

Technical Committee

2012 Annual Report

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I. INTRODUCTION

The Technical Committee (TC) submits this Annual Report covering the studies and activities undertaken and accomplished by the TC for the year 2012. This report also presents the proposed activities of the TC for the year 2013.

The members of the Technical Committee ("TC") are currently:

1. Meleusipo E. Fonollera, Sr.
2. Jaime V. Mendoza
3. Santiago A. Dimaliwat IV
4. Joseph Allan C. Baltazar

Profiles of the members are provided in Annex B.

The Market Assessment Group ("MAG") acts as the Technical and Administrative Secretariat of the TC.

II. RESPONSIBILITIES

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

- Monitor technical matters relating to the operation of the spot market;
- 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 TC, causes:
 - The inability of the WESM Member to comply with the WESM Rules; or
 - Unintended or distortionary effects to the WESM operation.
- Assist the Board by providing expertise in relation to information and metering technology including any matter of technical nature relating to the spot market; and
- Propose amendments to the WESM Rules, as necessary and appropriate, with respect to the following:
 - Improving the efficiency and the effectiveness of the WESM operation; and
 - Improving or enhancing the prospects for the achievement of the WESM Objectives.

III. 2012 ACCOMPLISHMENTS

The TC conducted seventeen (17) meetings¹ in 2012. The following matters were discussed and deliberated during said meetings:

A. Position Paper on ESAMELCO's Request on Market Trading Node Relocation²

¹ At any time and as may be practicable, the TC may conduct meetings more than once a month.

² Document Reference Number: COR-INT-TC-12-08

Following the request of Eastern Samar Electric Cooperative (ESAMELCO) for assistance in resolving the issue on the relocation of its Market Trading Node (MTN), the TC studied and submitted to the PEM Board on 21 March 2012 its final position paper on ESAMELCO's request.

Upon the review and discussion of ESAMELCO's concern with representatives of National Grid Corporation of the Philippines (NGCP), Grid Management Committee (GMC), Energy Regulatory Commission (ERC) and Philippine Electricity Market Corporation (PEMC), the TC together with the said representatives identified the requirements needed to relocate the MTN and accordingly agreed as follows: (1) *completion of technical requirements by NGCP and ESAMELCO*; (2) *NGCP and ESAMELCO to seek ERC's approval of additional CAPEX to procure facilities*; (3) *PEMC to conduct a simulation on the impact of the proposed MTN relocation on ESAMELCO's WESM prices and settlement*; and (4) *NGCP to provide GMC a list of technical requirements of ESAMELCO's MTN for the GMC's information*.

The TC also recommended the following:

1. Compliance of ESAMELCO and NGCP with the WESM, Philippine Grid Code (PGC) and requirements set forth under the WESM Manual on Market Network Model – Criteria and Guidelines Manual;
2. Close monitoring of GMC and Distribution Management Committee (DMC) of the timely compliance of NGCP and ESAMELCO to the ERC-approved plans and programs to address issues such as this; and
3. ESAMELCO to undergo necessary WESM trainings from PEMC particularly on the locational marginal pricing and Site Specific Loss Adjustment (SSLA) concept.

B. Proposed Amendments on Technical Committee (TC) Manual as approved by the PEM Board

In response to the Rules Change Committee (RCC) memo informing the TC of the PEM Board's suggestions and recommendations on the TC's proposed Market Manual which the TC submitted in 2011, the TC reviewed and subsequently commented and provided recommendations on the same.

After careful deliberation and in consideration of the PEM Board's suggestions during its meeting held last 26 April 2012, the TC submitted its revisions on the proposed TC Market Manual to the RCC on 3 July 2012³. This was subsequently approved by the PEM Board on 31 August 2012.

³ Document Reference Number: COR-INT-TC-12-09

C. Review of Shortening the Trading Interval⁴

The TC adopted the NGCP recommendation for the adoption of a shorter trading interval of 15 minutes from 1 hour and requested the PEMC's comments on the proposed shortening of the trading interval. Recognizing the advantages of having a shorter trading interval, PEMC responded that it would take into account the said proposal in the PEMC's plan to procure a new MMS.

D. Review of Certificate of Compliance (COC) Rules⁵

Upon the request of the ERC to provide comments on the draft Revised rules for the issuance of COCs for generation companies and entities with generation facilities, the TC deliberated and subsequently commented on the same. The TC submitted its matrix of comments/ recommendations/ suggestions on the draft revised rules to ERC on 25 July 2012.

E. Study/ Review on Geothermal Plants⁶

The Market Surveillance Committee (MSC) requested the TC to conduct a review/study that will assist the MSC in assessing the validity of technical reasons, i.e. low steam supply pressure, cited by TPs with geothermal power plants in failing to comply with the must-offer-rule. In response to the request, the TC invited AP Renewables, Inc. (APRI) in its meeting on 15 May 2012 for discussions on the said non-compliance and solicited inputs from them.

During a meeting between Chevron and DOE on 11 July 2012, Chevron confirmed that there was indeed a constraint in steam supply. Basing on the discussions held between Chevron and APRI during these meetings, the TC assessed that the reasons that have been cited by APRI are valid technical reasons for the inability to offer the maximum available capacity as required under WESM Rules. The TC submitted its report on the study on Geothermal Plants to the MSC on 16 August 2012.

F. Review of System Security and Reliability Guidelines (SSRG)

In response to the DOE's request for the TC to prioritize in its activities the review of the WESM Manual on System Security and Reliability in order to help the DOE

⁴ Document Reference : PEMC Response re Shortening the Trading Interval

⁵ Document Reference Number: COR-EXT-TC-12-06

⁶ Document Reference Number: COR-INT-TC-12-10

formulate sound policies for the electric power sector, the TC gathered comments/recommendations from different entities such as NGCP-SO, GMC and DMC as inputs to the review of the manual, taking into consideration the responsibilities of these entities in the power industry.

After thorough review and discussions, the TC finalized its matrix of consolidated comments and recommendations on the SSRG Manual. In its review, the TC recognized that other bases of the manual such as the Ancillary Services Procurement Plan (ASPP), Renewable Energy Market (REM), and the principal reference of the SSRG Manual which is the Philippine Grid Code (PGC) are still undergoing the process of further amendments. Thus the TC noted that its comments and recommendations on the SSRG Manual still need to be harmonized with the PGC, as amended.

Noting that the request was issued by the DOE, the TC submitted to the DOE the TC matrix of comments and recommendations together with the letter informing the DOE of updates on the TC's review of the SSRG on 18 December 2012.⁷

Further, in the course of its review, the TC noted that it is the NGCP-SO's responsibility *"to develop and update the SSRG manual, subject to approval of the PEM Board"* as stated in the WESM Rule Clause 6.6.1.1. Thus, the TC also agreed to submit its comments and recommendations to the NGCP-SO for its consideration. The TC's letter of endorsement together with its matrix of comments and recommendations on the SSRG was submitted to NGCP-SO on 4 January 2013.

G. Review of Proposed Changes to WESM Rules/ Manuals

a) Review of Management of Must-Run Unit (MRU) Manual⁸

Upon the request of the DOE to further study the RCC proposed amendments to the MRU Manual, which include provisions on Must-Stop Unit (MSU), the TC reviewed the proposed amendments to the MRU Manual vis-à-vis the materials provided by the DOE and relevant provisions of the Philippine Grid Code. After discussions and deliberations on the same, the TC submitted to the DOE, on 6 September 2012, a letter informing the DOE of its objections to the proposed provisions, specifically on the concept of Must Stop Units (MSU). The TC's comments also included the following:

⁷ Document Reference Number: COR-EXT-TC-12-08

⁸ Document Reference Number: COR-EXT-TC-12-07

1. The TC noted that under the relevant provisions of the Philippine Grid Code (PGC), the System Operation (SO) has been mandated to maintain system security and reliability. The provisions on MSU limit the flexibility of the SO in addressing system security and reliability issues of the grid;
2. Power Plants have its own inherent technical characteristics which dictate its response to an SO instruction. The concerns of the grid can be best addressed by generating plants which parameters are in full knowledge of the SO;
3. The WESM Merit Order Table (WMOT) should not be the sole basis in dealing with unforeseen events during a particular interval;
4. Power System is dynamic and a lot of uncontrollable factors may happen within the trading interval of one (1) hour which can affect the grid frequency; and
5. Compensation of MSU plants for energy not delivered is unfair and unreasonable since no energy was actually delivered to the grid and this additional compensation would directly affect the consumers who will ultimately shoulder the burden of resulting high power rates.

The TC thus recommended the following:

1. Strict compliance with the PGC and relevant WESM Rules governing the Must-Offer Rule, Dispatch Instructions and Linear Ramping;
2. Strict imposition of penalties on generators not following dispatch schedules;
3. Shortening of trading interval; and
4. To consider studying the possibility of tapping MSUs or plants that were asked to reduce the provision of energy as Ancillary Service.

Currently, the MRU Manual is still with DOE for review.

b) Review of Proposed Amendments regarding Cancellation of Offers⁹

Following the RCC's request for comments on the proposed amendments regarding Cancellation of Offers, the TC provided its comments and recommendations to the RCC on 21 December 2012. In general, the TC came up with its position that the proposed amendment will not foster competition in the market and that its implementation would seem like 'protecting' less efficient generators in the market. The TC further commented that that the

⁹ Document Reference Number: COR-INT-TC-12-16

said amendments are not consistent with the objective of the EPIRA in ensuring transparent and reasonable prices of electricity in a free and fair competition and full public accountability in achieving operational and economic efficiency and enhancing the competitiveness of Philippine products.

Other TC comments/ clarifications were as follows:

1. The proposed amendment shall impact on the Market Operator (MO) particularly in terms of additional man hours and additional costs which in the end may also affect the trading participants and end consumers in terms of increased Market Fees.
2. Rather than allowing Cancellation of offers, the plants can apply as ancillary service.
3. What is the technical basis for the imposition of the 10% threshold level; and whether such would not affect the security and reliability of the grid and the accuracy or reliability of information emanating from the DAP that the 10% threshold is based on.

c) Review of Dispatch Protocol Manual¹⁰

Upon the invitation of the RCC to all WESM members and other interested parties to submit comments on rules change proposals to the Dispatch Protocol Manual, the TC reviewed and submitted its comments on the same to the RCC on 8 October 2012.

In general, the TC noted that the proposed amendments to the Dispatch Protocol Manual particularly on the re-dispatch process based on WESM Merit Order Table (WMOT) are associated with the proposed amendments to the WESM Manual on the Management of Must-Run Units which is still with the DOE for its review.

The TC commented that it has already submitted its comments on the MRU Manual. Thus, pending the final approval of the MRU/MSU Manual, from which concepts of WMOT and new definitions of MRUs and MSUs are derived and proposed in the Dispatch Protocol Manual (DPM), the TC is deferring submission of comments to the proposed amendments to the DPM.

^{10 12 13 14} Document Reference Number: COR-INT-TC-12-14

d) Review of Proposed Amendments to the Registration and Settlement Provisions of the WESM Rules¹¹

Following the RCC's request for comments on the proposed amendments regarding the Registration and Settlement Provisions of the WESM Rules, the TC provided its comments to the RCC on 8 October 2012. Essentially, the TC did not pose any objection on the proposed amendments.

e) Review of Proposed Amendments to the WESM Manual on Metering Standards and Procedures¹²

Following the RCC's request for comments on the proposed amendments regarding the WESM Manual on Metering Standards and Procedures, the TC provided its comments to the RCC on 8 October 2012. Essentially, the TC did not pose any objection on the proposed amendments.

f) Review of Rules Change Manual¹³

Following the RCC's request for comments on the proposed amendments regarding the Rules Change Manual, the TC provided its comments to the RCC on 8 October 2012. Essentially, the TC did not pose any objection on the proposed amendments.

H. Review of Load Forecasting Methodology¹⁴

The TC lined up the review of the MO's Load Forecasting Methodology in its Work Plan for 2012. NGCP in its previous discussions with the TC has recommended the improvement of load forecasting accuracy to address the issue of non-compliance by the Trading Participants to the real-time dispatch schedule. To support the TC in its review of the MO's Load Forecasting Methodology, the TC requested for a presentation from PEMC-Trading Operations Department (TOD) regarding its load forecasting methodology for the WESM and likewise requested for a copy of the Report of PA Consulting Limited on the results of its audit, which included recommendations on MO's Load Forecasting.

¹⁴ Document Reference Number: COR-INT-TC-12-17

After a thorough review and discussion, the TC submitted its comments and recommendations on Load Forecasting Methodology to PEMC-TWG for consideration on 06 February 2013.

In general, the TC agreed with the recommendation of PA Consulting Group and also recommends as follows:

1. For Luzon load forecast to be aggregated into a number of areas such as regional area;
2. For Visayas load forecast be on an island basis; and
3. For the MO to explore for the possibility of using extended weather forecast of PAGASA on selected local government units on both Luzon and Visayas.

I. Conduct of Power System 101

The TC conducted a seminar to Independent Members of the WESM Governance Committees and PEMC employees on power systems: "Introduction to Power System Engineering – Power System Engineering for Non-Engineers". The said seminar was conducted to broaden the basic knowledge of the non-electrical engineer independent members of WESM Committees as well as PEMC personnel i.e. staff of MAG, ECO, Legal, HRAS and BSMD on matters relating to electricity. Depending on the results of this initial run, the TC may be requested to conduct similar sessions for other interested PEMC employees.

The seminar was held last 21 December 2012 with thirty (30) participants in attendance. Due to time constraints, the seminar was cut off for continuation in January 2013.

IV. 2013 ACTIVITIES

A. Carried Over Activities from 2012

- a. **Review of the Independent Operational Market Audit Findings and Recommendations**

The TC will review the 3rd Independent Operational Market Audit Findings and Recommendations to study, recommend possible rules changes to the RCC and/or provide advice to the PAC regarding technical aspects of the report of the External Auditor.

It is expected that the findings and recommendations of the External Auditor on the 3rd MO Audit will be submitted to the PEM Board in February.

The said review will be undertaken by the TC as soon as copies of the MO Audit Report is secured, with the TC target of completion by the 2nd Quarter of the year.

b. Revisit the Constraint Violation Coefficient Pricing

The TC will continue its review of the provisions of the price determination methodology particularly on the Constraint Violation Coefficient (CVC) Pricing and will also include the review of SO Actions listed in the CVC Table.

c. Study on Water Availability of Hydro Electric Plants

The TC will continue its study on the Water Availability of Hydro Electric Plants. The study is in relation to the letter received by the TC on 18 December 2011 from MSC seeking the TC's assistance in coming up with a study to verify the technical reasons submitted by the Trading Participants (TP's) with hydro- electric power (HEP) for their non-compliance to the must-offer rule. The said review is expected to be completed within the 2nd Quarter of the year.

d. Metering Arrangements Review

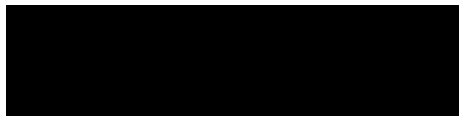
The TC will commence with its review of the Findings and Recommendations on the First Metering Arrangements Review after the Report on the said Audit is released to the TC with the study expected to be completed within the 2nd Quarter. The TC is expected to study and recommend possible rules changes to the RCC and/or provide advice to the PAC regarding technical aspects on the same.

Submitted by:

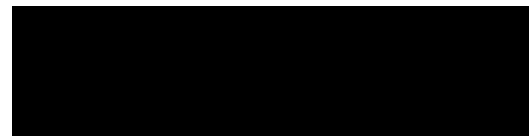
THE TECHNICAL COMMITTEE



Meleusipo E. Fonollera, Sr.
Chairman

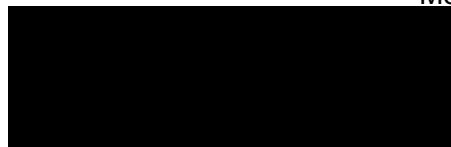


Jaime V. Mendoza
Member



Santiago A. Dimaliwat IV

Member



Joseph Allan C. Baltazar
Member

ANNEX A: 2013 TC WORK PLAN

Item	Activity	Requested by	DEADLINE	Responsible Lead Person/s	Deliverables
1.	Power System 101	TC	Q1 (Last Week of January)	Engr. JVMendoza	
2.	Metering Arrangements Review	PAC /TWG	Q2	Engr. JVMendoza	Study recommend possible rules changes to the RCC and/or provide update to the PAC (technical aspect only)

Item	Activity	Requested by	DEADLINE	Responsible Lead Person/s	Deliverables
3.	Study on Water Availability of Hydro-Electric Plants	MSC	Q2 (subject to DOE letter request to Pag-ASA and NWRB - c/o DOE)	TC	Position Paper to be submitted to MSC
4.	Review of the Independent Operational Market Audit Findings and Recommendations	DOE	Q2	TC	Study, Recommend possible rules changes to the RCC and/or provide update to the PAC (technical aspect only)
5.	Review of CVC Pricing including the SO Actions in CVC Table	TC	Q3	Engr. JACBaltazar	Study, recommend possible rules changes to the RCC
6.	Assessment of System Security Related WESM Manuals	TC	Q4	Engr. SADimaliwat IV/ Engr. JACBaltazar	
7.	Efficiency and Effectiveness Assessment of the WESM Operation	TC	continuing	Engr. MEFonollera	

Item	Activity	Requested by	DEADLINE	Responsible Lead Person/s	Deliverables
8.	Others as may be assigned by DOE/ PEM Board	DOE/ PEM Board / PEMC and Governance Committee			

ANNEX B: TC MEMBERSHIP PROFILE

1. Engr. Meleusipo E. Fonollera, Sr.

Chairman

Engr. Fonollera is a Licensed Professional Electrical Engineer and currently a Director of the Westrade International Co., Inc. He was a former Independent Director of the Philippine Electricity Market (PEM) Board and has sat in the said Board from year 2004 to April 2007. He is likewise a Fellow and a former National President of the Institute of Integrated Electrical Engineers of the Philippines, Inc.

2. Engr. Jaime V. Mendoza

Member, Distribution Management Committee (DMC) Representative

Engr. Mendoza is a Professional Electrical Engineer and currently member of the Board of Electrical Engineering, Professional Regulation. He is also the Chairman of the Distribution Management Committee and a Fellow of the Institute of Integrated Electrical Engineering of the Philippines, Inc.

3. Engr. Santiago A. Dimaliwat IV

Member, System Operator Representative
Appointed by the PEM Board on 14 March 2011

Engr. Dimaliwat is a Professional Electrical Engineer and currently the Deputy Assistant, Chief Technical Officer for System Operations of the National Grid Corporation of the Philippines. He earned his graduate studies in operations research from the University of the Philippines, Diliman.

4. Engr. Joseph Allan C. Baltazar

Member, Grid Management Committee (GMC) Representative
Appointed by the PEM Board on 28 July 2011

Engr. Baltazar is a Professional Electrical Engineer and is currently the Senior Manager and Head Network Asset Planning of the Manila Electric Company (MERALCO). His field of expertise is in the area of planning, development and operation of electric power systems covering Substations, Subtransmission and Distribution.

ANNEX C: REFERENCE DOCUMENTS

⁰² COR-INT-TC-12-08 *TC Report on ESAMELCO*

⁰³ COR-INT-TC-12-09 *TC Letter to RCC re Proposed TC Market Manual*

⁰⁴ *Memo from OP to TC re TC Request for Comments on Trading Interval*

⁰⁵ COR-EXT-TC-12-06 *TC Letter to ERC re Issuance of COC Rules*

⁰⁶ COR-INT-TC-12-10 *TC Letter to MSC re Request for Study on Geothermal Plants*

⁰⁷ COR-EXT-TC-12-08 *TC Letter to DOE re Comments and Recommendations on the SSRG*

⁰⁸ COR-EXT-TC-12-07 *TC Letter to DOE re Proposed MRU Manual*

⁰⁹ COR-INT-TC-12-16 *TC Letter to RCC re Proposed Amendments to Cancellation of Offers*

^{10, 11, 12, 13} COR-INT-TC-12-14 *TC Letter to RCC re Comments on Rules Change Proposals*

¹⁴ COR-INT-TC-12-17 *TC Letter to PEMC re Recommendations on Load Forecasting Methodology*