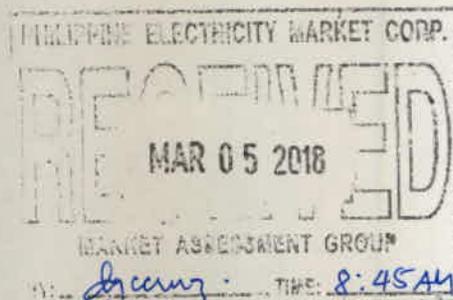


Proposed Amendments to the (1) WESM Rules and (2) WESM Manuals for Pre- Integration Provisions for Mindanao

Philippine Electricity Market Corporation

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I. SUMMARY OF THE PROPOSED RULES CHANGE

The amendments to the WESM Rules and Manuals are proposed to reflect the actual physical and market transactions in the Luzon, Visayas, and Mindanao grids. In particular, Luzon/Visayas and Mindanao are proposed to be treated as independent settlement regions prior to the interconnection of the Luzon/Visayas and Mindanao grids. The affected documents are:

- WESM Rules (As amended by DOE DC No. 2016-10-0014 and DOE DC No. 2017-03-0001)
- Billing and Settlement Manual Issue 5.0 (As amended under RCC Resolution No. 2017-05 and PEMB Resolution No. 2017-16)
- Price Determination Methodology Issue 1.0

II. BACKGROUND

Section 1.1 of Department of Energy (DOE) DC2017-05-0009 provided for the establishment of the WESM in Mindanao under the principle that the WESM Rules and Manuals will be uniformly applied to the WESM in Mindanao. In line with this, Mindanao transactions will be aggregated with Luzon and Visayas transactions in market processes that pertain to the whole market. One such process is the payment and collection of settlement amounts.

Under the current process, payments to trading participants with receivables from the market are sourced from collections from trading participants with payables to the market and, if necessary, their security deposits. In the event that the collection and security deposits are not sufficient to pay all trading participants with receivables, the shortfall is pro-rated to all trading participants with receivables based on their total receivables. Under the WESM Rules, the accounting of payments and pro-rating process for Mindanao and Luzon/Visayas grids will be combined (see Figure 1).



Figure 1. Payment and Collection Example with Mindanao under the WESM Rules.

Mindanao, however, is not yet interconnected with the rest of the grid. According to the application of the National Grid Corporation of the Philippines (NGCP) with the Energy Regulatory Commission (ERC), the proposed interconnection between Visayas and Mindanao has a project duration of 46 months ending in December 2020

(ERC Case No. 2017-034RC). Given a target implementation of WESM in Mindanao within the 4th quarter of 2018, WESM will be implemented in Mindanao for more than two (2) years without physical transfer of electricity between the two grids (i.e., Luzon/Visayas and Mindanao). In view of the above, Luzon/Visayas participants will be selling and buying electricity from the Luzon/Visayas grid, and in the same manner, Mindanao participants will be doing so within Mindanao grid.

III. THE PROPOSED RULES CHANGE

The Mindanao and Luzon/Visayas grids are not financially dependent due to the absence of interconnection; thus, it is proposed that payment and collection process for each grid be independently performed (see Figure 2). To avoid confusion with existing uses of the term “grid”, it is proposed that the combined Luzon and Visayas grids be referred to as a single “settlement region” while the Mindanao grid will be referred to as another “settlement region”.



Figure 2. Example of Proposed Payment and Collection with Mindanao Prior to Interconnection of the Luzon/Visayas and the Mindanao Grids.

In order to independently perform the accounting of collections, settlement amounts should be distinctly calculated for Luzon/Visayas and Mindanao trading participants. To achieve this, settlement quantities and prices should be determined or calculated such that payables to the market from each settlement region would be for the receivables from the market of the same settlement region. The table below provides an assessment of the settlement quantities and prices in the market:

| Item | Description | Assessment |
|-------------------------------|---|--|
| Quantities | | |
| Metered Quantities | Measured at individual injection / withdrawal points | Generation-Load balance would already be present for each grid since there is no interconnection |
| Bilateral Contract Quantities | Declaration from supplier to buyer; may be inter-grid (e.g., Luzon seller to Visayas buyer) | There should be no inter-settlement region declaration with Mindanao (e.g., Visayas seller to |

| Item | Description | Assessment |
|------------------------------------|---|---|
| | | Mindanao buyer) to achieve independent accounting |
| Prices | | |
| Normal Pricing | Locational marginal pricing | Prices already reflect no physical flows since power system is considered in pricing |
| Administered Pricing | Historical prices for generators; estimated generator payments are allocated to loads to determine load price | Allocation to loads should be per settlement region during system-wide application of market intervention or suspension |
| Price Substitution Methodology | Unconstrained price for generators; estimated generator payments are allocated to loads to determine load price | Regional application when there is no interconnection |
| Secondary Cap | Rolling system generation-weighted average price (GWAP) is the basis for triggering the secondary cap; when triggered, secondary cap replaces generator prices; estimated generator payments are allocated to loads | Independent GWAPs for Luzon/Visayas and Mindanao should be used; allocation to loads should be per settlement region |
| Amounts | | |
| Trading Amounts | Product of price and quantity per dispatch interval | Will be per settlement region if prices and quantities are already per settlement region |
| Net Settlement Surplus Allocation | Allocation of difference between payables and receivables based on loss and congestion payments | Allocation should be per settlement region |
| Generation Mix Ratio (GMR) for VAT | Reduction in 12% VAT due to zero-rated renewable energy generation | Calculation of GMR should be per settlement region |
| Additional Compensation | Costs not recovered during administered pricing (AP), secondary cap, and when designated as must-run unit | Allocation should be per settlement region for AP and secondary cap; MRU recovery is already regional |
| Payment and Collection | | |
| Default allocation | During collection and security deposit shortfalls, default is allocated to all | Accounting of shortfall and allocation of default should be per settlement region |

| Item | Description | Assessment |
|------|---|------------|
| | trading participants with receivables from the market | |

Based on the assessment, amendments to the WESM Rules and Manuals are proposed with regard to bilateral contract quantities, administered pricing, net settlement surplus allocation, and default allocation. Since the basis for the proposed independent conduct of payment and collection is the absence of physical flow of electricity between the grids, it is proposed that the per settlement region accounting of quantities, prices and amounts only be applicable while the interconnection is not yet present. Upon interconnection of the grids, uniform application of pricing and settlement mechanisms is proposed.

IV. BACKGROUND AND DESCRIPTION OF THE PROPONENT

The proponent is the Philippine Electricity Market Corporation. PEMC acts as both the governance arm and market operator of the WESM.

Top Officers:

Atty. Oscar E. Ala – CEO and Chairman, Transition Committee
 Atty. Francis Saturnino C. Juan – COO and Member, Transition Committee
 Atty. Jose M. Layug Jr. – Member, Transition Committee
 Mr. Rauf A. Tan – Member, Transition Committee
 Mr. Jose Mari T. Bigornia – Member, Transition Committee
 Rachel Angela P. Anosan – VP, Legal / Corporate Secretary
 Isidro E. Cacho Jr. – Officer-in-Charge, Corporate Planning and Communications
 Carlito C. Claudio – VP, Market Assessment Group
 Robinson P. Descanzo – VP, Trading Operations
 Celina R. Encarnacion – Officer-in-Charge, Corporate Services
 Salvador D. Subaran – VP, Information Systems and Technology

V. CONCLUSIONS AND RECOMMENDATIONS

The amendments to the WESM Rules and Manuals are proposed for the treatment of Mindanao as an independent settlement region prior to its interconnection to the Luzon/Visayas grid. By revising the WESM Rules and Manuals, WESM settlements would reflect the actual physical transactions in Luzon, Visayas, and Mindanao. Thus, it is recommended that the proposed changes be adopted.

VI. REFERENCES

1. WESM Rules (As amended by DOE DC No. 2016-10-0014 and DOE DC No. 2017-03-0001)
2. Billing and Settlement Manual Issue 5.0 (As amended under RCC Resolution No. 2017-05 and PEMB Resolution No. 2017-16)
3. Price Determination Methodology Issue 1.0