



Proposed Amendments to the WESM Manual on Dispatch Protocol to Enhance Procedures in Must-Run Unit (MRU) Accounting

**Independent Electricity Market Operator of the
Philippines**

October 2019

I. SUMMARY OF THE PROPOSED RULES CHANGE

The amendments to the WESM Manual on Dispatch Protocol Issue 13.0 are proposed to improve accounting of energy produced due to a must-run unit dispatch instruction and processing of discrepancy reports.

II. BACKGROUND

As provided under Section 17.1.1 of Dispatch Protocol Issue 13.0, must-run units (MRUs) were introduced as generating units that are scheduled or dispatched in real-time to maintain the security and reliability of the grid. Section 8.3.1 of the WESM Manual on Price Determination Methodology Issue 1.0 provides that a generating unit designated as MRU is entitled to additional compensation when the spot trading amount is not sufficient to cover its costs of complying with the MRU dispatch instruction.

A. Ramp Down Energy

When a generating unit is scheduled at a lower level from its current loading, the generating unit reaches its schedule gradually based on its ramp rate. As an example, consider a generating unit running at 100 MW with a ramp rate of 10 MW/min. If the generating unit is scheduled to produce 60 MW in the next dispatch interval, it will take the generating unit a minimum of four (4) minutes to reach that schedule. During the 4 minutes that it is ramping down, the generating unit is producing energy above its schedule.

A generating unit is designated as a must-run unit because its offer price did not clear the market but is required to dispatch for system security reasons. Due to its higher offer price than market prices, a generating unit designated as an MRU usually ramps down after its designation to its minimum stable loading or zero (0) MW. Although not designated as must-run unit, the generating unit is still producing energy based on the MRU instruction when it is ramping down. Under current procedures, the generating unit is not eligible to claim additional compensation for its ramp down energy.

B. Discrepancy Report Processing

On a weekly basis, the System Operator (SO) submits a report to the Market Operator indicating the must-run units (Section 17.4.3 of Dispatch Protocol Issue 13.0) for the past week. As required under Section 17.5.1 of Dispatch Protocol Issue 13.0, the Market Operator publishes the list of MRUs in the market information website. Under the same section, a generator is allowed to report a discrepancy (e.g., the generating unit was designated as an MRU by the SO but is not listed in the report) within two weeks from the publication of the MRU report. Upon receipt of the discrepancy report, the Market Operator coordinates with the System Operator for validation. There are, however, no clear timelines in the validation process and there have been validation requests that were acted upon after more than one year from reporting.

III. THE PROPOSED RULES CHANGE

To address the issues mentioned, it is proposed that enhancements on the accounting procedure for MRUs be facilitated. Highlights of proposed changes to the MRU procedures are as follows:

- A. a generating unit will additionally be considered as a must-run unit in the dispatch intervals succeeding an MRU instruction while it is ramping down; and
- B. a two-week timeline for the System Operator to provide validation results of discrepancy submissions from trading participants.

The proposed amendments will lead to more appropriate compensation and more timely settlement of must-run units.

Requirements for the Market Operator to implement the proposed amendments are enhancements to the settlement system and internal business processes updates.

IV. BACKGROUND AND DESCRIPTION OF THE PROPONENT

The proponent is the Independent Electricity Market Operator of the Philippines, Inc. IEMOP acts as the market operator of the WESM.

Top Officers:

Engr. Jose Mari T. Bigornia – President and CEO

Robinson P. Descanzo – Acting Chief Operating Officer and Trading Operations Head

Arthur P. Pintado – Internal Audit Head

Rachel Angela P. Anosan – Chief Legal Officer

Isidro E. Cacho, Jr. – Chief Corporate Strategy and Communications Officer

Salvador D. Subaran – Chief Information Systems and Technology Officer

V. CONCLUSIONS AND RECOMMENDATIONS

The amendments to the WESM Manual on Dispatch Protocol Issue 13.0 is proposed to enhance the procedures for Must-Run Unit accounting. By revising the WESM Manual, must-run units will be more appropriately compensated and settled in a more timely manner.

VI. REFERENCES

1. WESM Rules
2. WESM Manual on Dispatch Protocol Issue 13.0
3. WESM Manual on Price Determination Methodology Issue 1.0

**Proposed Amendments to the WESM
Manual on Metering Standards and
Procedures to Harmonize with the Site
Specific Loss Adjustment Procedures of
the Wholesale Metering Services Provider**

Independent Electricity Market Operator of the
Philippines

October 2019

I. SUMMARY OF THE PROPOSED RULES CHANGE

The amendments to the WESM Manual on Metering Standards and Procedures are proposed to harmonize the procedure for the calculations of the Site-Specific Loss Adjustment (SSLA) with the procedure of the Wholesale Metering Services Provider (WMSP), the National Grid Corporation of the Philippines (NGCP), in its determination of point-to-point losses in cases when the revenue meter of a grid customer is not located at its connection point.

II. BACKGROUND

On 16 May 2018, the Department of Energy (DOE) issued Department Circular No. DC2018-05-0015 entitled "Adopting Further Amendments to the Wholesale Electricity Spot Market (WESM) Rules and Market Manuals for the Implementation of Enhancements to WESM Design and Operations (Provisions for Metering, Market Trading Node and Scheduling Point)". One of the amendments made is on the definition of Market Trading Node as follows:

"3.2.2.1 A market trading node is a designated point in the market network model where energy is bought or sold based on the prices determined by the market dispatch optimization model."

"3.2.2.2 Each market trading node defined under Clause 3.2.2.1 shall:

- (a) Be assigned to a Trading Participant that intends to buy or sell energy and is capable of complying with the settlement requirements in the WESM;*
- (b) Be associated with a revenue metering capable of measuring all relevant incoming and outgoing energy deliveries for the purpose of settlement in the WESM; and*
- (c) As much as possible, **represent the connection point between the Network Service Provider and the Trading Participant.** For this purpose, the revenue metering or the metering equipment for the market trading node shall be installed no more than 500 meters from the connection point" (emphasis supplied)*

The amendments to the location of the market trading node and, consequently, the metering point of trading participants harmonize the location for the determination of settled metered quantities in the WESM and by NGCP, which also determines its billing determinant on energy at the connection point.

Clause 4.5.2.2 of WESM Rules provides the requirement for adjusting metering data when the meter of a trading participant is not located at its connection point as follows:

The Trading Participant, the Network Service Provider and the Market Operator shall use their best endeavors to agree to adjust the metering

data that is recorded in the metering database to allow for physical losses between the metering point and the relevant connection point.

Similarly, Section 2.2 of the WESM Manual on Metering Standards and Procedures provide that:

If the metering point is not located at the market trading node, an agreed site specific loss adjustment (SSLA) shall be applied to the meter data representing the energy consumed by the Customer at that metering point for determining the quantities to be settled in the WESM.

Given the same point of reference for the determination of metered quantities, the loss adjustments from the metering point to the connection point (or market trading node) of a trading participant should be similar in the WESM and as performed by NGCP. However, current procedures for the calculation of SSLA differ with the current methodology of NGCP for point-to-point loss calculation.

III. THE PROPOSED RULES CHANGE

Since the locations of metering points in the WESM are now referred at the connection points, the determination of settled metered quantities in the WESM and by NGCP should be the same. If the meter of a trading participant is not at its connection point, loss adjustments to its raw metered quantity using the SSLA procedures provided in the WESM Manual and as performed by NGCP should also be the same.

For the loss calculations of the two entities to be equal, it is proposed that the SSLA methodology of the WESM be harmonized with the procedure for loss calculation of NGCP. Highlights of the changes in the SSLA methodology, which were developed in consultation with NGCP, are as follows:

1. Revision/additional provisions in the Site Specific Loss Adjustment to clarify the roles and responsibilities of the MSP and MO, for provisions of additional data, and application of SSLA based on prescribed distance for all Trading Participants.
 - Additional responsibilities of MSP include the submission to MO of the list of trading participants that will be applied SSLA and provision of the R, X, B data
2. Revision of appendices such as the general equation for the Site-Specific Loss Adjustments and update of cases as a result of the changes in the SSLA methodology
 - Changes in the equation include changes in the calculation of line losses and calculation of transformer losses (i.e., the use of transformer loss factor)
 - Changes of cases that will be applied SSLA in terms of location of connection point and metering point

Minor revisions to reflect the transition to five-minute metering for the implementation of the enhanced WESM design and operations are also included in the proposal.

Enhancements to the metering system and updates on internal business processes of the Market Operator will be required to implement the proposed amendments.

IV. BACKGROUND AND DESCRIPTION OF THE PROPONENT

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V. CONCLUSIONS AND RECOMMENDATIONS

The amendments to the WESM Manual on Registration, Suspension and De-Registration Criteria and Procedures are proposed to harmonize the site-specific loss adjustment methodology of the WESM with the NGCP's procedure on point-to-point loss calculations.

VI. REFERENCES

1. WESM Rules
2. WESM Manual on Metering Standards and Procedures Issue 12
3. DOE Department Circular No. DC2018-05-0015