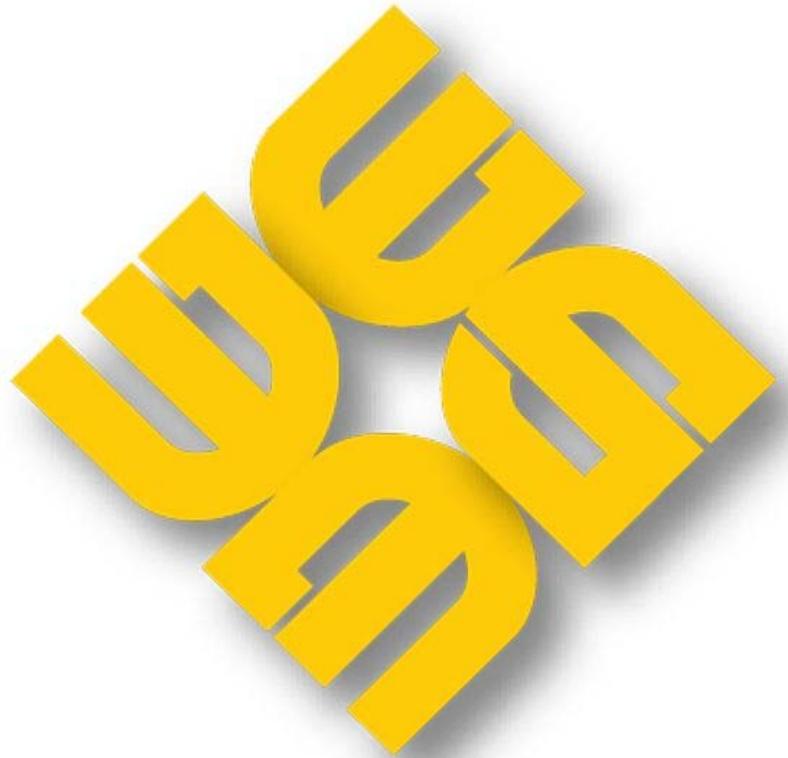


PUBLIC

# Market Operator Performance

Annual Report for the Period  
26 September 2013 to 25 September 2014  
MOPS-2014-AR (Rev. 2)



**PHILIPPINE ELECTRICITY MARKET  
CORPORATION  
MARKET ASSESSMENT GROUP  
(MAG)**

## Executive Summary

This Annual Market Operator Performance Report for the period 26 September 2013 to 25 September 2014 provides the results of the monitoring and assessment conducted by the Market Assessment Group of the Market Operator's performance, in accordance with Clause 1.3.2.3 of the WESM Rules, PEM Board Resolution No. 2013-11 dated 21 March 2013, and DOE letter dated 12 November 2013 approving the Market Operator Performance Standards (MOPS).

The monitoring of the MO's performance is also provided under the Integrated Management System (IMS), as one of the Measurement, Analysis and Improvement Processes under the Quality Management System (QMS) of the Philippine Electricity Market Corporation (PEMC).

The MO performance standards are classified into six categories:

1. IT Systems
2. Market Reports and Data Publication
3. Forecast Accuracy
4. Dispatch, Scheduling and Pricing
5. Billings, Settlements and Accounts Management; and
6. Registration and Customer Relations.

The MO performance ratings for each category from 26 September 2013 to 25 September 2014 (4Q 2013 – 3Q 2014) are as follows:

Category	Measure	Rating System	Weight (%)	Target	Score/Rating for 4Q 2013 – 3Q 2014			
					Actual	Equiv. Score	Score Description	Rating (Weight x Equiv. Score)
<b>IT Systems (20%)</b>								
Market Management Systems	Availability	RS 2a	15	99.80%	99.94%	5	Excellent	0.75
WESM Website	Availability	RS 2a	5	99.50%	99.99%	5	Excellent	0.25
<b>Market Reports and Data Publication (15%)</b>								
	Availability	RS 3	5	95%	99.95%	4	Very Satisfactory	0.20
	Timeliness	RS 3	10	95%	98.25%	4	Very Satisfactory	0.40
<b>Forecast Accuracy (20%)</b>								
RTD Forecast - MAPE	Accuracy (L)	RS 4	3.75	$\leq$ 0.95%	0.89%	4	Very Satisfactory	0.15
	Accuracy (V)		3.75		1.15%	2	Needs Improvement	0.08
RTD Forecast - FAR	Accuracy (L)	RS 2	3.75	$\geq$ 97.20%	98.17%	4	Very Satisfactory	0.15
	Accuracy (V)		3.75		94.25%	1	Poor	0.04
DAP Forecast - MAPE	Accuracy (L)	RS 4	2.5	$\leq$ 2.20%	1.45%	4	Very Satisfactory	0.10
	Accuracy (V)		2.5		2.23%	2	Needs Improvement	0.05
<b>Dispatch Scheduling and Pricing (20%)</b>								
RTD Workflow	Successful Run	RS 2a	2.5	99.75%	100.00%	5	Excellent	0.13
RTX Workflow	Successful Run	RS 2a	2.5	99.75%	99.99%	5	Excellent	0.13
Pricing Errors and Market Re-runs	Timeliness	RS 2a	5	99.50%	99.98%	5	Excellent	0.25
Market Intervention Attributable to MO	Duration	RS 4a	10	$\leq$ 19	0	5	Excellent	0.50
<b>Billings, Settlements and Accounts Management (15%)</b>								
Preliminary and Final Settlement	Timeliness	RS 2a	2	98%	100%	5	Excellent	0.10

Category	Measure	Rating System	Weight (%)	Target	Score/Rating for 4Q 2013 – 3Q 2014			
					Actual	Equiv. Score	Score Description	Rating (Weight x Equiv. Score)
Statements								
Preliminary Settlement Calculations	Accuracy	RS 2a	2	95%	84.52%	1	Poor	0.02
Final Settlement Calculations	Accuracy	RS 2a	3	99%	99.70%	5	Excellent	0.15
	Frequency	RS 4a	2	≤ 6	2	5	Excellent	0.10
Meter Data Error Detection	Timeliness	RS 2a	2	98%	100%	5	Excellent	0.10
Monetary Transactions	Efficiency	RS 1	1	100%	100%	5	Excellent	0.05
	Timeliness	RS 1a	1	0 late	0	5	Excellent	0.05
Margin Call	Timeliness	RS 2a	2	95%	100%	5	Excellent	0.10
<b>Registration and Customer Relations (10%)</b>								
Registration	Timeliness	RS 3	2	95%	100%	5	Excellent	0.10
Participant Training	Timeliness	RS 3	2	95%	100%	5	Excellent	0.10
	Feedback	RS 2a	2	≥ 90%	95.94%	4	Very Satisfactory	0.08
Participant Queries and Data Requests	Timeliness	RS 2a	2	95%	99.05%	5	Excellent	0.10
Participant/ Customer Complaints	Timeliness	RS 3	2	95%	100%	5	Excellent	0.10
<b>MO Rating for the Period (Σ of Weight x Rating) ~ out of 5.00</b>							<b>Very Satisfactory</b>	<b>4.31</b>

The MO's performance for the annual monitoring period 4Q 2013 to 3Q 2014 is Very Satisfactory, which is equivalent to 4.31 out of 5.00.

The MOPS monitoring provided the opportunity for PEMC to continuously review and enhance its operations and service to the WESM Members, Department of Energy, Energy Regulatory Commission and other stakeholders.

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## 1. Introduction

In accordance with Clause 1.3.2.3 of the Wholesale Electricity Spot Market (WESM) Rules, the PEM Board is mandated to develop the performance standards to monitor and provide indication on the performance of the Market Operator (MO) with respect to the Electric Power Industry Reform Act (EPIRA) of 2001 and its Implementing Rules and Regulations (IRR), WESM Rules, Philippine Grid Code (PGC) and all other applicable laws, rules and regulations.

On 25 May 2011, the PEM Board approved the Market Operator Performance Standards (MOPS)<sup>1</sup>, which monitoring initially commenced on 26 September 2011. Further, the PEM Board approved on 21 March 2013 the revised MOPS<sup>2</sup>, which was approved as amended by the Department of Energy (DOE) on 12 November 2013<sup>3</sup>. The DOE-approved MOPS provided the basis for this report covering the period 26 September 2013 to 25 September 2014 (4Q 2013 – 3Q 2014).

Section 2 describes the tasks involved in the monitoring of the MO's performance, and reporting of findings and recommendations by the Market Assessment Group (MAG), in accordance with Section 10 of the MOPS, to the Management of the Philippine Electricity Market Corporation (PEMC) and the PEM Board.

Section 3 provides the detailed scores for each category and sub-categories, along with the discussion of findings, recommendations and PEMC action plans, all of which have been discussed with the process owners and the PEMC Management.

The overall MO performance status and for each of the last four (4) quarters are provided in Section 4.

With the implementation of PEMC's Integrated Management System (IMS), the MOPS monitoring is included under the Measurement, Analysis and Improvement Processes of the PEMC's Quality Management System (QMS). As such, the MOPS also provides indication that the MO provides quality services and outputs to its customers.

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<sup>1</sup> PEMC-MOPS-001, 2011, approved by the PEM Board in its Resolution No. 2011-39

<sup>2</sup> PEMC-MOPS-002, 2013

<sup>3</sup> DOE Letter to PEMC dated 12 November 2013 (SOE-JLP-13006301)

## 2. Monitoring and Reporting

The MO performance standards are classified into six (6) categories, as follows:

1.	IT Systems	-	20%
2.	Market Reports and Data Publication	-	15%
3.	Forecast Accuracy	-	20%
4.	Dispatch Scheduling and Pricing	-	20%
5.	Billings, Settlements and Accounts Management	-	15%
6.	Registration and Customer Relations	-	10%

In monitoring and assessing the MO's performance for each category, the MAG undertook the following activities:

### 2.1. Data Collection and Validation

Data were collected from the following PEMC departments who are responsible in carrying out various MO responsibilities:

- Trading Operations Department (TOD);
- Information Systems and Technology Department (ISTD);
- Corporate Planning and Communications Department (CPCD);
- Corporate Services Department (CSD);
- Legal Department; and
- Office of the President (OP).

The above parties were requested to submit data and other supporting information. Validations were conducted by cross-checking other data sources and verification of supporting documents, logs and publications, as possible.

The monitoring timeline is concurrent with the monthly WESM billing and settlement timetable, i.e. beginning every 26<sup>th</sup> day of each month and ending on the 25<sup>th</sup> day of the next month.

### 2.2. Evaluation and Reporting

The data collected were used in the computation of the scores for all categories.

In the evaluation, a scoring system, including the performance targets for each category, was utilized in the determination of the MO performance rating (see Appendix A). The overall MO performance rating was computed as the sum of the weighted averages computed from the equivalent rating multiplied by the assigned weights of the performance categories.

As part of the analysis, the reason/s for the non-achievement of targets were indicated, for further evaluation of the PEM Board Compensation Committee, as required under the MOPS.<sup>4</sup>

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<sup>4</sup> Section 9.2.2 of the PEMC-MOPS-002

Discussion on the indicative scores and observations with relevant PEMC Departments and the PEMC Management were conducted on:

- 27 January 2014, covering the period 26 September 2013 to 25 December 2013 (4Q 2013);
- 23 April 2014, covering the period 26 December 2013 to 25 March 2014 (1Q 2014);
- 21 July 2014, covering the period 26 March 2014 to 25 June 2014 (2Q 2014); and
- 17 December 2014, covering the period 26 June 2014 to 25 September 2014 (3Q 2014) and the annual period 4Q 2013 – 3Q 2014.

Quarterly Status Reports, which provide indicative rating, were published in the market information website, or public WESM website, for reference.

### 3. Categories and Ratings

This section provides the details of the ratings per performance category.

#### 3.1. IT Systems

IT systems cover the availability of the Market Management System (MMS) and the WESM Website. Table 1 provides the summary of how the MO fared under the measures in this category.

Table 1. IT Systems Performance for the period 4Q 2013 – 3Q 2014

Section	Sub-Category	Target		Actual		Score	Description
3.1.1	Market Management Systems Availability	99.80%	8,742.48 hrs out of 8,760 hrs	99.94%	8,754.55 hrs; 5.45 hrs downtime (35 instances)	5	Excellent
3.1.2	WESM Website Availability	99.50%	8,716.20 hrs out of 8,760 hrs	99.99%	8,758.95; 1.05 hrs downtime (3 instances)	5	Excellent

##### 3.1.1. MMS Availability

The various IT components of the MMS is essential in the continuous and efficient communication of the market systems, gathering of market workflow inputs, processing and publication of market outputs and emergency systems.

Aside from the MMS components, the availability of the Wholesale Billing and Settlement System (WBSS) website<sup>5</sup>, which can be accessed by Market Participants through the MMS digital certificates (DCs), was considered in this measure. The WBSS website is currently being used by market participants to access their meter data and for the generators to declare their bilateral contract quantities (BCQs).

The IT components of the MMS are being administered, maintained and monitored by the ISTD, 24x7. As part of its operational functions, the ISTD monitors the MMS performance to ensure that the market results are available and published on time. The WBSS website is being monitored, as well, in coordination with the CSD-Billing, Settlements, and Metering Division (BSMD).

Participants' complaints or concerns regarding the MMS secured website, or Market Participant Interface (MPI), and the WBSS website are reported to the TOD, BSMD or the WESM Helpdesk through phone calls or emails. All MMS related complaints are then reported by said units to the ISTD. In addition, any system malfunction or errors detected by the TOD during its operations of the MMS, and by the BSMD in accessing the WBSS website, are likewise immediately reported to the ISTD.

The ISTD uses incident management in reducing or eliminating the effects of actual or potential disturbances in services. These incidents are documented through the accomplishment of Incident Reports (IRs) by the ISTD and the filing of requests or

<sup>5</sup> WBSS website may be accessed through either one of the links: Stl1.wesm.ph and Stl2.wesm.ph.

concerns internally within PEMC through the use of the in-house developed integrated tool called WIMPSys<sup>6</sup>.

In addition, the WESM Compliance Officer of PEMC, under the OP, collates these complaints and in turn included in the MOPS monitoring of Participant/Customer Complaints (See Section 3.6.5).

### MMS Downtimes

A total of 5.45 hours downtime in 35 instances were recorded for the period 4Q 2013 – 3Q 2014.

MMS downtimes are attributed to the number of IAS connections, MI/MA application and web server errors occurred in the current monitoring period. Details are provided in Appendix B.1.

Majority of the MMS downtimes are due to the number of IAS connections, which cause the MPI to be unavailable to either or both the Market Participants and the ISTD/TOD. The ISTD and TOD are closely monitoring such incidents.

As provided under the MOPS, unavailability of the MMS that were caused by third party service providers, such as electricity supply and communication link providers of PEMC, and downtimes that do not require the MMS to restart were excluded.

### Monitoring Results

MMS availability was maintained at Excellent levels in 4Q 2013, 1Q 2014, and 2Q 2014 with raw scores of 99.96%, 99.99%, and 99.97%, respectively. As provided in Table 2, while it decreased to 99.83% in 3Q 2014, the over-all rating for the period 4Q 2013 – 3Q 2014 was still 99.94%, or Excellent.

Table 2. MMS Availability for 4Q 2013– 3Q 2014

Monitoring Period	Total Operating Hours	Targets (99.80%)	Performance			
			Actual	Score	Description	
4Q 2013	2,184 hrs	2,179.63 hrs	2,183.07hrs; 0.93 hrs downtime (20 instances)	99.96%	5	Excellent
1Q 2014	2,160 hrs	2,155.68 hrs	2,159.85 hrs; 0.15 hrs downtime (4 instances)	99.99%	5	Excellent
2Q 2014	2,208 hrs	2,203.58 hrs	2,207.30 hrs; 0.70 hrs downtime (3 instances)	99.97%	5	Excellent
3Q 2014	2,208 hrs	2,203.58 hrs	2,204.33 hrs; 3.67 hrs downtime (8 instances)	99.83%	3	Satisfactory
4Q 2013 - 3Q 2014	8,760 hrs	8,742.48 hrs	8,754.55 hrs 5.45 hrs downtime (35 instances)	99.94%	5	Excellent

<sup>6</sup> Work Order, Incident Report, Monitoring Logs and Participant Information System (WIMPSys)

### 3.1.2. WESM Website Availability

The WESM public website, or the Market Information Website ([www.wesm.ph](http://www.wesm.ph)), is the facility and electronic communication system wherein PEMC publishes information that may be accessed by WESM Members, interested parties and the general public.

Based on the MOPS, this measure includes the entire corporate system of PEMC, excluding the Data Management System (DMS) and electronic mail sub-systems. On the other hand, excluded are third party downtimes which are beyond the control of the MO.

Similar with the monitoring of MMS Availability, participants' complaints or concerns regarding the WESM website are reported, through phone calls or emails, to the WESM Helpdesk or directly to the TOD or ISTD. PEMC departments immediately report such complaints to the ISTD for resolution and reporting using the IR's.

#### WESM Website Downtimes

Downtimes, which refer to the number of hours or incidents when the WESM website is not accessible to internal and/or external parties, for the current year are due to errors in the web servers, firewall, and database.

One (1) downtime related to the Sonic E6500 firewall has been addressed by restarting and closely monitoring the said equipment. An error in the Apache server caused a WESM website downtime of 0.02 hours for 1 instance, which caused slow performance in querying graphs in the public website. Another downtime due to database error was recorded for 0.48 hours and was resolved by restarting the database. Details are provided in Appendix B.2.

#### Monitoring Results

Noting the above-mentioned downtimes, the public website, which was expected to be available for at least 8,716.20 hours during 4Q 2013 – 3Q 2014, recorded a total of 8,758.95 available hours equivalent to an availability rating of 99.99%, or Excellent, as provided in Table 3.

Table 3. WESM Website Availability for 4Q 2013 - 3Q 2014

Monitoring Period	Total Operating Hours	Targets (99.50%)	Performance			
			Actual	Score	Description	
4Q 2013	2,184 hrs	2,173.08 hrs	2,184.00 hrs	100%	5	Excellent
1Q 2014	2,160 hrs	2,149.20 hrs	2,159.45 hrs; 0.55 hrs downtime (1 instances)	99.97%	5	Excellent
2Q 2014	2,208 hrs	2,196.96 hrs	2,207.50 hrs; 0.50 hrs downtime (2 instances)	99.98%	5	Excellent
3Q 2014	2,208 hrs	2,196.96 hrs	2,208.00 hrs	100%	4	Excellent
4Q 2013 - 3Q 2014	8,760 hrs	8,716.20 hrs	8,758.95 hrs; 1.05 hrs downtime (3 instances)	99.99%	5	Excellent

### **3.1.3. Findings and Recommendations: IT Systems**

The availability of the MMS indicates that the preventive measures in addressing noted causes of MMS downtimes have been effective. Likewise, the MO maintained the availability of the WESM website above the target. To further improve the ratings, we recommend the ISTD's continuing close monitoring of the availability of the MMS and WESM website.

### **3.1.4. PEMC Action Plans: IT Systems**

The following are the status of the action plans discussed during the quarterly meetings with the PEMC Management:

- Continuing monitoring of the number of IAS connections in relation to the PEMC Management's decision to accept the inherent limitations of the MMS in relation to the availability issues being encountered with the WESM secured website.
- Continuing coordination in addressing, resolving and reporting participant complaints regarding the availability of the MPI.

Noteworthy is the ongoing procurement, through a competitive bidding, of the New Market Management System (NMMS). Among other operational issues and enhancements, the NMMS is expected to address the incidents noted which affect MMS Availability.

## **3.2. Market Reports and Data Publication**

Market participants rely on market information for them to make informed business decisions, whether it be on electricity trading or making long term electricity industry investments. Readily available information are also helpful to the DOE and Energy Regulatory Commission (ERC) in their policy and regulatory decisions, respectively. Thus, making market information available through timely publication is essential in maintaining the transparency in the operations of the WESM.

The MO is required to publish various market information, in accordance with the WESM Rules, market manuals and policy/regulatory directives. The list of market information for publication is provided in Annex D of the MOPS document.

"Publication" as defined in the WESM Rules is "to make available information". While there are other means to make available information, for the purposes of this MOPS monitoring, publication of market reports and data is interpreted to being made through the WESM website, newspapers of general circulation and the MPI, as applicable.

The requirement to publish market information, in market reports format or in data format, is measured under the MOPS based on availability and timeliness. Published market reports and data that were considered in the "Timeliness" measure are those with a prescribed timeline for publication in corresponding enabling rules/guidelines. On the other hand, all publications are considered in the "Availability" measure, including those that have remained unchanged since its first publication (i.e. electronic procedures and procedures for calculating constraint violation coefficients).

The raw scores of the published market information that were reviewed, and the means of their publication, are provided in Appendix C while the summary on how the MO fared in this category is provided in Table 4.

Table 4. Market Reports and Data Publication Performance Rating for 4Q 2013 – 3Q 2014

Section	Sub-Category	Target	Actual	Score	Description
3.2.1	Availability of Market Reports and Data Publication	95% (36 publications)	99.95% 33 publications 3 publications are excluded  33 scored $\geq$ 95%	4	Very Satisfactory
3.2.1	Timeliness of Market Reports and Data Publication	95% (22 publications)	98.25% 18 publications 4 publications are excluded  15 scored $\geq$ 95%; 3 scored <95%	4	Very Satisfactory

Three (3) publications were excluded from the Availability measure while 4 publications were excluded from the Timeliness measure in 4Q 2013 - 3Q 2014 as shown in Table 5.

Table 5. List of Market Information Excluded in the Rating

Required Publication	Reason for Exclusion (in Measure)
1. Details of Deregistration of Metering Service Provider (MSP)	No suspended MSP (Availability and Timeliness)
2. MDOM Performance Standards	These standards are already provided in existing WESM Manuals that have been published and made available prior the effectivity of the current MOPS document. Further, the MOPS has been published in the WESM Website since 4Q 2013. (Timeliness)
3. Formulation of the Market Dispatch Optimization Model (MDOM)	Price Determination Methodology (PDM) published since 2Q 2012, particularly when the new public WESM website was launched. (Timeliness)
4. Register of all WESM Participants with a List of former WESM Members and the time that each ceased to be WESM Members	No deregistered participant in 4Q 2013 – 3Q 2014; no updates in the list of former WESM Members (Timeliness)
5. Suspension Notices	No suspended WESM Members in 4Q 2013 – 3Q 2014 (Availability)
6. Meaning of Reasonable Estimate	DOE-approved change to the WESM Rule 3.5.11.5, which deletes the requirement to publish the meaning of "reasonable estimate". (DC2013-10-0025 dated 08 October 2013) (Availability)

The details of the market reports/data ratings for availability and timeliness are provided below.

### 3.2.1. Availability of Market Reports and Data

The measure of availability pertains to the actual number of publications against the total number of required publications.

#### Monitoring Results

The MO was able to exceed the target rating of 95% for this measure by consistently making available the required publications cited in the MOPS. As provided in Table 6, the overall score for this measure is 99.94% or Very Satisfactory, with the lowest quarterly rating of 99.86% in 1Q 2014 and the highest rating of 100% in 3Q 2014.

Table 6. Availability of Market Reports and Data

Monitoring Period	Target	Performance			
		Actual (out of 36 reports/data)	Score	Description	
4Q 2013	95%	31 scored $\geq$ 95%; 5 are excluded	99.95%	4	Very Satisfactory
1Q 2014		32 scored $\geq$ 95%; 4 are excluded	99.86%	4	Very Satisfactory
2Q 2014		31 scored $\geq$ 95%; 5 are excluded	99.96%	4	Very Satisfactory
3Q 2014		32 scored = 100%; 4 are excluded	100%	5	Excellent
4Q 2013 - 3Q 2014		33 scored $\geq$ 95%; 3 are excluded	99.95%	4	Very Satisfactory

### 3.2.2. Timeliness of Market Reports and Data Publication

Timeliness of market information publication refers to the MO's adherence to the required timing of publication of market reports/data in accordance to the schedules under the WESM Rules, Manuals, internal procedures or the MOPS document.

While the MO performance in making the required publications available has improved, there remains opportunities for improvement in the timeliness of these publications. Table 7 provides the list of publications scoring less than the target of 95% for this year.

Table 7. Market Publications with Timeliness Scores of < 95%

Required Publication	Timeliness Rating	Observations	Recommendation/PEMC Action Plan
1. Hourly Total Registered Pmin of All Scheduled Generating Units	93.97%	The Dispatch Protocol Manual requires the MO to publish to the participants the hourly total registered Pmin of all scheduled generating units based on the Day-Ahead Market Projections (DAP) not later than 1800H of each trading day. This is to allow trading participants to make informed changes in their bids prior the gate closure, such that a generator may opt to change their standing bids/offers for a particular trading interval when the 1600H Day-	As per PEMC Management, the requirement to publish DAP Pmin will be complied with.  The TOD noted that relevant personnel shall be properly informed of the

Required Publication	Timeliness Rating	Observations	Recommendation/PEMC Action Plan
		<p>Ahead Market Projections indicate that the demand for that trading interval is less than summation of the registered technical minimum generating capacity (aggregate Pmin) of all the generating units that are classified as scheduled generation units<sup>7</sup>. The DAP Pmin is being published through the MPI.</p> <p>On 09 May 2014, the TOD was issued a Non-conformity, Corrective and Preventive Action Report (NCPAR) to address the 4Q 2013 and 1Q 2014 availability ratings for said publication that are less than 95%. The cause of delayed publication was that personnel were not aware that the DAP Pmin should be published daily by 1800H<sup>8</sup>.</p> <p>As a result of the TOD's action plan addressing the said NCPAR, the rating of the DAP Pmin publication rose to 96.74% and 98.91% in 2Q 2014 and 3Q 2014, respectively.</p>	<p>DAP Pmin publication timeline. Further, the said publication shall be monitored and discussed during their monthly meetings.</p>
2. Summary of PEN Issuance	91.78%	<p>The WESM Manual on the Criteria for Guidelines for the Issuance of Pricing Error Notices and Conduct of Market Rerun requires the MO to publish in the market information website a summary of the pricing error notices (PEN) issued for the trading day within 2 business days after the trading day when the pricing error occurs.</p> <p>The low score for this publication was also included in the NCPAR issued to the TOD on 09 May 2014 to address the combined scores for 4Q 2013 and 1Q 2014 of less than 95% timeliness rating. The TOD noted that some late publications in 1Q 2014 were actually on time but were tagged as late due to the overwriting of the logs for the original publications by those for revisions made on a later date. In this regard, the TOD resubmitted data for 1Q 2014.</p> <p>As a result of the TOD's action plan addressing the said NCPAR and submission of revised MOPS data, the rating of the PEN Summary publication</p>	<p>The TOD will comply with the timeline for publication of PEN summaries.</p>

<sup>7</sup> Appendix A.1, Section 4.5 of the Dispatch Protocol Manual

<sup>8</sup> NCPAR 2014-05-008

Required Publication	Timeliness Rating	Observations	Recommendation/PEMC Action Plan
		rose from 70.33% in 4Q 2013 to 98.33%, 100% and 98.92% in 1Q 2014, 2Q 2014 and 3Q 2014, respectively.	
3. Summary of PSM Issuance	91.49%	<p>The WESM Manual providing the Methodology for Determining Pricing Errors and Price Substitution Due to Congestion for Energy Transactions (PSM) require the MO to publish in the market information website a summary of the pricing error notices issued for that trading day within 2 business days after the trading day when the pricing error occurs.</p> <p>The low score for this publication was also included in the NCPAR issued to the TOD on 09 May 2014 to address the combined scores for 4Q 2013 and 1Q 2014 of less than 95% timeliness rating.</p> <p>As a result of the TOD's action plan addressing the said NCPAR, the rating of the PSM Summary publication rose from 70.59% in 4Q 2013 and 85.71% in 1Q 2014 to 96.51% and 96.72% in 2Q 2014 and 3Q 2014, respectively.</p>	The TOD will comply with the timeline for publication of PSM summaries.

### Monitoring Results

Although there were 3 publications with ratings that are less than the target rating of 95%, the MO exceeded the overall target for this measure. As provided in Table 8, the score for this measure is 98.25% or Very Satisfactory, with the lowest quarterly rating of 94.92% in 4Q 2013 and the highest rating of 99.51% in 3Q 2014.

Table 8. Timeliness of Market Reports and Data Publication

Monitoring Period	Target	Performance			
		Actual (out of 22 reports/data)	Score	Description	
4Q 2013	95%	13 scored ≥ 95%; 3 scored < 95%; 6 are excluded	94.92%	3	Satisfactory
1Q 2014		14 scored ≥ 95%; 3 scored < 95%; 5 are excluded	97.89%	4	Very Satisfactory
2Q 2014		16 scored ≥ 95%; 6 are excluded	99.02%	4	Very Satisfactory
3Q 2014		17 scored ≥ 95%; 5 are excluded	99.51%	4	Very Satisfactory
4Q 2013 - 3Q 2014		15 scored ≥ 95%; 3 scored < 95%; 4 are excluded	98.25%	4	Very Satisfactory

### 3.2.3. Findings and Recommendations: Market Reports and Data Publication

The MO was able to make available publications for this monitoring period, as required. On the other hand, some of these publications have not met the required publication timelines.

To aid the MO in achieving the performance target for this measure, the MO's continuing compliance with the publication requirements in the WESM Rules and Manuals is recommended.

Further, to provide sufficient evidence that a report has been published as required, it is recommended that the NMMS provide a functionality to record all user or administrator actions in the MPI or public WESM website in relation to publication.

### 3.2.4. PEMC Action Plan: Market Reports and Data Publication

The ISTD indicated that the audit logs of actions related to publication in the MPI and public WESM website will be included in the NMMS functionality. In the interim, logs will be requested from the ISTD as evidence of the MO's compliance with publication requirements.

## 3.3. Forecast Accuracy

The MO currently prepares and publishes week ahead (WAP), day ahead and hour ahead (RTD) market projections to forecast load scenarios considering various factors (e.g. network service provider data, reserve requirements, generation offer, among others).

As provided in the MOPS, however, only the DAP and RTD projections shall be measured as to their accuracy. The RTD accuracy is measured in terms of Mean Average Percent Error (MAPE) and Forecast Accuracy Rate (FAR) while the DAP accuracy is measured with the MAPE only. Both RTD and DAP are measured per region, i.e. Luzon and Visayas. The ratings for these sub-categories are provided in Table 9.

Table 9. Forecast Accuracy Performance Ratings for the 4Q 2013 – 3Q 2014

Section	Sub-Category	Target	Region	Actual	Score	Description
3.3.1	RTD Forecast - MAPE	≤ 0.95%	Luzon	0.89%	4	Very Satisfactory
			Visayas	1.15%	2	Needs Improvement
	RTD Forecast - FAR	≥ 97.20%	Luzon	98.17%	4	Very Satisfactory
			Visayas	94.25%	1	Poor
3.3.2	DAP Forecast - MAPE	≤ 2.20%	Luzon	1.45%	4	Very Satisfactory
			Visayas	2.23%	2	Needs Improvement

The assessment of forecast accuracy in this report considered exclusions that were provided in the MOPS. Appendix D provides these exclusions and the corresponding number of intervals of occurrence.

Out of the 8,760 total intervals for 4Q 2013 – 3Q 2014, 8,290 intervals were considered for the purpose of this monitoring of the accuracy of RTD/DAP for Luzon due to 470 excluded intervals. Out of the intervals that were excluded, 162 are attributed to the non-compliance of

the Kalayaan Pump Storage plant to its pump schedule while 254 intervals were excluded due to the market intervention declared by the System Operator (SO) due to Typhoon Glenda.

With regard the RTD/DAP for Visayas, 3,472 intervals (39.63%) were excluded, of which, 3,303 of which were mostly due to the market suspension declared by the ERC for the spot market in Visayas due to the impact of Typhoon Yolanda starting on 08 November at 1500H up to 25 March 2014. Further, 12 intervals were also excluded, most of which were due to Manual Load Dropping (MLD) on 15 October 2013 from 0900H to 2000H due to the 7.2 magnitude earthquake hitting Bohol and nearby islands.

### 3.3.1. RTD Forecast

The hour ahead forecast or the RTD forecast is one (1) of the variables that are used to determine the ex-ante schedules and prices for the target trading interval. For clarity, it is noted that the data used in the computation of RTD forecast accuracy is the MMS generated forecast (RTD) for Luzon and Visayas.<sup>9</sup> The said regions are measured separately since RTD is published on a regional basis. The accuracy is measured against the actual demand based on snapshot data of all generators at minute 59<sup>10</sup>, as follows:

- MAPE - reflects the average of the absolute percent difference between the actual and forecasted demand across all intervals
- FAR - reflects the number of intervals in percent wherein the forecast is within the MAPE tolerance level, which is set at  $\pm 3\%$ .

### Monitoring Results

Table 10 provides the RTD MAPE, including the minimum and maximum absolute percentage errors (APEs) across all relevant intervals for 4Q 2013 – 3Q 2014 in Luzon and Visayas. The MO rated 0.84% or Very Satisfactory for the accuracy of Luzon RTD, however, the rating for Visayas RTD is 1.15% or Needs Improvement. The lower rating for Visayas is attributed to the fact that the region is composed of several islands that may have different weather conditions.

Table 10. RTD-MAPE Ratings

Monitoring Period	Region	Absolute Percentage Errors		Performance (MAPE)			
		Min	Max	Target	Actual	Score	Description
4Q 2013	Luzon	0.00%	7.13%	≤ 0.95%	0.87%	4	Very Satisfactory
	Visayas	0.00%	14.80%		1.15%	2	Needs Improvement
1Q 2014	Luzon	0.00%	6.46%		0.89%	4	Very Satisfactory
	Visayas						
2Q 2014	Luzon	0.00%	5.03%		0.89%	4	Very Satisfactory
	Visayas	0.00%	9.62%		1.13%	2	Needs Improvement

<sup>9</sup> Previously, hourly load forecasts that are inputs to the MMS (LDF or LDP) were used, in accordance with the MOPS, Issue 1.0.

<sup>10</sup> In the absence of 59<sup>th</sup> minute snapshot data, the 54<sup>th</sup> minute snapshot data before the target hour or the 4<sup>th</sup> minute snapshot data of the target trading interval could be used. As an example, the 1559H or 1554H or 1604H snapshot data shall be used as actual demand for the 1600H interval.

Monitoring Period	Region	Absolute Percentage Errors		Performance (MAPE)			
		Min	Max	Target	Actual	Score	Description
3Q 2014	Luzon	0.00%	6.32%	97.20%	0.90%	4	Very Satisfactory
	Visayas	0.00%	9.25%		1.17%	2	Needs Improvement
4Q 2013 - 3Q 2014	Luzon	0.00%	7.13%		0.89%	4	Very Satisfactory
	Visayas	0.00%	14.80%		1.15%	2	Needs Improvement

There are 152 intervals out of 8,290 valid intervals in Luzon and 304 out of 5,288 valid intervals in Visayas that have RTD forecasts beyond the 3% MAPE tolerance level for the year. As shown in Table 11, the MO exceeded the target 97.20% RTD FAR rating for the year with an actual rating of 98.17% in Luzon. On the other hand, the MO rated 94.25% or Poor for Visayas.

Table 11. RTD-FAR Ratings

Monitoring Period	Region	Intervals Exceeding the Tolerance Limit <sup>1</sup>	Performance (FAR)			
			Target	Actual	Score	Description
4Q 2013	Luzon	38 out of 2,098 intervals	≥ 97.20%	98.19%	4	Very Satisfactory
	Visayas	55 out of 973 intervals		94.35%	1	Poor
1Q 2014	Luzon	35 out of 2,083 intervals		98.32%	4	Very satisfactory
	Visayas			n/a	n/a	n/a
2Q 2014	Luzon	37 out of 2,173 intervals		98.30%	4	Very Satisfactory
	Visayas	119 out of 2,164 intervals		94.50%	1	Poor
3Q 2014	Luzon	42 out of 1,936 intervals		97.83%	4	Very satisfactory
	Visayas	130 out of 2,151 intervals		93.96%	1	Poor
4Q 2013 - 3Q 2014	Luzon	152 out of 8,290 intervals		98.17%	4	Very satisfactory
	Visayas	304 out of 5,288 intervals		94.25%	1	Poor

<sup>1/</sup> Number of intervals exceeding the ±3% tolerance limit among the valid intervals

Due to the non-achievement of the target rating for the RTD Forecast Accuracy for Visayas, the TOD was issued an NCPAR to monitor their corrective and preventive action plans. As cited by the MO External Auditor in its 4th MO Audit Report on Market Software Testing, the load forecasts are a key determinant of market prices and schedules, and therefore must be as accurate as is reasonably possible. Any difference between the forecast load and the actual load represents an economic cost to the market in that either too much generation or too little generation is scheduled with a resulting "error" in the ex-ante prices set by the market clearing software.

The TOD cited that the low forecast accuracy for RTD Visayas can be attributed to the non-modelling of the Panay Electric Company (PECO) in the Market Network Model (MNM) and that the forecast accuracy rating methodology applied for Luzon may not be suitable for Visayas. The proposal to amend the said methodology is still for approval to the PEM Board in January 2015.

Since the filing of the said NCPAR, the RTD Forecast Accuracy for Visayas has not yet improved.

### 3.3.2. DAP Forecast

The DAP MAPE is used to measure the accuracy of DAP forecast. For clarity, the data used in the computation of DAP MAPE is the Similar Day Load Forecast (SDLF) Demand for Luzon and Visayas. As with the computation of RTD Forecast, the accuracy of DAP Forecast is measured against the actual demand based on snapshot data of all generators at minute 59.

### Monitoring Results

As shown in Table 12, the 2.20% yearly target for the accuracy of day ahead forecast was achieved with the rating of 1.45% in Luzon. However, the rating for Visayas is 2.23%, which is equivalent to Needs Improvement.

Table 12. DAP Forecast Accuracy Ratings

Monitoring Period	Region	Absolute Percentage Errors		Performance (MAPE)			
		Min	Max	Target	Actual	Score	Description
4Q 2013	Luzon	0.00%	9.13%	≤ 2.20%	1.54%	4	Very Satisfactory
	Visayas	0.00%	14.88%		1.88%	4	Very Satisfactory
1Q 2014	Luzon	0.00%	10.33%		1.49%	4	Very Satisfactory
	Visayas						
2Q 2014	Luzon	0.00%	10.00%		1.29%	4	Very Satisfactory
	Visayas	0.00%	22.63%		2.64%	2	Needs Improvement
3Q 2014	Luzon	0.00%	15.68%		1.49%	4	Very Satisfactory
	Visayas	0.00%	15.71%		1.99%	4	Very Satisfactory
4Q 2013 - 3Q 2014	Luzon	0.00%	15.68%		1.45%	4	Very Satisfactory
	Visayas	0.00%	22.63%		2.23%	2	Needs Improvement

### 3.3.3. Findings and Recommendation: Forecast Accuracy

While Luzon forecasts are rated Very Satisfactory, it has been consistently recommended in the MO audit reports that the MO implement nodal forecasting due to the poor accuracy of nodal forecasts.

Further to the TOD's proposal to amend the methodology to determine the Visayas Forecast Accuracy, we recommend that the MOPS rating system for Forecast Accuracy be reviewed and amended to consider range values for the Satisfactory rating. Currently, there is one definite raw score for the Satisfactory rating, i.e. for RTD MAPE, 0.95%; RTD FAR, 97.20%; and DAP MAPE, 2.20%. Having a rating one point above these will result to a Very Satisfactory rating, and on the other hand, a rating one point below these will immediately result to a Needs Improvement rating.

### 3.3.4. PEMC Action Plans: Forecast Accuracy

The proposal to amend the methodology in determining the accuracy of Visayas Forecast Accuracy will be presented, for approval, to the PEM Board in January 2015. Further, the PEMC Management indicated that any other changes to the MOPS will be considered in the next review and amendment of the MOPS.

### 3.4. Dispatch Scheduling and Pricing

This category deals with the market scheduling and pricing performance by the MO. It is particularly important that market processes be properly managed because of its impact to participant behavior and market outcome. As such, this category is measured in terms of the success in implementing workflow processes, timeliness of pricing error issuance and the duration of market intervention attributable to the MO, as provided in Table 13.

Table 13. Dispatch Scheduling and Pricing Performance Ratings for 4Q 2013 – 3Q 2014

Section	Sub-Category	Target	Actual		Score	Description
3.4.1	RTD Workflow Successful Run	99.75%	100.00%	8,756 out of 8,756 intervals	5	Excellent
3.4.2	RTX Workflow Successful Run	99.75%	99.99%	8,757 out of 8,758 intervals	5	Excellent
3.4.3	Timeliness of Pricing Errors and Market Re-runs	99.50%	99.98%	1 late PEN	5	Excellent
3.4.4	Number of Market Intervention (MI) Attributable to MO	≤ 19	0 MO-attributable MI		5	Excellent

#### 3.4.1. RTD Workflow

Since the RTD workflow process is run at an hourly interval, its success rate is evaluated by the number of trading intervals with resulting schedule completed within the timetable. These include RTD runs that were manually run by the TOD within the timetable.

Under the MOPS, unsuccessful RTD runs that are attributable to factors beyond the control of MO (e.g. attributable to the SO and communication failure by service providers) are excluded from the calculations. The following unsuccessful RTD runs were excluded:

1. 05 November 2013, interval 17 - due to inappropriate snapshot data resulting to workflow stoppage<sup>11</sup>
2. 06 May 2014, interval 15 - due to workflow stoppage in the Market Management System (MMS) caused by erroneous snapshot data from Visayas<sup>12</sup>

<sup>11</sup> MO Market Intervention Report dated 06 November 2013

<sup>12</sup> MO Market Intervention Report dated 15 May 2014

3. 23 May 2014, interval 14 - power flow solution did not converge in obtaining a feasible solution due to multiple congestions in the grid, along with the resulting deficit and surplus in supply<sup>13</sup>
4. 16 July 2014, interval 11 - workflow stoppage due to powerflow divergence caused by multiple line tripping due to Typhoon Glenda<sup>14</sup>

### Monitoring Results

Table 14 provides the summary of RTD runs recorded in 4Q 2013 - 3Q 2014. All 8,757 intervals considered had successful RTD runs. This resulted to an annual rating of 100%, or Excellent.

Table 14. RTD Workflow Run

Monitoring Period	Number of Intervals		Performance			
	Successful	Unsuccessful	Target	Actual	Score	Description
4Q 2013	2,183 out of 2,183	0	99.75%	100%	5	Excellent
1Q 2014	2,160 out of 2,160	0		100%	5	Excellent
2Q 2014	2,206 out of 2,206	0		100%	5	Excellent
3Q 2014	2,207 out of 2,207	0		100%	5	Excellent
4Q 2013 - 3Q 2014	8,756 out of 8,756	0		100%	5	Excellent

### 3.4.2. RTX Workflow

The ex-post run or RTX workflow is measured in the same manner as with the RTD workflow process.

### Monitoring Results

As provided in Table 15, the MMS was 99.99% successful in generating feasible solutions for RTX, that is, there were 8,759 successful intervals out of 8,760 intervals in 4Q 2013 – 3Q 2014.

Table 15. RTX Workflow Run

Monitoring Period	Number of Intervals		Performance			
	Successful	Unsuccessful	Target	Actual	Score	Description
4Q 2013	2,184 out of 2,184	0	99.75%	100%	5	Excellent
1Q 2014	2,159 out of 2,160	1 (1000 on 19 Jan 2014)		99.95%	5	Excellent
2Q 2014	2,206 out of 2,206	0		100%	5	Excellent
3Q 2014	2,208 out of 2,208	0		100%	5	Excellent
4Q 2013 - 3Q 2014	8,757 out of 8,758	1		99.99%	5	Excellent

The unsuccessful RTX run in 1Q 2014 was for hour 10 on 19 January 2014, due to error in the network security analysis (NSA) module of the MMS<sup>15</sup>.

<sup>13</sup> MO Market Intervention Report dated 30 May 2014

<sup>14</sup> TOD/MIR-20140716, dated 16 July 2014, Part 1. Report on SO-Luzon Initiated Market Intervention for 0300H Trading Interval of July 16 2014 and ERC declared market Suspension starting 0400H trading interval of July 16, 2014

<sup>15</sup> IR-1401-00042

### 3.4.3. Pricing Errors and Market Re-runs

This sub-category particularly refers to the process of validation of intervals with PENs and the timely completion of market re-runs (MRR) prior to final settlement for Luzon and Visayas.

#### Monitoring Results

The MO fared excellently in this category as all final prices for RTD PENs and RTX MRRs were determined and submitted to the CSD-BSMD prior to final settlement as provided in Table 16.

Table 16. Issuance of Pricing Errors and Conduct of Market Re-run

Monitoring Period	PEN Issued (RTD)	Re-runs (RTX)	No. of final price issued on time	No. of final price issued on time	Performance			
					Target	Actual	Score	Description
4Q 2013	1,127	384	1,127	384	99.50%	100%	5	Excellent
1Q 2014	707	40	706	40		99.87%	5	Excellent
2Q 2014	1,887	438	1,887	438		100%	5	Excellent
3Q 2014	1,184	151	1,184	151		100%	5	Excellent
4Q 2013 - 3Q 2014	4,905	1,013	4,904	1,013		99.98%	5	Excellent

### 3.4.4. Market Intervention Attributable to MO

This sub-category pertains to the duration/frequency of market interventions (MIs) that have been caused by the MO such as intervention due to software error. The target set for this sub-category is an annual cumulative number equal to or less than 19 trading intervals under market intervention.

There were 3 MO-initiated market interventions during the year, all of which are excluded since these were caused by external factors, as provided in Table 17.

Table 17. MO Initiated Market Interventions for 4Q 2013 – 3Q 2014

Date/Affected Intervals	Remarks
November 05, 2013 1700H	MO declared market Intervention due inappropriate snapshot data on Banilad load, resulting to RTD workflow stoppage
May 6, 2014 1500H	Market intervention due to workflow stoppage in the Market Management System (MMS) caused by erroneous snapshot data from Visayas
May 23, 2014 1400H	Market intervention was declared as the MDOM was not able to produce RTD results as the power flow solution did not converge in obtaining a feasible solution. Cited reasons are the multiple congestions in the grid, along with the resulting deficit and surplus in supply

#### Monitoring Results

Noting the above MIs, the MO still had an excellent rating with zero (0) MO-attributable MI's for the period 4Q 2013 – 3Q 2014, as provided in Table 18.

Table 18. Market Intervention Attributable to MO

Monitoring Period	Performance			
	Target	Actual	Score	Description
4Q 2013	≤ 19	0	5	Excellent
1Q 2014		0	5	Excellent
2Q 2014		0	5	Excellent
3Q 2014		0	5	Excellent
4Q 2013 - 3Q 2014		0	5	Excellent

### 3.4.5. Findings and Recommendations: Dispatch Scheduling and Pricing

The MO was able to maintain its good performance in relation to dispatch scheduling and pricing.

In consideration of the MO's performance, it is recommended that the target number of MO-attributable market interventions be reviewed and possibly reduced. In addition, the measure for pricing errors and market re-runs may also be reviewed to consider the publication of PENs and MRR results instead of the TOD's submission of the same to the CSD-BSMD.

### 3.4.6. PEMC Action Plans: Dispatch Scheduling and Pricing

The PEMC Management indicated that any changes to the MOPS will be considered in its next review and amendment.

## 3.5. Billings, Settlements and Accounts Management

This category is related to the financial aspect of the WESM operations. It is essential that the MO handle financial transactions of the WESM with utmost integrity and efficiency considering the possible financial impact of the transactions to the Market Participants. The MOPS provides that this category be measured in terms of timeliness, frequency and accuracy. The ratings for the 7 sub-categories under this major category are summarized below.

Table 19. Billings, Settlement and Accounts Management Performance Ratings for 4Q 2013 – 3Q 2014

Section	Sub-Category	Target	Actual		Score	Description
3.5.1	Timeliness of Preliminary and Final Settlement Statements	98%	100%	0 late statement	5	Excellent
3.5.2	Accuracy of Preliminary Settlement Calculations	95%	84.52%		1	Poor
	Accuracy of Final Settlement Calculations	99%	99.70%		5	Excellent
3.5.3	Frequency of Final Settlement Adjustments	≤ 6	2		5	Excellent
3.5.4	Timeliness of Meter Data Error Detection	98%	100%	0 late MTRs	5	Excellent
3.5.5	Timeliness of Monetary Transactions	0 days late	0 days late		5	Excellent
	Remittance Efficiency	100%	100%	0 late remittances	5	Excellent
3.5.6	Timeliness of Margin Call	95%	100%	0 late margin calls	5	Excellent

For reference, Table 20 provides the relevant dates and WESM billing periods that are covered in each monitoring period for this section.

Table 20. WESM Billing Periods

Monitoring Period	Billing Period	Dates
4Q 2013	87	26 August 2013 to 25 September 2013
	88	26 September 2013 to 25 October 2013
	89	26 October 2013 to 25 November 2013
1Q 2014	90	26 November 2013 to 25 December 2013
	91	26 December 2013 to 25 January 2014
	92	26 January 2014 to 25 February 2014
2Q 2014	93	26 February 2014 to 25 March 2014
	94	26 March 2014 to 25 April 2014
	95	26 April 2014 to 25 May 2014
3Q 2014	96	26 May 2014 to 25 June 2014
	97	26 June 2014 to 25 July 2014
	98	26 July 2014 to 25 August 2014

### 3.5.1. Timeliness of Preliminary and Final Settlement Statements

The WESM Rules require that Preliminary Settlement Statements are issued within 7 days after the end of each billing period. It also provides that the issuance of Final Settlement Statements should not be later than 18 days after the end of each billing period. Further, if the deadline falls on a Non-Working Day, the issuance of the settlement statements shall be made during the next immediate Working Day. Observations regarding the timeliness of Preliminary and Final Settlement Statements are provided in Appendix E.

#### Monitoring Results

The MO exceeded its target of 98% with its Preliminary and Final Statement Timeliness rating of 100%, as provided in Table 21.

Table 21. Timeliness of the Issuance of Preliminary and Final Settlement Statements

Monitoring Period	Performance			
	Target	Actual	Score	Description
4Q 2013	98%	100%	5	Excellent
1Q 2014		100%	5	Excellent
2Q 2014		100%	5	Excellent
3Q 2014		100%	5	Excellent
4Q 2013 - 3Q 2014		100%	5	Excellent

### 3.5.2. Accuracy of Preliminary and Final Settlement Calculations

Given the possible financial impact of WESM settlement statements, the MO is rated according to the accuracy of issued billing statements. Accuracy rating of Preliminary Settlements is computed as the mean of the absolute percentage error of the preliminary settlement total trading amount (TTA) and the final settlement TTA per participant invoice.<sup>16</sup>

<sup>16</sup> Per participant trading amounts are not provided in this report since this information is considered as Confidential under the WESM Information Disclosure and Confidentiality Manual.

The adjustments related to claims for additional compensation for Administered Prices (AP) and MRUs are excluded, as well as the adjustments due to corrections in meter quantities that are attributable to the MSP.

### Monitoring Results

As provided in Table 22, the MO failed to meet its target of 95% with its accuracy rating for preliminary statements of 84.52% for 4Q 2013 - 3Q 2014.

Table 22. Accuracy of Preliminary Settlement Statements

Monitoring Period	Billing Period	$\Sigma$ Participants' Accuracy Value per Invoice	No. of Participants' Invoice	Actual Accuracy Rating	Score	Description
4Q 2013	87	165.54	170.00	97.38%	1	Poor
	88	158.86	164.00	96.87%		
	89	128.02	169.00	75.75%		
		452.42	503.00	89.94%		
1Q 2014	90	109.31	118.00	92.63%	1	Poor
	91	99.04	126.00	78.60%		
	92	119.46	121.00	98.73%		
		327.80	365.00	89.81%		
2Q 2014	93	97.94	116.00	84.43%	1	Poor
	94	74.12	178.00	41.64%		
	95	164.79	182.00	90.54%		
		336.85	476.00	70.77%		
3Q 2014	96	156.36	168.00	93.07%	3	Satisfactory
	97	164.96	170.00	97.04%		
	98	173.88	181.00	96.07%		
		165.07	173.00	95.41%		
4Q 2013 - 3Q 2014		1,282.13	1,517.00	84.52%	1	Poor

Changes in market clearing prices due to additional PENs that were validated and submitted after the issuance of Preliminary Settlement Statements, affected net settlement surplus (NSS) allocation values resulting to low accuracy ratings for the Preliminary Settlement Statements. Further, errors in the BCQs attributable to the MO contributed to the low score.

An NCPAR on the low ratings for the 4Q 2013 and 1Q 2014 periods to facilitate the improvement of Preliminary statements accuracy. As agreed between the TOD, which prices are inputs to settlements, and CSD-BSMD, the TOD will strengthen its internal monitoring of PENs and, in coordination with the ISTD, the TOD and CSD-BSMD will enhance the programs/software tools used in Pricing and in Billing/Settlements. Due to the coordination among said departments, the rating in 3Q 2014 increased significantly to Very Satisfactory.

On the other hand, the MO also rated Excellent in the accuracy of final settlements, as shown in Table 23. However, the noted decline in the accuracy of final settlement statements in 2Q 2013 is due to the final settlement adjustment due to changes in meter data of Petron (See next Section 3.5.3, Frequency of Adjustments in Final Settlement Calculations).

Table 23. Accuracy of Final Settlement Statements

Monitoring Period	Billing Period	$\Sigma$ Participants' Accuracy Value per Invoice	No. of Participants' Invoice	Actual Accuracy Rating	Score	Description
4Q 2013	87	175.00	175.00	100.00%	4	Very Satisfactory
	88	172.61	176.00	98.07%		
	89	179.00	179.00	100.00%		
		526.61	530.00	99.36%		
1Q 2014	90	178.00	178.00	100.00%	5	Excellent
	91	181.00	181.00	100.00%		
	92	181.00	181.00	100.00%		
		540.00	540.00	100.00%		
2Q 2014	93	182.00	182.00	100.00%	4	Very Satisfactory
	94	182.00	182.00	100.00%		
	95	180.97	183.00	98.89%		
		544.97	547.00	99.63%		
3Q 2014	96	186.00	186.00	100.00%	5	Excellent
	97	190.00	190.00	100.00%		
	98	191.00	191.00	100.00%		
		189.00	189.00	100.00%		
4Q 2013 - 3Q 2014		1,800.57	1,806.00	99.70%	5	Excellent

The adjustments identified in the next section provides the details of the decrease in accuracy during the 4Q 2013 and 2Q 2014.

### 3.5.3. Frequency of Adjustments in Final Settlement Calculations

Final settlement statements are also evaluated according to the number of adjustments in the final settlement calculations with the target being less than 12 adjustments per year.

There have been 2 adjustments in the Final Settlement Statements for the period 4Q 2013 – 3Q 2014.

For 4Q 2013, adjustment in the final settlement calculations was due to error in the bilateral contract quantities as inputted by the MO in the 88th billing period. In 2Q 2014, the issuance of adjusted settlement statement was due to the imposition of Secondary cap for one interval on 21 May 2014 (Interval 9).

### Monitoring Results

With the above adjustments in the final settlement statements, the MO has achieved its target of incurring 12 or lesser adjustments in the final statements. As provided in Table 24, the MO performance for this measure is Excellent.

Table 24. Final Settlement Adjustments

Monitoring Period	Performance			
	Target	Actual	Score	Description
4Q 2013	≤ 6	1	5	Excellent
1Q 2014		0	5	Excellent
2Q 2014		1	5	Excellent
3Q 2014		0	5	Excellent
4Q 2013 - 3Q 2014		2	5	Excellent

### 3.5.4. Timeliness of Meter Data Error Detection

The MO is also evaluated in terms of its ability to detect meter data errors through the timely issuance of Meter Trouble Reports (MTRs) within 4 calendar days after receipt of meter data from the MSP.

The MO receives daily MQ electronically in Meter Data Exchange Format (MDEF – a software format) and monthly MQ via compact disc (CD) in Excel format from the MSP. The daily meter quantity (MQ) is used for daily monitoring, processing and validation while the formatted-excel MQ is used for monthly settlement in the WESM. In cases where there exists orphan<sup>17</sup> meter data and meter data with uncertain and missing values<sup>18</sup>, the MO will issue an MTR to the MSP. In turn, the MSP should issue the corrected daily meter data within 10 calendar days and monthly meter data within 2 business days.<sup>19</sup>

#### Monitoring Results

As provided in Table 25, the MO was able to issue MTR's as scheduled (see Appendix E for details).

Table 25. Meter Data Error Detection by MO

Monitoring Period	Performance			
	Target	Actual	Score	Description
4Q 2013	98%	100%	5	Excellent
1Q 2014		100%	5	Excellent
2Q 2014		100%	5	Excellent
3Q 2014		100%	5	Excellent
4Q 2013 - 3Q 2014		100%	5	Excellent

### 3.5.5. Timeliness of Monetary Transactions and Remittance Efficiency

As provided in the MOPS and the WESM Billing and Settlements Manual, all monetary transactions must be remitted to WESM Members in accordance to the WESM settlement timetable, i.e. no later than 3:00 p.m. on the next business day following the day on which the MO is to be paid.

#### Monitoring Results

Table 26 provides that the MO was able to remit all payments received to the market participants on time. Details are provided in Appendix E.

<sup>17</sup> Values of the metered data whose meter is not registered in the MMS master lists are known as the "Orphan Values" (Section 7.3.2.3 of the WESM Manual on Metering Standards and Procedures).

<sup>18</sup> Section 7.3.4 of the WESM Manual on Metering Standards and Procedures

<sup>19</sup> Section 10.4.1.3-4 of the WESM Manual on Metering Standards and Procedures

Table 26. Monetary Transactions Timeliness and Remittance Efficiency

Monitoring Period	Timeliness				Remittance Efficiency			
	Target	Actual	Score	Description	Target	Actual	Score	Description
4Q 2013	0 days delayed in remittance	0	5	Excellent	100%	5	Excellent	5
1Q 2014		0	5	Excellent	100%	5	Excellent	5
2Q 2014		0	5	Excellent	100%	5	Excellent	5
3Q 2014		0	5	Excellent	100%	5	Excellent	5
4Q 2013 - 3Q 2014		0	5	Excellent	100%	5	Excellent	5

### 3.5.6. Timeliness of Margin Calls

In accordance with the WESM Rules, the MO should verify whether each market participant has sufficient levels of prudential support to cover their financial trading activity in the spot market. If the actual exposure of a Market Participant exceeds its trading limit, then the MO shall issue a "Margin Call" to the Market Participant. As provided in the MOPS, the MO shall be evaluated according to the timeliness of issuing a notice for margin call to relevant WESM Member.

It may be recalled that the PEM Board, in its Resolution No. 2010-14 dated 24 February 2010, approved the adoption of the 12 month rolling average in the determination of the appropriate maximum net exposure in relation to fixing of the trading participants' prudential requirement.

In compliance with the said Board approval, monitoring of trading limit and prudential security is conducted monthly. The MO target of issuance is on or before the 20<sup>th</sup> of the next month after the billing period, i.e. for the billing month 26 January 2014 to 25 February 2014, margin calls should have been issued on or before 20 March 2014.

### Monitoring Results

The MO exceeded its target rating of 95% with the rating of 100% timely issuances of margin calls, as shown in Table 27 while further details are in Appendix E.

Table 27. Margin Calls

Monitoring Period	Performance			
	Target	Actual	Score	Description
4Q 2013	95%	100%	5	Excellent
1Q 2014		100%	5	Excellent
2Q 2014		100%	5	Excellent
3Q 2014		100%	5	Excellent
4Q 2013 - 3Q 2014		100%	5	Excellent

### 3.5.7. Findings and Recommendations

The MO retained its excellent performance in providing billing, settlement and accounts management services to the market participants in 4Q 2013 – 3Q 2014, except for the accuracy of Preliminary Settlement Statements.

In consideration of the lower accuracy ratings, the close coordination between the TOD and CSD-BSMD, with the assistance of the ISTD, is highly recommended.

### 3.5.8. PEMC Action Plans

As provided in the accomplished NCPAR on the low accuracy rating of Preliminary Settlement Statements, the MO will strengthen its internal monitoring of PENs and the programs/software tools used in Pricing and in Billing/Settlements. Further, the TOD and CSD-BSDM will continue to closely coordinate to ensure the accuracy of final market prices.

### 3.6. Registration and Customer Relations

This category evaluates the MO in relation to its efficiency in addressing the concerns and requests of external parties, which may directly influence the perception of the market participants on PEMC as an organization, and WESM as a venue for trading electricity.

In summary, the ratings for the 5 sub-categories under this major category are provided below.

Table 28. Registration and Customer Relations Performance Ratings for 4Q 2013 – 3Q 2014

Section	Sub-Category	Target	Actual		Score	Description
3.6.1	Timeliness of Processing Registration Applications	95%	100%	20 WESM registration applications processed on schedule	5	Excellent
3.6.2	Timeliness of the conduct of Participant Trainings	95%	100%	75 trainings conducted on schedule	5	Excellent
3.6.3	Participant's Feedback re: Training	≥ 90%	95.94%		4	Very Satisfactory
3.6.4	Timeliness in addressing Participant Queries and Data Requests	95%	99.05%	313 out of 316 queries/requests processed on time	5	Excellent
3.6.5	Timeliness in addressing Participant/ Customer Complaints	95%	100%	139 valid complaints processed on time	5	Excellent

#### 3.6.1. Timeliness in the Registration Processing

The process of registration of the WESM participants under the WESM Rules, as amended, shall be according to the following timeline:

- Within 5 working days of receiving an application, the MO shall advise the applicant of any further information which the MO reasonably considers to be required to properly assess the application (WESM Rules, Clause 2.5.3.1);
- The MO shall send written notice of approval to the applicant within 15 working days from receipt of the application or the additional information or fees, if any;
- The registration of the applicant shall take effect on the date specified in the notice of approval which shall be a date not more than 7 working days after the date on which the MO sends the notice of approval.

It may be recalled that the timeline for registration processing was determined based on “business days”, or any day that the spot market is open for business. This timeline was amended, through DOE Circular 2013-03-005 dated 22 March 2013 and effective 05 April 2013, to “working days”, or a day (excluding Saturdays and Sundays) on which banks and financial institutions are open in the city nor municipality where the principal offices of the MO are located<sup>20</sup>.

### Monitoring Results

In consideration of the above timelines, the MO exceeded its target of 95% with an annual rating of 100% as provided in Table 29. All of the complete WESM applications received were processed on time (see Appendix F).

Table 29. Timeliness of Processing Registration Applications

Monitoring Period	Total registration application	Registration applications processed on time	Performance			
			Target	Actual	Score	Description
4Q 2013	2	2	95%	100%	5	Excellent
1Q 2014	3	3		100%	5	Excellent
2Q 2014	8	8		100%	5	Excellent
3Q 2014	7	7		100%	5	Excellent
4Q 2013 - 3Q 2014	20	20		100%	5	Excellent

### 3.6.2. Timeliness in the Conduct of Training

In 4Q 2013 – 3Q 2014, 77 trainings for WESM Participants and interested parties from the academe, government agencies, and international organizations were conducted by the MO. The types of trainings conducted by the MO are provided below.

Table 30. Trainings Conducted

Category	Number of Trainings				
	4Q 2013	1Q 2014	2Q 2014	3Q 2014	4Q 2013 - 3Q 2014
WESM 101 Trainings / Basic WESM Training	3	3	6	6	18
WESM Orientations	5	4	6	9	24
Advanced WESM Trainings (i.e. Hands-on)	1	1	2	1	5
RCOA Trainings	4	2	4	3	13
Reserve Market Trainings		7	6	2	15
Total	13	17	24	21	75

### Monitoring Results

The abovementioned trainings were all conducted on time thus the 100% rating in Table 31.

<sup>20</sup> Glossary, WESM Rules

Table 31. Timeliness of Trainings Conducted

Monitoring Period	Performance			
	Target	Actual	Score	Description
4Q 2013	100%	100%	5	Excellent
1Q 2014		100%	5	Excellent
2Q 2014		100%	5	Excellent
3Q 2014		100%	5	Excellent
4Q 2013 - 3Q 2014		100%	5	Excellent

### 3.6.3. Participants Feedback on Trainings

To gauge the participants' appreciation of the trainings conducted by the MO, participants are requested to accomplish survey forms to rate the trainer/speaker and other aspects of the training (i.e. logistics and materials).

#### Monitoring Results

As provided in Table 32, the MO exceeded its target performance for this category.

Table 32. Participants' Feedback on Trainings Conducted

Monitoring Period	Performance			
	Target	Actual	Score	Description
4Q 2013	≥ 90%	96.04%	4	Very Satisfactory
1Q 2014		95.10%	4	Very Satisfactory
2Q 2014		96.32%	4	Very Satisfactory
3Q 2014		96.30%	4	Very Satisfactory
4Q 2013 - 3Q 2014		95.94%	4	Very Satisfactory

### 3.6.4. Participant Queries and Data requests

The MOPS requires the MO to address queries and data requests in a timely manner. Queries and data requests may include requests for historical data, clarifications regarding WESM concepts and requests for in-depth analysis or simulations.

#### Monitoring Results

The MO received a total of 316 queries/data requests and addressed 313 of these within the allotted time schedule, as provided in Table 33. A breakdown of queries/data requests, per category, is provided in Appendix F.

Table 33. Timeliness in addressing Requests/Queries

Monitoring Period	Total Queries and Data Requests	Queries and Data Requests addressed on time	Performance			
			Target	Actual	Score	Description
4Q 2013	68	68	95%	100%	5	Excellent
1Q 2014	62	61		98.39%	5	Excellent
2Q 2014	101	99		98.02%	5	Excellent
3Q 2014	85	85		100%	5	Excellent
4Q 2013 - 3Q 2014	316	313		99.05%	5	Excellent

### 3.6.5. Participant/Customer Complaint

The MOPS provides that complaints by customers (WESM Members, DOE and ERC) should be resolved in a timely manner, i.e. within 5 working days.

The number of valid complaints received are provided in Table 34 and grouped according to MO points of service. The most number of complaints received are related to the MO's IT systems, particularly the MPI and public WESM website, which are the main interface of the MO with the market participants.

Table 34. Number of Valid Complaints in 4Q 2013 – 3Q 2014

MO Services	4Q 2013	1Q 2014	2Q 2014	3Q 2014	4Q 2013 – 3Q 2014
Public WESM website Availability					
MPI Availability	9	17	16	32	74
WBSS Availability	2	4	1	4	11
MMS Pricing and Scheduling Results	2		1	1	4
Publications (MPI & Public WESM Website)	13	17	12	8	50
Total	26	38	30	45	139

### Monitoring Results

The MO was able to address all complaints within the required timeline. As shown in Table 35, the MO rated 100%, or Excellent, for this measure.

Table 35. Number of Valid Complaints in 4Q 2013 – 3Q 2014

Monitoring Period	Performance			
	Target	Actual	Score	Description
4Q 2013	95%	100%	5	Excellent
1Q 2014		100%	5	Excellent
2Q 2014		100%	5	Excellent
3Q 2014		100%	5	Excellent
4Q 2013 - 3Q 2014		100%	5	Excellent

### 3.6.6. Findings and Recommendations: Registration and Customer Relations

The MO has met all performance targets in relation to providing customer service and participant support. To further improve its performance in this area, particularly in addressing and monitoring queries/data requests and complaints, the close coordination within the MO is recommended to ensure timely resolution and also minimize duplication in monitoring.

### 3.6.7. PEMC Action Plans: Registration and Customer Relations

PEMC will be implementing an online ticketing system that is expected to facilitate submission of queries/data requests and complaints by WESM members and other external parties, and the timely resolution and monitoring of such submissions by the relevant PEMC departments.

## 4. Over-all MO Performance

The MO performance ratings for the period 26 September 2013 to 25 September 2014 are summarized in Table 36.

Table 36. Summary of MO Performance Scores

Section	Sub-Category	Target	Actual	Score	Description	
<b>IT SYSTEMS</b>						
3.1.1	Market Management Systems Availability	99.80%	8,742.48 hrs out of 8,760 hrs	99.94%	8,754.55 hrs; 5.45 hrs downtime (35 instances)	5 Excellent
3.1.2	WESM Website Availability	99.50%	8,716.20 hrs out of 8,760 hrs	99.99%	8,758.95; 1.05 hrs downtime (3 instances)	5 Excellent
<b>MARKET REPORTS AND DATA PUBLICATION</b>						
3.2.1	Availability of Market Reports and Data Publication	95% (36 publications)	99.95% 33 publications 3 publications are excluded  33 scored $\geq$ 95%	4	Very Satisfactory	
3.2.1	Timeliness of Market Reports and Data Publication	95% (22 publications)	98.25% 18 publications 4 publications are excluded  15 scored $\geq$ 95%; 3 scored <95%	4	Very Satisfactory	
<b>FORECAST ACCURACY</b>						
3.3.1	RTD Forecast – MAPE	$\leq$ 0.95%	Luzon	0.89%	4	Very Satisfactory
			Visayas	1.15%	2	Needs Improvement
	RTD Forecast - FAR	$\geq$ 97.20%	Luzon	98.17%	4	Very Satisfactory
			Visayas	94.25%	1	Poor
3.3.2	DAP Forecast - MAPE	$\leq$ 2.20%	Luzon	1.45%	4	Very Satisfactory
			Visayas	2.23%	2	Needs Improvement
<b>DISPATCH SCHEDULING AND PRICING</b>						
3.4.1	RTD Workflow Successful Run	99.75%	100.00%	8,756 out of 8,756 intervals	5	Excellent
3.4.2	RTX Workflow Successful Run	99.75%	99.99%	8,757 out of 8,758 intervals	5	Excellent
3.4.3	Timeliness of Pricing Errors and Market Re-runs	99.50%	99.98%	1 late PEN	5	Excellent
3.4.4	Number of Market Intervention (MI) Attributable to MO	$\leq$ 19	0 MO-attributable MI		5	Excellent
<b>BILLING AND SETTLEMENTS</b>						
3.5.1	Timeliness of Preliminary and Final Settlement Statements	98%	100%	0 late statement	5	Excellent
3.5.2	Accuracy of Preliminary Settlement Calculations	95%	84.52%		1	Poor
	Accuracy of Final	99%	99.70%		4	Very

Section	Sub-Category	Target	Actual		Score	Description
	Settlement Calculations					Satisfactory
3.5.3	Frequency of Final Settlement Adjustments	≤ 12	2		5	Excellent
3.5.4	Timeliness of Meter Data Error Detection	98%	100%	0 late MTRs	5	Excellent
3.5.5	Timeliness of Monetary Transactions	0 days late	0 days late		5	Excellent
	Remittance Efficiency	100%	100%	0 late remittances	5	Excellent
3.5.6	Timeliness of Margin Call	95%	100%	0 late margin calls	5	Excellent
<b>REGISTRATION AND CUSTOMER RELATIONS</b>						
3.6.1	Timeliness of Processing Registration Applications	95%	100%	20 WESM registration applications processed on schedule	5	Excellent
3.6.2	Timeliness of the conduct of Participant Trainings	95%	100%	75 trainings conducted on schedule	5	Excellent
3.6.3	Participant's Feedback re: Training	≥ 90%	95.94%		4	Very Satisfactory
3.6.4	Timeliness in addressing Participant Queries and Data Requests	95%	99.05%	313 out of 316 queries/requests processed on time	5	Excellent
3.6.5	Timeliness in addressing Participant/ Customer Complaints	95%	100%	139 valid complaints processed on time	5	Excellent
<b>TOTAL</b>					4.31	Very Satisfactory

Table 37 provides the equivalent ratings as computed using the weight and equivalent score for each category for the year while the quarterly ratings are provided in Table 38.

Table 37. MO Performance for 4Q 2013 - 3Q 2014

Category	Measure	Rating System	Weight (%)	Target	Score/Rating for 4Q 2013 – 3Q 2014			
					Actual	Equiv. Score	Score Description	Rating (Weight x Equiv. Score)
<b>IT Systems (20%)</b>								
Market Management Systems	Availability	RS 2a	15	99.80%	99.94%	5	Excellent	0.75
WESM Website	Availability	RS 2a	5	99.50%	99.99%	5	Excellent	0.25
<b>Market Reports and Data Publication (15%)</b>								
	Availability	RS 3	5	95%	99.95%	4	Very Satisfactory	0.20
	Timeliness	RS 3	10	95%	98.25%	4	Very Satisfactory	0.40
<b>Forecast Accuracy (20%)</b>								
RTD Forecast - MAPE	Accuracy (L)	RS 4	3.75	≤ 0.95%	0.89%	4	Very Satisfactory	0.15
	Accuracy (V)		3.75		1.15%	2	Needs Improvement	0.08
RTD Forecast - FAR	Accuracy (L)	RS 2	3.75	≥ 97.20%	98.17%	4	Very Satisfactory	0.15
	Accuracy (V)		3.75		94.25%	1	Poor	0.04
DAP Forecast - MAPE	Accuracy (L)	RS 4	2.5	≤ 2.20%	1.45%	4	Very Satisfactory	0.10

Category	Measure	Rating System	Weight (%)	Target	Score/Rating for 4Q 2013 – 3Q 2014			
					Actual	Equiv. Score	Score Description	Rating (Weight x Equiv. Score)
	Accuracy (V)		2.5		2.23%	2	Needs Improvement	0.05
<b>Dispatch Scheduling and Pricing (20%)</b>								
RTD Workflow	Successful Run	RS 2a	2.5	99.75%	100.00 %	5	Excellent	0.13
RTX Workflow	Successful Run	RS 2a	2.5	99.75%	99.99%	5	Excellent	0.13
Pricing Errors and Market Re-runs	Timeliness	RS 2a	5	99.50%	99.98%	5	Excellent	0.25
Market Intervention Attributable to MO	Duration	RS 4a	10	≤ 19	0	5	Excellent	0.50
<b>Billings, Settlements and Accounts Management (15%)</b>								
Preliminary and Final Settlement Statements	Timeliness	RS 2a	2	98%	100%	5	Excellent	0.10
Preliminary Settlement Calculations	Accuracy	RS 2a	2	95%	84.52%	1	Poor	0.02
Final Settlement Calculations	Accuracy	RS 2a	3	99%	99.70%	5	Excellent	0.15
	Frequency	RS 4a	2	≤ 6	2	5	Excellent	0.10
Meter Data Error Detection	Timeliness	RS 2a	2	98%	100%	5	Excellent	0.10
Monetary Transactions	Efficiency	RS 1	1	100%	100%	5	Excellent	0.05
	Timeliness	RS 1a	1	0 late	0	5	Excellent	0.05
Margin Call	Timeliness	RS 2a	2	95%	100%	5	Excellent	0.10
<b>Registration and Customer Relations (10%)</b>								
Registration	Timeliness	RS 3	2	95%	100%	5	Excellent	0.10
Participant Training	Timeliness	RS 3	2	95%	100%	5	Excellent	0.10
	Feedback	RS 2a	2	≥ 90%	95.94%	4	Very Satisfactory	0.08
Participant Queries and Data Requests	Timeliness	RS 2a	2	95%	99.05%	5	Excellent	0.10
Participant/ Customer Complaints	Timeliness	RS 3	2	95%	100%	5	Excellent	0.10
<b>MO Rating for the Period (Σ of Weight x Rating) ~ out of 5.00</b>							<b>Very Satisfactory</b>	<b>4.31</b>

Table 38. MO Performance Ratings per Category for 4Q 2013, 1Q 2014, 2Q 2014 and 3Q 2014

Category	Measure	Rating System	Weight (%)	Target	Score/Rating for 4Q 2013				Score/Rating for 1Q 2014				Score/Rating for 2Q 2014				Score/Rating for 3Q 2014			
					Actual	Equiv Score	Score Description	Rating	Actual	Equiv Score	Score Description	Rating	Actual	Equiv Score	Score Description	Rating	Actual	Equiv Score	Score Description	Rating
<b>IT Systems (20%)</b>																				
Market Management Systems	Availability	RS 2a	15	99.80%	99.96%	5	Excellent	0.75	99.99%	5	Excellent	0.75	99.97%	5	Excellent	0.75	99.83%	3	Satisfactory	0.45
WESM Website	Availability	RS 2a	5	99.50%	100%	5	Excellent	0.25	99.97%	5	Excellent	0.25	99.98%	5	Excellent	0.25	100%	5	Excellent	0.25
<b>Market Reports and Data Publication (15%)</b>																				
	Availability	RS 3	5	95%	99.95%	4	Very Satisfactory	0.20	99.86%	4	Very Satisfactory	0.20	99.96%	4	Very Satisfactory	0.20	100%	5	Excellent	0.25
	Timeliness	RS 3	10	95%	94.92%	3	Satisfactory	0.30	97.89%	4	Very Satisfactory	0.40	99.02%	4	Very Satisfactory	0.40	99.51%	4	Very Satisfactory	0.40
<b>Forecast Accuracy (20%)</b>																				
RTD Forecast - MAPE	Accuracy (L)	RS 4	3.75	≤ 0.95%	0.87%	4	Very Satisfactory	0.15	0.89%	4	Very Satisfactory	0.15	0.89%	4	Very Satisfactory	0.15	0.90%	4	Very Satisfactory	0.15
	Accuracy (V)		3.75		1.15%	2	Needs Improvement	0.08					1.13%	2	Needs Improvement	0.08	1.17%	2	Needs Improvement	0.08
RTD Forecast - FAR	Accuracy (L)	RS 2	3.75	≥ 97.20%	98.19%	4	Very Satisfactory	0.15	98.32%	4	Very Satisfactory	0.15	98.30%	4	Very Satisfactory	0.15	97.83%	4	Very Satisfactory	0.15
	Accuracy (V)		3.75		94.35%	1	Poor	0.04					94.50%	1	Poor	0.04	93.96%	1	Poor	0.04
DAP Forecast - MAPE	Accuracy (L)	RS 4	2.5	≤ 2.20%	1.54%	4	Very Satisfactory	0.10	1.49%	4	Very Satisfactory	0.10	1.29%	4	Very Satisfactory	0.10	1.49%	4	Very Satisfactory	0.10
	Accuracy (V)		2.5		1.88%	4	Very Satisfactory	0.10					2.64%	2	Needs Improvement	0.05	1.99%	4	Very Satisfactory	0.10
<b>Dispatch Scheduling and Pricing (20%)</b>																				
RTD Workflow	Successful Run	RS 2	2.5	99.75%	100%	5	Excellent	0.13												
RTX Workflow	Successful Run	RS 2	2.5	99.75%	100%	5	Excellent	0.13	99.95%	5	Excellent	0.13	100%	5	Excellent	0.13	100%	5	Excellent	0.13
Pricing Errors and Market Re-runs	Timeliness	RS 2	5	99.50%	100%	5	Excellent	0.25	99.87%	5	Excellent	0.25	100%	5	Excellent	0.25	100%	5	Excellent	0.25
Market Intervention Attributable to MO	Duration	RS 4	10	≤ 19	0	5	Excellent	0.50												
<b>Billings, Settlements and Accounts Management (15%)</b>																				
Preliminary and Final Settlement Statements	Timeliness	RS 2	2	98%	100%	5	Excellent	0.10												
Preliminary Settlement Calculations	Accuracy	RS 2	2	95%	89.94%	1	Poor	0.02	89.81%	1	Poor	0.02	70.77%	1	Poor	0.02	95.41%	3	Satisfactory	0.06
Final Settlement	Accuracy	RS 2	3	99%	99.36%	4	Very Satisfactory	0.12	100.00%	5	Excellent	0.15	99.63%	4	Very Satisfactory	0.12	100.00%	5	Excellent	0.15

Category	Measure	Rating System	Weight (%)	Target	Score/Rating for 4Q 2013				Score/Rating for 1Q 2014				Score/Rating for 2Q 2014				Score/Rating for 3Q 2014			
					Actual	Equiv Score	Score Description	Rating	Actual	Equiv Score	Score Description	Rating	Actual	Equiv Score	Score Description	Rating	Actual	Equiv Score	Score Description	Rating
Calculations	Frequency	RS 4	2	≤ 6	1	5	Excellent	0.10	0	5	Excellent	0.10	1	5	Excellent	0.10	0	5	Excellent	0.10
Meter Data Error Detection	Timeliness	RS 2	2	98%	100%	5	Excellent	0.10	100%	5	Excellent	0.10	100%	5	Excellent	0.10	100%	5	Excellent	0.10
Monetary Transactions	Timeliness	RS 1	1	100%	100%	5	Excellent	0.05	100%	5	Excellent	0.05	100%	5	Excellent	0.05	100%	5	Excellent	0.05
		RS 1	1	0 late	0	5	Excellent	0.05	0	5	Excellent	0.05	0	5	Excellent	0.05	0	5	Excellent	0.05
Margin Call	Timeliness	RS 2	2	95%	100%	5	Excellent	0.10	100%	5	Excellent	0.10	100%	5	Excellent	0.10	100%	5	Excellent	0.10
<b>Registration and Customer Relations (10%)</b>																				
Registration	Timeliness	RS 3	2	95%	100%	5	Excellent	0.10	100%	5	Excellent	0.10	100%	5	Excellent	0.10	100%	5	Excellent	0.10
Participant Training	Timeliness	RS 3	2	95%	100%	5	Excellent	0.10	100%	5	Excellent	0.10	100%	5	Excellent	0.10	100%	5	Excellent	0.10
	Feedback	RS 2	2	≥ 90%	96.04%	4	Very Satisfactory	0.08	95.10%	4	Very Satisfactory	0.08	96.32%	4	Very Satisfactory	0.08	96.30%	4	Very Satisfactory	0.08
Participant Queries and Data Requests	Timeliness	RS 2	2	95%	100%	5	Excellent	0.10	98.39%	5	Excellent	0.10	98.02%	4	Very Satisfactory	0.08	100%	5	Excellent	0.10
Participant/ Customer Complaints	Timeliness	RS 3	2	95%	100%	5	Excellent	0.10	100%	5	Excellent	0.10	100%	5	Excellent	0.10	100%	5	Excellent	0.10
<b>MO Rating for the Period (Σ of Weight x Rating)</b>									~ out of 4.90		Very Satisfactory		4.15							
									Transposed Score ~ out of 5.00		Very Satisfactory		4.23 <sup>21</sup>							
									Very Satisfactory		4.26									

<sup>21</sup> It is noted that the Forecast Accuracy measure for Visayas is excluded for 1Q 2014 because of the Market Suspension declared by the ERC due to Typhoon Yolanda. In this regard, the overall perfect MOPS score of 5.00 is reduced by 2% (0.10), which is the equivalent weight of the said measure, thus becoming 4.90. On the other hand, the MO rating for the period is transposed to its equivalent with the overall perfect MOPS score remaining at 5.00. Thus, the MO's performance as of 1Q 2014 is Very Satisfactory, which is equivalent to 4.15 out of 4.90; or 4.23 out of 5.00.

## Appendix A. Rating System References<sup>22</sup>

MO Performance Category	Measure	Rating System	Target	Ranges				
				Excellent 5	Very Satisfactory 4	Satisfactory 3	Needs Improvement 2	Poor 1
<b>IT Systems (20%)</b>								
Market Management Systems	Availability	RS 2a	99.80%	$99.93\% \leq x \leq 100\%$	$99.87\% \leq x < 99.93\%$	$99.80\% \leq x < 99.87\%$	$99.80\% > x \geq 99.73\%$	$99.73\% > x$
WESM Website	Availability	RS 2a	99.50%	$99.83\% \leq x \leq 100\%$	$99.67\% \leq x < 99.83\%$	$99.50\% \leq x < 99.67$	$99.50\% > x \geq 99.33\%$	$99.33\% > x$
<b>Market Reports and Data Publication (15%)</b>	Availability	RS 3	95%	=100%	$95\% \leq x < 100\%$	$90\% \leq x < 95\%$	$85\% \leq x < 90\%$	$x < 85\%$
	Timeliness	RS 3	95%	=100%	$95\% \leq x < 100\%$	$90\% \leq x < 95\%$	$85\% \leq x < 90\%$	$x < 85\%$
<b>Forecast Accuracy (20%)</b>								
RTD Forecast - MAPE	Accuracy	RS 4	$\leq 0.95\%$	$0.475\% > x \geq 0$	$0.95\% > x \geq 0.475\%$	= 0.95%	$0.95\% < x \leq 1.425\%$	$1.425\% < x$
RTD Forecast - FAR	Accuracy	RS 2	$\geq 97.20\%$	$98.60\% < x \leq 100\%$	$97.20\% < x \leq 98.60\%$	= 97.20%	$97.20\% > x \geq 95.80\%$	$95.80\% > x$
DAP Forecast - MAPE	Accuracy	RS 4	$\leq 2.20\%$	$1.10\% > x \geq 0$	$2.20\% > x \geq 1.10\%$	= 2.20%	$2.20\% < x \leq 3.30\%$	$3.30\% < x$
<b>Dispatch Scheduling and Pricing (20%)</b>								
RTD Workflow	Successful Run	RS 2a	99.75%	$99.92\% \leq x \leq 100\%$	$99.83\% \leq x < 99.92\%$	$99.75\% \leq x < 99.83\%$	$99.75\% > x \geq 99.67\%$	$99.67\% > x$
RTX Workflow	Successful Run	RS 2a	99.75%	$99.92\% \leq x \leq 100\%$	$99.83\% \leq x < 99.92\%$	$99.75\% \leq x < 99.83\%$	$99.75\% > x \geq 99.67\%$	$99.67\% > x$
Pricing Errors and Market Re-runs	Timeliness	RS 2a	99.50%	$99.83\% \leq x \leq 100\%$	$99.67\% \leq x < 99.83\%$	$99.50\% \leq x < 99.67\%$	$99.50\% > x \geq 99.33\%$	$99.33\% > x$
Market Intervention Attributable to MO	Duration	RS 4a	$\leq 19$	$6 \geq x \geq 0$	$13 \geq x > 6$	$19 \geq x > 13$	$19 < x \leq 25$	$25 < x$
<b>Billings, Settlements and Accounts Management (15%)</b>								
Preliminary and Final Settlement Statements	Timeliness	RS 2a	98%	$99.33\% \leq x \leq 100\%$	$98.67\% \leq x < 99.33\%$	$98\% \leq x < 98.67\%$	$98\% > x \geq 97.33\%$	$97.33\% > x$
Preliminary Settlement Calculations	Accuracy	RS 2a	95%	$98.33\% \leq x \leq 100\%$	$96.67\% \leq x < 98.33\%$	$95\% \leq x < 96.67\%$	$95\% > x \geq 93.33\%$	$93.33\% > x$
Final Settlement Calculations	Accuracy	RS 2a	99%	$99.67\% \leq x \leq 100\%$	$99.33\% \leq x < 99.67\%$	$99\% \leq x < 99.33\%$	$99\% > x \geq 98.67\%$	$98.67\% > x$
	Frequency	RS 4a	$\leq 6$	$2 \geq x \geq 0$	$4 \geq x > 2$	$6 \geq x > 4$	$6 < x \leq 8$	$8 < x$
Meter Data Error Detection	Timeliness	RS 2a	98%	$99.33\% \leq x \leq 100\%$	$98.67\% \leq x < 99.33\%$	$98\% \leq x < 98.67\%$	$98\% > x \geq 97.33\%$	$97.33\% > x$
Monetary Transactions	Remittance Efficiency	RS 1	100%	= 100%				$x < 100\%$
	Timeliness	RS 1a	0	=0				$x > 0$
Margin Call	Timeliness	RS 2a	95%	$98.33\% \leq x \leq 100\%$	$96.67\% \leq x < 98.33\%$	$95\% \leq x < 96.67\%$	$95\% > x \geq 93.33\%$	$93.33\% > x$

<sup>22</sup> Refer to the MO Performance Standards Scoring System, Section 9, PEMC-MOPS-002

MO Performance Category	Measure	Rating System	Target	Ranges				
				Excellent 5	Very Satisfactory 4	Satisfactory 3	Needs Improvement 2	Poor 1
<b>Registration and Customer Relations (10%)</b>								
Registration	Timeliness	RS 3	95%	= 100%	$95\% \leq x < 100\%$	$90\% \leq x < 95\%$	$85\% \leq x < 90\%$	$x < 85\%$
Participant Training	Timeliness	RS 3	95%	= 100%	$95\% \leq x < 100\%$	$90\% \leq x < 95\%$	$85\% \leq x < 90\%$	$x < 85\%$
	Feedback	RS 2a	90%	$96.67\% \leq x \leq 100\%$	$93.33\% \leq x < 96.67\%$	$90\% \leq x < 93.33\%$	$90\% > x \geq 86.67\%$	$86.67\% > x$
Participant Queries and Data Requests	Timeliness	RS 2a	95%	$98.33\% \leq x \leq 100\%$	$96.67\% \leq x < 98.33\%$	$95\% \leq x < 96.67\%$	$95\% > x \geq 93.33\%$	$93.33\% > x$
Participant/ Customer Complaints	Timeliness	RS 3	95%	= 100%	$95\% \leq x < 100\%$	$90\% \leq x < 95\%$	$85\% \leq x < 90\%$	$x < 85\%$

## Appendix B. Observations on IT Systems

### B.1. MMS Downtimes

Date	Time of Incident	Time Resolved	Downtime in Minutes	Incident/s / Reference Incident Report	Nature of the Problem / Assessment
<b>4Q 2013</b>			<b>55.00 (0.93 hours)</b>		
1-Oct-13	2048H	2049H	1.00	1. MPI found to be inaccessible per ISTD routine checking (IR-1310-00890)	Application problem attributable to the IAS connection. IAS reading: 248 - Restarted MIAPPS
17-Oct-13	2009H	2011H	2.00	2. MPI found to be inaccessible per ISTD routine checking; While restarting MPIAPPS, participant cannot access MPI (IR-1310-00929)	Application problem attributable to the IAS connection. IAS reading: 160+ - Restarted MIAPPS
21-Oct-13	0946H	0948H	2.00	3. Participant (PSALM and Team Energy) cannot access secured website (IR-1310-00940)	Application problem attributable to the large number of users. - Restarted MIAPPS
25-Oct-13	1306H	1310H	4.00	4. MPI found to be inaccessible per ISTD routine checking (IR-1310-00951)	Application problem attributable to the large number of users. IAS reading: 200 - Restarted MIAPPS
30-Oct-13	2045H	2047H	2.00	5. MPI found to be inaccessible per ISTD routine checking (IR-1310-00964)	Application problem attributable to the large number of users. IAS reading: 300 - Restarted MIAPPS
2-Nov-13	2050H	2052H	2.00	6. Participant (Masinloc) cannot access secured website (IR-1311-00974)	Application problem attributable to the IAS connection. IAS reading: 258+ - Restarted MIAPPS
4-Nov-13	2111H	2113H	2.00	7. MPI found to be inaccessible per ISTD routine checking (IR-1311-00979)	Application problem attributable to the IAS connection. IAS reading: 300+ - Restarted MIAPPS
5-Nov-13	1748H	1751H	3.00	8. Participant (Aboitiz) cannot access secured website (IR-1311-00983)	Application problem attributable to the IAS connection. IAS reading: 300+ - Restarted MIAPPS
6-Nov-13	2045H	2050H	5.00	9. MPI found to be inaccessible per ISTD routine checking (IR-1311-00987)	Application problem attributable to the IAS connection. IAS reading: 300+ - Restarted MIAPPS
7-Nov-13	1605H	1607H	2.00	10. MPI found to be inaccessible per ISTD routine checking (IR-1311-00988)	Application problem attributable to the IAS connection. IAS reading: 370+ - Restarted MIAPPS
	1810H	1814H	4.00		Application problem attributable to the IAS connection. Restarted MIAPPS
	2111H	2114H	3.00		
11-Nov-13	1640H	1642	2.00	11. TOD cannot access secured website (IR-1311-00996)	Application problem attributable to the IAS connection. IAS reading: 193 - Restarted MIAPPS
18-Nov-13	2108H	2110H	2.00	12. MPI found to be inaccessible per ISTD routine checking (IR-1311-01021)	Application problem attributable to the IAS connection. IAS reading: 337 - Restarted MIAPPS
28-Nov-13	1309H	1314H	5.00	13. TOD and participant (1590 EC) cannot access secured website (IR-1311-01044)	Application problem attributable to the IAS connection. IAS reading: 327 - Restarted MIAPPS
	2104H	2106H	2.00	14. MPI found to be inaccessible per ISTD routine	Application problem attributable to the IAS

Date	Time of Incident	Time Resolved	Downtime in Minutes	Incident/s / Reference Incident Report	Nature of the Problem / Assessment
				checking; TOD report MPI is not accessible (IR-1311-01045)	connection. IAS reading: 335 - Restarted MIAPPS
2-Dec-13	0817H	0820H	3.00	15. TOD cannot access secured website (IR-1312-01048)	Application problem attributable to the IAS connection. IAS reading: 200 - Restarted MIAPPS
4-Dec-13	1506H	1508H	2.00	16. TOD cannot access secured website (IR-1312-01059)	Application problem attributable to the IAS connection. IAS reading: 216 - Restarted MIAPPS
15-Dec-13	1805H	1807H	2.00	17. TOD cannot access the secured website (IR-1312-1086)	Application problem attributable to the IAS connection. IAS reading: 200+ - Restarted MIAPPS
17-Dec-13	1515H	1517H	2.00	18. TOD cannot access the secured website (IR-1312-1091)	Application problem attributable to the IAS connection. IAS reading: 167 - Restarted MIAPPS
18-Dec-13	2120H	2122H	2.00	19. MPI found to be inaccessible per ISTD routine checking (IR-1312-01097)	Application problem attributable to the IAS connection. IAS reading: 384 - Restarted MIAPPS
22-Dec-13	1425H	1427H	2.00	20. TOD cannot access the secured website (IR-1312-1106)	Application problem attributable to the IAS connection. IAS reading: 302 - Restarted MIAPPS
<b>1Q 2014</b>			<b>9.00 (0.15 hours)</b>		
9-Jan-14	1740H	1742H	2.00	1. MPI found to be inaccessible per ISTD routine checking (IR-1401-00022)	Application problem attributable to the IAS connection. IAS reading: 300+ - Restarted MIAPPS
11-Jan-14	1420H	1422H	2.00	2. MPI found to be inaccessible per ISTD routine checking (IR-1401-00024)	Application problem attributable to the IAS connection. IAS reading: 271 - Restarted MIAPPS
15-Jan-14	1842H	1844H	2.00	3. Participant (SMEC) cannot access secured website (IR-1401-00034)	Application problem attributable to the IAS connection. - Restarted MIAPPS
15-Jan-14	1609H	1612H	3.00	4. MPI found to be inaccessible per ISTD routine checking (IR-1401-00033)	Application problem attributable to the IAS connection. IAS reading: 299 - Restarted MIAPPS
<b>2Q 2014</b>			<b>42.00 (0.70 hours)</b>		
21-Apr-14	2109H	2111H	2.00	1. Aboitiz cannot access the MPI (IR-1404-00282)	Application problem attributable to the IAS connection. IAS reading: 300 - Restarted MIAPPS
6-Jun-14	1430H	1508H	38.00	2. Participant cannot access MMS secured website MPI (IR-1406-00394)	MMSASST server not responding due to connection issue. Restarted the server.
9-Jun-14	0850H	0852H	2.00	3. Participants (i.e. 1590 EC and others) cannot access the MPI (IR-1406-00402)	Application problem attributable to the IAS connection. IAS reading: 250+ - Restarted MIAPPS
<b>3Q 2013</b>			<b>220.00 (3.67 hours)</b>		
8-Jul-14	1653H	1657H	4.00	1. MPI cannot be accessed (IR-1407-00477)	Application problem attributable to the IAS connection. IAS reading: 300+ - Restarted MIAPPS
12-Jul-14	1910H	1912H	2.00	2. Participants (i.e. 1590 EC, PSALM and Pagbilao) cannot access the MPI (IR-1407-00487)	Application problem attributable to the IAS connection. IAS reading: 300+ - Restarted MIAPPS
30-Aug-14	2041H	2043H	2.00	3. Participants (i.e. PSALM, Calaca and GN Power) cannot access the MPI (IR-1408-	Application problem attributable to the IAS connection. IAS reading: 200 - Restarted MIAPPS

Date	Time of Incident	Time Resolved	Downtime in Minutes	Incident/s / Reference Incident Report	Nature of the Problem / Assessment
				00612)	
1-Sep-14	1552H	1830H	158.00	4. Participants (i.e. 1590 EC and others) cannot access the Stl Website (IR-1409-00619)	Application problem – Restarted webserver
1-Sep-14	1110H	1112H	2.00	5. Participants (PSALM and Limay) cannot access the MPI (IR-1409-00616)	Application problem attributable to the IAS connection. IAS reading: 200 - Restarted MIAPPS
4-Sep-14	1712H	1714H	2.00	6. MPI found to be inaccessible per ISTD routine checking (IR-1409-00632)	Application problem attributable to the IAS connection. IAS reading: 300+ - Restarted MIAPPS
14-Sep-14	1600H	1610H	10.00	7. Participants (i.e. KSPC and others) cannot access the Stl Website (IR-1409-00665).	Database table space became almost full – Restarted webserver
16-Sep-14	1450H	1530H	40.00	8. Participants (i.e. PSALM and others) reported error while accessing the Stl Website (IR-1409-00673).	Page can't be displayed – Restarted webserver

## B.2. WESM Website Downtimes

Date	Time of Incident	Time Resolved	Downtime (in Minutes)	Incident/s / Reference Incident Report	Nature of the Problem / Assessment
<b>4Q 2013</b>			<b>0.00 (0 hours)</b>		
<b>1Q 2014</b>			<b>33.00 (0.55 hours)</b>		
20-Mar-14	1621H	1654H	33.00	1. No internet access in corporate network affecting the email and public website. (IR-1403-00200)	Hardware issue. Sonicwall 6500 was used to load backup configuration.
<b>2Q 2014</b>			<b>30.00 (0.50 hours)</b>		
28-Apr-14	0954H	0955H	1.00	1. Slow performance in querying graphs in public website.	Application issue. Restarted Apache
30-Apr-14	0349H	0418H	29.00	2. Participant (Masinloc) reported that the WESM public website cannot be accessed (IR-1404-00303)	Database issue / Reboot server
<b>3Q 2014</b>			<b>0.00 (0 hours)</b>		

## Appendix C. Observations on Market Data and Reports Publication

### List of Publication Requirements<sup>23</sup>

Required Publications	Location of Publication	4Q 2013		1Q 2014		2Q 2014		3Q 2014		4Q 2013 – 3Q 2014	
		Availability	Timeliness	Availability	Timeliness	Availability	Availability	Timeliness	Timeliness	Availability	Timeliness
1. Significant Variations Report	WESM website> Downloads>Significant Variations Report	100.00%	95.60%	100.00%	94.44%	100.00%	95.65%	100.00%	100.00%	100.00%	96.44%
2. Registration Fees	WESM website> Downloads> WESM Registration Guide & Forms	100.00%	-	100.00%	-	100.00%	-	100.00%	-	100.00%	-
3. Suspension Notice	WESM website>Notices> WESM Advisories; and Newspaper of general circulation	n/a	-	n/a	-	n/a	-	n/a	-	n/a	-
4. Details of Deregistration of Deregistered MSP	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
5. Formulation of MDOM (in the PDM Manual)	WESM website> Downloads> Price Determination Methodology	100.00%	n/a	100.00%	n/a	100.00%	n/a	100.00%	n/a	100.00%	n/a
6. MDOM Performance Standards	WESM website> Downloads> WESM Manuals> Dispatch Protocol Manual										
	WESM website> Downloads> Price Determination Methodology	100.00%	n/a	100.00%	n/a	100.00%	n/a	100.00%	n/a	100.00%	n/a
	WESM Website> Downloads> WESM										

<sup>23</sup> Publications marked with "-" are not rated against that measure; while those marked with "n/a" are excluded from being rated according to that measure for the period

Required Publications	Location of Publication	4Q 2013		1Q 2014		2Q 2014		3Q 2014		4Q 2013 – 3Q 2014	
		Availability	Timeliness	Availability	Timeliness	Availability	Availability	Timeliness	Timeliness	Availability	Timeliness
	Rules WESM website> Downloads>Market Operator Performance										
7. Review of the Underlying Factors Giving Rise to any Net Settlement Surplus	WESM website> Downloads>Net Settlement Surplus	n/a	n/a	n/a	n/a	0.00%	0.00%	100.00%	100.00%	100.00%	100.00%
8. List of former WESM Members and the time that each ceased to be WESM Members	WESM website> The Market> Wholesale> Registration List	100.00%	n/a	100.00%	n/a	100.00%	n/a	100.00%	n/a	100.00%	n/a
9. List of registered WESM Members, the categories in which they are registered and details of the current status of applications to become a WESM Member	WESM website> The Market> Wholesale> Registration List	100.00%	-	100.00%	-	100.00%	-	100.00%	-	100.00%	-
10. Structure and level of market fees and the methods used in determining the structure	WESM website> Downloads> Market Fees	n/a	n/a	100.00%	100.00%	n/a	n/a	n/a	n/a	100.00%	100.00%
11. Market Network Model (in the MNM Manual)	WESM website> Downloads> Market Network Model	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Required Publications	Location of Publication	4Q 2013		1Q 2014		2Q 2014		3Q 2014		4Q 2013 – 3Q 2014	
		Availability	Timeliness	Availability	Timeliness	Availability	Availability	Timeliness	Timeliness	Availability	Timeliness
12. Market Trading Nodes (in the MNM Manual)	WESM website> Downloads> Market Network Model	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
13. Week Ahead Projections	WESM website> The Market> Wholesale Market Data and Reports> Daily Operations Reports> Next Week Summary	100.00%	97.80%	100.00%	100.00%	100.00%	98.91%	100.00%	98.91%	100.00%	98.90%
14. Day Ahead Projections	WESM website> The Market> Wholesale Market Data and Reports> Daily Operations Reports> Next Day Summary	99.45%	97.25%	98.89%	97.78%	100.00%	97.83%	100.00%	98.37%	99.59%	97.81%
15. Spot Market Operation Timetable	WESM website> Downloads> WESM Manuals> Dispatch Protocol Manual	100.00%	-	100.00%	-	100.00%	-	100.00%	-	100.00%	-
16. Forecast Tolerance Range	WESM website> Downloads> WESM Manuals> Load Forecasting Methodology	100.00%	-	100.00%	-	100.00%	-	100.00%	-	100.00%	-
17. Meaning Of “Reasonable Estimate”	WESM website> Downloads> WESM Manuals> Dispatch Protocol Manual	n/a	-	n/a	-	n/a	-	n/a	-	n/a	-
18. Dispatch Tolerances Standards	- Dispatch Protocol Manual	100.00%	-	100.00%	-	100.00%	-	100.00%	-	100.00%	-
19. Procedures for determination	WESM website> Downloads> WESM	100.00%	-	100.00%	-	100.00%	-	100.00%	-	100.00%	-

Required Publications	Location of Publication	4Q 2013		1Q 2014		2Q 2014		3Q 2014		4Q 2013 – 3Q 2014	
		Availability	Timeliness	Availability	Timeliness	Availability	Availability	Timeliness	Timeliness	Availability	Timeliness
of market re-run prices	Manuals> Criteria and Guidelines for the Issuance of Pricing Error Notices and Conduct of Market Re-run)										
20. Procedures In Establishing the Network Configuration and Other Constraints for the determination of ex-post nodal energy prices for circumstances in which power system conditions materially change during the trading interval	WESM website> Downloads> WESM Manuals> Determination of Ex-post Nodal Prices Manual	100.00%	-	100.00%	-	100.00%	-	100.00%	-	100.00%	-
21. Scheduled Generation Or Scheduled Load	WESM website> Downloads> Market Prices and Schedules	100.00%	99.82%	100.00%	100.00%	100.00%	98.62%	100.00%	99.86%	100.00%	99.57%
22. Levels of NSS / NSS Allocations	WESM website> Downloads> Net Settlement Surplus	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
23. Electronic Communication Procedures	WESM website> Downloads> WESM Manuals> MO Information Disclosure and Confidentiality Manual	100.00%	-	100.00%	-	100.00%	-	100.00%	-	100.00%	-
24. List of All Suspended Trading Participants	WESM website> The Market> Wholesale> Registration List	100.00%	-	100.00%	-	100.00%	-	100.00%	-	100.00%	-

Required Publications	Location of Publication	4Q 2013		1Q 2014		2Q 2014		3Q 2014		4Q 2013 – 3Q 2014	
		Availability	Timeliness	Availability	Timeliness	Availability	Availability	Timeliness	Timeliness	Availability	Timeliness
25. Methodology For Determining the Administered Price	WESM website> Downloads> Administered Price Determination Methodology	100.00%	-	100.00%	-	100.00%	-	100.00%	-	100.00%	-
26. Constraint Violation Coefficients or Procedures for Calculating Constraint Violation Coefficients for Each Constraint and Revisions in the Constraint Violation Coefficient levels	WESM website> Downloads> WESM Manuals> Constraint Violation Coefficients Manual	100.00%	-	100.00%	-	100.00%	-	100.00%	-	100.00%	-
27. New Metering Installation of the MSP	WESM website> Downloads> Metering Updates	100.00%	-	100.00%	-	100.00%	-	100.00%	-	100.00%	-
28. Administered Prices for one billing period	WESM website> Downloads> Administered Price	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
29. Hourly Total Registered Pmin of All Scheduled Generating Units	MMS-MPI	98.90%	90.11%	97.78%	90.00%	98.91%	96.74%	100.00%	98.91%	98.90%	93.97%
30. Hourly Nodal Demand Forecasts	MMS-MPI	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
31. Post Dispatch Reports	WESM website> Downloads> Previous Day Summary	100.00%	100.00%	98.89%	97.78%	100.00%	98.91%	100.00%	100.00%	99.73%	99.45%
32. Summary of PEN Issuance	WESM website> Downloads> Daily PEN MRR PSM AP	100.00%	70.33%	100.00%	98.33%	100.00%	100.00%	100.00%	98.92%	100.00%	91.78%

Required Publications	Location of Publication	4Q 2013		1Q 2014		2Q 2014		3Q 2014		4Q 2013 – 3Q 2014	
		Availability	Timeliness	Availability	Timeliness	Availability	Availability	Timeliness	Timeliness	Availability	Timeliness
	Summary										
33. Summary of PSM Issuance	WESM website> Downloads> Price Substitution Due to Congestion	100.00%	70.59%	100.00%	85.71%	100.00%	96.51%	100.00%	96.72%	100.00%	91.49%
34. MRR Results Publication	WESM website> Downloads> Market Re-run Results	100.00%	97.22%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	99.04%
35. Complete List of Pricing errors that occurred during the billing month	Emailed to participants by WESM Helpdesk	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
36. Monthly Performance Rating of the MSP	WESM website> Downloads> MSP Performance	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
<b>TOTAL</b>		<b>99.95%</b>	<b>94.92%</b>	<b>99.86%</b>	<b>97.89%</b>	<b>99.96%</b>	<b>99.02%</b>	<b>100%</b>	<b>99.51%</b>	<b>99.95%</b>	<b>98.25%</b>
<b>Rating</b>		<b>4</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>5</b>	<b>4</b>	<b>4</b>	<b>4</b>
		<b>Very Satisfactory</b>	<b>Satisfactory</b>	<b>Very Satisfactory</b>	<b>Very Satisfactory</b>	<b>Very Satisfactory</b>	<b>Very Satisfactory</b>	<b>Excellent</b>	<b>Very Satisfactory</b>	<b>Very Satisfactory</b>	<b>Very Satisfactory</b>

## Appendix D. Observations on Forecast Accuracy

### Excluded Intervals in the determination of Forecast Accuracy

Conditions for Exclusion	Luzon					Visayas				
	4Q 2013	1Q 2014	2Q 2014	3Q 2014	4Q2013–3Q2014	4Q 2013	1Q 2014	2Q 2014	3Q 2014	4Q2013–3Q2014
1. Non-compliance of Kalayaan Pump Storage plant to its pump schedule	66	58	19	19	162	n/a	n/a	n/a	n/a	n/a
2. Line trippings that caused dropping of load equivalent to $\geq$ 1% of the total demand	5	1	2	1	9	24		30	21	75
3. Generator tripping or unplanned outages affecting the total demand in the 39th, 44th, 49th minutes of the affected interval	7		4	2	13			3	9	12
4. Manual Load Dropping			1		1	12		4	2	18
5. Market intervention/ Suspension	1		9	244	254	1,140	2,160	2	1	3,303
6. RTU errors which refer to absence of snapshot or bad data on system snapshots equivalent to $\geq$ 1% of the total demand	7	18		6	31	35		5	24	64
<b>Total Intervals</b>	86	77	35	272	470	1,211	2,160	44	57	3,472
<b>% (out of total intervals)</b>	3.94%	3.56%	1.59%	12.32%	5.37%	55.45%	100%	1.99%	2.58%	39.63%

### Number of Intervals excluded and considered for Forecast Accuracy

Summary	Luzon					Visayas				
	4Q 2013	1Q 2014	2Q 2014	3Q 2014	4Q2013–3Q2014	4Q 2013	1Q 2014	2Q 2014	3Q 2014	4Q2013–3Q2014
1. Intervals considered	2,098	2,083	2,173	1,936	8,290	973	0	2,164	2,151	5,288
2. Intervals excluded	86	77	35	272	470	1,211	2,160	44	57	3,472
<b>Total Intervals</b>	2,184	2,160	2,208	2,208	8,760	2,184	2,160	2,208	2,208	8,760

## Appendix E. Observations on Billings, Settlements and Accounts Management

### E.1. Issuance of Preliminary and Final Settlement Statements

Monitoring Period	Billing Period	Prelim Statement			Final Statement		
		Schedule	Date Issued	No. Of Days Late	Schedule	Date Issued	No. Of Days Late
4Q 2013	87	10/2/2013	10/2/2013	0	10/13/2013	10/11/2013	0
	88	11/1/2013	10/31/2013	0	11/12/2013	11/12/2013	0
	89	12/2/2013	12/2/2013	0	12/13/2013	12/12/2013	0
1Q 2014	90	1/1/2014	1/2/2014	0 (January 1- holiday)	1/12/2014	1/13/2014	0 (January 12 - Sunday)
	91	2/1/2014	1/31/2014	0	2/12/2014	2/12/2014	0
	92	3/4/2014	3/4/2014	0	3/15/2014	3/13/2014	0
2Q 2014	93	4/1/2014	4/1/2014	0	4/14/2014	4/11/2014	0
	94	5/2/2014	5/2/2014	0	5/13/2014	5/13/2014	0
	95	6/2/2014	6/2/2014	0	6/13/2014	6/13/2014	0
3Q 2014	96	7/2/2014	7/3/2014	0 (July 2 - non-working day)	7/12/2014	7/11/2014	0
	97	8/1/2014	8/1/2014	0	8/12/2014	8/12/2014	0
	98	9/1/2014	9/1/2014	0	9/12/2014	9/12/2014	0

### E.2. Issuance of Meter Trouble Reports

Monitoring Period	Billing Period	Monthly MTRs						Daily MTRs			
		Date Received (MQ)	Schedule (MTR)	Date Issued (MTR)	No. of Monthly MTRs	No. Of Monthly MTRs Issued on Schedule	No. of Daily MTRs	No. Of Daily MTRs Issued on Schedule			
4Q 2013	87	30-Sep-13	2-Oct-13	30-Sep-13	297	297	7,266		7,266		
	88	30-Oct-13	1-Nov-13	30-Oct-13	269	269	5,960		5,960		
	89	30-Nov-13	2-Dec-13	30-Nov-13	427	993	4,840	18,066	4,840	18,066	
1Q 2014	90	30-Dec-13	1-Jan-14	30-Dec-13	221	221	3,501		3,501		
	91	30-Jan-14	1-Feb-14	30-Jan-14	239	239	3,556		3,556		
	92	1-Mar-14	3-Mar-14	2-Mar-14	348	808	2,624	9,681	2,624	9,681	
2Q 2014	93	29-Mar-14	31-Mar-14	30-Mar-14	434	434	5,495		5,494		
	94	29-Apr-14	1-May-14	30-Apr-14	535	535	7,219		7,219		
	95	29-May-14	31-May-14	29-May-14	388	1,357	8,541	21,255	8,541	21,254	

Monitoring Period	Billing Period	Monthly MTRs						Daily MTRs				
		Date Received (MQ)	Schedule (MTR)	Date Issued (MTR)	No. of Monthly MTRs	No. Of Monthly MTRs Issued on Schedule		No. of Daily MTRs		No. Of Daily MTRs Issued on Schedule		
3Q 2014	96	29-Jun-14	1-Jul-14	1-Jul-14	301		301		8768		8768	
	97	29-Jul-14	31-Jul-14	31-Jul-14	379		379		4,673		4,673	
	98	29-Aug-14	31-Aug-14	29-Aug-14	330	1,010	330	1,010	6,728	20,169	6,728	20,169
4Q 2013 – 3Q 2014					4,168		4,168		69,171		69,171	

### E.3. Issuance of Margin Calls

Monitoring Period	No. of Margin Calls to be Issued	No. of Issued Margin Calls (On Time)	No. of Exceptions	Remarks	Total	Timeliness
4Q 2013	134	117	17	Visayas Ecs, due to Yolanda	134	100.00%
1Q 2014	128	128	0		128	100.00%
2Q 2014	76	76		Due to Recalculation of Annual Maximum Net Exposure based on the amended WESM Rules on Prudential Requirement.	76	100.00%
3Q 2014	104	104	0		104	100.00%
4Q 2013 – 3Q 2014	442	425	17	0	442	100.00%

### E.4. Monetary Transactions

Monitoring Period	Payments Received	Remittances	Remittance Efficiency	No. of Payments Received	No. of Late Remittance	Timeliness
4Q 2013	10,085,465,711.67	10,085,465,711.67	100.00%	44	0	100%
1Q 2014	25,909,494,912.27	25,909,494,912.27	100.00%	52	0	100%
2Q 2014	21,450,589,989.88	21,450,589,989.88	100.00%	45	0	100%
3Q 2014	18,231,595,463.53	18,231,595,463.53	100.00%	43		100%
4Q 2013 – 3Q 2014	75,677,146,077.35	75,677,146,077.35	100.00%	184.00	0	100%

## Appendix F. Observations on Registration and Customer Relations

### F.1. Processing of Registration Applications

Name of Applicant	Membership Category	Application Type	Membership Applied	Date Application is Received by Helpdesk	Date Complete Application forms and requirements are submitted to Helpdesk	Date the Application should be Processed by the MO	Date Application Processing is Completed	Effective date of Membership	Application Processing within timeline?
<b>4Q 2013</b>									
1. Maibarara Geothermal, Inc.	Generation Company	New registration	Direct WESM Member	2-Sep-13	23-Oct-13	15-Nov-13	31-Oct-13	4-Nov-13	Yes
2. Carmen Copper Corporation	Directly-Connected Customer	New registration	Indirect WESM Member	2-Aug-13	12-Sep-13	3-Oct-13	3-Oct-13	26-Dec-10	Yes
<b>1Q 2014</b>									
3. Olongapo Electricity Distribution Company, Inc.	Customer - Distribution Utility	New registration	Direct WESM Member	3-Jul-13	30-Jan-14	21-Feb-14	10-Feb-14	11-Feb-14	YES
4. Northern Samar Electric Cooperative, Inc.	Customer - Distribution Utility	Change in level of participation	Direct WESM Member	28-Dec-12	18-Feb-14	11-Mar-14	28-Feb-14	4-Mar-14	YES
5. Tarlac Electric, Inc.	Customer - Distribution Utility	Change in level of participation	Direct WESM Member	26-Mar-13	21-Feb-14	14-Mar-14	7-Mar-14	10-Mar-14	YES
<b>2Q 2014</b>									
6. South Luzon Thermal Energy Corporation	Generator	New registration	Direct WESM Member	23-Dec-13	13-May-14	3-Jun-14	23-May-14	24-May-14	YES
7. San Carlos Solar Energy, Inc.	Generator	New registration	Direct WESM Member	28-Jan-14	16-May-14	6-Jun-14	28-May-14	29-May-14	YES
8. AP Renewables, Inc. (UNOCAL)	Customer - Bulk-user	New registration	Indirect WESM Member	15-Apr-14	9-May-14	30-May-14	30-May-14	5-Jun-14	YES
9. Lafarge Republic, Inc.	Generator	New registration	Direct WESM Member	16-Dec-13	30-May-14	23-Jun-14	6-Jun-14	9-Jun-14	YES
10. Panay Power Corporation	Generator	Registration of additional facility	Direct WESM Member	26-May-14	26-May-14	17-Jun-14	11-Jun-14	14-Jun-14	YES
11. Panay Power Corporation	Generator	Registration of additional facility	Direct WESM Member	26-May-14	26-May-14	17-Jun-14	11-Jun-14	14-Jun-14	YES
12. Energy Development Corporation	Generator	Registration of additional facility	Direct WESM Member	28-Mar-14	1-Apr-14	25-Apr-14	11-Apr-14	12-Apr-14	YES

Name of Applicant	Membership Category	Application Type	Membership Applied	Date Application is Received by Helpdesk	Date Complete Application forms and requirements are submitted to Helpdesk	Date the Application should be Processed by the MO	Date Application Processing is Completed	Effective date of Membership	Application Processing within timeline?
13. Benguet Corporation	Customer (Bulk-user)	New registration	Indirect WESM Member	19-Jul-10	29-May-14	20-Jun-14	20-Jun-14	21-Jun-14	YES
<b>3Q 2014</b>									
14. Mindanao Grain Processing Co., Inc.	Customer (Bulk-User)	New registration	Indirect	9-Dec-13	14-Jul-14	6-Aug-14	17-Jul-14	18-Jul-14	YES
15. National Grid Corporation of the Philippines	Customer (Bulk-User)	New registration	Direct	6-Sep-10	18-Jul-14	11-Aug-14	28-Jul-14	29-Jul-14	YES
16. Batangas City Water District	Customer (Bulk-User)	New registration	Indirect	19-Aug-10	7-Jul-14	30-Jul-14	30-Jul-14	31-Jul-14	YES
17. Quanta Paper Corporation	Customer (Bulk-User)	New registration	Indirect	1-Mar-12	4-Jul-14	28-Jul-14	28-Jul-14	1-Aug-14	YES
18. San Carlos Solar Energy Inc.	Generator	Registration of additional facility	Direct	6-Aug-14	6-Aug-14	29-Aug-14	15-Aug-14	16-Aug-14	YES
19. San Jose City I Power Corporation	Generator	New registration	Direct	11-Jul-14	12-Aug-14	4-Sep-14	26-Aug-14	28-Aug-14	YES
20. SPC Power Corporation	Generator	New registration	Direct	26-Aug-14	17-Sep-14	9-Oct-14	23-Sep-14	25-Sep-14	YES

## F.2. Participant Queries and Data Requests

Inquiry Type	Response Time	Number of Queries/Data Requests							
		4Q 2013		1Q 2014		2Q 2014		3Q 2014	
		Received	Processed On-Time	Received	Processed On-Time	Received	Processed On-Time	Received	Processed On-Time
A. 1 Data Requests (Historical Data)	Within 3 business days			13	13	2	2	4	4
A.2 Data Requests (Recent Data, covering the last 1-2 months of WESM operation)	Within 5 business days	18	18	4	4	6	6	9	9
A.3 Data Requests (others- not commonly)	Within 5 business days	10	10	5	4	14	14	5	5

Inquiry Type	Response Time	Number of Queries/Data Requests							
		4Q 2013		1Q 2014		2Q 2014		3Q 2014	
		Received	Processed On-Time	Received	Processed On-Time	Received	Processed On-Time	Received	Processed On-Time
requested)									
B.1 Queries on Basic WESM Concepts	Within 1 business day	6	6	6	6	1	1	8	8
B.2 Queries on Registration	Within 1 business day	12	12	4	4	11	11	1	1
B.3 Analysis or validation of market results and simulations	Within 5 business days			3	3	9	7	1	1
B.4 Other Participant Queries (require referral by Helpdesk to relevant PEMC department/units)	Within 5 business days	22	22	27	27	58	58	57	57
<b>Total</b>		<b>68</b>	<b>68</b>	<b>62</b>	<b>61</b>	<b>101</b>	<b>99</b>	<b>85</b>	<b>85</b>