

Technical Committee 2014 Annual Report

March 2015

TABLE OF CONTENTS

A.	2014 ACCOMPLISHMENTS	1
B.	2015 WORK PLAN	8
C.	MEMBERSHIP	10
D.	RESPONSIBILITIES	10
	Appendix A: REFERENCE DOCUMENTS	12

The Technical Committee (TC) submits this Annual Report covering the activities undertaken and accomplished by the TC for the year 2014. This report also presents the proposed activities of the TC for the year 2015.

A. 2014 ACCOMPLISHMENTS

A.1. Proposed Amendments to the WESM Rules and Manual on Metering Standards and Procedures

Pursuant to its mandate provided under the WESM Rules, the TC initiated the review of the WESM Rules and the WESM Manual on Metering Standards and Procedures Issue 9.0 ("Metering Manual") with the view to proposing amendments to both the WESM Rules and the Metering Manual to enhance and clarify the provisions regarding metering in both documents.

The TC particularly focused its review on the provisions related to Site Specific Loss Adjustment (SSLA) provided under the Metering Manual. In the course of its review, the TC deemed that some of the proposed amendments to the WESM Metering Manual, mainly the definition of terms, need to be reflected in the WESM Rules for consistency.

In summary, the proposed amendments are as follows:

- (1) alignment of certain provisions under the WESM Metering Manual, Philippine Grid Code (PGC) and the Philippine Electrical Code (PEC) 2009 Edition;
- (2) revision of terminologies defined in the WESM Rules and Metering Manual and adoption of additional terminologies from the PGC and the PEC;
- (3) inclusion of the current PGC amendments, particularly the removal of the term "Grid Owner" by redefining "TRANSCO" and the addition of the term "Grid Operator" to be consistent with the direction being taken by the Grid Management Committee (GMC);
- (4) revision of the provisions specifying the location and arrangement of instrument transformers and inclusion of diagrams illustrating the same;
- (5) addition of new sections to include the general requirements and diagrams for Grounding System;
- (6) revisions on identified provisions on Site Specific Loss Adjustment (SSLA) to make the section systematic and comprehensive. Sample cases for loss calculations were removed from the body of the Manual and instead discussed in the Appendix as reference;
- (7) deletion of sample loss calculations for generator cases noting that currently, SSLA computation is not applied to generators. The main body of Section 9 in the Metering Manual was proposed to be revised so as to contain only the general principles and equations. The different cases describing the detailed loss calculation for each case, which were modeled from existing installations, were then included in an Appendix; and
- (8) reformatting and correction of general equations using an equation editor for improved readability.

The TC finalized its proposed amendments and submitted the same to the Rules Change Committee (RCC) on 13 June 2014. Following its submission, the TC also presented its proposal before the RCC on 02 July 2014 during the 89th RCC meeting. The TC proposal, together with the PEMC's proposed revisions to the Metering Manual, were approved by the RCC on 01 October 2014 and the consolidated proposal presented to the PEM Board on 24 October 2014. During the presentation by the RCC of the said proposal, the TC was present as resource person.

The PEM Board deferred action on the proposed amendments and remanded the proposal to the RCC for further study with the view to harmonizing the proposals to the Rules and Metering Manual for both Retail and WESM. Among the issues raised during the PEM Board meeting was whether or not it is mandatory to have a back-up meter for all WESM participants. The TC position on the issue is discussed in **Section A.2**.

A.2. Review of the Proposed Amendments to the Retail Manual on Metering Standards and Procedures

On an invitation by the RCC for interested parties to submit comments on the proposed amendments to the Retail Market Rules relative to the Retail Manual on Metering Standards and Procedures ("Retail Metering Manual"), the TC reviewed the proposal and consolidated its comments for submission to the RCC. In general, the TC deemed that a back-up meter is not mandatory, both in the WESM and Retail market. The TC agreed on the following points to support its position:

- (1) disputes may arise if main and back-up meters have discrepancies in their readings;
- (2) unless it can be established that historically there are problems with most meters, requiring a back-up meter for all WESM participants is not necessary;
- (3) the Validation, Estimation and Editing (VEE) procedure is in place to address issues regarding Meter Trouble Reports (MTR). If necessary, this procedure may be improved or updated accordingly.

The TC finalized and transmitted its comments to the RCC on November 21, 2014.

A.3. Review of the Classification of Battery Energy Storage System¹

On 15 October 2014, the RCC transmitted to the TC a request for assistance in determining the classification of the Battery Energy Storage System (BESS) whether: (a) as a Generation Company certified as Ancillary Service Provider; or (b) as a purely Ancillary Services Provider.

The request was in reference to the Proposed Amendments to the WESM Rules on Generation Company Reserve/Offer submitted by the AES Philippines. The TC's comments is intended to assist the RCC in its deliberation of the proposal.

¹ Appendix A.1 TC-RSTR-2014-02

Below are the TC's comments following its discussions on the matter:

- (1) BESS is a generation resource and should be capable to offer in the energy market. The TC however, recognizes the limitation of such technology in terms of energy capacity;
- (2) The TC further recognizes that for this type of generation, the Maximum Available Capacity as defined in the Dispatch Protocol Manual (DPM) may be seriously limited. Since the DPM provides instructions regarding the limitations of generation technologies such as hydro power plants and steam power plants, the TC believes that a similar provision can be made for BESS;
- (3) The TC notes that the limitation of a BESS in terms of availability is similar to the case of a pumped-storage power plant, which is currently able to offer in the energy market;
- (4) Classifying some resources as purely Ancillary Service Provider is not consistent with the envisioned energy-reserve co-optimized market. For the market to realize maximum economic gain, all available resources should be made available for both energy and reserve; and
- (5) Based on the definition of a Generation Company in the WESM Rules, together with the expected capacity of a BESS, the TC agreed that a BESS falls under the category of a Generation Company with scheduled generating units. In addition, these generating units may be capable to offer Ancillary Services subject to ERC's approval.

It is the TC's opinion that a BESS can function as a Generation Company with scheduled generating units that can also provide both Ancillary Services and energy instead of purely Ancillary Services. The TC finalized the result of its review and transmitted the same to the RCC on 18 December 2014.

In anticipation of the forthcoming participation of the *Battery Energy Storage Systems* in the market, the TC agreed to conduct a study on the framework for a BESS' participation in the WESM. The TC agreed to include in its Work Plan for 2015, the *Study on the Framework of Participation of Battery Energy Storage Systems in the Market*.

A.4. Review of Study on Pmin of Ilijan

The TC was requested to provide comments on the study conducted by PEMC-TOD following the request of KEPCO to change the Pmin of its Ilijan combined cycle gas turbine (CCGT) from 300 MW to 420 MW.

The TC was requested to provide comments on the study considering that the TC also transmitted in 2011 a position paper on the generator's technical parameters relative to KEPCO-Ilijan's prior request in 2011 to increase its Pmin from 300 MW to 450 MW.

The TC discussed the study presented by TOD and provided comments as follows:

- (1) technically, the Pmin of CCGT plants should be 1 gas turbine (GT) + 0 steam turbine (ST), however, currently Trading Participants (TP) with CCGT plants have been observed to have based their Pmins on the operation of 1 GT + 1 ST;
- (2) in the case of KEPCO-Ilijan's CCGT plant therefore, 420 MW cannot be considered its technical Pmin; and
- (3) increasing the Pmin of Ilijan to 420 MW is thus not necessary.

The same was subsequently transmitted to the TOD on 15 April 2014 for its information and consideration. The TOD in its clarification on the position of the TC that the Pmin of a CCGT facility should be based on simple cycle operation, stated that the WESM Registration Manual, based on ERC Resolution No.9 series of 2010, specified that the Pmin of a CCGT block shall be based on a combined cycle operation.

The TC noted that pursuant to the provisions of the WESM Registration Manual, the Pmin of a CCGT block was indeed based on a combined cycle operation. Notwithstanding, the TC was still of the opinion, that the technical Pmin of a CCGT should be based on a simple cycle operation and thus agreed to push forth such recommendation at a later time and in the more appropriate venue. During the drafting of its Work Plan for 2015, the TC agreed to include in its activities the *Review of Pmin of Combined Cycle Gas Turbine Plants*.

A.5. Review of the 4th Independent Operational Market Audit Findings and Recommendations and the Load Forecasting Methodology

The TC reviewed the findings and recommendations of the 4th Independent Operational Market Audit and subsequently agreed to focus on the External Auditor's findings on Load Forecasting relative to the TC's own review of the Load Forecasting Methodology in the WESM. The TC initiated the review of Load Forecasting Methodology with the intent to submit comments to the PEMC or proposed rules changes to the RCC.

Resource persons from the TOD were invited by the TC to discuss the Load Forecasting Methodology and the observed significant difference of performance between Luzon and Visayas grid relative to Maximum Absolute Percentage Error (MAPE) and Forecasting Accuracy Rate (FAR) as reported in the Market Operator Performance Standards (MOPS).

The TC noted that the Load Forecasting accuracy in the WESM is limited by the current Market Management System (MMS) and that many limitations to the current MMS will be addressed with the proposed new MMS expected to be available in 2017. Options were discussed on how to go about with their review of Load Forecasting Methodology. However, with the discussions that followed, the TC resolved to postpone the TC review and to wait for the implementation of the new MMS instead.

A.6. Enforcement and Compliance Office (ECO) Investigation Cases Review Panel

The chairperson of the TC was designated as a member of the Review Panel, convened upon the directive of the PEM Board during its meeting on 14 August 2014. The Review Panel was mandated to: a) conduct a technical review of requests for reconsideration filed by Trading Participants (TP) on the PEM Board's decision to impose sanctions on said participants for breach of the Must Offer Rule (MOR); and b) submit its recommendations on said requests based on its review.

The TC chairperson joined the Review Panel during the meetings scheduled for the purpose of reviewing the said requests for reconsideration. The cases reviewed were specifically for finding of breaches on the Must Offer Rule from 26 October 2013 to 25 December 2013.

A.7. Publication of the Public Version of Study on Luzon HEPPs

The TC reviewed its report on the TC study on Luzon Hydroelectric Power Plants (HEPP) in view of the provisions in the TC Market Manual as regards publication and information disclosure and confidentiality. The TC finalized the public version of the report and thereafter published the same in the WESM Information Website.

A.8. PAC-TC Joint Conduct of the 2nd Metering Arrangements Review

The TC was appointed to be a part of the Technical Working Group (TWG) created for the conduct of the 2nd Metering Arrangements Review ("Metering Review"). As part of the TWG, the TC provided assistance to the PAC in supervising the conduct of the said Review. The TC joined the PAC during its regular meetings and the harmonization TWG meetings held during the period, to discuss matters as regards the 2nd Metering Review. Among others, the TC aided the PAC in the conduct of the 2nd Metering Review as follows:

- (1) provided its comments which were incorporated accordingly on the draft Terms of Reference (TOR) for the conduct of the 2nd Metering Review;
- (2) reviewed the materials for the conduct of the Metering Review Conference in relation to the ongoing selection of External Auditor held on 22 April 2014;
- (3) assisted in the review of the draft Request for Proposal (RFP) and the evaluation guidelines and the standard form and provided its recommendations to improve the RFP for easier evaluation of the technical proposal. The final and approved RFP was presented to the PAC during the PAC-TWG meeting;
- (4) joined the PAC during the opening of Technical Proposal on 16 June 2014 and opening of Financial Proposal on 23 June 2014;
- (5) undertook the evaluation of the four (4) technical proposals. The evaluation of technical proposals was concluded and presented to the PAC on 19 June 2014 for their consideration;
- (6) joined the PAC in its negotiations with the first-ranked bidder and the Auditor's meeting with the Metering Service Providers to be audited; and

- (7) participated in the conduct of 2nd Metering Review Site Inspections during the months of October and November 2014.

The TC continuously assisted the PAC in the remaining activities of the 2nd Metering Review, which is expected to be completed in the first quarter of 2015.

A.9. Study on Dispatch Tolerance Limit²

The TC received a request from the Market Surveillance Committee (MSC) for the TC to conduct a simulation and further review of the reasonability of the rule allowing $\pm 3\%$ deviation in real time dispatch (RTD) in accordance with the PEM Board Resolution No. 2005-15. Said request is in connection with the monitoring of the MSC on the possible non-compliances by generator TPs to the RTD schedule/ instruction. Specifically, the MSC requested that RTD deviations below 10 MW be included in the scope of the study and that simulations be conducted as necessary, with a view to amend the above rule as applicable.

The historical data on generator trading intervals with deviations was provided and presented by the MAG for the TC's consideration in the formulation of its recommendation. The TC agreed to study the data and to propose recommendations on the appropriate dispatch tolerance limit.

The TC requested the MAG to process the raw data covered by October 2013 billing period and to produce summaries on the frequencies of RTD violations according to various parameters such as plant type and plant size.

The TC also looked into the frequency bias for the Luzon Grid and the various sections of the Visayas Grid, data and analysis of dispatch deviation and the current trading interval duration of one (1) hour. All trading intervals with RTD deviations that are attributable to SO instructions were excluded from the data set. The draft is being finalized and the report is expected to be forwarded to the MSC in the first quarter of 2015.

A.10. Study on the on Impact of N-1 Contingency Imposed on Transmission Lines and Substation Transformers to the Delivery of Power³

The TC received a request from the MSC to conduct a study on the impact of N-1 contingency imposed on transmission lines and substation transformers to the delivery of power. The result of the study will assist the MSC in its review of over-riding constraints imposed by the NGCP-SO on transmission lines and substation transformers.

In the MSC request, it was mentioned that a number of transmission lines and transformers were regularly included in the contingency list as reflected in the Report on Over-riding Constraints. Among the transmission lines and transformers included in particular are: (a)

² Appendix A.2 TC-RSTR-2013-02

³ Appendix A.3 TC-RSTR-2014-01

Manila-Dona Imelda and Manila-Muntinlupa 230 kV lines; and (b) Dona Imelda, Dolores, Quezon, Zapote, Dasmaringas and San Jose transformers.

Documents relative to the study were requested from the MAG for the TC's reference. The TC also requested the MAG to present a sample report on Over-riding Constraints for the TC to be informed and clarified further about the over-riding constraints imposed on generators and N-1 contingency requirements regularly monitored by the MSC.

As part of the TC's consultation process, resource persons from the TOD were invited to discuss and clarify matters relative to the study being undertaken. There are still continuing discussions and deliberation on the subject, including a meeting with the System Operator (SO) to clarify the SO's procedures.

A.11. Review of WESM Rules and Manuals relative to the Implementation of Market Intervention, Market Suspension and Market Restoration

The TC discussed the Market Operator's (MO) report on Market Intervention (MI) on 16 May 2014 at 1400H to 1800H with details showing the intervention initiated by the Luzon System Operator (LSO) as Manual Load Dropping (MLD) due to generation deficiency. After initial discussions, the TC agreed to review the WESM Rules and Manuals focused on the implementation of Market Intervention, Suspension and Restoration in view of the recent events.

For its reference, the TC reviewed the following relevant documents:

- Energy Regulatory Commission (ERC) Resolution No. 15, Series of 2007, a resolution adopting the procedures in the event of market suspension or declaration of temporary market failure and the subsequent market resumption of the operation of the Wholesale Electricity Spot Market (WESM);
- WESM Rules Chapter 6 *Intervention and Market Suspension*;
- Appendix B.1 *Market Intervention, Suspension & Restoration* of the Dispatch Protocol Manual (DPM); and
- Recent Proposed Amendments to the Manual on Administered Price Determination Methodology (APDM).

In its review, the TC intended to treat the Market Intervention and Market Suspension separately. The TC thus agreed to propose changes to the (a) Market Intervention & Restoration Procedure; (b) Market Suspension & Restoration Procedure; and (c) Market Intervention/ Suspension Declaration reflected in Appendix B.1. of the Dispatch Protocol Manual. There are still ongoing discussions on the matter.

Items **A8** to **A11** were carried over to 2015 since discussion and deliberations on the said topics are still ongoing. **Section B** provides the details of the TC 2015 Work Plan which contains said carried over activities as well as new activities for the 2015, as follows:

B. 2015 WORK PLAN

Item	Activity	Requested by	DEADLINE	Responsible Lead Person/s	Status	Remarks/Deliverables
1.	Study on Dispatch Tolerance Limit	MSC	Q1	Prof. Jordan Rel C. Orillaza	Ongoing	Provide MSC with a copy of the study once completed, for MSC's reference
2.	PAC-TC Joint Conduct of the 2 nd Metering Arrangements Review	PAC/TWG	Q1	TC	Ongoing	Assist PAC in the conduct of Metering Arrangements Review
3.	Review of WESM Rules and Manual on the Implementation of Market Intervention, Market Suspension and Market Restoration	TC	Q1	Engr. Santiago A. Dimaliwat IV	Ongoing	Submit/recommend proposed rules changes on the WESM Rules and Dispatch Protocol Manual
4.	Study on the on Impact of N-1 Contingency Imposed on Transmission Lines and Substation Transformers to the Delivery of Power	MSC	Q2	Engr. William C. Alcantara	Ongoing	Provide MSC with a copy of the study once completed, for MSC's reference
5.	Proposed Amendments to the Retail Manual on	TC	Q2	Engr. Jaime V. Mendoza	(new)	Submit/recommend proposed rules changes to the RCC.

Item	Activity	Requested by	DEADLINE	Responsible Lead Person/s	Status	Remarks/Deliverables
	Metering Standards and Procedures					
6.	Study on the Framework of Participation of Battery Energy Storage Systems in the Market.	TC	Q2	Engr. William C. Alcantara	(new)	1. Position Paper to be submitted to RCC/ PEM Board 2. Submit/recommend proposed rules changes
7.	Review of TC Market Manual	TC	Q3	Prof. Jordan Rel C. Orillaza	(new)	Submit/recommend proposed rules changes to the RCC
8.	5 th MO Audit	PAC/TWG	Q4	Engr. Jaime V. Mendoza	continuing	Assist PAC in the conduct of the 5th MO Audit.
9.	Review of the Pmin of CCGT Plants	TC	Q2	Prof. Jordan Rel C. Orillaza	(new)	Transmit/ recommend proposal to TOD
10.	Others <i>(as may be directed by DOE or PEM Board and as may be requested by PEMC and by other Governance Committees)</i>	DOE/ PEM Board or any requesting party		TC		

C. MEMBERSHIP

For 2014, the members of the Technical Committee ("TC") were as follows:

1. Prof. Jordan Rel C. Orillaza (Independent)
2. Engr. William C. Alcantara (Independent)
3. Engr. Jaime V. Mendoza (DMC representative)
4. Engr. Joseph Allan C. Baltazar (GMC representative)
5. Engr. Santiago A. Dimaliwat IV (SO representative)

Prof. Jordan Rel C. Orillaza was appointed as independent member of the TC on 01 July 2013 and is currently the TC acting chairman. Engr. William C. Alcantara was appointed as independent member of the TC on 01 August 2013.

Engr. Joseph Allan C. Baltazar was the GMC representative beginning 01 August 2011 until the expiry of his appointment on 31 July 2014. Engr. Santiago A. Dimaliwat IV was appointed as SO representative on 05 March 2011 and Engr. Jaime V. Mendoza as DMC representative on 24 June 2010.

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

D. RESPONSIBILITIES

The main role and responsibilities of the TC are set out in the WESM Rules 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 TC, causes:
 - a. the inability of the WESM Member to comply with the WESM Rules; or
 - b. unintended or distortionary effects to the WESM operation.
3. 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
4. Propose amendments to the WESM Rules, as necessary and appropriate, with respect to the following:
 - a. improving the efficiency and the effectiveness of the WESM operation; and
 - b. improving or enhancing the prospects for the achievement of the WESM Objectives.

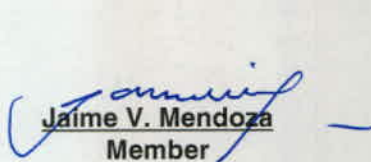
In addition, the TC is also tasked to conduct technical reviews and studies pursuant to the guidelines set forth in the TC Market Manual

The TC conducted fourteen (14) meetings⁴ in 2014. The TC deliberated on a number of matters during its meetings in line with its responsibilities as provided in the WESM Rules.

⁴At any time and as may be practicable, the TC may conduct meetings more than once a month.

Submitted By:

Technical Committee


Jaime V. Mendoza
Member


Jordan Rel C. Orillaza
Member

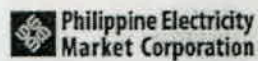

Santiago A. Dimaliwat IV
Member


William C. Alcantara
Member

APPENDIX A: REFERENCE DOCUMENTS

Appendix A. 1 - TC-RSTR-2014-02

ANNEX 'A'



TC-RSTR FORM A

TC-RSTR-20[14]-[02]


REQUEST FOR TECHNICAL STUDY/REVIEW

Requests made only under this prescribed form shall be accepted and considered as submitted.

This request for technical study or review can be submitted to:

TECHNICAL COMMITTEE
Thru: Market Assessment Group
Philippine Electricity Market Corporation
18/F Robinsons Equitable Tower
ADB Avenue, Ortigas Center
Pasig City, 1605 Philippines
Email addresses: mag@wesm.ph
Fax Number: (+632) 395-2704

I. Requesting Party

Name	Rowena Cristina L. Guevara
Designation	Chairperson, Rules Change Committee
Signature	
Company	c/o Philippine Electricity Market Corporation (PEMC)
Company Address	18th Floor, Robinsons Tower, ADB Avenue, Ortigas Center, Pasig City
Telephone Number	c/o Market Assessment Group, PEMC - 02-261-8734
Fax. No.	c/o Market Assessment Group, PEMC - 02-395-2704
Email address	gev@eee.upd.edu.ph; gevguevara@gmail.com

ANNEX 'A'
II. Request Information

Topic : Request for Assistance in Determining Classification of Battery Energy Storage System

Nature of Request (please indicate with x)

☐ Rule/ Manual Review

☐ Incidents/Case Study

☐ Position Paper

☒ Others Please Specify : Request for Classification of Battery Energy Storage System

Details of the Request: Please provide the purpose, scope and details of the study/review. Attach supporting documents if any. Use additional sheets if necessary.

As a background, the AES Proposed amendments to relevant sections of the WESM Rules to provide a distinction between a Generation Company certified as Ancillary Service Provider and a purely Ancillary Services Provider, such as the Grid Energy Storage System, in submitting offers for energy and reserve. The Proposal widens the scope of Participants that can submit reserve offers.


The Proposal went through the usual RCC processes. During the RCC's discussion of the proposal, the RCC noted that the Battery Energy Storage System (BESS) can only operate at a maximum of 30 minutes to address primarily the frequency problem encountered in the grid. It was likewise noted that the BESS has a fast response but can sustain provision of its capacity only for a limited time. However, during said RCC deliberations on the matter, issues were also identified by the RCC relative to the Proposal, among others, the classification of the Grid Energy Storage System or the Battery Energy Storage System of the AES. Noting that there was no consensus on how the same can be classified, the RCC agreed to defer its decision on the Proposal and first seek the TC's assistance in identifying how such technology can be classified based on the provisions under the WESM Rules and the Grid Code.

The RCC acknowledges that new technologies such as the Grid Energy Storage Systems may contribute in enhancing the capacity for reserve and energy in the Market and thus should be given a chance to participate in the Market. However, the RCC at the moment cannot make a decision on the AES' Proposal until we are able to ascertain the identity of such technology type. In this regard, the RCC herein submits this request to the TC for the appropriate classification of such technology.

ANNEX 'A'

Urgent Request : ☒ Yes ☐ No

Date Received by MAG:

 **Philippine Electricity
Market Corporation**

For MAG use only

TC-RSTR FORM B

TC-RSTR-20[14] [09]

Date of Endorsement to the TC:

OCT 16 2014



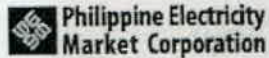
ANNEX 'A'

Actions Taken By TC:

TC Resolutions:

Appendix A. 2 - TC-RSTR-2013-02

ANNEX 'A'



TC-RSTR FORM A

TC-RSTR-2013-02

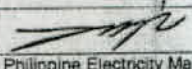
REQUEST FOR TECHNICAL STUDY/ REVIEW

Requests made only under this prescribed form shall be accepted and considered as submitted.

This request for technical study or review can be submitted to:

TECHNICAL COMMITTEE
 Thru: Market Assessment Group
 Philippine Electricity Market Corporation
 18/F Robinsons Equitable Tower
 ADB Avenue, Ortigas Center
 Pasig City, 1605 Philippines
 Email addresses: mag@wesm.ph
 Fax Number: (+632) 395-2704

I. Requesting Party

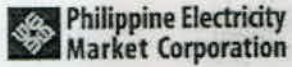
Name	ENGR. FRANCIS V. MAPILE
Designation	Chairman, Market Surveillance Committee
Signature	
Company	Philippine Electricity Market Corporation
Company Address	18/F Robinsons Equitable Tower, ADB Avenue, Ortigas Center, pasig City
Telephone Number	02-395-27-04
Fax. No.	02395-27-04
Email address	fvmapi@gmail.com

ANNEX 'A'

II. Request Information

Topic
Nature of Request (please indicate with x) <input type="checkbox"/> Rule/ Manual Review <input checked="" type="checkbox"/> Incidents/Case Study <input type="checkbox"/> Position Paper <input type="checkbox"/> Others Please Specify : _____
Details of the Request: Please provide the purpose, scope and details of the study/review. Attach supporting documents if any. Use additional sheets if necessary. Requesting the Technical Committee (TC) to conduct further review on the reasonability of $\pm 3\%$ deviation in Real Time Dispatch (RTD) particularly including deviations below 10 MW and conduct a simulation, if necessary, on the same. Attached is the duly-signed MSC Memorandum on the subject, discussing the request in detail.
Urgent Request : <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

ANNEX 'A'



For MAG use only

Date Received by MAG:

TC-RSTR FORM B

TC-RSTR-2013_02

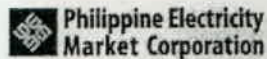
Date of Endorsement to the TC:

Actions Taken By TC:

TC Resolutions:

Appendix A. 3 - TC-RSTR-2014-01

ANNEX 'A'



TC-RSTR FORM A


REQUEST FOR TECHNICAL STUDY/ REVIEW

Requests made only under this prescribed form shall be accepted and considered as submitted.

This request for technical study or review can be submitted to:

TECHNICAL COMMITTEE
Thru: **Market Assessment Group**
Philippine Electricity Market Corporation
18/F Robinsons Equitable Tower
ADB Avenue, Ortigas Center
Pasig City, 1605 Philippines
Email addresses: mag@wesm.ph
Fax Number: (+632) 395-2704

I. Requesting Party

Name	ENGR. FRANCIS V. MAPILE
Designation	Chairman, Market Surveillance Committee
Signature	
Company	Philippine Electricity Market Corporation
Company Address	18/F Robinsons Equitable Tower, ADB Avenue, Ortigas Center, Pasig City
Telephone Number	02-395-27-04
Fax No.	02395-27-04
Email address	fvmapiie@gmail.com

TC Internal Rules Issue 2.0

Page 1 of 3

ANNEX 'A'

II. Request Information

Topic **Impact of N-1 Contingency Imposed on Transmission Lines and Substation Transformers to the Delivery of Power**

Nature of Request (please indicate with x)

- ☐ Rule/ Manual Review
☒ Incidents/Case Study
☐ Position Paper
☐ Others Please Specify : _____

Details of the Request: Please provide the purpose, scope and details of the study/review. Attach supporting documents if any. Use additional sheets if necessary.

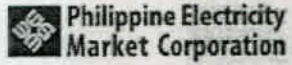
The MSC requests the Technical Committee (TC) to conduct a study on the impact of N-1 contingency imposed on transmission lines and substation transformers to the delivery of power that will assist the MSC in its review of Over-riding Constraints imposed by the NGCP-SO.

In the course of the MSC's monitoring of the spot market, it has come to the attention of the MSC that Manila-Doria Imelda and Manila-Muntinlupa 230 kV lines within the MERALCO were regularly included in the transmission contingency list, while Doria Imelda, Dolores, Quezon, Zapote, Dasmariñas and San Jose (transformers 1, 2, 3 and 5) were included for the transformers contingency list.

Attached is the duly-signed MSC Memorandum on the subject, discussing the request in detail.

Urgent Request : ☒ Yes ☐ No

ANNEX 'A'



For MAG use only

Date Received by MAG:

June 13, 2014

TC-RSTR FORM B

TC-RSTR-2014_01

Date of Endorsement to the TC: June 13, 2014

Actions Taken By TC:

TC Resolutions: