

Annual Market Operator Performance Report

26 September 2019 to 25 September 2020

NOVEMBER 2020

This Report is prepared by the
Philippine Electricity Market Corporation –
Market Assessment Group for the
PEM Audit Committee

The information contained in this document is based on data that are subject to continuous verification by the Philippine Electricity Market Corporation (PEMC). The same information is subject to change as updated figures come in. This report is based on the Market Operator Performance Standards (PEMC-MOPS, 2015) and is subject to external audit per Section 10.3 of the MOPS.

Executive Summary

The monitoring of the Market Operator performance is in accordance with Clause 1.3.2.3 of the WESM Rules and Clause 1.4.2 of the Retail Rules and the Market Operator Performance Standards (MOPS) that was approved by the DOE on 06 October 2015.

The Independent Market Operator of the Philippines (IEMOP) assumed the market operations functions of the WESM on 26 September 2018 pursuant to the Operating Agreement entered into between the Philippine Electricity Market Corporation (PEMC) and IEMOP on 19 September 2019.

Further, the IEMOP was designated as the Central Registration Body (CRB) for the implementation of the Retail Competition and Open Access (RCOA) pursuant to Department Circular No. 2019-07-0011 issued by the Department of Energy (DOE) dated 29 July 2019. This Circular amended the provisions of Department Circular No. 2012-02-0002, which designated PEMC as the CRB.

This annual report provides the results of the monitoring and assessment of the performance of IEMOP, hereinafter alternatively referred to as the Market Operator (MO), for the period 26 September 2019 to 25 September 2020 (4Q 2019 - 3Q 2020).

The over-all performance of the MO for the period is Very Satisfactory. Provided in the table are performance ratings for the individual measures. The performance ratings for 26 measures are Excellent while the remaining 4 measures are Very Satisfactory.

Category	Measure	Weight (%)	Satisfactory Range	Actual	Score	
A. IT Systems						
Market Management Systems	Availability	15	99.80%≤x<99.87%	100%	5	Excellent
WESM Website	Availability	5	99.50%≤x<99.67	99.998%	5	Excellent
B. Market Reports and Data Publications						
	Availability	5	90% ≤ x < 95%	99.99%	4	Very Satisfactory
	Timeliness	10	90% ≤ x < 95%	99.74%	4	Very Satisfactory
C. Forecast Accuracy						
RTD Forecast - MAPE	Accuracy (L)	3.75	0.92%≤ x ≤0.98%	0.70%	4	Very Satisfactory
	Accuracy (V)	3.75	1.17%≤ x ≤1.23%	0.84%	5	Excellent
RTD Forecast - FAR	Accuracy (L)	3.75	97.65%≥ x ≥96.75%	99.03%	5	Excellent
	Accuracy (V)	3.75	94.33%≥ x ≥91.67%	97.75%	5	Excellent
DAP Forecast - MAPE	Accuracy (L)	2.5	1.45%< x <2.32%	1.16%	4	Very Satisfactory
	Accuracy (V)	2.5	2.41%< x <3.08%	1.38%	5	Excellent
D. Dispatch Scheduling and Pricing						
RTD Workflow	Successful Run	2.5	99.75%≤x<99.83%	100%	5	Excellent
RTX Workflow	Successful Run	2.5	99.75%≤x<99.83%	99.98%	5	Excellent
Pricing Errors and Market Re-runs	Timeliness (Prelim)	2	98.50% <x<99.00%	100%	5	Excellent
	Timeliness (Final)	3	99.50%≤x<99.67%	100%	5	Excellent
Market Intervention Attributable to MO	Duration	10	14>=x>9	2	5	Excellent
E. Billing, Settlements and Accounts Management						
Preliminary and Final Settlement Statements	Timeliness	2	98%≤x<98.67%	99.79%	5	Excellent
Preliminary Settlement Calculations	Accuracy	2	95%≤x<96.67%	98.70%	5	Excellent
Final Settlement Calculations	Accuracy	3	99%≤x<99.33%	100%	5	Excellent
	Frequency	2	6 ≥ x > 4	0	5	Excellent
Meter Data Error Detection	Timeliness	2	98%≤x<98.67%	100%	5	Excellent
Monetary Transactions	Efficiency	1	0 amount late	0 late	5	Excellent
	Timeliness	1	0 days late	0 late	5	Excellent
Margin Call	Timeliness	1	95%≤x<96.67%	100%	5	Excellent
Default Notice	Timeliness	1	0 days late	0 late	5	Excellent
F. Registration and Customer Relations						
Registration	Timeliness	2	90% ≤ x < 95%	100%	5	Excellent
Customer Switching	Timeliness	1	90% ≤ x < 95%	100%	5	Excellent
Participant Training	Timeliness	2	90% ≤ x < 95%	100%	5	Excellent
	Feedback	1	90%≤x<93.33%	96.99%	5	Excellent
Participant Queries and Data Requests	Timeliness	2	95%≤x<96.67%	100%	5	Excellent
Participant/ Customer Complaints	Timeliness	2	90% ≤ x < 95%	100%	5	Excellent
2020 Over-all Rating					4	Very Satisfactory

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IT Systems

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Market Reports and Data Publication

Availability	3
Timeliness	4

Forecast Accuracy

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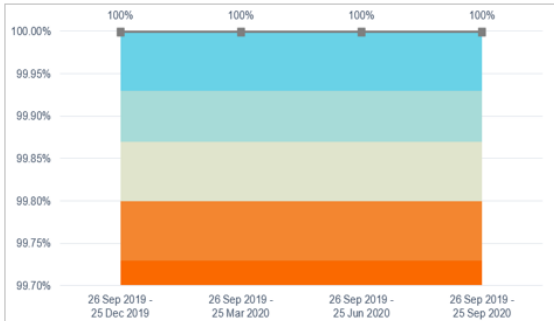
Billing, Settlements and Accounts Management

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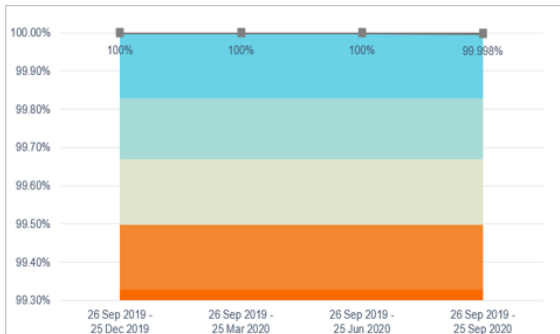
Registration and Customer Relations

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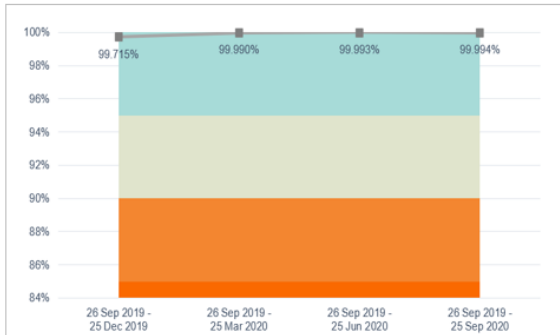
Annual Market Operator Performance for 2020 (26 September 2019 to 25 September 2020)

Measure	Brief Description	Weight	Target	2020 Annual Performance	2020 Annual Highlights																																								
IT Systems (20%)																																													
Market Management Systems (MMS) Availability	Ratio of intervals that the MMS is functional or accessible to Users through the Market Participant Interface (MPI) to the total intervals it is required and expected to function or be accessible.	15%	99.80%	<div><table><thead><tr><th>YR/QTR</th><th>Q1</th><th>Q2</th><th>Q3</th><th>Q4</th></tr></thead><tbody><tr><td>2014</td><td>99.96%</td><td>99.98%</td><td>99.97%</td><td>99.94%</td></tr><tr><td>2015</td><td>100%</td><td>99.91%</td><td>99.85%</td><td>99.88%</td></tr><tr><td>2016</td><td>100%</td><td>99.95%</td><td>99.80%</td><td>99.85%</td></tr><tr><td>2017</td><td>99.997%</td><td>99.99%</td><td>99.99%</td><td>99.99%</td></tr><tr><td>2018</td><td>99.99%</td><td>99.996%</td><td>99.996%</td><td>99.996%</td></tr><tr><td>2019</td><td>100%</td><td>100%</td><td>100%</td><td>100%</td></tr><tr><td>2020</td><td>100%</td><td>100%</td><td>100%</td><td>100%</td></tr></tbody></table></div>	YR/QTR	Q1	Q2	Q3	Q4	2014	99.96%	99.98%	99.97%	99.94%	2015	100%	99.91%	99.85%	99.88%	2016	100%	99.95%	99.80%	99.85%	2017	99.997%	99.99%	99.99%	99.99%	2018	99.99%	99.996%	99.996%	99.996%	2019	100%	100%	100%	100%	2020	100%	100%	100%	100%	<ul style="list-style-type: none">100% availabilityRecorded 128.19 downtime hours but these were excluded in the calculation of the MPI availability as provided in the MOPS <p>(see Appendix C for the list of recorded downtimes)</p>
YR/QTR	Q1	Q2	Q3	Q4																																									
2014	99.96%	99.98%	99.97%	99.94%																																									
2015	100%	99.91%	99.85%	99.88%																																									
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2018	99.99%	99.996%	99.996%	99.996%																																									
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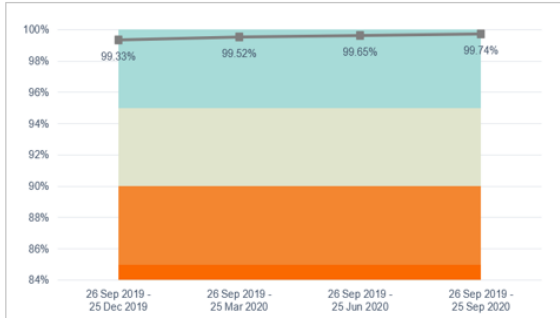
Measure	Brief Description	Weight	Target	2020 Annual Performance	2020 Annual Highlights																																								
Public WESM Website (PW) Availability	Ratio of intervals that the PW is functional or accessible to Users to the total intervals it is required and expected to function or be accessible.	5%	99.50%	<div><table><thead><tr><th>YR/QTR</th><th>Q1</th><th>Q2</th><th>Q3</th><th>Q4</th></tr></thead><tbody><tr><td>2014</td><td>100%</td><td>99.99%</td><td>99.98%</td><td>99.99%</td></tr><tr><td>2015</td><td>100%</td><td>99.73%</td><td>99.82%</td><td>99.85%</td></tr><tr><td>2016</td><td>99.93%</td><td>99.92%</td><td>99.95%</td><td>99.87%</td></tr><tr><td>2017</td><td>99.99%</td><td>99.98%</td><td>99.98%</td><td>99.99%</td></tr><tr><td>2018</td><td>100%</td><td>99.91%</td><td>99.94%</td><td>99.95%</td></tr><tr><td>2019</td><td>100%</td><td>99.91%</td><td>99.94%</td><td>99.96%</td></tr><tr><td>2020</td><td>100%</td><td>100%</td><td>100%</td><td>99.998%</td></tr></tbody></table></div>	YR/QTR	Q1	Q2	Q3	Q4	2014	100%	99.99%	99.98%	99.99%	2015	100%	99.73%	99.82%	99.85%	2016	99.93%	99.92%	99.95%	99.87%	2017	99.99%	99.98%	99.98%	99.99%	2018	100%	99.91%	99.94%	99.95%	2019	100%	99.91%	99.94%	99.96%	2020	100%	100%	100%	99.998%	<ul style="list-style-type: none">99.998% availabilityRecorded 49.88 downtime hours but only 0.15 downtime hours (9 minutes) was considered in the calculation of the PW availabilityThe rest of downtime hours were excluded as provided in the MOPS <p>(see Appendix D for the list of recorded downtimes)</p>
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Legend: ■ Poor ■ Needs Improvement ■ Satisfactory ■ Very Satisfactory ■ Excellent

Measure	Brief Description	Weight	Target	2020 Annual Performance	2020 Annual Highlights																																																		
Availability	Average of the measured publications' availability ratios, which are the ratio of the actual number of published reports/data to the total expected number.	5%	95%	<div><table><thead><tr><th>YR/QTR</th><th>Q1</th><th>Q2</th><th>Q3</th><th>Q4</th></tr></thead><tbody><tr><td>2014</td><td>99.95%</td><td>99.91%</td><td>99.93%</td><td>99.95%</td></tr><tr><td>2015</td><td>91.63%</td><td>94.56%</td><td>99.97%</td><td>99.97%</td></tr><tr><td>2016</td><td>99.99%</td><td>98.61%</td><td>99.99%</td><td>99.99%</td></tr><tr><td>2017</td><td>99.997%</td><td>99.998%</td><td>99.998%</td><td>99.998%</td></tr><tr><td>2018</td><td>99.998%</td><td>99.999%</td><td>99.999%</td><td>99.999%</td></tr><tr><td>2019</td><td>98.054%</td><td>99.999%</td><td>99.993%</td><td>99.975%</td></tr><tr><td>2020</td><td>99.715%</td><td>99.99%</td><td>99.993%</td><td>99.994%</td></tr></tbody></table></div>	YR/QTR	Q1	Q2	Q3	Q4	2014	99.95%	99.91%	99.93%	99.95%	2015	91.63%	94.56%	99.97%	99.97%	2016	99.99%	98.61%	99.99%	99.99%	2017	99.997%	99.998%	99.998%	99.998%	2018	99.998%	99.999%	99.999%	99.999%	2019	98.054%	99.999%	99.993%	99.975%	2020	99.715%	99.99%	99.993%	99.994%	<ul style="list-style-type: none">99.994% availabilityRated 40 publications¹ for the year, with availability ratings above 99%The table below lists five (5) publications which were not rated for availability: <table><thead><tr><th>Required Publication (Reference Rules/Manuals)</th><th>Reasons</th></tr></thead><tbody><tr><td>Suspension Notice</td><td>No suspended participant</td></tr><tr><td>Real-Time System Condition or SO Advisory</td><td rowspan="2">Automated publication of data as soon as received from the SO</td></tr><tr><td>SO Advisory (Updated Daily or upon availability of verified/ complete information)</td></tr><tr><td>Substitute prices for congestion-related pricing errors in the WESM website daily</td><td rowspan="2">Already covered in other publications</td></tr><tr><td>Other system data: Total energy dispatched, Total dispatchable load, Total reserve required per time point (for each class and area), Total system losses, Reserve requirements, Locational marginal prices</td></tr></tbody></table>	Required Publication (Reference Rules/Manuals)	Reasons	Suspension Notice	No suspended participant	Real-Time System Condition or SO Advisory	Automated publication of data as soon as received from the SO	SO Advisory (Updated Daily or upon availability of verified/ complete information)	Substitute prices for congestion-related pricing errors in the WESM website daily	Already covered in other publications	Other system data: Total energy dispatched, Total dispatchable load, Total reserve required per time point (for each class and area), Total system losses, Reserve requirements, Locational marginal prices
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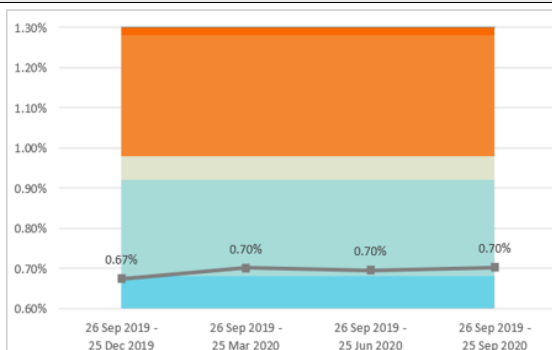
¹ Details of publications are provided in Appendix E

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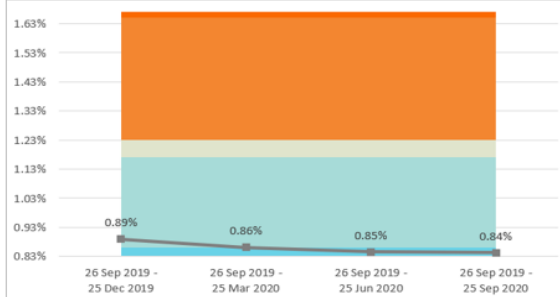
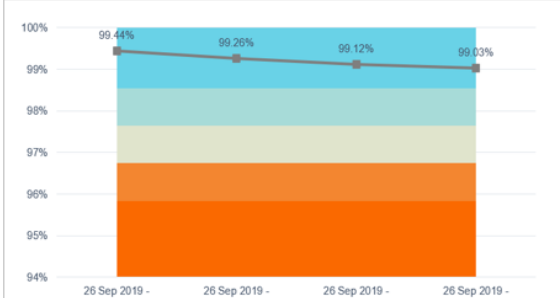
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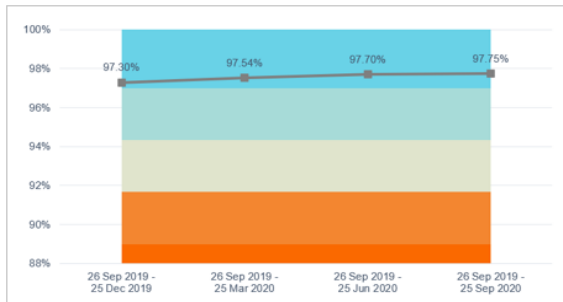
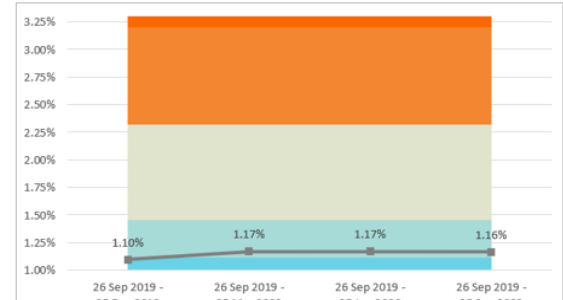
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Measure	Brief Description	Weight	Target	2020 Annual Performance	2020 Annual Highlights																																																			
Forecast Accuracy (20%)																																																								
Real Time Dispatch (RTD) Forecast Mean Absolute Percentage Error (MAPE) for Luzon	<p>Measures how far is the RTD forecasted demand compared to the actual demand in Luzon.</p> <p>The closer the rating is to 0%, the higher the MAPE rating.</p>	3.75%	0.95%	<div><table><thead><tr><th>YR/QTR</th><th>Q1</th><th>Q2</th><th>Q3</th><th>Q4</th></tr></thead><tbody><tr><td>2015</td><td>0.78%</td><td>0.82%</td><td>0.78%</td><td>0.79%</td></tr><tr><td>2016</td><td>0.74%</td><td>0.77%</td><td>0.79%</td><td>0.80%</td></tr><tr><td>2017</td><td>0.78%</td><td>0.81%</td><td>0.80%</td><td>0.80%</td></tr><tr><td>2018</td><td>0.76%</td><td>0.75%</td><td>0.74%</td><td>0.74%</td></tr><tr><td>2019</td><td>0.71%</td><td>0.69%</td><td>0.68%</td><td>0.69%</td></tr><tr><td>2020</td><td>0.67%</td><td>0.70%</td><td>0.70%</td><td>0.70%</td></tr></tbody></table></div>	YR/QTR	Q1	Q2	Q3	Q4	2015	0.78%	0.82%	0.78%	0.79%	2016	0.74%	0.77%	0.79%	0.80%	2017	0.78%	0.81%	0.80%	0.80%	2018	0.76%	0.75%	0.74%	0.74%	2019	0.71%	0.69%	0.68%	0.69%	2020	0.67%	0.70%	0.70%	0.70%	<ul style="list-style-type: none">0.70% MAPEConsidered 8,458 out of 8,784 intervals, with highest absolute forecast error of 5.82%, in the computation of this measureExcluded 326 intervals in the calculations due to the following reasons as provided in the MOPS: <table><thead><tr><th>Reason for Exclusion</th><th>No. of Trading Intervals</th></tr></thead><tbody><tr><td>Market Intervention</td><td>108</td></tr><tr><td>Generator Tripping</td><td>18</td></tr><tr><td>Line Tripping</td><td>21</td></tr><tr><td>Load Dropping</td><td>8</td></tr><tr><td>Non-following of pump schedule of Kalayaan PSPP</td><td>67</td></tr><tr><td>Sudden change in weather</td><td>63</td></tr><tr><td>Snapshot-related data error</td><td>41</td></tr></tbody></table>	Reason for Exclusion	No. of Trading Intervals	Market Intervention	108	Generator Tripping	18	Line Tripping	21	Load Dropping	8	Non-following of pump schedule of Kalayaan PSPP	67	Sudden change in weather	63	Snapshot-related data error	41
YR/QTR	Q1	Q2	Q3	Q4																																																				
2015	0.78%	0.82%	0.78%	0.79%																																																				
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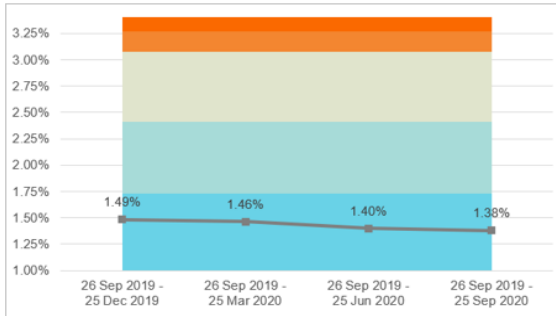
Legend: ■ Poor ■ Needs Improvement ■ Satisfactory ■ Very Satisfactory ■ Excellent

Measure	Brief Description	Weight	Target	2020 Annual Performance	2020 Annual Highlights																																																	
RTD Forecast MAPE for Visayas	<p>Measures how far is the RTD forecasted demand compared to the actual demand in Visayas.</p> <p>The closer the rating is to 0%, the higher the MAPE rating.</p>	3.75%	1.20%	<div><table><thead><tr><th>YR/QTR</th><th>Q1</th><th>Q2</th><th>Q3</th><th>Q4</th></tr></thead><tbody><tr><td>2015</td><td>1.13%</td><td>1.20%</td><td>1.19%</td><td>1.20%</td></tr><tr><td>2016</td><td>1.13%</td><td>1.16%</td><td>1.15%</td><td>1.16%</td></tr><tr><td>2017</td><td>1.01%</td><td>1.20%</td><td>1.49%</td><td>1.50%</td></tr><tr><td>2018</td><td>1.04%</td><td>1.03%</td><td>1.00%</td><td>0.99%</td></tr><tr><td>2019</td><td>0.90%</td><td>0.88%</td><td>0.88%</td><td>0.89%</td></tr><tr><td>2020</td><td>0.89%</td><td>0.86%</td><td>0.85%</td><td>0.84%</td></tr></tbody></table></div>	YR/QTR	Q1	Q2	Q3	Q4	2015	1.13%	1.20%	1.19%	1.20%	2016	1.13%	1.16%	1.15%	1.16%	2017	1.01%	1.20%	1.49%	1.50%	2018	1.04%	1.03%	1.00%	0.99%	2019	0.90%	0.88%	0.88%	0.89%	2020	0.89%	0.86%	0.85%	0.84%	<ul style="list-style-type: none">0.84% MAPEConsidered 8,505 out of 8,784 intervals, with maximum absolute forecast error of 11.04%, in the calculation of this measureExcluded 279 intervals in the calculations due to the following reasons as provided in the MOPS:<table><thead><tr><th>Reason for Exclusion</th><th>No. of Trading Intervals</th></tr></thead><tbody><tr><td>Market Intervention</td><td>15</td></tr><tr><td>Generator Tripping</td><td>23</td></tr><tr><td>Line Tripping</td><td>103</td></tr><tr><td>Load Dropping</td><td>14</td></tr><tr><td>Sudden change in weather</td><td>66</td></tr><tr><td>Snapshot-related data error</td><td>58</td></tr></tbody></table>	Reason for Exclusion	No. of Trading Intervals	Market Intervention	15	Generator Tripping	23	Line Tripping	103	Load Dropping	14	Sudden change in weather	66	Snapshot-related data error	58
YR/QTR	Q1	Q2	Q3	Q4																																																		
2015	1.13%	1.20%	1.19%	1.20%																																																		
2016	1.13%	1.16%	1.15%	1.16%																																																		
2017	1.01%	1.20%	1.49%	1.50%																																																		
2018	1.04%	1.03%	1.00%	0.99%																																																		
2019	0.90%	0.88%	0.88%	0.89%																																																		
2020	0.89%	0.86%	0.85%	0.84%																																																		
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Snapshot-related data error	58																																																					
RTD Forecast Accuracy Rating (FAR) for Luzon	<p>The ratio of intervals with forecast error that is within the MAPE tolerance level of ± 3% in Luzon.</p>	3.75%	97.20%	<div><table><thead><tr><th>YR/QTR</th><th>Q1</th><th>Q2</th><th>Q3</th><th>Q4</th></tr></thead><tbody><tr><td>2015</td><td>98.88%</td><td>98.48%</td><td>98.79%</td><td>98.78%</td></tr><tr><td>2016</td><td>98.28%</td><td>98.47%</td><td>98.53%</td><td>98.64%</td></tr><tr><td>2017</td><td>98.87%</td><td>98.53%</td><td>98.64%</td><td>98.79%</td></tr><tr><td>2018</td><td>99.10%</td><td>99.18%</td><td>99.14%</td><td>99.22%</td></tr><tr><td>2019</td><td>98.94%</td><td>99.05%</td><td>99.18%</td><td>99.26%</td></tr><tr><td>2020</td><td>99.44%</td><td>99.26%</td><td>99.12%</td><td>99.03%</td></tr></tbody></table></div>	YR/QTR	Q1	Q2	Q3	Q4	2015	98.88%	98.48%	98.79%	98.78%	2016	98.28%	98.47%	98.53%	98.64%	2017	98.87%	98.53%	98.64%	98.79%	2018	99.10%	99.18%	99.14%	99.22%	2019	98.94%	99.05%	99.18%	99.26%	2020	99.44%	99.26%	99.12%	99.03%	<ul style="list-style-type: none">99.03% forecast accuracy ratingConsidered 8,376 out of the 8,458 valid intervals, with forecast error within the +/-3% tolerance level, in the computationExcluded same intervals as enumerated in the RTD Forecast MAPE for Luzon measure														
YR/QTR	Q1	Q2	Q3	Q4																																																		
2015	98.88%	98.48%	98.79%	98.78%																																																		
2016	98.28%	98.47%	98.53%	98.64%																																																		
2017	98.87%	98.53%	98.64%	98.79%																																																		
2018	99.10%	99.18%	99.14%	99.22%																																																		
2019	98.94%	99.05%	99.18%	99.26%																																																		
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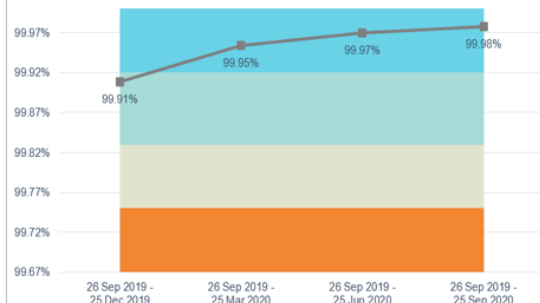
Legend: ■ Poor ■ Needs Improvement ■ Satisfactory ■ Very Satisfactory ■ Excellent

Measure	Brief Description	Weight	Target	2020 Annual Performance	2020 Annual Highlights																																																			
RTD Forecast Accuracy Rating (FAR) for Visayas	The ratio of intervals with forecast error that is within the MAPE tolerance level of ± 3% in Visayas.	3.75%	93.00%	<div><table><thead><tr><th>YR/QTR</th><th>Q1</th><th>Q2</th><th>Q3</th><th>Q4</th></tr></thead><tbody><tr><td>2015</td><td>95.84%</td><td>94.98%</td><td>94.98%</td><td>95.03%</td></tr><tr><td>2016</td><td>97.39%</td><td>94.47%</td><td>90.00%</td><td>89.70%</td></tr><tr><td>2017</td><td>94.26%</td><td>93.59%</td><td>94.19%</td><td>94.50%</td></tr><tr><td>2018</td><td>95.84%</td><td>95.91%</td><td>96.21%</td><td>96.46%</td></tr><tr><td>2019</td><td>96.99%</td><td>97.46%</td><td>97.64%</td><td>97.49%</td></tr><tr><td>2020</td><td>97.30%</td><td>97.54%</td><td>97.70%</td><td>97.75%</td></tr></tbody></table></div>	YR/QTR	Q1	Q2	Q3	Q4	2015	95.84%	94.98%	94.98%	95.03%	2016	97.39%	94.47%	90.00%	89.70%	2017	94.26%	93.59%	94.19%	94.50%	2018	95.84%	95.91%	96.21%	96.46%	2019	96.99%	97.46%	97.64%	97.49%	2020	97.30%	97.54%	97.70%	97.75%	<ul style="list-style-type: none">97.75% forecast accuracy ratingConsidered 8,314 out of the 8,505 valid intervals, with forecast error within the +/-3% tolerance level, in the calculation.Excluded same intervals as enumerated in the RTD Forecast MAPE for Visayas measure																
YR/QTR	Q1	Q2	Q3	Q4																																																				
2015	95.84%	94.98%	94.98%	95.03%																																																				
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2018	95.84%	95.91%	96.21%	96.46%																																																				
2019	96.99%	97.46%	97.64%	97.49%																																																				
2020	97.30%	97.54%	97.70%	97.75%																																																				
Day Ahead Projection (DAP) Forecast MAPE for Luzon	<p>Measures how far is the DAP forecasted demand compared to the actual demand in Luzon.</p> <p>The closer the rating is to 0%, the higher the MAPE rating.</p>	2.50%	1.60%	<div><table><thead><tr><th>YR/QTR</th><th>Q1</th><th>Q2</th><th>Q3</th><th>Q4</th></tr></thead><tbody><tr><td>2015</td><td>1.39%</td><td>1.43%</td><td>1.38%</td><td>1.39%</td></tr><tr><td>2016</td><td>1.40%</td><td>1.35%</td><td>1.33%</td><td>1.36%</td></tr><tr><td>2017</td><td>1.28%</td><td>1.36%</td><td>1.32%</td><td>1.31%</td></tr><tr><td>2018</td><td>1.23%</td><td>1.27%</td><td>1.26%</td><td>1.25%</td></tr><tr><td>2019</td><td>1.07%</td><td>1.08%</td><td>1.11%</td><td>1.14%</td></tr><tr><td>2020</td><td>1.10%</td><td>1.17%</td><td>1.17%</td><td>1.16%</td></tr></tbody></table></div>	YR/QTR	Q1	Q2	Q3	Q4	2015	1.39%	1.43%	1.38%	1.39%	2016	1.40%	1.35%	1.33%	1.36%	2017	1.28%	1.36%	1.32%	1.31%	2018	1.23%	1.27%	1.26%	1.25%	2019	1.07%	1.08%	1.11%	1.14%	2020	1.10%	1.17%	1.17%	1.16%	<ul style="list-style-type: none">1.16% MAPEConsidered 8,287 out of 8,784, with maximum absolute forecast error of 17.59%, in the computationExcluded 497 intervals in the calculation due to the following reasons as provided in the MOPS: <table><thead><tr><th>Reason for Exclusion</th><th>No. of Trading Intervals</th></tr></thead><tbody><tr><td>Market Intervention</td><td>108</td></tr><tr><td>Generator Tripping</td><td>25</td></tr><tr><td>Line Tripping</td><td>27</td></tr><tr><td>Load Dropping</td><td>8</td></tr><tr><td>Non-following of pump schedule of Kalayaan PSPP</td><td>121</td></tr><tr><td>Sudden change in weather</td><td>161</td></tr><tr><td>Snapshot-related data error</td><td>47</td></tr></tbody></table>	Reason for Exclusion	No. of Trading Intervals	Market Intervention	108	Generator Tripping	25	Line Tripping	27	Load Dropping	8	Non-following of pump schedule of Kalayaan PSPP	121	Sudden change in weather	161	Snapshot-related data error	47
YR/QTR	Q1	Q2	Q3	Q4																																																				
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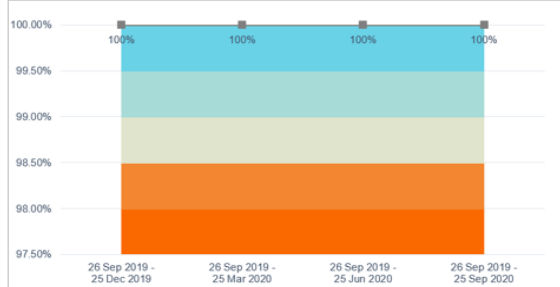
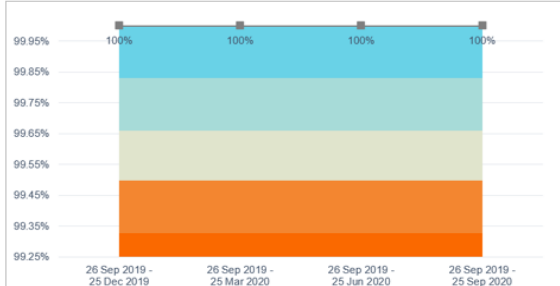
Legend: ■ Poor ■ Needs Improvement ■ Satisfactory ■ Very Satisfactory ■ Excellent

Measure	Brief Description	Weight	Target	2020 Annual Performance	2020 Annual Highlights																																																	
DAP Forecast MAPE for Visayas	<p>Measures how far is the DAP forecasted demand compared to the actual demand in Visayas.</p> <p>The closer the rating is to 0%, the higher the MAPE rating.</p>	2.50%	2.20%	<div><table><tr><th>YR/QTR</th><th>Q1</th><th>Q2</th><th>Q3</th><th>Q4</th></tr><tr><td>2015</td><td>2.48%</td><td>2.38%</td><td>2.27%</td><td>2.18%</td></tr><tr><td>2016</td><td>1.62%</td><td>1.78%</td><td>1.90%</td><td>2.00%</td></tr><tr><td>2017</td><td>2.05%</td><td>2.24%</td><td>2.30%</td><td>2.20%</td></tr><tr><td>2018</td><td>1.84%</td><td>1.76%</td><td>1.75%</td><td>1.73%</td></tr><tr><td>2019</td><td>1.44%</td><td>1.56%</td><td>1.55%</td><td>1.53%</td></tr><tr><td>2020</td><td>1.49%</td><td>1.46%</td><td>1.40%</td><td>1.38%</td></tr></table></div>	YR/QTR	Q1	Q2	Q3	Q4	2015	2.48%	2.38%	2.27%	2.18%	2016	1.62%	1.78%	1.90%	2.00%	2017	2.05%	2.24%	2.30%	2.20%	2018	1.84%	1.76%	1.75%	1.73%	2019	1.44%	1.56%	1.55%	1.53%	2020	1.49%	1.46%	1.40%	1.38%	<ul style="list-style-type: none">1.38% MAPEConsidered 8,366 out of 8,784 intervals, with maximum absolute forecast error of 20%, in the calculation of this measureExcluded 418 intervals in the computation due to the following reasons as provided in the MOPS: <table><tr><th>Reason for Exclusion</th><th>No. of Trading Intervals</th></tr><tr><td>Market Intervention</td><td>15</td></tr><tr><td>Generator Tripping</td><td>26</td></tr><tr><td>Line Tripping</td><td>144</td></tr><tr><td>Load Dropping</td><td>15</td></tr><tr><td>Sudden change in weather</td><td>146</td></tr><tr><td>Snapshot-related data error</td><td>72</td></tr></table>	Reason for Exclusion	No. of Trading Intervals	Market Intervention	15	Generator Tripping	26	Line Tripping	144	Load Dropping	15	Sudden change in weather	146	Snapshot-related data error	72
YR/QTR	Q1	Q2	Q3	Q4																																																		
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Dispatch Scheduling and Pricing (20%)																																																						
RTD (ex-ante) Workflow Successful Run	Percent of RTD market runs with available schedules and completed within the timetable	2.50%	99.75%	No unsuccessful RTD run since 2014 excluding intervals which resulted in Market Intervention.	<ul style="list-style-type: none">100% RTD successful runsConsidered 8,782 out of 8,784 RTD runs in the computation of this measureExcluded two (2) unsuccessful RTD runs that resulted to market intervention attributable to the MO																																																	

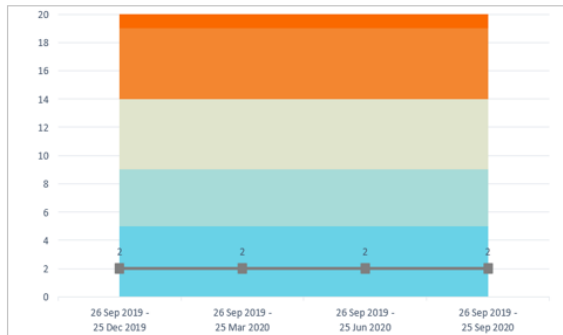
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Measure	Brief Description	Weight	Target	2020 Annual Performance	2020 Annual Highlights																																														
RTX (ex-post) Workflow Successful Run	Percent of RTX market runs with available schedules and completed within the timetable	2.50%	99.75%	<div><table><thead><tr><th>YR/QTR</th><th>Q1</th><th>Q2</th><th>Q3</th><th>Q4</th></tr></thead><tbody><tr><td>2014</td><td>100%</td><td>99.98%</td><td>99.98%</td><td>99.99%</td></tr><tr><td>2015</td><td>100%</td><td>99.91%</td><td>99.92%</td><td>99.92%</td></tr><tr><td>2016</td><td>100%</td><td>100%</td><td>100%</td><td>100%</td></tr><tr><td>2017</td><td>100%</td><td>100%</td><td>100%</td><td>100%</td></tr><tr><td>2018</td><td>100%</td><td>100%</td><td>100%</td><td>100%</td></tr><tr><td>2019</td><td>100%</td><td>100%</td><td>100%</td><td>100%</td></tr><tr><td>2020</td><td>99.91%</td><td>99.95%</td><td>99.97%</td><td>99.98%</td></tr></tbody></table></div>	YR/QTR	Q1	Q2	Q3	Q4	2014	100%	99.98%	99.98%	99.99%	2015	100%	99.91%	99.92%	99.92%	2016	100%	100%	100%	100%	2017	100%	100%	100%	100%	2018	100%	100%	100%	100%	2019	100%	100%	100%	100%	2020	99.91%	99.95%	99.97%	99.98%	<ul style="list-style-type: none">99.98% RTX successful runsConsidered 8,782 intervals in the calculation, which excluded two (2) intervals under market intervention attributable to the MORecorded two (2) unsuccessful RTX runs in the following intervals: <table><thead><tr><th>Date</th><th>Reason</th></tr></thead><tbody><tr><td>24 Oct 2019 0300H</td><td>Market Management System (MMS) stoppage resulting to no RTX savecase</td></tr><tr><td>23 Nov 2019 2300H</td><td>Switching of RDB1 and RDB2</td></tr></tbody></table>	Date	Reason	24 Oct 2019 0300H	Market Management System (MMS) stoppage resulting to no RTX savecase	23 Nov 2019 2300H	Switching of RDB1 and RDB2
YR/QTR	Q1	Q2	Q3	Q4																																															
2014	100%	99.98%	99.98%	99.99%																																															
2015	100%	99.91%	99.92%	99.92%																																															
2016	100%	100%	100%	100%																																															
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2019	100%	100%	100%	100%																																															
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24 Oct 2019 0300H	Market Management System (MMS) stoppage resulting to no RTX savecase																																																		
23 Nov 2019 2300H	Switching of RDB1 and RDB2																																																		

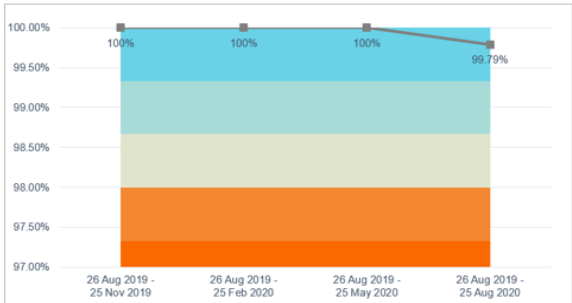
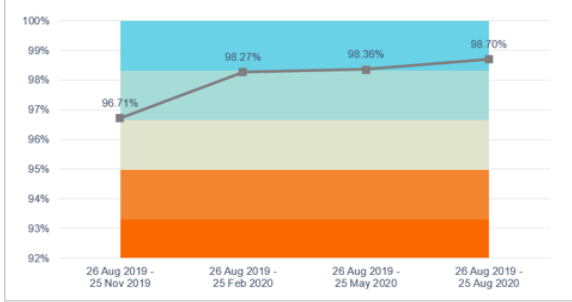
Legend: ■ Poor ■ Needs Improvement ■ Satisfactory ■ Very Satisfactory ■ Excellent

Measure	Brief Description	Weight	Target	2020 Annual Performance	2020 Annual Highlights																																												
Pricing Errors and Market Re-runs Timeliness (Prior Prelim Statement)	Completion of the validation of intervals that have been tagged with pricing errors and the timely completion of market re-runs prior the preliminary settlement run.	2.00%	98.50%	<div><table><thead><tr><th>YR/QTR</th><th>Q1</th><th>Q2</th><th>Q3</th><th>Q4</th></tr></thead><tbody><tr><td>2015</td><td>100%</td><td>99.95%</td><td>99.97%</td><td>99.98%</td></tr><tr><td>2016</td><td>98.49%</td><td>98.31%</td><td>99.02%</td><td>99.17%</td></tr><tr><td>2017</td><td>100%</td><td>100%</td><td>99.49%</td><td>99.50%</td></tr><tr><td>2018</td><td>100%</td><td>100%</td><td>100%</td><td>100%</td></tr><tr><td>2019</td><td>100%</td><td>100%</td><td>99.54%</td><td>99.63%</td></tr><tr><td>2020</td><td>100%</td><td>100%</td><td>100%</td><td>100%</td></tr></tbody></table></div>	YR/QTR	Q1	Q2	Q3	Q4	2015	100%	99.95%	99.97%	99.98%	2016	98.49%	98.31%	99.02%	99.17%	2017	100%	100%	99.49%	99.50%	2018	100%	100%	100%	100%	2019	100%	100%	99.54%	99.63%	2020	100%	100%	100%	100%	<ul style="list-style-type: none">100% timely completion of validation and submission of market prices for settlementsOnly intervals with non-congestion pricing errors were considered in the calculation as summarized in the table below <table><thead><tr><th>Region</th><th>RTD-PEN</th><th>RTX-PEN</th></tr></thead><tbody><tr><td>Luzon</td><td>264</td><td>214</td></tr><tr><td>Visayas</td><td>241</td><td>211</td></tr></tbody></table>	Region	RTD-PEN	RTX-PEN	Luzon	264	214	Visayas	241	211
YR/QTR	Q1	Q2	Q3	Q4																																													
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Pricing Errors and Market Re-runs Timeliness (Prior Final Statement)	Completion of the validation of intervals that have been tagged with pricing errors and the timely completion of market re-runs prior the final settlement run.	3.00%	99.50%	<div><table><thead><tr><th>YR/QTR</th><th>Q1</th><th>Q2</th><th>Q3</th><th>Q4</th></tr></thead><tbody><tr><td>2014</td><td>100%</td><td>99.96%</td><td>99.98%</td><td>99.98%</td></tr><tr><td>2015</td><td>100%</td><td>100%</td><td>100%</td><td>100%</td></tr><tr><td>2016</td><td>100%</td><td>100%</td><td>100%</td><td>100%</td></tr><tr><td>2017</td><td>100%</td><td>99.90%</td><td>99.91%</td><td>99.92%</td></tr><tr><td>2018</td><td>100%</td><td>100%</td><td>100%</td><td>100%</td></tr><tr><td>2019</td><td>100%</td><td>100%</td><td>100%</td><td>100%</td></tr><tr><td>2020</td><td>100%</td><td>100%</td><td>100%</td><td>100%</td></tr></tbody></table></div>	YR/QTR	Q1	Q2	Q3	Q4	2014	100%	99.96%	99.98%	99.98%	2015	100%	100%	100%	100%	2016	100%	100%	100%	100%	2017	100%	99.90%	99.91%	99.92%	2018	100%	100%	100%	100%	2019	100%	100%	100%	100%	2020	100%	100%	100%	100%					
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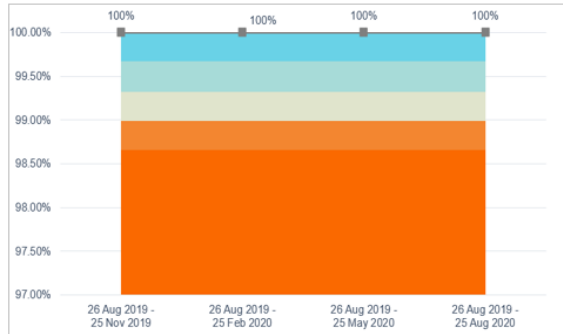
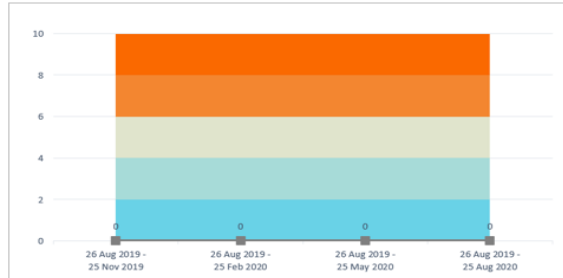
Legend: ■ Poor ■ Needs Improvement ■ Satisfactory ■ Very Satisfactory ■ Excellent

Measure	Brief Description	Weight	Target	2020 Annual Performance	2020 Annual Highlights																																												
Duration of Market Intervention Attributable to MO	Number of trading intervals with Market Intervention that was caused by MO, such as intervention due to software error.	10.00%	≤ 14	<div><table><thead><tr><th>YR/QTR</th><th>Q1</th><th>Q2</th><th>Q3</th><th>Q4</th></tr></thead><tbody><tr><td>2014</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>2015</td><td>0</td><td>4</td><td>6</td><td>8</td></tr><tr><td>2016</td><td>0</td><td>3</td><td>15</td><td>16</td></tr><tr><td>2017</td><td>0</td><td>0</td><td>0</td><td>4</td></tr><tr><td>2018</td><td>7</td><td>7</td><td>9</td><td>9</td></tr><tr><td>2019</td><td>0</td><td>3</td><td>6</td><td>6</td></tr><tr><td>2020</td><td>2</td><td>2</td><td>2</td><td>2</td></tr></tbody></table></div>	YR/QTR	Q1	Q2	Q3	Q4	2014	0	0	0	0	2015	0	4	6	8	2016	0	3	15	16	2017	0	0	0	4	2018	7	7	9	9	2019	0	3	6	6	2020	2	2	2	2	<ul style="list-style-type: none">Recorded two (2) intervals with market interventions attributable to the MO during the following intervals: <table><thead><tr><th>Date</th><th>Reason</th></tr></thead><tbody><tr><td>24 Oct 2019, 0400H–0500H</td><td>Failed start-up of MMS Sable application This software application that was connected to the database server being shutdown hanged, when it was expected that this server will reconnect at the other server. This happened during the replacement of the defective Central Processing Unit (CPU) of one of the servers.</td></tr></tbody></table>	Date	Reason	24 Oct 2019, 0400H–0500H	Failed start-up of MMS Sable application This software application that was connected to the database server being shutdown hanged, when it was expected that this server will reconnect at the other server. This happened during the replacement of the defective Central Processing Unit (CPU) of one of the servers.
YR/QTR	Q1	Q2	Q3	Q4																																													
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2017	0	0	0	4																																													
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Billing, Settlements, and Accounts Management (15%)																																																	

Legend: ■ Poor ■ Needs Improvement ■ Satisfactory ■ Very Satisfactory ■ Excellent

Measure	Brief Description	Weight	Target	2020 Annual Performance	2020 Annual Highlights																																								
Timeliness Preliminary and Final Settlement Statements	Issuance of Preliminary Settlement statements within seven (7) business days after the end of each billing period, and Final Settlement statements not later than eighteen (18) business days after the end of each billing period.	2.00%	98%	<div><table><thead><tr><th>YR/QTR</th><th>Q1</th><th>Q2</th><th>Q3</th><th>Q4</th></tr></thead><tbody><tr><td>2014</td><td>100%</td><td>100%</td><td>100%</td><td>100%</td></tr><tr><td>2015</td><td>99.17%</td><td>99.58%</td><td>99.72%</td><td>99.79%</td></tr><tr><td>2016</td><td>100%</td><td>100%</td><td>100%</td><td>100%</td></tr><tr><td>2017</td><td>100%</td><td>100%</td><td>100%</td><td>100%</td></tr><tr><td>2018</td><td>100%</td><td>100%</td><td>100%</td><td>100%</td></tr><tr><td>2019</td><td>99.17%</td><td>99.58%</td><td>99.72%</td><td>99.79%</td></tr><tr><td>2020</td><td>100%</td><td>100%</td><td>100%</td><td>99.79%</td></tr></tbody></table></div>	YR/QTR	Q1	Q2	Q3	Q4	2014	100%	100%	100%	100%	2015	99.17%	99.58%	99.72%	99.79%	2016	100%	100%	100%	100%	2017	100%	100%	100%	100%	2018	100%	100%	100%	100%	2019	99.17%	99.58%	99.72%	99.79%	2020	100%	100%	100%	99.79%	<ul style="list-style-type: none">99.79% timely issuance of settlement statementsIssued 1- day late Preliminary Settlement Statement for August 2020 billing month on 2 September 2020
YR/QTR	Q1	Q2	Q3	Q4																																									
2014	100%	100%	100%	100%																																									
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Accuracy of Preliminary Settlement Calculations	Compares the difference between preliminary and the final settlement calculations.	2.00%	95%	<div><table><thead><tr><th>YR/QTR</th><th>Q1</th><th>Q2</th><th>Q3</th><th>Q4</th></tr></thead><tbody><tr><td>2014</td><td>89.94%</td><td>89.89%</td><td>83.12%</td><td>84.52%</td></tr><tr><td>2015</td><td>77.32%</td><td>87.48%</td><td>91.82%</td><td>93.64%</td></tr><tr><td>2016</td><td>96.62%</td><td>98.11%</td><td>98.22%</td><td>98.27%</td></tr><tr><td>2017</td><td>99.39%</td><td>99.28%</td><td>99.12%</td><td>99.12%</td></tr><tr><td>2018</td><td>99.11%</td><td>99.18%</td><td>91.48%</td><td>92.67%</td></tr><tr><td>2019</td><td>38.89%</td><td>59.44%</td><td>62.71%</td><td>71.30%</td></tr><tr><td>2020</td><td>96.71%</td><td>98.27%</td><td>98.36%</td><td>98.70%</td></tr></tbody></table></div>	YR/QTR	Q1	Q2	Q3	Q4	2014	89.94%	89.89%	83.12%	84.52%	2015	77.32%	87.48%	91.82%	93.64%	2016	96.62%	98.11%	98.22%	98.27%	2017	99.39%	99.28%	99.12%	99.12%	2018	99.11%	99.18%	91.48%	92.67%	2019	38.89%	59.44%	62.71%	71.30%	2020	96.71%	98.27%	98.36%	98.70%	<ul style="list-style-type: none">98.70% accuracy of Preliminary Settlement Calculations
YR/QTR	Q1	Q2	Q3	Q4																																									
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Measure	Brief Description	Weight	Target	2020 Annual Performance	2020 Annual Highlights																																								
Accuracy of Final Settlement Calculations	Compares the difference between the original and last adjusted total trading amounts in the final settlement calculations.	3.00%	99%	<div><table><thead><tr><th>YR/QTR</th><th>Q1</th><th>Q2</th><th>Q3</th><th>Q4</th></tr></thead><tbody><tr><td>2014</td><td>99.36%</td><td>99.68%</td><td>99.66%</td><td>99.70%</td></tr><tr><td>2015</td><td>90.05%</td><td>94.82%</td><td>96.72%</td><td>97.62%</td></tr><tr><td>2016</td><td>100%</td><td>100%</td><td>99.89%</td><td>99.92%</td></tr><tr><td>2017</td><td>100%</td><td>100%</td><td>99.97%</td><td>99.97%</td></tr><tr><td>2018</td><td>100%</td><td>100%</td><td>100%</td><td>99.79%</td></tr><tr><td>2019</td><td>76.94%</td><td>75.24%</td><td>17.52%</td><td>38.46%</td></tr><tr><td>2020</td><td>100%</td><td>100%</td><td>100%</td><td>100%</td></tr></tbody></table></div>	YR/QTR	Q1	Q2	Q3	Q4	2014	99.36%	99.68%	99.66%	99.70%	2015	90.05%	94.82%	96.72%	97.62%	2016	100%	100%	99.89%	99.92%	2017	100%	100%	99.97%	99.97%	2018	100%	100%	100%	99.79%	2019	76.94%	75.24%	17.52%	38.46%	2020	100%	100%	100%	100%	<ul style="list-style-type: none">100% accuracy of Final Settlement CalculationsNo adjustments in Final Statements attributable to the MO for September 2019 to August 2020 billing months
YR/QTR	Q1	Q2	Q3	Q4																																									
2014	99.36%	99.68%	99.66%	99.70%																																									
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Frequency of Adjustments to Final Settlement Statements	Number of adjustments to the Final Settlement Statements.	2.00%	6	<div><table><thead><tr><th>YR/QTR</th><th>Q1</th><th>Q2</th><th>Q3</th><th>Q4</th></tr></thead><tbody><tr><td>2014</td><td>1</td><td>1</td><td>2</td><td>2</td></tr><tr><td>2015</td><td>2</td><td>2</td><td>2</td><td>2</td></tr><tr><td>2016</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>2017</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>2018</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>2019</td><td>3</td><td>6</td><td>9</td><td>9</td></tr><tr><td>2020</td><td>0</td><td>0</td><td>0</td><td>0</td></tr></tbody></table></div>	YR/QTR	Q1	Q2	Q3	Q4	2014	1	1	2	2	2015	2	2	2	2	2016	0	0	1	1	2017	0	0	1	1	2018	0	0	0	0	2019	3	6	9	9	2020	0	0	0	0	<ul style="list-style-type: none">No adjustments in Final Statements attributable to the MO for September 2019 to August 2020 billing monthsExcluded an adjustment in Final Statement in March 2020 billing month due to late submission of MQ of Meralco, NGCP and VECO, as provided in the MOPS
YR/QTR	Q1	Q2	Q3	Q4																																									
2014	1	1	2	2																																									
2015	2	2	2	2																																									
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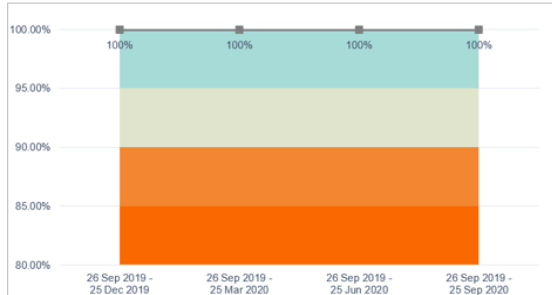
Measure	Brief Description	Weight	Target	2020 Annual Performance	2020 Annual Highlights												
Timeliness of Meter Data Error Detection	Ratio of Meter Trouble Reports (MTRs) issued within four (4) calendar days after receipt of meter data from MSP and RMSP.	2.00%	98%	No late MTR processing since 2014.	<div><ul style="list-style-type: none">100% timeliness in issuance of MTRsSignificant volume of MTRs was observed. Majority of the Monthly MTRs were associated with RCOA meters while most of the Daily MTRs are associated with WESM meters</div> <table><tr><th>Category</th><th>Monthly MTR</th><th>Daily MTR</th></tr><tr><td>WESM</td><td>9,055</td><td>73,294</td></tr><tr><td>RCOA</td><td>9,573</td><td>46,235</td></tr><tr><td>Total</td><td>18,628</td><td>119,529</td></tr></table>	Category	Monthly MTR	Daily MTR	WESM	9,055	73,294	RCOA	9,573	46,235	Total	18,628	119,529
Category	Monthly MTR	Daily MTR															
WESM	9,055	73,294															
RCOA	9,573	46,235															
Total	18,628	119,529															
Efficiency of Monetary Transactions	Measures the amount of late monetary remittances. This is an all or nothing measure, which means even 1 peso of late remittance would mean a Poor rating.	1.00%	0 late	No late remittances since 2014.	<ul style="list-style-type: none">No late monetary transactionsOn time remittance to sellers of PhP53.845B WESM payments received by the MO												
Timeliness of Monetary Transactions	All monetary transactions must be remitted to WESM members within the next working day from receipt of payments. This is an all or nothing measure, which	1.00%	0 late														

Legend: ■ Poor ■ Needs Improvement ■ Satisfactory ■ Very Satisfactory ■ Excellent

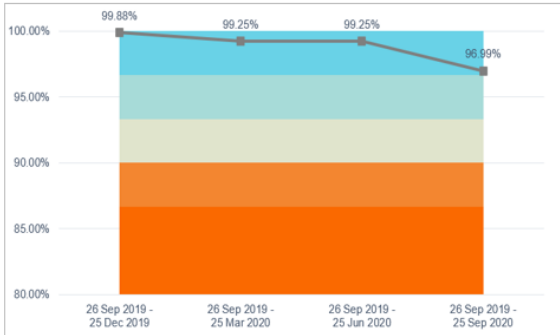
Measure	Brief Description	Weight	Target	2020 Annual Performance	2020 Annual Highlights
	means even 1 day late remittance would mean a Poor rating.				
Timeliness of Margin Call	Measures the timeliness of the MO's issuance of margin calls upon determination that the actual exposure to any WESM member exceeds the WESM member's trading limit.	1.00%	95%	No late margin calls since 2014.	<ul style="list-style-type: none"> • 100% timely issuance of margin calls • Issued 256 margin calls on time • No margin call was issued in March and April 2020 billing months due to the ERC and DOE Advisories³, in view of the Enhanced Community Quarantine (ECQ)
Timeliness of Default Notice	Measures the timeliness of the MO's issuance of default notice upon non-payment of a WESM member within the month.	1.00%	0 late	No late default notices since 2015. <i>The timeliness of default notice issuance was only measured since 2015.</i>	<ul style="list-style-type: none"> • 100% timely issuance of default notices • Issued 104 default notices on time • No default notice was issued in February and March 2020 billing months due to the ERC and DOE Advisories¹, in view of the Enhanced Community Quarantine (ECQ)
Registration and Customer Relations (10%)					

³ ERC Advisories dated 17 March, 15 April and 5 May 2020 and DOE Advisories dated 18 March 30 April and 7 May 2020 and

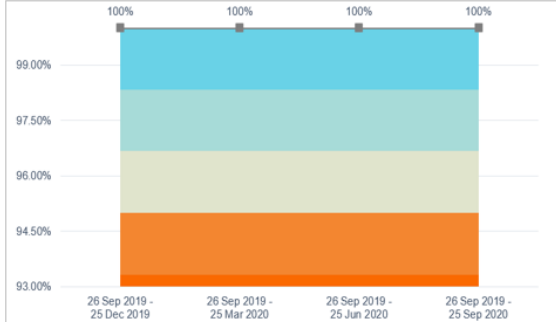
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Measure	Brief Description	Weight	Target	2020 Annual Performance	2020 Annual Highlights																																								
Timeliness of Registration Application Processing	Ratio of registration applications processed within 15 working days from the submission of complete requirements	2.00%	95%	<div><table><thead><tr><th>YR/QTR</th><th>Q1</th><th>Q2</th><th>Q3</th><th>Q4</th></tr></thead><tbody><tr><td>2014</td><td>100%</td><td>100%</td><td>100%</td><td>100%</td></tr><tr><td>2015</td><td>92.59%</td><td>95.12%</td><td>96.30%</td><td>97.06%</td></tr><tr><td>2016</td><td>100%</td><td>100%</td><td>100%</td><td>96.67%</td></tr><tr><td>2017</td><td>99.00%</td><td>99.75%</td><td>99.79%</td><td>99.81%</td></tr><tr><td>2018</td><td>100%</td><td>100%</td><td>100%</td><td>100%</td></tr><tr><td>2019</td><td>100%</td><td>100%</td><td>100%</td><td>100%</td></tr><tr><td>2020</td><td>100%</td><td>100%</td><td>100%</td><td>100%</td></tr></tbody></table></div>	YR/QTR	Q1	Q2	Q3	Q4	2014	100%	100%	100%	100%	2015	92.59%	95.12%	96.30%	97.06%	2016	100%	100%	100%	96.67%	2017	99.00%	99.75%	99.79%	99.81%	2018	100%	100%	100%	100%	2019	100%	100%	100%	100%	2020	100%	100%	100%	100%	<ul style="list-style-type: none">100% timely processing of registration applicationsProcessed 156 registration applications, of which, 23 were WESM applications and 133 were RCOA applications
YR/QTR	Q1	Q2	Q3	Q4																																									
2014	100%	100%	100%	100%																																									
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2020	100%	100%	100%	100%																																									
Timeliness of Customer Switching Requests Processing	Ratio of customer switching requests processed on time	1.00%	95%	No late processing of customer switching requests since its commencement in 2015.	<ul style="list-style-type: none">100% timely processing of customer switching requestsProcessed 196 customer switching requests																																								
Timeliness of the Conduct of Participant Trainings	Ratio of participant trainings conducted as per schedule	2.00%	95%	No late training since 2014.	<ul style="list-style-type: none">Conducted seven (7) participant trainings on time<ul style="list-style-type: none">five (5) Basic WESM Trainingone (1) Advanced WESM Trainingone (1) RCOA Training																																								

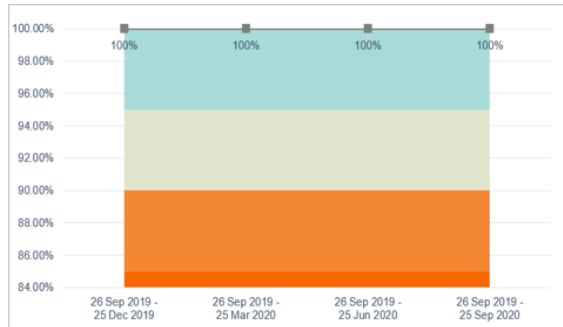
Legend: ■ Poor ■ Needs Improvement ■ Satisfactory ■ Very Satisfactory ■ Excellent

Measure	Brief Description	Weight	Target	2020 Annual Performance	2020 Annual Highlights																																								
Feedback on Participant Trainings	Average of the participant feedback on trainings, as gathered from survey forms	1.00%	90%	<div><table><thead><tr><th>YR/QTR</th><th>Q1</th><th>Q2</th><th>Q3</th><th>Q4</th></tr></thead><tbody><tr><td>2014</td><td>96.04%</td><td>95.57%</td><td>95.95%</td><td>95.94%</td></tr><tr><td>2015</td><td>96.50%</td><td>96.04%</td><td>95.17%</td><td>95.38%</td></tr><tr><td>2016</td><td>94.85%</td><td>94.57%</td><td>94.70%</td><td>94.80%</td></tr><tr><td>2017</td><td>96.72%</td><td>96.72%</td><td>96.71%</td><td>96.81%</td></tr><tr><td>2018</td><td>97.24%</td><td>97.54%</td><td>97.64%</td><td>97.45%</td></tr><tr><td>2019</td><td>97.44%</td><td>97.84%</td><td>97.84%</td><td>98.09%</td></tr><tr><td>2020</td><td>99.88%</td><td>99.25%</td><td>99.25%</td><td>96.99%</td></tr></tbody></table></div>	YR/QTR	Q1	Q2	Q3	Q4	2014	96.04%	95.57%	95.95%	95.94%	2015	96.50%	96.04%	95.17%	95.38%	2016	94.85%	94.57%	94.70%	94.80%	2017	96.72%	96.72%	96.71%	96.81%	2018	97.24%	97.54%	97.64%	97.45%	2019	97.44%	97.84%	97.84%	98.09%	2020	99.88%	99.25%	99.25%	96.99%	<ul style="list-style-type: none">An average feedback of 96.99% on the participant trainings
YR/QTR	Q1	Q2	Q3	Q4																																									
2014	96.04%	95.57%	95.95%	95.94%																																									
2015	96.50%	96.04%	95.17%	95.38%																																									
2016	94.85%	94.57%	94.70%	94.80%																																									
2017	96.72%	96.72%	96.71%	96.81%																																									
2018	97.24%	97.54%	97.64%	97.45%																																									
2019	97.44%	97.84%	97.84%	98.09%																																									
2020	99.88%	99.25%	99.25%	96.99%																																									

Legend: ■ Poor ■ Needs Improvement ■ Satisfactory ■ Very Satisfactory ■ Excellent

Measure	Brief Description	Weight	Target	2020 Annual Performance	2020 Annual Highlights																																								
Timeliness of addressing Participant Queries and Data Requests	Ratio of queries and requests that were addressed as per schedule	2.00%	95%	<div><table><thead><tr><th>YR/QTR</th><th>Q1</th><th>Q2</th><th>Q3</th><th>Q4</th></tr></thead><tbody><tr><td>2014</td><td>100%</td><td>99.23%</td><td>98.70%</td><td>99.05%</td></tr><tr><td>2015</td><td>100%</td><td>98.13%</td><td>98.80%</td><td>99.02%</td></tr><tr><td>2016</td><td>100%</td><td>100%</td><td>100%</td><td>100%</td></tr><tr><td>2017</td><td>100%</td><td>100%</td><td>100%</td><td>100%</td></tr><tr><td>2018</td><td>100%</td><td>100%</td><td>100%</td><td>99.19%</td></tr><tr><td>2019</td><td>100%</td><td>100%</td><td>100%</td><td>100%</td></tr><tr><td>2020</td><td>100%</td><td>100%</td><td>100%</td><td>100%</td></tr></tbody></table></div>	YR/QTR	Q1	Q2	Q3	Q4	2014	100%	99.23%	98.70%	99.05%	2015	100%	98.13%	98.80%	99.02%	2016	100%	100%	100%	100%	2017	100%	100%	100%	100%	2018	100%	100%	100%	99.19%	2019	100%	100%	100%	100%	2020	100%	100%	100%	100%	<ul style="list-style-type: none">• 100% rating in addressing participants' data requests and queries• Addressed 297 participants' data requests and queries within the required timeline<ul style="list-style-type: none">○ TOD responded to 285 data requests and queries○ CPC processed 12 data requests and queries with payment
YR/QTR	Q1	Q2	Q3	Q4																																									
2014	100%	99.23%	98.70%	99.05%																																									
2015	100%	98.13%	98.80%	99.02%																																									
2016	100%	100%	100%	100%																																									
2017	100%	100%	100%	100%																																									
2018	100%	100%	100%	99.19%																																									
2019	100%	100%	100%	100%																																									
2020	100%	100%	100%	100%																																									

Legend: ■ Poor ■ Needs Improvement ■ Satisfactory ■ Very Satisfactory ■ Excellent

Measure	Brief Description	Weight	Target	2020 Annual Performance	2020 Annual Highlights																																								
Timeliness of resolving Participant/ Customer Complaints	Ratio of valid complaints that were resolved as per schedule	2.00%	95%	<div><table><thead><tr><th>YR/QTR</th><th>Q1</th><th>Q2</th><th>Q3</th><th>Q4</th></tr></thead><tbody><tr><td>2014</td><td>100%</td><td>100%</td><td>100%</td><td>100%</td></tr><tr><td>2015</td><td>100%</td><td>100%</td><td>100%</td><td>100%</td></tr><tr><td>2016</td><td>100%</td><td>100%</td><td>98.11%</td><td>98.51%</td></tr><tr><td>2017</td><td>100%</td><td>100%</td><td>100%</td><td>100%</td></tr><tr><td>2018</td><td>100%</td><td>100%</td><td>96.77%</td><td>96.88%</td></tr><tr><td>2019</td><td>N/A</td><td>100%</td><td>100%</td><td>100%</td></tr><tr><td>2020</td><td>100%</td><td>100%</td><td>100%</td><td>100%</td></tr></tbody></table></div>	YR/QTR	Q1	Q2	Q3	Q4	2014	100%	100%	100%	100%	2015	100%	100%	100%	100%	2016	100%	100%	98.11%	98.51%	2017	100%	100%	100%	100%	2018	100%	100%	96.77%	96.88%	2019	N/A	100%	100%	100%	2020	100%	100%	100%	100%	<ul style="list-style-type: none">• 100% rating in resolving valid complaints• Resolved five (5) valid complaints within the required timeline
YR/QTR	Q1	Q2	Q3	Q4																																									
2014	100%	100%	100%	100%																																									
2015	100%	100%	100%	100%																																									
2016	100%	100%	98.11%	98.51%																																									
2017	100%	100%	100%	100%																																									
2018	100%	100%	96.77%	96.88%																																									
2019	N/A	100%	100%	100%																																									
2020	100%	100%	100%	100%																																									
Overall Rating (26 September 2019 – 25 September 2020)					4.79 – Very Satisfactory																																								

Legend: ■ Poor ■ Needs Improvement ■ Satisfactory ■ Very Satisfactory ■ Excellent

Appendix A. 2015 Market Operator Performance Standards

Performance Category	Description
A. IT Systems	<p>IT systems cover the availability to market participants of the Market Management System (MMS) and the public WESM website, which is referred to as the market information website under the WESM Rules.</p> <p>The MMS and public WESM website are being administered, maintained and monitored 24/7 to ensure that the market results are available and published on time. Participants' complaints or concerns regarding these systems are reported to the MO through phone calls or emails. In addition, any system malfunction or errors detected internally are likewise immediately reported and addressed.</p>
Market Management Systems (MMS)	<p>The various IT components of the MMS is essential in the continuous and efficient communication of the market systems, gathering of market workflow inputs, dispatch scheduling, processing and publication of market outputs and emergency systems.</p> <p>Unavailability of the MMS that was caused by third party service providers, such as electricity supply and communication link providers of MO, are excluded from the MOPS.</p>
Public WESM Website	<p>The public IEMOP website, or the Market Information Website, is the facility and electronic communication system wherein the MO publishes information that may be accessed by WESM Members, interested parties and the general public. It provides extensive information about the MO, WESM and Retail Competition and Open Access (RCOA), market operations and governance. It also makes available market data and operational reports, registration and training information, and various documents, including the relevant laws, issuances, rules, and manuals.</p> <p>A new public website was made which is the IEMOP Public Website and can be found at www.iemop.ph. The public IEMOP website also contains relevant publication such as news, notices, announcements, and information on events. It also has a platform, i.e. Ticketing System, wherein inquiries, concerns, and even complaints can be made electronically by any interested party.</p> <p>In measuring its availability, downtimes refer to incidents when the public WESM website is not accessible due to errors caused by the MO's internal system and processes. Those attributed or caused by third parties are excluded since these are beyond the MO's control.</p>

Performance Category	Description
B. Market Reports and Data Publication	<p>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.</p> <p>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.</p> <p>"Publication" as defined in the WESM Rules is "to make available information". While there are other means to make available information⁴, for the purposes of this MOPS monitoring, publication of market reports and data is interpreted to being made through the public WESM website, MPI, email, and newspaper of general circulation, as applicable. Note that publications through file transfer protocol (FTP) are monitored internally.</p> <p>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 latter are those with a prescribed timeline for publication in corresponding enabling rules/guidelines. On the other hand, reports or data are considered available once published, including those that have remained unchanged since its first publication (such as WESM Manuals, e.g. procedures regarding constraint violation coefficients).</p> <p>Availability pertains to the actual number of publications against the total number of required publications for each of the publications monitored. The average of the availability ratings for the publications provides the basis for rating this measure, such that regardless of the volume of the published market information, all publications have equal weights.</p> <p>Timeliness of market information publication refers to the MO's compliance to the required timing of publication of market information in accordance to the schedules under the WESM Rules, Manuals, internal procedures or the MOPS document. Similar to the calculation of availability, timeliness</p>

⁴ Publication is also done via data sharing or file transfer facility to market participants who have availed of this paid service. Data sharing or file transfers of MMS-generated and other market data and/or reports are provided to the monitoring systems of the DOE and ERC.

Performance Category	Description
	<p>pertains to the actual number of timely publications against the total number of required publications for each of the publications monitored. The average of the timeliness ratings for the publications provides the basis for rating for this measure, such that regardless of the volume of the published information, all publications have equal weights.</p>
C. Forecast Accuracy	<p>Load forecasting is 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 or too little generation is scheduled.</p> <p>The MO currently prepares and publishes week ahead (WAP), day ahead (DAP) 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).</p> <p>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 Absolute Percentage 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.</p>
RTD Forecast	<p>The hour ahead forecast or the RTD forecast is one 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 for Luzon and Visayas.⁵ 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 59,⁶ as follows:</p> <ul style="list-style-type: none"> • 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 $\pm 3\%$.
DAP Forecast	<p>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. Similar with the computation of RTD forecast, the accuracy of DAP forecast is measured</p>

⁵ Previously, hourly load forecasts that are inputs to the MMS (LDF or LDP) were used, in accordance with the MOPS, Issue 1.0.

⁶ In the absence of 59th minute snapshot data, the 54th minute snapshot data before the target hour or the 4th 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.

Performance Category	Description
	against the actual demand based on snapshot data of all generators at minute 59. The same exclusions in the RTD forecasts are applied in the DAP forecasts.
D. 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 RTD and real-time ex-post (RTX) workflow processes, timeliness of pricing error issuance and the duration of market intervention (MI) attributable to the MO.
RTD Workflow	<p>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 PEMC within the timetable.</p> <p>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. Further, RTD runs with MI attributable to the MO are excluded in the trading intervals considered.</p>
RTX Workflow	The ex-post run or RTX workflow is measured in the same manner as with the RTD workflow process.
Pricing Errors and Market Re-runs	This refers to the process of validation of intervals with PENs and the timely completion of market re-runs (MRR) prior to the issuance of preliminary and final settlements for Luzon and Visayas.
Market Intervention Attributable to MO	The duration or frequency of market interventions (MIs) that are attributable to the MO is being monitored to ensure that the WESM is operational 24/7. The allowable number of MIs in a year is equal to or less than 14 trading intervals.
E. 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

Performance Category	Description
	the transactions to the Market Participants. The MOPS provides that this category be measured in terms of timeliness, frequency and accuracy.
Issuance of Preliminary and Final Settlement Statements	The WESM Rules require that Preliminary Settlement Statements are issued within seven (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. If the deadline falls on a Non-Working Day, the issuance of the settlement statements shall be made during the next immediate Working Day.
Preliminary and Final Settlement Calculations	<p>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.</p> <p>The adjustments related to claims for additional compensation for Administered Prices (AP) and must run units (MRUs) are excluded, as well as the adjustments due to corrections in meter quantities that are attributable to the metering service provider (MSP).</p> <p>Final settlement statements are also evaluated according to the number of adjustments in the final settlement calculations with the target being less than 6 adjustments per year.</p>
Meter Data Error Detection	<p>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 four (4) calendar days after receipt of meter data from the Metering Services Provider (MSP).</p> <p>The MO receives daily meter quantities (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 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 orphan⁷ meter data and meter data with uncertain and missing values⁸, the MO will issue an MTR to the MSP. In turn, the MSP should issue the corrected daily meter data within ten (10) calendar days and monthly meter data within two (2) business days.⁹</p>

⁷ 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).

⁸ Section 7.3.4 of the WESM Manual on Metering Standards and Procedures

⁹ Section 10.4.1.3-4 of the WESM Manual on Metering Standards and Procedures

Performance Category	Description
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.
Margin Call	<p>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.</p> <p>The MO target of margin call issuance is on or before the 20th of the next month after the billing period, i.e. for the billing month 26 January 2020 to 25 February 2020, margin calls should have been issued on or before 20 March 2020.</p>
Default Notice	WESM Rule 3.14.11.2 requires the MO to issue a default notice, which specifies the nature of the alleged default, as soon as practicable, during any of the default events specified under WESM Rule 3.14.11.1. Further, the MO is required to disclose information pursuant to DOE DC No. 2013-07-0018 issued on 26 July 2013, Section 1.1.(a) containing the Settlement amount unpaid by the end of the month, and the specific WESM member that failed to pay the settlement amounts.
F. 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.
Registration Processing	<p>The process of registration of the WESM participants under the WESM Rules is being implemented according to the following timeline:</p> <ul style="list-style-type: none"> • Within five (5) working days from 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);

Performance Category	Description
	<ul style="list-style-type: none"> 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.
Customer Switching Requests	In accordance with the Retail Rules, customer switching requests should be processed by the MO, subject to the completion of all requirements, within 30 days prior to the proposed effective date.
Participants' Training and Feedback	To gauge the effectiveness of trainings, their timely conduct and the participants' feedback on the trainer/speaker and other aspects of the training (e.g. logistics and materials), which are gathered through survey forms to rate, are monitored.
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.
Participant/Customer Complaint	The MOPS provides that complaints by customers should be resolved in a timely manner, i.e. within 5 working days. The MOPS provides that customers refer to Trading Participants, which may be generation companies or customer/load, Network Service Provider, Metering Services Provider, the System Operator, Contestable Customers, Retail Metering Services Provider, Retail Suppliers, the DOE, and the ERC.

Appendix B. Rating System References¹⁰

MO Performance Category	Measure	Rating System	Target	Ranges				
				Excellent 5	Very Satisfactory 4	Satisfactory 3	Needs Improvement 2	Poor 1
IT Systems (20%)								
Market Management Systems	Availability	RS 2a	99.80%	99.93%≤x≤100%	99.87%≤x<99.93%	99.80%≤x<99.87%	99.80%>x≥99.73%	99.73%>x
WESM Website	Availability	RS 2a	99.50%	99.83%≤x≤100%	99.67%≤x<99.83%	99.50%≤x<99.67	99.50%>x≥99.33%	99.33%>x
Market Reports and Data Publication (15%)	Availability	RS 3	95%	=100%	95% ≤ x < 100%	90% ≤ x < 95%	85% ≤ x < 90%	x < 85%
	Timeliness	RS 3	95%	=100%	95% ≤ x < 100%	90% ≤ x < 95%	85% ≤ x < 90%	x < 85%
Forecast Accuracy (20%)								
RTD Forecast - MAPE	Accuracy - Luzon	RS 4b	0.95%	x<=0.68%	0.68%< x <0.92%	0.92%<= x <=0.98%	0.98%< x <1.28%	x >=1.28%
	Accuracy - Visayas		1.20%	x <=0.86%	0.86%< x <1.17%	1.17%<= x <=1.23%	1.23%< x <1.65%	x >=1.65%
RTD Forecast - FAR	Accuracy - Luzon	RS 2b	97.20%	x >=98.55%	98.55%> x >97.65%	97.65%>= x >=96.75%	96.75%> x >95.85%	x <=95.85%
	Accuracy - Visayas		93.00%	x >=97.00%	97.00%> x >94.33%	94.33%>= x >=91.67%	91.67%> x >89.00%	x <=89.00%
DAP Forecast - MAPE	Accuracy - Luzon	RS 4C	1.60%	x <1.11	1.11%< x <1.45%	1.45%< x <2.32%	2.32%< x <3.20%	x >3.20%
	Accuracy - Visayas		2.20%	x <1.73	1.73%< x <2.41%	2.41%< x <3.08%	3.08%< x <3.27%	x >3.27%
Dispatch Scheduling and Pricing (20%)								
RTD Workflow	Successful Run	RS 2a	99.75%	99.92%≤x≤100%	99.83%≤x<99.92%	99.75%≤x<99.83%	99.75%>x≥99.67%	99.67%>x
RTX Workflow	Successful Run	RS 2a	99.75%	99.92%≤x≤100%	99.83%≤x<99.92%	99.75%≤x<99.83%	99.75%>x≥99.67%	99.67%>x
Pricing Errors and Market Re-runs	Timeliness - Prelim	RS 2a	98.50%	99.50% <x<100%	99.50% <x<99.00%	98.50% <x<99.00%	98.50% <x<98.00%	98.00%>x
	Timeliness - Final	RS 2a	99.50%	99.83%≤x≤100%	99.67%≤x<99.83%	99.50%≤x<99.67%	99.50%>x≥99.33%	99.33%>x

¹⁰ Refer to the MO Performance Standards Scoring System, Section 9, MOPS as approved by the DOE in October 2015

MO Performance Category	Measure	Rating System	Target	Ranges				
				Excellent 5	Very Satisfactory 4	Satisfactory 3	Needs Improvement 2	Poor 1
Market Intervention Attributable to MO	Duration	RS 4a	14	$5 \geq x \geq 0$	$9 \geq x > 5$	$14 \geq x > 9$	$14 < x \leq 19$	$19 < x$
Billings, Settlements and Accounts Management (15%)								
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	≤ 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	0 amount late	$x=0$				$x>0$
	Timeliness	RS 1a	0 days late	$x=0$				$x>0$
Margin Call	Timeliness	RS 2a	95%	$98.33\% \leq x \leq 100\%$	$96.67\% \leq x < 98.33\%$	$95\% \leq x < 96.67\%$	$95\% > x \geq 93.33\%$	$93.33\% > x$
Default Notice	Timeliness	RS 1	0 days late	$x=0$				$x>0$
Registration and Customer Relations (10%)								
Registration	Timeliness	RS 3	95%	$x=100\%$	$95\% \leq x < 100\%$	$90\% \leq x < 95\%$	$85\% \leq x < 90\%$	$x < 85\%$
Customer Switching	Timeliness	RS 3	95%	$x=100\%$	$95\% \leq x < 100\%$	$90\% \leq x < 95\%$	$85\% \leq x < 90\%$	$x < 85\%$
Participant Training	Timeliness	RS 3	95%	$x=100\%$	$95\% \leq x < 100\%$	$90\% \leq x < 95\%$	$85\% \leq x < 90\%$	$x < 85\%$
	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%	$x=100\%$	$95\% \leq x < 100\%$	$90\% \leq x < 95\%$	$85\% \leq x < 90\%$	$x < 85\%$

Appendix C. Market Management System (MMS) Downtime

For the period 26 September 2019 to 25 September 2020

The listed downtimes were recorded using the PEMC monitoring tool.

Date	Time of Incident	Time Resolved	Downtime (in Hours)	Reason/Remarks	Included? (Yes/No)
11/10/2019	20:48:54	20:55:03	0.10	MPI logs show that the MPI is up on the dates and time of observed system downtime. MPI was MONITORED UP and ACCESSIBLE. This downtime manifested due to the load balancer issues.	No
12/03/2019	19:51:34	20:01:13	0.16		No
12/20/2019	16:53:49	18:08:17	1.24	IEMOP Maintenance Schedule of ASST Database Server	No
12/20/2019	19:10:33	22:08:13	2.96		No
12/20/2019	23:04:39	23:46:22	0.70		No
12/21/2019	0:02:09	0:16:18	0.24		No
12/21/2019	2:16:39	2:21:48	0.09		No
12/21/2019	2:43:26	10:18:17	7.58		No
12/21/2019	18:27:09	18:36:22	0.15		No
12/21/2019	19:22:39	19:27:22	0.08		No
12/21/2019	19:53:09	19:56:22	0.05	MPI logs show that the MPI is up on the dates and time of observed system downtime. MPI was MONITORED UP and ACCESSIBLE. This downtime manifested due to the load balancer issues.	No
12/21/2019	20:12:09	20:36:18	0.40		No
12/21/2019	20:57:56	22:24:17	1.44		No
12/22/2019	1:23:01	2:24:13	1.02		No
12/22/2019	4:32:09	6:28:13	1.93		No
12/22/2019	8:41:19	8:56:22	0.25		No
12/22/2019	10:03:09	10:30:13	0.45		No
12/22/2019	18:08:39	18:38:13	0.49		No
12/22/2019	20:22:31	20:26:22	0.06		No
12/22/2019	20:37:09	20:46:18	0.15		No
12/23/2019	0:39:34	10:34:07	9.91		No
12/23/2019	10:54:59	10:56:12	0.02		No
12/23/2019	11:39:55	12:00:03	0.34		No
12/23/2019	13:18:59	14:54:03	1.58		No
12/23/2019	18:58:59	0:00:00	5.02		No
12/24/2019	0:00:00	3:02:07	3.04		No
12/24/2019	15:14:54	17:26:07	2.19		No
12/24/2019	17:41:54	18:06:03	0.40		No
12/24/2019	19:49:52	23:14:02	3.40		No
12/25/2019	7:36:54	9:26:33	1.83		No
12/25/2019	9:43:07	11:20:02	1.62		No
12/25/2019	13:39:25	19:24:02	5.74		No
12/26/2019	3:30:24	9:58:02	6.46		No
12/26/2019	23:38:53	0:00:00	0.35		No
12/27/2019	0:00:00	0:12:01	0.20		No
12/27/2019	18:16:51	19:45:58	1.49		No
12/30/2019	1:15:37	1:25:49	0.17		No
01/11/2020	13:32:59	14:08:34	0.59		No
01/11/2020	17:38:30	18:49:31	1.18		No

Date	Time of Incident	Time Resolved	Downtime (in Hours)	Reason/Remarks	Included? (Yes/No)
01/14/2020	9:52:26	10:28:24	0.60	MPI logs show that the MPI is up on the dates and time of observed system downtime. MPI was MONITORED UP and ACCESSIBLE. This downtime manifested due to the load balancer issues.	No
01/15/2020	8:22:39	8:24:17	0.03		No
01/16/2020	23:58:54	0:00:00	0.02		No
01/17/2020	0:00:00	15:57:25	15.96		No
01/18/2020	22:45:39	23:45:48	1.00		No
02/14/2020	6:48:23	6:53:01	0.08		No
02/14/2020	10:37:33	11:18:02	0.67		No
02/14/2020	11:54:23	12:06:06	0.20		No
02/14/2020	12:16:53	14:05:57	1.82		No
02/14/2020	14:37:44	17:24:27	2.78		No
02/14/2020	19:26:23	19:38:06	0.20		No
02/14/2020	20:57:46	0:00:00	3.04		No
02/15/2020	0:00:00	2:13:55	2.23		No
02/15/2020	3:27:47	3:36:26	0.14		No
02/15/2020	5:12:47	5:16:00	0.05		No
02/15/2020	5:26:47	7:15:56	1.82		No
02/15/2020	7:37:34	12:19:59	4.71		No
02/18/2020	19:02:42	19:11:45	0.15		No
02/18/2020	19:25:42	19:30:46	0.08		No
02/18/2020	21:50:11	21:55:46	0.09		No
03/07/202	22:00:36	22:06:45	0.10	ETPI Network Outage in Ortigas	No
03/07/202	23:33:35	0:00:00	0.44		No
03/08/202	0:00:00	3:44:47	3.75	This downtime manifested due to the load balancer issues.	No
03/08/202	6:04:38	6:06:46	0.04		No
03/08/202	7:04:03	10:04:46	3.01		No
03/08/202	10:51:03	11:28:45	0.63		No
03/08/202	11:44:32	12:08:41	0.40		No
03/08/202	13:43:32	15:06:40	1.39		No
03/08/202	15:42:32	16:54:45	1.20		No
03/08/202	17:10:32	17:48:45	0.64		No
03/08/202	18:35:01	19:48:41	1.23		No
03/08/202	21:05:30	21:22:56	0.29		No
04/23/2020	16:45:24	16:47:46	0.04	MPI logs show that the MPI is up on the dates and time of observed system downtime. MPI was MONITORED UP and ACCESSIBLE. This downtime manifested due to the load balancer issues.	No
06/19/2020	11:59:10	18:18:18	6.32	PEMC Core Switch had network hardware failure	No
06/28/2020	1:49:28	6:41:59	4.88	Bayantel communication link as the primary line for MPI in Diliman Site was down from 01:35AM - 06:00AM. The secondary line was immediately activated as contingency to provide continued MPI access via Diliman Site.	
06/28/2020	7:18:49	10:21:24	3.04		

Date	Time of Incident	Time Resolved	Downtime (in Hours)	Reason/Remarks	Included? (Yes/No)
				MPI access logs as proof that MPI was accessible in Diliman Site around 01:30AM - 11:00AM.	
08/08/2020	0:56:08	0:57:11	0.02	MPI logs show that the MPI is up on the dates and time of observed system downtime. MPI was MONITORED UP and ACCESSIBLE. This downtime manifested due to the load balancer issues.	No
09/07/2020	2:29:35	2:31:54	0.04		No

Appendix D. Public Website Downtime

For the period 26 September 2019 to 25 September 2020

The listed downtimes were recorded using the PEMC monitoring tool.

Date	Time of Incident	Time Resolved	Downtime (in Hours)	Reason/Remarks	Included? (Yes/No)
12/08/2019	23:06:19	23:24:24	0.30	IEMOP-ISTD monitored no downtime which was supported by the MRTG or PRTG setup of their public website.	No
12/20/2019	16:53:57	18:06:27	1.21		No
01/11/2020	13:34:19	14:09:00	0.58	PEMC Network Maintenance (Replacement of SonicWALL Firewall and separation of Network of PEMC and IEMOP)	No
01/11/2020	16:41:52	0:00:00	7.30		No
01/12/2020	0:00:00	15:42:56	15.72		No
01/14/2020	9:54:15	10:23:53	0.49		No
01/14/2020	15:37:25	15:38:27	0.02		No
01/15/2020	8:22:22	8:23:49	0.02		No
01/16/2020	17:23:05	17:23:41	0.01		No
01/16/2020	23:59:32	0:00:00	0.01		No
01/17/2020	0:00:00	15:59:10	15.99		No
01/18/2020	22:46:33	23:43:35	0.95		No
02/18/2020	19:01:48	19:07:26	0.09	Maintenance schedule of PEMC on the Firewall and Core Switch	No
02/18/2020	21:49:46	21:55:37	0.10		No
03/26/2020	0:53:22	1:23:30	0.50	IEMOP-ISTD monitored no downtime which was supported by the MRTG or PRTG setup of their public website. IEMOP's monitoring system is via public IP and PEMC is thru URL, this may incur discrepancy on the result.	No
04/21/2020	10:18:30	10:23:56	0.09		No
06/19/2020	11:57:10	18:18:07	6.35	PEMC Core Switch had network hardware failure	No
08/29/2020	1:39:09	1:48:24	0.15	sudden heavy data network activity	Yes

Appendix E. Publication of Market Reports and Data

For the period 26 September 2019 to 25 September 2020

Publication	Rules/Manual References	Location / Audience	4Q 2019 – 3Q 2020				
			Availability		Timeliness		
			Score	Rating	Score	Rating	
Registration Information							
1. Registration Fees	WESM Rules 2.9.2 & 2.5.1	IEMOP website / Public	100%	5	Not rated		
2. Suspension Notice	WESM Rules 3.15.7.1 a to 3.15.7.1 b and WESM Rules 3.15.8.3 & Manual – Billing and Settlement Section 5.1	IEMOP website / Public	n/a	n/a	Not rated		
3. Notice of Deregistered WESM Participants	WESM Rules 4.7.5 & WESM Rule 3.15.8.6 (b) & Dispatch Protocol Appendix A.10 Market Information Publication 4.2.1.4. Registration	IEMOP website / Public	100%	5	100%	5	
4. Register of all WESM Members	WESM Rule 1.3.1.1 (f) & WESM Rules 5.2.3 (a), (c) and (d) & WESM Rule 2.5.7 & MO Information Disclosure and Confidentiality Manual – Market Information Catalogue & Dispatch Protocol Appendix A.10 Market Information Publication 4.2.1.4. Registration	IEMOP website / Public IEMOP website /Public	100%	5	100%	5	
5. Register of all WESM Applicants	WESM Rules 2.5.7 & WESM Rules 5.2.3 (a) and (b)	IEMOP website /Public IEMOP website /Public	100%	5	Not rated		
6. New Metering Installation of the MSP	Manual - Metering Standards and Procedures	IEMOP website / Public	100%	5	100%	5	
Market Manuals, Regulatory Issuances, and Guidelines							
7. Formulation Of The Market Dispatch Optimization Model (Price Determination Methodology)	WESM Rules 3.6.1.2 & MO Information Disclosure and Confidentiality Manual – Market Information Catalogue	IEMOP website / Public	100%	5	n/a	n/a	
8. Structure and level of market fees and the methods used in determining the structure	WESM Rules 2.10.5 & MO Information Disclosure and Confidentiality Manual – Market Information Catalogue	IEMOP website / Public	100%	5	100%	5	

Publication	Rules/Manual References	Location / Audience	4Q 2019 – 3Q 2020			
			Availability		Timeliness	
			Score	Rating	Score	Rating
9. Spot Market Operation Timetable (contained in the Dispatch Protocol Manual)	WESM Rules 3.4.2.3	IEMOP website / Public	100%	5	Not rated	
10. Forecast Tolerance Range (contained in the Load Forecasting Manual)	WESM Rules 3.5.4.1	IEMOP website / Public	100%	5	Not rated	
11. Dispatch Tolerances Standards (Dispatch Protocol Manual)	WESM Rules 3.8.7	IEMOP website / Public	100%	5	Not rated	
12. Procedures for determination of market re-run prices (contained in the Criteria and Guidelines for the Issuance of Pricing Error Notices and Conduct of Market Re-Run)	WESM Rules 3.10.5	IEMOP website / Public	100%	5	Not rated	
13. Procedure In Establishing the Network Configuration and Other Constraints for the determination of ex-post nodal energy prices (contained in the Dispatch Protocol Manual and Determination of Ex-post Nodal Prices Manual)	WESM Rules 3.10.7	IEMOP website / Public	100%	5	Not rated	
14. Electronic Communication Procedures (contained in the MO Information Disclosure and Confidentiality Manual)	WESM Rules 5.2.2.5 (a) to 5.2.2.5 (c)	IEMOP website / Public	100%	5	Not rated	
15. Methodology For Determining the Administered Price (contained in the Administered Price Determination Methodology Manual)	WESM Rules 6.2.3	IEMOP website / Public	100%	5	Not rated	

Publication	Rules/Manual References	Location / Audience	4Q 2019 – 3Q 2020			
			Availability		Timeliness	
			Score	Rating	Score	Rating
16. Constraint Violation Coefficients or Procedures for Calculating Constraint Violation Coefficients for Each Constraint and Revisions in the Constraint Violation Coefficient levels (contained in the Constraint Violation Coefficients (CVC) Manual)	WESM Rules 3.6.2.4 (DOE Circular No. DC 2010-03-0004 & Manual – Constraint Violation Coefficients (CVC) Sections 3.1, 10.1 and 10.3 & Dispatch Protocol Appendix A.10 Market Information Publication 4.2.1.2	IEMOP website / Public	100%	5	Not rated	
17. MDOM Performance Standards	WESM Rule 3.6.1.2	IEMOP website / Public	100%	5	Not rated	
18. Other system data: Total energy dispatched, Total dispatchable load, Total reserve required per time point (for each class and area), Total system losses, Reserve requirements, Locational marginal prices	Dispatch Protocol Appendix A.6 Real Time Dispatch Schedule	IEMOP website / Public	n/a	n/a	n/a	n/a
19. Operating Procedures (Dispatch Protocol, Emergency Procedures, Load Shedding, Registration Manual)	Dispatch Protocol Appendix A.10 Market Information Publication 4.2.1.1. Systems and Procedures	IEMOP website / Public	100%	5	100%	5
20. Initial Loss Percentage	Load Forecasting Manual 6.3. Initial Loss Percentage	IEMOP website / Public	100%	5	n/a	n/a
Market Reports						
21. Significant Variations Report	WESM Rules 1.3.1.4 & Manual - Guidelines on Significant Variations In and Between Trading Intervals Clause 7.2	IEMOP website / Public	100%	5	100%	5

Publication	Rules/Manual References	Location / Audience	4Q 2019 – 3Q 2020			
			Availability		Timeliness	
			Score	Rating	Score	Rating
22. Market Network Model / Market Trading Nodes / MNM Bus-Oriented Single Line Diagram	WESM Rules 3.2.1 & WESM Rules 3.2.2.4 & Manual – Market Network Model & MO Information Disclosure and Confidentiality Manual – Market Information Catalogue & Dispatch Protocol Appendix A.10 Market Information Publication 4.2.1.2	IEMOP website / Public	100%	5	100%	5
23. Review of the Underlying Factors Giving Rise to any Net Settlement Surplus	WESM Rules 3.13.16.3 b	IEMOP website / Public	100%	5	100%	5
24. Post Dispatch Reports	Dispatch Protocol	IEMOP website (Luzon/Visayas) / Public	100%	5	99.59%	4
25. Summary of PEN Issuance	Manual – Criteria for Guidelines for the Issuance of Pricing Error Notices and Conduct of Market Re-run in WESM Clause 9.4	IEMOP website / Public	100%	5	100%	5
26. Summary of PSM Issuance	Manual - Methodology for Determining Pricing Errors and Price Substitution Due to Congestion for Energy Transactions in the WESM Clause 9.3	IEMOP website / Public	100%	5	99.75%	4
27. Market Re-Run (MRR) Results	Manual – Criteria for Guidelines for the Issuance of Pricing Error Notices and Conduct of Market Re-run in WESM Clause 9.5	IEMOP website / Public	100%	5	100%	5
28. Monthly Performance Rating of the MSP	Manual - Metering Standards and Procedures in WESM Clause 10.7.1	IEMOP website / Public	100%	5	97.61%	4
29. Real-Time System Condition or System Operator Advisory	Transmission System Information provided by the System Operator to the Market Operator	IEMOP website / Public	n/a	n/a	n/a	n/a
30. System Operator Advisory (Updated Daily or upon availability of verified/ complete information)	Transmission System Information provided by the System Operator to the Market Operator	IEMOP website / Public	n/a	n/a	n/a	n/a

Publication	Rules/Manual References	Location / Audience	4Q 2019 – 3Q 2020			
			Availability		Timeliness	
			Score	Rating	Score	Rating
31. MRU Report by the SO	MO Information Disclosure and Confidentiality Manual – Market Information Catalogue & Transmission System Information provided by the System Operator to the Market Operator	IEMOP website / Public (MyWESM log-in)	100%	5	100%	5
Market Data						
32. Day-Ahead Projections	WESM Rules 3.4.2.2 (b) & WESM Rules 3.7.2.1 & Dispatch Protocol & MO Information Disclosure and Confidentiality Manual – Market Information Catalogue	MPI / per participant Public website (DAP: Load/ Gen & Next Day Summary: Luzon/ Visayas) / Public	99.98%	4	99.91%	4
33. Week-Ahead Projections	WESM Rules 3.4.2.2 (a) & WESM Rules 3.7.1.1 & Dispatch Protocol & MO Information Disclosure and Confidentiality Manual – Market Information Catalogue	MPI / per participant Public website (WAP: Load/ Gen & Next Week Summary: Luzon/ Visayas) / Public	100%	5	99.56%	4
34. Scheduled Generation Or Scheduled Load	WESM Rules 3.11.1.3 & MO Information Disclosure and Confidentiality Manual – Market Information Catalogue	IEMOP website / Public	99.97%	4	99.97%	4
35. Levels of NSS / NSS Allocations	WESM Rules 3.13.16.3 a & Manual - Management of The Net Settlement Surplus Clause 10.1 & ERC/DOE Directive	IEMOP website / Public	100%	5	100%	5
36. Administered Prices for one billing period	Manual - Administered Price Determination Methodology	IEMOP website / Public	100%	5	100%	5
37. Hourly Total Registered Pmin of All Scheduled Generating Units	Dispatch Protocol (DP) - Bids and Offers	MMS-MPI / WESM Trading participants	100%	5	98.36%	4
38. Hourly Nodal Demand Forecasts for RTD, DAP, WAP Reserve Requirement	DP - Demand Forecasting & MO Information Disclosure and Confidentiality Manual – Market Information Catalogue	MMS-MPI / WESM Trading participants, DOE and ERC	99.98%	4	99.55%	4

Publication	Rules/Manual References	Location / Audience	4Q 2019 – 3Q 2020			
			Availability		Timeliness	
			Score	Rating	Score	Rating
		IEMOP website / Public				
39. Generation Offers and Demand Bids	MO Information Disclosure and Confidentiality Manual – Market Information Catalogue	IEMOP website / Public	99.98%	4	99.98%	4
40. Ex-Ante and Ex-Post Load Weighted Average Price (LWAP)	MO Information Disclosure and Confidentiality Manual – Market Information Catalogue	IEMOP website / Public (MyWESM log-in)	99.99%	4	99.98%	4
41. MRU generation prices	MO Information Disclosure and Confidentiality Manual – Market Information Catalogue	IEMOP website / Public	100%	5	100%	5
42. Marginal Plants and Market Clearing Prices	MO Information Disclosure and Confidentiality Manual – Market Information Catalogue	IEMOP website / Public	100%	5	98.91%	4
43. Generator and Line Outages, Security Limits and Contingency Lists as submitted by SO to the MMS	MO Information Disclosure and Confidentiality Manual – Market Information Catalogue & Transmission System Information provided by the System Operator to the Market Operator	IEMOP Website / WESM Trading Participants and exceptions under WESM Rules 5.3.2 (MyWESM log-in)	100%	5	100%	5
44. Substitute prices for PSM for congestion related pricing errors	MO Information Disclosure and Confidentiality Manual – Market Information Catalogue	MMS-MPI / WESM Trading participants	99.86%	4	99.77%	4