

33rd Electric Power Industry Reform Act (EPIRA) Implementation Status Report

(For the Report Period October 2018)

Prepared by the
Department of Energy

With Contributions from

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



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I. EXECUTIVE SUMMARY

The 33rd Status Report on Electric Power Industry Reform Act (EPIRA) of 2001 implementation covers the period May 2018 to October 2018 which includes significant accomplishments, developments and continuing challenges undertaken by the attached agencies as provisioned under EPIRA.

Pursuant to EPIRA under the privatization mandate of the Power Sector Assets and Liabilities Management Corporation (PSALM), the DOE sets a new directive to PSALM to remove the requirement for the Malaya Thermal Power Plant (MTPP) to run as a Must Run Unit (MRU) for the next three (3) years upon the turn over of the plant to the winning bidder considering its technical and physical condition. Further, PSALM continues other privatization activities for other remaining plants and National Power Corporation-Independent Power Producer (NPC-IPP) contracts, and the disposal of other disposable assets to include real estate and unserviceable assets, waste and junk materials. With regard to the reduction in PSALM's foreign debts, as of 4th quarter of 2018, the remaining balance is down to PhP466.4 billion from the peak of PhP1.23 Trillion as of year 2003 or a decrease of PhP774.5 billion.

The DOE commenced initiatives to fulfill the requirement of Section 30 of the EPIRA to put in place an Independent Market Operator (IMO) with the issuance of Department Circular No. 2018-01-0002 entitled "Adopting Policies for the Effective and Efficient Transition to the Independent Market Operator (IMO) for the WESM", which provided the basic principles to be adopted for the transition to the IMO

In terms of the electricity pricing as of June 2018 compared to the March 2018 national average systems rates, there is a significant increase of PhP0.32 centavos/kWh in country's average electricity rates or equivalent to PhP8.57/kWh. In the Visayas grid, rate increased from PhP7.43/kWh to PhP7.81/kWh or an increase of 38 centavos/kWh. Luzon and Mindanao grid increased by 31 centavos/kWh and 34 centavos/kWh, respectively.

To attain further transparency in the billing and charges of the distribution utilities (DUs) to the electricity end-users for the greater protection of public interest, the DOE issued Department Circular No. DC 2018-09-0026 entitled "Adopting Framework for Uniform Monthly Electricity Bill Format" signed by Secretary Alfonso G. Cusi on 24 August 2018. This policy aims for further unbundling of charges, adopt electronic billing, and reflect description of each charge to provide information among the electricity consumers.

Meanwhile, for the power supply-demand situation, the country's total peak demand in 2018 was recorded at 14,782 MW, which is 993 MW or 7.2% higher than the 13, 789 MW in 2017 wherein 10,876 MW or 74% of the total demand comes from the Luzon grid while Visayas and Mindanao has a share of 14% (2,053 MW) and 13% (1,853 MW), respectively. Among the three grids, Luzon grid showed significant increase in peak demand since it grew by 822 MW or 8.2% from its last year's peak demand of 10,054 MW. The total power supply, in terms of installed capacity, grew by 4.8% from 21,730 MW in 2017 to 22,23,815 MW in 2018. A total of 933.6 MW new capacities were added to the country's supply base which include coal-fired (720 MW), oil-based (87.3 MW), geothermal (12 MW), hydropower (80.3 MW) and biomass (34 MW). In terms of share by grid, Luzon contributed additional capacity by 659.5 MW or 71% and Mindanao at 274.1 MW or 29% while Visayas has not developed any additional capacity for 2018.

Changes in the procedures for the provision of financial benefits to Host Communities were made with the promulgation of the DOE of Department Circular No. DC2018-08-0021 entitled "Providing For The Amendments To Rule 29 Part (A) of the Implementing Rules and Regulations of Republic Act No. 9136" which provides the rules and guidelines for the effective administration, management, utilization, and implementation of the Financial Benefits to the Host Communities. The circular, among others, will enable the transfer of all existing funds being administered by the

DOE to the concerned DUs, Host LGUs, Regions, and Indigenous Cultural Communities/ Indigenous People.

To further accelerate the electrification program of the government as directed by the President, the DOE included in the Power Development Plan (PDP) 2016-2040 the Electrification Roadmap toward total Energy Access in 2040 with specific target of country's 100% household electrification level by 2022 based on 2015 Census. This aims to accelerate total electrification by 2020, address ailing ECs, and ensure greater private sector participation.

Further, the DOE issued a Department Order No. DO2018-05-0010 creating the "Task Force E-Power Mo" (TFEM) for the purpose of ensuring access to electricity for the communities that remain unserved and underserved by distribution utilities and electric cooperatives as mandated by their franchises.

For more effective implementation of the law, the DOE proposed for the amendment of the Implementing Rules and Regulations (IRR) of the EPIRA thru a draft Department Circular entitled "Amending Certain provisions of the Rules and Regulation to Implement Republic Act 9136 entitled Electric Power Industry Reform Act of 2001" and conducted focus group discussions and public consultations in Luzon, Visayas, and Mindanao to solicit inputs among electric power industry participants and attached agencies. This is to identify provisions of the IRR that need to be amended and thereafter prepared the consolidated proposed amendments.

II. PRIVATIZATION

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

During the report period, the DOE in its letter to PSALM dated 04 July 2018 expresses no objection and support to the request of the PSALM Board to no longer require the Malaya Thermal Power Plant (MTPP) to run as a Must Run Unit (MRU) for the next three (3) years as the previous requirement set forth by the DOE after MTPP's privatization. The DOE sees no adverse affect on the demand-supply situation in 2019 if said proviso shall be included in the draft Asset Purchase Agreement (APA). However, the DOE reiterates that the privatization package of MTPP should already cover the land and all other assets associated with the plant structures. Corollary to this, PSALM has set the timeline of the privatization of the MTPP with details below:

| Activity | Date |
|--|--|
| Publication of Invitation to Bid | 05-07 October 2018 |
| Submission of Letters of Interest | 05 October 2018 to 5:00 p.m., 19 November 2018 |
| Submission of Confidentiality Agreement and Undertaking and Payment of Participation Fee | 05 October 2018 to 5:00 p.m., 20 November 2018 |
| Issuance of the Bidding Package | 05 October 2018 to 5:00 p.m., 20 November 2018 |
| Due Diligence Period | 05 October 2018 until 2 Business days prior to the Bid Submission Deadline |
| Pre-Bid Conference | 2:00 p.m., 17 October 2018 |
| Bidders Comments Deadline on the Draft Asset APA | 5:00 p.m., 23 October 2018 |
| Consortium Request Deadline | 5:00 p.m., 24 October 2018 |
| Initial Documentary Deliverables Deadline | 5:00 p.m., 05 November 2018 |
| Notice to Bidders on its compliance to the Initial Documentary Deliverables | 5:00 p.m., 12 November 2018 |
| Final Submission of Documentary Deliverables Deadline | 5:00 p.m., 20 November 2018 |
| Evaluation of Documentary Deliverables | 5:00 p.m. 21-23 November 2018 |
| PSALM release of the APA | 07 December 2018 |
| Bid Submission Deadline | 12:00 noon, 14 December 2018 |
| Opening of Bids | 12:30 p.m., 14 November 2018 |
| Notice of Award | Within thirty (30) days after the declaration of the Highest Bidder/s |

With regard to the privatization of ULGPP Bulk Strips, PSALM shall conduct review of the privatization design in view of the end of cooperation period of the Power Purchase Agreement/IPP Contract with the Energy Development Corporation in 2021-2022.

With respect to the Mindanao Coal-Fired Thermal Power Plant, CBK Hydroelectric Power Plant Complex and Casecnan Multi-Purpose Project, PSALM will engage the services of a third party advisor to conduct a feasibility study, Said study aims to determine the most suitable privatization options for the three (3) remaining IPP contracts, to formulate legal, technical and commercial structure and to provide assistance in the conduct of the bidding process from the pre-sale to post-sale stages.

For the remaining generating assets and IPP contracts, the latest privatization targets are indicated in Table 1 and Table 2.

Table 1. Schedule of Privatization for Generating Assets as of 30 September 2018

| Asset Type/ Plant Name | Rated Capacity (MW) | Bid Date | Turnover Date |
|--------------------------------|------------------------|--|---------------|
| Owned Generating Plants | | | |
| Malaya Thermal Power Plant | 650.00 | | 2018 |
| 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 | 254.00 | | |
| Pulangui Hydro | 255.00 | | |

Source: PSALM

Table 2. Indicative Privatization Schedule for the Appointment of IPPAs as of 30 September 2018

| Grid | Plant Name | Contracted Capacity (MW)/Energy (GWh) | Bid Date | Turnover Date |
|----------------------|---------------------------------|---|----------|---------------|
| Luzon Grid | Casecnan Multi-Purpose Hydro | 228.00 GWh | | 2019 |
| | Caliraya-Botocan-Kalayaan Hydro | 797.92 MW | | 2021 |
| Mindanao Grid | Mindanao Coal-Fired | 200.00 MW | | 2020 |

Source: PSALM

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:

Manila Thermal Power Plant (MTPP) Land

1. On 31 May 2018, Supplemental Bid Bulletin (SBB) No. 5 was issued setting the Bid Submission Deadline to 27 June 2018.
2. On 16 May 2018, PSALM requested MERALCO to provide legal basis for its use of a portion of Lot No. 4 for its electric post/take-off tower.
3. The proposed minimum bid price will be presented to the PSALM Board for approval.

Cebu Diesel Power Plant (DPP) II Land

1. On 03-04 May 2018, PSALM together with the Philippine Economic Zone Authority (PEZA) assessed the suitability of the site for conversion into an economic zone.
2. On 16 May 2018, PSALM requested the National Transmission Corporation (TransCo) to provide survey plans, lot plans, index maps and/or other available documents pertinent to the Cebu DPP switchyard lots.

Aplaya DPP Land

On 16 May 2018, PSALM requested TransCo for survey plans, lot plans, index maps and/or other available documents pertinent to the Aplaya DPP switchyard lots.

Puerto Azul Condominium Units and Club Share

1. Two Condominium Units

- Puerto Azul Condominium Units will undergo a two-stage sale process. The first stage is for the unit owner to offer first the condominium unit to a member of the Puerto Azul Beach & Country Club, Inc. (now Puerto Azul Golf and Country Club or PAGCC). The offer is valid only for six months and after it lapsed, the owner can proceed offering the unit to a non-member under similar terms. The next stage is to dispose the unit through public bidding after ascertaining that no PAGCC member is interested in the acquisition.
- The bid opening for PAGCC members took place on 18 June 2018 but was declared a failure as there were no members who signified interest to bid.

2. Club Share

- Similarly, Puerto Azul Club Share will undergo a two-stage sale process. The first stage will follow the PAGCC requirements which provides that a unit owner should offer first the share to PAGCC at fair market value. The offer is valid only for 30 days and after it lapsed, the owner can proceed offering the share to a non-member. The 2nd stage is to offer the Club Share through public bidding after establishing that no PAGCC member is interested in the acquisition.
- On 13 June 2018, PBAC approved the commencement of sale of the Puerto Azul Club Share. PSALM submitted the AAR to COA on 18 June 2018 and in compliance with COA's instruction, resubmitted the same on 30 June 2018.

C. Privatization Proceeds

As of 30 September 2018, PSALM, through the privatization of generation assets, the transmission business, and the IPP contracted capacities, has generated a total of PhP910 billion. Also, the actual collection amounted to PhP555 billion.

Table 3. Privatization Proceeds as of 30 September 2018, (in PhP Billion)

| Privatization Assets | Generated | Collected | Balance |
|------------------------------|----------------------|----------------------|---------------|
| Generating Assets | 162.23 | 162.23 | - |
| Decommissioned Plants | 0.63 | 0.63 | - |
| Transmission Asset (TransCo) | 264.80 ^{1/} | 180.54 | 84.26 |
| Appointment of IPPAs | 482.50 | 211.37 ^{2/} | 271.13 |
| TOTAL | 910.16 | 554.77 | 355.39 |

1/ Privatization Proceeds relative to concession fees are inclusive of Interest on deferred payment

2/ Collections include adjustments in IPPA proceeds based on IPP plant operation

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.

Total collections of PhP555 billion as of September 2018, including interest income on placements, were exclusively utilized for the liquidation of financial obligations amounting to PhP605 billion as of September 2018.

Table 4. Privatization Proceeds Utilization as of 30 September 2018

| Particulars | In US\$ Billion |
|----------------------|-----------------|
| Debt Prepayment | 70.39 |
| Regular Debt Service | 373.77 |
| Lease Obligations | 160.82 |
| Others | 5.12 |
| TRANSCO Opex | 0.05 |
| TOTAL | 610.15 |

USD1:PhP54.251 (BSP Guiding Rate dated 30 September 2018)

Source: PSALM

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 No. 9511 or the Franchise Law and the Construction Management Agreement (CMA), the National Transmission Company (TransCo) continues to monitor the performance and compliance of NGCP to these Agreements.

For the report period, the Joint PSALM-TransCo Technical, Regulatory, Financial and Legal Compliance Assessment Team (TRFLAT) and Inspection of Books and Records (IBR) convened to discuss NGCP's response relative to the CY 2016 CA Compliance and activities in relation to the 2017 IBR. The conduct of the IBR is in accordance with Section 10.01¹ of the CA.

The Joint TRFLAT scheduled the 2017 IBR during the report period at the NGCP Technical Document Centers (TDC) in Quezon City and in Mexico Substation, Pampanga. For this year, checking of the availability of records was improved by modifying the Available category as "Available Complete (AC)" and "Available Incomplete (AI).

Following is the summary of the findings.

1. TDC 1 – NGCP Main Office, Quezon City

| Area of Assessment | No. of Records | Findings | | | | | |
|---|----------------|----------------------|------------------------|-------------|----------------|------------------------|---------------|
| | | Available (Complete) | Available (Incomplete) | Unavailable | Not Applicable | % Available Incomplete | % Unavailable |
| 1. TECHNICAL | 1,477 | 974 | 247 | 124 | 132 | 17% | 8% |
| 1.1 Philippine Grid Code | 643 | 281 | 214 | 115 | 33 | 33% | 18% |
| 1.2 Operation and Maintenance | 71 | 43 | 28 | - | - | 39% | 0% |
| 1.3 Planning, Construction, and Engineering | 420 | 316 | 2 | 9 | 93 | 0% | 2% |
| 1.4 Systems Operations | 329 | 322 | 1 | - | 6 | 0% | 2% |
| 1.5 Environmental | 14 | 12 | 2 | - | - | 14% | 0% |
| 2. REGULATOR Y | 30 | 28 | 2 | - | - | 7% | 0% |
| 3. FINANCIAL | 56 | 54 | - | - | 2 | 0% | 0% |
| 3.1 Financial Records | 27 | 26 | - | - | 1 | 0% | 0% |
| 3.2 Transmission Assets | 29 | 28 | - | - | 1 | 0% | 0% |
| 4. LEGAL & ROW | 1,265 | 751 | - | - | 514 | | |

¹ Section 10.01 of the CA states that "The Concessionaire shall maintain complete and accurate books and records in which it shall make full, true and correct entries of all its transactions in accordance with Philippine GAAP, including records of the operating and financial history and condition of the Transmission Assets. The Concessionaire shall maintain a complete and updated copy of such books and records both at its office in the Metro Manila area and at another appropriately secure location, and shall provide representatives of PSALM and Transco, with access to such books and records during normal business hours after reasonable advance written request for PSALM's monitoring and audit of the Concessionaire's compliance and performance with its obligations under this Agreement and other Transaction Documents.

| Area of Assessment | No. of Records | Findings | | | | | |
|---|----------------|----------------------|------------------------|-------------|----------------|------------------------|---------------|
| | | Available (Complete) | Available (Incomplete) | Unavailable | Not Applicable | % Available Incomplete | % Unavailable |
| 4.1 Legal | 19 | 15 | - | - | 4 | 0% | 0% |
| 4.2 Right of Way | 1,246 | 736 | - | - | 510 | 0% | 0% |
| <i>PUC</i> | 462 | 292 | - | - | 170 | | |
| <i>Non-PUC</i> | 784 | 444 | - | - | 340 | | |
| 5. ADMINISTRATIVE, IT, QA, SAFETY, AND SECURITY | 47 | 42 | 3 | - | 2 | 6% | 0% |
| TOTAL | 2,875 | 1,849 | 252 | 124 | 650 | 9% | 4% |

2. TDC 2 – Mexico Substation, Pampanga

| Area of Assessment | No. of Records | Findings | | | | | |
|--|----------------|----------------------|------------------------|-------------|----------------|------------------------|---------------|
| | | Available (Complete) | Available (Incomplete) | Unavailable | Not Applicable | % Available Incomplete | % Unavailable |
| 6. TECHNICAL | 1,477 | 950 | 268 | 124 | 135 | 18% | 8% |
| 6.1 Philippine Grid Code | 643 | 281 | 214 | 115 | 33 | 33% | 18% |
| 6.2 Operation and Maintenance | 71 | 19 | 49 | - | 3 | 69% | 0% |
| 6.3 Planning, Construction, and Engineering | 420 | 316 | 2 | 9 | 93 | 0% | 2% |
| 6.4 Systems Operations | 329 | 322 | 1 | - | 6 | 0% | 2% |
| 6.5 Environmental | 14 | 12 | 2 | - | - | | 8% |
| 7. REGULATORY | 30 | 28 | 2 | - | - | 7% | 0% |
| 8. FINANCIAL | 56 | 54 | - | - | 2 | 0% | 0% |
| 8.1 Financial Records | 27 | 26 | - | - | 1 | 0% | 0% |
| 8.2 Transmission Assets | 29 | 28 | - | - | 1 | 0% | 0% |
| 9. LEGAL & ROW | 1,265 | 751 | - | - | 514 | | |
| 9.1 Legal | 19 | 15 | - | - | 4 | 0% | 0% |
| 9.2 Right of Way | 1,246 | 736 | - | - | 510 | 0% | 9% |
| <i>PUC</i> | 462 | 292 | - | - | 170 | | |
| <i>Non-PUC</i> | 784 | 444 | - | - | 340 | | |
| 10. ADMINISTRATIVE, IT, QA, SAFETY, AND SECURITY | 47 | 42 | 3 | - | 2 | 6% | 0% |
| TOTAL | 2,875 | 1,825 | 273 | 124 | 653 | 9% | 4% |

With the above results, the NGCP needs to fully satisfy the requirement pursuant to Section 10.01 of the CA for their preferential attention and strict observance/compliance in order to avoid any occurrence of events of default by the Concessionaire.

Arbitration Proceedings Between NGCP and PSALM/TRANSCO Under the Concession Agreement

During the report period, arbitration proceedings were instituted by NGCP against PSALM and TransCo in connection with the implementation of the Concession Agreement. The dispute concerns NGCP's remittance to PSALM of PhP57.883 Billion on 15 July 2013 which PSALM does not constitute a valid prepayment since at the time of the payment, NGCP has outstanding obligations to TransCo.

NGCP and TransCo first engaged in a dispute resolution to settle concerns over the grid operator's concession agreement prior to the filing of the arbitration case but failed to come up with amicable settlements.

NGCP filed the arbitration case with the International Chamber of Commerce in Singapore in February 2018 under the 1976 UNCITRAL Arbitration Rules, and nominated Honorable L. Yves Fortier as an arbitrator. With the approval of the Joint PSALM and Transco Board, TransCo engaged Romulo Mabanta Buenaventura Sayoc & de los Angeles ("Romulo Law") as external counsel for TransCo and PSALM in the Arbitration Case filed by NGCP. The engagement of Romulo Law was through negotiated procurement, which the Commission on Audit ("COA") approved on 16 April 2018.

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

E. Sale of Sub-Transmission Assets (STAs)

The sale of TransCo's STAs involves 123 sale contracts and 107 interested distribution utilities (DUs), most of which are electric cooperatives (ECs). The STAs include some 5,900 ckt-km of mostly 69 kV transmission lines and 1,600 MVA of substation capacity. In compliance with the mandate of EPIRA and under the guidelines set by the Energy Regulatory Commission (ERC), TransCo in January 2016 signed one (1) sale contract with DU amounting to about PhP2.9 Million.

As of 30 October 2018, TransCo has signed 114 sale contracts with 93 DUs/ECs/consortia amounting to PhP6 billion. These sales cover an aggregate length of 3,833 ckt-kms of sub-transmission lines and 34,153 sub-transmission structures and 830 MVA of substation capacity. Of the 114 sale contracts, 72 contracts with total sale price of PhP4.3² billion have been approved, approved with modification, and disapproved. Included in the said 72 contracts

² The total ERC approved amount of PhP3.276 billion is lower compared to the total contract amount of PhP4.34 billion due to the following reasons:

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

are eight (8) contracts amounting to PhP261.5 million disapproved as of September 30, 2018 posted at the ERC website. The rest of the sale contracts are for filing with the ERC for evaluation and approval.

III. PSALM LIABILITY MANAGEMENT

From the beginning balance in 2000 of PhP830.7 billion, PSALM's financial obligations as of September 2018 was reduced to PhP466.4 billion or a decrease of PhP364.3 billion. This comprised of debts amounting to PhP264.7 billion and IPP obligations amounting to PhP197.88 billion. In terms of currency, more than half (74%) of PSALM's FOs is denominated in dollars, amounting to PhP340 billion. Peso-denominated FOs of PhP93.0 billion accounts to 20%, while the remaining FOs amounting to PhP29.5 billion equivalent to 6% is in Japanese Yen.

It can be noted PSALM's financial liability peaked in 2003 at PhP1.2 trillion due to the following:

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

Table 5. Financial Obligations by Currency as of September 2018

| Currency | Amount in PhP Equivalent (In Millions) | Percent to Total |
|-----------------|---|-------------------------|
| USD | 339,985.50 | 73.50% |
| PHP | 93,070.83 | 20.12% |
| JPY | 29,519.77 | 6.38% |
| Total | 462,576.11 | 100% |

Exchange Rates Used: BSP Guiding Rate dated 30 September 2018

USD : PhP 1.00 = 54.2510; EUR : PhP 1.00 = 63.1644; JPY : PhP 1.00 = 0.4785

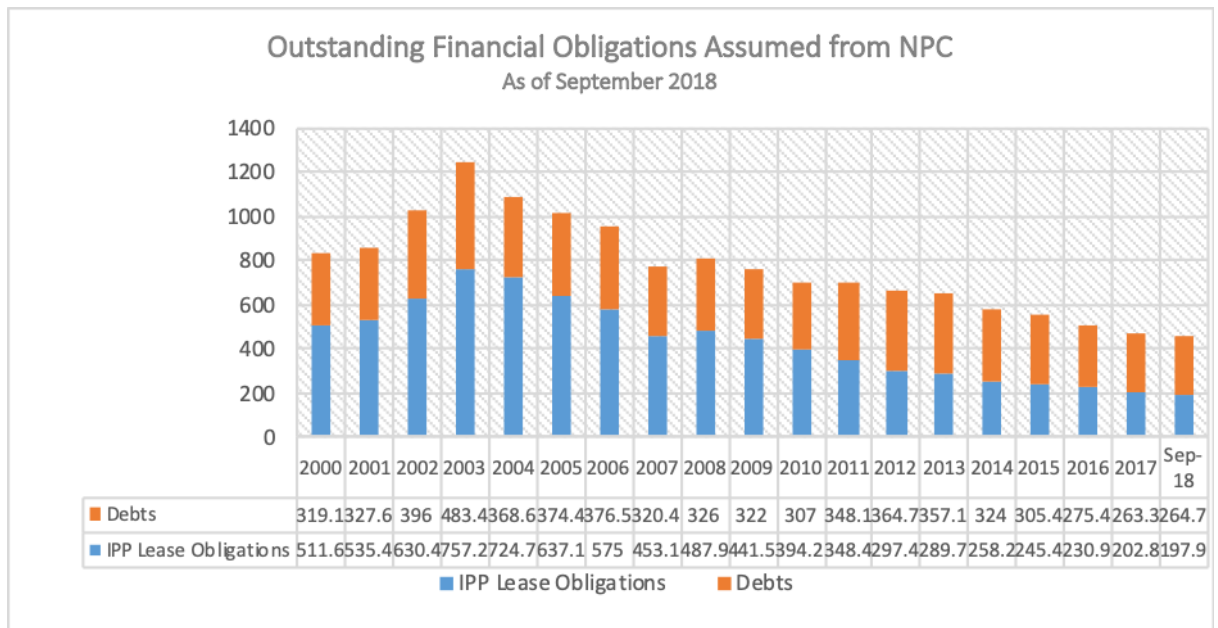
Source: PSALM

During the report period, PSALM availed PhP7.0 billion and PhP8.0 billion Short Term Line (STLL) with Land Bank of the Philippines (LBP). On 12 April 2018, PSALM converted the PhP15.0 billion STLL to a 7-year Term Loan with interest of 3-month Philippine Dealing System Treasury Rates (PDST)-R2 plus minimum spread of 0.50% subject to a floor rate of 2.75% and quarterly reprising.

On 03 August 2018, PSALM drawdown the amount of PhP8.0 billion from the PhP30 billion Credit Line Agreement. This was availed directly as a Term Loan with a tenor of 7 years and interest of 3-month PDST-R2 plus minimum spread of 0.50% subject to a floor rate of 2.75% and quarterly reprising.

Figure below shows the movement of the financial obligations of PSALM from 2000 to September 2018.

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



Source: PSALM

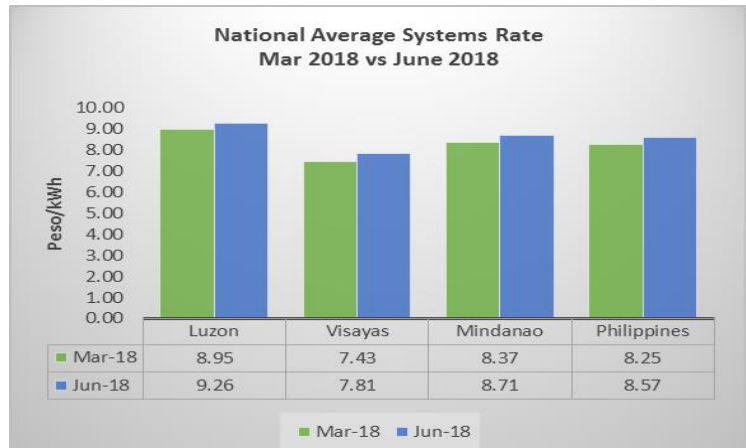
IV. ELECTRICITY RATES

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

A. Average Electricity Rates

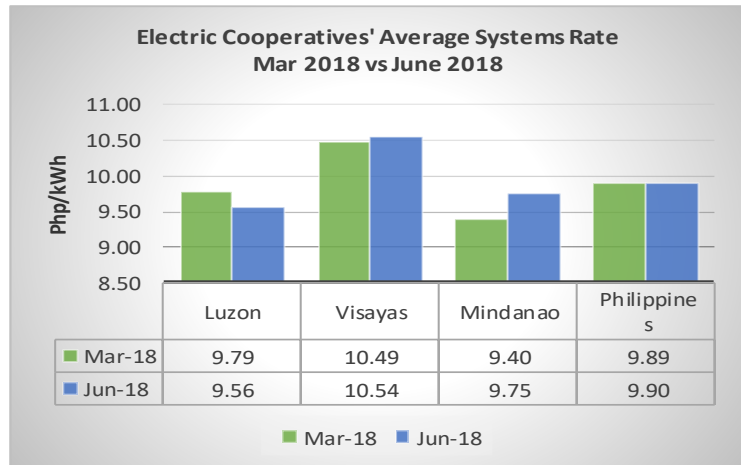
The country's average electricity rates as of June 2018 is around PhP8.57/kWh, PhP0.32 centavos higher compared with the March 2018 national average systems rate. Biggest increase in rate was posted in the Visayas Grid from PhP7.43/kWh in 2018 March to PhP7.81/kWh in June 2018 or an increase of 38 centavos/kWh. Luzon and Mindanao grid increased by 31 centavos/kWh and 34 centavos/kWh, respectively.

Figure 2 - National Average Systems Rate



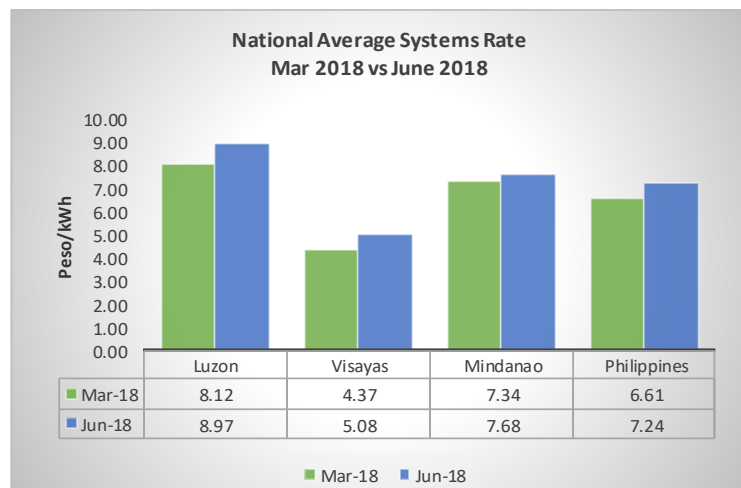
Meanwhile, the ECs' average systems rate for June 2018 is at PhP9.90/kWh, 0.01 centavos higher compared to March 2018 rate. Among the three grids, Mindanao grid experienced highest increase in rate of 0.35 centavos from Php 9.40/kWh in March 2018 to Php 9.75/kWh in June 2018 while Visayas' grid only posted PhP0.05 centavos increase. In Luzon grid, a decrease in rate in the amount of 23 centavos/kWh was noted.

Figure 3 - Electric Cooperatives' Average Systems Rate



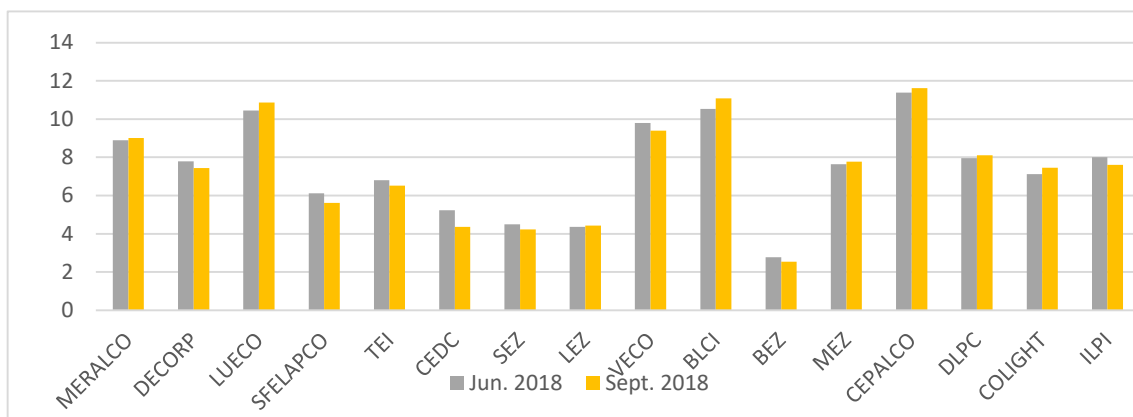
The national average systems rates of PIOUs posted an overall increase of PhP0.63 centavos/kWh from PhP6.61 per kWh in March 2018 to PhP7.24/kWh in June 2018. All the grids posted an increase in per kWh by PhP0.85 in Luzon grid, PhP0.71 in Visayas grid and PhP 0.33 in Mindanao grid

Figure 4 - Private Distribution Utilities' Average Systems Rate



Among the Luzon PIOUs, La Union Electric Company (LUECO) posted the highest rate for the month of September 2018 at PhP 10.87. On the other hand, the lowest average rate was noted for the Subic Enerzone (SEZ) at PhP 5.66/kWh. The low rates can be attributed to the customer profile of SEZ which is around 98.03% industrial, 0.88% commercial and 1.01% residential, on the basis of megawatt-hour sales. In the Visayas grid, the Visayan Electric Company (VECO) and Balamban Enerzone's average electricity rates for September 2018 decreased by PhP0.45/kWh and PhP0.25/kWh compared to the June 2018 level of PhP7.94/kWh and PhP2.77/kWh. Bohol Light Power and Company posted a significant increase of PhP0.55/kWh while Mactan Enerzone posted an increase of PhP 0.02/kWh. For the Mindanao grid, all the PIOUs showed a significant increase as follows: Cagayan Electric Power and Light Company (CEPALCO) at 9 centavos/kWh, Davao Light and Power Company (DLPC) at 23 centavos/kWh, and Cotabato Light and Power Company (CLPC) at 35 centavos/kWh, while Iligan Light and Power Company (ILPI) decreased by 38 centavos/kWh.

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



As reflected in Table 6, the ECs' national average unbundled residential electricity rate for June 2018 was PhP 9.90/kWh. Visayas grid still has the highest average effective residential electricity rates at around PhP10.54/kWh of which generation costs comprise 56%. On the average, generation costs comprise the bulk of ECs residential rates at around 54 percent followed by distribution, supply and metering charges (DSM) at 17%.

Table 6. EC's Unbundled Average Residential Electricity Rates, June 2018

| Bill Subgroup | LUZON | | VISAYAS | | MINDANAO | | NATIONAL | |
|--------------------------|-------------|------------|--------------|------------|-------------|------------|-------------|------------|
| | PhP/kWh | % share | PhP/kWh | % share | PhP/kWh | % share | PhP/kWh | % share |
| Generation | 5.17 | 54.13 | 5.96 | 56.48 | 5.14 | 52.71 | 5.38 | 54.35 |
| Transmission | 0.92 | 9.67 | 0.87 | 8.21 | 1.02 | 10.50 | 0.94 | 9.45 |
| System Loss | 0.77 | 8.08 | 0.80 | 7.54 | 0.83 | 8.47 | 0.79 | 8.01 |
| DSM | 1.71 | 17.87 | 1.82 | 17.25 | 1.69 | 17.34 | 1.73 | 17.51 |
| RFSC | 0.36 | 3.81 | 0.36 | 3.39 | 0.49 | 5.06 | 0.40 | 4.00 |
| Other Charges | (0.06) | (0.61) | 0.03 | 0.32 | -0.12 | (1.26) | -0.04 | (0.42) |
| Subsidy Charges | 0.02 | 0.16 | 0.05 | 0.51 | 0.03 | 0.27 | 0.03 | 0.29 |
| Universal Charges | 0.64 | 6.74 | 0.63 | 5.97 | 0.61 | 6.26 | 0.63 | 6.36 |
| Other Taxes ⁶ | 0.01 | 0.15 | 0.03 | 0.32 | 0.06 | 0.65 | 0.04 | 0.45 |
| Total | 9.56 | 100 | 10.54 | 100 | 9.75 | 100 | 9.90 | 100 |

Source: NEA

Among the three (3) grids, Mindanao EC residential customers paid the lowest generation costs at PhP 5.14/kWh. Distribution, Supply and Metering (DSM), which comprise the ECs main business, is the next largest component of EC's residential electricity rates cost comprising about 17% followed by transmission at 11%. Relative to Systems Loss, it can be noted that on the average, ECs' system losses cost 79 centavos/kWh on the average, equivalent to 8% of the total average electricity rates for ECs' residential customers. The ECs likewise are allowed to impose Reinvestment Fund for Sustainable Capex (RFSC) which amounts to 40 centavos/kWh on the average.

MERALCO, the largest distribution utility in the country posted an increase in its average residential electricity rates in the amount of PhP0.19 centavos per kWh from PhP 9.88/kWh in June 2018 to PhP10.07 in September 2018. For the same period, MERALCO's effective residential rates for the different residential customer classes ranged from PhP10.04/kWh to PhP11.28/kWh of which the highest component was generation costs at PhP5.28/kWh. MERALCO distribution charges for its different residential customer classes comprised 19-27% of the total effective residential rates equivalent to about PhP1.96/kWh to PhP3.03/kWh, respectively. Systems loss charges on the other hand was 45-centavos/kWh.

Table 7. Summary of MERALCO Residential Unbundled Power Rates, September 2018 (PhP/kWh)

| BILL SUBGROUP | 0 to 200 kWh | % Share | 201 to 300 kWh | % Share | 301 to 400 kWh | % Share | Over 400 kWh | % Share |
|-------------------|--------------|---------|----------------|---------|----------------|---------|--------------|---------|
| Generation | 5.27 | 52% | 5.27 | 51% | 5.27 | 49% | 5.27 | 47% |
| Transmission | 0.67 | 7% | 0.67 | 6% | 0.67 | 6% | 0.67 | 6% |
| System Loss | 0.45 | 4% | 0.45 | 4% | 0.45 | 4% | 0.45 | 4% |
| Distribution | 1.96 | 19% | 2.24 | 22% | 2.52 | 24% | 3.03 | 27% |
| Subsidies* | 0.09 | 1% | 0.09 | 1% | 0.09 | 1% | 0.09 | 1% |
| Universal Charge | 0.38 | 4% | 0.38 | 4% | 0.38 | 4% | 0.38 | 3% |
| Fit-All Renewable | 0.26 | 3% | 0.26 | 2% | 0.26 | 2% | 0.26 | 2% |
| Government Taxes | 1.00 | 10% | 1.04 | 10% | 1.08 | 10% | 1.13 | 10% |
| TOTAL | 10.07 | 100% | 10.39 | 100% | 10.71 | 100% | 11.28 | 100% |

Source: MERALCO

For the report period, MERALCO's blended generation charges ranged from a low of PhP4.77/kWh to a high of PhP5.36/kWh. MERALCO's low generation costs during the period of May to June 2018 was attributed to the lower generation cost due to the normalization of operations of various power plants which has undergone scheduled maintenance shutdown. Also, the decrease in rate for the three-month period (June, July & September) was due to the decrease in Power Supply Agreement (PSA) and Wholesale Electricity Spot Market (WESM) charges. Charges from PSAs (June & July) registered a decrease of PhP0.4420 per kWh brought about by the higher dispatch of Pagbilao Unit1 and Ilijan Unit 1 as both returned to normal operations. Meanwhile, charges from the WESM also decreased by PhP2.0768 per kWh due to less power plant capacity on outage and lower average demand for power in Luzon grid. The share of WESM purchases to MERALCO's total requirement is 21 percent for this period.

Compared to the NPC regulated rates for Luzon, MERALCO's generation charges were higher for the six-month period of March 2018 to September 2018 as explained on the paragraph above.

WESM prices were also low in March 2018 due to the lower spot prices resulting from a reduction in power demand in Luzon grid.

Figure 6 provides MERALCO's average bulk power purchase for the month of March 2018 which came from First Gas Power Corp. (FGPC) - Sta. Rita at 22.90%, South Premier Power Corporation (SPPC) at 17.90%, and First Gas Power Corp. (FGP) – San Lorenzo at 12.00% which are all natural gas powered plants. About 19.10 percent of MERALCO's power supply requirement is bought from the WESM.

Figure 6 – MERALCO Detailed Generation Charge

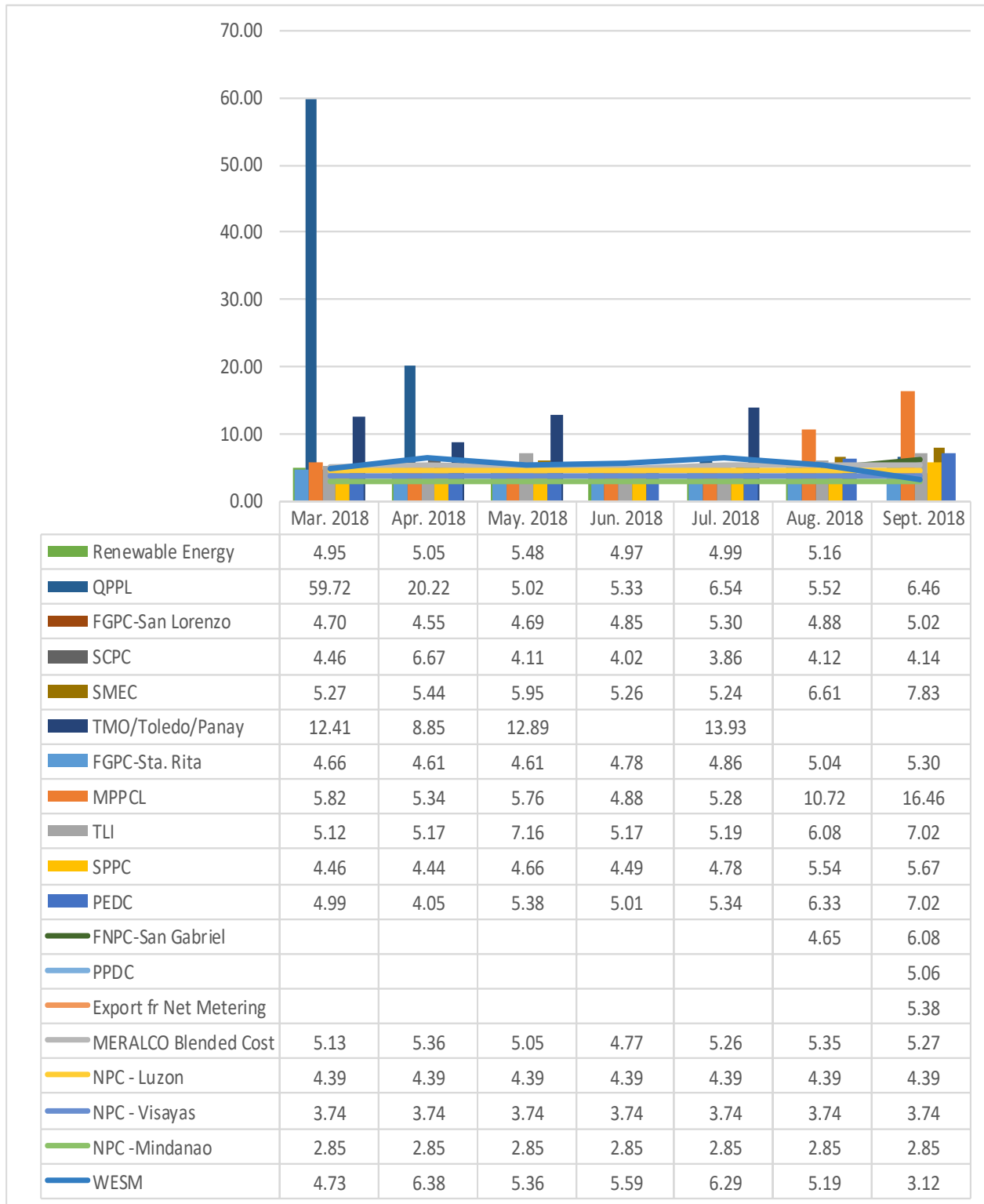
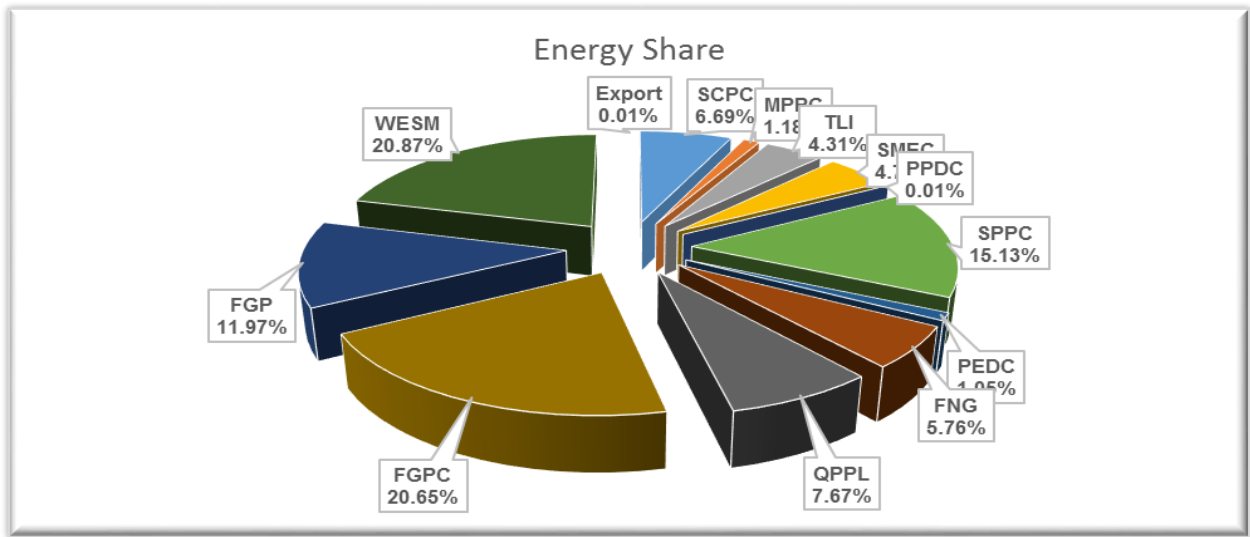


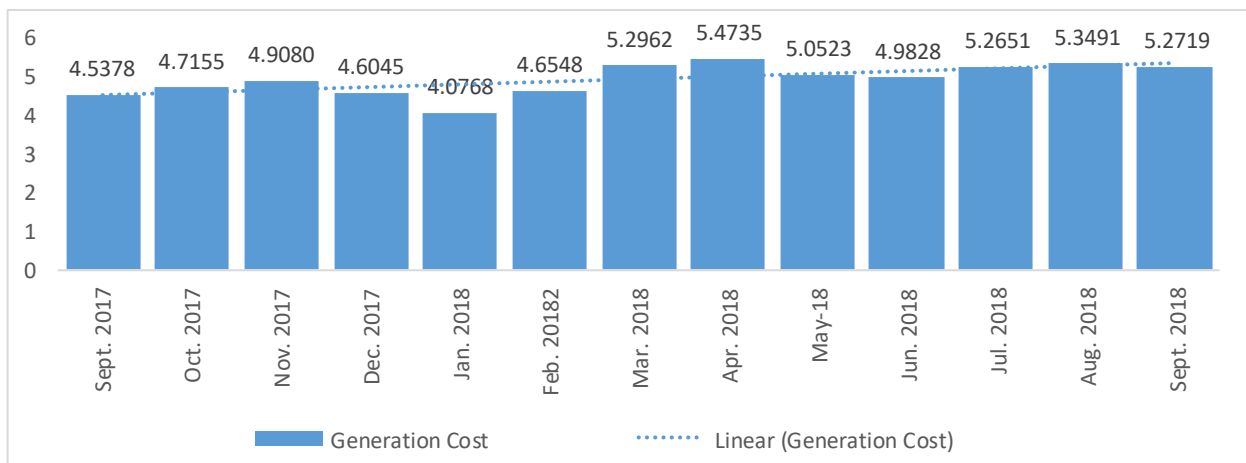
Figure 7 - Sources of MERALCO Power Supply Requirement



Source: MERALCO

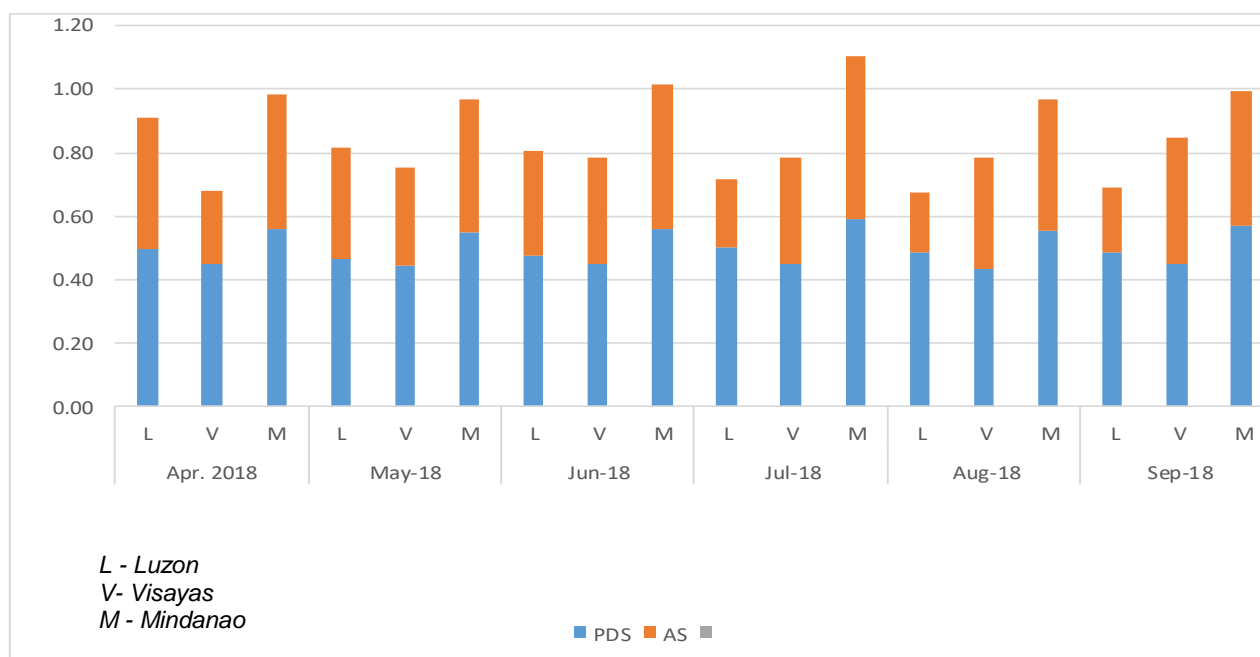
Figure No. 8 provides MERALCO's average generation cost in Peso per kWh per month from September 2017 to September 2018. Comparing a year on year basis, the figure shows an increase of PhP0.7341 per kWh in September 2018 as compared to September 2017 data. The increase was generally attributed to the following: a) depreciation of the Philippine peso; b) the effect of the imposition of the value-added tax (VAT) on the transmission charge due to the Tax Reform for Acceleration and Inclusion (Train Law) c) PSALM's implementation of ERC Order/Decision for the recovery of NPC and PSALM's 10th to 17th GRAM applications; d) PSALM's implementation of ERC Order/Decision for the recovery of NPC and PSALM's 15th to 16th ICERA applications; e) PSALM's implementation of ERC Order/Decision for the recovery of its TAFPPC and TAFxA/FPPCA and FxA NPC applications; f) depreciation of Philippine Peso; g) lower average plant dispatch g) normalization of capacity fees; h) tighter supply conditions in Luzon due to warmer temperatures; and i) high fuel prices.

Figure 8 - Average MERALCO Generation Charges



Source: MERALCO

Figure 9 – NGCP Average Effective Transmission Charges



Source: NGCP

Transmission charges, on the average, comprise around 7% to 9% of a DU's average electricity rates. For the period April 2018 to September 2018, Mindanao Grid recorded the highest transmission charges at PhP1.11/kWh of which 59 centavos was paid for the power delivery service while 52 centavos/kWh went to ancillary services. The lowest average transmission cost was recorded in the Visayas grid at 68 centavos in April 2018 and in Luzon grid in August 2018. For the Visayas grid, the power delivery service was around 45 centavos/kWh while ancillary services cost 23 centavos/kWh, while in the Luzon grid, the power delivery service was around 49 centavos/kWh while ancillary services cost 19 centavos/kWh.

B. Feed-in Tariff

On the Feed-in-Tariff Allowance (FIT-All), starting June 2017 billing month, the new FIT-All rate of PhP0.1830/kWh was implemented in compliance with the ERC Decision on the application of the TRANSCO regarding ERC Case No. 2015-216 RC entitled, "In the Matter of the Application for the Approval of the Feed-in-Tariff Allowance for the Calendar Year 2016 Pursuant to the Guidelines for Collection of the Feed-in-Tariff Allowance and the Disbursement of the Feed-in-Tariff Allowance Fund, with Prayer for Provisional Authority". In the aforesaid Decision, the ERC authorized TransCo to collect an additional FIT-All of the PhP0.0590/kWh from the PhP0.1240/kWh current level, thereby bringing the FIT-All to PhP0.1830/kWh.

Meanwhile, during the report period, Transco filed with the ERC the determination for the FIT-All rate for the years 2014-2015, 2016, 2017, and 2018. Status of the said regulatory filings is shown below.

| Year | Rate Applied (PhP/KWh) | ERC Approval | Remarks |
|---------------------------------------|------------------------|--|---|
| 2014-2015 (filed on July 30, 2014) | PhP0.0406 | Provisional Authority (PA) PhP0.0406/kWh | Implementation started on January 2015 billing period |
| | | Final PhP0.0406/kWh | The ERC approved the 2014-2015 FIT-All Rate on December 10, 2015. |

| Year | Rate Applied (PhP/KW) | ERC Approval | Remarks |
|-----------------------------------|---|---|--|
| 2016 (filed on December 22, 2015) | PhP0.1025 or the updated amount at the time of evaluation | Provisional: PhP0.1240/kWh | Implementation started on April 2016 billing period |
| | | Final: PhP0.1830/kWh | Approved on May 9, 2017 (docketed May 13, 2017) Implementation started on June 2017 billing month |
| 2017 (filed on December 1, 2016) | PhP0.2291 or the updated amount at the time of evaluation | Final PhP0.2563/kWh | Approved on February 27, 2018 (docketed May 11, 2018) effective June 2018 billing |
| 2018 (filed on August 29, 2017) | PhP0.2932 or the updated amount at the time of evaluation | No Provisional Authority issued to date | For ERC Resolution |
| 2019 (filed on July 30, 2018) | PhP0.2780 or the updated amount at the time of evaluation | | Awaiting ERC Order for Public hearing and Expository Presentation |

C. Administration of Universal Charge (UC)

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

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

As of 30 September 2018, the total collections of Universal Charge amounted to PhP160.4 billion with interest earnings from deposits and placements of UC funds amounted to PhP0.17 Billion. On the other hand, UC fund disbursement amounted to PhP159.4 Billion. Accounting for the inflows and outflows of the UC fund leaves it with a balance of about PhP1.1 billion.

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

Table 8. UC Collections as of 30 September 2018 (in Billion PHP)

| Particulars | Remittances | Interests | Disbursements | Balance |
|---|---------------|-------------|---------------|-------------|
| Special Trust Fund – Missionary Electrification (ME) NPC-SPUG | 83.17 | 0.04 | 83.19 | 0.02 |
| Special Trust Fund – ME Renewable Energy Developer Cash Incentive (REDCI) | 0.55 | 0.00 | 0.27 | 0.29 |
| Special Trust Fund – Environmental Charge (EC) | 2.17 | 0.11 | 1.49 | 0.79 |
| Special Trust Fund – Stranded Contract Cost (SCC) | 72.36 | 0.01 | 72.35 | 0.02 |
| Stranded Debts | 2.10 | 0.01 | 2.10 | 0.00 |
| TOTAL | 160.36 | 0.17 | 159.41 | 1.12 |

Source: PSALM

2. UC Remittances

For the period May 2018 to September 2018, PSALM received PhP13.1 Billion in UC remittances broken down with details reflected in Table 9.

Table 9. UC Remittances to PSALM for the period May 2018-September 2018 (In Billion PhP)

| Month | UC-ME (NPC-SPUG) | UC-ME (REDCI) | EC | SCC | SD | Total/Month |
|----------------|------------------|---------------|-------------|-------------|-------------|--------------|
| May 2018 | 0.98 | 0.01 | 0.02 | 1.22 | 0.17 | 2.39 |
| June 2018 | 1.16 | 0.01 | 0.02 | 1.44 | 0.19 | 2.82 |
| July 2018 | 1.11 | 0.01 | 0.02 | 1.34 | 0.19 | 2.67 |
| August 2018 | 1.10 | 0.01 | 0.02 | 1.38 | 0.19 | 2.70 |
| September 2018 | 1.04 | 0.01 | 0.02 | 1.30 | 0.18 | 2.54 |
| Total | 21.23 | 0.05 | 0.10 | 6.68 | 0.92 | 13.12 |

Source: PSALM

3. UC Disbursements

For the May 2018 to September 2018, PSALM disbursed PhP13 billion to NPC-SPUG to fund the missionary electrification functions, chargeable against the UC-ME fund.

Table 10. UC Disbursements of PSALM for the Period May 2018 to September 2018 (in PhP Billion)

| Month | ME (NPC-SPUG) | ME (REDCI) | SCC | SD | Total/Month |
|----------------|---------------|---------------|---------------|-------------|--------------|
| May 2018 | 0.97 | - | 1.05 | 0.16 | 2.19 |
| June 2018 | 1.17 | 0.02 | ^{2/} | 0.19 | 1.36 |
| July 2018 | 1.10 | 0.02 | 2.94 | 0.18 | 4.24 |
| August 2018 | 1.11 | ^{1/} | 1.38 | 0.19 | 2.69 |
| September 2018 | 1.04 | 0.00 | 1.30 | 0.18 | 2.52 |
| Total | 5.39 | 0.04 | 6.67 | 0.90 | 13.00 |

^{1/} No REDCI claim was received during the months of May 2018 and August 2018.

^{2/} The ERC-approved UC-SCC in the amount PhP12.877 Million in its Order dated 06 August 2018 under ERC Case Nos. 2013-160 RC and 2014-111 RC was fully disbursed on 21 May 2018.

Source: PSALM

4. ERC-Approved UC Rates

Total UC being charged to customers per kilowatt hour amounts to PhP0.3789 as approved by the ERC.

| Type of UC | PhP/kWh |
|---|---------------|
| UC-ME <ul style="list-style-type: none"> • UC-ME Subsidy • Cash Incentive for RE Developers • True-up Adjustment (2011) • True-up Adjustment (2010) | 0.1561 |
| UC-EC | 0.0025 |
| UC-SCC | 0.1938 |
| UC-SD | 0.0265 |
| Total | 0.3789 |

On 03 November 2014, the ERC issued an Order provisionally approving the instant petition filed by NPC on the proposed Subsidized Approved Generation Rate (SAGR) and the UC-ME for the years 2015 to 2016. NPC was authorized to extend the implementation of the current CY 2014 UC-ME subsidy amounting to PhP0.1561/kWh from January 2015 to August 2015, broken down as follows:

| Particulars | CY 2015 | |
|----------------------------------|--------------------------|--------------------------|
| | January-May (PhP/kWh) | June-August (PhP/kWh) |
| UC-ME Subsidy | 0.0454 | 0.1163 |
| Cash Incentive for RE Developers | 0.0017 | 0.0017 |
| True-up Adjustment (2011) | 0.0709 | 0 |
| True-up Adjustment (2010) | 0.0381 | 0.0381 |
| Total | 0.1561 | 0.1561 |

Further, the ERC issued an order dated 17 August 2015 extending the provisional authority it granted under the ERC Order dated 03 November 2014, until revoked or made permanent by the ERC.

D. Lifeline Rate Subsidy Program

For the period December 2017 to July 2018, the total amount of subsidy provided by non-lifeline consumers was PhP620 million which extended an average of 2.48PhP/kWh amount of subsidy to lifeline customers. On the average, the amount of subsidy paid for by the non-lifeline customers of all DUs is at PhP0.07/kWh, while those in the MERALCO franchise area is at PhP0.09/kWh. For On Grid ECs, non-lifeline customers subsidized an average of PhP0.06/kWh while 0.07 PhP/kwh for non-lifeline customers of Off Grid ECs.

Figures for MERALCO were based on its submission of Uniform Reportorial Requirements as of September 2018 where 2.74 PhP/kwh is the average amount of subsidy extended to lifeline customers in its franchise area. The average subsidy provided by non-lifeline customers is an average of PhP0.07/kWh.

Table 11. Total Amount of Discount per Lifeline Level

| Particulars | MERALCO | Other PDUs | ON-GRID ECs | OFF-GRID ECs | Total |
|---|---------------|---------------|---------------|--------------|---------------|
| Average Monthly Total Amount of Subsidy Provided by Non-Lifeline Customers (in PhP) | 317,345,117 | 86,223,754 | 197,152,074 | 20,252,327 | 620,973,272 |
| Average Monthly Total Consumption of Lifeline Customers (kWh) | 115,863,105 | 39,261,880 | 85,620,609 | 9,713,983 | 250,459,577 |
| Average Monthly Total Consumption of Non-Lifeline Customers (kWh) | 3,574,391,920 | 1,369,825,406 | 3,551,225,782 | 284,299,374 | 8,779,742,483 |
| Average Amount of Subsidy Provided to Lifeline Customers (In PhP/kWh) | 2.74 | 2.20 | 2.30 | 2.08 | 2.48 |
| Average Amount of Subsidy Provided by Non-Lifeline Customers (In PhP/kWh) | 0.09 | 0.06 | 0.06 | 0.07 | 0.07 |

Source: MERALCO URR, September 2018

E. Mandatory Rate Reduction (MRR)

Pursuant to Section 72 of the EPIRA, NPC is continuously granting to residential customers the mandatory discount of 30-centavos/kWh. For this report period, focus is given in the Small Power Utilities Group (SPUG) areas, which is being served by the NPC. From the enactment of the law in 2001, NPC was able to provide benefits of about P31.48 Billion of rate reduction to electricity consumers nationwide. The highest amount of discount was granted to the Luzon grid at 46.8% followed by Mindanao grid at 32.2%. For January 2018 to November 2018, total discounts granted by NPC have amounted to Php48.4 million. This amount is almost equally shared by electricity end-users in the Luzon and Mindanao areas since NPC has already privatized its generation facilities in the Visayas.

Table 12. NPC-Incurred Amount on Grant of Mandatory Rate Reduction

| Year | LUZON | VISAYAS | MINDANAO | TOTAL |
|-----------------|--------------------------|-------------------------|--------------------------|--------------------------|
| 2001 | 958,740,000.00 | 336,400,000.00 | 386,860,000.00 | 1,682,000,000.00 |
| 2002 | 1,739,560,200.00 | 610,372,000.00 | 701,927,800.00 | 3,051,860,000.00 |
| 2003 | 1,837,281,000.00 | 644,660,000.00 | 741,359,000.00 | 3,223,300,000.00 |
| 2004 | 1,976,247,000.00 | 693,420,000.00 | 797,433,000.00 | 3,467,100,000.00 |
| 2005 | 1,862,247,000.00 | 653,420,000.00 | 751,433,000.00 | 3,267,100,000.00 |
| 2006 | 1,495,748,400.00 | 524,824,000.00 | 603,547,600.00 | 2,624,120,000.00 |
| 2007 | 1,527,508,800.00 | 535,968,000.00 | 616,363,200.00 | 2,679,840,000.00 |
| 2008 | 1,618,397,137.71 | 561,119,367.51 | 635,133,615.12 | 2,814,650,120.34 |
| 2009 | 1,194,222,115.62 | 566,935,169.51 | 689,177,083.02 | 2,550,334,367.15 |
| 2010 | 285,887,093.30 | 427,552,082.83 | 714,165,916.31 | 1,427,545,092.44 |
| 2011 | 155,448,933.21 | 269,063,509.57 | 742,749,200.70 | 1,167,291,643.48 |
| 2012 | 34,237,549.12 | 226,319,497.74 | 714,532,284.67 | 975,089,331.53 |
| 2013 | 5,709,192.08 | 213,015,951.12 | 699,932,744.81 | 918,657,888.01 |
| 2014 | 0.00 | 170,046,642.19 | 738,280,984.52 | 908,327,626.71 |
| 2015 | 0.00 | 28,885,127.68 | 574,576,865.21 | 603,461,992.89 |
| 2016 | 24,548,708.14 | 0.00 | 24,034,938.01 | 48,583,646.15 |
| 2017 | 12,054,309.98 | 0.00 | 8,264,433.16 | 22,002,080.77 |
| Up to Nov. 2018 | 17,142,751.54 | 0.00 | 24,195,597.28 | 48,417,013.36 |
| TOTAL | 14,744,980,190.70 | 6,462,001,348.15 | 10,163,967,262.81 | 31,479,680,802.82 |

Source: NPC

F. Policy Issuance

The DOE promulgated Department Circular No. DC2018-09-0026 entitled “*Adopting Framework For Uniform Monthly Electricity Bill Format*” signed by Secretary Alfonso G. Cusi on 24 August 2018. Said circular prescribed a uniform monthly electricity bill format to be adopted by the DUs to ensure greater transparency in their billing and charges for the utmost protection of public interest.

Following are the salient features of the circular:

1. Providing policy direction for the ERC to issue and enforce rules and regulation on uniform monthly electricity bill format for DUs;

2. Further unbundling of electricity components to reflect, among others, the following, as new line on the bill:
 - a. Ancillary Services Charge;
 - b. Distribution System, Supply, and Metering Charges;
 - c. Universal Charges for:
 - i. Missionary Electrification for NPC-SPUG;
 - ii. Missionary Electrification for Renewable Energy Developers Cash Incentive;
 - iii. Environmental Charge;
 - iv. NPC Stranded Debt; and
 - v. NPC Stranded Contract Cost.
3. Posting of DUs' monthly electricity rate schedule per customer class, details and computation of monthly rate adjustments, and description of each charge on electricity bill on its website and/or official social media account/page;
4. Provision on the monthly electricity bill of the following:
 - a. Customer Account Information including Bill Deposit and its corresponding interest;
 - b. Billing Summary;
 - c. Message Center;
 - d. Customer Care;
 - e. Payment Slip;
 - f. Summary of Electricity Charges;
 - g. Billing Details; and
 - h. Electricity Consumption Graph.

Prior to the promulgation of the said circular, there were series of public consultations being conducted with stakeholders held in selected areas in Luzon, Visayas, and Mindanao during the report period.

V. COMPETITION

This section provides an update on key areas of competition to include 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 October 2018, the total registered participants in the integrated WESM (Luzon and Visayas) is two hundred sixty four (264). The breakdown of the Generation Companies and Customer Trading Participants is shown in the table below.

Table 13. Registration Update as of 25 August 2018 (Luzon and Visayas)

| CATEGORY | REGISTERED | | | | | | |
|---|------------|------------|-----------|----------|-----------|----------|----------|
| | TOTAL | DIRECT | | | INDIRECT | | |
| | | LUZ | VIS | LUZ/VIS | LUZ | VIS | LUZ/VIS |
| Generation Companies | 114 | 75 | 35 | 3 | 1 | 0 | 0 |
| Customers | | | | | | | |
| • Private distribution utilities & Local government utilities | 17 | 8 | 4 | 0 | 5 | 0 | 0 |
| • Electric cooperatives | 71 | 29 | 28 | 0 | 14 | 0 | 0 |
| • Directly Connected Customers | 58 | 8 | 6 | 1 | 33 | 8 | 2 |
| • Wholesale aggregators | 4 | 0 | 0 | 4 | 0 | 0 | 0 |
| Total Customer Trading Participants | 150 | 45 | 38 | 5 | 52 | 8 | 2 |
| TOTAL PARTICIPANTS | 264 | 120 | 73 | 8 | 53 | 8 | 2 |

Source: PEMC

For the billing period from May to October 2018, the average system-wide demand for the month of May continued to grow peaking at 10,410 MW due to the summer season. On the other hand, with the onset of rainy season and cooler temperatures, the system-wide demand had a decreasing trend for the billing months from June to September 2018 at 9,898MW, 9,614 MW, 9,593 MW and 9,559 MW, respectively. Following the higher temperatures and lower level of precipitation, the demand in October increased again at 10,119 MW.

In terms of the effective supply, the month of May presented a higher capacity at 13,182 MW as compared with the previous month. In contrast, the June and July billing months posted a decrease at 12,794 MW and 12,406 MW, respectively, owing to a higher level of outage capacities. Subsequently, the capacity had shown an unsteady behavior in the last three billing months of the covered period which are as follows: increased at 12,894 MW in August, decreased at 12,570 MW in September and increased again at 13,159 MW in October.

For the monthly reserve schedule between May to October 2018 were noted individually to be at 922 MW, 846 MW, 827 MW, 893 MW, 885 MW and 1,078 MW.

On the other hand, the WESM registered capacities for May and June billing months recorded an increase from 18,757 MW to 18,771 MW. The rise of WESM registered capacities in May was attributable to the entry of the 6.5 MW additional unit of Calumangan DPP coupled with the changes in the registered capacities of SLPGC GTPP units 1 and 2. Each unit were noted to increase from 23 MW to 25 MW; while similarly Maris HEP units 1 and 2 registered capacity

increased from 3.8 MW to 4.3 MW. For the month of June, it was attributable to the changes in the respective registered capacity of Masinloc CFTPP unit 2 (from 315 MW to 344 MW), CPPC DPP (70 MW to 64 MW) and EAUC DPP (49.6 to 43.5 MW).

As a turning point, the registered capacity decreased to 18,738 MW for the month of July which was associated with the deregistration of SPC Power Corporation's Cebu DPP units 1 and 2. It then remained at 18,738 MW by the end of August billing month.

Registered capacities increased by 150MW at 18,888MW in September with the entry of the fourth unit of coal-fired facility by SMC Consolidated Power Corporation. However, this slightly decreased to 18,882 MW in October which was attributed by the change of registered capacity of Makban GPP Ormat from 12 MW to 6 MW.

For the total WESM registered capacities traded in WESM, the offered capacities were as follows: 70% in May at 13,070 MW, 68% in June at 12,735 MW, 66% in July at 12,416 MW, 70% in August at 13,087 MW, 67% in September at 12,593 MW and finally 68% 12,911 MW in October.

Table below summarizes the capacities unavailable to the market.

Table 14. Summary of capacities unavailable to the market

| Month | Outage Capacity | | Capacity Not Offered | |
|----------------|-----------------|--------------------------------|----------------------|--------------------------------|
| | MW | % of total registered capacity | MW | % of total registered capacity |
| May 2018 | 1,711 | 9% | 2,197 | 12% |
| June 2018 | 2,122 | 11% | 2,316 | 12% |
| July 2018 | 2,432 | 13% | 2,238 | 12% |
| August 2018 | 1,861 | 10% | 1,990 | 11% |
| September 2018 | 2,513 | 13% | 2,116 | 11% |
| October 2018 | 2,456 | 13% | 1,992 | 11% |

Meanwhile, it was noted that during the report period, significant amount of capacities were unavailable to supply in the market as these are either on outage or not offered. The capacity on outage for the month of May averaged at 1,711 MW, lower significantly by 34.4% compared to April as coal and natural gas plants previously on outage were restored to operation.

Plant outages plant in June and July increased by 24% and 14.6% at 2,122 MW and 2,432 MW, respectively. Outage capacities were attributable mainly to the maintenance outages of Pagbilao CFTPP unit 3 from 27 June to 11 July; SMC Limay CFTPP unit 2 from 25 June to 21 July; forced outages of SLPGC CFTPP unit 1 starting 6 March; SLTEC CFTPP unit 2 starting 18 June, and finally the planned outage of Pagbilao CFTPP unit 2 from 7 June to 5 July.

On the contrary, the outage capacity for the August billing month decreased by 23.5% at 1,861 MW. The reduction was related to the lower outage capacities involving coal plants such as SLPGC CFTPP unit 1 since 6 March, SLTEC CFTPP unit 2 since 18 June, and Calaca CFTPP unit 2 from 6 to 17 August. Oil-based plants in outage include the forced outage of Malaya TPP unit 2 for the whole billing month (since 19 May) and planned outages of Limay unit 2 (since 23 July) and unit 3 (since 22 June). Geothermal plants' outage involved the forced outages of units of Tiwi GPP unit A on top of the prevailing outages of Makban GPP unit C and Tiwi GPP unit B. while the natural gas plants outages are attributed to the maintenance outage of Sta. Rita NGPP unit 2 and planned outage of Sta. Rita NGPP unit 3.

In September, capacities on outage increased by 35% at 2,513 MW compared to August mainly due to the planned outage schedule of Sual CFTPP Unit 1 and the maintenance outage of the Pagbilao CFTPP Unit 3.

Lastly, a minor decrease of 2.3% was noted in October at 2,456 MW. It was driven by the lower outage capacity of coal plants due to the resumption of operations of Pagbilao CFTPP unit 1 & 3 and SLPGC CFTPP unit 1.

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

Table 15. Major Plant Outages in Luzon and Visayas

| Month | Luzon | Visayas | |
|-------------|---|---|---|
| May 2018 | Tiwi 1, 3 & 5 Makban 2, 5, 6, 7 & 9 Angat M 3 SLPGC 1 & 3 San Roque 3 Pagbilao 1 Ilijan A1, A2 & A3 Magat 3 & 4 Casecnan 2 Pantabangan 2 Malaya 1 & 2 Binga 1, 2 & 3 Masinloc 1 & 2 | Sual 2 Bacman 1 & 3 SMC 1 Calaca 2 Limay 4 San Gabriel Avion 1 & 2 Botocan 1 & 2 Kalayaan 2 | PGPP2 Unit 4 Upper Mahiao 1,2, 3 & 4 PEDC 1 Mahanagdong A1, A2, & B1 CENPRI 2 & 5 TPC Sangi 1 & 2 Malitbog BC & 2 Nasulo Bohol 4 Leyte 1 & 2 CEDC 2 Cebu Diesel 6 |
| June 2018 | Tiwi 1, 2, 3, & 5 Makban 5, 6,7 & 9 Angat M 3 SLPGC 1 & 2 San Roque 1,2 & 3 Pantabangan 2 Malaya 1 & 2 Calaca 1 & 2 Kalayaan 2,3 & 4 Binga 1 Botocan 2 Sta. Rita 2 & 3 QPPL | Limay 3 & 7 Ilijan A1 Pagbilao 1 & 2 San Lorenzo 1 & 2 SLTEC 1 & 2 Caliraya 1 & 2 Avion 1 & 2 SMC 2 | PGPP2 Unit 4 Upper Mahiao 1 & 2 Mahanagdong A1 & B1 TPC Sangi 1 & 2 Bohol 4 PGPP1 Unit 1,2 & 3 PGPP2 Unit 1,2 & 3 CENPRI 5 PALM 1 PEDC 1 & 2 Nasulo CEDC 1, 2 & 3 Cebu Diesel 5 |
| July 2018 | Tiwi 2, 3, 5 & 6 Makban 5, 6, 7, 8,9 & 10 Angat M 1, 3 & 4 SLPGC 1 & 4 San Roque 3 Malaya 1 & 2 Pagbilao 2 & 3 SLTEC 1 & 2 Limay 2, 3, 5 & 6 SMC 2 Calaca 2 | San Gabriel Sta. Rita 1, 3 & 4 San Lorenzo 1 Masinloc 1 Sual 1 & 2 Nasulo Avion 1 & 2 GN Power 1 Kalayaan 2 Ilijan A2 Pantabangan 2 | PGPP2 Unit 4 PGPP1 Unit 1, 2 & 3 Upper Mahiao 1 Mahanagdong B1 CEDC 1 & 2 Cebu Diesel 5 PEDC 2 Leyte 1 Bohol 1 TPC Sangi 2 PB102 Unit 1 |
| August 2018 | Tiwi 1, 2 & 3 Makban 5, 6, 8,9 & 10 Angat M 3 & 4 SLPGC 1 & 4 San Roque 3 Malaya 2 SLTEC 1 & 2 Limay 2 & 3 Kalayaan 2 Pantabangan 2 San Gabriel | Pagbilao 2 ANDA 1 Bacman 3 Sta. Rita 2 & 3 Calaca 2 SMC 2 Avion 1 & 2 Ilijan A1 GN Power 1 Angat M 4 QPPL | PGPP2 Unit 4 Upper Mahiao 1,2 & 4 Mahanagdong B1 San Carlos 1 PEDC 2 PALM 1 Kepco Salcon 1 PB102 Unit 3 TPC Sangi 1 Bohol 4 |

| Month | Luzon | Visayas |
|-----------------------|---|---|
| | | CEDC 1 |
| September 2018 | Tiwi 1 & 3 Makban 1, 2, 5, 6, 7, 8 & 9 Angat M 3 & 4 SLPGC 1 & 2 San Roque 3 Malaya 1 & 2 SLTEC 1 & 2 Limay 2 & 3 SMC 2 Sta. Rita 1, 2, 3 & 4 San Lorenzo 2 Sual 1 & 2 | Pagbilao 1, 2 & 3 Masinloc 1 San Gabriel Avion 1 & 2 Ambuklao 1 Calaca 2 Casecnan 1 QPPL |
| October 2018 | Tiwi 1 & 3 Makban 1,2, 5,6,7, 8 & 9 Makban Ormat Angat M 3 Malaya 1 & 2 SLTEC 2 Limay 3 & 7 Sual 1 Casecnan 1 Pagbilao | QPPL Caliraya 1 & 2 Avion 1 & 2 SLPGC 3 & 4 SMC 4 Masinloc 1 Sta. Rita 3 TMO Unit 4 |

Supply margin for the billing months of May and June improved to 1,851 MW and 2,050 MW, respectively. It also showed an unsteady trend as follows: for the month of July, it somewhat tightened by 4.2% at 1,964 MW; for the August billing month, it widened again by 22.6% at 2,408 MW; narrowed again by 11.7% at 2,126 MW in September and 7.7% at 1,963 MW in October, respectively.

In terms of prices, a declining pattern on average market prices were noted from May to August 2018 which were as follows: 2.2%, 0.8%, 6.8% and 28.5% at PhP4, 105/MWh, PhP4, 073/MWh, PhP3,794/MWh and PhP2,713/MWh, respectively. In contrast, it individually increased by 9.3% at PhP2, 966/MWh in September and 28.8% at PhP3, 819/MWh in October.

Relative to price volatility, price spiked in May 2018 peaking at PhP32,454/MWh was observed on 4 May at 1600H. It was noted that the supply from Ilijan NGPP Block A was limited from 600 MW at 1500H to 301 MW at 1600H following the outage of one of its units. For the June billing month, the maximum price on recorded was at PhP19,211/MWh (4 June at 1900H) when high level of outages were noted following the forced outages of Palm CFTPP at 1600H; Ilijan NGPP Block A at 1700H; and PEDC CFTPP unit 2 at 1800H. Between June 27 up to 29, price spikes were once again observed ranging from PhP14,199/MWh to PhP17,473/MWh. This trend continued on June 10 from PhP15,148/MWh to PhP16,021/MWh.

In addition, the clearing price on 25 August (1900H) peaked at PhP7,805/MWh. Similarly, it recorded a maximum price of PhP21,453/MW on 8 September (1900H) and PhP31,707/MWh on October, respectively.

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, following are the highlights of respective activities of the various WESM governance committees:

1. Market Surveillance Committee (MSC)

- Submission of Market Reports to the PEM Board
 - a. Reviewed and deliberated the Market Assessment Report for March 2018 (MAG-MMAR-2018-03), April 2018 (MAG-MMAR-2018-04), May 2018 (MAG-MMAR-2018-05), June 2018 (MAG-MMAR-2018-06), July 2018 (MAG-MMAR-2018-07) and August 2018 (MAG-MMAR-2018-08) submitted by the Market Assessment Group (MAG).
 - b. Met with NGCP-SO to discuss the Grid Operating and Maintenance Program's (GOMP) objectives, processes and timeline preparation.
 - c. Reviewed and approved the Retail Market Assessment Report covering the period 26 December 2017 to 25 March 2018 (1st Quarter of 2018), 26 March 2018 to 25 June 2018 (2nd Quarter of 2018) and the Annual Retail Market Assessment Report covering the period 26 December 2016 to 25 December 2017 submitted by the MAG.
- Reviewed and deliberated cases of Interesting Pricing Events and prepared reports covering the months of March, April, May and June.
- Review of the Compliance Monitoring Reports
 - a. Reviewed the activities of the Generator-Trading Participants (TP) with scheduled generating units and priority dispatch generating units in terms of their compliance with the Real Time Dispatch (RTD) schedule. Summary for the covered period are as follows:

Table 16. Real Time Dispatch (CMR-RTD)

| Billing Month | Luzon | | | Visayas | | |
|---------------|--------------------------|-----------------------------|--------------------------|--------------------------|-----------------------------|--------------------------|
| | No. of Generating Plants | No. of Trading Participants | No. of Trading Intervals | No. of Generating Plants | No. of Trading Participants | No. of Trading Intervals |
| March 2018 | 36 | 33 | 1,656 | 13 | 10 | 1,197 |
| April 2018 | 38 | 34 | 3,450 | 16 | 13 | 649 |
| May 2018 | 35 | 32 | 2,426 | 9 | 8 | 347 |
| June 2018 | 34 | 37 | 2,747 | 12 | 10 | 509 |
| July 2018 | 35 | 31 | 2,236 | 10 | 7 | 901 |
| August 2018 | 32 | 27 | 2,264 | 12 | 10 | 925 |

Source: PEMC

- b. Continued to review the activities of the generator-TPs with scheduled generating units in terms of their compliance with the Must Offer Rule (MOR) as shown below:

Table 17. Must Offer Rule (CMR-MOR)

| Billing Month | Luzon | | | Visayas | | |
|---------------|--------------------------|-----------------------------|--------------------------|--------------------------|-----------------------------|--------------------------|
| | No. of Generating Plants | No. of Trading Participants | No. of Trading Intervals | No. of Generating Plants | No. of Trading Participants | No. of Trading Intervals |
| March 2018 | 19 | 16 | 10,980 | 13 | 7 | 6,474 |
| April 2018 | 15 | 12 | 9,994 | 11 | 6 | 6,075 |
| May 2018 | 19 | 15 | 15,194 | 17 | 11 | 7,027 |
| June 2018 | 18 | 15 | 15,830 | 15 | 10 | 6,045 |
| July 2018 | 19 | 16 | 16,190 | 14 | 9 | 5,351 |
| August 2018 | 20 | 17 | 12,522 | 12 | 7 | 5,713 |

Source: PEMC

- Submission of Request for Investigation (RFI) for Possible Non-Compliances of Generator Trading Participants on Real Time Dispatch (RTD) and Must Offer Rule (MOR) breaches as presented in Tables 20 and 21:

Table 18. March to August 2018 (RFI-RTD& MOR)

| Month | RTD (Total No of Generator – TP) | MOR (Total No of Generator – TP) |
|-------------|----------------------------------|----------------------------------|
| March 2018 | 81 | 81 |
| April 2018 | 80 | 80 |
| May 2018 | 80 | 13 |
| June 2018 | 82 | 12 |
| July 2018 | 78 | 78 |
| August 2018 | 76 | 76 |

Source: PEMC

- Reviewed the Monthly Monitoring Report on the Submission of Projected Output and Nomination of Loading Levels for March to August 2018.

Table 19. MMR on Submission of Projected Output and Nomination of Loading Levels

| No. of non-scheduled, must-dispatch and priority dispatch generating units | March 2018 | April 2018 | May 2018 | June 2018 | July 2018 | August 2018 |
|---|------------|------------|----------|-----------|-----------|-------------|
| Registered | 77 | 77 | 77 | 77 | 77 | 77 |
| Started WESM participation | 56 | 57 | 61 | 62 | 60 | 60 |
| a.Submitted nomination of loading levels and projected output in all trading intervals | 18 | 14 | 17 | 16 | 22 | 21 |
| b.Did not submit their nomination of loading level and projected output in some or all of the covered trading intervals | 38 | 43 | 44 | 46 | 38 | 39 |

Source: PEMC

- Requested ECO to conduct a workshop for generator-TPs regarding compliance with the WESM Rules and Manuals specifically on the submission of NLL, PO and FAS.

- Reviewed the Over-riding Constraints for March to August 2018.

Table 20. Over-riding Constraints

| | March 2018 | April 2018 | May 2018 | June 2018 | July 2018 | August 2018 |
|---|---|---|---|--|--|--|
| Total Number of over-riding events | 7,925 | 7,984 | 6,271 | 3,538 | 3,586 | 4,051 |
| • Involved Luzon generating plants | 36 | 27 | 27 | 32 | 32 | 42 |
| • Involved Visayas generating plants | 11 | 8 | 13 | 10 | 13 | 8 |
| Event Category | Security Limit Events (3.1%) Non-Security Limit Events (96.9%) | Security Limit Events (3.8%) Non-Security Limit Events (96.2%) | Security Limit Events (6.5%) Non-Security Limit Events (93.5%) | Security Limit Events (.06%) Non-Security Limit Events (99.94%) | Security Limit Events (.2%) Non-Security Limit Events (99.8%) | Security Limit Events (.07%) Non-Security Limit Events (99.93%) |

Source: PEMC

- Reviewed the Proposed WESM Penalty Manual Issue 2.0
 - For the month of May, MSC discussed and approved additional revisions to the proposed Penalty Manual Issue 2.0. The proposal was presented to the PEMC Transition Committee (PTC) on 17 May 2018 and to the Board Review Committee (BRC) on 22 May 2018. The same was published in the market information website of PEMC for comments among of interested parties on 24 May 2018. Pursuant to the WESM Rules, the MSC presented the proposed Penalty Manual Issue 2.0, for consultation to the PEM Board on 30 May 2018 and to the Rules Change Committee (RCC) on 01 June 2018.
 - For June, due to the comments received from consultations, the MSC agreed to incorporate in the proposed Manual, the Guidelines and Procedures on the Utilization of the Penalty previously proposed by the Enforcement and Compliance Office (ECO). The MSC also agreed to adopt the suggestion allowing all concerned WESM members to file for a request for reconsideration regardless of the aggregate penalty amount.
 - For July, the MSC approved the request of the Philippine Independent Power Producers Association's (PIPPA) to extend the period to submit comments on the Manual and issued an advisory to disseminate the extension among for interested participants. The MSC also didn't approve the participant's request to be provided with a flowchart and timeline of the processes in the enhanced WESM design. The requested flowchart and timeline cover from the start of flagging of probable breach up to compliance monitoring and assessment; penalty imposition; filing of request for reconsideration; until the decision on appeal since the same would be appended in the proposed WESM Penalty Manual upon finalization.
 - For August, the MSC deliberated inputs from the DOE as well as the consolidated comments submitted by PTC, BRC, PEM Board, RCC and other stakeholders. Some of the comments were the following: a.) transition period or moratorium on the application of the proposed WESM Penalty Manual; b.) proposal to incorporate the proposed guidelines and procedures on the utilization of the penalties; and c.) penalties collected be reverted to customers.
- Reviewed the Draft Department Circular (DC) entitled "Providing Further Policies for the Efficient Transition to the Independent Market Operator (IMO) of the WESM"

- In June, the MSC discussed and provided comments on the draft DC specifically with regard to the creation of a DOE-ERC Enforcement and Compliance Committee (DEECC). In general, the MSC is of the opinion that the draft DC, insofar as it proposes to create the DEEC, is not consistent with the intent of the framers of EPIRA to make the Market Operator truly independent and to create an atmosphere that will foster the independence of the Market Operator.
- Reviewed the proposed Code of Ethics
 - In August, MSC reviewed and revised the Code of Ethics for WESM Participants which was originally proposed by PEMC. The former also agreed to issue a resolution recommending to DOE the adoption of the subject.
- Reviewed the Enforcement and Compliance Office (ECO) Investigation Reports for the billing months of March, April, May and July 2018 and agreed to finalize for submission to PEM Board.
- Reviewed the Consolidated Comments on the Proposed Market Surveillance Manual
 - In August, the MSC also reviewed the consolidated comments on the proposed Market Surveillance Manual and thereafter provided its responses accordingly.
- Updates from ECO in the status of Investigations
 - In September, MSC suggested ECO to a.) Inform the PEM Board of the pros and cons of allowing offer for settlement and b.) Include factors to be considered when determining offers for settlement.

2. Technical Committee (TC)

- Study on the Integration of Variable Renewable Energy Resources in the Power System and its Effects on the Reserve Market.
 - In May, the TC reviewed the draft Integration Study and approved on further revisions of to the study after agreeing on a revised outline.
- Study on the Increasing Penetration of Variable Renewable Energy Resources and the Reserve Market
 - a. In June and July, the TC reviewed and discussed the vRE Penetration Study.
 - b. In August, the TC made comments and revisions on the same.
 - c. In 28 September, the TC finalized and submitted the study to the PEM Board.
- 3rd Metering Arrangement Review Audit Report
 - a. Review of Provisions on Meter and Instrument Transformer Standards and Test

In May, the TC further reviewed the relevant provisions relating to the meter and instrument transformer standards and testings in the following documents: (a) Philippine Grid Code (PGC) 2016 Edition; (b) Philippine Distribution Code (PDC) 2017 Edition; (c) WESM Rules; (d) WESM Metering Manual and Retail Metering Manual; and (e) National Electricity Rules for the Australia Electricity Market.

The TC noted that there was no provision stating the frequency of testing for Instrument Transformers except in the National Electricity Rules. However, it was likewise noted that there is a separate rule governing the retail market of Australia

which may be more appropriate in terms of comparison with the Philippine setting. Following these findings, the TC agreed to inquire with the PEMC – Metering Group if the currently provided procedures for the testing of Instrument Transformers are sufficient to ensure the accuracy and efficiency of the equipment. Likewise, the TC requested for further research on the required tests and frequency of testing done in other jurisdictions, before it decides to elevate the issue to the ERC. Furthermore, the TC continued to discuss the same for the month of June and July.

3. Rules Change Committee (RCC)

- Proposed Amendments to the WESM Rules and Market Manuals

Participation of Energy Storage Systems in the WESM

- In May, the RCC finalized the proposal, in consideration of the comments received from WESM stakeholders regarding (1) the inclusion of Energy Storage Systems (ESS) forecasts in the Market Operator Net Load Forecast, and (2) the amendments on the definition of the terms “generating system” and “generating unit” to encompass ESS. The body likewise agreed on setting the minimum block offer size for ESS at 1MW, as originally proposed by the Technical Committee, to avoid dispatch issues for the System Operator.

Additional Trading Participant Category – Wholesale Electricity Market Trader

- In May, the RCC deliberated on the proposed amendments to allow registration in the WESM of entities with commercial arrangements to sell or purchase electricity but do not own or manage physical assets (e.g., multiple-owned generators, strip owners). The proposal is intended to (1) remove the need for such non-registered entities to course their commercially sensitive information through their associated registered Trading Participants, and (2) enhance accuracy of market information by reflecting through WESM settlement actual commercial arrangement of Trading Participants.

Consultation on the Proposed Penalty Manual Issue 2.0

- In June, the MSC presented to the RCC the revisions of to the proposed WESM Penalty Manual (hereafter Issue 2.1) to solicit comments from the body.

Further Revisions to the WESM Rules and WESM Manual on Market Surveillance Pertaining to the Proposed Penalty Manual

- a. In June, the RCC approved the publication of the MSC’s proposal and the same was published on 04 June 2018. The summary of additional proposed changes to the WESM Rules and the MSC Manual are as follows: (a) provide that the DOE rather than the MSC shall promulgate the WESM Penalty Manual following consultations with the RCC, PEM Board and WESM stakeholders; (b) retain the MSC’s responsibility in monitoring anti-competitive behaviour, which mandate was recommended to be removed from the MSC in the 2017 proposal; and (c) include the MSC’s responsibility to issue decisions on requests for reconsideration
- b. In August, the RCC deliberated approved the proposed amendments as revised, for submission to the PEM Board.

Enforcement and Compliance

- a. In June, the PEMC submitted additional amendments to the Enforcement and Compliance Manual' while the RCC approved the need for its publication in the market information website to solicit comments from Market Participants and stakeholders. The highlights of the proposed further changes are as follows: (a) clarify the roles and obligations of the parties involved in the compliance monitoring and assessment processes including the new Compliance Committee to be formed; (b) provide that penalty shall be imposed upon the ECO's finding of breach as a result of its compliance monitoring and assessment activity; (c) provide that investigations may be initiated for breaches that do not emanate from the ECO's compliance monitoring and assessment process through requests for investigation or report of probable breach from the Market Operator, System Operator, WESM Members or from the directive of the ERC; and (d) provide that the concerned WESM Member may seek a reconsideration of the Notice of Specified Penalty in accordance with the procedures and subject to the requirements provided in Penalty Manual 2.0.
- b. In August, the RCC deliberated on the subject proposal taking into consideration the comments received from Aboitiz Power Corporation and FirstGen Corporation, and the clarifications of PEMC (Enforcement and Compliance Office) as the proponent. The proposed changes are primarily focused on laying-out a comprehensive and streamlined Compliance Monitoring and Assessment process to be performed by PEMC-ECO that already covers data gathering, validation and assessment of all submitted data and information from Trading Participants, Market Operator, System Operator and other relevant entities in order to determine with finality if a breach was committed and if warranted, immediately impose the proper penalty based on the WESM Penalty Manual. This process also includes allowing WESM Members to appeal to the PEMC-ECO the penalty imposed. Pending the proponent's submission of minor revisions for enhancement and clarity as requested by the RCC, the body provisionally approved the proposal as revised, for submission to the PEM Board.

Reduce Barriers to Entry and Participation in Retail Competition

- In August, PEMC presented the subject proposal, which aims to reduce barriers to entry for Contestable Customers in participating in the Retail Market by introducing the following major changes to the WESM and Retail Rules:
 - a. From currently being mandatory, make registration of Contestable Customers in the wholesale market optional to reduce participation requirements and processing.
 - b. Require Distribution Utilities to submit to the Central Registration Body (CRB) accurate and timely customer and metering information of all eligible contestable customers for inclusion in the Retail Market Registry. A centralized registry with the CRB would enable easier processing of switch requests.
 - c. Reduce minimum switch timeframe from thirty (30) days to five (5) working days.

Following the presentation, the RCC approved the publication of the proposal in the market information website, as submitted, to solicit comments from WESM Members and stakeholders.

- DOE Presentation to the RCC regarding Concerns on Cross-Grid Power Supply Agreement and Line Rental Amount
 - In June, the RCC discussed the DOE's presentation on its concerns regarding cross-grid power supply contracts approved by the ERC. The DOE requested the

RCC to look into the said concerns and determine if WESM Rules change is necessary.

- In July, with the assistance of PEMC-Market Assessment Group, the RCC reviewed how various pricing conditions for ex-ante and ex-post prices (i.e., normal, with pricing error, during market intervention/suspension), and the difference in pricing conditions between regions determine whether actual line loss and congestion are reflected in the Line Rental Trading Amount (LRTA). The RCC also looked at how LRTA is affected with cross-grid bilateral contracts. The RCC initially noted the following observations:
 - a. In cases of cross-region bilateral contract quantity declaration (across Luzon and Visayas), it was concluded that line loss and congestion cannot be reflected in the LRTA if Luzon and Visayas have different pricing conditions;
 - b. Significant nodal price differences between Luzon and Visayas occur when the limit of high-voltage direct current (HVDC) cable is maximized, restricting the flow of power from Visayas to Luzon and results to price separation between Luzon and Visayas. Consequently, the LRTA for Luzon customers would be significantly high, while Visayas customers would be settled at extreme negative prices.
 - c. Without High-Voltage Direct Current (HVDC) Cable constraints, there would be minimal differences in the LRTA among customers with or without cross-grid bilateral contracts.
 - d. With HVDC cable constraints, the LRTAs for customers with cross-grid PSAs are affected as follows:

| Flow of HVDC | Effects in LRTA |
|------------------|---|
| Luzon to Visayas | Minimal effect due to minimal times that this flow occurs in the system |
| Visayas to Luzon | For Luzon Customers: High LRTA |
| | For Visayas Customers: Negative LRTA |

- In August, the RCC reviewed the presented general outline and overview of the draft RCC's report regarding LRTA in the context of Cross-Grid Power Supply Agreements, for the body's further inputs. The report contains the following:
 - a. Overview of how Line Rental Trading Amounts (LRTA) are determined considering various pricing conditions (i.e., normal, with non-congestion pricing error, with congestion pricing error, with market intervention/suspension);
 - b. Factors affecting LRTA via simulation of line rental based on zonal price differences;
 - c. Basic concept on how bilateral contracts (with LRTA) affect end-users; and
 - d. Related issues and recommendations.

The RCC agreed to highlight in the report, the economic advantage or disadvantage of cross-region contracting across congested transmission lines.

- On 17 September 2018, the RCC finalized the discussion paper and submitted the same to the PEM Board. During its 4th meeting on 26 September 2018, the PEM Board agreed to endorse to the DOE the RCC discussion paper on DOE's concerns regarding cross-grid Power Supply Agreement.
- Reviewed NGCP-MSPs Concerns regarding DOE-approved Amendments to the WESM Manual on Metering Standards and Procedures last 14 August 2018.

- Started the deliberation in September of the PEMC’s proposed amendments to the Retail Rules and WESM Rules to Reduce Barriers to Entry and Participation in Retail Competition.

4. Dispute Resolution Administration (DRA)

- WESM Dispute Databank
 - In May, the DRA finalized with particular revisions the draft WESM disputes databank, which is in checklist form, on the kinds of possible legal relief or remedies which a Market Participant may pursue and file a dispute for. In summary, a relief or remedy may fall under one of the following categories: (1) damages, (2) non-pecuniary (non-monetary) damages or specific performance, and (3) declaratory relief. The WESM disputes databank checklist shall be added to the Request for Mediation and Request for Arbitration as one of the portions to be filled-up by the party in filing a claim.
- Implementation of the Requirement on Market Participants to Submit a Dispute Management Protocol
 - In May, the DRA recommended to provide in the Dispute Resolution Manual a default Dispute Management Protocol (DMP) which parties may adopt during their negotiation if they do not already have their own or cannot agree on a protocol.
- Inclusion of an “Agreement to Submit All Disputes to Mediation and/or Arbitration” in the Market Participation Agreement
 - In June, the DRA submitted to PEMC’s Office of the President a proposal to include in the Market Participation Agreements an open agreement to submit all disputes to Mediation and then to Arbitration. This proposal is in compliance to Section 8.2.2.1 of the WESM Manual on Dispute Resolution. It served as a follow-up to the DRA’s initial efforts in 2014 with the same proposal to PEMC.
- Administration of Pending WESM Mediation Cases
 - In June 2018, two (2) requests for mediation were filed with the DRA for resolution using the WESM dispute resolution mechanism. The DRA immediately assessed the two requests and issued a preliminary determination on 19 June 2018 that both fall under the category of WESM dispute. The DRA undertook the following preparatory activities for the mediation of WESM Mediation Case Nos. WESM Med-18-01 and WESM-Med-18-02: a.) selection of nominee-mediators; and b.) identification of affected parties in the dispute.
 - In July, the DRA facilitated the preparatory activities for two (2) mediation cases, each involving a generation company (Claimant) and the Market Operator (Respondent). Within the covered period, the DRA convened a pre-mediation meeting with the parties for them to select their mediator from a list of nominees submitted by the DRA. Discussions were also made regarding mediation procedures, as well as the possibility of dispensing with mediation to proceed directly to arbitration.
 - In August, the parties involved in the two (2) mediation cases filed with the DRA on 08 June 2018 mutually agreed to dispense with mediation to proceed directly to arbitration. Said decision emanated from the parties’ discussions during a meeting convened by the DRA on 30 July 2018 that mediation may no longer be a viable option for them to resolve their dispute.

- On 05 September 2018, the DRA officially closed the conduct of mediation activities. Also, the DRA conducted a review of the mediation procedures undertaken to assess the effectiveness of the same and, based on practical, hands-on experience, determine ways to improve the mediation process efficiency.
- On 22 October 2018, the DRA received the following request for arbitration from SPC Power Island Corporation: a) WESM-ARB-18-01 – claims for RTD underpayment from January 2011 to September 2017 and b) WESM-ARB-18-02 – claims for settlement of undeclared must-run units for period covering June 2016 to July 2017.

5. PEM Audit Committee (PAC)

- 2016 Market Audit Status
 - For the month of May, in response to the PAC's request, PEMC presented to the former its action plans with corresponding timeline, to address audit findings in the recently concluded 2016 Market Audit.
 - For August, the PAC approved the summary reports of the 6th independent audit of the systems; procedures and performance of the market report; 3rd review of metering installations and the independent software audit of CRSS on 17 August 2018. It also subsequently endorsed the same for submission to the PEM Board and publication to the market information website.
 - On 04 September 2018, the public version of the report on the Joint Conduct of the 6th Independent Audit of the Systems, Procedures and Performance of the Market Operator and the 3rd Metering Review of Metering Installations and Arrangements by PAC were published in the market information website.
- Independent Software Audit of the New Market Management Systems (NMMS)
 - For the month of May, the NMMS Project Team discussed with PAC the status//progress of the audit activities for each of the eight (8) modules of the NMMS as well as the issues encountered for the conduct of the said audit.
 - From June to August 2018, the PAC conducted a meeting and discussed the progress of the NMMS audit. The said audit which is being conducted by Intelligent Energy System (IES) is currently ongoing.
 - For the October billing period, progress report for the following components were submitted by the IES: a) Market Projections and Real-Time Dispatch Runs, b) Financial Transmission Rights (FTRs) and c) Market Publication. On 28 September 2018, the approved/accepted final audit report and software certificate indicating the compliance of the Post—Market Run Calculations component was issued.
- Software Certification Audit of the Accounts Management System (AMS)
 - For the month of May, the PAC, together with the PEMC-Procurement Team, discussed and agreed on the provisions of the audit contract during the contract negotiation with the winning auditing firm, KPMG R.G. Manabat & Co.. This culminated with the issuance by PEMC of the notice to proceed with the conduct of audit.
 - For June, the PAC discussed the progress and updates on the audit status.

- For July, the status of audit conducted by KPMG R.G. Manabat & Co. on PEMC's Accounts Management System (AMS) was already on its final week. It already completed the audit tasks required and the only items remaining from the said engagement was the handover of the final audit deliverables. This include the Final Audit Report and the Audit Certificate, and the presentation of the same to the PEM Board.
- For August, the audit submitted all the final deliverables. To fully conclude the audit, the PEM Audit Committee together with the auditor presented the results of the Independent Software Certification audit of the AMS for the information of the PEMC Board of Directors on 30 August 2018.
- On 05 October 2018, the public version of the Final Audit Report and Software Certificate prepared by PAC was published in the WESM website.

C. WESM Mindanao Update

As part of the preparations for the integration of Mindanao in the WESM, the DOE conducted and facilitated the following activities for the covered period:

- Four (4) Readiness Assessment meetings³ to evaluate readiness for WESM Mindanao commercial operations based on updates presented by various energy agencies tasked to undertake preparatory activities (i.e. PEMC, NGCP, NEA, ERC and PSALM);
- One (1) Participants' Forum⁴ to apprise Trading Participants on the updates on preparations for commercial operations;
- One (1) Registration Information Drive⁵ and Two (2) Hands-on Trainings⁶ to familiarize Trading Participants with the registration process and market systems; and
- Site visits and ocular inspection among to Trading Participants'⁷ facilities to assess WESM operation readiness.

Significant development was observed during the period as major interface links between the Market Operator and the System Operator were established and tested for consistency and redundancy. Infrastructure readiness also improved with the installation by NGCP of WESM-compliant metering and real-time monitoring facilities in most Trading Participants' sites.

With regard to market systems, the Central Registration and Settlement System (CRSS) already attained software certification while the New Market Management System (NMMS) is still undergoing audit certification by a third-party auditor. The operation of the NMMS is contingent with the approval of ERC of the amended WESM Price Determination Methodology (PDM) reflecting WESM design enhancements. As of the end of the reporting period, the ERC has not yet issued a decision on PEMC's PDM application for approval but had conducted two (2) evidentiary hearings on 22 June 2018 and 24 October 2018, respectively.

In addition, one of the most important criteria to declare commercial operation of WESM in Mindanao is the registration of power industry participants in the WESM. By 25 August 2018, sixty-five (65) participants, equivalent to 76% of the expected total, have started respective registration process with PEMC.

³ 3 May 2018 in Cagayan de Oro City; 5 June 2018 in Davao City; 12 July 2018 Cagayan de Oro City; and 20 September 2018 in Cagayan de Oro City

⁴ 14 June 2018 in General Santos City

⁵ 01 August 2018 in General Santos City

⁶ 3-4 May 2018 in Cagayan de Oro City; 5-6 June 2018 in Davao City

⁷ 19 September in Minergy Diesel Power Plants; 21 September 2018 in Agus-Pulangi Power Plants and 25 September 2018 in ZAMCELCO Diesel Power Plant

For the succeeding months, the DOE plans to facilitate continuous conduct of assessment/coordination meetings, Information, Education and Communication (IEC) campaigns, and site visits to ensure stakeholders' readiness and ensure smooth transition of Mindanao under the WESM regime.

D. Establishment of Independent Market Operator (IMO)

The transition to the IMO was recently endorsed this year by the DOE upon the issuance last 17 January 2018 of the Department Circular No. DC2018-01-0002 entitled, "Adopting Policies for the Effective and Efficient Transition to the Independent Market Operator of the Wholesale Electricity Spot Market (WESM)".

On 06 February 2018, during the membership meeting of PEMC, the industry participants likewise endorsed the transition to IMO thru the ratification of "Plan for Transition to the IMO of the Philippine WESM".

On 15 May 2018, the Independent Electricity Market Operator of the Philippines (IEMOP) was incorporated under the Securities and Exchange Commission (SEC) with a Company Registration No. CN201807379. IEMOP was the agreed name for the IMO Company, which was organized as a non-stock and non-profit corporation that is separate from the Philippine Electricity Market Corporation (PEMC). Effective 26 September 2018, it assumed and performed all functions of the Market Operator pursuant to the provisions set out in the EPIRA, EPIRA IRR, WESM Rules, WESM Market Manuals and other official issuances. On the other hand, PEMC retained its governance functions, including, among others, the supervision and monitoring of the operations of the IEMOP.

In addition, the IEMOP was incorporated by individuals who are independent from the electric power industry participants and from the government. On 25 June 2018, during the first PEMC Annual Membership Meeting, the initial composition of the IEMOP Board was selected and this was officially confirmed by the PEM Board together with and the DOE Secretary Alfonso G. Cusi. The seven (7) Board of Directors that were officially designated were as follows:

| Name | Position |
|--|----------------------------------|
| 1. Lt. Gen. Ralph A. Villanueva AFP (Ret.) | Chairman |
| 2. Atty. Francis Saturnino C. Juan | President and CEO |
| 3. Atty. Caroll U. Tang | Director and Corporate Secretary |
| 4. Atty. Richard J. Nethercott | Director and Treasurer |
| 5. Engr. Jose Mari T. Bigornia | Director and COO |
| 6. Engr. Jose Rodelio Varilla Mangulabnan | Director |
| 7. Mgen Vicente M. Porto AFP (Ret) | Director |

In view of the foregoing, to ensure the smooth and successful transfer of assets, liabilities, personnel and market operator related functions from PEMC to IEMOP, an Operating Agreement between the two entities was officially signed last 19 September 2018. The said agreement defines the parties' rights and obligations relative to such transfer and at the same time further outlines the parties' distinct roles and functions.

E. Retail Competition and Open Access (RCOA)

The Government, despite the challenges restraining the full implementation of RCOA, continuously exerts its effort in strengthening competition in the retail market and empower the contestable customers.

1. RCOA Registration

In June 2013, total number of prospective participants in the RCOA is 961. It is composed of 892 Contestable Customers (CC), 32 Suppliers, nine (9) Suppliers of Last Resort (SOLR), and 28 Retail Metering Services Provider (RMSP). Of the Suppliers, 19 are Retail Electricity Suppliers (RES) and 13 are Local RES (LRES).

As of September 2018, the total prospective participants climbed up to 2,019 (108% greater than that of June 2013), and is comprised of 1,873 CCs, 55 Suppliers, 44 SOLR, and 47 RMSP. Of the CCs, 1,329 are within 1MW threshold level while 544 are within 750kW-1MW. Of the Suppliers, 30 are RES and 25 are LRES.

Table 21. Summary of RCOA Registration

| Membership Category | | Prospective* | | | Registered** | | |
|-----------------------|-----------------|--------------|-------------|-------------|--------------|-------------|-------------|
| | | Jun 2013 | Sep 2018 | Increase | Jun 2013 | Oct 2018 | Increase |
| Contestable Customers | D ≥ 1MW | 892 | 1329 | 49% | 239 | 969 | 305% |
| | 750kW ≥ D > 1MW | 0 | 544 | | 0 | 208 | |
| | <i>Total</i> | 892 | 1873 | 110% | 239 | 1177 | 392% |
| Suppliers | RES | 19 | 30 | 58% | 15 | 30 | 100% |
| | LRES | 13 | 25 | 92% | 3 | 14 | 367% |
| | <i>Total</i> | 32 | 55 | 72% | 18 | 44 | 144% |
| SOLR | | 9 | 44 | 389% | 0 | 24 | |
| RMSP | | 28 | 47 | 68% | 18 | 47 | 161% |
| Grand Total | | 961 | 2019 | 110% | 276 | 1292 | 368% |

Source: ERC, PEMC

In terms of registration with the Central Registration Body (CRB), total number of participants accounted in June 2013 was 276 comprising of 239 CCs, 18 Suppliers (15 RES and 13 LRES), 18 RMSP while no SOLR was registered during the period.

As of October 2018, the total registered participants climbed up to 1,292 (368% greater than that of June 2013) comprised of 1,177 CCs, 44 Suppliers, 24 SOLR, and 47 RMSP. Of the CCs 969 are within 1MW threshold level while 208 are within 750kW-1MW. Of the Suppliers, 30 are RES and 14 are LRES).

2. Policy and Regulatory Issuances

On 26 March 2018, the ERC promulgated Resolution No. 9, Series of 2018 entitled “Resolution Adopting the ERC Rules Supplementing the Switching and Billing Process and Adopting a Disconnection Policy for Contestable Customers”.

The Rules, among others, provides each of the following:

- Supplementary procedures on the customer switching method;
- To ensure the efficient and timely exchange of information between and among competitive retail market participants; and
- Applicable billing procedures and disconnection process for contestable customers.

Prior to the issuance of the said Rules, the CCs are being billed by the Supplier thru a Single Billing Policy. Such scheme enables the RES to undertake contracting for Distribution Wheeling Agreement and the collection of the applicable charges.

The new Rules provides that the Customer may choose payment option on either Single or Multiple Billing scheme. As such, the CC may opt to contract on its own directly to the RES and/or WESM for its supply, and to Network Service Provider for the metering services. With this set up, the Customer will be billed and will pay for the services separately. In any case, this arrangement is expected to improve transparency of billing to the customers as it detailed minimum charges that has to be reflected on the bill given by the RES for the Supplier's Charges and the Distribution Wheeling Charges.

Moreover, the Rules also provides for the Switching process. Further, it protects the CCs, RES, Distribution Utility and the Network Service Provider on the payment/refund of Bill deposits and its interest. Furthermore, it provides guidelines on the disconnection and reconnection process and specifies other prohibited acts, such as the prohibition of take or pay provision on contracts.

VI. POWER SUPPLY SECURITY AND RELIABILITY

A. Power Supply

The total power supply, in terms of installed capacity, grew by 4.8% from 22,728 MW in 2017 to 23,815 MW in 2018. As shown in Table 22, a total of 933.6 MW new capacities were added to the country's supply based in 2018 which include coal-fired (720 MW), oil-based (87.3 MW), geothermal (12 MW), hydropower (80.3 MW) and biomass (34 MW). In terms of share by grid, Luzon contributed additional capacity by 659.5 MW or 71% and Mindanao at 274.1 MW or 29% while Visayas has not developed any additional capacity for 2018.

Table 22. Newly Operational Power Plants for 2018

| POWER PLANT | | CAPACITY, MW | | LOCATION | OWNER / OPERATOR | COMMERCIAL OPERATION DATE |
|---------------------|--|--------------|--------------|---|--|---------------------------|
| FACILITY NAME | SUBTYPE | INS | DEP | MUNICIPALITY / PROVINCE | | |
| LUZON | | 659.5 | 636.4 | | | |
| COAL | | 570 | 555 | | | |
| PAGBILAO U3 | Pulvurized Sub Critical Coal | 420 | 420 | Pagbilao, Quezon | Pagbilao Energy Corporation (PEC) | March 2018 |
| SCPC U3 | Circulating Fluidized Bed (CFB) Coal | 150 | 135 | Limay, Bataan | SMC Consolidated Power Corporation (SCPC) | March 2018 |
| OIL-BASED | | 50 | 46 | | | |
| SLPGC U3 | Modular Gas Turbine | 25 | 23 | Calaca, Batangas | Southwest Luzon Power Generation Corporation (SLPGC) | March 2018 |
| SLPGC U4 | Modular Gas Turbine | 25 | 23 | Calaca, Batangas | Southwest Luzon Power Generation Corporation (SLPGC) | March 2018 |
| GEOTHERMAL | | 12 | 12 | | | |
| MAIBARARA U2 | Flash Type Steam recovery | 12 | 12 | Sto. Tomas, Batangas | Maibarara Geothermal Inc. (MGI) | May 2018 |
| HYDRO | | 8.5 | 8 | | | |
| MARIS 1 MAIN CANAL | Run-of-River type HEPP | 8.5 | 8 | Ramon, Isabela | SN Aboitiz Power (SNAP) - Magat, Inc. | November 2017 |
| BIOMASS | | 19 | 15.4 | | | |
| ACNC | Biogas | 2 | 0.6 | Tarlac City, Tarlac | Asian Carbon Neutral Power Corporation (ACNC) | October 2017 |
| BBEC | Rice Husk-fired Cogeneration Plant | 5 | 4 | Pili, Camarines Sur | Bicol Biomass Energy Corporation (BBEC) | March 2017 |
| SJC IPOWER PHASE II | Rice Husk-fired Cogeneration Plant | 12 | 10.8 | San Jose City, Nueva Ecija | San Jose City I Power Corporation | December 2017 |
| VISAYAS | | 0 | 0 | | | |
| MINDANAO | | 274.1 | 257.3 | | | |
| COAL | | 150 | 135 | | | |
| SMC MALITA U2 | Circulating Fluidized Bed (CFB) Coal | 150 | 135 | Brgy. Culaman, Malita, Davao Occidental | San Miguel Consolidated Power Corporation (SCPC) | February 2018 |
| DIESEL | | 37.3 | 37 | | | |
| KEGI - JIMENEZ | Bunker/Diesel Internal Combustion Engine | 7.8 | 7.5 | Jimenez, Misamis Occidental | King Energy Generation Inc. (KEGI) | October 2017 |
| PBI | Bunker/Diesel Internal Combustion Engine | 10.4 | 10.4 | Bukidnon | Peak Power Bukidnon. Inc. (PBI) | March 2018 |

| POWER PLANT | | CAPACITY, MW | | LOCATION | OWNER / OPERATOR | COMMERCIAL |
|---|--|--------------|--------------|------------------------------------|--|--------------------------------------|
| PSFI 2 | Bunker/Diesel Internal Combustion Engine | 5.2 | 5.2 | San Francisco, Agusan del Sur | Peak Power San Francisco (PSFI) | January 2018 |
| PSI 2 | Bunker/Diesel Internal Combustion Engine | 13.9 | 13.9 | General Santos City | Peak Power Soccsargen, Inc. (PSI) | September 2017 |
| HYDRO | | 71.8 | 71.8 | | | |
| NEW BATAAN HEPP | Run-of-River type HEPP | 3 | 3 | New Bataan, Compostela Valley | Euro Hydro Power (Asia) Holdings, Inc. | March 2018 |
| Manolo Fortich HEPP | Run-of-River type HEPP | 68.8 | 68.8 | Santiago, Manolo Fortich, Bukidnon | Hydro Electric Development Corporation (HEDCOR) Bukidnon, Inc. | U1 – July 2018 U2 – November 2018 |
| BIOMASS | | 15 | 13.5 | | | |
| LAMSAN POWER CORPORATION | Bagasse-fired Cogeneration Plant | 15 | 13.5 | Maguindanao | Lamsan Power Corporation | May 2018 |
| TOTAL NEW CAPACITY FOR 2018 (MW) | | 933.6 | 893.7 | | | |

Source: DOE

The country's installed capacity, as shown in the table below, which comes from both for grid and off-grid connected generating facilities, has increased significantly by 1,087 MW or 4.8% from 22,728 MW in 2017, the capacity grew to 23,815 MW in 2018. The total dependable capacity, rose by 3.5% or 21,241 MW in 2018 from 20,515 MW in 2017.

Table 23. Total Installed and Dependable Capacities per technologies, Philippines, 2018

| FUEL TYPE | PHILIPPINES | | | |
|------------------------------|---------------|---------------|-------------------|--------------|
| | Capacity (MW) | | Percent Share (%) | |
| | Installed | Dependable | Installed | Dependable |
| Coal | 8,844 | 8,368 | 37.1 | 39.4 |
| Oil Based | 4,292 | 2,995 | 18.0 | 14.1 |
| <i>Diesel</i> | 2,839 | 2,305 | 11.9 | 10.9 |
| <i>Oil Thermal</i> | 650 | 150 | 2.7 | 0.7 |
| <i>Gas Turbine</i> | 803 | 540 | 3.4 | 2.5 |
| Natural Gas | 3,453 | 3,286 | 14.5 | 15.5 |
| Renewable Energy (RE) | 7,227 | 6,592 | 30.3 | 31.0 |
| <i>Geothermal</i> | 1,944 | 1,770 | 8.2 | 8.3 |
| <i>Hydro</i> | 3,701 | 3,473 | 15.5 | 16.3 |
| <i>Biomass</i> | 258 | 182 | 1.1 | 0.9 |
| <i>Solar</i> | 896 | 740 | 3.8 | 3.5 |
| <i>Wind</i> | 427 | 427 | 1.8 | 2.0 |
| TOTAL | 23,815 | 21,241 | 100.0 | 100.0 |

Source: DOE

Note: Grid and off-grid generators included

POWER PROJECTS

Due to the increasing demand caused by the infrastructure development, DOE encourages investors that will augment the needed capacity in the power system. As of end of 2018, capacities from committed power projects reached 6,329 MW, as shown in table 3. About 80% of these capacities are accounted from coal-fired power projects that will provide baseload capacity in the system in the coming years. Aside from committed capacities, there are also indicative projects that has a total capacity amounting to 33,200 MW. 31.5% of these

indicative capacity is from coal-fired power projects while 55.7% is expected to come from renewable energy technologies.

Table 24. Committed and Indicative Capacities, Philippines, as of 31 December 2018

| Type of Power Plant | Committed | | | Indicative | | |
|------------------------------|-------------------|---------------|--------------|-------------------|---------------|--------------|
| | No. of Proponents | Capacity (MW) | % Share | No. of Proponents | Capacity (MW) | % Share |
| Coal | 10 | 5,085 | 80.3 | 10 | 10,463 | 31.5 |
| Oil-Based | 2 | 78 | 1.2 | 6 | 415 | 1.3 |
| Natural Gas | 1 | 650 | 10.3 | 5 | 4,060 | 12.2 |
| Renewable Energy (RE) | 30 | 516 | 8.2 | 152 | 18,261 | 55.0 |
| <i>Geothermal</i> | 2 | 81 | 1.3 | 3 | 200 | 0.6 |
| <i>Hydro</i> | 13 | 79 | 1.2 | 54 | 4,676 | 14.1 |
| <i>Biomass</i> | 12 | 215 | 3.4 | 20 | 343 | 1.0 |
| <i>Solar</i> | 3 | 141 | 2.2 | 62 | 10,199 | 30.7 |
| <i>Wind</i> | 0 | - | 0.0 | 13 | 2,843 | 8.6 |
| TOTAL | 44 | 6,329 | 100.0 | 173 | 33,200 | 100.0 |

Source: DOE

Table 25. Committed and Indicative Capacities, Luzon, as of 31 December 2018

| Type of Power Plant | Committed | | | Indicative | | |
|------------------------------|-------------------|---------------|-------------|-------------------|---------------|-------------|
| | No. of Proponents | Capacity (MW) | % Share | No. of Proponents | Capacity (MW) | % Share |
| Coal | 6 | 3,950 | 82.7 | 7 | 8,935 | 33.3 |
| Oil-Based | 0 | 0 | 0 | 3 | 346 | 1.3 |
| Natural Gas | 1 | 650 | 13.6 | 5 | 4,060 | 15.1 |
| Renewable Energy (RE) | 12 | 175 | 3.7 | 77 | 13,464 | 50.2 |
| <i>Geothermal</i> | 1 | 31 | 0.7 | 1 | 130 | 0.5 |
| <i>Hydro</i> | 8 | 23 | 0.5 | 29 | 3,344 | 12.5 |
| <i>Biomass</i> | 2 | 6 | 0.1 | 11 | 164 | 0.6 |
| <i>Solar</i> | 1 | 115 | 2.4 | 30 | 8,550 | 31.9 |
| <i>Wind</i> | 0 | 0 | 0 | 6 | 1,275 | 4.7 |
| TOTAL | 19 | 4,775 | 100 | 92 | 26,805 | 100 |

Source: DOE

Table 26. Committed and Indicative Capacities, Visayas, as of 31 December 2018

| Type of Power Plant | Committed | | | Indicative | | |
|------------------------------|-------------------|---------------|-------------|-------------------|---------------|-------------|
| | No. of Proponents | Capacity (MW) | % Share | No. of Proponents | Capacity (MW) | % Share |
| Coal | 2 | 435 | 56.8 | 1 | 600 | 15.4 |
| Oil-Based | 2 | 78 | 10.2 | 2 | 64 | 1.6 |
| Natural Gas | 0 | 0 | 0 | 0 | 0 | 0 |
| Renewable Energy (RE) | 10 | 253 | 33 | 37 | 3,240 | 83 |
| <i>Geothermal</i> | 1 | 50 | 6.5 | 1 | 40 | 1 |
| <i>Hydro</i> | 2 | 23 | 3 | 13 | 728 | 18.6 |
| <i>Biomass</i> | 6 | 179 | 23.3 | 2 | 60 | 1.5 |
| <i>Solar</i> | 1 | 1 | 0.2 | 14 | 844 | 21.6 |
| <i>Wind</i> | 0 | - | 0 | 7 | 1,568 | 40.2 |
| TOTAL | 14 | 766 | 100 | 40 | 3,903 | 100 |

Source: DOE

Table 27. Committed and Indicative Capacities, Mindanao, as of 31 December 2018

| Type of Power Plant | Committed | | | Indicative | | |
|------------------------------|-------------------|---------------|-------------|-------------------|---------------|-------------|
| | No. of Proponents | Capacity (MW) | % Share | No. of Proponents | Capacity (MW) | % Share |
| Coal | 2 | 700 | 88.8 | 2 | 928 | 37.2 |
| Oil-Based | 0 | - | 0 | 1 | 6 | 0.2 |
| Natural Gas | 0 | - | 0 | 0 | - | 0 |
| Renewable Energy (RE) | 8 | 88 | 11.2 | 38 | 1,558 | 62.5 |
| <i>Geothermal</i> | 0 | - | 0 | 1 | 30 | 1.2 |
| <i>Hydro</i> | 3 | 33 | 4.2 | 12 | 603 | 24.2 |
| <i>Biomass</i> | 4 | 30 | 3.8 | 7 | 119 | 4.8 |
| <i>Solar</i> | 1 | 25 | 3.2 | 18 | 805 | 32.3 |
| <i>Wind</i> | 0 | - | 0 | 0 | - | 0 |
| TOTAL | 11 | 788 | 100 | 41 | 2,491 | 100 |

Source: DOE

POWER SITUATION IN LUZON, VISAYAS, AND MINDANAO

In terms of significant incidents for 2018, Luzon grid did not experience Red Alert occurrence. The non-issuance of Red alert notice implicates that there was no reserve inadequacy in the system that may cause rotating brownouts in the grid. However, Luzon grid still experienced seven occurrences of Yellow alerts during the following dates, wherein the reserve level is below the required contingency reserve of the grid:

- 26 February 2018 due to forced and unplanned outages of power plants, natural gas fuel restriction, and de-rating of power plants;
- 12 April 2018 due to forced and unplanned outages of power plants, and de-rating of power plants;
- 29-31 May 2018 due to high demand, forced and unplanned outages of power plants, and de-rating of power plants;
- 1 June 2018 due to forced and unplanned outages of power plants, and de-rating of power plants; and
- 4 June 2018 due to forced and unplanned outages of power plants, and de-rating of power plants.

On the other hand, Visayas is still experiencing problems in the power system that caused fifteen (15) recorded Red alert notices in the grid along with significant number of Yellow alert occurrences especially on instances where large power plants are on simultaneous outages, planned or forced. For Visayas, the peak demand usually occurs in the evening and the unavailability of solar power plants at this time of the day contributes to the low reserve level of the grid.

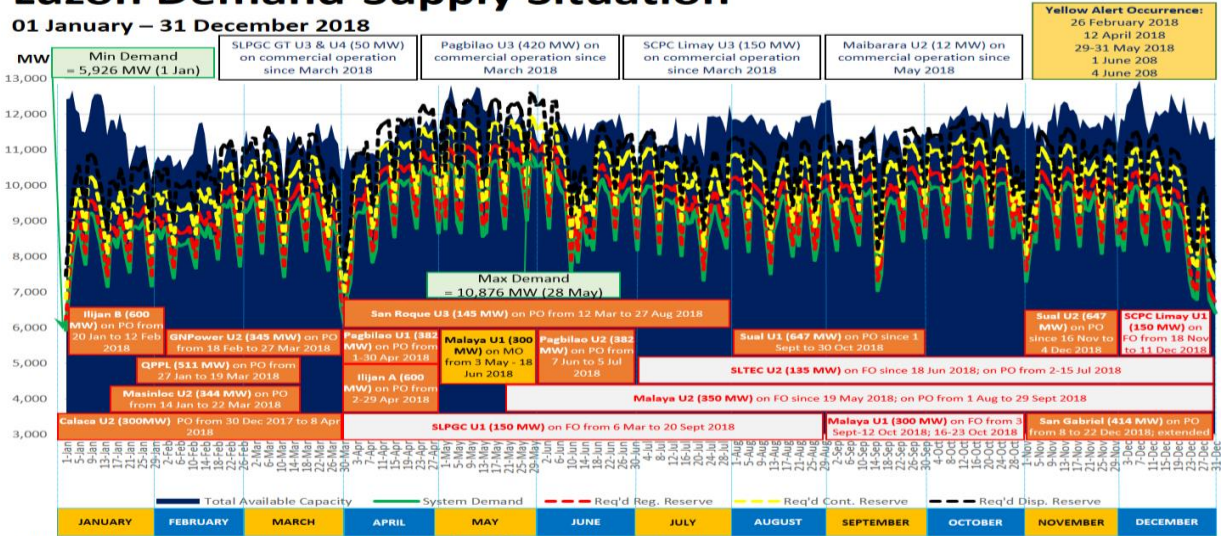
Mindanao also has improved in terms of having lesser Red and Yellow alert notices in 2018, compared to the previous years due to the development of additional stable capacity from large coal-fired power plants in the grid. There was only one recorded major incident in the Mindanao grid that cause a partial blackout due to transmission line tripping on 8 November 2018 that affected areas in Zamboanga peninsula as well as the provinces of Lanao and Misamis Oriental.

B. System Peak Demand

The country's total peak demand in 2018 was recorded at 14,782 MW, which is 993 MW or 7.2% higher than the 13,789 MW in 2017. 10,876 MW or 74% of the total demand comes from the Luzon grid while Visayas and Mindanao has a share of 14% (2,053 MW) and 13% (1,853 MW), respectively. Among the three grids, Luzon grid showed significant increase in peak demand since it grew by 822 MW or 8.2% from its last year's peak demand of 10,054 MW.

Luzon Demand-Supply Situation

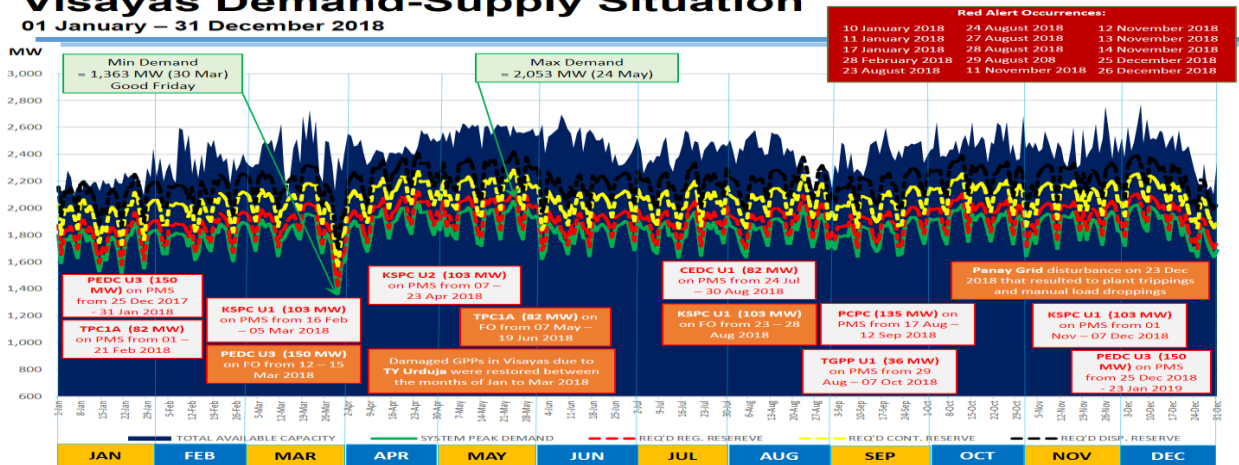
01 January – 31 December 2018



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

Visayas Demand-Supply Situation

01 January – 31 December 2018

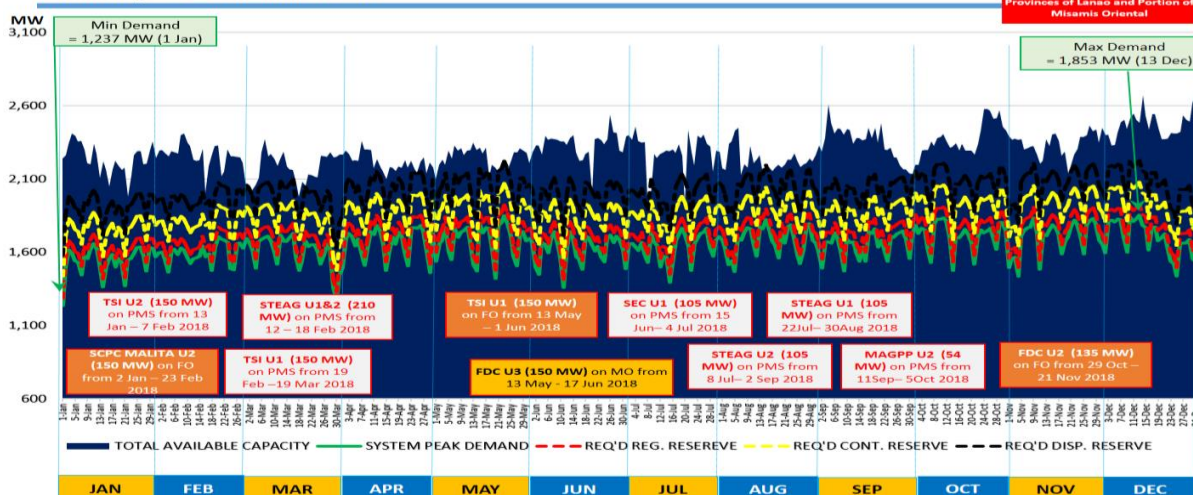


Source: National Grid Corporation of the Philippines (NGCP) Daily Operations Report

Mindanao Demand-Supply Situation

01 January – 31 December 2018

Partial Blackout on 8 Nov 2018 affecting Zamboanga Peninsula, Provinces of Lanao and Portion of Misamis Oriental



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

C. Status of Government Generating Assets

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

The Agus VI Units 1 and 2 Uprating Project was implemented to increase the power output of Units 1 and 2 from 25MW to 34.5MW each, and to extend their economic life to another thirty (30) years. The Project consists of engineering investigation, design, manufacturing and installation of new hydropower turbines and blades for the uprating of Units 1 and 2 from 25 MW to 34.5 MW per unit. The Project was awarded to the joint venture of Guangxi Hydroelectric Construction Bureau and ITP Construction Inc. in December 2013.

The Contract's Intended Completion Date (ICD), or the date when the Works is expected to be completed, is on 26 April 2016. However, as provided also under Clause GTR-1.2, Section VI. Schedule of Requirements, the project should be completed within nine hundred (900) days, which corresponds to 14 June 2016.

The original ICD was not met due to the following major delays:

| UNIT | DELAYS | # OF DAYS |
|------|---|-----------|
| 1 | Unavailability of As-Built Drawings | 35 |
| | Leakage problem in the Intake Gate | 21 |
| 1 | Delayed shutdown of Unit 5 transformer | 26 |
| | Unavailability of NGCP-Agus VI substation bay | 127 |
| 2 | Duration of Variation Order | 147 |
| | Unavailability of NGCP-Agus VI substation bay | 145 |

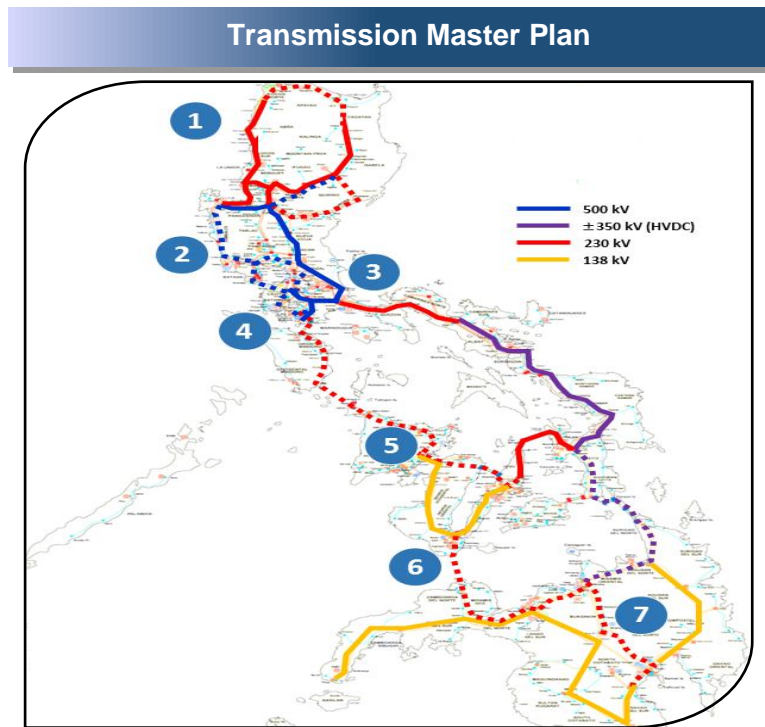
Due to said delays, the testing and commissioning were completed only on 24 and 17 March 2017 for Units 1 and 2, respectively.

On 29 June 2018, the Project was declared completed upon JV's correction of the minor works and remaining requirements under the Contract. The final As-built Drawings and Operations and Maintenance Manuals were submitted by Guangxi Hydroelectric Construction Bureau to PSALM following the latter's approval of the documentary requirements.

The rated capacity and dependable capacity of the newly uprated units are as follows:

| Agus VI | Rated Capacity, MW | Dependable/Available Capacity, MW |
|---------|--------------------|-----------------------------------|
| Unit 1 | 34.5 | 34.5 |
| Unit 2 | 34.5 | 34.5 |

D. Status of Transmission Projects



1. Northern Luzon 230 kV Backbone (2024)

- To provide additional transmission line capacity, accommodate generation additions, and provide redundancy.

2. Western Luzon 500 kV Backbone (2024)

- Stage 1 (Castillejos-Hermosa T/L)
 - 24.32 % complete
 - To accommodate generation entry
- Stage 2 (Castillejos-Bolo T/L)
 - To provide additional transmission line capacity and increase system reliability through N-2 contingency for the 500 kV backbone in Luzon.

3. Metro Manila 500 kV Backbone Loop

- To provide additional transmission line capacity and accommodate demand growth in the load center of Luzon.

4. Batangas-Mindoro Interconnection (2021)

- For ERC Approval (Filed on Aug 2011)

- To interconnect Mindoro to Luzon Grid, improve the overall reliability in the Island of Mindoro and strengthen the transmission backbone.

5. Cebu-Negros-Panay 230 kV Backbone (2020)

- Stage 1 (Negros-Panay Interconnection)
 - Submarine Cable: Energized
 - Overhead T/L: 79.89 %
 - Substation: 99.00 %
 - To accommodate generation entry
- Stage 2 (Cebu Substation)
 - For ERC approval
 - Transmission Line: 0.36 %
 - Substation: Bidding Process
 - To accommodate generation entry
- Stage 3 (Negros-Cebu Interconnection)
 - Submarine Cable: 20.00 %
 - Reconductoring of 138 kV T/L: 0.36 %
 - To accommodate excess generation

6. Visayas-Mindanao Interconnection (2020)

- ERC-approved
- Turnkey: Bidding Process
- To enable sharing of available capacity with the major grids, increase system reliability, encourage investments, optimize the utilization of indigenous resources

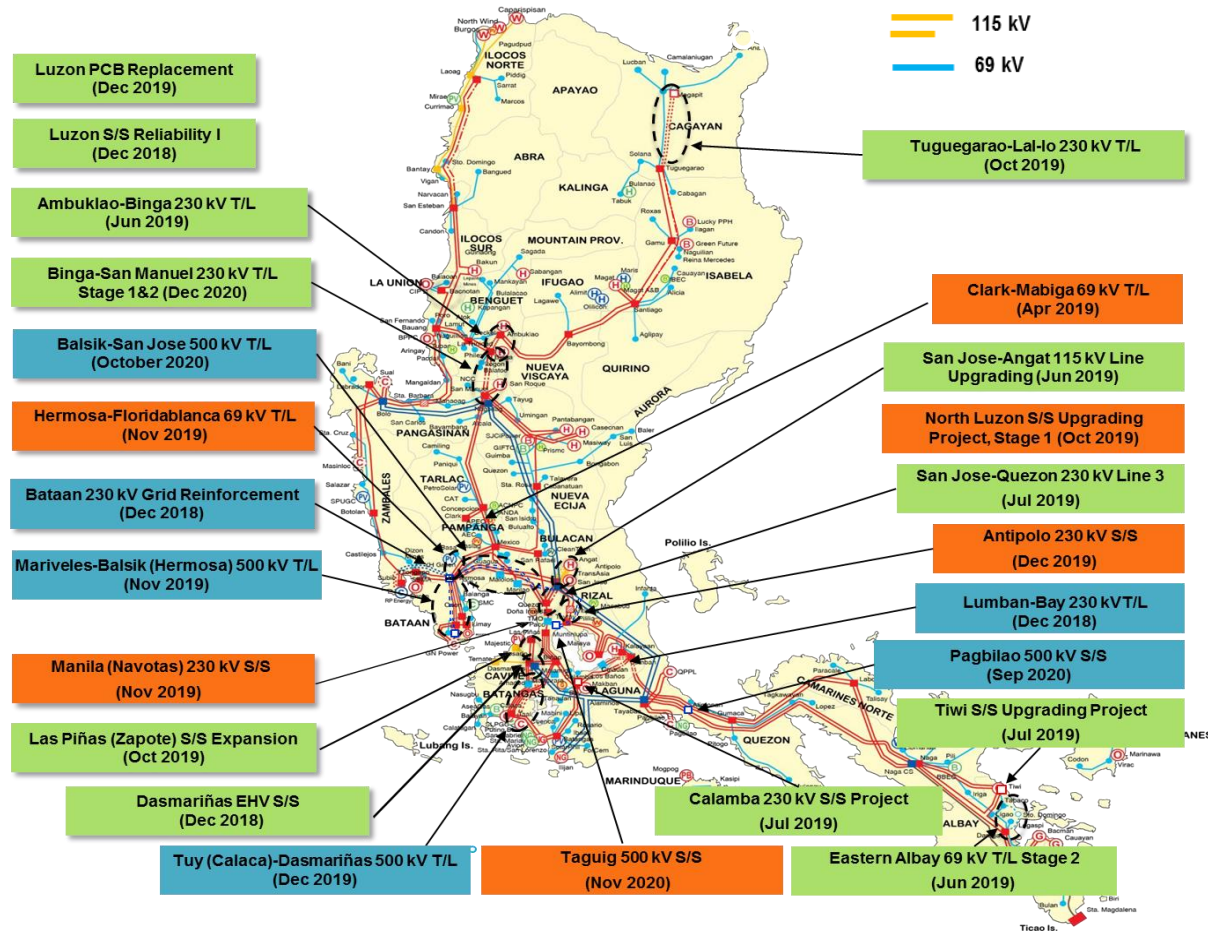
7. Mindanao 230 kV Backbone (2018)

- Transmission Line: 19.66 %
- Turnkey (Secondary Equipment & Erection of HV Equipment)
 - Schedule 1 (Culaman/Matanao/Toril/Bunawan): 30.02 %
 - Schedule 2 (Baloi/Villanueva/Maramag): 18.34 %
- To provide additional high voltage corridor
- To accommodate generation entry

LUZON



Legend:



LOAD GROWTH

- **Manila (Navotas) 230 kV Substation Project**
 - Expected Time Completion (ETC): Nov 2019
 - Status: 1.5
 - To accommodate the continuous load growth in Metro Manila.
- **Taguig 500 kV Substation**
 - ETC: Nov 2020
 - Status: Awaiting ERC Decision; Site development: 47.96 %
 - To decongest the San Jose and Dasmariñas 500 kV Substations, and provide a new 500 kV drawdown substation.
- **Clark-Mabiga 69 kV T/L Project**
 - ETC: April 2019
 - Transmission line component: manufacturing in progress
 - Substation component (turn-key): 83.79 % complete

- To provide an alternate source of power aside from the Mexico-Clark 69 kV line.
- **Antipolo 230 kV Substation Project**
 - ETC: Dec 2019
 - Supply (HV equipment): 100 % complete
 - Site Development: Securing of LGU permits.
 - To accommodate the demand increase in Metro Manila and maintain the N-1 contingency provision for Taytay Substation.
- **Hermosa-Floridablanca 69 kV T/L Project**
 - ETC: Dec 2018
 - Supply: Manufacturing in progress
 - Erection: Securing of LGU permits.
 - To relieve the overloading of the existing Hermosa-Guagua line and address the low voltage issues in the area.
- **North Luzon S/S Upgrading Project, Stage 1**
 - ETC: October 2019
 - Turnkey (Secondary & HV Equipment): 2.01 % complete
 - To ensure the continuous adequacy of substation capacity in serving the increasing loads both during normal and N-1 contingency conditions, and to meet the grid code standard and to have operational flexibility especially during the maintenance activities for power transformers at the substations.

GENERATION ASSOCIATED

- **Lumban (Kalayaan)-Bay (Makban) 230 kV Transmission Line Project**
 - ETC: Dec 2018
 - Transmission line component: 100 % complete
 - Substation component: 98.49 % complete
 - To increase the capacity of this corridor in order to accommodate any generation dispatch scenarios
- **Bataan 230 kV Grid Reinforcement Project**
 - ETC: Dec 2018
 - Transmission line component: 92.13 % complete
 - Substation component (supply): 100 % complete
 - To optimize the existing transmission lines by increasing the capacity without acquiring new right-of-way in order to accommodate new generation capacity addition.
- **Balsik (Hermosa)-San Jose 500 kV Transmission Line Project**
 - ETC: Oct 2020
 - Transmission line component: 8.50 % complete
 - Substation component (Site Development): Securing of LGU permits
 - To accommodate the generation capacity additions in Bataan and Zambales area
- **Tuy (Calaca)-Dasmariñas 500 kV T/L Project**
 - ETC: December 2019
 - Supply: Manufacturing in progress.
 - To reinforce the outgoing 230 kV line from Calaca Substation and accommodate the full dispatch of the incoming power plants in Batangas area.

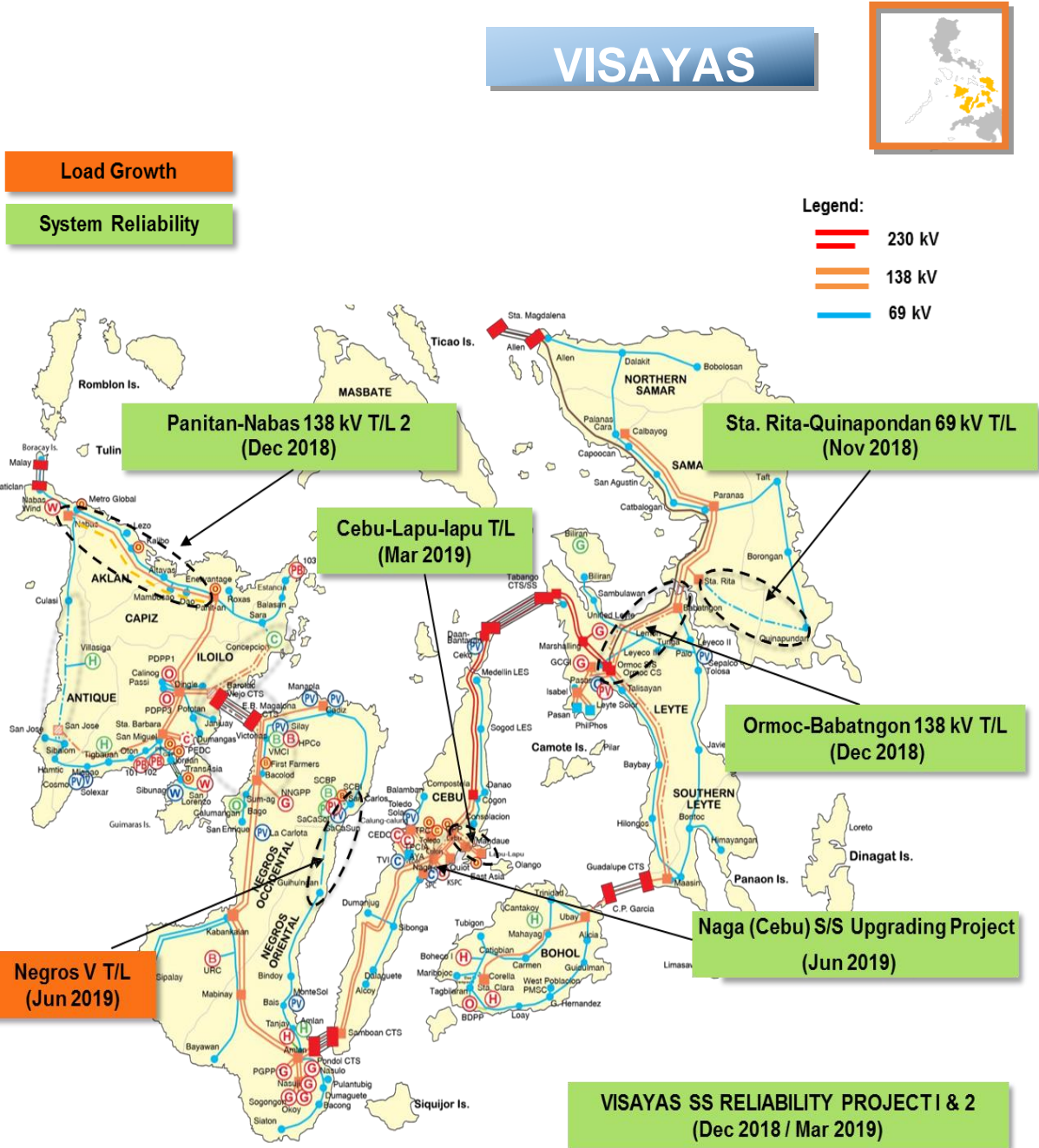
- **Mariveles-Balsik (Hermosa) 500 kV T/L Project**
 - ETC: Nov 2019
 - Supply (T/L and S/S): Manufacturing in progress.
 - To establish a 500 kV backbone at Bataan peninsula in order to support the entry of large capacity plants in the area.
- **Pagbilao 500 kV Substation Project**
 - ETC: Sep 2020
 - Transmission line component: 2 % complete
 - Substation component (Turkney): Manufacturing in progress
 - To accommodate the generation capacity additions for the Luzon Grid which will be located in Quezon Province.

SYSTEM RELIABILITY

- **Luzon Power Circuit Breaker (PCB) replacement**
 - ETC: December 2019
 - Status: 72.63 % complete
 - To replace old PCBs to improve substation reliability at San Jose, Labo, Malaya and Gumaca.
- **San Jose-Quezon (Balintawak) 230 kV Line 3 Project**
 - ETC: July 2019
 - Status: 89.68 % complete
 - To increase transfer capacity of the existing corridor and maintain the N-1 contingency provision.
- **Ambuklao-Binga 230 kV Transmission Line Project (Substation Component)**
 - ETC: June 2019
 - Status: 94.35 % complete
 - To address the old age condition of the line and accommodate the generation capacity addition in Cagayan Valley area.
- **Luzon Substation Reliability Project 1**
 - ETC: Dec 2018
 - Status: 98.63 % complete
 - To add substation capacity to provide N-1 contingency.
- **Binga-San Manuel 230 kV Transmission Line Project**
 - To address the old age condition of the line and provide N-1 contingency during maximum dispatch of the generating power plants in North Luzon.
 - Stage 1 (Binga S/S)**
 - ETC: Dec 2020
 - Status: 94.36% complete
 - Stage 2 (San Manuel S/S)**
 - ETC: June 2019
 - Status: 94.36 % complete
- **Dasmariñas EHV Substation Expansion Project**
 - ETC: Dec 2018
 - Status: 99.92 % complete

- To maintain the provision for N-1 contingency for the transformers at Dasmariñas drawdown substation.
- **Las Piñas (Zapote) Substation Expansion Project**
 - ETC: October 2019
 - Status: 99.55 % complete
 - Installation of the 4th transformer unit for N-1 contingency for the 230/115 kV transformers. This will address the ex-ante pricing errors in the WESM Market Operation brought about by the contingency constraint violations in Las Piñas Substation.
- **San Jose-Angat 115 kV Transmission Line Upgrading Project**
 - ETC: June 2019
 - Status: 84.27 % complete
 - To address the old age condition and reliability issues in the existing line serving the Angat Hydroelectric Power Plant.
- **Tuguegarao-Lal-lo (Magapit) 230 kV Transmission Line Project**
 - ETC: October 2019
 - Transmission line component: 32.2 % complete
 - Substation component: 60.97 % complete
 - To improve the power quality and reliability of supply in the province of Cagayan and this will form part of the development of the Northern Luzon 230 kV Loop that will cater the wind power generation potential in the region.
- **Tiwi Substation Upgrading Project**
 - ETC: July 2019
 - Supply (HV Equipment): 100 % complete
 - To upgrade the old and deteriorated substation equipment at Tiwi A and C Substations to improve the reliability of the system.
- **Relocation of Steel Pole of Hermosa-Duhat 230 kV T/L (along JASA Road)**
 - ETC: March 2019
 - Supply: 100 % complete
 - Erection (Board Pile Foundation): 20.40 % complete
 - To relocate 18 steel poles at the middle of the JASA road affected by the road widening project of the DPWH.
- **Eastern Albay 69 kV Transmission Line Project, Stage 2**
 - ETC: June 2019
 - Transmission line component (supply): Manufacturing in progress
 - Transmission line component (erection): Bidding process
 - To provide the looping configuration for the 69 kV line in eastern Albay.
- **Calamba 230 kV S/S Project**
 - ETC: July 2019
 - Transmission line component: 6.75 % complete
 - Substation component (Turnkey): 4.40 % complete
 - To develop a new drawdown substation strategically located near the industrial parks in Laguna and Batangas and midway of Sta. Rosa and Calauan Substations to provide the long-term power requirement of the loads, provide higher level of transmission reliability and flexibility of operation.

- **Permanent Restoration Works of Toppled Towers by Typhoon Nina (82 Towers)**
 - ETC: July 2019
 - Schedule 1: 18.51 % complete
 - Schedule 2: 45.93 % complete
 - To permanently restore the 82 Towers toppled during the Typhoon Nina.



LOAD GROWTH

- **Negros V Transmission Project**
 - ETC: June 2019
 - Status: 91.47 % complete

- To accommodate load growth in Northeastern Negros and to provide operational flexibility.

SYSTEM RELIABILITY

- **Ormoc-Babatngon 138 kV Transmission Line Project**
 - ETC: December 2018
 - Transmission line component: 99.58 %
 - Substation component: 99.29 %
 - To provide N-1 contingency for the existing corridor by installing the second circuit.
- **Visayas Substation Reliability Project 1**
 - To add substation capacity to provide N-1 contingency.

Ormoc/Babatngon/Bacolod/Cadiz/Maasin/Samboan Substations

 - Energized

Amlan

 - Status: Energized, 95.85 % complete
 - ETC: December 2018
- **Visayas Substation Reliability Project 2**
 - To add substation capacity to provide N-1 contingency.

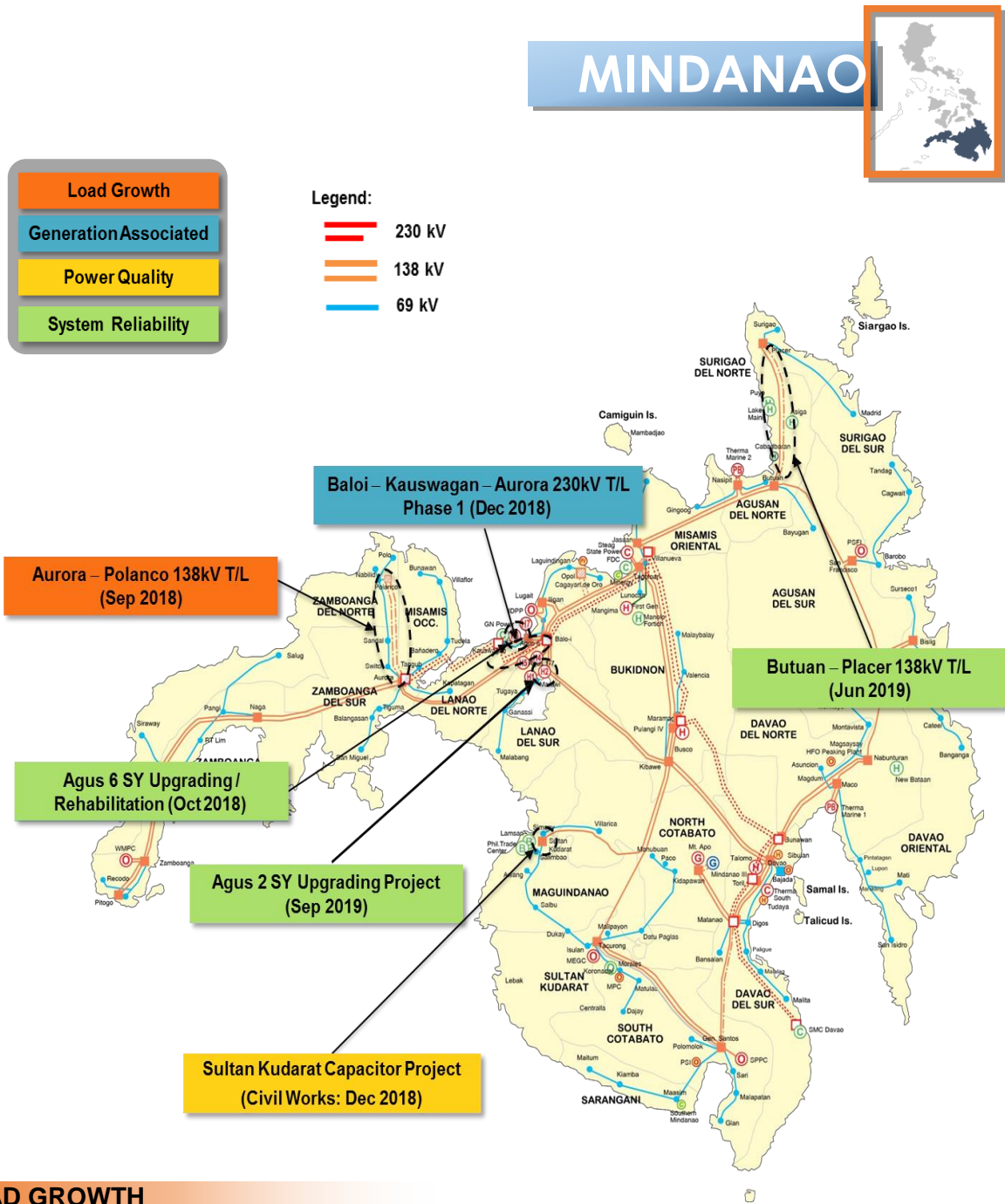
Ormoc/Babatngon/Sta. Barabara Substation

 - Energized

Lapu Lapu/Mandaue S/S

 - ETC: March 2019
- **Sta. Rita-Quinapondan 69 kV Transmission Line Project**
 - ETC: November 2018
 - Status: 99.67 % complete
 - To make Quinapondan Substation closer to its power source and thus, provide a more reliable power delivery system.
- **Cebu-Lapu Lapu 230 kV Transmission Project**
 - ETC: March 2019
 - Transmission line component: Contract suspended due to non-issuance of endorsement/approval by the LGU of Mandaue City.
 - Substation component: 97.40 % complete
 - To increase transfer capacity of the existing corridor and maintain the N-1 contingency provision.
- **Panitan-Nabas 138 kV Transmission Line 2 Project**
 - ETC: December 2018
 - Status: 87.98 % complete
 - To improve the reliability of the power transmission system towards the northwestern part of Panay by providing N-1 contingency to the existing single circuit Panitan-Nabas 138 kV Transmission Line.
- **Naga (Cebu) S/S Upgrading Project**
 - ETC: June 2019
 - Turnkey: 0.71 % complete

- To improve the operational reliability of Naga Substation in Cebu by minimizing outages due to equipment failure, maintenance and repair works which are expected to occur more frequently and at longer duration.



- **Aurora-Polanco 138 kV Transmission Line Project**
 - ETC: September 2018
 - Transmission line component: 100 %
 - Substation component: 98.35 %
 - To serve the growing power demand in Zamboanga del Norte area.

GENERATION ASSOCIATED

- **Baloi-Kauswagan-Aurora 230 kV Transmission Line Project (Phase 1)**
 - ETC: Dec 2018
 - Turnkey (Secondary Equipment): 83.00 % complete
 - Erection: 95.29 % complete
 - To accommodate the proposed 4x100MW coal-fired power plant of GN Power in Kauswagan.

POWER QUALITY

- **Sultan Kudarat (Nuling) S/S Capacitor Project**
 - ETC (Civil Works): December 2018
 - Civil Works: 57.35 % complete
 - To improve the voltage profile in the area.

SYSTEM RELIABILITY

- **Butuan-Placer 138 kV Transmission Line Project**
 - ETC: June 2019
 - Transmission line component (Schedule 1): 100 %
 - Transmission line component (Schedule 2): 28.02 %
 - Substation component: 100 %
 - To provide N-1 contingency to the existing line.
- **Agus 6 Switchyard Upgrading Rehabilitation Project**
 - ETC: October 2018
 - Status: 95.62 % complete
 - To ensure the operational reliability of the plant's switchyard.
- **Agus 2 Switchyard Upgrading/Rehabilitation Project**
 - ETC: September 2019
 - Status: 28.00 % complete
 - To address the deteriorating physical and operational condition of the switchyard.

E. Distribution Infrastructure Projects

ERC-Approved Capital Expenditure (CAPEX) Projects

For this report period, the ERC granted approval to the Capital Expenditure (CAPEX) Projects applications filed by seven (7) Distribution Utilities namely: Aklan Electric Cooperative, Inc. (AKELCO), Agusan Del Norte Electric Cooperative, Inc. (ANECO), Camarines Sur I Electric Cooperative, Inc. (CASURECO I), Ilocos Norte Electric Cooperative, Inc. (INEC), Leyte IV Electric Cooperative, Inc. (LEYECO IV), Mountain Province Electric Cooperative, Inc. (MOPRECO) and Tablas Island Electric Cooperative, Inc. (TIELCO). 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 to almost 100% barangay electrification, with only six (6) barangays out of the total of 41,974 potential barangays remaining as unenergized due to geographical and security reasons. The current program of the Government aims to attain 90% household electrification by 2017.

1. Status of Household Electrification

Table 28. Household Electrification Level as of October 2018

For the report period, the initial household electrification level of the country is estimated at 88.3% based on the major updates provided by the NEA and the 120 ECs. Said level corresponds to 20.9 million energized HHs out of the estimated total HH population of 23.7 million (see Table 28). The basis of the baseline household population is the initial DDP 2018-2027 by all DUs.

| Distribution Utility | Household | | |
|---------------------------------|-----------------------------------|-------------------|--------------|
| | Total Household Population (2015) | Served | % |
| Electric Cooperatives | 14,585,600 | 12,186,492 | 83.6% |
| MERALCO | 6,984,572 | 6,825,522 | 97.7% |
| Other PIOUs/LGU Owned Utilities | 2,145,856 | 1,924,485 | 89.7% |
| Total | 23,716,028 | 20,936,499 | 88.3% |

Source: DOE

2. Directives and Issuances

The DOE issued Power Development Plan (PDP) 2016-2040 provides the Electrification Roadmap toward total Energy Access in 2040 with specific target of country's 100% household electrification level by 2022 based on 2015 Census.

The President, through DOE Secretary issued directives to pursue and accelerate total electrification by 2020, address ailing ECs, and ensure greater private sector participation.

On 21 March 2018, Secretary Alfonso G. Cusi enjoined the EC General Managers to submit on or before 30 May 2018 comprehensive action plans and programs to attain total electrification within their coverage area.

On 16 April 2018, the Senate Committee on Energy requested DOE to submit a National Unified Strategies on Total Electrification.

On 4 May 2018, the DOE conducted the Energy Sector Agencies coordination meeting to discuss the Total Electrification Framework.

On 24 May 2018, the DOE issued a Department Order No. DO2018-05-0010 creating the "Task Force E-Power Mo" (TFEM) for the purpose of ensuring access to electricity for the communities that remains unserved and underserved by distribution utilities and electric cooperatives as mandated by their franchises.

On 07 June 2018, the Composite Team comprised by DOE, NEA and NPC had the first TFEM TWG Meeting have discussed the initial electrification strategies to support and achieve the objectives of the TFEM of total electrification by 2022.

The Department thru the created Task Force shall develop the National Unified Strategy for Total Electrification based from the consolidated and reviewed Total Electrification Master Plans of the Distribution Utilities. It shall contain the following:

- Inventory and Uniform Database of all Unserved, Underserved and Unviable Areas in the country;
- List of existing electrification projects and no. of beneficiary HHs;
- List of proposed programs and actions to address last-mile stretch of household electrification;
- Budgetary requirements for each of the program/project;
- Recommendation on Issue that will be encountered by the DU to implement the project; and
- Identification of potential partners specifically in Off-grid Electrification in the country.

3. Seven (7) Initial Electrification Strategies to Achieve Total Electrification by 2022

Initial activity of the Task Force is the program-matching criteria and roll-out scheme to strategically identify appropriate electrification program per specific setup of un-electrified/underserved area/households. Taking into consideration the specific type of area: contiguous, island, isolated, etc. vis-as-vis the viability of the areas.

The strategies identified is subdivided into i) Household Electrification, ii) Grid Electrification and iii) Off-grid electrification.

For Household and Grid Electrification strategies, the following are the area/household configuration and the appropriate electrification program fit to served it:

| Area/Household Configuration | Description of program |
|--|--|
| 1. Nationwide Intensification of Household Electrification (NIHE) SCHEME | |
| Households situated in areas with existing distribution facility | Provision of housewiring subsidy including atleast 2 bulb and 1 convenience outlet, kWhr Meter and Service Drop |
| 2. Enhanced NIHE SCHEME | |
| Households situated in areas with Existing distribution facility but requires additional 1-3 Poles (more than 30meters) | Aside from housewiring subsidy includes the provision of funding for required additional poles to household situated to distribution facilities of the DUs. |
| 3. Sitio Electrification Program (SEP) | |
| Clustered households that are viable for grid-extension to nearest tapping point of the ECs and don't have adverse impact on system loss | Provision of funding assistance to fund grid extension project to served areas |
| 4. Barangay Line Enhancement Program (BLEP) | |
| Clustered households previously energized by off-grid solution that are feasible to grid-extension to nearest tapping point and also the HH situated in a grid-able island or isolated mainland area | Provision of funding assistance to fund grid extension project including: <ul style="list-style-type: none"> 1. Overhead lines, 2. Submarine Cable 3. Enhancement/Upgrading of Distribution lines |

For Off-grid Electrification strategies, the following are the area/household configuration and the appropriate electrification program fit to served it:

| Area/Household Configuration | Description of program |
|--|--|
| 1. PV MAINSTREAMING SCHEME | |
| Dispersed households are not feasible to grid extension to nearest tapping point and not a contiguous area and unviable to extend the line | Provision of individual PVSHS to household that can provide lighting and charger capability. 1. PVM- EU funded 2017-2019 2. Continue the program Budget 2019 |
| 2. MINI-GRID/ Qualified Third Party (QTP) SCHEME | |
| Clustered households that are not feasible to grid extension to nearest tapping point and in n contiguous area Viable for mini-grid system | Provision funding for Generation and Distribution Component for Mini-grid. Entry of Private Sector in the form of QTP |
| 3. NPC-SPUG MINI-GRID SCHEME | |
| Clustered (contiguous) households that are not feasible to grid extension to nearest tapping point and unviable for mini-grid system where No QTP Players have energized | Provision funding for Generation and Distribution Component by NPC-SPUG |

4. Status of Qualified Third Party (QTP) Approach

The DOE through the European Union-Philippines “Access to Sustainable Energy Program (ASEP) conducted the policy study on “Encouraging Private Sector Participation in Off-grid Missionary Electrification through Policy Reforms and Improving Regulatory Governance.” This study resulted in the drafting of the proposed Amended Qualified Third Party (QTP) Circular which seeks to streamline and simplify the QTP regulatory process and harmonize the same with the policies under the Renewable Energy Act of 2008. The latter harmonization was brought about by the increasing interest of renewable energy companies to enter the offgrid missionary areas space.

The proposed Amended QTP Circular was subjected to a series of public consultations:

| | Venue | Dates |
|----------|--------------------------|---------------|
| Luzon | Mandaluyong City | July 18, 2018 |
| Luzon | Puerto Princesa, Palawan | June 29, 2018 |
| Visayas | Cebu City | June 26, 2018 |
| Mindanao | Cagayan de Oro City | July 13, 2018 |

The issuance of the amended Circular was deferred as it is deemed necessary to formulate one Omnibus Circular encompassing all policies and rules relative to missionary electrification including the rationalization of subsidy and utilization of the universal charge.

Meanwhile, the QTP program continues with below updates:

a. Rio Tuba QTP Project in Bataraza, Palawan

PowerSource Philippines, Inc. (PSPI) continues to operate outstandingly as QTP in Barangay Rio Tuba with a Subsidized Approved Retail Rate of PHP8.50/kWh. To date, overall installed capacity is 1.60MW (3x350 kW + 1x500 kW + 1x50kW gensets) covering the highest recorded peak demand of 840kW.

For the report period, there are 1,927 households connected in the system. In the case of the remaining unelectrified households which are composed of informal settlers, households within zonal restrictions, and new households, PSPI is coordinating with the LGU for the options on how to provide electricity to these households. The highest recorded peak demand is 840 Kw and average system is 11.38%.

The average monthly electricity generated and electricity sales for the period May to October 2018 is 254,872.13 kWh and 235,523.17 kWh respectively.

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

PSPI continues to operate its existing diesel gensets with total capacity of 1.05 MW in the Island collecting PHP12.00/kWh for consumers with monthly consumption of 40kWh or less and PHP15.00/kWh for monthly consumption greater than 40kWh. The average system loss is 6.43%.

For the reporting period, 34 additional households were electrified, a 2.77% increase in the past six (6) months. Based on the barangay records, out of 1,227 households in the island, 1,156 are connected to the mini grid system, achieving 94.21% electrification level. PSPI is looking at connecting the remaining unconnected 71 households in Malapascua.

PSPI managed to generate an average of 254,872.12 Kwh of electricity per month for the reporting period and average monthly electricity sales of 234,523.17 kWh.

c. Liminangcong, Taytay, Palawan

Residents of Bgy. Liminangcong is enjoying 24 hours of electricity service provided by PSPI. The installed capacity in the coastal barangay of Liminangcong is 675kW (3x225 kW gensets) with a highest recorded peak demand of 298 Kw.

Currently, the total number of connected customers is 892 which results to 74.33% electrification level and expected to increase due to upcoming line extensions.

From May 2018 to October 2018, the average monthly net electricity generation is 108,838.17 kWh and the average monthly electricity sales is 99,217.83 kWh. The average system loss is 7.00%. PSPI is charging PHP8.50/kWh to all its customers.

d. Brgy. Cabayugan , Puerto Princesa City, Palawan

SREC is finalizing the masterplan of engineering works and has been working the procurement of the Solar+Battery Power Management system, including the BOI, DOE, BOC applications and approvals. Meanwhile, land clearance and other civil and electrical works are ongoing.

SREC also organized an information campaign targeting all previously signed up residential and commercial consumers, to determine their preparedness and compliance with City Government requirements, to be connected to the SREC grid.

Formal groundbreaking of the project took place on 24th April 2018 in the presence of Hon. Lucillo Bayron, Mayor of Puerto Princesa, Ms. Marion Derckx, Ambassador of the Netherlands, Ms. Kok Li Peng, Ambassador of Singapore, SREC Top Management and Representatives of International Shareholders, local dignitaries, leaders and member of the public who will benefit from the improved electrification that SREC will bring to the community.

Before and after ground-breaking, SREC financed all operations with its equity investments, because DBP needed more time to process release of the loan for this unique QTP project; to avoid delays, the equity base of SREC had to be increased. The first tranche release of the loan of PhP150,000,000 only took place in the 1st week of November 2018. The 2nd tranche is expected to be released in January 2019. This schedule of capital influx is expected to support SREC to tentatively start testing the system by March/April 2019 and tentatively commission the project in May/June 2019 (or Q2-2019).

e. Brgys. Candawaga, Culasian, Rizal, Palawan

ERC granted PSPI and interim relief to operate in April 2018 with an approved Subsidized Approved Retail Rate of PHP9.9082/Kwh. PSPI put up 1x80kVA and 1x140kVA, serving 804 households with a peak demand of up to 87 Kw.

PSPI will extend the existing 4 circuit kilometres main distribution line that will connect additional 50 households from Bgy. Culasian. PSPI is also planning to serve Lionheart Company with a minimum load requirement of about 400kVA which requires additional generators to accommodate the additional load.

For the report period, the average monthly net electricity generation is 27,260 kWh and the average monthly electricity sales is 24,115.89 kWh.

Table 29. Summary status of the QTP Projects:

| PROJECT LOCATION | TECHNOLOGY | TARGET HHs | PROPONENT | STATUS |
|---|---|------------|-----------|---|
| Brgy. Rio Tuba, Bataraza, Palawan | 1.05 MW Diesel - Biomass | 1744 | PSPI | Operational, Authority to Operate (ATO), 2010 |
| Brgy. Logon, Daan-Bantayan, Cebu | 1.05 kW Diesel | 771 | PSPI | Operational, Permanent ATO 2016 |
| Sitio Sabang, Puerto Princesa City, Palawan | Hybrid : 1.4 MW Solar + 1.2 MW Diesel + 2.3 MWh Battery | 683 | SREC | Authority to Operate (ATO) 05 October 2016 |
| Brgys. Candawaga & Culasian, Rizal, Palawan | 268 kW Diesel | 998 | PSPI | Interim Relief , April 2018 |
| Balut Island, Sarangani, Davao Occidental | 690 kW Diesel | 3570 | PSPI | Interim Relief , April 2018 |
| Brgy. Liminangcong, Taytay, Palawan | 108 kW Diesel | 709 | PSPI | Provisional, 2016 |
| Brgy. Tumbod, Taytay, Palawan | Line Extension from Liminangcong | 326 | PSPI | For ERC's Expository Hearing |
| Lahuy Island, Caramoan, Camarines Sur | 246 kWp Solar + 400 kW Diesel + 79kWh Battery | 550 | FPIEC | For endorsement to ERC |
| Haponan Island, Caramoan, Camarines Sur | 51.4 kWp Solar + 100 kW Diesel + 19 kWh Battery | 87 | FPIEC | For endorsement to ERC |
| Quinasalag Island Garchitorena, Camarines Sur | 331 kWp Solar + 500 kW Diesel + 80kWh Battery | 705 | FPIEC | For endorsement to ERC |
| Bgy. Poblacion, Dumaran, Palawan | Hybrid: 132.8 kWp Solar + 144 kW Diesel + 351.1 kWh Battery | 331 | PSPI | On going negotiation with NPC-SPUG for QSSC |
| Bgy. Manamoc, Cuyo, Palawan | 216 kW Diesel | 560 | PSPI | On going negotiation with NPC-SPUG for QSSC |
| Bgy. Port Barton, San Vicente, Palawan | Hybrid: 200 kWp Solar + 609.5 kW Diesel + 200 kWh Battery | 900 | PSPI | On going negotiation with NPC-SPUG for QSSC |

Source: DOE

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.

- Preparing the Electric Cooperatives (ECs) for Operation and Competition

As of 30 September 2018, NEA released a total of PhP1,722 Million loans to 52 ECs with the following break down:

| Particulars | EC Grantees | Amount (PhP in Million) |
|--|---|-------------------------|
| Short-term Credit Facility (average) | Quezon I Electric Cooperative, Inc. (QUEZELCO I) | 20 |
| | Subtotal | 20 |
| Stand-by Credit Facility (average) | Zamboanga City Electric Cooperative, Inc. (ZAMCELCO) | 145 |
| | Subtotal | 145 |
| Capital Projects | Ilocos Norte Electric Cooperative, Inc. (INEC) | 129 |
| | Ilocos Sur Electric Cooperative, Inc. (ISECO) | 37 |
| | Batanes Electric Cooperative, Inc. (BATANELCO) | 3 |
| | Cagayan II Electric Cooperative, Inc. (CAGELCO II) | 67 |
| | Aurora Electric Cooperative, Inc. (AURELCO) | 61 |
| | Tarlac I Electric Cooperative, Inc. (TARELCO I) | 42 |
| | Nueva Ecija II Electric Cooperative, Inc. (NEECO II) (Area 1) | 61 |
| | Zambales I Electric Cooperative, Inc. (ZAMECO I) | 4 |
| | Zambales II Electric Cooperative, Inc. (ZAMECO II) | 25 |
| | First Laguna Electric Cooperative, Inc. (FLECO) | 21 |
| | Tablas Island Electric Cooperative, Inc. (TIELCO) | 7 |
| | Quezon I Electric Cooperative, Inc. (QUEZELCO I) | 39 |
| | Quezon II Electric Cooperative, Inc. QUEZELCO II | 8 |
| | Lubang Electric Cooperative, Inc. (LUBELCO) | 8 |
| | Occidental Mindoro Electric Cooperative, Inc. (OMECCO) | 5 |
| | Oriental Mindoro Electric Cooperative, Inc. (ORMECO) | 7 |
| | Romblon Electric Cooperative, Inc. (ROMELCO) | 5 |
| | Camarines Sur I Electric Cooperative, Inc. (CASURECO I) | 115 |
| | Camarines Sur III Electric Cooperative, Inc. (CASURECO III) | 6 |
| | Sorsogon I Electric Cooperative, Inc. (SORECO I) | 10 |
| | First Catanduanes Electric Cooperative, Inc. (FICELCO) | 5 |
| | Masbate Electric Cooperative, Inc. (MASELCO) | 4 |
| | Ticao Island Electric Cooperative, Inc. (TISELCO) | 11 |
| | Iloilo I Electric Cooperative, Inc. (ILECO I) | 16 |
| | Iloilo II Electric Cooperative, Inc. (ILECO II) | 20 |
| | Guimaras Electric Cooperative, Inc. (GUIMELCO) | 50 |
| | Central Negros Electric Cooperative, Inc. (CENECO) | 8 |
| | Don Orestes Romualdez Electric Cooperative, Inc. (DORELCO) | 22 |
| | Leyte III Electric Cooperative, Inc. (LEYECO III) | 6 |
| | Leyte IV Electric Cooperative, Inc. (LEYECO IV) | 11 |
| | Southern Leyte Electric Cooperative (SOLECO) | 12 |
| | Zamboanga City Electric Cooperative, Inc. (ZANECO) | 23 |
| Zamboanga del Sur I Electric Cooperative, Inc. (ZAMSURECO I) | 18 | |
| Misamis Oriental I Electric Cooperative, Inc. (MORESCO I) | 13 | |
| Misamis Oriental II Electric Cooperative, Inc. (MORESCO II) | 7 | |
| First Bukidnon Electric Cooperative, Inc. (FIBECO) | 14 | |

| Particulars | EC Grantees | Amount (PhP in Million) |
|---------------------|---|-------------------------|
| | Davao Oriental Electric Cooperative, Inc. (DORECO) | 10 |
| | Cotabato Electric Cooperative, Inc. (COTELCO) | 3 |
| | South Cotabato I Electric Cooperative, Inc. (SOCOTECO I) | 31 |
| | Sultan Kudarat Electric Cooperative, Inc. (SUKELCO) | 4 |
| | Tawi-Tawi Electric Cooperative, Inc. (TAWELCO) | 6 |
| | Siasi Electric Cooperative, Inc. (SIASELCO) | 8 |
| | Agusan del Norte Electric Cooperative, Inc. (ANEKO) | 22 |
| | Agusan del Sur Electric Cooperative, Inc. (ASELCO) | 31 |
| | Siargao Electric Cooperative Inc. (SIARELCO) | 34 |
| Subtotal | | 1,049 |
| Modular Generator | Misamis Oriental I Electric Cooperative, Inc. (MORESCO I) | 39 |
| | Misamis Oriental II Electric Cooperative, Inc. (MORESCO II) | 44 |
| | Sultan Kudarat Electric Cooperative, Inc. (SUKELCO) | 33 |
| | Agusan del Norte Electric Cooperative, Inc. (ANEKO) | 19 |
| Subtotal | | 135 |
| Working Capital | Abra Electric Cooperative, Inc. (ABRECO) | 18 |
| | Nueva Ecija II Electric Cooperative, Inc. (NEECO II) (Area 2) | 30 |
| | OMEKO | 58 |
| | Marinduque Electric Cooperative, Inc. (MARELCO) | 67 |
| | Sorsogon I Electric Cooperative, Inc. (SORECO I) | 29 |
| | AKELCO | 65 |
| | Negros Oriental I Electric Cooperative, Inc. (NORECO I) | 20 |
| | Camotes Electric Cooperative, Inc. (CELCO) | 7 |
| | Misamis Oriental II Electric Cooperative, Inc. (MORESCO II) | 79 |
| Subtotal | | 373 |
| TOTAL AMOUNT | | 1,722 |

Further to this, NEA was able to release PhP98 Million calamity loans to six (6) ECs affected by typhoons.

| | ECs | Amount (PhP in Million) |
|---------------------|--|-------------------------|
| Calamity Loan | Biliran Electric Cooperative, Inc. (BILECO) | 12 |
| | Isabela II Electric Cooperative, Inc. (ISELCO II) | 39 |
| | First Bukidnon Electric Cooperative, Inc. (FIBECO) | 10 |
| | Lanao del Norte Electric Cooperative, Inc. (LANECO) | 17 |
| | Lanao del Sur Electric Cooperative, Inc. (LASURECO) | 12 |
| | Surigao del Norte Electric Cooperative, Inc. (SURNECO) | 8 |
| TOTAL AMOUNT | | 98 |

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 |
|-------------------------|---|---------------------|
| April 10 to May 9, 2018 | Power Distribution System Linemen Enhancement Course | 37 |
| May 2-4, 2018 | Distribution Utility CAPEX-OPEX Planning and Rate Making | 24 |
| May 16-18, 2018 | Electric Power Industry Structure, Market, and Regulation | 57 |
| May 30 to June 1, 2018 | Electricity Market: Power Supply Contracting, WESM & Retail Competition | 51 |
| June 18-23, 2018 | Power Distribution System Linemen | 65 |

| Date | Title of Training/Seminar | No. of Participants |
|---------------------|---|---------------------|
| | Enhancement Course | |
| July 04-06, 2018 | EPIRA 202: Power Supply Contracting | 24 |
| July 5, 2018 | Roundtable Assessment of Under-Performing, Financially and Technically Distressed ECs | 8 |
| July 09-14, 2018 | Power Distribution Linewroker Enhancement Course (Batch 1) | 48 |
| July 12-16, 2018 | Meter Reading, Billing, Connection and Disconnection Enhancement | 32 |
| July 16-21, 2018 | Power Distribution Lineworker Enhancement Course (Batch 2) | 48 |
| July 17-18, 2018 | Distribution Network System for Reliability Improvement (Batch 1) | 16 |
| July 18-19, 2018 | Distribution Network System for Reliability Improvement (Batch 2) | 16 |
| July 25-27, 2018 | Simplified Planning Tool for Development of RE-Diesel Hybrid System | 24 |
| Aug. 28 – 29, 2018 | Quality Customer Relations | 16 |
| Aug. 30 – 31, 2018 | Work Attitude and Values Enhancement at the Workplace for EC Employees (WAVE) | 16 |
| Sept. 4- 6, 2018 | Simplified Planning Tool for Development of RE-Diesel Hybrid System | 24 |
| Sept. 17 – 22, 2018 | Work Attitude and Values Enhancement at the Workplace for EC Employees (WAVE) | 16 |

IX. BENEFITS TO HOST COMMUNITIES

In 2017, the ER No. 1-94 Program funded 87 projects amounting to almost PhP162 million through the Electrification Fund (EF), Development and Livelihood Fund (DLF), Reforestation Watershed Management, Health and/or Environment Enhancement Fund (RWMHEEF).

Likewise, ER1-94 provided funding assistance to Electric Cooperatives namely Bantayan Electric Cooperative, Inc. (BANELCO) and Cebu II Electric Cooperative, Inc. (CEBECO II), which were hardly hit by Typhoon Yolanda to rehabilitate a total of 534 solar home systems damaged under the PV Mainstreaming Project. A total of PhP6,633,982.00 funding assistance benefited 534 off-grid and isolated households.

On the non-monetary benefits to host communities, the Prioritization of Load Dispatch (PLD), public consultations were conducted in Luzon, Visayas and Mindanao to seek comments, issues and concerns and recommendation from the concerned DUs and generation companies on how to best implement the PLD for the benefit of the host communities.

Meanwhile, on the 3rd Quarter of CY2018, a major development on the provision of financial benefits to Host Communities has been made with the issuance of the DOE with a new policy. On 26 July 2018, the DOE issued the Department Circular No. DC2018-08-0021 entitled "Providing For The Amendments To Rule 29 Part (A) of the Implementing Rules and Regulations of Republic Act No. 9136" which provides the rules and guidelines for the effective administration, management, utilization, and implementation of the Financial Benefits to the Host Communities. To note on the previous scheme, the one-centavo per kilowatt-hour sale of the generations companies was remitted to trust accounts established by generations companies which are administered by DOE. In the new scheme pursuant to Section 12 of Department Circular DC2018-08-0021, all existing funds being administered by the DOE shall be transferred to the concerned DUs, Host LGUs, Regions, and Indigenous Cultural Communities/ Indigenous People.

In summary, following are the salient features of the policy:

1. Allocation of Financial Benefits

- Fifty percent of one centavo per kilowatt-hour (P0.005/kWh) of the electricity sales shall be set aside as Electrification Fund (EF); and
- Twenty-five percent of one centavo per kilowatt-hour (0.0025/kWh) of the electricity sales shall be allocated as Development and Livelihood Fund (DLF) while the remaining twenty-five percent shall be allocated as Reforestation, Watershed Management and/or Environment Enhancement (RWMHEEF)

2. Remittance of Financial Benefits

The EF shall be remitted by the GenCos and/or Energy Resource Developers to the DUs, while DLF and RWMHEEF shall be remitted by the GenCos to the Host LGUs and ICCs/IPs and the identified LGUs for the Regional Share.

3. Audit of Financial Benefits and Project Monitoring and Audit of Annual Work Program (AWP)

The DOE shall conduct periodic audit and review of reported electricity sales, fund allocation and remittances of Financial Benefits of the GenCos and/or Energy Resource Developers to the DUs, Host LGU, Region and ICC/IP.

Upon effectivity of the Circular, the DOE has conducted five (5) Information, Education and Communication (IEC) campaigns to the concerned stakeholders in selected areas in Luzon, Visayas, and Mindanao to ensure awareness and proper implementation of the policy.

X. AMENDMENTS ON CERTAIN PROVISIONS OF THE IMPLEMENTING RULES AND REGULATIONS OF REPUBLIC ACT 9136 KNOWN AS THE ELECTRIC POWER INDUSTRY REFORM ACT (EPIRA) OF 2001

The Republic Act No. 9136 otherwise known as Electric Power Industry Reform Act (EPIRA) is a law passed on 08 June 2001, which provides the framework for the restructuring of the Philippine electric power industry and the total electrification of the country.

For the report period, EPIRA is in its 17 years of implementation. To further ensure its effective implementation and enforce it to come up with sufficient competition in the industry, the DOE proposed for the amendment of the Implementing Rules and Regulations (IRR) of the EPIRA thru a draft Department Circular entitled "*Amending Certain provisions of the Rules and Regulation to Implement Republic Act 9136 entitled Electric Power Industry Reform Act of 2001*" and conducted focus group discussions and public consultations in Luzon, Visayas, and Mindanao to solicit inputs among electric power industry participants and attached agencies. This is to identify provisions of the IRR that need to be amended and thereafter prepared the consolidated proposed amendments.

The draft department circular provides for the following proposed amendments, among others:

1. Clarification on the responsibilities of the DOE, ERC, TRANSCO, and its buyer/concessionaire relative to the preparation and approval of the Transmission Development Plan;
2. Clarification on the mandates of the NEA relative to its authority and responsibilities over electric cooperatives towards viably operating in the deregulated electricity market and ensuring the total electrification of the country;
3. Alignment of the ERC mandate to ensure that Suppliers would comply to rules concerning anti-competitive behavior and market share limitations, including unbundling provisions as required under Section 36 of the law;
4. Emphasis on the compliance of generation companies of embedded generators and distribution utilities to Philippine Grid Code and WESM;
5. Rationalization of the subsidies for missionary electrification;
6. Authority for Transco or its buyer/concessionaire to operate, maintain, and develop the transmission system in any Small Power Utility Group area that has been identified by the DOE as viable;
7. Separation of accounts of related business of distribution and transmission utilities subsidization among related businesses;
8. Determination of remote and unviable areas for the provision of electricity.
9. Exemption from the imposition of universal charge for self-generating entities;
10. Rationalization of lifeline rates subsidy; and
11. Clarification on the Power Sector Assets and Liabilities Management (PSALM) mandates on the administration of universal charge.

For the report period, said circular is still being finalized by the DOE. Upon its promulgation and effectivity, said circular shall be subject for Information, Education and Communication (IEC) campaigns to the concerned stakeholders in selected areas in Luzon, Visayas, and Mindanao.

ANNEXES

Annex 1. TransCo Inspection Report Based on Concession Agreement (May 2018 to October 2018)

| No. | Inspection Report No. | Location | Name of Project/ Transmission Facilities | Inspection Date |
|-----------------|-----------------------|------------------------|--|--------------------------|
| LUZON | | | | |
| 1 | NLR-AC-18-20 | North Luzon | NLACC, Tuba and Ampucao Repeater Stations | May 21-25, 2018 |
| 2 | NLR-MA-18-25 | North Luzon | North Luzon MTD-A Office in San Fernando, La Union | June 4-8, 2018 |
| 3 | SLR-D3-18-28 | District 3 South Luzon | Naga, Tiwi, Daraga & Labo Substation, Iriga, Libmanan, Talisay, Ligao, Balogo & Bulan Load End Substation, Naga HVDC Converter Station, Calabanga Electrode Station and Sta. Magdalena CTS & Naga ACC | June 4-8, 2018 |
| 4 | NLR-D3-18-33 | District 3 North Luzon | San Manuel, Nagsaag, Bolo, Labrador, and Balingueo Substations | July 2-6, 2018 |
| 5 | NLR-D2-18-35 | District 2 North Luzon | La Trinidad, Ambuklao, Beckel and Binga Substation and Itogon Load End Station | July 16-20, 2018 |
| 6 | NLR-D7-18-37 | District 7 North Luzon | San Jose, Malaya, Quezon, Doña Imelda, Taytay Substations, Angat & San Mateo Repeater Stations, and Angat Power House | July 16-20, 2018 |
| 7 | NLR-RS-18-39 | North Luzon | Ramon (Magat), Enrile (Roma Norte), and Baligatan (Ilagan) Repeater Stations | July 30 - August 3, 2018 |
| 8 | SL-MB-18-41 | South Luzon | MTD-B South Luzon Conference Room | August 13-17, 2018 |
| 9 | SLR-RS-18-42 | South Luzon | Camalig, Bocalbocalan & Manito Repeater Stations | August 13-17, 2018 |
| 10 | SLR-D2-18-48 | District 2 South Luzon | Tayabas, Gumaca, Lumban, San Juan, and Bay S/S, Calamba, Los Baños, Pitogo, Mulanay and Lopes LES and Maunong RS | Sept. 24-28, 2018 |
| VISAYAS | | | | |
| 1 | VIS-RC-18-22 | Visayas | Visayas System Operations, Minglanilla (Majic) & Babag (Busay) Repeater Stations | May 21-25, 2018 |
| 2 | VIS-RS-18-31 | Visayas | Ivisan and Tangalan (Jawili) Repeater Stations | July 2-6, 2018 |
| 3 | VIS-RS-18-36 | Visayas | Poron (Camotes), Borbon (Muagao) and Compostela Repeater Stations | July 16-20, 2018 |
| 4 | VIS-D4-18-40 | District 4 Visayas | Sta. Barbara, Barotac Viejo, Dingle, Panitan, Nabas, Concepcion & San Jose Substations, Barotac Viejo Cable Terminal Station and Boracay Load-End Station | July 30 - August 3, 2018 |
| 5 | VIS-D3-18-44 | District 3 Visayas | Bacolod, Cadiz, Kabankalan, Sipalay, Amlan, Mabinay Substations, Victorias Capacitor Bank Station and E. B. Magalona, Pondol Cable Terminal Stations | August 13-17, 2018 |
| 6 | VIS-D2-18-46 | District 2 Visayas | Cebu, Naga, Colon, Quiot, Toledo, Calongcalong, Ubay, Compostela, Daanbantayan, Corella & Tagbilaran Substations, Mandaue & Mactan GIS, Pajo, Medellin, Garcia Hernandez, Sogod, Danao, Medellin & Sibonga Load End Substations, West Poblacion (Garcia Hernandez) & Trinidad CBS, and Daanbantayan, Samboan & CP Garcia (Tugas) CTS | Sept. 3-7, 2018 |
| 7 | VIS-MB-18-47 | Visayas | Visayas MTD-B Office in Bacolod City | Sept. 3-7, 2018 |
| 8 | VIS-D1-18-54 | District 1 Visayas | Ormoc, Maasin, Tabango, Babatngon, Calbayog, Paranas (Wright) & Sta. Rita (Bagolibas) Substations, Guadalupe CTS, Hilongos PCB Station, Albuera Electrode Station, Tolosa Capacitor Bank Station and Ormoc HVDC Station | Oct. 22-26, 2018 |
| MINDANAO | | | | |
| 1 | MIN-AC-18-21 | Mindanao | Iligan Area Control Center and Manticao & Talacogon Repeater Stations | May 21-25, 2018 |
| 2 | MIN-MA-18-23 | Mindanao | Mindanao MTD-A Office in Iligan City, Lanao del Norte | May 21-25, 2018 |
| 3 | MIN-D4-18-24 | District 4 Mindanao | Butuan, Nasipit, Bislig, San Francisco and Placer Substations | May 21-25, 2018 |
| 4 | MIN-RC-18-26 | Mindanao | Mindanao System Operations & Cugman Repeater Station | June 4-8, 2018 |
| 5 | MIN-D6-18-27 | District 6 Mindanao | General Santos, Tacurong, Kidapawan & Sultan Kudarat Substations | June 4-8, 2018 |
| 6 | MIN-D3-18-29 | District 3 Mindanao | Cagayan De Oro, Opol, Tagoloan, Jasaan, Villanueva Maramag and Kibawe Substations | June 18-22, 2018 |

| No. | Inspection Report No. | Location | Name of Project/ Transmission Facilities | Inspection Date |
|-----|-----------------------|---------------------|--|--------------------------|
| 7 | MIN-D5-18-30 | District 5 Mindanao | Davao, Culaman, Matanao, Nabunturan, Maco, Bunawan, and Toril Substations | June 18-22, 2018 |
| 8 | MIN-RS-18-32 | Mindanao | Dinas, Ozamis and Lopez Jaena Repeater Stations | July 2-6, 2018 |
| 9 | MIN-D2-18-34 | District 2 Mindanao | Iligan, Balo-i, Agus 6/7 & Lugait Substations and Agus 5 HEP & Switchyard | July 2-6, 2018 |
| 10 | MIN-RS-18-38 | Mindanao | Catarman & Gingoog Repeater Stations | July 30 - August 3, 2018 |
| 11 | MIN-AC-18-43 | Mindanao | General Santos Area Control Center, Malalag, Calumpang, and Tupi Repeater Stations | August 13-17, 2018 |
| 12 | MIN-D1-18-45 | District 1 Mindanao | Pitogo, Zamboanga, Naga & Aurora Substations and Tumaga (Lunzurun Capacitor Bank Station | Sept. 3-7, 2018 |
| 13 | MIN-D5-18-49 | District 5 Mindanao | Davao, Culaman, Matanao, Nabunturan, Maco, Bunawan, and Toril Substations | Oct. 8-12, 2018 |
| 14 | MIN-D3-18-50 | District 3 Mindanao | Cagayan De Oro, Opol, Tagoloan, Jasaan, Villanueva Maramag and Kibawe Substations | Oct. 8-12, 2018 |
| 15 | MIN-AC-18-51 | Mindanao | Davao ACC, Mintal & Matina Repeater Stations | Oct. 22-26, 2018 |
| 16 | MIN-RS-18-52 | Mindanao | Carmen, San Isidro & Salvacion Repeater Stations | Oct. 22-26, 2018 |
| 17 | MIN-MB-18-53 | Mindanao | MTD-B, Davao, Mindanao | Oct. 22-26, 2018 |

Source: Transco

Annex 2. NGCP Related Petitions to ERC as of 30 October 2018

| DECISION/CASE NO./ DATE OF FILING | NATURE OF PETITION | GROUNDS FOR FILING | STATUS |
|---------------------------------------|---|---|---|
| ERC Case 2018-100-RC/ October 2, 2018 | Application for the Approval of Force Majeure (FM) Event Regulated FM Pass Through for the Bombing /Sabotage Incidents in Mindanao and Luzon, and Lightning/ Thunder Incident | <ol style="list-style-type: none"> 1. DECLARE the Bombing/Sabotage Incidents in Mindanao and Luzon, as well as the Lightning/Thunder Incident in Luzon as Force Majeure Events (FME); 2. GRANT PROVISIONAL APPROVAL to implement and bill the FM Pass-Through Amounts to Mindanao and Luzon customers starting November 2018 billing month to December 2020 billing month or until such time that the amount incurred is fully recovered; 3. APPROVE the FME CAPEX amounting to Three Million Four Hundred Sixteen Thousand Seven Hundred Twelve Pesos and 11/100 (PhP3,416,712.11) incurred by NGCP for the repair, restoration , and rehabilitation of the damaged transmission assets and other related facilities due to the Subject Force Majeure Events; 4. APPROVE, after due notice and hearing, the proposed FM PassThrough Amount to be collected from the Mindanao and Luzon customers starting November 2018 billing month to December 2020 billing month or until such time that the amount incurred is fully recovered; 5. APPROVE and ALLOW the recovery of the Net Fixed Asset Value of the transmission assets and other related facilities damaged by the Subject Force Majeure Events amounting to Four Million Three Hundred Thirty One Thousand Eighty Nine Pesos and 77/100(PhP4,331,089.77) given that it would have been fully recovered by NGCP if these transmission assets and other related facilities have not been damaged or destroyed by the Subject Force Majeure Events; and 6. EXCLUDE the proposed Pass-Through Amounts from the side constraint calculation. | Awaiting ERC Order/Notice of Hearing |
| ERC Case 2018-094/ September 20, 2018 | Application for Approval of the Ancillary Services Procurement Agreement Between the National Grid Corporation of the Philippines and Western Mindanao Power Corporation | <ol style="list-style-type: none"> 1. Immediately ISSUE a provisional authority to implement the ASPA between NGCP and WMPC; and 2. APPROVE, after notice and hearing, the ASPA between NGCP and WMPC. | Pursuant to ERC Order dated 3 October 2018, the Commission conducted the hearing on 30 October 2018 (Tuesday) at nine o'clock in the morning (9:00 A.M.) at Badjao 1 Function Room, Garden Orchid Hotel, Governor Camins Avenue, Zamboanga City, Zamboanga del Sur. The hearing was likewise concluded and Co- Applicants were directed to submit its Formal Offer or Evidence. |
| ERC Case 2018-074/ July 12,2018 | Application for Approval of the Ancillary Services Procurement Agreement Between the National Grid Corporation of the Philippines and Southwest Luzon Power Generation Corporation, with Prayer for the Issuance of Provisional Authority | <ol style="list-style-type: none"> 1. Immediately ISSUE a provisional authority to implement the subject ASPA executed on 29 May 2018; and 2. APPROVE, after notice and hearing, the subject ASPA. | Pursuant to ERC Order dated 19 September 2018. The Commission set the hearing on 11 October 2018 (Thursday) at two o'clock in the afternoon (2:00 PM) at Building 2 Calaca Power Complex Housing, Brgy. San Rafael, Calaca,Batangas. The hearing was concluded and the Co-Applicants were directed to submit its Formal Offer of Evidence. |
| ERC Case 2018-073RC/ July 5, | Application for the Approval of Force Majeure Event | <ol style="list-style-type: none"> 1. DECLARE the earthquake in Leyte in the Visayas region as Force Majeure Events (FME); | Pursuant to ERC Order dated 1 August 2018. The Commission conducted initial hearing on |

| DECISION/CASE NO./ DATE OF FILING | NATURE OF PETITION | GROUND FOR FILING | STATUS |
|---|--|--|--|
| 2018 | Regulated FM Pass-Through for Earthquake in Leyte in the Visayas Region, In Accordance with the Rules for Setting Transmission Wheeling Rates, with Prayer for Provisional Authority | <ol style="list-style-type: none"> 2. Immediately GRANT Provisional Approval to implement and bill the following FM Pass-Through Amounts starting August 2018 billing month to December 2020 for Visayas, or until such time that the amounts incurred are fully recovered: 3. APPROVE the FME CAPEX and OPEX amounting to One Hundred Fifty-Four Million Eight Hundred Fifty-Three Thousand Forty Pesos and 16/100 (PhP154,853,040.16) incurred by NGCP for the repair, restoration and rehabilitation of the damaged transmission assets and other related facilities due to FME Earthquake in Leyte; 4. APPROVE, after due notice and hearing, the proposed FM Pass-Through Amounts to be collected from the Visayas customers starting August 2018 billing month or until such time that the amounts incurred are fully recovered: 5. APPROVE and ALLOW the recovery of the Net Fixed Asset Value of the transmission assets and other related facilities damaged by the FME Earthquake in Leyte amounting to Thirty-Nine Million Two Hundred Ninety Thousand Five Hundred Thirty-Four Pesos and 84/100 (PhP39,290,534.84) given that it would have been fully recovered by NGCP if these transmission assets and other related facilities have not been damaged or destroyed by the said FME; and 6. EXCLUDE the proposed Pass-Through Amounts from the side constraint calculation. | 28 September 2018 (Thursday), 1:00 PM at the ERC Visayas Field Office, St. Mary's Drive, Banilad Cebu City. The next hearing is still to be set by the Commission. |
| ERC Case 2018-059RC/ June 21, 2018 | Application for Approval of the Ancillary Services Procurement Agreement Between the National Grid Corporation of the Philippines and Therma Luzon, Inc., with Prayer for Issuance of Provisional Authority | <ol style="list-style-type: none"> 1. Immediately ISSUE a provisional authority to implement the , 2018 ASPA; 2. APPROVE, after notice and hearing, the 2018 ASPA. | Pursuant to ERC Order dated July 10, 2018, the Expository, Pre-Trial and Evidentiary hearing was conducted on August 16, 2018 in Lucena City. |
| ERC Case 2018-043RC/ May 15, 2018 | Application for Approval of the Ancillary Services Procurement Agreement Between the National Grid Corporation of the Philippines and Palm Concepcion Power Corporation, with Prayer for the Issuance of Provisional Authority | <ol style="list-style-type: none"> 1. Immediately ISSUE a provisional authority to implement the ASPA between NGCP and PCPC; 2. APPROVE, after notice and hearing, the ASPA between NGCP and PCPC. | Pursuant to ERC Order dated July 16, 2018 the Expository, Pre-Trial and Evidentiary Hearing was conducted on August 9, 2018 at Conference Hall, Northern Iloilo Polytechnic State College - Concepcion Campus, Barangay Poblacion, Concepcion, Iloilo. |
| ERC Case No. 2018-017RC/ March 23, 2018 | Application for Approval of the Ancillary Services Procurement Agreement Between the National Grid Corporation the Philippines and Phinma Energy Corporation (Bulacan Plant) with Prayer for the Issuance of Provisional Authority | <ol style="list-style-type: none"> 3. Immediately ISSUE a provisional authority to implement the 2017 ASPA, to take effect upon expiration of the 2012 ASPA or on the July 2018 Billing Period; 4. APPROVE, after notice and hearing, the 2017 ASPA. | As per ERC order dated May 30, 2018, the jurisdictional and expository presentation were conducted on June 22, 2018. ERC will issue an Order to set the date for the continuance of hearing. |

| DECISION/CASE NO./ DATE OF FILING | NATURE OF PETITION | GROUND FOR FILING | STATUS |
|---|---|---|--|
| ERC Case No. 2018-016RC/ March 23, 2018 | Application for Approval of the Ancillary Services Procurement Agreement Between the National Grid Corporation the Philippines and Phinma Energy Corporation (Subic Plant) with Prayer for the Issuance of Provisional Authority | <ol style="list-style-type: none"> 1. Immediately ISSUE a provisional authority to implement the 2017 ASPA, to take effect upon expiration of the 2012 ASPA or on the July 2018 Billing Period; 2. APPROVE, after notice and hearing, the 2017 ASPA. | On May 30, 2018, the ERC posted on its website ERC order dated May 22, 2018, setting the Jurisdictional, Expository, Pre-Trial and evidentiary hearing on June 20, 2018. |
| ERC Case No. 2017-116RC/Dec. 22, 2017 | In the Matter of the Application for the Approval of Force Majeure Event Regulated FM Pass-Through for Typhoon Nina in Luzon, in Accordance with the Rules for Setting Transmission Wheeling Rates, with Prayer for Provisional Authority | <ol style="list-style-type: none"> 1. DECLARE Typhoon Nina in Luzon as Force Majeure Events (FME); Immediately GRANT Provisional Approval to implement and bill the following FM Pass-Through Amounts starting January 2018 billing month to December 2020 for Luzon, or until such time that the amounts incurred are fully recovered: 2. APPROVE the FME CAPEX amounting to One Hundred Thirty-Four Million Four Hundred Two Thousand Eight Hundred Eighty-Four Pesos (PhP 134,402,884.00) incurred by NGCP for the repair, restoration and rehabilitation of the damaged transmission assets and other related facilities due to FME Typhoon Nina in Luzon; 5. APPROVE, after due notice and hearing, the proposed FM Pass-Through Amounts to be collected from the Luzon customers starting January 2018 billing month or until such time that the amounts incurred are fully recovered: 6. APPROVE and ALLOW the recovery of the Net Fixed Asset Value of the transmission assets and other related facilities damaged by the FME Typhoon Nina in Luzon amounting to One Hundred Ninety-Three Million One Hundred Fourteen Thousand Three Hundred Eighty Pesos (PhP 193,114,380.00), given that it would have been fully recovered by NGCP if these transmission assets and other related facilities have not been damaged or destroyed by the said FME; and 7. EXCLUDE the proposed Pass-Through Amounts from the said constraint calculation. | <p>Pursuant to ERC order dated May 29, 2018, the Jurisdictional and expository presentation were conducted on July 31, 2018.</p> <p>On August 29, 2018, Pre-Trial and Evidentiary hearing was conducted.</p> |
| ERC Case No. 2017-113RC/ Dec. 13, 2017 | In the Matter of the Application for Approval of the Ancillary Services Procurement Agreement Between the National Grid Corporation of the Philippines and San Roque Power Corporation, with Prayer for the Issuance of Provisional Authority | <ol style="list-style-type: none"> 1. Immediately ISSUE a Provisional Authority to implement the 2017 ASPA, to take effect upon expiration of the 2012 ASPA; 2. APPROVE, after notice and hearing, the 2017 ASPA. | On June 7, 2018, the Evidentiary hearing was continued and concluded. |
| ERC Cases No. 2017-110 RC/ Dec. 1, 2017 | In the Matter of the Application for the Approval of the Implementation of Additional Capital Expenditure Program for the Calendar Years 2017 - Beyond 2020, with Prayer for the Issuance of Provisional Authority | <ol style="list-style-type: none"> 1. Immediately ISSUE an Order provisionally authorizing the implementation of the proposed CAPEX projects; and 2. APPROVE, after notice and hearing, the proposed CAPEX projects. | <p>As per ERC order dated May 31, 2018 the expository presentation for Mindanao and Visayas stakeholders were conducted on July 3 and July 5, 2018, respectively.</p> <p>On July 10, 2018, Pre-trial and Evidentiary were conducted.</p> |

| DECISION/CASE NO./ DATE OF FILING | NATURE OF PETITION | GROUND FOR FILING | STATUS |
|--|--|--|--|
| ERC Case No. 2017-100 RC/ Oct. 26, 2017 | In the Matter of Application for the Approval of the Connection Charges and Residual Subtransmission Charges for Calendar Years 2014 and 2015 on Subtransmission Assets of the National Grid Corporation of the Philippines, with Prayer for Provisional Authority | <ol style="list-style-type: none"> 1. ISSUE a Provisional Authority to implement and commence the billing and collection of the proposed CY 2015 CC/RSTC beginning the billing month of January 2018. 2. APPROVE the recovery of the computed CY 2014 and 2015 CC/RSTC provided in this application from all Transmission Customers. 3. ALLOW NGCP to bill and collect under-recoveries resulting from the difference in the actual collection made by NGCP for CY 2015 and 2016 vis-a-vis the proposed CY2014 and 2015 CC/RSTC which should have been collected for the years CY2015 and 2016; and DIRECT NGCP to refund any over-recovery arising from such difference. 4. ALLOW NGCP to bill and collect the deferred CC/RSTC for disposed sub-transmission assets; 5. ALLOW NGCP to impose a 3% Franchise Tax on CC/RSTC to be reflected as a separate line item in the Power Bill. | <p>As per ERC order dated June 6, 2018 the following were conducted:</p> <ul style="list-style-type: none"> • Jurisdictional and Expository Presentation on July 16, 2018 at ERC Pasig; • Expository Presentation on July 18, 2018 at ERC Visayas Field Office; • Expository presentation on July 25, 2018 at ERC Mindanao Field Office ; • Pre-Trial and Evidentiary hearing on July 31, 2018 at ERC Pasig. <p>On 31 August 2018, the ERC issued a "Motion to Reset Hearing" and reset the evidentiary hearings to 29 and 31 October 2018 both at 10:00 AM in Pasig City and Davao City respectively.</p> <p>The October 29, 2018 Evidentiary Hearing in ERC Cebu field Office was cancelled in view of NGCP's filing on October 22, 2018 of an 'Urgent Motion' to reset the hearing. Next hearing to be announced.</p> |
| ERC Case No. 2017-093R/ October 13, 2017 | Application for Approval of the Implementation of the Cebu-Bohol 230 kV Interconnection Project and Nabas-Caticlan-Boracay Transmission Project. | <ol style="list-style-type: none"> 1. Immediately issue a provisional authority to implement the Cebu-Bohol 230 kV Interconnection & Nabas-Caticlan-Boracay Transmission Line Projects; 2. Approve, after notice and hearing, the projects. | <p>On May 4, 2018, Expository Presentation for Luzon was conducted. NGCP requested for a resetting of hearing until the ERC ruled on their motion regarding TransCo's Intervention.</p> <p>On June 7, 2018, the Evidentiary hearing was continued and concluded.</p> |
| ERC Case No. 2017-090RC/ Oct, 12, 2017 | Application for Approval of the FME for Typhoons Karen and Lawin in Luzon | <ol style="list-style-type: none"> 1. Declare Typhoons Karen and Lawin in Luzon as Force Majeure Events; 2. Immediately grant provisional approval to implement FME pass through amounts starting October 2017 billing month to December 2020 or until such time that the amounts incurred are fully recovered; 3. Approve the CAPEX and OPEX incurred by NGCP for the repair, restoration and rehabilitation of the damaged transmission assets and other related facilities; 4. Approve, after due notice and hearing, the proposed FM Pass-Through Amounts to be collected from the Luzon customers starting October 2017 billing month or until such time that the amounts incurred are fully recovered; 5. Approve and allow the recovery of the Net Fixed Asset Value of the transmission assets and other related facilities damaged by Typhoons Karen & Lawin in Luzon; 6. Exclude the proposed Pass-Through Amounts from the side constraint calculation. | <p>As per ERC order dated June 1, 2018 the Commission conducted the continuance of hearing on July 30, 2018 at ERC Pasig.</p> <p>On August 14, 2018, Evidentiary hearing was conducted. Out of the six witnesses, only George Lustestica was not present in the hearing due to an important matter. Because of this, the hearing was set to continue on September 10, 2018 at 10:00 AM.</p> <p>On September 10, 2018, the evidentiary hearing was continued and concluded. NGCP to submit its FOE within 15 days</p> |
| ERC Case No. 2015-205RC/ | Application of the National Grid Corporation of the | <ol style="list-style-type: none"> 1. DECLARE the Typhoon Ruby and Tropical Storm Seniang as Force Majeure Events (FMEs); | <p>As per ERC order dated June 6, 2018 the following were conducted:</p> |

| DECISION/CASE NO./ DATE OF FILING | NATURE OF PETITION | GROUNDS FOR FILING | STATUS |
|-----------------------------------|---|---|---|
| Dec. 4, 2015 | Philippines for the Approval of Force Majeure Event Regulated FM Pass Through for Typhoon Ruby and Tropical Storm Seniang in Visayas and Mindanao | <ol style="list-style-type: none"> 2. GRANT Provisional Approval to implement and bill the FM Pass- Through Amounts to Visayas and Mindanao customers starting January 2016 billing month to December 2020 billing month or until such time that the amount incurred is fully recovered; 3. APPROVE the Capital Expenditure (CAPEX) amounting to PhP37,809,639.76 incurred by NGCP for the repair, restoration and rehabilitation of the damaged transmission assets and other related facilities due to the Typhoon Ruby and Tropical Storm Seniang as FMEs; 4. APPROVE, after due notice and hearing, the proposed FM Pass Through Amount to be collected from the Visayas and Mindanao Customers starting January 2016 billing month to December 2020 billing month or until such time that the amount incurred is fully recovered; 5. APPROVE and ALLOW the recovery of the Net Fixed Asset Value of the transmission assets and other related facilities damaged by the FME Ruby and Seniang amounting to PhP16,556,597.57, given that it would have been fully recovered by NGCP if these transmission assets and other related facilities have not been damaged or destroyed by FME Ruby and Seniang; and 6. EXCLUDE the proposed Pass-Through Amount from the side constraint calculation. | <ul style="list-style-type: none"> • Jurisdictional and Expository Presentation on July 16, 2018 at ERC Pasig; • Expository Presentation on July 18, 2018 at ERC Visayas Field Office; • Expository presentation on July 25, 2018 at ERC Mindanao Field Office ; and • Pre-Trial and Evidentiary hearing on July 30, 2018 at ERC Pasig. |

Source: Transco

Annex 3. ERC Approved Capital Expenditure Projects as of May 2018 – June 2018

| APPLICANT | PROJECT DESCRIPTION | RATIONALE | PROJECT COST (PhP) | DATE FILED/ APPROVED |
|---|--|---|--------------------|-----------------------------------|
| Agusan Del Norte Electric Cooperative, Inc. (ANECO) ERC CASE NO. 2013-129 RC | INTERIM CAPITAL EXPENDITURE PROJECTS (2013) AND CAPITAL EXPENDITURE PROJECTS (2014)-2016 | | | 06 June 2013/ 08 May 2018 |
| | Replacement of Rotten Poles | To replace existing dilapidated wooden poles and to serve additional lines. | 25,416,472.25 | |
| | Procurement of Distribution Transformers | To replace its existing old and damaged distribution transformers in order to maintain a safe, efficient and reliable distribution system. | 36,763,436.00 | |
| | Construction of New 20 MVA Substation | The proposed project is intended to address the anticipated load demand of Robinson Mall and to relieve the overloading condition of Libertad, Ambago, Villakanaga, and Ampayon Substations and to meet the growing demand of Butuan City. | 32,799,181.33 | |
| | Procurement of ACSR Wires | The project aims to rehabilitate and repair existing lines and to serve additional lines. | 15,591,300.00 | |
| | Procurement of kWh Meters (single and three phase) | The project aims to increase accuracy of meter reading and to reduce pilferage, thus, reduce systems loss. | 40,500,000.00 | |
| | Procurement of Instrument Transformers | The project is intended for all existing and new industrial and commercial customers whose load demand consumption is above 300 kVA needed for metering revamp in order to reduce transformer loss. | 4,623,666.07 | |
| | Acquisition of Test Bench (kWh Meter Calibrator) | The project aims to test the accuracy of the kWh meters and to properly bill the consumers of their actual consumption. This is to improve system efficiency. | 4,000,000.00 | |
| | Acquisition of Portable kWh Meter Calibrator Standard | The Portable kWh Meter Calibrator shall provide a wide range of test and measurement capabilities: burden measurement, accuracy measurement, kWh meter characteristic, and kWh Meter Behaviour Measurement. | 1,500,000.00 | |
| | Acquisition of SCADA | The project aims to increase operation efficiency through system automation and centralized data gathering and monitoring of power distribution system. | 15,516,540.29 | |
| | Acquisition of Software and Facilities for Geographic Information System (GIS) | The project aims to improve customer efficiency. | 500,000.00 | |
| Procurement of Maintenance/Utility Vehicle | The project intends to replace aging utility vehicles to facilitate maintenance operations in order to improve customer service. | 9,000,000.00 | | |
| Aklan Electric Cooperative, Inc. (AKELCO) ERC CASE NO. | EMERGENCY CAPITAL EXPENDITURE PROJECTS (2017) | | | 15 September 2017/ 17 May 2018 |
| | Procurement of a new 10 MVA Power Transformer as replacement for the damaged 5 MVA Power Transformer at the Nabas Substation, including protection and safety accessories incidental to the acquisition and operation of the new power | The immediate procurement and installation of the new 10 MVA Power Transformer to replace the damaged 5 MVA Power Transformer at the Nabas Substation was a must, to immediately restore power and provide a safe, adequate, efficient and reliable electric service to the consumers being served by the | 14,395,000.00 | |

| APPLICANT | PROJECT DESCRIPTION | RATIONALE | PROJECT COST (PhP) | DATE FILED/ APPROVED |
|--|---|--|--------------------|----------------------------------|
| 2017-082 RC | transformer. | substation. | | |
| Leyte IV Electric Cooperative, Inc. (LEYECO IV) ERC CASE NO. 2015-159 RC | FORCE MAJEURE EVENT CAPITAL EXPENDITURE PROJECTS | | | 26 August 2015/ 17 May 2018 |
| | Repair, restoration, replacement, and/or rehabilitation of the cooperative's distribution lines, poles, distribution transformers, hardware, protection equipment and accessories damaged by Super Typhoon Yolanda. | The project ensured the power restoration in the entire coverage area of LEYECO IV, and a more reliable and efficient power supply to satisfy the necessities of its consumers. | 28,109,279.38 | |
| Tablas Island Electric Cooperative, Inc. (TIELCO) ERC CASE NO. 2011-026 RC | ELECTRIC CAPITAL PROJECTS (2011-2015) | | | 28 February 2011/ 17 May 2017 |
| | Rehabilitation/replacement of Rotten Poles and Cross Arms | This project is necessary to meet the criteria of safety and reliability, thus its first priority ranking. Ageing wood poles and cross-arms were beyond their standard asset life of 20 years. | 395,989.00 | |
| | Upgrading of Selected Line Sections | This project will improve capacity and power quality to present and future customers. | 2,370,282.00 | |
| | Distribution Transformers | To provide electric services to customers. | 1,744,600.00 | |
| | Low Voltage (240V) Distribution Lines | To provide electric services to customers. | 1,115,583.00 | |
| | Customers Service Drops and Metering Equipment | To provide electric services to customers. | 5,886,288.12 | |
| | Expansion/Rural Electrification | To fulfil primary mandate for missionary electrification is to extend power services to customer found in the remote or unviable areas of the franchise coverage. | 22,046,993.00 | |
| | System Re-configuration | To improve power reliability. | 9,876,302.00 | |
| | Purchase of Line Capacitors, Line Reclosers Single Phase, Line Reclosers Three Phase | To provide more reliable electric service to customers. | 37,950.00 | |
| | Non-Network Assets | The proposed expenditures will improve consumer service efficiency. | 1,968,316.00 | |
| | Building and Office Equipment | The proposed expenditures will improve the working condition of the employees, will provide comfort to customers, and service efficiency. | 2,076,315.00 | |
| Camarines Sur I Electric Cooperative, Inc. (CASURECO I) ERC CASE NO. 2013-142 RC | CAPITAL EXPENDITURE PROJECTS (2013-2016) | | | 04 July 2013/ 22 May 2018 |
| | Procurement of Poles | To replace the old/rotten wood poles which affect the reliability of electric service due to interruptions and worse, may cause accidents to consumers, lines and properties. | 5,162,440.00 | |
| | Replacement of Old Transformers | To improve safety. | 242,981.37 | |
| | Rehabilitation/Upgrading of Distribution Lines | To address the power demand of Bicol Sanitarium and other business establishments in the area. | 8,608,023.00 | |
| | Replacement of Old kWh Meter | The purpose of the project is to replace inefficient kilowatt-hour meters and to determine the real power consumed by each customer and avoid pilferages. | 25,427,248.26 | |

| APPLICANT | PROJECT DESCRIPTION | RATIONALE | PROJECT COST (Php) | DATE FILED/ APPROVED |
|--|--|--|--------------------|----------------------------------|
| | Cluster Metering | To reduce system loss. | 5,701,516.75 | |
| | Purchase of Materials for New Customers | To provide electric services to customers. | 31,159,242.43 | |
| | Buffer Stocks | Reliability level improvement and to avoid delay of repair and construction services during typhoons, other natural disasters and emergency corrective maintenance. | 11,500,641.65 | |
| | Procurement of Laptop | There is a need to procure additional one unit of laptop for them to do their duties and responsibilities. | 41,500.00 | |
| | Office and Furniture Equipment | The proposed expenditures will improve the working condition and consumer service efficiency and will provide comfort to customers. | 1,192,279.98 | |
| | Transportation Equipment | To meet the increasing number of customers that has to be served. | 7,998,774.50 | |
| | Laboratory Equipment | CASURECO I does not have these testing equipment which are all necessary in providing reliable and effective electric service. | 6,530,267.63 | |
| | Tools, Shop, Safety Gadgets, and Garage Equipment | The proposed capital project is intended to maximize the performance and safety of CASURECO I's personnel in maintaining its distribution system including the proper monitoring of its equipment to avoid unwanted failures or system interruptions. | 2,642,005.67 | |
| | Storage Equipment | In order to have a storage of its collection especially during due dates on member consumers monthly bills, CASURECO I proposed for the procurement of Safe and Vault for its offices. | 461,279.32 | |
| | Information Technology Equipment | Procurement of Meter Reading Gadget, Complete Accounting System, Hand Held Radio, Mobile Radio/base, Wide Area Network, Global Positioning System (GPS), Geographical Information System (GIS), Queuing System, and Labelling System. | 7,183,643.48 | |
| | Improvement of Perimeter Fence, Driveway, and Drainage System | Improvement of Perimeter Fence at Main Office, CAO-II Pamplona and CAO V Camaligan. Improvements of Driveway and Drainage System at CAO III – Sipocot and 5 MVA Sipocot Substation Site. | 7,094,950.76 | |
| | Land Titling, Land purchase, Construction of Collection Center | The purpose of the project is to transfer the land rights to CASURECO I's property. | 27,493,045.86 | |
| Improvement of Warehouse Building, and Construction of Administrative Building | The said buildings are already dilapidated and evidently needs renovation and replacement in order to have a good working ambiance and to further improve the working efficiency and mindset of employees, and satisfaction and comfort of member-consumers, as well as safety of CASURECO I's personnel and its member-consumers. | 62,732,790.67 | | |
| Ilocos Norte Electric Cooperative, Inc. (INEC) ERC CASE NO. 2017-013 RC | FORCE MAJEURE EVENT CAPITAL EXPENDITURE PROJECT | | | 24 February 2017/ 29 May 2018 |
| | The Force Majeure CAPEX Project is for the immediate replacement of the distribution line materials and equipment as well as service drop wires and metering facilities utilized in the reconstruction, repair and rehabilitation of network assets damaged by | The project ensured power restoration in the entire coverage area of INEC and delivery of more reliable and efficient service to its consumers. It was also intended to restore the safety and protection of the cooperative's entire distribution system. | 19,675,446.00 | |

| APPLICANT | PROJECT DESCRIPTION | RATIONALE | PROJECT COST (Php) | DATE FILED/ APPROVED |
|--|---|--|--------------------|-----------------------------------|
| | Typhoon Lawin. | | | |
| | EMERGENCY CAPITAL EXPENDITURE PROJECTS | | | |
| Mountain Province Electric Cooperative, Inc. (MOPRECO) ERC CASE NO. 2013-027 RC | Fuse Cut-Out Combination | To ensure the circuit protection during occurrence of electrical fault. | 871,904.00 | 27 February 2013/ 07 June 2018 |
| | Installation of Circuit Breaker at Ba-ang Substation | To comply with the requirement of the Philippine Grid Code that all substations shall be protected by a circuit breaker at the primary side. | 2,000,000.00 | |
| | Replacement of Rotten/Damaged Poles | To ensure safety of the consumers and general public. | 5,876,235.00 | |
| | Upgrading of 2.5 MVA to 5 MVA Power Transformer | To accommodate the increasing demand of Pegeo Substation. | 18,041,000.00 | |
| | Replacement of Overloaded Distribution Transformers | To accommodate the demand of the customers. | 6,411,497.35 | |
| | Replacement of Defective Kilowatt-Hour Meters | To replace existing defective meters to improve system, loss and prevent billing complaints. | 1,881,892.45 | |
| | Pole Metering | To reduce the system loss of MOPRECO. | 9,618,269.19 | |
| | Kilowatt Hour Meters for New Connection | To accommodate new customers. | 14,860,533.38 | |
| | Fuse Links | To accommodate new customers. | 306,060.00 | |
| | Distribution Transformers for Rehabilitation/ Stock | To accommodate new customers. | 13,983,700.11 | |
| | Bid Publication Cost | To improve consumer service efficiency. | 26,480.00 | |
| | Vehicle Tires and Spare Parts | To improve consumer service efficiency. | 284,120.00 | |
| | Office Furniture | To improve consumer service efficiency. | 248,221.25 | |
| | Software | To improve consumer service efficiency. | 1,610,000.00 | |
| | Office Computers | To improve consumer service efficiency. | 249,550.00 | |
| | Technical Tools and Equipment | To improve consumer service efficiency. | 1,489,622.39 | |
| | Grounding Instruments | To improve consumer service efficiency. | 353,500.00 | |
| | Test Instrument | To improve consumer service efficiency. | 825,779.08 | |
| Vehicle | To improve consumer service efficiency. | 2,320,010.40 | | |
| Air Conditioning Unit | To improve consumer service efficiency. | 44,440.00 | | |
| | NETWORK DEVELOPMENT PROJECT | | | |
| Aurora Electric Cooperative, Inc. (AURELCO) ERC Case No. | Replacement of damaged reclosers • Procurement of new reclosers which will be installed at the feeders of San Isidro Substation. | Maintain the security of the distribution system, particularly the existing San Isidro substation, by replacing the existing protection equipment that are refurbished and was previously damaged. | 1,490,000.00 | |

| APPLICANT | PROJECT DESCRIPTION | RATIONALE | PROJECT COST (PhP) | DATE FILED/ APPROVED |
|------------|--|---|--------------------|----------------------|
| 2017-114RC | Replacement/Rehabilitation of deteriorated substation equipment <ul style="list-style-type: none"> Procurement and installation of substation equipment and materials such as SF6 Circuit breaker, Automatic Voltage Regulator, Reclosers, by-pass switches, power fuses, terminals, 336 conductors and batteries. | Maintain the security of the distribution system by replacing the existing substation materials and equipment which is already aged and deteriorated. | 9,220,000.00 | |
| | Replacement of rotten poles and crossarms <ul style="list-style-type: none"> Procurement of poles and cross arms and associated accessories. | To maintain a safe and reliable distribution network. | 7,682,381.38 | |
| | Rehabilitation of Lines from Hiwalayan to Baler | To address the safety concern of AURELCO's distribution utilities. | 8,219,050.19 | |
| | Construction of 69 kV subtransmission line from San Isidro Substation to Casiguran, Aurora and Installation of 5 MVA Substation at Casiguran, Aurora and Lot purchase | Address the load growth and improve the reliability performance of the distribution system, particularly the distribution lines serving the DICADI Area. | 289,099,253.75 | |
| | Construction of Three Phase Line from Brgy. Buhangin to So. Labasin, Brgy. Sabang, Baler to replace the existing single phase line in the area. | To accommodate the connection requirement of AURELCO's consumers. | 1,385,212.74 | |
| | Conversion of vee phase to three phase line from Butas na Bato to Umiray, Dingalan, Aurora | To accommodate the connection requirement of AURELCO's consumers. | 13,390,317.43 | |
| | New kWh meter and service drop wires for service dropping <ul style="list-style-type: none"> Procurement of kWh meters and service drop wires for new connection in the whole coverage area of AURELCO. | The DU is mandated to provide its new customers the required metering facilities consistent with the DSOAR. | 11,671,765.00 | |
| | Additional distribution transformers for new customers <ul style="list-style-type: none"> Installation of additional distribution transformers (DTs) with various rating capacities in the distribution network. The following are the required specifications of the proposed DTs: <ol style="list-style-type: none"> The transformer ratings are 15, 25, 37.5, 50 and 75 KVA; and All transformers are of conventional type, oil immersed and pole-mounted. | The installation of additional distribution transformers to the network is a continuing process in the distribution utility to address the increasing loads. Additional loads require additional capacity in the distribution network assets. | 3,649,200.00 | |
| | Replacement of overloaded/busted distribution transformers/transformer load management <ul style="list-style-type: none"> Procurement of distribution transformers for the | To address the increasing demand of the system. | 19,395,263.83 | |

| APPLICANT | PROJECT DESCRIPTION | RATIONALE | PROJECT COST (PhP) | DATE FILED/ APPROVED |
|---|---|---|--------------------|----------------------|
| | replacement of overloaded and busted distribution transformers. | | | |
| | Replacement of deteriorated Line Hardware materials and conductors <ul style="list-style-type: none"> • Purchase of line hardware materials and conductors for the replacement of deteriorated line hardware materials and repair of distribution transformer in the whole coverage area of AURELCO. | To maintain reliable supply of electricity | 23,706,260.56 | |
| | Installation of Fuse cut-out assembly to backbone lines and laterals <ul style="list-style-type: none"> • Purchase of "Fuse Cut Out" assembly for installation to backbone lines and laterals of the distribution system of AURELCO, as well as replacement of defective ones. | To maintain reliable supply of electricity | 2,196,646.00 | |
| | Conversion of Three Phase to Double Circuit Lines from San Isidro Substation to Hiwalayan, San Luis, Aurora <ul style="list-style-type: none"> • Construction of Double Circuit from San Isidro Substation to So. Hiwalayan. | To maintain reliable supply of electricity | 4,595,414.57 | |
| | Installation of recloser as sectionalizing devices <ul style="list-style-type: none"> • Procurement of vacuum type reclosers as sectionalizing devices to be installed in AURELCO's feeders (midstream) to be properly coordinated with the reclosers in the feeder 1 and 2. | To maintain reliable supply of electricity | 3,500,000.00 | |
| | Buffer Stock <ul style="list-style-type: none"> • Procurement of distribution line hardware and materials for buffer stock. | The proposed project is intended tom improve system reliability and customer service efficiency considering that necessary materials and equipment are already available if in case an emergency situation in the system or force majeure event occurs within the franchise area. | 24,854,026.00 | |
| | New kWh meter for change meter Replacement of defective kilowatt-hour meters | The proposed project shall improve the efficiency of the distribution system. | 13,247,881.29 | |
| NON-NETWORK DEVELOPMENT PROJECTS | | | | |
| | Lineman tools/safety gadgets <ul style="list-style-type: none"> • Purchase of Lineman tools/safety gadgets to effectively accomplish the construction, rehabilitation, operation or maintenance of the | The EC is mandated to improve and maintain the safety of its personnel with the proper use of personal protective equipment to ensure safety and to maximize efficiency in maintaining the distribution network. | 2,509,828.00 | |

| APPLICANT | PROJECT DESCRIPTION | RATIONALE | PROJECT COST (Php) | DATE FILED/ APPROVED |
|-----------|---|---|--------------------|----------------------|
| | distribution system. | | | |
| | Purchase of lot and construction of Dinalungan service center | The cooperative has three areas that have no service centers. These are in Dinalungan, Dilasag, and Dinapigue. At present, the cooperative only rents offices on the areas mentioned. The said offices are small and it's not convenient and comfortable. For this, it is appropriate to purchase lot and construct Dinalungan and Dilasag service center for the benefit of member-consumers and employees in the municipality of Dinalungan and Dilasag. | 2,649,162.83 | |
| | Purchase of lot and construction of Dilasag service center | The propose project will provide good facility for the cooperative and customers in order to improve customer service. | 3,749,162.83 | |
| | Logistics <ul style="list-style-type: none"> • Purchase/procurement of laboratory equipment, information system equipment and service vehicles for maintenance and rehabilitation lines. | <p>Laboratory equipment is very important in the operation of the cooperative. Procurement of dielectric tester, medium voltage voltmeter, oil filter, multimeter, load logger, resistance tester and clamp ammeter are necessary to be used in the preventive maintenance of the substation and monitoring the distribution system. Measuring primary voltage using potential transformer and an ordinary voltmeter which is a conventional way is very dangerous although accurate. To prevent accident while measuring primary voltage efficiently and more accurately, utilizing a high voltage is necessary.</p> <p>Service vehicle is needed in order to render fast, efficient and quality service in case interruption on the distribution system occurred.</p> <p>Information System Equipment will help to improve the cooperative technical, financial and institutional services. New technology is a great help to improve the service efficiency of the cooperative and will lessen the operational cost of the cooperative.</p> | 24,936,355.00 | |

Source: ERC