Philippine Electricity Market Corporation

WHOLESALE ELECTRICITY SPOT MARKET RULES CHANGE COMMITTEE

RESOLUTION NO. 2019-16

Proposed Amendments to the WESM Manual on Dispatch Protocol for the Optimal Timing of Market Runs

WHEREAS, the Independent Electricity Market Operator of the Philippines (IEMOP) submitted the subject proposal to the Rules Change Committee (RCC) on 14 August 2019 to optimize the timing of dispatch scheduling activities considering system performance and System Operator (SO) requirements for the day-ahead projection (DAP), hour-ahead projection (HAP) and real-time dispatch (RTD) market runs;

WHEREAS, under DOE Circular No. DC2017-05-0009, the WESM Manual on Dispatch Protocol was revised to reflect the changes in the market processes in view of the reduction of the dispatch interval to five (5) minutes, and the improvements to the projections (i.e., more frequent conduct of day-ahead projections, inclusion of multiple scenarios in day-ahead projections, addition of hour-ahead projections);

WHEREAS, during the Parallel Operations Program (POP) that started in 26 April 2019, it was observed that the processing time of market runs for DAP, HAP and RTD differ from the estimates;

WHEREAS, the proponent's recommendation is to adopt minor adjustments on the timeline of market run activities for DAP, HAP and RTD as these will ensure that the market runs will be completed on-time in view of the observations during the POP and the additional requirement from the SO for the Market Operator (MO) to submit DAP, HAP, and RTD results to the SO one (1) minute earlier;

WHEREAS, the RCC approved the publication of the proposal in the PEMC website on 16 August 2019 to solicit comments from industry stakeholders and interested parties;

WHEREAS, following the 30-working day commenting period from publication date on 20 August 2019, comments were received from PEMC, Global Business Power Corp., SN Aboitiz Power, and Aboitiz Power Corp., which, together with the

proponent's responses to these comments, were considered in the RCC's deliberation during its 157th meeting on 18 October 2019;

WHEREAS, the RCC approved the proposal, as amended, and its endorsement to the PEM Board;

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

RESOLVED, that the RCC approves Proposed Amendments to the WESM Manual on Dispatch Protocol for the optimal timing of market runs;

RESOLVED FURTHER, that the Proposed Amendments to the WESM Manual on Dispatch Protocol for the Optimal Timing of Market Runs (Annexes) are hereby endorsed to the PEM Board for approval and subsequent transmittal to the DOE for promulgation;

Done this 08 November 2019, Pasig City.

Approved by: **THE RULES CHANGE COMMITTEE**	
Independent Members:	
[redacted] **Maila Lourdes G. de Castro** Chairperson	[redacted] **Francisco L.R. Castro, Jr.**
[redacted] **Allan C. Nerves**	**Concepcion I. Tanglao**
Generation Sector Members:	
[redacted] **Dixie Anthony R. Banzon** Masinloc Power Partners Co. Ltd. (MPPCL)	[redacted] **Abner B. Tolentino** Power Sector Assets and Liabilities Management Corporation (PSALM)
(Resigned as of 08 October 2019) **Jose Ildebrando B. Ambrosio** NorthWind Power Development Corp. (NorthWind)	[redacted] **Cherry A. Javier** Aboitiz Power Corp. (APC)
Distribution Sector Members:	
[redacted] **Virgilio C. Fortich, Jr.** Cebu III Electric Cooperative, Inc. (CEBECO3)	[redacted] **Ryan S. Morales** Manila Electric Company (MERALCO)
Ricardo G. Gumalal Iligan Light and Power, Inc. (ILPI)	[redacted] **Jose P. Santos** Ilocos Norte Electric Cooperative, Inc. (INEC)
Supply Sector Member:	
[redacted] **Lorreto H. Rivera** TeaM (Philippines) Energy Corporation (TPEC)	

Market Operator Member:
[redacted] **Isidro E. Cacho, Jr.** Independent Electricity Market Operator of the Philippines (IEMOP)
System Operator Member:
[redacted] **Ambrocio R. Rosales** National Grid Corporation of the Philippines (NGCP)

Annex A

Proposed Amendments to the WESM Manual on Dispatch Protocol for the Optimal Timing of Market Runs

<table>
<tr><th colspan="5">Dispatch Protocol No. 13</th></tr>
<tr><th>Title</th><th>Clause</th><th>Provision</th><th>Proposed Amendment</th><th>Rationale</th></tr>
<tr><td>Categories of WESM Timetable – Background</td><td>4.1.4</td><td>(new)</td><td><u>The Market Operator shall review and update if necessary the WESM Timetable after the commencement of the full operations of the new Market Management System in accordance with DOE Department Circular Nos. 2016-10-0014 and 2018-04-0007.</u></td><td>The Market Operator Performance Standards shall be revised accordingly to be consistent with any changes to the market data publication timelines and the relevant obligations of the MO.</td></tr>
<tr><td>Categories of WESM Timetable – Day-Ahead Projection (DAP)</td><td>4.4.2</td><td>The activities that shall be performed for the DAP, within the time specified, using inputs for the covered study period of that specific DAP run, are provided in Table 2. The covered periods for all DAP runs within a day are provided in Table 3.

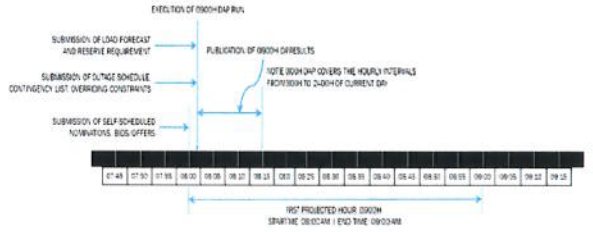
Table 2. DAP Timeline<table><tr><th>Timeline</th><th>Activity</th><th>Responsible Party</th></tr><tr><td>Before STPH1*</td><td>Submit the most recent self-scheduled nominations, bids and offers for all relevant hours of the DAP run</td><td>Trading Participants</td></tr><tr><td>Before [STPH1 + 2 minutes]</td><td>Provide updates on the following, if any:
1. Outage Schedules
2. Contingency List
3. Over-riding Constraints
4. Reserve Requirements
5. Real-time system snapshot</td><td>System Operator</td></tr><tr><td></td><td>6. VRE Aggregated Generation Forecasts
7. Forecasts on the loading levels of Must dispatch generating units</td><td></td></tr><tr><td>Before [STPH1 + 2 minutes]</td><td>Submit load forecast for the covered period</td><td>Market Operator</td></tr><tr><td>[STPH1 + 2 minutes]</td><td>Execute DAP</td><td>Market Operator</td></tr></table></td><td>The activities that shall be performed for the DAP, within the time specified, using inputs for the covered study period of that specific DAP run, are provided in Table 2. The covered periods for all DAP runs within a day are provided in Table 3.

Table 2. DAP Timeline<table><tr><th>Timeline</th><th>Activity</th><th>Responsible Party</th></tr><tr><td>Before <u>[STPH1* - 10 minutes]</u></td><td>Submit the most recent self-scheduled nominations, bids and offers for all relevant hours of the DAP run</td><td>Trading Participants</td></tr><tr><td>Before [STPH1 + <u>2</u> <u>1</u> minutes]</td><td>Provide updates on the following, if any:
1. Outage Schedules
2. Contingency List
3. Over-riding Constraints
4. Reserve Requirements
5. Real-time system snapshot</td><td>System Operator</td></tr><tr><td></td><td>6. VRE Aggregated Generation Forecasts
7. Forecasts on the loading levels of Must dispatch generating units</td><td></td></tr><tr><td>Before [STPH1 + <u>2</u> <u>1</u> minutes]</td><td>Submit load forecast for the covered period</td><td>Market Operator</td></tr><tr><td>[STPH1 + <u>2</u> <u>1</u> minutes]</td><td>Execute DAP</td><td>Market Operator</td></tr></table></td><td>The proposed changes will reflect the optimal timing of activities for the market runs considering the actual performance of the NMMS.

Specifically, the justifications for the proposed changes for the Day-Ahead Projection (DAP) run are as follows:
• Before [STPH1* - 10 minutes]: Submission of self-scheduled nominations, bids/offers – To allow more processing time for market participant interface (MPI) transfer
• Before [STPH1 + 1 minute]: (a) Submission of load forecast and reserve requirement, (b) Submission of outage schedule,</td></tr>
</table>

Annex A

<table>
<tr><th colspan="4">Dispatch Protocol No. 13</th></tr>
<tr><th>Title</th><th>Clause</th><th>Provision</th><th>Proposed Amendment</th><th>Rationale</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>Before [STPH1 + 15 minutes]</td><td>Publish DAP Results in the MPI</td><td>Market Operator</td></tr>
<tr><td></td><td>Transmit DAP Results to System Operator</td><td>Market Operator</td></tr>
</table>
*STPH1 refers to the Start Time of the first Projected Hour (1) covered by the DAP run. For example, the Projected Hour of 0900H has a start time of 08:00 AM and an end time of 09:00 AM.

<u>(DAP Timeline Illustration)</u>
 
Figure 3. DAP Timeline</td><td>
<table>
<tr><td>Before [STPH1 + ~~15~~ <u>25</u> minutes]</td><td>Publish DAP Results in the MPI</td><td>Market Operator</td></tr>
<tr><td></td><td>Transmit DAP Results to System Operator</td><td>Market Operator</td></tr>
</table>
*STPH1 refers to the Start Time of the first Projected Hour (1) covered by the DAP run. For example, the Projected Hour of 0900H has a start time of 08:00 AM and an end time of 09:00 AM.

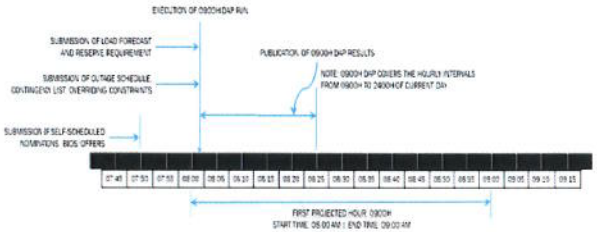
<u>(DAP Timeline Illustration)</u>
 
Figure 3. DAP Timeline</td><td>contingency list, overriding constraints and (c) Execution of DAP run - To align the processes to be as close as possible to the Start Time of the first Projected Hour (1) covered by the DAP run
• Before [STPH1 + 25 minutes]: (a) Publish DAP Results in the MPI and (b) Transmit DAP Results to System Operator – To allow sufficient time for the performance of five (5) DAP run scenarios (1 base DAP run, 4 different load scenarios) which may take up to four (4) minutes each</td></tr>
<tr><td>Categories of WESM Timetable – Hour-Ahead Projection (HAP)</td><td>4.5.2</td><td>The following activities shall be performed for the HAP, within the time specified, using inputs for the covered study period of that specific HAP run.

Table 4. HAP Timeline
<table>
<tr><th>Timeline</th><th>Activity</th><th>Responsible Party</th></tr>
<tr><td>Before [STDI1* – 8 minutes]</td><td>Submit the most recent self-scheduled nominations, bids and offers for all relevant hours of the HAP run</td><td>Trading Participants</td></tr>
<tr><td>Before [STDI1 – 7 minutes]</td><td>Provide updates on the following, if any:
1. Outage Schedules
2. Contingency List</td><td>System Operator</td></tr>
</table></td><td>The following activities shall be performed for the HAP, within the time specified, using inputs for the covered study period of that specific HAP run.

Table 4. HAP Timeline
<table>
<tr><th>Timeline</th><th>Activity</th><th>Responsible Party</th></tr>
<tr><td>Before [STDI1* – ~~8~~ <u>9</u> minutes]</td><td>Submit the most recent self-scheduled nominations, bids and offers for all relevant hours of the HAP run</td><td>Trading Participants</td></tr>
<tr><td>Before [STDI1 – 7 minutes]</td><td>Provide updates on the following, if any:
1. Outage Schedules
2. Contingency List</td><td>System Operator</td></tr>
</table></td><td>For the Hour-Ahead Projection (HAP) run, the following changes are proposed to consider actual system performance and accommodate SO's requirement:
• Before [STDI1 – 9 minutes]: Submit the most recent self-scheduled nominations, bids and offers for all relevant hours of the HAP run – To ensure timely processing</td></tr>
</table>

<table>
<tr><th colspan="4">Dispatch Protocol No. 13</th></tr>
<tr><th>Title</th><th>Clause</th><th>Provision</th><th>Proposed Amendment</th><th>Rationale</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td></td><td>3. Over-riding Constraints
4. Reserve Requirements
5. Real-time system snapshot</td><td></td></tr>
<tr><td>Before [STDI1 – 7 minutes]</td><td>Submit load forecast for the covered period</td><td>Market Operator</td></tr>
<tr><td>[STDI1 – 7 minutes]</td><td>Execute HAP</td><td>Market Operator</td></tr>
<tr><td rowspan="2">Before [STDI1 – 1 minute]</td><td>Publish HAP Results in the MPI</td><td>Market Operator</td></tr>
<tr><td>Transmit HAP Results to System Operator</td><td>Market Operator</td></tr>
</table>
*STDI1 refers to the Start Time of the first dispatch interval (1) covered by the HAP run. For example, the 0815H dispatch interval has a start time of 08:10 AM and an end time of 08:15 AM. And if this is the first dispatch interval of the HAP run, then it will cover the period until 09:10 AM.</td><td>
<table>
<tr><td></td><td>3. Over-riding Constraints
4. Reserve Requirements
5. Real-time system snapshot</td><td></td></tr>
<tr><td>Before [STDI1 – 7 minutes]</td><td>Submit load forecast for the covered period</td><td>Market Operator</td></tr>
<tr><td>[STDI1 – 7 minutes]</td><td>Execute HAP</td><td>Market Operator</td></tr>
<tr><td rowspan="2"><u>Before [STDI1 – 2 minute]</u></td><td>Publish HAP Results in the MPI</td><td>Market Operator</td></tr>
<tr><td>Transmit HAP Results to System Operator</td><td>Market Operator</td></tr>
</table>
*STDI1 refers to the Start Time of the first dispatch interval (1) covered by the HAP run. For example, the 0815H dispatch interval has a start time of 08:10 AM and an end time of 08:15 AM. And if this is the first dispatch interval of the HAP run, then it will cover the period until 09:10 AM.</td><td>prior to HAP run execution considering actual system performance
• Before [STDI1 – 2 minute]: Transmit HAP Results to System Operator – To accommodate SO's request that results shall be submitted two (2) minutes before the start of the dispatch interval in order to allow processing time for different SO applications</td></tr>
<tr><td>Categories of WESM Timetable – Real-Time Dispatch Schedule (RTD)</td><td>4.6.2</td><td>The following activities shall be performed for the RTD, within the time specified, using inputs for the covered study period of that specific RTD run:

Table 5. RTD Timeline
<table>
<tr><th>Timeline</th><th>Activity</th><th>Responsible Party</th></tr>
<tr><td>Before [STDI1* – 8 minutes]</td><td>Submit self-scheduled nominations, bids and offers for all relevant hours of the RTD run</td><td>Trading Participants</td></tr>
<tr><td>Before [STDI – 7 minutes]</td><td>Provide updates on the following, if any:
1. Outage Schedules
2. Contingency Lst
3. Over-riding Constraints
4. Reserve Requirements</td><td>System Operator</td></tr>
<tr><td></td><td>5. Real-time system snapshot</td><td></td></tr>
<tr><td>Before [STDI – 7 minutes]</td><td>Submit load forecast for the relevant dispatch interval</td><td>Market Operator</td></tr>
<tr><td>[STDI – 7 minutes]</td><td>Execute RTD</td><td>Market Operator</td></tr>
<tr><td></td><td>Publish RTD Results in the MPI</td><td>Market Operator</td></tr>
</table></td><td>The following activities shall be performed for the RTD, within the time specified, using inputs for the covered study period of that specific RTD run:

Table 5. RTD Timeline
<table>
<tr><th>Timeline</th><th>Activity</th><th>Responsible Party</th></tr>
<tr><td>Before [STDI1* – ~~8~~ <u>9</u> minutes]</td><td>Submit self-scheduled nominations, bids and offers for all relevant hours of the RTD run</td><td>Trading Participants</td></tr>
<tr><td>Before [STDI – 7 minutes]</td><td>Provide updates on the following, if any:
1. Outage Schedules
2. Contingency List
3. Over-riding Constraints
4. Reserve Requirements</td><td>System Operator</td></tr>
<tr><td></td><td>5. Real-time system snapshot</td><td></td></tr>
<tr><td>Before [STDI – 7 minutes]</td><td>Submit load forecast for the relevant dispatch interval</td><td>Market Operator</td></tr>
<tr><td>[STDI – 7 minutes]</td><td>Execute RTD</td><td>Market Operator</td></tr>
<tr><td></td><td>Publish RTD Results in the MPI</td><td>Market Operator</td></tr>
</table></td><td>For the Real-Time Dispatch (RTD) run, the following changes are proposed to consider actual system performance and accommodate SO's requirement:
• Before [STDI1 – 9 minutes]: Submit the most recent self-scheduled nominations, bids and offers for all relevant hours of the RTD run – To ensure timely processing prior to RTD run execution considering actual system performance
• Before [STDI1 – 2 minute]: Transmittal of Energy and Reserve Schedules, and</td></tr>
</table>

Annex A

Dispatch Protocol No. 13				
Title	**Clause**	**Provision**	**Proposed Amendment**	**Rationale**
		Before [STDI – 1 minute] | Transmittal of Energy and Reserve Schedules, and WESM Merit Order Table to the System Operator | Market Operator *STDI refers to the Start Time of the relevant dispatch interval.	Before [STDI – ~~1~~ **2 minutes**] | Transmittal of Energy and Reserve Schedules, and WESM Merit Order Table to the System Operator | Market Operator *STDI refers to the Start Time of the relevant dispatch interval.	WESM Merit Order Table to the System Operator – To accommodate SO's request that results shall be submitted two (2) minutes before the start of the dispatch interval in order to allow processing time for different SO applications

[redacted]