



Technical Committee 2018 Annual Report

January 2018 to December 2018

MARCH 2019

This Report is prepared by the
Philippine Electricity Market Corporation –
Corporate Planning & Communications Department
and Market Assessment Group for the
Technical Committee

PEMC
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TABLE OF CONTENTS

I.	2018 ACCOMPLISHMENTS	1
	A. Conduct of Technical Studies and Reviews	1
	B. Review of Proposed Amendments to the WESM Rules and Manuals	5
II.	COMMITTEE WORK PLAN	6
III.	MEMBERSHIP	6
IV.	RESPONSIBILITIES	7

The Technical Committee (TC) submits this Annual Report covering the activities undertaken and accomplished by the TC for the year 2018.

The Market Assessment Group (MAG) provides support to the TC in performing its functions and obligations under the WESM Rules¹ and applicable WESM Manuals. Following the transition to an Independent Market Operator on 26 September 2018 and the subsequent reorganization of PEMC, the provision of administrative and technical function to the TC was transferred to the Corporate Planning and Communications (CPC) Department.

I. 2018 ACCOMPLISHMENTS

A. Conduct of Technical Studies and Reviews

A.1. Study on the Increasing Penetration of VRE Resources and the Reserve Market

The TC finalized its study on the Increasing Penetration of VRE Resources and the Reserve Market. The study provided thorough discussions on the following subjects:

- **VRE Resources in the Philippines**

WESM Data in recent years have clearly shown the increasing penetration of VRE resources in the Philippine grids. Although beneficial in many ways, this development has introduced increased variability and uncertainty in electricity supply. Expectedly, there will be an impact in the reserve requirements. Such challenges are currently managed by the System Operator through contracts with various A/S Providers.

¹ Refer to Section IV of this report.

- **Challenges and Recommendations**

- a) Natural variability of VRE resources

Energy storage systems (ESS) are being introduced at the grid-scale. Currently, wind turbine generators are not expected to provide any service to address variability, however TC expects that further technology development is making possible services such as that of synthetic inertia.

- b) Uncertainty of VRE resources

Improved forecasting is expected both from the supply side and from the operators (i.e. both the system operator and the market operator). The existing target performance of 18% MAPE is consistently achieved by many participants. With the continuously improving forecasting techniques, TC foresees that this industry-wide target can be reduced, thus assuring more accurate forecasts.

- c) Apparent concentration of VRE developments in some areas

The TC supports the existing policy and on-going efforts from the DOE for optimal location of VRE developments. A full implementation of DOE DC No. 2009-07-0011 and the on-going activities to establish Competitive Renewable Energy Zones (CREZ) are expected to avoid further overcrowding. The TC likewise acknowledges that the transmission development undertaken by the transmission network provider (TNP) to strengthen EHV corridors in Luzon and to connect inter-islands in Visayas and Mindanao provides for better transmission of supply from various VRE resources.

- **Reserve Market**

It is envisioned that an effective Reserve Market shall provide trading of various reserve categories at competitive prices. This will happen when there is larger trading from more market participants. Presently, there are substantial capacities available in the Luzon grid. However, not all of generators providing A/S are certified A/S providers. Aligned with the preparation for a full implementation of a reserve market, it is hoped that more power plants can be certified to provide ancillary services.

Even prior to a reserve market, the reserve requirements for various categories may have to be reviewed in light of increasing VRE penetration. Included in this study is a straightforward analysis on possible sizing of reserve based on load and supply variabilities. The TC recommends that further studies accommodating more sophisticated models be conducted in order to specify options for new reserve requirements.

Said study was finalized on 25 September 2018 and was thereafter submitted and presented to the PEM Board during its meeting held on 28 November 2018. The study is currently published in the PEMC website² for the public's reference and perusal.

A.2. Review of the concerns on WESM Metering Manual Issue 12.0

In light of the Rules Change Committee's (RCC) request for assistance in addressing concerns raised by the National Grid Corporation of the Philippines (NGCP) on the DOE-Promulgated WESM Metering Manuals Issue 12.0, the TC, during the TC Meeting No. 2018-13 held on 16 October

² http://www.wesm.ph/inner.php/downloads/tc_report

2018, discussed the issues received, and provided responses and recommendations on the same.

Said responses shall be transmitted to the RCC for its consideration and appropriate actions.

A.3. Review of the Draft DOE Department Circular

On 16 August 2018, the TC was informed that the DOE was undertaking a public consultation in relation to the Adoption of Energy Storage System in the Electric Power Industry. The TC then went through the said draft department circular and submitted comments which were for clarification and clerical in nature.

Said comments were transmitted to PEMC on 20 August 2018, for consolidation prior to submission to the DOE.

A.4. Review of the Results of the 3rd Review of Metering Installation and Arrangement

Pursuant to the TC's mandate in the WESM Rules and as agreed in the committee's 2018 Work Plan, the TC looked into the results of the 3rd Review of Metering Installation and Arrangement and agreed to look into the issue raised by the Manila Electric Company (MERALCO) as regards to substitution of Phase Angle Test instead of the required Accuracy Test.

The TC gone through the following relevant documents to look into the prescribed Accuracy Test for Instrument Transformers:

- Institute of Electrical Electronics Engineers and other international standards

- Philippine Grid and Distribution Codes
- WESM Rules
- WESM and Retail Metering Manuals
- Compliance plans from Enforcement and Compliance Office and Distribution Management Committee

Following the said review, the TC likewise invited the PEMC Billing, Settlement and Metering Department (PEMC – BSMD) to discuss the other issues related to conformance with the Accuracy Tests. PEMC – BSMD informed the TC of the occurrence of negative metering quantities which were tagged to be caused by malfunctioning instrument transformers. Without undergoing the proper Accuracy Test, PEMC – BSMD is of the opinion that negative metering quantities will not be addressed.

In view of the concerns emanating from the 3rd RMIA and the above-mentioned concerns of PEMC – BSMD, the TC flagged the concern to the PEMC Management³ together with its recommendations, for information and consideration.

B. Review of Proposed Amendments to the WESM Rules and Manuals

As part of the TC's mandate under the *WESM Rules*⁴, the TC reviewed the published proposed amendments by the Rules Change Committee to the Market Information website. Among the said proposals, the TC reviewed and discussed the following:

1. Proposed Amendments to the WESM Rules and WESM Manuals for Pre-Integration Provisions for Mindanao;

³ COR-INT-TC-18-05 *Review of Instrument Transformer Test* dated 30 October 2018

⁴ WESM Rules Clause 1.7.2 *Responsibilities of the Technical Committee*

2. Proposed Amendments to the WESM Rules and WESM Manual on Registration for Additional Trading Participant Category: Wholesale Electricity Market Trader; and
3. Proposed Amendments to the WESM Rules to Implement the Approved Plan for Transition to Independent Market Operator
4. Proposed Amendments the WESM Manual on Market Surveillance Compliance and Enforcement; and
5. Proposed Amendments to the Retail Rules and WESM Rules to Reduce Barriers to Entry and Participation in Retail Competition

Following the thorough review of the proposal, the TC deems that the same are in line with the WESM objectives and therefore no comments were submitted to the RCC.

II. COMMITTEE WORK PLAN

Annex A provides details of the Technical Committee's program of activities for 2019 until 2021 consistent with the PEMC's Corporate Strategic Plan which was approved by the PEM Board on 27 March 2019.

III. MEMBERSHIP

For 2018, the members of the Technical Committee ("TC") were as follows:

1. Mr. Jordan Rel C. Orillaza (Independent)
2. Mr. Jaime V. Mendoza (DMC representative)
3. Mr. Fidel D. Dagsaan, Jr. (SO representative from January – August 2018)
4. Mr. Ermelindo R. Bugaoisan, Jr. (SO representative as of August 2018)
5. Mr. Fortunato C. Leynes (Independent as of December 2018)

Mr. Jordan Rel C. Orillaza was re-appointed as independent member of the TC on 01 July 2016 and was designated as chairperson on 25 May 2016. The SO representative, Mr. Ermelindo R. Bugaoisan, Jr., was appointed on 30 August 2018. Mr. Jaime V. Mendoza was re-appointed as DMC representative on 18 September 2017. Mr. Fortunato C. Leynes was appointed as an independent member of the TC on 28 November 2018.

IV. RESPONSIBILITIES

The main role and responsibilities of the TC are set out in the WESM Rules⁵ as follows:

1. Monitor technical matters relating to the operation of the spot market,
2. Provide a report to the PEM Board on any matter of a technical nature relating to any WESM member which in the reasonable opinion of the Technical Committee, causes:
 - a. That WESM Participant to be unable to comply with the WESM Rules;
or
 - b. Unintended or distortionary effects to the operation of the WESM;
3. Assist the PEM Board by providing expertise in relation to:
 - a. Information technology;
 - b. Metering technology and metering data; and
 - c. Any other matter of a technical nature relating to the spot market;
4. From time to time if the Technical Committee in its discretion deems necessary or appropriate, propose amendments to the WESM Rules in relation to technical matters, in accordance with chapter 8 with a view to:
 - a. Improving the efficiency and the effectiveness of the operation of the spot market; and

⁵ WESM Rules Clause 1.7.2 *Responsibilities of the Technical Committee*

- b. Improving or enhancing the prospects for the achievement of the WESM objectives; and
5. Assist the Rules Change Committee in relation to its assessment of proposals of a technical nature to amend the WESM Rules under chapter 8.

In addition, the TC is also tasked to conduct technical reviews and studies pursuant to the guidelines⁶ set forth in the TC Market Manual.

The TC conducted fifteen (15) meetings⁷ in 2018. The TC deliberated on a number of matters during its meetings in line with its responsibilities as provided in the WESM Rules.

⁶ WESM-TCMM-002 Section 4.3 *Procedures*

⁷ At any time and as may be practicable, the TC may conduct meetings more than once a month

Submitted By:

Technical Committee


Jordan R. C. Orillaza
Chairperson


Ermelindo R. Bugaoisan, Jr.
Member


Fortunato C. Leynes
Member


Jaime V. Mendoza
Member