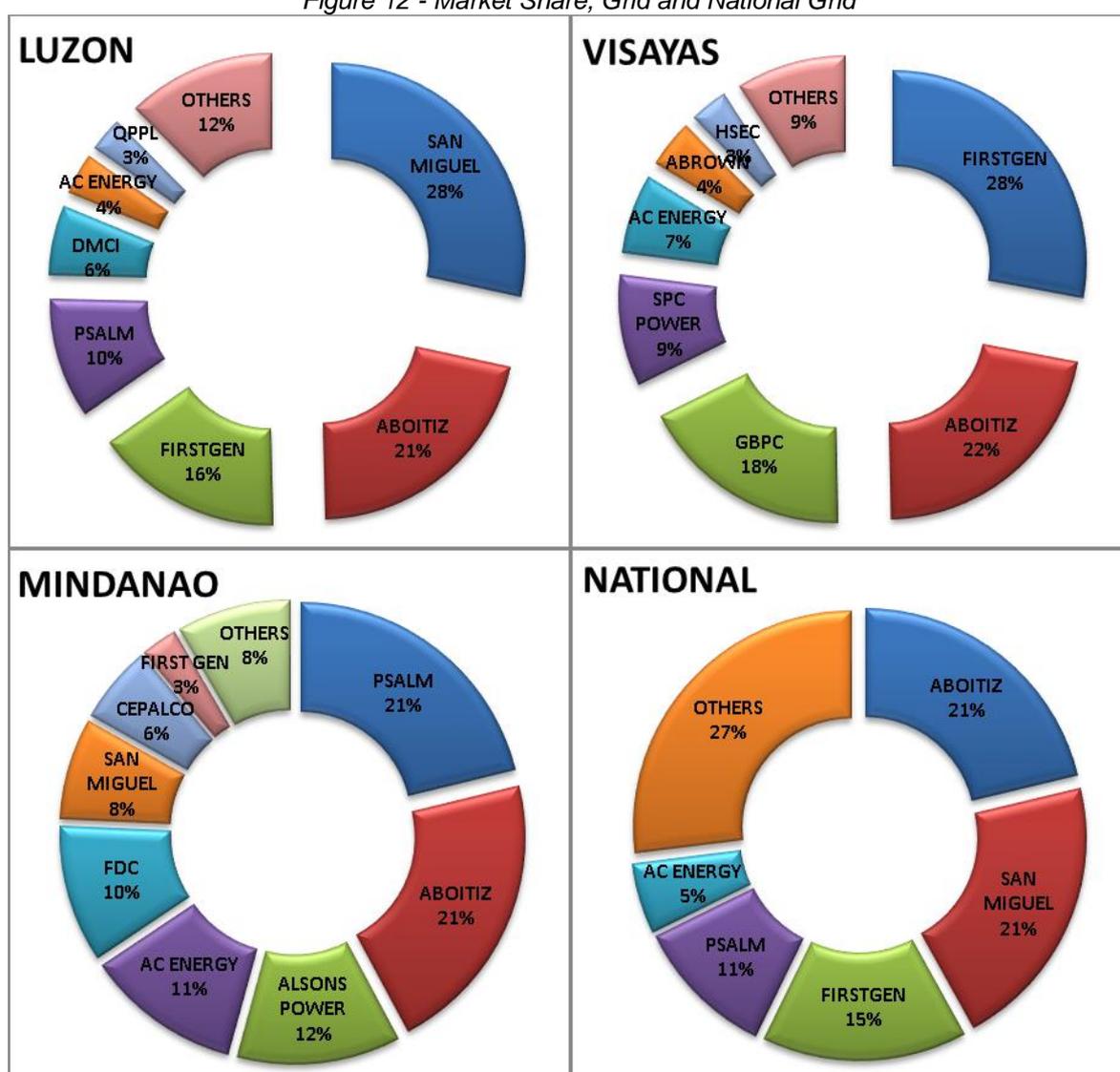
Table 29. Market Share Determination per Grid and National Grid

Grid	Installed Generating Capacity (MW)	% Market Share Limitation as per R.A. 9136	Installed Generating Capacity Limit (MW)
Luzon	16,044,000	30%	4,813,200
Visayas	3,366,558	30%	1,009,967
Mindanao	3,999,096	30%	1,199,967
National	23,409,654	25%	5,852,414

Source: ERC Resolution No. 02, Series of 2020

Below is the graphical presentation of the dominant power market players with their respective percentage market share:

Figure 12 - Market Share, Grid and National Grid



Source: ERC Resolution No. 02, Series of 2020

In Luzon, the San Miguel Power Corporation with 4,556.0 MW total installed generating capacity is on the top of the list of the power generation business which reaches 28% of the total installed capacity of 16,044.0 MW in Luzon Grid. It is followed by the Aboitiz Power Corporation with 3,401.7 MW total installed generating capacity or 21% of the Luzon market share. The other generation

company on the top of the list is the FirstGen Power Corporation with a total installed generating capacity of 2,518 MW or 16% market share. This is followed by the PSALM having an installed generating capacity of 1,615.8 MW or 10% of the market share. None of the market participants in Luzon exceeded the market share limitation of 30%.

In Visayas, the FirstGen Corporation with 941.5 MW covers 28% of the total installed generating capacity of 3,366.6MW. The Aboitiz Power follows with 22% or 730.8 MW installed generating capacity. No generating company in Visayas exceeded the market share limitation of 30%.

In Mindanao, the Government still holds the main portion of the power generation business through the IPP contracts of the PSALM and the NPC having an installed generating capacity of 847.1 MW or 21.2% share in the total installed generating capacity of 3,999.1 MW of the Mindanao Grid. The Aboitiz Power seconds on the list with 840.9 MW installed generating capacity or 21% followed by Alsons Power with 12%, AC Energy with 11%, and FDC Utilities with 10%. None of the market participants in Mindanao exceeded the market share limitation of 30%.

In the National Grid, the Aboitiz Power Corporation gains the largest market share in totality, holding 21.3% of the 23,409.7 MW national installed capacity, followed by the San Miguel Power Corporation with 20.7% and FirstGen Power Corporation with 15% while the Government thru PSALM still has 11% market share remaining. For the reporting period, no power generation entity has exceeded the installed generating capacity and market share limitation of 25% for the national Grid.

To measure the current Philippine power market concentration, the DOE uses the Herfindahl-Hirschman index (HHI) computation. HHI is the most common measure used to assess concentration from shares of industry participants. In the US, the market with an HHI of less than 1,500 is considered to be a competitive marketplace, an HHI of 1,500 to 2,500 to be a moderately concentrated marketplace, and an HHI of 2,500 or greater to be a highly concentrated marketplace.

Luzon, Visayas and Mindanao indicate a moderately concentrated market or reasonably competitive market having an HHI of 1,786, 1,828, and 1,420 respectively.

Generally, the HHI for the national grid of 1,982 reflected a moderately concentrated market which means that the energy market of the Philippines is still competitive and quite far from a monopoly.

*Table 30. HHI Computation Luzon*

<b>Luzon</b>				
<b>Ranking</b>	<b>Market Players</b>	<b>Installed Generating Capacity</b>	<b>Market Share</b>	<b>% Share (squared)</b>
1	SAN MIGUEL	4,556,000	28%	784
2	ABOTIZ	3,401,650	21%	441
3	FIRSTGEN	2,518,000	16%	256
4	PSALM	1,615,782	10%	100
5	DMCI	950,000	6%	36
6	AC ENERGY	557,200	4%	16
7	QPPL	460,000	3%	9
8	OTHERS	1,985,368	12%	144
				<b>1,786</b>

Source: ERC Resolution No. 02, Series of 2020

*Table 31. HHI Computation Visayas*

<b>Visayas HHI</b>				
<b>Ranking</b>	<b>Market Players</b>	<b>Installed Generating Capacity</b>	<b>Market Share</b>	<b>% Share (squared)</b>
1	FIRSTGEN	941,470	28%	784
2	ABOITIZ	730,840	22%	484
3	GBPC	605,700	18%	324
4	SPC POWER	315,200	9%	81
5	AC ENERGY	223,700	7%	49
6	ABROWN	135,000	4%	16

<b>Visayas HHI</b>				
<b>Ranking</b>	<b>Market Players</b>	<b>Installed Generating Capacity</b>	<b>Market Share</b>	<b>% Share (squared)</b>
7	HSEC	108,120	3%	9
8	OTHERS	306,528	9%	81
				<b>1,828</b>

Source: ERC Resolution No. 02, Series of 2020

Table 32. HHI Computation Mindanao

<b>Mindanao HHI</b>				
<b>Ranking</b>	<b>Market Players</b>	<b>Installed Generating Capacity</b>	<b>Market Share</b>	<b>% Share (squared)</b>
1	PSALM	847,100	21%	441
2	ABOITIZ	840,945	21%	441
3	ALSONS POWER	480,211	12%	144
4	AC ENERGY	454,210	11%	121
5	FDC	405,000	10%	100
6	SAN MIGUEL	300,000	8%	64
7	CEPALCO	229,519	6%	36
8	FIRSTGEN	108,400	3%	9
9	OTHERS	333,711	8%	64
				<b>1,420</b>

Source: ERC Resolution No. 02, Series of 2020

Table 33. HHI Computation National

<b>National</b>				
<b>Ranking</b>	<b>Market Players</b>	<b>Installed Generating Capacity</b>	<b>Market Share</b>	<b>% Share (squared)</b>
1	ABOITIZ	4,973,435	21%	441
2	SAN MIGUEL	4,856,000	21%	441
3	FIRSTGEN	3,567,870	15%	225
4	PSALM	2,462,882	11%	121
5	AC ENERGY	1,235,110	5%	25
6	OTHERS	6,314,357	27%	729
				<b>1,982</b>

Source: ERC Resolution No. 02, Series of 2020

## VI. POWER SUPPLY SECURITY AND RELIABILITY

### A. Peak Demand

For the first half of 2020, the country's total peak demand<sup>5</sup> was recorded at 15,281 MW, which is 300 MW or 1.9% lower than the 15,581 MW in the same period last year

For this period, the country's three main grids showed a decrease in peak demand compared last year due to the pandemic that hits the country. The Luzon grid contributed 11,103 MW or 72.7% of the total demand of the country with a decrease of 241 MW from the 2019 peak demand of 11,344 MW. Visayas demand of 2,201 or 14.4 % share of the country's total demand also slightly declined by 23 MW from the recorded 2,224 MW peak demand in 2019., The Mindanao grid contributed the remaining share of 12.9% or 1,977 MW, a 36 MW decline from its 2019 peak demand of 2,013 MW.

Based on the 2019-2040 Peak Demand forecast of the DOE, following are the forecasted peak demand figures per grid for 2020: (1) Luzon at 12,169 MW; (2) Visayas at 2,415 MW; and (3) Mindanao at 2,274 MW. These peak demand figures were anticipated to occur during the summer months of 2020 considering the recent observed trend over the past few years. However, the power sector experienced an abrupt change in electricity consumption patterns, due to the COVID-19 pandemic and the implementation of community quarantine in the country, which hampered the momentum built in the first quarter of the year.

### B. Electricity Sales And Consumption

Table 34. 2020 and 2019 Comparative Electricity Sales and Consumption of Distribution Utilities, Philippines (in GWh)

Consumption by Grid	PHILIPPINES					
	1H 2020		1H 2019		Difference	
	GWh	% Share	GWh	% Share	GWh	% Growth
Luzon	30,719	73.4%	32,587	74.1%	-1,868	-5.7%
Visayas	5,434	13.0%	5,585	12.7%	-150	-2.7%
Mindanao	5,691	13.6%	5,807	13.2%	-116	-2.0%
<b>Philippines</b>	<b>41,845</b>	<b>100.0%</b>	<b>43,979</b>	<b>100.0%</b>	<b>-2,134</b>	<b>-4.9%</b>

NOTE: Includes Off-grid sales  
Excludes Directly Connected Customers (DCC)  
Preliminary Data as of 28 October 2020

Despite the halt in several commercial and industrial operations amid the coronavirus disease 2019 (COVID-19) pandemic, the energy sector remained steadfast as the sales and consumption of Distribution Utilities only decreased by 4.9% from 43,979 GWh in the first half of 2019 to 41,845 GWh in 2020. This can be attributed to the substantial increase in consumption by the residential sector, the sector with the highest share in energy sales, since the imposition of community quarantine throughout the country, preliminary data showed.

Luzon, where the National Capital Region (NCR) is located, had the highest decline among the three main grids from 32,587 GWh in 2019 down to 30,719 GWh in 2020. A major contributing factor to the downswing in sales can be traced to when the NCR otherwise known as Metro Manila, was placed under enhanced community quarantine from 17 March 2020 to 15 May 2020.

<sup>5</sup> Total non-coincidental peak demand of Luzon, Visayas and Mindanao grids

On the other hand, the electricity sales and consumption of Distribution Utilities in the Visayas and Mindanao grids showed stability with only minimal decline in the first half of 2020. Visayas decreased to 5,434 GWh during January to June of this year, registering a 2.7% decline from 5,585 GWh of the same period last year. Meanwhile, the energy consumption in Mindanao only dropped by 116 GWh or 2.0% from 5,807 GWh in the first half of 2019 to 5,691 GWh in 2020.

### C. Supply

Table 35. 2019 Total Installed and Dependable Capacity per Technology, Philippines (in MW) as of 30 June 2020

FUEL TYPE	PHILIPPINES			
	Capacity (MW)		Percent Share (%)	
	Installed	Dependable	Installed	Dependable
<b>Coal</b>	<b>10,417</b>	<b>9,743</b>	<b>40.5</b>	<b>42.7</b>
<b>Oil Based</b>	<b>4,328</b>	<b>3,024</b>	<b>16.8</b>	<b>13.2</b>
<b>Natural Gas</b>	<b>3,453</b>	<b>3,286</b>	<b>13.4</b>	<b>14.4</b>
<b>Renewable Energy (RE)</b>	<b>7,515</b>	<b>6,787</b>	<b>29.2</b>	<b>29.7</b>
<i>Geothermal</i>	1,928	1,792	7.5	7.8
<i>Hydro</i>	3,761	3,509	14.6	15.4
<i>Biomass</i>	363	225	1.4	1.0
<i>Solar</i>	1,020	817	4.0	3.6
<i>Wind</i>	443	443	1.7	1.9
<b>TOTAL</b>	<b>25,713</b>	<b>22,841</b>	<b>100.0</b>	<b>100.0</b>
<b>BESS</b>	11	11		

NOTE: Includes Off-Grid generators

Source: DOE

Table 36. Newly Operational Power Plants for 1st half 2020

POWER PLANT			CAPACITY, MW		LOCATION	OPERATOR
Facility Name	Subtype		Installed	Dependable	Municipality/ Province	
<b>LUZON</b>			<b>91.6</b>	<b>73.3</b>		
<b>Solar</b>						
CONCEPCION 1 SOLAR	Ground Solar PVs	Mounted	20.7	16.6	Concepcion, Tarlac	Solar Philippines Tarlac Corporation
CONCEPCION 2 SOLAR	Ground Solar PVs	Mounted	70.9	56.7	Concepcion, Tarlac	Solar Philippines Tarlac Corporation
<b>VISAYAS</b>			<b>1.2</b>	<b>1.2</b>		
<b>Hydro</b>						
LOBOC HEPP 2	Run-of-River HEPP	type	1.2	1.2	Loboc, Bohol	Sta. Clara Power Corporation
<b>MINDANAO</b>			<b>0.0</b>	<b>0.0</b>		
<b>TOTAL NEW CAPACITY FOR 1H 2020 (MW)</b>			<b>92.8</b>	<b>73.3</b>		

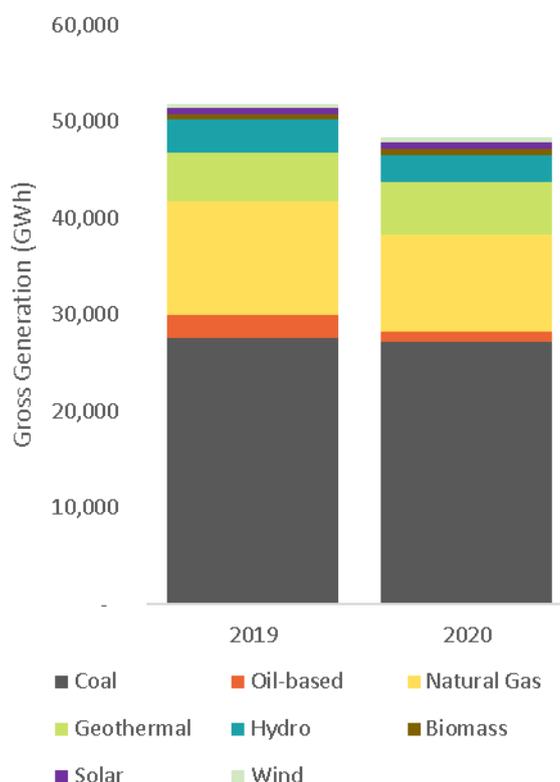
The total power supply, in terms of installed capacity, grew by 0.7% from 25,531 MW in 2019 to 25,713 MW in the first half of 2020. As shown in Table 3, a total of 92.8 MW newly installed capacities were added to the country's grid supply which include solar (91.6 MW) and hydro (1.2 MW) from the Luzon and Visayas grid, respectively. Mindanao has not developed any additional capacity for the first half of 2020.

Off-Grid generators were also updated to account the changes in capacities of some of the power plants, particularly diesel, wind, solar, and Battery Energy Storage System (BESS). As shown in Table 32, coal still dominated the installed capacity mix with a 40.5% share followed by renewable energy at 29.2%. On the other hand, various oil-based sources contributed 16.8% in the mix, while natural gas is at 13.4%.

#### D. Generation

The gross generation of the country for the first half of 2020 totaled to 48,392 GWh registering a decrease of 6.7% from the previous year. The decrease in the generation was a result of the implementation of community quarantine in the country which heavily affected the industry and commercial sectors. The Luzon grid contributed the majority of generation at 70.2%. While Visayas and Mindanao grids recorded 15.7% and 14.1% share, respectively. Coal continuously dominated the power mix in the first half of 2020 by increasing its share to 56.1%. Even with the domination of fossil fuels in the mix, renewable energy technologies retained its total generation share to 20.7%. Natural gas contributed 21.1% while oil-based plants continuously registered the least contribution in the power mix with a percent share of 2.2%

Figure 13 - 1H 2019 vs. 1H 2020 Gross Generation, GWh



#### E. Power Projects

Table 37. Committed and Indicative Capacities, Philippines, as of 31 December 2019 (in MW)

Fuel Type	Committed			Indicative		
	No. of Proponents	Capacity (MW)	% Share	No. of Proponents	Capacity (MW)	% Share
Coal	8	3,991.0	60.6	15	9,803.0	22.7
Oil-Based	3	414.6	6.3	9	1,086.3	2.5
Natural Gas	2	1,750.0	26.6	9	8,758.0	20.3
Renewable Energy (RE)	15	432.5	6.6	200	23,529.4	54.5
Geothermal	0	0.0	0.0	6	497.0	1.2
Hydro	0	0.0	0.0	76	5,289.5	12.3
Biomass	12	197.5	3.0	19	262.6	0.6
Solar	3	235.0	3.6	72	12,261.9	28.4
Wind	0	0.0	0.0	27	5,218.4	12.1
<b>TOTAL</b>	<b>28</b>	<b>6,588.1</b>	<b>100.0</b>	<b>233</b>	<b>43,176.7</b>	<b>100.0</b>
Battery Energy Storage System	7	989.0		16	1,143.5	

Source: DOE List of Private Sector – Initiated Power Projects as of 30 June 2020

Despite the pandemic in 2020, the DOE encourages the private sector to invest in power generation and continue their development of putting up generation facilities to augment the needed capacity of the power system in the coming years. As shown in Table 4, capacities from committed power projects reached 6,588 MW by the 1st half of 2020. About 60.6% of these capacities are from coal-fired power projects that will provide baseload capacity in the system in the coming years.

The indicative power projects capacity amounted to 43,177 MW by the 1st half of 2020. Coal-fired power projects contributed 22.7% and Natural gas projects are at 20.3%, while 54.5% is expected to come from renewable energy technologies.

With the recent issuance of the Energy Storage Systems (ESS) policy of the Department of Energy in the last quarter of 2019, ESS facilities development grew in the 1st half of 2020 as committed BESS projects increased to 989 MW from seven proponents, while 1,144 MW additional BESS capacity under indicative status from sixteen proponents were applied to the Department and are expected to contribute to the grid in the coming years.

## F. Significant Incidents

### **COVID-19 Pandemic impact to the Electric Power Industry (March 2020 - Present)**

When the COVID-19 pandemic hit the country and became a national concern in March 2020, the government issued a Community Quarantine measure starting 18 March 2020 to limit the spread of the virus all around the country. With this implementation, the entire power industry was affected in terms of operation of facilities, development of projects, payment of consumption by the consumers to the utilities and even the entry of foreign technical contractors to the country to perform maintenance or repair of power plants .

To ensure unimpeded energy services to the Filipino in this time of pandemic, the Department of Energy continues to provide assistance to the power sector stakeholders through the following issuances:

1. Advisories on the deferment of payments of the Distribution Utilities;
2. Issuance of IATF IDs and Rapidpass QR Codes for better cross-province/city travel of essential power sector stakeholders;
3. Issuance of COVID-19 Response Protocol to all Energy Stakeholders; and
4. Endorsement for Foreign Workers of the contractor to the Department of Foreign Affairs and Bureau of Quarantine to enter the country.

Following are the significant incidents that occurred in the first semester of 2020 by main grid:

#### Luzon

Luzon grid experienced two (2) Yellow Alerts on 16 January 2020 and 4 June 2020. The 16 January 2020 Yellow Alert was caused by the unplanned outages and derated output of power plants due to line constraints. While the 4 June 2020 Yellow Alert was mainly attributed to the higher demand due to the mild El Niño phenomenon, and the series of unplanned outages and derated output of power plants due to the Malampaya gas restriction. Furthermore, the expected additional capacity from committed power projects were not able to ease the power situation as a result of the delayed commissioning and commercial operation of power plants which were affected by the nationwide community quarantine.

## Visayas

One (1) occurrence of Yellow Alert was recorded in the Visayas Grid on 28 January 2020. This was triggered by capacity reserves being below the system reserve requirement due to forced outages of power plants.

A few grid disturbances were also experienced because of power plant and line trippings which resulted in load droppings and momentary power interruptions.

## Mindanao

There were no yellow and red alerts during the first half of 2020 in Mindanao. Despite the COVID-19 pandemic, Mindanao grid continued to provide enough supply to its reduced demand. The decrease in demand and the current over-supply capacity situation of this grid resulted in various power plants to be on reserve shutdown.

## **G. Status of Government Generating Assets**

### Agus VI HEPP (Units 1 & 2) Uprating Project

During the report period, among the outstanding deliverables of the Joint Venture of Guangxi Hydroelectric Construction Bureau and ITP Construction, Inc. is the installation of Annunciator Alarm Panel, the commissioning of which was completed on 10 October 2019, and copy of the Operation & Maintenance Manuals for the said equipment was submitted to PSALM. In November 2019, the Joint Venture likewise submitted to PSALM the Computer Control & Supervision System Diagram, Operation and Maintenance Manual of the Annunciator Alarm Panel, and Factory inspection and test report.

The turn-over of the Agus VI Units 1 and 2 to NPC was undertaken on 14 February 2020. The Agus VI units 1 & 2 (uprating project) are under warranty until November 2020.

On 15 April 2020, notice of defects was issued to the Joint Venture of Guangxi Hydroelectric Construction Bureau and ITP Construction, Inc. advising them to correct/rectify the discovered defects within sixty (60) days from the lifting of Enhanced Community Quarantine in Iligan City.

## H. Status of Transmission Projects

During the report period, following are the ongoing Transmission Projects:

### 1. LUZON GRID

#### Power Quality

- TUGUEGARAO–LAL-LO (MAGAPIT) 230 kV T/L (PQ, LG)

The Tuguegarao–Lal-lo (Magapit) 230 kV Transmission Line project aims to address the imminent overloading of the Tuguegarao–Magapit 69 kV Line due to the forecasted load growth (LG) in the northern part of Cagayan Province. It

also aims to improve the power quality (PQ) and reliability of supply in the area, which is presently being served by a very long 69 kV line. As of 30 June 2020, the Transmission Line portion is 49.86% complete and the Substation Portion is 83.19% complete. Due to the implementation of community quarantine due to COVID-19, the expected time of completion of the project was moved from May 2021 to March 2020.



#### System Reliability

- AMBUKLAO–BINGA 230 kV T/L UPGRADING

The Ambuklao–Binga 230 kV Transmission Line Upgrading project aims to upgrade the existing line in order to address its old age condition and also to maintain the N-1 contingency provision taking into consideration the repowering of Ambuklao HEPP and the proposed generation capacity additions in the Cagayan Valley area. Thus, during maximum generation of the power plants, this project

will prevent the overloading under N-1 contingency conditions, i.e, outage of one 230 kV circuit. As of 30 June 2020, the Substation Portion is 94.35% complete which is expected to be completed in November 2021.



- BINGA–SAN MANUEL  
230 kV T/L

The Binga–San Manuel 230 kV Transmission Line upgrading project aims to provide N-1 contingency during maximum dispatch of the generating plants. The existing line, as well as the power circuit breakers at Binga Substation, which were constructed/installed in 1956 have already surpassed the economic life. Moreover, there are developments in the power plants affecting the power flow at Binga–San Manuel 230 kV line. As of 30 June 2020, the Transmission Line Portion is in Tendering Stage for the preparation of its bidding documents and the Substation Portion is 95.02% complete. The project is expected to be completed in November 2021.



- SAN MANUEL –  
NAGSAAG 230 kV T/L

The project aims to address the overloading of the San Manuel– Nagsaag 230 kV tie line, Pantabangan–Cabanatuan 230 kV Line, and the Nagsaag 500/230 kV transformer. During Maximum North condition and the hydro plants are maximized, outage of the San Manuel–Nagsaag 230 kV tie line will result in the overloading of the single circuit Pantabangan–Cabanatuan 230 kV line. Conversely, the outage of Pantabangan–Cabanatuan 230 kV line will result in overloading of the San Manuel–Nagsaag 230 kV tie line. As of 30 June 2020, the transmission line portion is 43.68% complete while the substation portion is 69.03% complete. Nonetheless, the project is expected to be completed in June 2021.



- SAN JOSE–QUEZON 230 kV LINE 3

The San Jose–Quezon 230 kV Line 3 project intends 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 500kV system will have to be limited to maintain the N-1



contingency for the line and this may result in supply adequacy issue and load dropping. As of 31 August 2020, the Transmission Line Portion is 98.69% complete. Due to the COVID-19 pandemic situation in the country, the target date of project completion was moved from June 2020 to a later date within the year.

- SAN JOSE–ANGAT 115 kV LINE UPGRADING PROJECT

The San Jose–Angat 115 kV Line Upgrading Project aims to ensure the reliability of the existing 115 kV transmission lines connecting Angat HEPP to the Luzon Grid. The 300 MVA capacity per circuit of the project would be sufficient to provide N-1 contingency during maximum



dispatch of the 246 MW Angat HEPP. As of 30 June 2020, the Transmission Line Portion is 88.86% complete and is expected to be fully constructed by March 2021, less than a year delayed from its original target date completion of March 2021 due to the COVID-19 pandemic.

- TIWI 230 KV SUBSTATION PROJECT

The project aims to upgrade the old and deteriorated substation equipment at Tiwi A and C Substations to improve the reliability of the system. It is also intended to augment the power requirement of Malinao/Ligao LES by installation of additional power transformer at Tiwi C Substation and will clearly identify asset

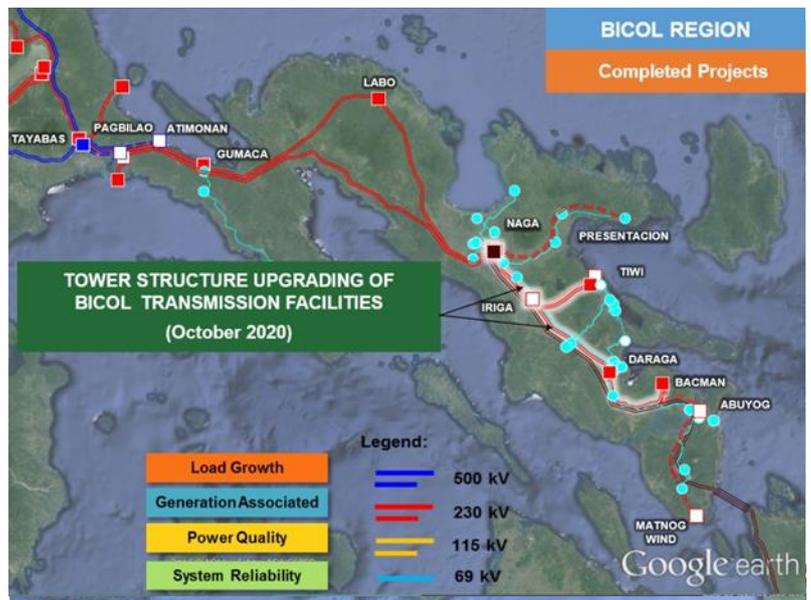
boundaries within the Tiwi Geothermal Power Plant Complex through construction of NGCP's own control facilities. As of 30 June 2020, the Primary Equipment is already 88.33% completed while and the Secondary Equipment is 27.24% completed. Because of COVID-19, the expected time of completion of the project has to change from December 2020 to December 2021.



- TOWER STRUCTURE UPGRADING OF BICOL TRANSMISSION FACILITIES

The restoration project of Bicol transmission facilities offers the reconstruction of the affected transmission lines destroyed by Typhoon Nina, namely the Naga–Daraga–Tiwi A and Naga–Tiwi C 230 kV Transmission Lines. It will provide a permanent solution to address the

limitations of the emergency restoration that made use of provisional light-weight modular tower and steel pole structures. The project will involve the erection of 82 new steel tower structures, which are in conformity with the required design standards considering higher wind design criteria replacing the old and toppled structures. As of 30 August 2020, Schedule 1 is already 100% completed while Schedule 2 is nearly completed at 95.41%, which is expected to be fully completed within the year.

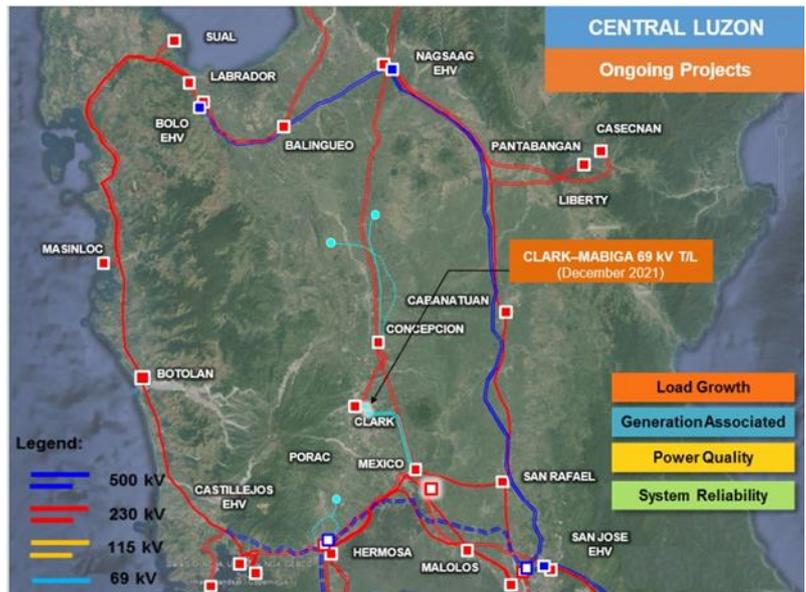


## Load Growth

- CLARK-MABIGA 69 KV TRANSMISSION LINE PROJECT

The Clark–Mabiga 69 kV Line Project aims to provide transmission capacity reinforcement to the Mexico–Clark 69 kV Line, which is currently serving PRESCO, PELCO I, PELCO II, Angeles Electric Corporation (AEC), Quanta Paper Corporation and Clark Electric Development Corporation (CEDC).

This project will address not only the load growth in the area of Angeles and Mabalacat together with the new industries in Clark Freeport Zone but also improve the power quality of supply in the area. As of 30 June 2020, the Substation Portion is 93.76% complete. On the other hand, its Transmission Line Portion is for re-routing due as the proposed original route was affected by the Malolos–Clark Railway Project. Due to the COVID-19 pandemic situation, the expected time of completion of the project was moved from December 2020 to December 2021.



- NAVOTAS 230KV SUBSTATION PROJECT

The Navotas 230 kV Substation aims to cater the load growth in Sector 1 of MERALCO and to serve as a connection point for power plants in the area such as the TMO and Millennium Power Plants. With the further increase in load, the existing 230/115 kV substations in Metro Manila become heavily

loaded and have been losing the provision for N-1 contingency. This will expose the Metro Manila loads to supply reliability risk as well as power quality concerns during system peak load condition. The proposed Navotas 230 kV Substation will be initially linked to the grid through cut-in connection along the existing Marilao–Quezon 230 kV Transmission Line and will ultimately terminate in the future Marilao 500 kV Substation. As of 30 June 2020, the project is 85.7% complete. With the circumstances brought about by COVID-19, the expected project completion date was changed from June 2020 to June 2021.



- **ANTIPOLO 230 KV SUBSTATION PROJECT**

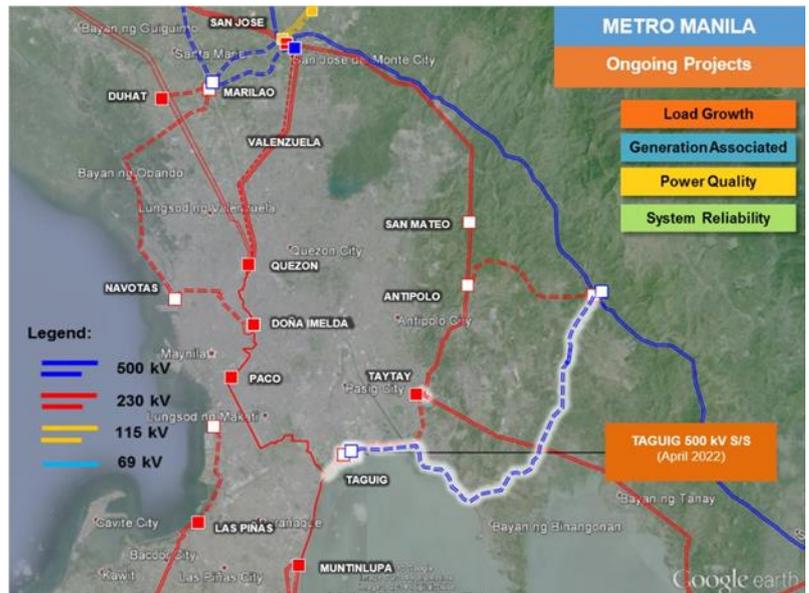
The Antipolo 230 kV Substation aims to cater the load growth in Sector 2 of MERALCO. It involves the construction of a new 230 kV substation that will bus-in along the existing Steel Tower- Double Circuit San Jose-Taytay 230 kV line. Initially, the substation will also be installed with capacitor banks for voltage support.



As of 30 June 2020, the following is the status of the project’s components: 1) Site Development Portion is 18.85% complete; 2) Erection of its Primary Equipment is awaiting the completion of the site development; and 3) Secondary Equipment is 57.19% complete. Due to COVID-19, the projected completion date has to change from March 2021 to April 2022.

- **TAGUIG 500 KV SUBSTATION PROJECT**

The Taguig 500 kV Substation intends to provide another 500/230 kV drawdown substation to decongest San Jose EHV Substation and provide higher level of reliability to the 500 kV system of the Luzon Grid. It will also address the criticality of the existing 230 kV single-circuit line from Quezon to

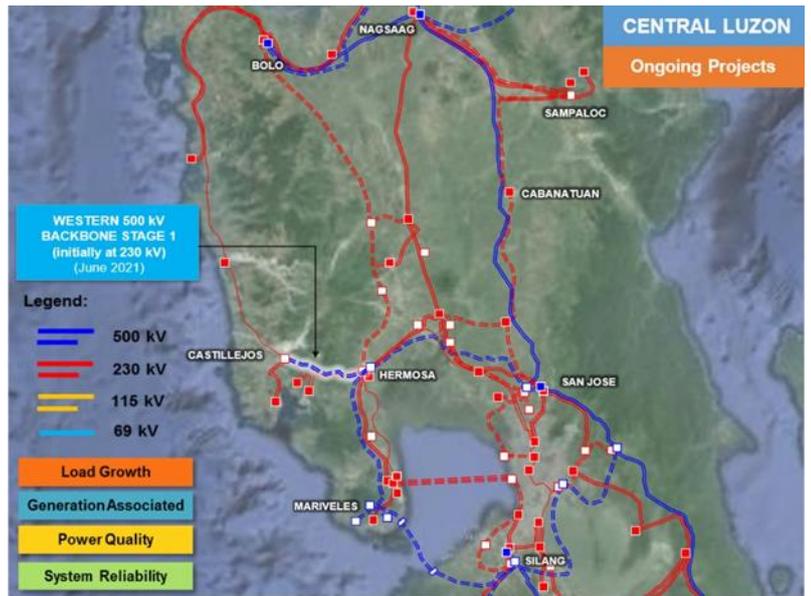


Muntinlupa during N-1 contingency. Further, this project will address the severe low voltage of the Metro Manila 230 kV Substations due to the single-circuit configuration and heavy loading condition of the Quezon–Muntinlupa 230 kV Line. As of 30 June 2020, the Transmission Line Portion is 23.81% complete while the Substation Portion is 26.17% complete. Due to the circumstances brought about by COVID-19, the expected time of completion of the project was moved from May 2021 to April 2022.

## Generation Entry

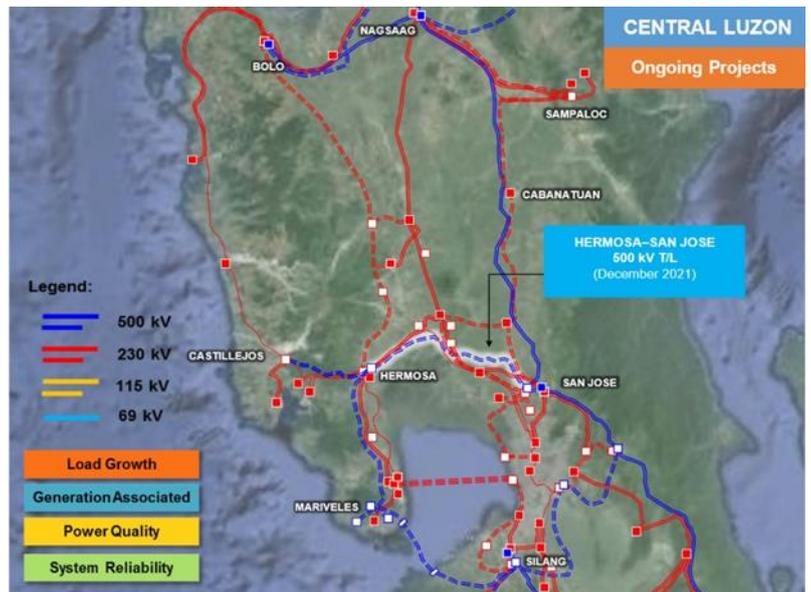
- WESTERN LUZON BACKBONE STAGE 1 (Castillejos–Hermosa 500kV T/L Project)

The Western Luzon Backbone (Stage 1: Castillejos–Hermosa 500 kV Transmission Line Project) pertains to the construction of a transmission facility to connect the 2x300 MW RP Energy CFPP to the Luzon Grid through the Hermosa Substation. It is part of the proposed long-term plan for 500 kV backbone loop development from Bolo (Kadampat) down to Hermosa Substation. As of 30 June 2020, the Transmission Line Portion is 61.21% complete. Due to the circumstances brought about by COVID-19, the expected time of completion of the project was moved from December 2020 to June 2021.



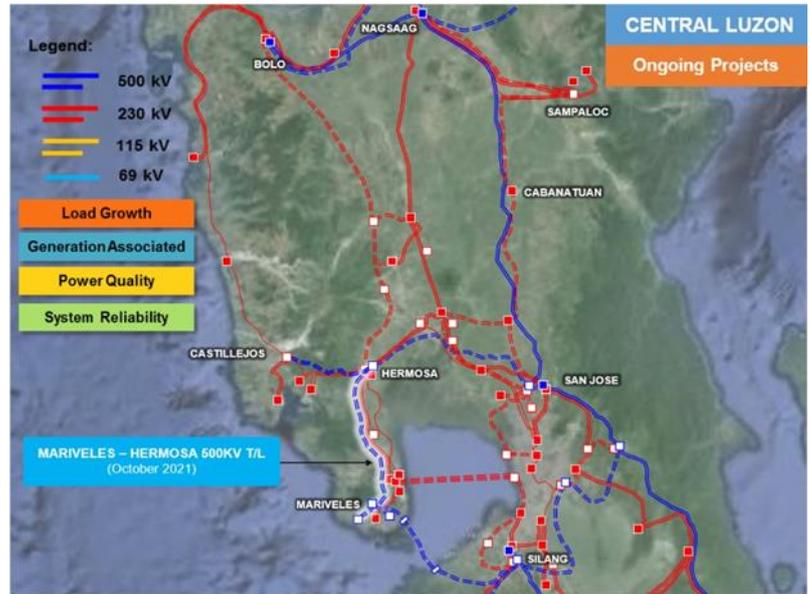
- HERMOSA–SAN JOSE 500 KV TRANSMISSION LINE PROJECT

The Hermosa–San Jose 500 kV Transmission Line Project will serve as a new 500 kV corridor for the bulk power generation coming from the existing Limay CCPP, Petron RSFF, Subic Enron DPP, Mariveles CFPP and the programmed generation capacity additions which include RP Energy CFPP and SMC CFPP. As of 30 June 2020, the Transmission Line portion is 14.67% complete while the Site Development of its Substation Portion is 64.39% complete and the Substation Portion 10.18% complete. Due to COVID-19, the expected time of completion of the project was adjusted from March 2021 to December 2021.



- **MARIVELES-HERMOSA 500 KV TRANSMISSION LINE PROJECT**

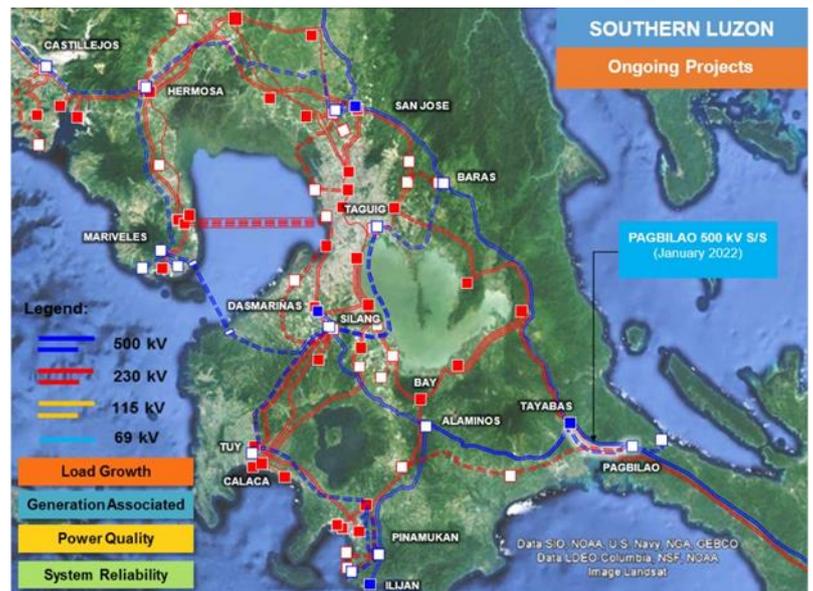
The Mariveles–Hermosa 500 kV Transmission Line Project aims to allow the connection of incoming generations in Bataan Peninsula, which include 2x668 MW GN Power Dinginin CFPP and 8x150 MW SMC Consolidated Power Corporation CFPP. While the Bataan 230 kV Grid Reinforcement



Project can increase the capacity of the existing 230 kV corridor in the area, the huge generation capacity addition cannot be accommodated unless a new transmission highway is developed. This new backbone will form part of the loop from Hermosa to Mariveles then to Cavite/Metro Manila upon completion of the future submarine cable. As of 30 June 2020, the Transmission Line Portion is 51.84% complete and the Substation Portion is 6.26% complete. Due to the circumstances brought about by COVID-19, the expected time of completion of the project was adjusted from March 2021 to October 2021.

- **PAGBILAO 500 KV SUBSTATION PROJECT**

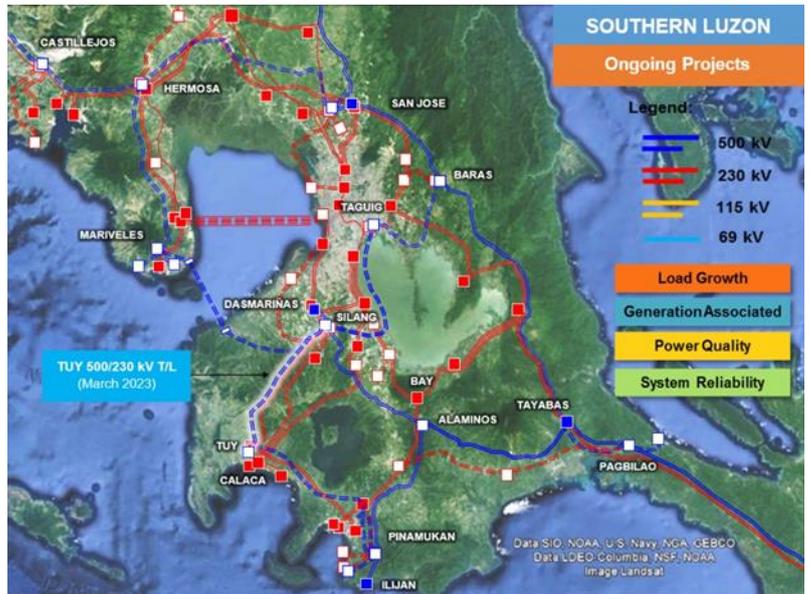
The Pagbilao 500 kV Substation Project will accommodate the connection of incoming power plants in Quezon Province. The Pagbilao EHV Substation Project will address the overloading of Tayabas 500/230 kV transformers and the fault level issue at Tayabas 230 kV Substation. As of 30 June 2020, the Transmission



Line Portion is 75.60% complete and the Substation Portion is 10.45% complete. Due to the circumstances brought about by COVID-19, the expected time of completion of the project was adjusted from March 2021 to January 2022.

- TUY 500/230 KV SUBSTATION PROJECT/TUY-DASMARIÑAS 500KV T/L PROJECT

The Tuy 500 kV Substation (Stage 1) aims to accommodate the connection of the 2x350 MW SRPGC Coal Plant and allow full dispatch of bulk generation capacity addition in Batangas. The generation capacity addition will turn Calaca Substation into a merging point of more than 2,000 MW of power generation.

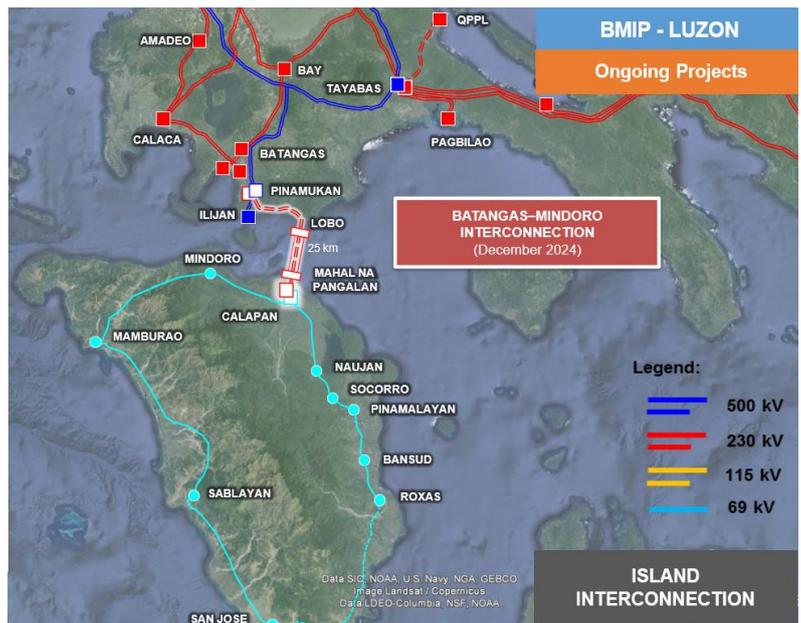


As of 30 June 2020, the NGCP has yet to issue the Notice-to-Proceed for the Transmission Line component while the Substation component is already 16.83% completed. With the restrictions brought about by COVID-19, the expected time of completion of the project was moved from December 2021 to March 2023.

### Island Interconnection

- BATANGAS-MINDORO INTERCONNECTION PROJECT

The proposed interconnection of Mindoro Island with the Luzon Grid was envisioned to provide access to bulk generation sources in the main grid, while at the same time providing the means to export possible excess power once the generation potentials, including RE-based plants, within the island have been developed. The nearest connection point in the Luzon Grid for the planned island interconnection project is the proposed Pinamukan 500 kV Substation, while Calapan would serve as the interconnection point in Mindoro Island. As of 30 June 2020, the NGCP is awaiting the approval of the ERC to commence implementation.

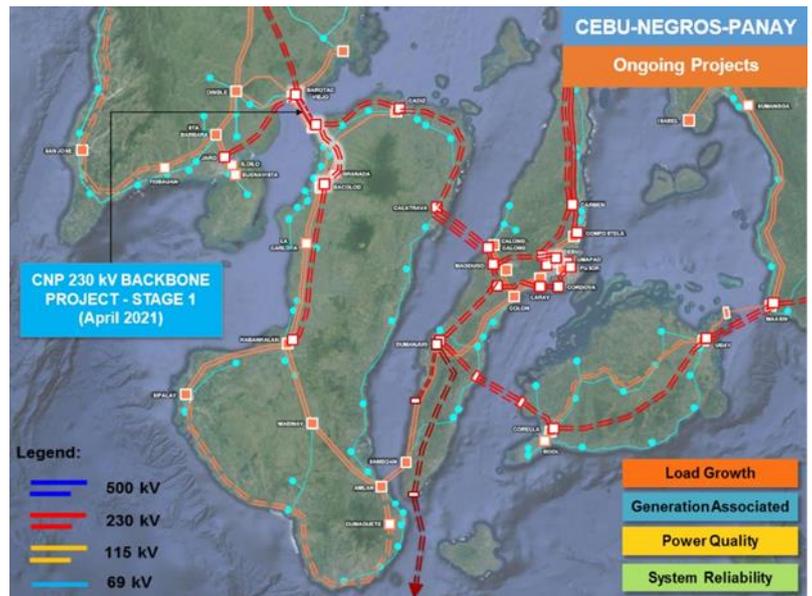


## 2. VISAYAS GRID

### Generation Entry

- CEBU-NEGROS-PANAY 230KV BACKBONE PROJECT – STAGE 1, GE & SR

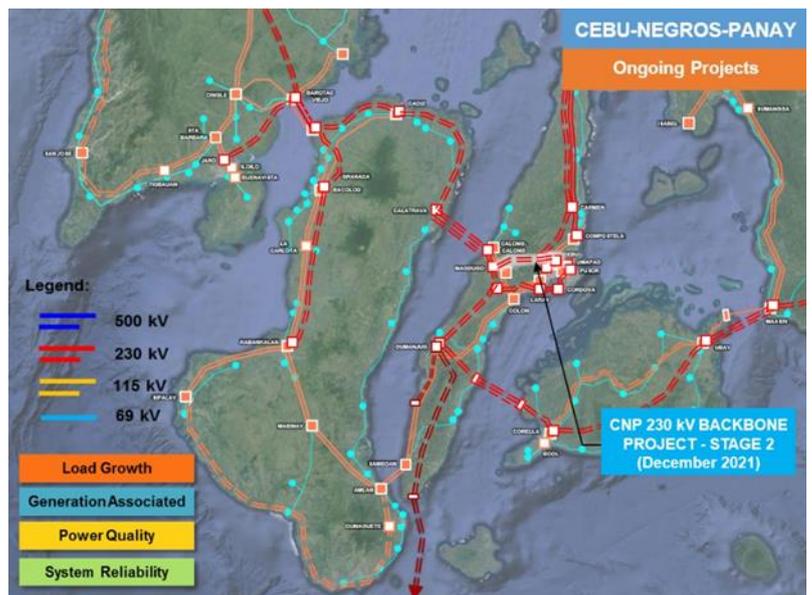
To ensure the effective transmission of excess power generation from Panay towards Negros, a high capacity transmission corridor is being proposed. Strategically, the project will be designed consistent with the long-term transmission master plan of having a 230 kV transmission backbone in the Visayas by establishing a 230 kV interconnection from Panay to Cebu.



The Transmission Line portion is 84.33% complete while the Substation component is already 100% completed. However, with the COVID-19, the expected time of completion of the project was moved from July 2020 to April 2021.

- CEBU-NEGROS-PANAY 230KV BACKBONE PROJECT – STAGE 2, GE & SR

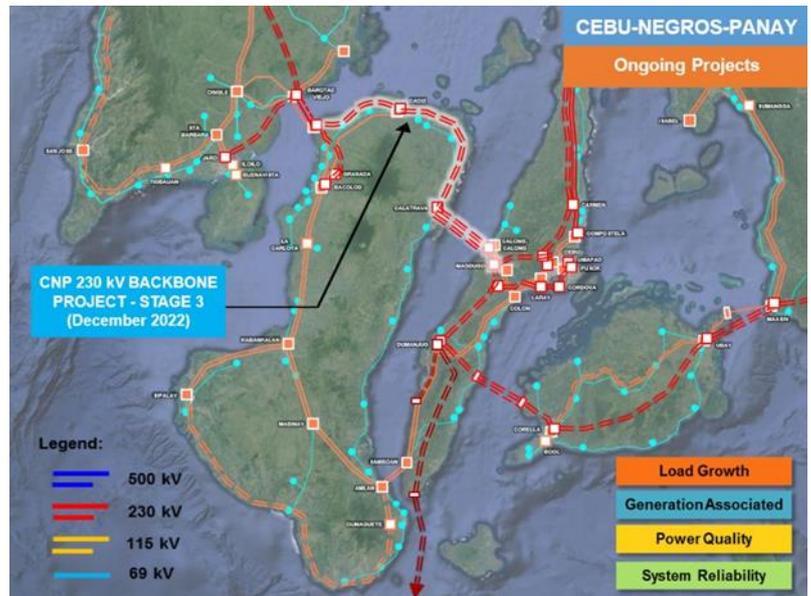
In order to ensure the effective full generation dispatch of the new power plant, a new transmission corridor, which includes high-capacity transmission line and new substation facilities, is being proposed towards Metro Cebu. As of 30 June 2020, following is the status of the project's components:



1) Transmission Line portion is 93.78% complete; 2) Substation Portion is 0.77% complete; 3) Underground Cable is 10.15% complete; and 4) Multi-storey facility is 16.68% complete. Due to the circumstances brought about by COVID-19, the expected time of completion of the project was adjusted from December 2020 to December 2021.

- CEBU-NEGROS-PANAY 230KV BACKBONE PROJECT – STAGE 3

The development of new power plants, including baseload and renewable, in Panay and Negros Islands will result in the increase in power exchange between the islands of Panay, Negros and Cebu. To ensure the effective transmission of excess power generation from Panay and Negros

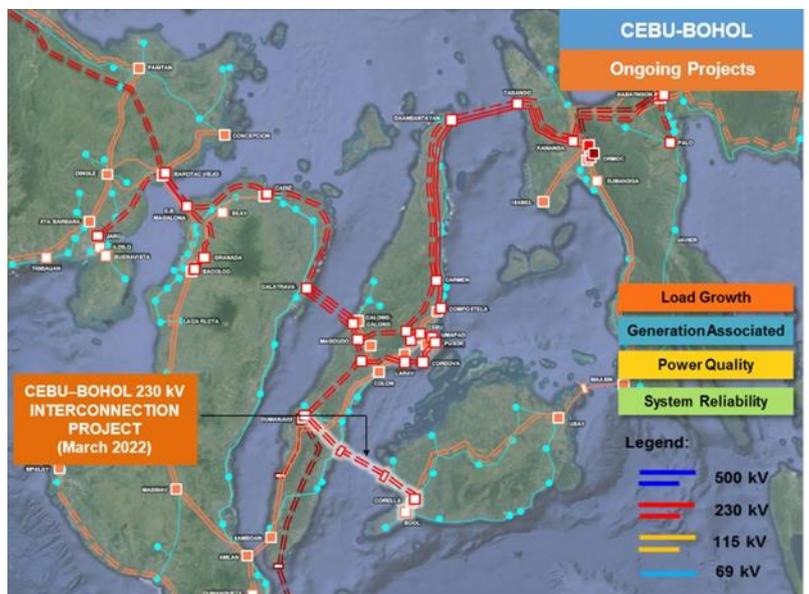


towards Cebu, a high capacity transmission corridor is being proposed and this will serve as the stage 3 or the final stage for the Cebu–Negros–Panay 230 kV Backbone Project. As of 30 June 2020, the Submarine Cable portion is 94.96% complete, the Reconductoring/Bundling of 138kV Transmission Line is 96.34% complete, the E.B. Magalona–Cadiz 230kV Transmission Line is 0.60% complete, the Magdugo–Cebu 230kV Transmission Line is 38.83% complete, the Barotac Viejo Substation is 72.06% complete and the Bacolod Substation is 12.48% complete, all of which forms part of the project’s Phase 1. Phase 2 of the project which includes Cadiz Substation, Calatrava Substation, E.B. Magalona Substation and Magdugo Substation have been issued with Notice-to-Proceed by the NGCP. On the other hand, Phase 3 of the Project which includes the Cebu Substation and Quiot Substation is currently Manufacturing its equipment. With COVID-19 pandemic situation, the expected time of completion of the project was changed from December 2021 to December 2022.

Load Growth

- CEBU-BOHOL 230KV INTERCONNECTION PROJECT

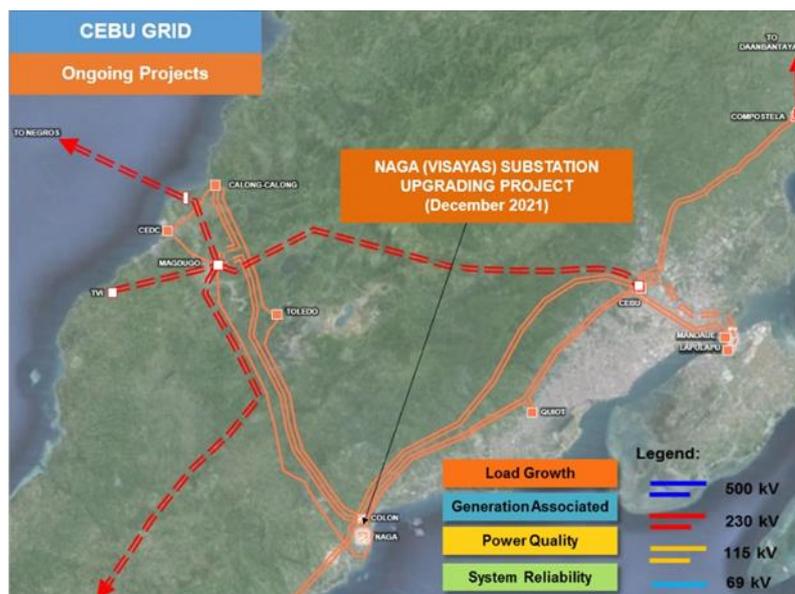
Currently, Cebu, Leyte and Bohol are connected radially. As such, an outage of the Leyte–Bohol 138 kV Interconnection will cause power delivery interruption towards the entire Bohol Island. Since the existing power plants in Bohol do not have sufficient generation capacity to cater the power demand in the island during N-1 contingency conditions, there is a need to provide additional transmission backbone towards Bohol. As of 30 June 2020, the Corella Substation project



component is for issuance of Notice-to-Proceed and is currently waiting for the approval of the ERC. The project is expected to be completed in March 2022.

- **NAGA (VISAYAS) SUBSTATION UPGRADING PROJECT**

To improve the reliability of the Naga Substation, which was commissioned in 1977, equipment shall be replaced. The project involves the construction of new steel tower structures and installation of associated overhead line components. It also involves the use of steel tower structures with higher wind design capability. As of 30 June 2020, its Primary and Secondary equipment is 81.96% complete. Due to the circumstances brought about by COVID-19, the expected time of completion of the project was moved from December 2020 to December 2021.



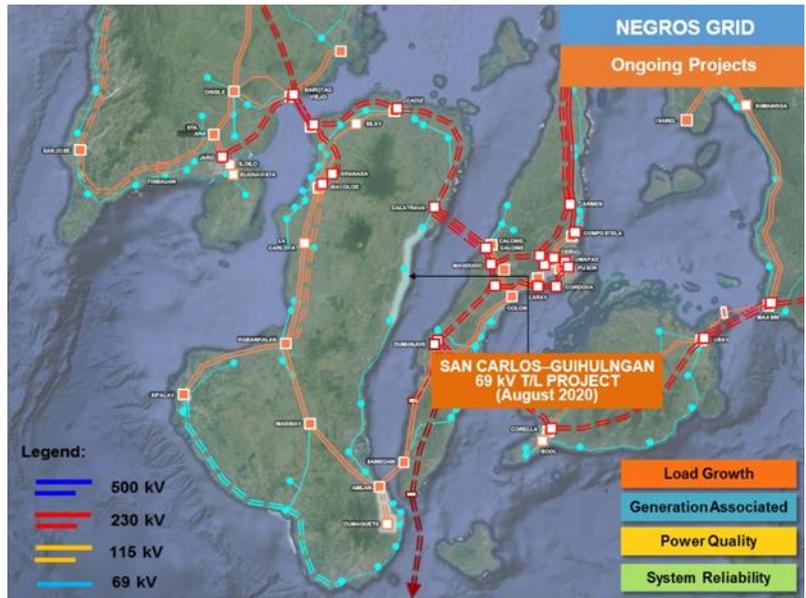
- **NEW NAGA (COLON) SUBSTATION PROJECT**

To accommodate the projected demand of Colon Substation, there is a need to increase the substation capacity. The project involves the installation of 100 MVA transformer at Colon Substation and the transfer of the Naga–Sibonga–Dumanjug and VECO Naga 69 kV feeders from Naga Substation to Colon Substation. As of 30 June 2020, the project is already 81.96% completed. However, because of the restrictions imposed due to COVID-19, the expected time of completion of the project was adjusted from December 2020 to December 2021.



- SAN CARLOS – GUIHULNGAN 69 KV TRANSMISSION LINE PROJECT

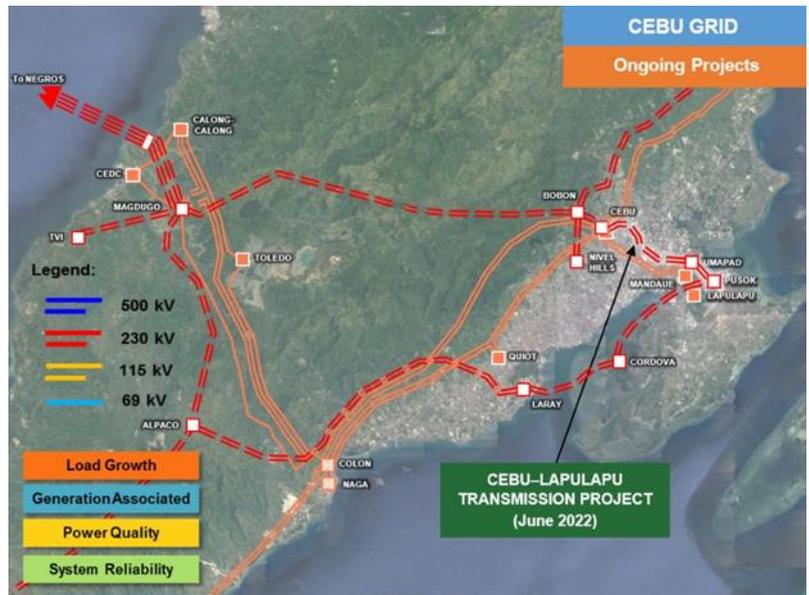
The San Carlos-Guihulngan 69kV Transmission Line project is intended to accommodate power demand in the northeastern part of Negros island by building a 69 kV transmission loop from Cadiz to Amlan. As of 30 June 2020, the project is almost completed at 97.84%. Because of the circumstances brought about by COVID-19, the expected time of completion of the project was changed from June 2020 to a later date within the year.



System Reliability

- CEBU-LAPULAPU 230KV TRANSMISSION PROJECT

The existing transmission corridors serving the major load centers in Mandaue and Mactan in Cebu do not have N-1 contingency provision. Thus a new transmission corridor, composed of overhead transmission line and submarine/underground cable system, is proposed between Cebu

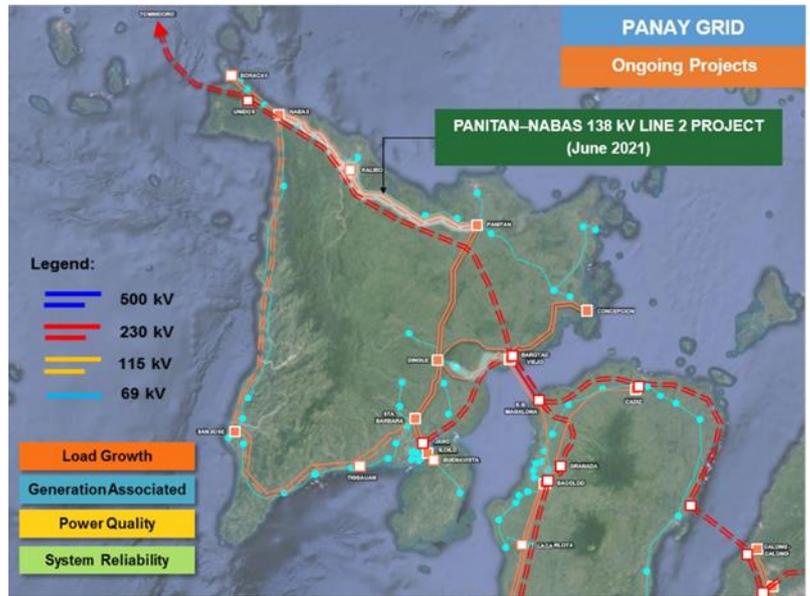


Substation and Lapulapu Substation. As of 31 January 2020, the Substation portion is 97.40% complete. On the other hand, both the Submarine Cable and Overhead Transmission Line components of the project are at the Tendering stage. Due to the circumstances brought about by COVID-19, the expected time of completion of the project was moved from December 2021 to June 2022.

- PANITAN – NABAS 138 KV TRANSMISSION LINE – LINE 2 (2ND CIRCUIT STRINGING)

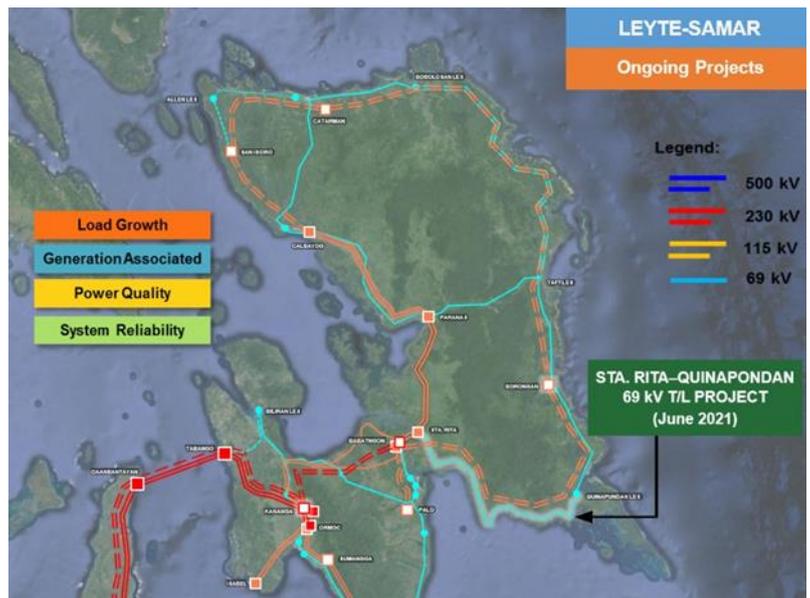
The northwestern part of Panay, which includes the Boracay Island, is served by Nabas Substation which normally draws power from the grid through the existing Panitan–Nabas 138 kV Transmission Line. The Nabas Substation is also linked to the San Jose

Substation by a 69 kV transmission line. However, during the outage of the 138 kV line, the 69 kV line will have limited transmission capacity to cater the entire load of the area, hence, will result in power curtailment. To cater the entire power requirement of Nabas Substation even during N-1 condition, a new 138 kV circuit will be installed from Panitan Substation and Nabas Substation. As of 30 June 2020, the Transmission Line component is ready for Energization while the Substation Portion is 51.86% complete. Due to the circumstances brought about by COVID-19, the expected time of completion of the project was moved from December 2020 to June 2021.



- STA.RITA–QUINAPONDAN 69 KV TRANSMISSION LINE

This project involves the construction of a 97 km 69 kV line connecting Sta. Rita and Quinapondan Substation to improve system reliability and power quality in Eastern Samar Area. As of 30 June 2020, the Transmission Line project is almost complete at 99.67%. However, due to the circumstances brought about by COVID-19, the expected time of completion of the project has to change from December 2020 to June 2021.



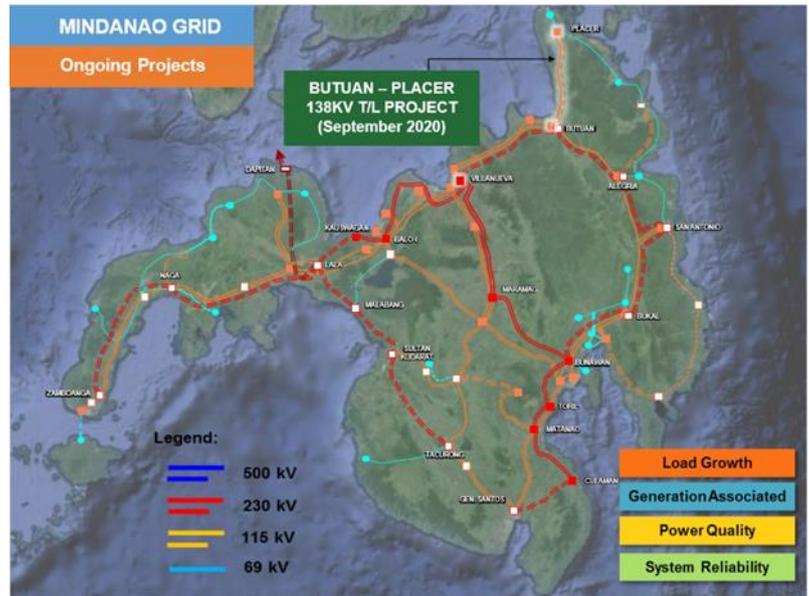
### 3. MINDANAO GRID

#### System Reliability

- BUTUAN – PLACER 138KV TRANSMISSION LINE PROJECT

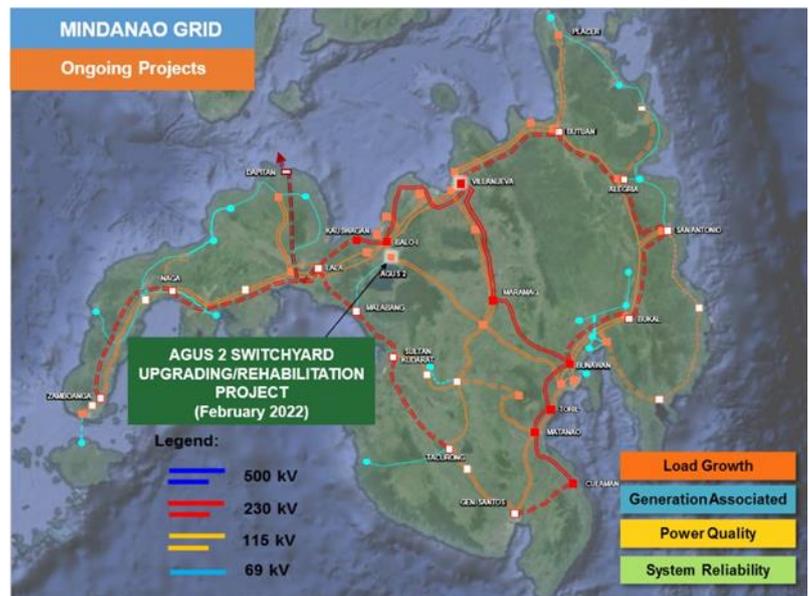
The Butuan-Placer 138 kV Transmission Line Project provides the needed line reinforcement to achieve reliable and continuous power supply to northeastern Mindanao. The project not only satisfies the compliance of the transmission line facility to the single-outage contingency

criterion of the PGC but also improves the voltage level in the served area. As of 31 August 2020, the Substation Portion is already 100% completed while the Transmission Line component is 94.96% complete. Due to the circumstances brought about by COVID-19, the expected time of completion of the project was moved from June 2020 to a later date within the year.



- AGUS 2 SWITCHYARD UPGRADING/REHABILITATION PROJECT

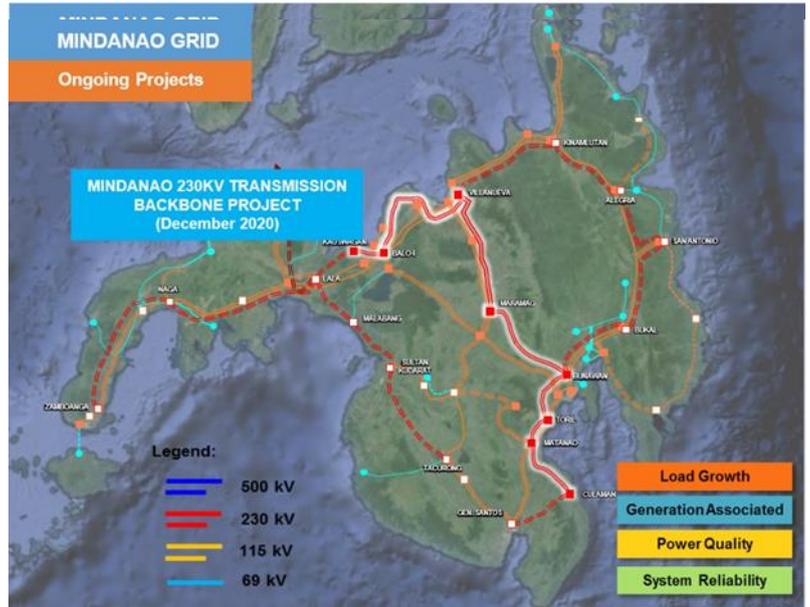
The project enhances the operational stability of the grid that ensures the continuity of service of the power plant's transmission corridor. It involves the replacement of obsolete power circuit breakers, capacitive potential transformers, telecom equipment and other secondary devices. As of 30 June 2020, the transmission project is 94.78% complete. However, with the restrictions brought about by COVID-19, the expected time of completion of the project was adjusted from December 2020 to February 2022.



Generation Entry

- MINDANAO 230KV TRANSMISSION BACKBONE PROJECT

The project upgrades the thermal capacity of the existing transmission backbone. It entails two (2) major activities: 1) Construction of the Matanao-Toril-Bunawan 230 kV Line; and 2) Energization of the existing Balo-i-Villanueva-Maramag-Bunawan Line to 230 kV voltage level.



The transmission line portion of the project utilizes the existing 230 kV PCBs in Matanao Substation and the installation of transformers in the substations of Toril and Bunawan. However, the energization of the whole stretch of the backbone to 230 kV level requires the installation of additional transformers in the substations of Culaman, Toril, Bunawan, and Villanueva. As of 30 June 2020, the Transmission Line Portion is 97.85% complete, Culaman Substation is 90.90% complete, Matanao Substation is 89.35% complete, Toril Substation is 97.97% complete and Bunawan Substation is 97.20% complete. Due to the circumstances brought about by COVID-19, the expected time of completion of the project was moved from March 2020 to December 2020.

System Reliability

- MINDANAO SUBSTATION UPGRADING PROJECT (MSUP)

The MSUP will provide additional transformers, install capacitor banks, and replace defective, old, obsolete and underrated power circuit breakers (PCBs) to ensure adequate, reliable, and high-quality power transmission system in Mindanao. It also involves the installation of a total of 875 MVA power transformers, 52.5 MVAR capacitor banks, nineteen (19)-138 kV PCBs and twenty-one (21)-69 kV PCBs. Also included as project component is the replacement of eleven (11)-138 kV and twenty-seven (27)-69 kV PCBs in various substations in the grid.

The Project is divided into two (2) Stages. Segments of Stage 1 of the Project have already been completed and energized in 2019 except for Bislig Substation and General Santos Substation which as of 30 June



2020 are already 63.18% and 29.12% completed respectively. On the other hand, Stage 2 of the MSUP is already on-going at 40.74%. The MSUP is expected to be completed in September 2021.

- MINDANAO SUBSTATION REHABILITATION PROJECT (MSRP) – STAGE 1

Mindanao Substation Rehabilitation Project (MSRP) will replace power circuit breakers (PCBs) in various substations in Mindanao due to defectiveness, old age, obsolescence and low fault level capacity. Implementation of the project will increase the reliability of the network, reduce/prevent unserved energy, avoid costly maintenance expenses, improve personnel safety and decrease incidents of breaker failures. As of 30 June 2020, Stage 1 of the project is already 51.74% completed. Due to the circumstances brought about by COVID-19, the expected time of completion of the project was adjusted from August 2020 to October 2021.



Island Interconnection

- MINDANAO-VISAYAS INTERCONNECTION PROJECT

The implementation of the MVIP will also allow export of power to the other major grids. From a technical standpoint, the MVIP will provide benefits to the system in terms of added supply security, improved system reliability and improvement in the quality of power supply. The MVIP through an interconnected power network shall optimize utilization of indigenous energy sources, such as natural gas in Luzon, geothermal in the Visayas and hydro in Mindanao, thus, reducing the overall generation of pollution as well as the dependency on the importation of fossils fuel, where its availability and price are sensitive to the price in the world market.



Due to the circumstances brought about by COVID-19, the expected time of completion of the project was moved from December 2020 to December 2021.

Mindanao-Visayas Interconnection Project		
Section		Status (As of June 2020)
Submarine Cable	Slander CTS-Dapitan CTS HVDC	37.53% Complete
Substation	Dumanjug Converter Station & S/S	51.64% Complete
	Lala Converter Station & S/S	
	Aurora S/S	
	Magdugo S/S	
Transmission Line	Dumanjug-Magdugo HVAC T/L	62.88% Complete
	Kauswagan-Lala HVAC T/L	77.82% Complete
	Aurora-Lala HVAC T/L	49.19% Complete
	Dumanjug-Santander HVDC OHTL	
	Lala-Dapitan HVDC OHTL	38.18% Complete
	Alegria-Dumanjug Electrode Line	
	Kolambugan-Lala Electrode Line	

## I. Distribution Infrastructure Projects

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

Section 43 (f) of the Republic Act No. 9136, otherwise known as the EPIRA, provides that any significant operating costs or projects investment of DU which shall become part of the rate base shall be subject to verification by the ERC to ensure that the contracting and procurement of the equipment, assets and services have been subjected to transparent and accepted industry procurement and purchasing practices to protect the public interest.

On the other hand, the accompanying application for authority to secure loan from the NEA in connection with the funding source for the proposed projects, is being filed pursuant to Section 20 e) of Commonwealth Act No. 146 otherwise known as the Public Service Act, which requires every public service to secure the approval and authorization of the ERC for issuance of any bonds or other evidence of indebtedness payable in more than one year.

During the report period, the ERC approved the Capital Expenditure (CAPEX) Projects applications filed by five (5) Distribution Utilities namely: 1) Cebu III Electric Cooperative, Inc. (CEBECO III); 2) Pangasinan I Electric Cooperative, Inc. (PANELCO I); 3) South Cotabato II Electric Cooperative, Inc. (SOCOTECO II); 4) Tarlac II Electric Cooperative, Inc. (TARELCO II); and 5) Tarlac Electric, Inc. (TEI). Details of these projects are shown in Annex 3.

## VII. 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 in 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.

### 1. Status of Household Electrification

For the report period, the household electrification level of the country is estimated at 92.96% based on the latest status of energization provided by the National Electrification Administration, Local Government Unit-Owned Utilities and Private-Investor Owned Utilities. Said level corresponds to 23.23 million energized households surpassing the 22.98 million identified and targeted household population based from the 2015 Census of the Philippine Statistics Authority (PSA).

*Table 38. Household Electrification Level*

Distribution Utility	Total Household Population (2015 Census)	Served HHs	Unserved HHs, actual per DU per Province <sup>[a]</sup>	%HH Level <sup>[b]</sup>
Electric Cooperatives	14,305,751	13,628,992 <sup>[c]</sup>	1,546,265	89.19%
MERALCO	6,478,982	7,405,728	-	100.00%
Other PIOUs/LGU Owned Utilities	2,171,932	2,170,099	63,459	97.08%
<b>Total</b>	<b>22,984,971</b>	<b>23,229,866</b>	<b>1,618,264</b>	<b>92.96%</b>

Source: DOE

Note: [a]  $Unserved\ HHs\ per\ DU\ per\ Prov = (Pot.\ HHs - Served\ HHs) / per\ DU\ per\ Prov$

[b]  $\%HH\ Level = (Pot.\ HHs - Unserved\ HHs\ per\ DU\ per\ Prov) / Pot.\ HHs$

[c] Total count of served households for ECs includes households served by QTPs and NPC-SPUG which are not included in December 2019 NEA Report  
NEA Report: 13,628,992 HHs; QTP/NPC-SPUG Report: 25,047 HHs

On previous reports, the electrification level only accounts for the served households of all DUs and it results in higher level since some DUs have already exceeded the total potential number of households as reported by PSA thus, compensating the DUs with low electrification level. With the new computation, it accounts the actual number of unserved households per DUs per province. This formula provides accurate representation of the status of household electrification level of the country.

### 2. On-going and Planned Programs and Activities

- Grid Electrification

- a. NEA's Expanded Sitio Electrification Program (Expanded SEP)

This refers to NEA's program of attaining 100 percent sitio electrification in the country while providing house wiring and connection assistance to eligible HHs. SEP is the energization of unlit sitio/purok/zone defined as a territorial enclave that forms part of barangay, the location of which may be distant from the center of barangay itself, by providing funds for the construction of distribution lines and house wiring facilities to the beneficiaries. This provision covers for the two (2) bulbs, 1 (one) convenient outlet, a

kwh meter, and thirty (30) meters of service drop wire, including the cost of house wiring service).

Under the Sitio Electrification Program (SEP) and the off-grid solar project for 5,000 households, the programs are currently experiencing delays due to the continuing restrictions imposed by the government. NEA revised the number of sitios to be included in the SEP this year from the original target of 964 sitios to 635 sitios. As of June 30, 2020, NEA, through the ECs, has completed the energization of 181 sitios (86 in Luzon, 74 in Mindanao, and 21 in Visayas).

To help in the country's fight against this global pandemic, the DOE and NEA remitted P1.5 billion to the Bureau of Treasury, as requested by the Department of Finance. Of the amount, P1.26 billion represents unutilized subsidy funds received in 2016, while the P85.71 million given earlier represents dividends to the national government for 2019 operations and the allocated P500 Million of the DOE-Approved LFP-TEP 2019. Hence, implementation of the fund allocated targets for the year may not be met due to this.

b. NEA's Barangay Line Enhancement Program (BLEP)

This aims to rehabilitate those barangays previously energized through solar home system, generator sets and other 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. Funds are provided for grid extension projects such as overhead lines, submarine cable, underground cable and enhancement /upgrading of distribution lines.

Please take note that no budget allocation on BLEP Projects for CY2018-2019 hence, NEA has no targets for CY2019. However, as of 31 December 2019, there are 72 barangays nationwide that need enhancement. NEA managed to complete 26 BLEP projects as of 31 December 2019 amounting to Php300,198,890.39.

c. 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 project proposal for DOE's funding approval under the ER 1-94 Electrification Fund.

As part of the DC2018-08-0021 "Providing for the Amendments of Rule 29 Part (A) of the Implementing Rules and Regulations of Republic Act No. 9136", the DOE have conducted its last leg of Information, Education and Communication (IEC) Campaign in Marquis Events Place, BGC, Taguig City on 05 November 2019. The discussion on the said IEC mainly focuses on the computation and allocation of financial benefits, requirements to facilitate the transfer of financial benefits and the projects to be covered/funded under electrification fund.

For the period of May 2020 to October 2020, due to the COVID-19 outbreak in the Philippines, and the declarations of State of Public Health Emergency and State of Calamity throughout the Philippines, through Proclamation Nos. 922 and 929, respectively, the DOE issued Department Circular No. DC2020-04-0008 "Rationalizing the Utilization of ER1-94 Funds by Local Government Units in Response to COVID-19 Public Health Emergency" which aims to provide additional fund sources for Host LGUs to combat COVID-19. Under the Circular, all available and unremitted ER 1-94 Funds with the Department and concerned power generation companies (GenCos) shall be

immediately distributed to the host LGUs for them to have readily available funding to undertake their duty to contain COVID-19 in their respective areas. An Advisory for the Implementation of DC2020-04-008 was issued last 14 July 2020 to provide clarification on particular sections of said DC for the continuity of processes and activities. However, with this effort, the allocated electrification fund under ER 1-94 due for the DUs will be suspended until the State of Public Health Emergency in the country is lifted.

*Table 39. Summary of Transfer of ER1-94 Funds to Host LGUs*

Fund Type	No. of Host LGUs	Total Amount Transferred
Electrification Fund	309	1,594.88 M
Development and Livelihood Fund	428	825.57 M
Reforestation, Watershed Management, Health and/or Environment Enhancement Fund	426	805.09 M

*Source: DOE*

d. Nationwide Intensification of Household Electrification (NIHE) Program

Approved in 2014, the NIHE project is a 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.

However, during the Budget Deliberations in Congress, the House of Representatives has allotted another budget for the program under General Appropriations Act CY2018 to accommodate more requests amounting to PhP300,000,000.00.

For the 2015 NIHE Program, 25,563 households are reported energized out of 30,512 approved and allocated with house-wiring and KWH meter subsidy as of 08 September 2020.

For the 2016 NIHE Program, 79,152 households are reported energized out of 116,592 approved and allocated with house-wiring and KWH meter subsidy as of 08 September 2020.

For the 2017 NIHE Program, 38,145 households are reported energized out of 115,216 approved and allocated with house-wiring and KWH meter subsidy as of 08 September 2020.

For the 2018 NIHE Program, 23,533 households are reported energized out of 81,770 approved and allocated with house-wiring and KWH meter subsidy as of 08 September 2020.

Early this year, the Department of Energy encountered some administrative concerns about the implementation of the NIHE Program that affected the timely releases of project funds to the concerned ECs. This delay was further worsened during this COVID-19 pandemic. Other factors that affected the release of these funds to concerned ECs includes the delayed submission of the pertinent bidding documents from the concerned ECs as well as the closeout of previous completed projects by the concerned ECs.

Recently, DBM issued a Notice of Cash Allocation that can cover some of the NIHE projects. However, the disbursement to the concerned ECs will be subject to their compliance of the required documents and/or liquidation of previous project/fund.

Also, project close-out activities such as technical inspection and financial audit of completed projects were put on hold due to the travel restrictions imposed during the community quarantine.

Following are the lists of NIHE projects with pending releases from the DOE:

1. NIHE Projects with Pending Release of 15% of Approved Amount

Funding Year	Region	Distribution Utility	Approved Amount	Reason for Delay
2018	1	PANELCO III	24,885,000.00	Pending close-out of 2015 NIHE Project
2017	3	ZAMECO II	3,641,250.00	Pending close-out of 2016 NIHE Project
2018	6	ILECO II	28,691,250.00	Pending close-out of PVM Project
2018	8	LEYECO V	43,125,000.00	Pending close-out of 2015 NIHE Project

2. NIHE Projects with Pending Release of 85% or 100% of Approved Amount

Funding Year	Region	Distribution Utility	Approved Amount	Reason for Delay
2018	1	ISECO	12,626,250.00	NCA for LFP from DBM
2017	4A	QUEZELCO I	14,910,000.00	Lacking Bid Documents
2015	4B	BISELCO	375,000.00	Lacking Bid Documents
2017	4B	PALECO	2,392,500.00	NCA for LFP from DBM
2018	4B	MARELCO	15,442,500.00	NCA for LFP from DBM
2017	5	CANORECO	21,663,750.00	Lacking Bid Documents
2017	6	AKELCO	4,620,000.00	NCA for LFP from DBM
2017	8	LEYECO III	39,637,500.00	Lacking Bid Documents
2016	9	ZANECO	9,221,250.00	Pending close-out of 2016 NIHE Project
2018	9	ZAMSURECO I	83,505,000.00	Lacking Bid Documents
2017	10	FIBECO	3,858,750.00	Pending close-out of 2016 NIHE Project
2017	10	FIBECO	25,800,000.00	Pending close-out of 2016 NIHE Project
2018	10	MORESCO I	22,226,250.00	Pending close-out of 2015 NIHE Project
2017	12	COTELCO-PPALMA	81,881,250.00	Lacking Bid Documents
2016	CAR	BENECO	19,095,000.00	NCA for LFP from DBM
2018	CARAGA	ANECO	8,163,750.00	NCA for LFP from DBM

The DOE is currently preparing advisory guidelines for the ECs on the implementation of Locally Funded Projects in view of the current crisis the country is facing. The DOE is experiencing difficulty in timely releases of the project funds due to the delayed issuance of Notice of Cash Allocation by the DBM and EC's submission of complete bid documents. Also, the DOE received various reports from Distribution Utility (DU) Project

Implementers regarding the suspension of majority of activities because of the community quarantine rules imposed by different localities.

As part of IATF's minimum health safety protocol in ensuring safety during Covid-19 pandemic, some of the major activities restrict the completion of projects and likewise conduct technical inspections of completed projects. Thus, thorough, and proper documentation of the project's completion will be required from the corresponding DU implementers.

Despite the current crisis, the DOE assures that it is coordinating with the concerned ECs and continues processing of documents for the release of funds.

- Off-Grid Electrification

1. PV Mainstreaming (PVM) Program:

Below is the status of the PV Mainstreaming Program with the corresponding funding sources.

- a. DOE Locally-Funded Project

Funding under this Project was distributed to six (6) Electric Cooperatives for electricity service provision through 50 Wp solar home systems (SHS) to highly remote and unviable areas in the six (6) Provinces in the country. Breakdown of this Project and status to date are presented below.

Funding Year	Province	Distribution Utility	No. of HHs	Status
2017	Quezon	QUEZELCO II	1,333	Completed
	Palawan	BISELCO	3,711	Completed
	Bohol	BOHECO II	530	Completed
2018	Sulu	SULECO	2,575	On-going
	Iloilo	ILECO II	706	For final technical inspection & financial audit
	Zamboanga del Sur	ZAMSURECO I	1,129	On-going
2019	Palawan	BISELCO	1,129	Procurement concluded; installations to commence 2Q 2020
<b>Total</b>			<b>11,113</b>	

2. European Union –Philippines’ Access to Sustainable Energy Program (EU-PHIL ASEP)

As previously reported, this EU-PHIL ASEP grant proceeds provide investment support to 40,500 households in the inland and mountainous remote areas in Mindanao who cannot be connected to the main distribution lines of the Electric Cooperatives (ECs). A total of 10,000 households were already experiencing the benefits of solar PV electrification since 2019.

For the reporting period, preparatory activities were undertaken to proceed with the procurement of the remaining 30,500 solar home systems. The participating ECs have also started the ground works such as identification and enlistment of household beneficiaries, social marketing of the Project through barangay assemblies, among others. It is expected that Project implementation will commence immediately after this global crisis on COVID-19 is over.

Below is the list of the provinces benefitting from this EU-PHIL ASEP: PVM subcomponent.

Province	Electric Cooperative	No. of Households
Davao del Sur	DASURECO	10,000
South Cotabato	SOCOTECO II	10,000
Sultan Kudarat	SUKELCO	8,400
North Cotabato	COTELCO	7,500
Bukidnon	BUSECO	2,500
	FIBECO	2,100
Total		40,500

### 3. 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 the private sector to enter into QTP operations with the entry of renewables in off-grid electrification. On 22 November 2019, the DOE issued Department Circular No. DC2019-11-0015 provides a streamlined participation procedure for QTP, greater role for the Distribution Utilities in the selection process of QTP, and harmonized guidelines with the Renewable Energy Law.

In July 2020, the DOE conducted a Virtual Orientation with the Electric Cooperatives on the Amended QTP Circular. Strong emphasis was given on the guidelines to be observed on the conduct of Competitive Selection for the QTPs to serve the declared unviable areas. The National Electrification Administration provides strong technical assistance to support the Electric Cooperatives in the conduct of said competitive selection process.

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

#### a. Barangay Rio Tuba in the Municipality of Bataraza, Palawan

In June 2020, the QTP Service Contract between the National Power Corporation (NPC) and PowerSource Philippines, Inc. (PSPI). To avoid disruption of electricity service in the barangay, the Energy Regulatory Commission (ERC) extended the Authority to Operate to PSPI to continue operating as QTP for a period of six (6) months, beginning 18 June 2020. The Palawan Electric Cooperative (PALECO) is closely coordinating with key stakeholders and exerting efforts to ensure the continuity of electricity service once the said termination takes effect in December 2020.

For the reporting period, PSPI Rio Tuba has a recorded peak and off-peak load of 856 kW and 535 kW, respectively, with an average load of 696 kW. PSPI has recorded 19 new connections, totalling to 2,009 of HHs connections. There were a total 69.2 outage hours recorded in Rio Tuba.

#### b. Malapascua Island in the Municipality of Daanbantayan, Cebu

PSPI continues to operate its existing diesel gensets with a total capacity of 1.26 MW in the Island. As approved by the ERC, it charges PHP12.00/kWh for consumers with monthly consumption of 40kWh or less and PHP15.00/kWh for monthly consumption greater than 40kWh.

During the report period, 102 additional households were electrified making the total household connections of 1,270, achieving 94.5% electrification level. Malapascua has a recorded peak and off-load of 312 kW and 171 kW, respectively, and an average load of 238 kW with a reported total 11 outage hours.

c. Barangay Liminangcong in the Municipality of Taytay, Palawan

Residents of Brgy. Liminangcong were among the first beneficiaries of the QTP Program enjoying 24/7 access to electricity for only PHP8.50/kWh. To date, PSPI is serving 987 households with an additional 36 new connections. It recorded peak and off-peak demand of 244 kW and 112 kW, respectively.

The benefits of the electricity service will soon be extended to the adjacent island of Brgy. Tumbod. The ERC is still to approve the PSPI's application to extend its QTP operations in the subject barangay to serve an additional 942 households.

d. Barangays Candawaga and Culasian in the Municipality of Rizal, Palawan

In Candawaga-Culasian grid, PSPI will upgrade the existing distribution line and extend it to unreached areas in Rizal within the year to accommodate the still large number of unconnected households in the area. PSPI is only serving 43.9% of the total 2,203 households in the area.

The system has an installed capacity of 460 kW with a recorded peak and off-peak demand of 119 kW and 48 kW, respectively and a demand growth of 4.15%. PSPI is authorized by the ERC through interim relief issued in April 2018 to collect Subsidized Approved Retail Rate (SARR) of 9.9082 pesos per kilowatt-hour to its household consumers.

e. Barangay Cabayugan (Sabang), Puerto Princesa City, Palawan

SREC continues to provide 24/7 electricity to its customers and is set to connect more significant customers to grow its demand load and economic activity in the service area pending support from the local government and financial easing given the effects of COVID-19 on the local economy.

Currently, SREC is providing 24/7 electricity service to 535 consumers consisting of both commercial and residential customers. Connecting its largest institutional consumer, Sheridan Hotel and Resort, which will support the long-term viability of the operations, is underway.

SREC has recorded a peak load of about 10 kW and an off-peak load of almost 60 kW with 26 unscheduled power outages due to adverse weather conditions. SREC is authorized by the ERC to collect PhP12/kwh to the residential and public buildings and PhP 15/kwh for commercial establishments.

To date, SREC is yet to secure the Certificate of Compliance (COC) from the ERC. Once secured, SREC will now be able to claim the ERC-approved subsidy from the Universal Charge-Missionary Electrification to the NPC.

f. Lahuy and Haponan Islands in Caramoan and Quinalasag Island in Garchitorena, Camarines Sur

The ERC issued Provisional Authority to Operate to the First Philippine Island Energy Corporation (FPIEC) in June 2019. FPIEC is authorized to collect PhP12.00/kwh and PhP15.00/kWh for the residential/public buildings and commercial consumers, respectively for all the areas.

Because of Covid-19 related delays, the delivery of the materials and equipment to FPIEC's warehouses in Metro Manila which began in late 2019 was only completed in August 2020. Due to weather conditions, all materials and equipment only reached

Quinalasag at the start of September. Deliveries to the other two (2) islands are expected to be completed by the second week of September. FPIEC expects the construction of facilities and the installation of equipment to commence in October.

Most of the permits and licenses necessary for the QTP Project, from both the national government agencies and the local government units, have already been acquired. The Project's timeline has been considerably delayed due to the global pandemic such that FPIEC now expects to start commercial operations in March 2021.

For the report period, below is the summary status of the QTP projects:

PROJECT LOCATION	TECHNOLOGY	TARGET HHs	Served HHs	Electrification Level %	PROPONENT	STATUS
Rio Tuba, Bataraza, Palawan	1.05 MW Diesel - Biomass	5,103	1,990	39%	PSPI	Operational, Authority to Operate (ATO) issued by ERC, 2010
Malapascua, Daan-Bantayan, Cebu	750 kW Diesel	1,342	1,168	87%	PSPI	Operational, Permanent ATO issued by ERC, 2016
Sabang, Puerto Princesa City, Palawan	Hybrid : 1.4 MW Solar + 1.2 MW Diesel + 2.3 MWh Battery	769	535	69.57%	SREC	Authority to Operate (ATO) issued by ERC 05 October 2016
Candawaga & Culasian, Rizal, Palawan	268 kW Diesel	2,151	946	44%	PSPI	Interim Relief, April 2018
Balut Island, Saranggani, Davao Occidental	690 kW Diesel	4,003			PSPI	Interim Relief, April 2018
Liminangcong, Taytay, Palawan	108 kW Diesel	1,199	951	79.3%	PSPI	Provisional ATO issued by ERC, 2016
Brgy. Tumbod, Taytay, Palawan	Line extension from Brgy. Liminangcong	395			PSPI	Expositor y Hearing conducted on 25 April 2019

PROJECT LOCATION	TECHNOLOGY	TARGET HHs	Served HHs	Electrification Level %	PROPONENT	STATUS
Lahuy Island, Haponan Island in Municipality of Caramoan and Quinasalag Island in the Municipality of Garchitorea, Camarines Sur	Lahuy Island: 246 kWp Solar + 400 kW Diesel + 79kWh Battery  Haponan Island: 51.4 kWp Solar + 100 kW Diesel + 19 kWh Battery  Quinalasag Island: 331 kWp Solar + 500 kW Diesel + 80kWh Battery	Lahuy: 550 HHs  Haponan: 87 HHs  Quinalasag : 705 HHs			FPIEC	Endorsed to ERC (23 Jan 2018)
Bgy. Poblacion, Dumarán, Palawan	Hybrid: 132.8 kWp Solar + 144 kW Diesel + 351.1 kWh Battery	497			PSPI	Endorsed to ERC (18 March 2019)
Bgy. Manamoc, Cuyo, Palawan	216 kW Diesel	605			PSPI	Endorsed to ERC (18 March 2019)
Bgy. Port Barton, San Vicente, Palawan	Hybrid: 200 kWp Solar + 609.5 kW Diesel + 200 kWh Battery	1,259			PSPI	Endorsed to ERC (18 March 2019)

## VIII. PROMOTION OF RURAL ELECTRIFICATION

Pursuant to Section 58 of the EPIRA, as additional mandate, the National Electrification Administration (NEA) shall develop and implement programs in strengthening the technical capability and financial viability of the rural ECs as electric utilities and to prepare the said ECs to operate and compete in deregulated electricity market, specifically in environment open access and retail wheeling.

### 1. Financial Assistance

During the report period, NEA released a total of PhP60.82 Million loans to six (6) ECs with the following breakdown:

Particulars	No	Electric Cooperatives	Project	Amount (In PhP Million)
Capital Projects	1	Misamis Oriental-1 Rural Electric Service Cooperative, Inc.	For the supply, delivery, installation & commissioning of 3 units, 2MW Modular Gensets	38.8
	2	Masbate Electric Cooperative	Construction of Cataingan 10MVA substation at Curvada, Cataingan (final release)	20.3
	3	Misamis Oriental-1 Rural Electric Service Cooperative, Inc.	Construction of Line Enhancement Projects	21.3
	4	Davao Del Norte Electric Cooperative, Inc.	Construction of two storey building	24.5
	5	Surigao del Sur I Electric Cooperative, Inc.	Upgrading of San Fernando substation from 5MVA to 10MVA	2.1
<b>TOTAL</b>				<b>60.82</b>

### 2. Competency Seminars and Training Programs for EC Personnel

In increasing the learning curve of NEA and ECs through competency programs for EC personnel, NEA conducted the following activities accordingly:

Date	Title of Training/Seminar	No. of Participants
June 22 – 26, 2020	Leading in Times of Crisis via Zoom Video Conferencing	30
July 14 - 17	Supervisory Development Course	34
July 27 - 31	Leading in Times of Crisis	39
August 10 - 13	Supervisory Development Course (Batch 2)	34

## IX. POLICY ISSUANCES

The Department of Energy under Section 37 of the EPIRA is mandated to formulate rules and regulations as may be necessary to implement its objectives; and exercise such other powers as may be necessary or incidental to attain the objectives of the Act.

Despite the limitations in movement brought about by the community quarantine, the DOE was able to continue its consultative process of policy-making through the conduct of virtual public consultations and posting of draft policies in the DOE website.

Following are the policies promulgated in 2020 and other proposed policies in different stages of developments:

### A. Policies Adopted and Promulgated

1. **Department Circular (DC) No. DC2020-04-0008 “Rationalizing the Utilization of ER 1-94 Funds by Host Local Government Units in Response to COVID-19 Public Health Emergency” at Philippine Star newspaper.**

Under the Circular, all available and unremitted ER 1-94 Funds with the Department and concerned power generation companies (GenCos) as of 31 December 2019 shall be immediately distributed to the host LGUs for them to have readily available funding to undertake their duty to contain COVID-19 in their respective areas.

2. **Adopting Further Amendments to the Wholesale Electricity Spot Market (WESM) Rules and Market Manual on Registration, Suspension and De-Registration Criteria and Procedures for the Implementation of Enhancements to WESM Design and Operations (Provisions for Registration of New Facility and Harmonization with Republic Act No. 11234 entitled “An Act Establishing the Energy Virtual One-Stop Shop Act”)**

The policy enhances the WESM’s Registration processes and requirements for generation companies. The policy was promulgated as Department Circular No. DC2020-06-0013 on 01 June 2020 and was published in a newspaper on Published on 17 June 2020.

3. **Adopting Further Amendments to the Wholesale Electricity Spot Market (WESM) Rules and Market Manual on Billing and Settlement for the Implementation of Enhancements to the WESM Design and Operations (Provisions for Prudential Requirements)**

The policy introduced an appropriate formula for the computation of the initial prudential requirements in line with the target commercial operation of WESM in Mindanao and implementation of enhancement to the WESM design and operations. The policy was promulgated as Department Circular DC2020-06-0014 on 02 June 2020 and was published on 17 June 2020.

### B. Policies Proposed

1. **Draft Department Circular (DC) Prescribing Revised Guidelines for Disconnection of Electric Power Industry Participants**

The proposed policy is an amendment to DC2010-08-0010 “Prescribing the Implementing Rules and Procedures for DC No. DC2010-05-0006: Terminating the Default Wholesale

Supplier Arrangement for the Philippine Wholesale Electricity Spot Market (WESM) and Declaring a Disconnection Policy”.

The following are its objectives:

- a. To establish a disconnection policy to ensure that all electric power industry participants comply with the EPIRA; its IRRs, and all other related rules and regulations with the end goal of encouraging new power generation investments in the country; and
- b. To minimize if not avoid existing leakages in the electric power systems due to unauthorized withdrawal of electricity as well as unmetered and unbilled consumptions of facilities connected to the grid.

Rationale for the Amendments are as follows:

- a. The policy is not applicable to Visayas and Mindanao Grid since the Circular was initially intended to address issues regarding start of commercial operations of WESM in Luzon;
- b. Some provision on the Circular needs to be amended to realign with the current rules; and
- c. Additional grounds for disconnection are identified necessary for inclusion in the Circular.

## **2. Draft DC Adopting a General Framework Governing the Test and Commissioning of Generation Facilities**

The said draft DC aims to address the concerns on the extended conduct of Test and Commissioning of several plants, specifically exceeding the prescribed two-month period of the Energy Regulatory Commission (ERC) in its Resolution No. 16 Series of 2014 (“2014 Revised Rules for the Issuance of Certificate of Compliance for Generation Companies, Qualified End-Users and Entities with Self-Generation Facilities). Moreover, the said draft DC considered the following initial recommendations gathered from the stakeholders during the Focus Group Discussions:

- a. Various test and commissioning activities are conducted by the different entities (i.e. plant contractor, Transmission Network Provider) to meet various specifications and standards;
- b. Allowable period for the conduct of Test and Commissioning should be differentiated for various technologies;
- c. Revisit the definition of Test and Commissioning in the COC Rules; and
- d. Need to develop definite procedures for the conduct of Test and Commissioning.

## **3. Draft DC Adopting General Guidelines for the Conduct of PAA for the Electric Power Industry Participants**

The proposed policy is supplemental to the DC2017-05-0008 which provides for policies and guidelines, and mandates the conduct of PAA of all Power Generation, Transmission and Distribution Systems and Facilities; and DC2017-12-0016 which adopts guidelines and

provides relevant entities for continuing conduct of respective PAA to direct Electric Power Industry Participants to implement PAA activities.

The following are its objectives:

- a. The DOE proposed policy aims to institutionalize the conduct PAA on Power Generation, Transmission and Distribution Systems and Facilities through the entities mandated by law, specifically the ERC ; and
- b. To establish a comprehensive and sustainable mechanism to confirm and validate the level of compliance, by adopting the proposed policies and guidelines on the conduct of Performance Assessment and Audit.

The Rationale for the policy proposal are as follows:

- a. Abolition of ERC's technical arms, i.e. Grid Management Committee and Distribution Management Committee;
- b. Government's limited human power and expertise; numerous number of Electric Power Industry Participants;
- c. Voluminous compliance reports;
- d. Credibility, reliability and independency of assessment and audit findings; and
- e. Streamlining processes of compliance, the DOE commenced study on the development of guidelines and parameters which was subjected to a series of public consultations.

Annex 4 provides the additional list of other policy proposals.

# ANNEXES

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Annex 1. TransCo Inspection Report Based on Concession Agreement (June 2020 to August 2020)

No.	Inspection Report No.	Location	Name of Project/ Transmission Facilities	Inspection Date
<b>LUZON</b>				
1	SLR-D3-20-22	District 3	Daraga, Naga, & Labo Substations, Sta. Magdalena Cable Terminal Station, Bulan, Balogo, Ligao, Iriga, Libmanan, & Talisay Load-end Stations, and Bicol Area Control Center	June 16-19, 2020
2	SLR-D1-20-23	District 1	Dasmariñas - Tayabas 500kV Transmission Line	June 16-19, 2020
3	NLR-AC-20-25	North Luzon	North Luzon Area Control Center (Benguet)	June 23-26, 2020
4	SLR-RS-20-28	South Luzon	South Luzon Repeater Station (Calapan)	June 30- July 02, 2020
5	NLR-D3-20-31	North Luzon	San Manuel, Nagsaag, Labrador, Bolo, & Balingueo Substations	June 30- July 03, 2020
6	SLR-RS-20-29	South Luzon	Looc Repeater Station	July 02-03, 2020
7	SLR-RS-20-37	South Luzon	Regional Control Center, Majic & Busay RS	July 28-30, 2020
8	NLR-D7-20-39	District 7	San Jose, Malaya, Quezon, Doña Imelda, Taytay Substations, Angat & San Mateo Repeater Stations, and Angat Power House	July 28 – August 4, 2020
9	NLR-D2-20-40	District 2 North Luzon	La Trinidad, Binga, Itogon, Ambuklao	August 4-7, 2020
10	NLR-D4-20-41	District 4 North Luzon	Santiago, Tuguegarao, Gamu & Bayombong Substations and Ilagan & Lagawe Load End Substations	August 4-7, 2020
11	SLR-MA-20-42	South Luzon	Maintenance & Testing Division-A, South Luzon	August 4- 7, 2020
12	NLR-NC-20-43	North Luzon	National Control Center (NCC) & Luzon System Operations (LSO)	August 11-14, 2020
13	NLR-D6-20-45	District 6 North Luzon	Meco SS, Concepcion SS, San Rafael SS, Cabanatuan SS, Pantabangan SS, Pantabangan LES, CLACC & Fatima RS	August 11-14, 2020
14	NLR-D5-20-47	District 5 North Luzon	Hermosa, Limay, Olongapo, Botolan, SBMA & Subic Substations and BCCPP Switching Station	August 11-14, 2020
15	NLR-D1-20-50	District 1 North Luzon	Bauang, Bacnotan, San Esteban, Currimao, Bantay, Laoag	August 25-28, 2020
16	NLR-PR-20-03	North Luzon	Luzon PCB Replacement Project 1	August 25-26, 2020
<b>VISAYAS</b>				
1	VIS-AC-20-20	Visayas	Panay Area Control Center and Jordan Repeater Station	June 16-18, 2020
2	VIS-RS-20-26	Visayas	Visayas Repeater Station (Cebu)	June 23-26, 2020
3	VIS-MA-20-32	Visayas	Visayas MTD-A	June 30- July 03, 2020
4	VIS-D2-20-35	District 2 Visayas	Corella SS, Tagbilaran SS, Ubay SS, West Poblacion CBS, Garcia Hernandez LES, Trinidad CBS and CP Garcia (Tugas) CTS and VCA of Bohol ACC, Loon and Jagna Repeater Stations	July 14 - 17, 2020
5	VIS-RC-20-36	Visayas	Visayas Regional Control Center, Minglanilla & Babag Repeater Stations	July 28-30, 2020
6	VIS-D4-20-38	District 4 Visayas	Sta. Barbara, Barotac Viejo, Dingle, Panit-an, Nabas, Concepcion & San Jose Substations, San Juan Cable Terminal Station and Boracay Load-End Station	July 28 – August 4, 2020
7	VIS-MB-20-46	Visayas	Maintenance & Testing Division-B, Visayas	August 11-14, 2020
8	VIS-D2-20-49	District 2 Visayas	Corella, Tagbilaran, & Ubay Substations, West Poblacion & Trinidad Capacitor Bank Stations, Garcia Hernandez Load End Station and C.P. Garcia Cable Terminal Station	August 25-28, 2020
9	VIS-D1-20-51	District 1 Visayas	Ormoc, Maasin, Tabango, Babatngon, Calbayog, Paranas (Wright) & Sta. Rita (Bagolibas) S/S, Guadalupe CTS, Hilongos PCB Station, Albuera Electrode Station, Tolosa Capacitor Bank Station and Ormoc HVDC Station	August 25-28, 2020
<b>MINDANAO</b>				
1	MIN-D4-20-21	District 4	Butuan, Nasipit, Bislig, San Francisco and Placer Substations	June 16-19, 2020
2	MIN-RC-20-24	Mindanao	Mindanao Regional Control Center (Cagayan)	June 23-26, 2020
3	MIN-MA-20-27	Mindanao	Mindanao MTD-A	June 23-26, 2020

No.	Inspection Report No.	Location	Name of Project/ Transmission Facilities	Inspection Date
4	MIN-RS-20-30	Mindanao	North Western Mindanao Repeater Station (Dinas, Ozamiz, and Lopez Jaena)	June 30- July 03, 2020
5	MIN-D2-20-33	District 2 Mindanao	Iligan, Balo-i, Agus 6/7 & Lugait Substations and Agus 5 HEP & Switchyard	June 30- July 03, 2020
6	MIN-AC-20-34	Mindanao	"General Santos Area Control Center, Calumpang, Malalag, and Tupi Repeater Stations"	July 14 - 17, 2020
7	MIN-D6-20-44	District 6 Mindanao	General Santos, Tacurong, Kidapawan & Sultan Kudarat Substations	August 11-14, 2020
8	MIN-D1-20-48	District 1 Mindanao	Pitogo, Zamboanga, Naga & Aurora Substations and Tumaga (Lunzurun) Capacitor Bank Station	August 25-28, 2020

Source: Transco

*Annex 2. NGCP Related Petitions to ERC as of August 2020*

DECISION/CASE NO./ DATE OF FILING	NATURE OF PETITION	GROUND FOR FILING	STATUS
ERC Case No. 2019-086RC/October 29, 2019	Interim Maximum Annual Revenue for CY 2020 with Prayer for the Urgent Issuance of Provisional Authority	<ul style="list-style-type: none"> <li>• Immediately ISSUE an Order provisionally approving the collection of the iMAR2020 in the amount of PhP58,846Mn effective January 2020 billing month (December 26, 2019 to January 25, 2020); and</li> <li>• APPROVE, after notice and hearing, the authority to collect the iMAR2020 in the amount of PhP58,846Mn.</li> </ul>	<p>On August 17, 2020, TransCo received a copy of NGCP's Urgent Motion (to conduct Virtual hearing) dated July 20, 2020.</p> <p>On August 24, 2020, the ERC promulgated ERC Order dated August 17, 2020 wherein the Commission sets virtual hearings on the following dates:</p> <p>September 3, 2020 – expository presentation for the Visayas stakeholders                      - September 10, 2020 – expository for the Mindanao stakeholders                      - September 17, 2020 – pre-trial and Evidentiary                      September 24, 2020 – continuation of Evidentiary hearing</p>
ERC Case No. 2019-051RC/21 June 2019	Application for Approval of the Ancillary Services Procurement Agreement (ASPA) Between the National Grid Corporation of the Philippines and Prime Meridian Powergen Corporation (PMPC)	<ul style="list-style-type: none"> <li>• APPROVE the ASPA between NGCP and PMPC dated 14 May 2019 pursuant to the Decision dated 03 October 2007 in ERC Case No. 2006-049RC entitled “In the Matter of the Application for the Approval of Ancillary Services-Cost Recovery Mechanism of the Ancillary Service Procurement Plan with Prayer for Provisional Authority”.</li> </ul>	<p>On July 7, 2020, TransCo received copy of NGCP's Compliance dated June 11, 2020.</p> <p>On August 12, 2020, TransCo received PMPC's (Co-applicant) Manifestation dated August 12, 2020 submitting to the Commission the Accreditation Certificate issued by NGCP on August 1, 2020 which certifies that Unit 2 of PMPC has been tested and proven its capability of providing Regulating Reserve of 40 MW.</p>
ERC Case No. 2019-100RC/ December 27, 2019	Application for Approval of the Ancillary Services Procurement Agreement between the National Grid Corporation of the Philippines and AP Renewables Inc. For Makban A	<ul style="list-style-type: none"> <li>• Immediately ISSUE a provisional authority to implement the subject ASPA executed on 18 November 2019; and</li> <li>• APPROVE, after notice and hearing, the subject ASPA.</li> </ul>	<p>On July 7, 2020, TransCo received copy of NGCP's Compliance dated June 11, 2020.</p>
ERC Case No. 2019-092RC/ December 17, 2019	Application for the Approval of the Implementation of the Cebu - Bohol 230 kV Interconnection Project.	<ul style="list-style-type: none"> <li>• Immediately ISSUE an Order provisionally authorizing the implementation of the Cebu – Bohol 230 kV Interconnection Project; and</li> <li>• After notice and hearing, APPROVE the Application for the implementation of the Cebu – Bohol 230 kV Interconnection Project.</li> </ul>	<p>On July 30, 2020, TransCo received copy of NGCP's Urgent Motion.</p>

DECISION/CASE NO./ DATE OF FILING	NATURE OF PETITION	GROUNDS FOR FILING	STATUS
ERC Case No. 2019-086RC/ October 29, 2019	Interim Maximum Annual Revenue for CY 2020 with Prayer for the Urgent Issuance of Provisional Authority	<ul style="list-style-type: none"> <li>• Immediately Issue an Order provisionally approving the collection of the IMAR2020 in the amount of PhP58,846 Million effective January 2020 billing month (December 26, 2019 to January 25, 2020)</li> <li>• Approve, after notice and hearing the authority to collect the IMAR 2020 in the amount of PhP58,846 Million.</li> </ul>	<p>On July 29, 2020, TransCo received a copy of NGCP's Opposition to TransCo's presentation of Expert witness during the July 15, 2020 Hearing.</p> <p>Hearing on the case was conducted by ERC on July 15, 2020; TransCo presented its Expert Witness, Dr. Joel C. Yu, Ph.D.</p> <p>On July 7, 2020 – TransCo submitted its reply to NGCP's Comments on TransCo's MR.</p> <p>On June 23, 2020, TransCo Received NGCP's Comments on TransCo's MR dated June 16, 2020.</p>
ERC Case No. 2019-085RC/ October 29, 2019	Application for the Approval of the Force Majeure Event Regulated FM Passthrough for Typhoon "Rosita" in Luzon In Accordance With The Rules For Setting Transmission Wheeling Rates	<ul style="list-style-type: none"> <li>• Declare the occurrence of Typhoon "Rosita" in Luzon which resulted in an increase in costs incurred by the NGCP to restore, repair and rehabilitate various affected transmission assets and facilities in the NGCP North Luzon Operations and Maintenance District 4, as a Force Majeure Event (FME).</li> <li>• Immediately grant Provisional Authority to implement and bill the following FM Pass-Through Amounts to Luzon customers starting the billing month of January 2020 to December 2020, or until such time that the amounts incurred are fully recovered.</li> <li>• Approve the FME CAPEX and OPEX amounting to One Million Nine Hundred One Thousand Seven Hundred Eleven Pesos (PhP1,901,711.33) incurred NGCP for the repair, restoration, and rehabilitation of the damaged transmission assets and facilities due to FME Typhoon "Rosita".</li> <li>• Approve and allow the partial recovery of the Net Fixed Asset Value (NFAV) of the transmission assets and facilities damaged by the FME Typhoon "Rosita" amounting to Seven Hundred Fifty Thousand Four Hundred Five Pesos and Eighty Five Centavos (PhP750,405.85) given that it would have been fully recovered by NGCP if these transmission assets and facilities have not been damaged or destroyed by</li> </ul>	NGCP's compliance and Manifestation relative to the directive of the ERC during the 12 February 2020 hearing.

DECISION/CASE NO./ DATE OF FILING	NATURE OF PETITION	GROUNDS FOR FILING	STATUS
		<p>the said FME; and the NFAV of other assets and facilities affected by the same typhoon which are yet to be retired, be considered during the updating of the costs prior to the evaluation/approval of the case or during the next Reset Process.</p> <ul style="list-style-type: none"> <li>• Approve, after due notice and hearing the proposed FM Pass-Through Amounts to be collected from the Luzon customers starting January 2020 billing month to December 2020, or until such time that the amounts incurred are fully recovered.</li> <li>• Exclude the proposed Pass-Through Amounts from the side constraint calculation.</li> </ul>	
ERC Case No. 2016-179RC/ October 10, 2016	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.	<ul style="list-style-type: none"> <li>• Declare Typhoon Lando in Luzon and Sabotage Incidents in Mindanao as Force Majeure Events (FMEs).</li> <li>• Immediately grant Provisional Authority 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>• 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 facilities due to FMEs Typhoon Lando and sabotage incidents in Mindanao.</li> <li>• 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 or until such time that the amount incurred is fully recovered.</li> <li>• Approve and allow the recovery of the NFAV 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</li> </ul>	NGCP's compliance and Manifestation relative to the directive of the ERC during the 12 February 2020 hearing.

DECISION/CASE NO./ DATE OF FILING	NATURE OF PETITION	GROUNDS FOR FILING	STATUS
		and other related facilities have not been damaged or destroyed by said FME. <ul style="list-style-type: none"> <li>• Exclude the proposed Pass-Through amount from the side constraint calculation.</li> </ul>	

Source: Transco

*Annex 3. ERC Approved Capital Expenditure Projects*

APPLICANT	PROJECT DESCRIPTION	RATIONALE	PROJECT COST (Php)	ERC CASE NO.	DATE FILED/ APPROVED
PANELCO I	<b>CAPITAL EXPENDITURE PROJECTS</b>				
	Replacement of Out Modeled Secondary Protection Devices, Severed Primary Protection Devices and Severed Panel Board Secondary Protection Devices.	This project involves the installation of circuit breakers, protective relays, and the respective panel boards in Palanis, Tara, Bani, and Dasol substations.	14,423,016.00	<b>2017-105 RC</b>	10 November 2017/ 8 May 2020
	Relocation of 69 kV Line (DPWH Widening Project).	This project involves the relocation of 69 kV distribution line affected by the road widening project of the DPWH.	To be funded by DPWH		
	Relocation of Electrical Lines due to Road Widening (DPWH Project).	This project involves the relocation of the primary (13.8 kV facilities) and secondary (low voltage facilities) distribution lines affected by the road widening project of the DPWH.	To be funded by DPWH		
	Rerouting of 13.2 kV Three Phase Primary Line (Catubig to Malong, Anda).	This project involves the relocation of the existing 3-phase line from Brgy. Catubig, Bolinao to Brgy. Mal-Ong, Anda road right-of-way (Anda Bridge).	874,117.86		
	Extension of Secondary Line Requirement.	This project involves the rehabilitation of overextended service drop wire through the extension of PANELCO I's secondary distribution line.	8,391,689.60		
	Replacement of PCB Contaminated Electrical Equipment.	This project involves the replacement of Polychlorinated Biphenyls (PCB) contaminated distribution transformers using new equipment.	3,238,000.00		
	PCB Equipment Storage Facility and PCB Equipment Disposal.	This project involves the testing of suspected PCB contaminated equipment, construction of storage facility, and disposal of PCB contaminated equipment.	427,786.98		
	Personal Protective Equipment and Safety Tools Requirement.	This project involves the procurement of personal protective equipment (i.e. hard hat, safety shoes, safety goggles, etc.) and safety tools (i.e. telescopic stick and hot stick).	2,444,034.29		
	Rerouting and Upgrading from Single Phase to Three Phase the Primary Line from Gais Guipe to Lake Uli.	The subject project involves the following activities: 1. Rerouting/relocation of the existing 1-phase primary line from Gais Guipe to Uli, Dasol, Pangasinan; and 2. Construction of 3-phase line from Bobonot to Gais Guipe, Dasol, Pangasinan.	23,288,094.19		
	Acquisition and Installation of Additional 10 MVA Power Transformer to the Existing Bani substation.	The subject project involves the following activities: 1. Installation of an additional 10 MVA power transformer in PANELCO I's Bani substation;	60,631,254.72		

APPLICANT	PROJECT DESCRIPTION	RATIONALE	PROJECT COST (PhP)	ERC CASE NO.	DATE FILED/ APPROVED
		<ol style="list-style-type: none"> <li>2. Construction of the necessary gantry and supporting structures including the installation of the appropriate protective devices for the new power transformer; and</li> <li>3. Construction of out-going feeders for the new power transformer.</li> </ol>			
	Acquisition and Installation of Additional 20 MVA substation 5.5 km from Tara Substation.	<p>The subject project involves the following activities:</p> <ol style="list-style-type: none"> <li>1. Installation of a 20 MVA Substation in Bolinao, Pangasinan, approximately 5.5 km away from the existing Tara Substation;</li> <li>2. Construction of 5.5 km 69 kV distribution line;</li> <li>3. Construction of 3 km 13.8 kV outgoing feeder line; and</li> <li>4. Connection of the distribution network of Santiago Island to the new 20 MVA Substation in Bolinao, Pangasinan.</li> </ol>	121,807,329.02		
	Acquisition and Installation of Additional 10 MVA Power Transformer to the Existing Palamis Substation.	<p>The subject project involves the following activities:</p> <ol style="list-style-type: none"> <li>1. Installation of an Additional 10 MVA power transformer in PANELCO I's Palamis Substation;</li> <li>2. Construction of the necessary gantry and supporting structures including the installation of the appropriate protective devices for the new power transformer; and</li> <li>3. Reconfiguration of the existing 13.8 kV outgoing feeder circuit of Palamis Substation to a double circuit three phase line.</li> </ol>	48,075,311.54		
	kWh-meter New Connection Requirement.	This projects involves the procurement of kilowatt-hour meters and associate accessories.	39,250,394.80		
	Service Drop Wires Requirement.	This project involves the installation of service drop wires.	5,717,200.00		
	Electrical Lines Requirements.	This project involves the extension of primary and secondary distribution lines.	35,204,514.94		
	Distribution Transformer Requirement.	This project involves the procurement and installation of distribution transformers for new customers.	33,510,643.92		
	Replacement of Busted Distribution Transformers.	This project involves the procurement and installation of distribution transformers as replacement for damaged/deteriorated equipment.	14,470,146.24		
	Rural Electrification Projects.	This project involves the extension and construction of primary and secondary distribution lines in remote and unviable areas.	56,224,574.70		
	Replacement of Cut-Outs in Strategic Places.	This project involves the installation of autolink sectionalizers.	2,928,640.00		

APPLICANT	PROJECT DESCRIPTION	RATIONALE	PROJECT COST (PhP)	ERC CASE NO.	DATE FILED/ APPROVED
	Installation of Fault Indicator on Strategic Places.	This project involves the installation of one-hundred twenty (120) units of fault indicators in PANELCO I's distribution lines.	3,462,000.00		
	Acquisition of Buffer Stock for Line Hardware.	This project involves the procurement of poles, conductors, distribution transformers, electric kWh meters, and service drop wires as buffer stock.	16,028,216.00		
	Crimping of Service Drop Wires.	This project involves the procurement of compression connectors and re-tightening of electrical bonding/connection between PANELCO I's distribution lines and the customer's service drop wires.	1,149,400.00		
	Installation and Replacement of Existing Feeder Metering.	This project involves the installation of new feeder meters to those un-metered feeders and replacement of the existing feeder meters in all substations of PANELCO I.	411,587.00		
	kwh-meter Replacement Requirement.	This project involves the replacement of defective kilowatt-hour meters.	4,997,020.00		
	Installation of Distribution Transformer Check-meters (kWH-meter).	This project involves the installation of check meters (metering facilities) to identify distribution transformers in PANELCO I's distribution system.	8,720,093.25		
	Utility Vehicle Requirement.	This project involves the procurement of manlift trucks, utility vehicles and service vehicles.	26,474,700.00		
	Construction of Sub-office Building in the Town of Alaminos.	This project involves the construction of PANELCO I's sub-office in the City of Alaminos, Province of Pangasinan.	4,792,038.11		
	Construction of an Administrative Building.	This project involves the construction of PANELCO I's new main office building in Brgy. San Jose, Bani, Pangasinan.	89,426,472.96		
	Replacement of Network Switch and Old Unserviceable Computers with Brand New Units.	This project involves the procurement of desktop computers and network switches.	1,146,496.62		
	Acquisition of Wireless Communication System.	This project involves the installation of wireless communication facilities in PANELCO I's main office and its respective sub-offices.	5,348,805.00		
	Acquisition and Installation of Back-up Power Generation System.	This project involves the acquisition and installation of a 125 kVA diesel generator at PANELCO I's main office.	2,373,120.43		
	Labelling Requirements.	This project involves the procurement of labelling materials (reflectorized stickers with appropriate markings).	1,648,003.50		
	Software (Accounting System, Consumer Management System, Electric Billing & Collection Integrated System, Warehouse & Inventory).	This project involves the procurement of associated software for PANELCO I's accounting system, consumer management system, electric billing and collection system, and warehouse management system.	9,793,110.00		

APPLICANT	PROJECT DESCRIPTION	RATIONALE	PROJECT COST (Php)	ERC CASE NO.	DATE FILED/ APPROVED
	Procurement of Testing Measuring Equipment for Substations, Power Quality and Metering.	This project involves the procurement of the following test instrument: Insulation power factor tester, Transformer turns ratio tester, Dielectric breakdown voltage tester, Insulation resistance tester, Relay tester, Contact resistance tester, Portable multi-tester, and Clamp ammeter.	3,392,618.00		
	Procurement of Tools and Line Equipment for Maintenance.	This project involves the procurement of tools and equipment such as adjustable wrench, chain saw, crimping tool, electrical pliers, ratchet, post hole digger, etc.	4,984,726.99		
TARELCO II	<b>ELECTRIC UNPLANNED CAPITAL EXPENDITURE PROJECTS</b>			<b>2018-079 RC</b>	19 July 2018/ 27 May 2020
	Construction of new 5 MVA S/S in Magunting, Sto. Rosario, Concepcion, Tarlac.	Construction of a new substation at Magunting, Sto. Rosario, Concepcion, Tarlac utilizing TARELCO II's spare 5 MVA power transformer and installation of approximately 0.35 km of 69 kV line.	26,219,000.00		
	Construction of new 10 MVA S/S in Zaragoza, Nueva Ecija.	Construction of new 10 MVA substation in Zaragoza, Nueva Ecija and installation of approximately 6.5 km of 69 kV line.	52,235,473.76		
	Purchase of Service Vehicle.	Procurement of service vehicle to facilitate delivery of service to customers.	959,998.00		
TEI	<b>MAJOR CAPITAL EXPENDITURE PROJECTS</b>			<b>2014-184 RC</b>	16 December 2014/ 10 June 2020
	69kV Line Rehabilitation and Upgrading to 795 MCM ACSR Conductor from NGCP Concepcion to Tarlac Junction via Maliwalo Line; and Conversion to Ring Type System.	The said rehabilitation is necessary due to the deterioration of said lines and structures resulting from the normal wear and tear of the assets since the said lines have been in service for more than thirty (30) years.	56,117,314.51		
	Distribution Transformers Replacement and Proper Disposal for DENR Safety Compliance.	The project is a compliance to DENR Administrative Order No. 01, Series of 2014, requiring the replacement of all non-compliant DTs or DTs that are not PCB-free.	104,573,589.79		
	Construction of New Warehouse with Office Spaces for the Retail Services Division.	The project intends to promote improvement and efficiencies in the delivery of services by TEI.	14,187,921.15		
	Installation of Data Domain back-up.	The project intends to improve the service efficiency of TEI.	13,483,670.12		
	Refurbishment of Non-Supervisory Control and Data Acquisition (SCADA)-Ready Meters and Relays.	The project is necessary to accurately monitor the system, thus allowing TEI to immediately act on	18,406,041.19		

APPLICANT	PROJECT DESCRIPTION	RATIONALE	PROJECT COST (PhP)	ERC CASE NO.	DATE FILED/ APPROVED
		abnormal situations through remote fault isolation and service restoration.			
SOCOTECO II	<b>INTERIM CAPITAL EXPENDITURE PROGRAM</b>				
	Relocation of 25 MVA Power Transformer from Main Office Substation to Polomolok Substation.	The uprating of the 10/12.5 MVA Polomolok Substation will address the overloading capacity of the said substation brought about by the development in the affected area.	10,000,000.00	<b>2014-088 RC</b>	19 June 2014/ 30 June 2020
	Modification of New Society Substation.	This project will maximize the usage of the 12-hectare piece of land owned by SOCOTECO II, where the New Society Substation is installed, to give way to other future development in the area, including the development of a 20MW diesel power plant, and the expansion of the main office building and the warehouse of SOCOTECO II.	22,173,452.65		
	Installation of Automatic Circuit Reclosers.	The protective reach of the feeders' breaker is limited in that when a high impedance fault occurs in various Feeders, the existing protection component in the substation could not sense the minimum fault.	11,250,000.00		
	Procurement of adequate stocks of critical spare parts such as 15kV outdoor-type circuit breaker, battery charger 48 VDC and 125 VDC, industrial batteries and sets of station class 69 kV and 13.2 kV lightning arresters.	SOCOTECO II must maintain adequate stocks of critical spare parts. Insufficient stocks affects the overall performance of physical assets, as lack of spares may result in its inability to respond to emergencies and contingencies on a timely basis.	4,040,000.00		
	Installation of IEC-Compliant Three-Phase Meters.	The installation of new meters will expedite the preparation of the data needed for its regulatory compliances, including the PGC and PDC.	1,006,632.00		
	Acquisition of 24sets of 70:1 Potential Transformer; 15kV Single Bushing; and 24sets of 200:5 Extended Range Current Transformer 15kV.	The implementation of this project will accommodate the incoming new large load industrial customers of SOCOTECO II in its system. The metering equipment is also necessary to measure the power consumption of these new customers.	7,200,000.00		
	Acquisition of 10kVA, 15kVA, 25kVA, 37.5kVA, 50kVA, 75kVA and 100kVA Distribution Transformers.	This project will accommodate its load growth.	6,983,779.00		
	Construction of 47 kilometers low voltage secondary lines using 1/0 ACSR and 30-foot poles.	With the implementation of this project, new customers will be provided with the necessary low voltage secondary lines.	9,296,412.00		
	Installation of kWh-meters, class 200, 2W, 240V, form 1S, socket-type	This project is needed to accommodate new customers.	11,249,600.00		

APPLICANT	PROJECT DESCRIPTION	RATIONALE	PROJECT COST (PhP)	ERC CASE NO.	DATE FILED/ APPROVED
	electronic for 6,809 add-on residential customers.				
	Installation of Close Circuit Television (CCTV) security camera and radio frequency repeater.	This project will help enhance security measures in the properties of SOCOTECO II.	2,118,681.00		
	<b>CAPITAL EXPENDITURE PROJECTS</b>				
<b>CEBECO III</b>	Installation of 4 units of Gang Type Disconnect Switches in lieu of the individually-operated disconnect switches.	The project is intended to maintain the security of the distribution system.	1,038,000.00	<b>2016-140 RC</b>	13 June 2016/ 30 June 2020
	Installation of Disconnect Switches on both three-phase and single-phase lateral lines that could loop two or more power sources.	To provide a safe and reliable distribution system.	767,360.00		
	Installation of Fuse Cutouts with arrester on all lateral sections to provide protection for the feeder and isolate the faulted section from the unfaulted sections.	Fuse Cutouts will absorb the impact of the threshold breaching and self-destruct, thus, preventing any damage on the distribution assets during fault incidence.	1,112,540.00		
	Construction of 5/6.25 MVA substation at Guinabasan, Asturias with two (2) outgoing feeders.	Address the power quality issues of Balamban Feeder 4.	26,051,319.58		
	Installation of Amorphous Distribution Transformers.	To address the forecasted growth in demand requirement and customer load growth.	10,649,960.00		
	Installation of Service Drop Wire using insulated #6 ACSR, AWG 6/1.	Address increasing customer requirements within the franchise.	5,513,366.00		
	Procurement of 17,538 units of kWh meters.	This project intends to address the forecasted growth in consumer base.	17,309,500.00		
	Installation of SCADA Remote Terminal Units (RTU) and Fiber Optics.	To improve service efficiency.	4,155,737.00		
	Procurement of Service Vehicles.	To improve service efficiency.	18,596,545.63		
	Procurement of three (3) units of load logger and one (1) unit of transformer loss tester.	The procurement of measuring instruments is necessary to properly monitor the condition of CEBECO III distribution assets.	3,665,000.00		
	Procurement of a variety of basic tools and gears used in electrical line maintenance.	CEBECO III's line personnel should be fully equipped with complete and appropriate tools and gears vital in the performance of their duties.	808,480.50		
	Purchase of Safety Apparel.	Procurement of protective garments to equip new technical personnel of CEBECO III and replace the existing damaged and worn out safety apparels used by the existing personnel.	1,770,007.00		

APPLICANT	PROJECT DESCRIPTION	RATIONALE	PROJECT COST (PhP)	ERC CASE NO.	DATE FILED/ APPROVED
	Acquisition of Lot and Site Development for Asturias Substation.	Purchase of an 800-square meter lot for 5 MVA Asturias Substation and site development/ perimeter fence for the said substation.	1,485,530.43		
	Acquisition of Lot for Asturias Area Office and Asturias Area Office Building.	The proposed project is intended to provide a convenient and safe place for the normal transactions of the member-consumers of CEBECO III and its personnel.	2,534,877.32		
	Procurement of tools and equipment used for motor pool department and construction activities.	To improve service efficiency.	86,335.00		
	Acquisition and replacement of IT hardware and software assets.	To ensure an efficient and reliable service to its customers.	1,506,799.32		
	Procurement of handheld radio and mobile radios.	To ensure an efficient and reliable service to its customers.	202,304.00		
	Procurement of android cellphones for CEBECO III as meter reading device for field meter reader personnel upon installation of a meter reading application.	To ensure an efficient and reliable service to customers by providing remote meter reading and sending information directly to the main server of CEBECO III.	181,583.00		
	Procurement of Complete Furniture and Equipment Facilities.	To improve service efficiency.	232,890.00		

Source: ERC

*Annex 4. Policy Proposals*

No.	Title of Policy	Objectives	Status
1	Adopting Further Amendments to the Wholesale Electricity Spot Market (WESM) Rules and Market Manual on Registration, Suspension and De-Registration Criteria and Procedures for the Implementation of Enhancements to WESM Design and Operations (Provisions for Registration of New Facility and Harmonization with Republic Act No. 11234 entitled “An Act Establishing the Energy Virtual One-Stop Shop Act”)	The amendments aim to enhance the WESM’s Registration processes and requirements for generation companies	Promulgated with Department Circular No. DC2020-06-0013 on 01 June 2020  Published on 17 June 2020
2	Adopting Further Amendments to the Wholesale Electricity Spot Market (WESM) Rules and Market Manual on Billing and Settlement for the Implementation of Enhancements to the WESM Design and Operations (Provisions for Prudential Requirements)	The amendments aim to introduce an appropriate formula for the computation of the initial prudential requirements in line with the target commercial operation of WESM in Mindanao and implementation of enhancement to the WESM design and operations	Promulgated with Department Circular DC2020-06-0014 on 02 June 2020  Published on 17 June 2020
3	Adopting Further Amendments to the Wholesale Electricity Spot Market (WESM) Market Manual on Constraint Violation Coefficients and Pricing Re-runs for the Implementation of Enhancements to WESM Design and Operations (Provisions for Self-Scheduled Generation)	The proposed amendments aim to include additional Constraint Violation Coefficients to reflect the dispatch and curtailment hierarchy for non-scheduled, priority dispatch and must-dispatch generating unit classifications.	Done Virtual Public Consultations on 15, 17, 19 June 2020
4	Adopting Further Amendments to the Wholesale Electricity Spot Market (WESM) Market Manual on Dispatch Protocol for the Implementation of Enhancements to WESM Design and Operations (Provisions for the WESM Timetable)	The proposed amendments aim to adopt minor adjustments on the timeline of market run activities for the Day Ahead Projections (DAP), Hour Ahead Projections (HAP) and Real Time Dispatch (RTD) to ensure that the market runs will be completed on time.	Promulgated with Department Circular No. DC2020-10-0020 on 06 October 2020 pending its publication.
5	Adopting Further Amendments to the Wholesale Electricity Spot Market (WESM) Rules, Retail Rules and Market Manuals (Provisions for the Audit and Performance Monitoring)	The proposed amendments aim to fine tune the responsibilities of the PEM Audit Committee in the conduct of market audit and reviews, and enhance the preparation of market audits and performance monitoring of WESM service providers.	Done Virtual Public Consultations on 15, 17, 19 June 2020
6	Adopting Further Amendments to the Retail Rules and Retail Market Manuals for the Implementation of Rules Supplementing the Switching and Billing Process and Adopting a Disconnection Policy for Contestable Customers	The proposed amendments aim to harmonize Retail Rules and Retail Manuals on Market Transactions and on Registration Procedures with ERC Resolution No.9 Series of 2018, or the “ERC Rules Supplementing the Switching and Billing Process and Adopting a	Done Virtual Public Consultations on 15, 17, 19 June 2020

No.	Title of Policy	Objectives	Status
		<p>Disconnection Policy for the Contestable Customers”</p> <p>This was integrated in the Draft Department Circular Adopting Further Amendments to the WESM Rules, Retail Rules and Various Market Manuals for the Implementation of Enhancements to WESM Design and Operations (Provision to Promote Participation in the Retail Competition) with the following objectives:</p> <ul style="list-style-type: none"> <li>a) Optional registration of Contestable Customers in the wholesale market;</li> <li>b) Streamlining of the submission of customer information; and</li> <li>c) Reduction of the minimum switch processing timeframes.</li> </ul>	
7	Adopting Further Amendments to the Wholesale Electricity Spot Market (WESM) Market Manuals on Registration, Suspension, and De-registration, and Market Network Model Development and Maintenance for the Implementation of Enhancements to WESM Design and Operations (Provisions for the New Load Facility of a Registered WESM Member)	The proposed amendments aim to prevent the possible discrepancies or disputes on scheduling and settlement processes of the WESM caused by the non-registration of new load facilities.	Promulgated with Department Circular No. DC2020-10-0019 on 06 October 2020 pending its publication
8	Adopting Further Amendments to the Wholesale Electricity Spot Market (WESM) Rules and New Manual on WESM Compliance Officers Accreditation	The proposed amendments aim to: a) amend the WESM Rules; and b) adopt New WESM Compliance Officers (WCO) Accreditation Manual in order to ensure that the WCOs possess the right competencies and knowledge, thus empowering them to effectively ensure compliance with their obligations in the WESM.	Done Virtual Public Consultations on 22 and 29 July 2020

No.	Title of Policy	Objectives	Status
9	Adopting Further Amendments to the Wholesale Electricity Spot Market (WESM) Manual on Metering Standards and Procedures Issue 12.0 to Harmonize with the Site-Specific Loss Adjustment Procedures of the Wholesale Metering Services and to Align Technical Requirements for Metering Facilities in accordance with Philippine Grid Code 2016 Edition, Philippine Distribution Code 2017 Edition, and other Applicable References	The proposed amendments aim to amend the WESM Market Manual on Metering Standards and Procedures in order to: a) harmonize the procedure for the calculation of the Site-Specific Loss Adjustment with the procedures of the MSP; b) align and clarify the rated burden of Current Transformers based on PGC 2016 Rules and latest version of IEC 61869-2 which supersedes IEC 60044-1 and to update the term ANSI C57.13 to IEEE C57.13; and c) align the Metering Manual with the procedures and standards set forth in the PGC and PDC, issuances from the DOE and Energy Regulatory Commission (ERC).	Done Virtual Public Consultations on 22 and 29 July 2020
10	Adopting Further Amendments to the Wholesale Electricity Spot Market (WESM) Market Manual on Protocol for Central Scheduling and Dispatch of Energy and Contracted Reserves	The proposed amendments aim to amend the WESM Market Manual on Protocol for Central Scheduling and Dispatch of Energy and Contracted Reserves in order to: a) harmonize with enhanced WESM design and operations such as 5-min dispatch interval; and b) address observed operations issues since 2015.	Done Virtual Public Consultations on 22 and 29 July 2020
11	Adopting Further Amendments to the Wholesale Electricity Spot Market (WESM) Rules and Market Manual on Information Disclosure and Confidentiality (Provisions for Exceptions and Conditions for Confidentiality)	The proposed amendments aim to amend the WESM Rules and Market Manual on Information Disclosure and Confidentiality in order to: a) provide exceptions for the DOE and ERC as oversight bodies, in receiving confidential market data and exempting them in executing a non-disclosure agreement with the Market Operator; and b) facilitate a more efficient market data provision to the DOE and the ERC.	Done Virtual Public Consultations on 22 and 29 July 2020
12	Adopting Further Amendments to the Wholesale Electricity Spot Market (WESM) Manual on Dispatch Protocol (Issue 13.0) to Enhance Procedures in Must-Run Unit (MRU) Accounting	The proposed amendments aim to amend the WESM Market Manual on Dispatch Protocol in order to improve the accounting of energy produced due to a must-run unit dispatch instruction and processing of discrepancy reports.	Done Virtual Public Consultations on 22 and 29 July 2020

No.	Title of Policy	Objectives	Status
13	Draft DC Adopting General Guidelines for the Conduct of PAA for the Electric Power Industry Participants	The proposed policy is supplemental to the DC2017-05-0008 which provides for policies and guidelines, and mandates the conduct of PAA of all Power Generation, Transmission and Distribution Systems and Facilities; and DC2017-12-0016 which adopts guidelines and provides relevant entities for continuing conduct of respective PAA to direct Electric Power Industry Participants to implement PAA activities.	Done Virtual Public Consultation on 1 and 3 July 2020
14	Draft Department Circular (DC) Prescribing Revised Guidelines for Disconnection of Electric Power Industry Participants	The proposed policy is an amendment to DC2010-08-0010 “Prescribing the Implementing Rules and Procedures for DC No. DC2010-05-0006: Terminating the Default Wholesale Supplier Arrangement for the Philippine Wholesale Electricity Spot Market (WESM) and Declaring a Disconnection Policy”	Done Virtual Public Consultation on 1 and 3 July 2020
15	Draft DC Adopting a General Framework Governing the Test and Commissioning of Generation Facilities	The said draft DC aims to address the concerns on the extended conduct of Test and Commissioning of several plants, specifically exceeding the prescribed two-month period of the Energy Regulatory Commission (ERC) in its Resolution No. 16 Series of 2014 (“2014 Revised Rules for the Issuance of Certificate of Compliance for Generation Companies, Qualified End-Users and Entities with Self-Generation Facilities).	Done Virtual Public Consultation on 1 and 3 July 2020

Source: DOE