



Philippine Electricity  
Market Corporation

**WHOLESALE ELECTRICITY SPOT MARKET  
RULES CHANGE COMMITTEE**

**RESOLUTION NO. 2019-11**

**Proposed Amendments to the Market Manual on Procedures for the Monitoring  
of Forecast Accuracy Standards for Must-Dispatch Generating Units**

**WHEREAS**, the Philippine Electricity Market Corporation (PEMC) submitted to the Rules Change Committee (RCC) its proposed amendments to the Market Manual on Procedures for the Monitoring of Forecast Accuracy Standards for Must-Dispatch Generating Units on 11 April 2019;

**WHEREAS**, the proposal aims: a) to mainly align the provisions of the market manual with the forthcoming operation of the new Market Management System under the 5-minute dispatch interval regime and b) to provide a more appropriate calculation for the *forecast percentage error* (FPE);

**WHEREAS**, during the 151<sup>st</sup> RCC Meeting held on 12 April 2019, PEMC presented the proposed amendments to the RCC for approval for publication in the PEMC website;

**WHEREAS**, following the presentation and request, the RCC approved the publication of the proposed amendments in the PEMC website to solicit comments from WESM stakeholders, giving them until 30 May 2019 or thirty (30) working days from the date of publication (15 April 2019) to submit comments on the matter;

**WHEREAS**, the DOE, the Technical Committee (TC), the Independent Electricity Market Operator of the Philippines (IEMOP), the National Grid Corporation of the Philippines (NGCP), San Carlos Sun Power, Inc. (SACASUN), Wind Energy Developers Association of the Philippines (WEDAP), SPC Power Corporation (SPC) and Aboitiz Power Corporation (APC) submitted comments to the proposal;

**WHEREAS**, during the 153<sup>rd</sup> RCC Meeting held on 21 June 2019, the RCC deliberated on the proposal giving due consideration to the submitted comments and the corresponding responses of the proponent;

**WHEREAS**, concerns raised by commenting parties regarding the proposed new calculation for FPE, specifically on the use of the *projected quantity* as the basis in determining forecast accuracies, PEMC explained that the proposal to use the *projected quantity* is actually a more accurate way to measure the dependable capacity and is aligned with the provisions of the Philippine Grid Code;

**WHEREAS**, PEMC further explained that with the proposed new calculation and in consideration that nominations submitted by *must-dispatch generating units* may be revised on a per five-minute (5-minute) dispatch interval basis, improvement on compliances to the forecast accuracy standards are expected since nominations may now be reflective of the minute changes in its surrounding environment that affect its generation;

**WHEREAS**, following the deliberation on the matter, the RCC adopted the proposed FPE calculation and agreed to provide in the Market Manual, a transition period to be specified by the DOE wherein non-compliances to the forecast accuracy standards provided in the Market Manual shall not be subjected to penalties, and that the forecast accuracy standards be reviewed periodically;

**WHEREAS**, clerical and minor revisions were likewise adopted by the RCC for enhancements of provisions in the Market Manual such as the use of "dispatch interval" instead of "trading interval" to be aligned with the definitions in the WESM Rules;

**WHEREAS**, during the RCC's 154<sup>th</sup> meeting held on 19 July 2019, the RCC agreed to recommend a specific transition period which is one (1) year upon effectivity of the proposed amendments;

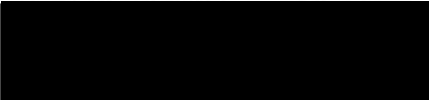


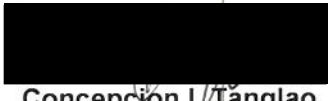
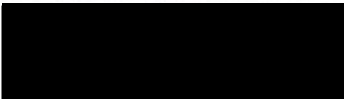



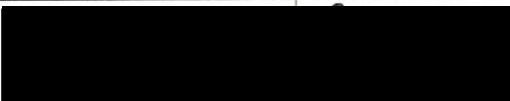
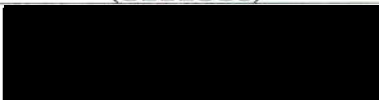

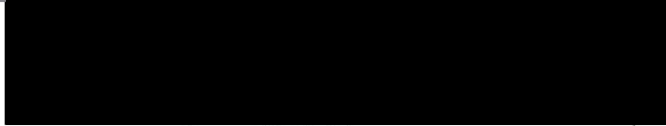
**WHEREAS**, there being no other matters left to be deliberated, the RCC approved the Proposed Amendments to the Market Manual on Procedures for the Monitoring of Forecast Accuracy Standards for Must-Dispatch Generating Units;



**NOW THEREFORE**, we, the undersigned in behalf of the sectors we represent, hereby resolve as follows:

**RESOLVED**, that the Rules Change Committee approves and adopts the Proposed Amendments to the Market Manual on Procedures for the Monitoring of Forecast Accuracy Standards for Must-Dispatch Generating Units (Annex), thereby amending Issue 1.0;

**RESOLVED FURTHER**, that the Proposed Amendments to the Market Manual on Procedures for the Monitoring of Forecast Accuracy Standards for Must-Dispatch Generating Units are hereby endorsed to the PEM Board for approval and subsequent transmittal to the DOE for promulgation.

Done this 21 June 2019, Pasig City.

Approved by: <b>THE RULES CHANGE COMMITTEE</b>	
Independent Members:	
 <b>Maria Lourdes G. de Castro</b> Chairperson	 <b>Francisco L.R. Castro, Jr.</b>
 <b>Allan C. Nerves</b>	 <b>Concepcion I. Tanglao</b>
Generation Sector Members:	
 <b>Dixie Anthony R. Banzon</b> Masinloc Power Partners Co. Ltd. (MPPCL)	 <b>Abner B. Tolentino</b> Power Sector Assets and Liabilities Management Corporation (PSALM)
<b>Jose Ildebrando B. Ambrosio</b> NorthWind Power Development Corp. (NorthWind)	 <b>Cherry A. Javier</b> Aboitiz Power Corp. (APC)
Distribution Sector Members:	
 <b>Virgilio L. Fortich, Jr.</b> Cebu III Electric Cooperative, Inc. (CEBECO3)	 <b>Ryan S. Morales</b> Manila Electric Company (MERALCO)
 <b>Ricardo G. Gumalal</b> Iligan Light and Power, Inc. (ILPI)	 <b>Jose P. Santos</b> Ilocos Norte Electric Cooperative, Inc. (INEC)
Supply Sector Member:	
 <b>Lorreto H. Rivera</b> TeaM (Philippines) Energy Corporation (TPEC)	

Market Operator Member:	
 <b>Isidro E. Cacho, Jr.</b> Independent Electricity Market Operator of the Philippines (IEMOP)	
System Operator Member:	
 <b>Ambrosio R. Rosales</b> National Grid Corporation of the Philippines (NGCP)	

**Proposed Amendments to the Market Manual on Procedures for the Monitoring of Forecast Accuracy Standards for Must-Dispatch Generating Units**

Title	Section	Provision	Proposed Amendment	Rationale
Background	1.1.1	The <i>WESM Rules</i> require <i>generation companies</i> to submit to the <i>Market Operator</i> <i>projected outputs</i> in respect of their <i>must dispatch generating units</i> on an hourly basis.	The <i>WESM Rules</i> require <i>generation companies</i> to submit to the <i>Market Operator</i> <i>projected outputs</i> in respect of their <i>must dispatch generating units</i> <b><u>for each dispatch interval</u></b> .	For consistency with the implementation of 5-minute dispatch interval and the WESM Rule Clause 3.5.5.5 as amended by DOE DC No. 2016-10-0014 dated 14 October 2016.
Background	1.1.4	Moreover, the <i>Market Operator</i> is required by the <i>WESM Rules</i> report to the <i>PEM Board</i> and <i>DOE</i> the annual compliance of each <i>must dispatch generating unit</i> to the forecast accuracy standards with respect to its <i>projected outputs</i> .	Moreover, the <i>Market—Operator Enforcement and Compliance Office (ECO) of the Philippine Electricity Market Corporation (PEMC)</i> is required by the <i>WESM Rules</i> <b><u>to</u></b> report to the <i>PEM Board</i> and <i>DOE</i> the annual compliance of each <i>must dispatch generating unit</i> to the forecast accuracy standards with respect to its <i>projected outputs</i> .	<ul style="list-style-type: none"> <li>• To transfer the responsibility of monitoring the Trading Participants' compliance to the forecast accuracy standards from the Market Operator to PEMC, as the WESM governing body.</li> <li>• Clerical.</li> </ul>
Glossary	2.1.2(a)	Forecast percentage error. Error (in %) of the <i>projected output</i> submitted by a <i>must dispatch generating unit</i> with respect to its <i>installed capacity</i> calculated in accordance with Section 4.2.3.	Forecast percentage error. Error (in %) of the <i>projected output</i> submitted by a <i>must dispatch generating unit</i> with respect to its <b><u>projected output over a dispatch interval</u></b> <del>installed capacity</del> calculated in accordance with Section 4.2.3	For consistency with the proposed amendments to Section 4.2.3 (Forecast percentage error calculation)
Glossary	2.1.2(b)	Initial loading. Loading (in MW) assumed for the beginning of the <i>trading interval</i> assumed in, or estimated by, the <i>dispatch optimization</i> performed prior to the beginning of that <i>trading interval</i> as	Initial loading. Loading (in MW) assumed for the beginning of the <del>trading</del> <b><u>dispatch</u></b> <i>interval</i> assumed in, or estimated by, the <i>dispatch optimization</i> performed prior to the beginning of that <b><u>dispatch interval</u></b> as	For consistency with the implementation of 5-minute dispatch interval.

**Proposed Amendments to the Market Manual on Procedures for the Monitoring of Forecast Accuracy Standards for Must-Dispatch Generating Units**

Title	Section	Provision	Proposed Amendment	Rationale
		indicated in Clause 3.13.5.1 of the <i>WESM Rules</i> .	<del>indicated in Clause 3.13.5.1 of the <i>WESM Rules</i>.</del>	Clause 3.13.5.1, which provided the Gross Ex-ante Energy Settlement Quantity in consideration of the initial loading and RTD schedule, has been deleted from the WESM Rules under DOE DC 2016-10-0014 (Adopting Further Amendments to the WESM Rules – Enhancements to WESM Design and Operations, dated 14 October 2016).
Glossary	2.1.2(c)	(c) Installed capacity. Refers to the <i>Nameplate Rating of a generating unit</i>	<del>(c) Installed capacity. Refers to the <i>Nameplate Rating of a generating unit</i></del>	Removed definition of installed capacity and installed capacity quantity since it is not used in the manual.
Glossary	2.1.2(d)	(d) Installed capacity quantity. <i>Generation by a generating unit at its installed capacity for a trading interval</i> calculated in accordance with Section 4.2.3  (e) xxx (f) xxx (g) xxx (h) xxx (i) xxx	<del>(d) Installed capacity quantity. <i>Generation by a generating unit at its installed capacity for a trading interval</i> calculated in accordance with Section 4.2.3</del>  (c)(e) xxx (d)(f) xxx (e)(g) xxx (f)(h) xxx (g)(i) xxx	

**Proposed Amendments to the Market Manual on Procedures for the Monitoring of Forecast Accuracy Standards for Must-Dispatch Generating Units**

Title	Section	Provision	Proposed Amendment	Rationale
Glossary	2.1.2(j)	(j) Projected quantity. Estimated generation of a <i>must dispatch</i> generating unit over a <i>trading interval</i> based on its submitted <i>projected output</i> assuming linear ramping calculated in accordance with Section 4.2.4	(j) <del>(h)</del> Projected quantity. Estimated generation of a <i>must dispatch</i> generating unit over a <b><i>dispatch</i></b> interval based on its submitted <i>projected output</i> assuming linear ramping calculated in accordance with Section 4.2.4	For consistency with the implementation of 5-minute dispatch interval.
		(k) xxx	<del>(k)</del> <b>(i)</b> xxx	Renumbering.
Responsibilities	3.1	Market Operator	Market Operator <b>PEMC</b>	To transfer the responsibility of monitoring the Trading Participants' compliance to the forecast accuracy standards from the Market Operator to PEMC, as the WESM governing body.
Responsibilities	3.1.1	The <i>Market Operator</i> shall review annually the forecast accuracy standards in this Market Manual.	<del>The Market Operator</del> <b>PEMC</b> shall review annually the forecast accuracy standards in this Market Manual.	
Responsibilities	3.1.2	The <i>Market Operator</i> shall report to the <i>PEM Board</i> and the <i>DOE</i> the monthly and annual compliance of each <i>must dispatch</i> generating unit to the forecast accuracy standards with respect to its <i>projected outputs</i> .	<del>The Market Operator</del> <b>ECO</b> shall report to the <i>PEM Board</i> and the <i>DOE</i> the monthly and annual compliance of each <i>must dispatch</i> generating unit to the forecast accuracy standards with respect to its <i>projected outputs</i> .	
Responsibilities – Generation Companies	3.4.2	<i>Generation companies</i> shall immediately advise the <i>System Operator</i> and <i>Market Operator</i> of any circumstances which threaten a significant probability of material adverse change in the state of their facilities in any <i>trading interval</i> of any <i>trading day</i> in the current week-	<i>Generation companies</i> shall immediately advise the <i>System Operator</i> and <i>Market Operator</i> of any circumstances which threaten a significant probability of material adverse change in the state of their facilities in any <b><i>dispatch</i></b> <del><i>trading</i></del> interval of any <i>trading day</i> in the current	For consistency with the implementation of 5-minute dispatch interval.



**Proposed Amendments to the Market Manual on Procedures for the Monitoring of Forecast Accuracy Standards for Must-Dispatch Generating Units**

Title	Section	Provision	Proposed Amendment	Rationale
		<i>ahead market horizon. After the occurrence of the significant event referred to above, the Generation Company shall submit a written report to the Market Operator with supporting data immediately within the following trading day.</i>	<i>week-ahead market horizon. After the occurrence of the significant event referred to above, the Generation Company shall submit a written report to the Market Operator with supporting data immediately within the following trading day.</i>	
Market Operator	3.5	NEW	<b><u>3.5.1 The Market Operator shall advise the must dispatch generating units of their real-time dispatch schedules, and any output restrictions imposed as a result of the dispatch scheduling process or by the System Operator</u></b>	To clearly state the responsibilities of the Market Operator in providing information to Trading participants regarding the real-time dispatch schedules and output restrictions imposed on their must dispatch generating units.
Standards	4.1.1	Each <i>must dispatch generating unit</i> shall comply with the following standards with respect to its <i>mean absolute percentage error (MAPE)</i> and <i>percentile 95 of the forecasting error (Perc95)</i> determined in accordance with Section 4.2 and calculated over the period specified in Section 4.1.2:	Each <i>must dispatch generating unit</i> shall comply with the following standards with respect to its <i>mean absolute percentage error (MAPE)</i> and <i>percentile 95 of the forecasting error (Perc95)</i> determined in accordance with Section 4.2 and calculated over the period specified in Section 4.1.2:	Standards for run-of-river hydro are already provided under Table 8.3 of the latest version of the Grid Code.



**Proposed Amendments to the Market Manual on Procedures for the Monitoring of Forecast Accuracy Standards for Must-Dispatch Generating Units**

Title	Section	Provision	Proposed Amendment	Rationale																												
		<table><tr><th rowspan="2">Technology</th><th colspan="2">Standards</th></tr><tr><th>MAPE</th><th>Perc95</th></tr><tr><td>Solar</td><td>&lt; 18%</td><td>&lt; 30%</td></tr><tr><td>Wind</td><td></td><td></td></tr><tr><td>Run of River Hydro*</td><td>&lt; 9%</td><td>&lt; 30%</td></tr></table> <p><i>* subject to the determination of the ERC/Grid Management Committee</i></p>	Technology	Standards		MAPE	Perc95	Solar	< 18%	< 30%	Wind			Run of River Hydro*	< 9%	< 30%	<table><tr><th rowspan="2">Technology</th><th colspan="2">Standards</th></tr><tr><th>MAPE</th><th>Perc95</th></tr><tr><td>Solar</td><td>&lt; 18%</td><td>&lt; 30%</td></tr><tr><td>Wind</td><td></td><td></td></tr><tr><td>Run of River Hydro*</td><td>&lt; 9%</td><td>&lt; 30%</td></tr></table> <p><del><i>* subject to the determination of the ERC/Grid Management Committee</i></del></p>	Technology	Standards		MAPE	Perc95	Solar	< 18%	< 30%	Wind			Run of River Hydro*	< 9%	< 30%	
Technology	Standards																															
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	4.1.3.	Subject to Section 4.5 of this Market Manual, must dispatch generating units who fail to meet the requisite forecast accuracy standards set out in Section 4.1.1 of this Market Manual may be liable for sanctions imposed under Clause 7.2 of the WESM Rules.	Subject to Section 4.5 of this Market Manual, must dispatch generating units who fail to meet the requisite forecast accuracy standards set out in Section 4.1.1 of this Market Manual may be liable for sanctions imposed under Clause 7.2 of the WESM Rules. <b><u>For this purpose, the ECO shall develop the necessary procedures and guidelines for monitoring the compliance with the forecast accuracy standards including the procedure for the review by the Market Surveillance Committee of the results of the monitoring, and the approval and imposition of</u></b>	To ensure that there are clear procedures in the: (a) conduct of compliance monitoring of forecast accuracy standards, (b) review by MSC of the results of compliance monitoring, and (c) approval of penalties by the PEM Board.																												

**Proposed Amendments to the Market Manual on Procedures for the Monitoring of Forecast Accuracy Standards for Must-Dispatch Generating Units**

Title	Section	Provision	Proposed Amendment	Rationale
			<u>appropriate penalty by the PEM Board.</u>	
Calculations	4.2.3	<p>The <i>forecast percentage error</i> for a <i>trading interval</i> of a <i>must dispatch generating unit</i> shall be calculated using the following formula:</p> $FPE_{i,t} = \left  \frac{PQ_{i,t} - MQ_{i,t}}{ICQ_i} \right  \times 100\%$ <p>Where,  <i>FPE<sub>i,t</sub></i> <i>forecast percentage error</i> (in %) of <i>must dispatch generating unit i</i> for <i>trading interval t</i></p> <p><i>PQ<sub>i,t</sub></i> <i>projected quantity</i> (in MWh) of <i>must dispatch generating unit i</i> for <i>trading interval t</i> calculated in accordance with Section 4.2.4</p> <p><i>MQ<sub>i,t</sub></i> <i>metered quantity</i> (in MWh) of <i>must dispatch generating unit i</i> for <i>trading interval t</i> as provided by the <i>Metering Services Provider</i></p> <p><i>ICQ<sub>i</sub></i> <i>installed capacity quantity</i> (in MWh) of <i>must dispatch generating unit i</i></p>	<p>The <i>forecast percentage error</i> for a <i>trading interval</i> of a <i>must dispatch generating unit</i> shall be calculated using the following formula:</p> $FPE_{i,t} = \left  \frac{PQ_{i,t} - MQ_{i,t}}{ICPQ_{i,t}} \right  \times 100\%$ <p>Where,  <i>FPE<sub>i,t</sub></i> <i>forecast percentage error</i> (in %) of <i>must dispatch generating unit i</i> for <i>trading interval t</i></p> <p><i>PQ<sub>i,t</sub></i> <i>projected quantity</i> (in MWh) of <i>must dispatch generating unit i</i> for <i>trading interval t</i> calculated in accordance with Section 4.2.4</p> <p><i>MQ<sub>i,t</sub></i> <i>metered quantity</i> (in MWh) of <i>must dispatch generating unit i</i> for <i>trading interval t</i> as provided by the <i>Metering Services Provider</i></p> <p><del><i>ICQ<sub>i</sub></i> <i>installed capacity quantity</i> (in MWh) of <i>must dispatch generating unit i</i></del></p>	<p>For consistency with the implementation of 5-minute dispatch interval.</p> <p>Revised formula to consider a more appropriate calculation of the FPE as a factor of its maximum "projected quantity" over a billing period for a VRE generation plant. The original formula, as provided in the PGC 2016 Edition and the WESM Manual on Forecast Accuracy Standards, gives VRE resources with higher installed/dependable capacity an avenue to have a lower result of MAPE. This would then be a disadvantage for those plants with low installed/dependable capacity.</p>

**Proposed Amendments to the Market Manual on Procedures for the Monitoring of Forecast Accuracy Standards for Must-Dispatch Generating Units**

Title	Section	Provision	Proposed Amendment	Rationale
		calculated by multiplying the <i>installed capacity</i> (in MW) of <i>must dispatch generating unit i</i> provided during registration in the WESM by the duration of a <i>trading interval</i> (in hours)	<del>calculated by multiplying the <i>installed capacity</i> (in MW) of <i>must dispatch generating unit i</i> provided during registration in the WESM by the duration of a <i>trading interval</i> (in hours)</del>	
Calculations	4.2.4	<p>The <i>projected quantity</i> for each <i>trading interval</i> of a <i>must dispatch generating unit</i> shall be calculated using the following formula:</p> $PQ_{i,t} = \frac{IL_{i,t} + PO_{i,t}}{2}$ <p>Where,  <math>PQ_{i,t}</math> <i>projected quantity</i> (in MWh) of <i>must dispatch generating unit i</i> for <i>trading interval t</i></p> <p><math>IL_{i,t}</math> <i>initial loading</i> (in MW) of <i>must dispatch generating unit i</i> used during the scheduling process for <i>trading interval t</i></p>	<p>The <i>projected quantity</i> for each <b><u>dispatch interval</u></b> of a <i>must dispatch generating unit</i> shall be calculated using the following formula:</p> $PQ_{i,t} = \frac{1}{n} \sum_{t=1}^n \frac{IL_{i,t} + PO_{i,t}}{2}$ <p>Where,  <math>PQ_{i,t}</math> <i>projected quantity</i> (in MWh) of <i>must dispatch generating unit i</i> for <i>trading interval t</i></p> <p><math>IL_{i,t}</math> <i>initial loading</i> (in MW) of <i>must dispatch generating unit i</i> <b><u>for each dispatch interval</u></b> used during the scheduling process for <i>trading interval t</i></p>	For consistency with the implementation of 5-minute dispatch interval.

**Proposed Amendments to the Market Manual on Procedures for the Monitoring of Forecast Accuracy Standards for Must-Dispatch Generating Units**

Title	Section	Provision	Proposed Amendment	Rationale
		$PO_{i,t}$ projected output (in MW) of must dispatch generating unit $i$ used during the scheduling process for trading interval $t$	$PO_{i,t}$ projected output (in MW) of must dispatch generating unit $i$ <b><u>for each dispatch interval</u></b> used during the scheduling process for trading interval $t$  <b><u>n number of dispatch interval(s) within a trading interval</u></b>	
Calculations	NEW		<b><u>4.2.5 A one hundred (100) percent FPE shall be imposed to a must dispatch generating unit on a particular dispatch interval where its Projected Quantity is equal to zero (0) and a metered quantity has been recorded in its metering data.</u></b>	To provide the basis for imposition of 100 percent FPE value to instances when FPE shall become incalculable caused by projected quantity having zero (0) value.
Exclusions	4.3.1	(b) xxx footnote 13 - Clause 3.8.3.4, WESM Rules	(b) xxx footnote 13 - Clause <del>3.8.3.4</del> <b><u>3.8.3.5</u></b> , WESM Rules	For consistency with the WESM Rules as amended by DOE DC No. 2016-10-0014 dated 14 October 2016.
	4.3.1	(c) a market suspension or market intervention was declared for the trading interval; (d) xxx; or (e) xxx.	(c) a market suspension or market intervention was declared for the <b><u>dispatch</u></b> interval; (d) xxx; or (e) xxx; <b><u>or</u></b>	For consistency with the implementation of 5-minute dispatch interval.

**Proposed Amendments to the Market Manual on Procedures for the Monitoring of Forecast Accuracy Standards for Must-Dispatch Generating Units**

Title	Section	Provision	Proposed Amendment	Rationale
	NEW		<b><u>4.3.1 (f) the projected quantity and the metered quantity both reflect zero (0) MWh.</u></b>	If a must dispatch generating unit has no nomination and has no actual output (via the metered quantity), then that generating unit did not have any effect in the determination of prices and schedules in the WESM. Thus, these are recommended to be excluded. It shall also cover solar generating units that do not project any output during night time.
Monitoring, Reporting, and Review	4.4.1	The <i>Market Operator</i> shall report to the <i>PEM Board</i> and <i>DOE</i> the annual compliance of each <i>must dispatch generating unit</i> to the forecast accuracy standards with respect to its <i>projected outputs</i> within two (2) calendar months after the end of the period specified in Section 4.1.2.	The <i>Market Operator</i> <b><u>ECO</u></b> shall report to the <i>PEM Board</i> and <i>DOE</i> the annual compliance of each <i>must dispatch generating unit</i> to the forecast accuracy standards with respect to its <i>projected outputs</i> within two (2) calendar months after the end of the period specified in Section 4.1.2.	To transfer the responsibility of monitoring the Trading Participants' compliance to the forecast accuracy standards from the Market Operator to PEMC, as the WESM governing body.
Monitoring, Reporting, and Review	4.4.2	The <i>Market Operator</i> shall report to the <i>PEM Board</i> and <i>DOE</i> the status of the compliance of each <i>must dispatch generating unit</i> to the forecast accuracy standards as of the most recent <i>Billing</i>	The <i>Market Operator</i> <b><u>ECO</u></b> shall report to the <i>PEM Board</i> and <i>DOE</i> the status of the compliance of each <i>must dispatch generating unit</i> to the forecast accuracy standards as of the most recent <i>Billing</i>	

**Proposed Amendments to the Market Manual on Procedures for the Monitoring of Forecast Accuracy Standards for Must-Dispatch Generating Units**

Title	Section	Provision	Proposed Amendment	Rationale
		<i>Period with a final statement on a monthly basis.</i>	<i>Period with a final statement on a monthly basis.</i>	
Monitoring, Reporting, and Review	4.4.3	The <i>Market Operator</i> shall review annually the forecast accuracy standards set in Section 4.1.	<del>The <i>Market Operator</i></del> <b>PEMC</b> shall <b>periodically</b> review annually the forecast accuracy standards set in Section 4.1.	To transfer the responsibility of reviewing the forecast accuracy standards from the Market Operator to PEMC, as the WESM governing body.
Publication	5.2	This <i>Market Manual</i> , as it may be amended from time to time, shall be published in the <i>market information website</i> maintained by the <i>Market Operator</i> .	This <i>Market Manual</i> , as it may be amended from time to time, shall be published in <del>the market information website maintained by the <i>Market Operator</i></del> <b>PEMC</b> .	
Transition Period	4.5.1	A <i>transition period</i> covering the period specified by the <i>DOE</i> shall be implemented.	A <i>transition period</i> covering the period specified by the <i>DOE</i> shall be implemented <b><u>for amendments related to compliance of must dispatch generation unit.</u></b>	To specify that only amendments which affect compliances of <i>must dispatch generating units</i> shall be covered by transition periods specified by the DOE.
Transition Period	4.5.3	Before the end of the <i>transition period</i> , the <i>Market Operator</i> shall submit to the <i>DOE</i> and other concerned government agencies a report on the compliance of <i>must dispatch generating units</i> to the forecast accuracy standards and the proposed forecast accuracy standards to be implemented after the <i>transition period</i> .	Before the end of the <i>transition period</i> , <del>the <i>PEMC</i> <i>Market Operator</i></del> shall submit to the <i>DOE</i> and other concerned government agencies a report on the compliance of <i>must dispatch generating units</i> to the forecast accuracy standards and <del>its</del> the proposed forecast accuracy standards to be implemented after the <i>transition period</i> .	To transfer the responsibility of reviewing the forecast accuracy standards from the Market Operator to PEMC, as the WESM governing body.  Clerical amendment for clarity

**Proposed Amendments to the Market Manual on Procedures for the Monitoring of Forecast Accuracy Standards for Must-Dispatch Generating Units**

Title	Section	Provision	Proposed Amendment	Rationale
NIST Method for Calculating Percentiles	Appendix A	Sample list: $Y_{[k]} = \{3\%, 5\%, 12\%, 15\%, 20\%\}$ ; $N = 5$	<p>Sample list: <math>Y_{[k]} = \{53\%, 125\%, 312\%, 2045\%, 1520\%\}</math>; <math>N = 5</math></p> <p><u>Sample ordered data: <math>Y_{[k]} = \{3\%, 5\%, 12\%, 15\%, 20\%\}</math>; <math>N = 5</math></u></p>	To show the method in ordering the data.