

**Minutes of the 106th Meeting of the Rules Change Committee
Regular Meeting No. 2015-11**

Meeting Date & Time:	04November 2015 - 09:00AM to 01:45 PM
Meeting Venue:	Training Room 2&3, 9/FRobinsons Equitable Tower, Ortigas Center, Pasig City

Attendance List

In-Attendance

Not In-Attendance

Rules Change Committee

Principal Members:

Maila Lourdes G. de Castro, Chairperson--Independent
Francisco Leodegario R. Castro, Jr., Member--Independent
Joselyn D. Carabuena, Member -- Generation (PSALM)
Global
Theo Cruz Sunico, Member -- Generation (1590 EC)
Jose P. Santos, Member--Distribution (INEC)
Ludovico D. Lim, Member -- DU, ANTECO
Lorreto H. Rivera, Member --Supply (TPEC)
Ambrocio R. Rosales, Member --System Operator (NGCP)
Isidro E. Cacho, Jr., Member -- Market Operator (PEMC)

Gilbert A. Pagobo -- Distribution--MECO
Concepcion I. Tanglao, Member--Independent
Allan C. Nerves, Member --Independent
Ciprinilo C. Meneses, Member--Distribution(MERALCO)
Jose Ferlino P. Raymundo, Member -- Generation (SMC)

Alternate Members:

Erwil Bugaoisan, NGCP

PEMC -- Market Assessment Group (MAG)

Geraldine A. Rodriguez
Romellen C. Salazar

PEMC -- Legal

Sheryll M. Dy

PEMC -- TOD

Edward I. Olmedo

Others:

DOE Observer(s)

Ferdinand B. Binondo
Lorelei Moya

SN Aboitiz Power

Dominic Dave Pacaba Leo Robel Alyssa Aranzaso

There being a quorum, Chairperson Atty. Maila Lourdes de Castro called the meeting to order at around 9:00 AM.

The RCC approved the Agenda for the 106th RCC Meeting, as amended.

1. Reading, Review and Approval of the Minutes of the 105th RCC Meeting

The RCC reviewed the minutes of the 105th RCC Meeting held on 07October 2015 and approved the same, as presented.

2. Matters Arising from the Previous Meetings

3.1. MO-SO Study on Dispatch Tolerance: Position Paper

Mr. Edward Olmedo made a presentation regarding the summary of the results of the joint MO-SO study on the dispatch tolerance standards, which results were previously presented in several RCC meetings. (see attached presentation material on "MO-SO Study on Dispatch Tolerance Standards")

Mr. Olmedo explained that since the market is closely entering the stage of a shortened dispatch interval, participants should be familiarized on how monitoring is done in other markets. He presented an example of the dispatch conformance standards adopted by the Australian Energy Market Operator (AEMO), which he said the WESM can perhaps also adopt. He stated that the AEMO adopts a two-trigger mechanism—small and large error trigger—in identifying severity of non-compliances, based on a five-minute dispatch interval. (see attached presentation material on "Overview of AEMO Dispatch Conformance Standards")

Mr. Olmedo expressed that the market can adopt either the 5-minute dispatch interval of AEMO or the 15-minute dispatch interval as recommended by the System Operator. However, it would be best hearing the side of the Generators first before arriving at a final decision. Mr. Olmedo recalled that the RCC previously agreed to invite Sual Power Plant to explain its experience at the control room in responding to certain conditions of the plant and effectively, in complying with the current dispatch tolerance limits. Mr. Olmedo suggested that perhaps, the RCC can look into the plant performance of Sual in the dispatch conformance standards based on a 5-minute and 15-minute dispatch interval. If the results show that Sual has no issue on compliance, then perhaps, the RCC can move forward towards proposing to adopt the dispatch conformance standards that he presented.

Following are the discussions arising from the presentations made by Mr. Olmedo.

- 41 • Mr. Erwil Bugaoisan inquired on the basis of/ rationale for the 1.5% tolerance for
42 over-dispatch being recommended by the Market Operator as shown in the
43 presentation. Mr. Olmedo explained that the 1.5% tolerance level was arrived at
44 using the same data and methodology performed in the previous simulation
45 conducted by the MO on the Generators' compliance at 98% of the time. However,
46 in the more recent simulation by the MO, the results were disaggregated for the
47 Generators' over-dispatch and under-dispatch.
48
- 49 • Mr. Bugaoisan further inquired on which has more violations by the Generators in
50 terms of their linear ramping. Mr. Olmedo responded that the results for over
51 dispatch and under dispatch are close. He shared that more violations are
52 committed during the intra hour, and that Generators are generally compliant
53 meeting their target at the end-of-hour.
54
- 55 • Atty. de Castro inquired on how similar the AEMO is with the WESM, that the
56 Market Operator is basing its study on the former. Mr. Olmedo explained that the
57 adoption of the dispatch conformance standards was a recommendation coming
58 from the consultant for the WESM Design Study, and that the AEMO was
59 considered since the Australian market is more or less similar with the WESM in
60 terms of market mechanism, although AEMO's demand is larger and its dispatch
61 intervals are much shorter.
62
- 63 • Mr. Theo C. Sunico expressed his assumption that in the Australian Market,
64 Generators run based on their RTD and without further instructions from their
65 System Operator. On a related note, he raised a previous concern raised by the
66 Generators that one of the reasons they are sometimes unable to achieve their
67 ramp rate is because of the SO's dispatch instructions during the trading interval.
68 Thus, his assumption, with the recommended shorter dispatch interval, is that the
69 only time that the SO would call the Generator is when it would tell the Generator
70 to stop, otherwise, the Generator will just have to follow its RTD schedule provided
71 to it by the SO. He wondered, however, if with the implementation of a 15-minute
72 dispatch interval, more problems would occur if the Generators will still have to
73 wait for SO instructions. In response, Mr. Isidro E. Cacho clarified that the SO may
74 still give dispatch instructions during intra-hour in instances where the grid
75 experiences problems with security. In terms of monitoring, however, upon
76 determining that the SO gave dispatch instructions to the Generator, then the same
77 will not be counted as a non-compliance. Mr. Bugaoisan added that the SO's
78 dispatch deviation report indicates instructions given to the Generators. If there is
79 no instruction and the Generator did not comply with its RTD, that is the time that
80 the MSC will call the attention of the Generator.
81
- 82 • Further on the matter, Mr. Sunico asked for the consideration of the body to allow
83 Generators to ramp up linearly based on the RTD schedule provided to them. He
84 expressed that there are instances where a Generator was given dispatch
85 instruction but which was not recorded properly, and in those instances, the burden
86 falls on the Generator in providing justification on why it had to deviate from its
87 RTD schedule. Mr. Sunico stated that not all Generators have a recorder that
88 captures the conversation between the plant operator and the SO, thus, he

recommended crafting the rules that would allow or require the parties to set up a mechanism that will ensure full transparency for this purpose. For his part, Mr. Robel of SNAP opined that it would be ideal to already net out in the SO report the instances where it gave dispatch instructions to the Generator, expressing that it is very tedious on the part of the Generator going through the voice recording and transcript, and explaining the intervals where they appear to have non-compliances.

- Mr. Bugaoisan supported the recommendation of Mr. Sunico to have a proper recording of the conversations between the Generator and SO, which can be supplemented by an email confirmation after, for reference in validating when an instruction was given by the SO, and for determining the responsible person from SO who gave specific instructions to the Generator. He also shared that the SO is already exploring the possibility of capturing the data for the 0th minute as against the current 59th minute snapshot data capture.

In view of the discussions, the RCC agreed to no longer invite the Sual plant operator and instead, call a meeting with PIPPA to present the result of the MO-SO study and likewise get inputs from the Generators to determine whether or not the recommendations of the MO below are feasible and achievable.

- Over-dispatch tolerance: max [1.5% RTD, 1] MW
- Under-dispatch tolerance: max [3%, 1] MW

Atty. de Castro instructed the Secretariat to prepare the RCC's letter inviting PIPPA to a meeting in the following week.

The agreements were duly noted by the parties.

3.2. NGCP's Comments on the Proposed Amendment to the Dispatch Protocol Manual (Proposed Dispatch Protocol Manual Issue 12)

The RCC reviewed the comments submitted by the System Operator relative to PEMC's Proposed Amendment to the Dispatch Protocol Manual (Proposed Dispatch Protocol Manual Issue 12). It was noted that the RCC is discussing the matter following the SO's request. However, the Secretariat explained that as a matter of procedure, the RCC shall deliberate upon the proposal again, once the commenting period for the proposal has ended and comments received, if any, have been considered. Relatedly, Ms. Rodriguez informed the RCC that the TC is also submitting a separate set of comments to the Proposal, most of which are coming from the SO representative in TC. The information was duly noted by the body.

Below are the RCC's discussions and agreements relative to the SO's comments on the Proposed Amendment to the Dispatch Protocol Manual.

Title / Section	Provision in the Proposed Dispatch Protocol Manual Issue 12	Comments of the System Operator	RCC Discussions / Agreements
3.2.1	3.2.1 The System Operator shall be responsible for and shall operate the power system in accordance with the WESM Rules, the Grid Code and the dispatch schedule communicated by the Market Operator. Its primary responsibilities include providing central dispatch to all generation facilities and loads connected, directly and indirectly, to the transmission system in accordance with the dispatch schedule submitted by the Market Operator (WESM Rules section 1.3.3).	3.2.1 The System Operator shall be responsible for <u>the implementation of the dispatch schedule as provided by the Market Operator on an hourly basis</u> and shall operate the power system in accordance with the WESM Rules, the Grid Code and <u>other related rules in relation to the security and reliability guidelines.</u> the dispatch schedule communicated by the Market Operator. Its primary responsibilities include providing central dispatch to all generation facilities and loads connected, directly and indirectly, to the transmission system in accordance with the dispatch schedule submitted by the Market Operator (WESM Rules section 1.3.3).	Noted
3.2.3	3.2.3 The System Operator is responsible for the development of Procedures, Processes and Systems relevant to its functions contained in this Market Manual. Also, the System Operator shall inform the Market Operator any changes to its internal processes that will affect this manual.	3.2.3 The System Operator <u>in coordination with the Market Operator</u> shall be responsible for the development of Procedures, Processes and Systems relevant to its functions contained in this Market Manual. Also, the System Operator shall inform the Market Operator any changes to its internal processes that will affect this manual.	
4.3 Week-Ahead Market Projection (WAP)	[From the Table] Retrieve Other Information from SO re: 1. Reserve Requirements 2. Outage Schedules 3. Transmission Limits 4. Security Limits	Retrieve Other Information from SO re: 1. Reserve Requirements 2. Outage Schedules (Plants) 3. Transmission Limits 4. Security Limits 5. Overriding Constraint Limits	• SO does not provide WAP Reserve Requirements to MO • SO clarified that item 2 shall not include line outages, as the entire list did not include contingency, which means that the WAP does not require contingency testing. • Mr. Olmedo requested the SO to clarify its statement regarding the exclusion of contingency list in the WAP results. The SO pointed out that the list specified in the Proposed Dispatch Protocol Manual Issue 12 did not include the contingency list. However, if the MO will include contingency in the list, then it will be considered in the WAP results, and as such, the SO will also provide the outage schedule for transmission lines. To address the concern, Mr. Cacho suggested reviewing relevant provisions in the

			Rules regarding the considerations in generating WAP results.
4.3 Week-Ahead Market Projection (WAP)	[From the Table] WAP Results Analysis and Coordination with SO	WAP Results Analysis and <u>Coordination with SO</u>	• Not in practice. • Noted by the RCC.
4.4.2	The DAP timetable is presented in the following table - Retrieve Other Information from SO re: 1. Reserve Requirements 2. Outage Schedules 3. Contingency Lists 4. Transmission Limits 5. Security Limits	Retrieve Other Information from SO re: 1. Reserve Requirements 2. Outage Schedules(<u>Plants/Lines/Equipment</u>) 3. Contingency Lists 4. Transmission Limits 5. Security Limits 5. <u>Overriding Constraint Limits</u>	Noted
4.5 Real-Time Dispatch Schedule (RTD) or Hour-Ahead Schedule	[From the Table] Retrieve Other Information from SO re: 1. Reserve Requirements 2. Outage Schedules 3. Contingency Lists 4. Transmission Limits 5. Security Limits	1. Reserve Requirements 2. Outage Schedules(<u>Plants/Lines/Equipment</u>) 3. Contingency Lists 4. Transmission Limits 5. Security Limits <u>Overriding Constraint Limits</u>	Noted
4.5 Real-Time Dispatch Schedule (RTD) or Hour-Ahead Schedule	[From the table] Security Analysis and Issuance of Energy and Reserve Schedules	Security Analysis and Issuance of Energy and Reserve Schedules	• Not in practice. • Noted by the RCC.
4.6	[From the table] Retrieve Other Information from RTD Save Case: 1. Reserve Requirements 2. Outage Schedules 3. Contingency Lists 4. Transmission Limits 5. Security Limits	Retrieve Other Information from RTD Save Case: 1. Reserve Requirements 2. Outage Schedules(<u>Plants/Lines/Equipment</u>) 3. Contingency Lists 4. Transmission Limits 5. Security Limits <u>Overriding Constraint Limits</u>	Noted

5.2 Scheduling and Dispatch Procedure	5.2.2 [From the table] System Operator Data Inputs and Reports – - Contingency - Outage - Security limits - Transmission limits - System snapshot - System advisories	System Operator Data Inputs and Reports – - Contingency <u>lists</u> - Outage <u>Schedules</u> - Security limits <u>Overriding Constraint Limits</u> - Transmission limits - System snapshot - System advisories	- Mr. Olmedo commented that overriding constraints, based on current definition, includes but is not limited to transmission limit or security limit. - Based on MO's comment, the RCC agreed to delete "Transmission Limits" from the list. System Operator Data Inputs and Reports – - Contingency <u>lists</u> - Outage <u>Schedules</u> - Security limits <u>Overriding Constraint Limits</u> Transmission limits - System snapshot - System advisories
5.2 Scheduling and Dispatch Procedure	5.2.2 [From the table] Pre-dispatch market projections - Week-ahead projections (RTD) (WAP) - Day-ahead projections (DAP)	Pre-dispatch market projections - Week-ahead projections <u>(RTD)</u> (WAP) - XXX	Noted
6.6.4	6.6.4 If it deems necessary to address the occurrence of constraints in the system, the Market Operator may extend the gate closure time and allow the submission or revision of bids and offers later than the set gate closure time.	6.6.4 If it deems necessary to address the occurrence of constraints in the system, the Market Operator may extend the gate closure time and allow the submission or revision of bids and offers later than the set gate closure time.	- SO stated that the provision is not applicable as the MO does not extend gate closure. - MO explained that the provision is worded as such, in anticipation of a shortened gate closure. The SO opined that this should be proposed later on, once the shorter gate closure is implemented. - The RCC noted SO's comment.
6.6.5	6.6.5 The most recently submitted bids which have passed validation and which had been "converted" as a valid bid shall be used for the Pre-Dispatch Market Projection (Day-Ahead Projections, DAP or Week-Ahead, WAP) or Real Time Dispatch (RTD and RTX) market runs.	6.6.5 The most recently submitted bids which have passed validation and which had been "converted" as a valid bid shall be used for the Pre-Dispatch Market Projection (Day-Ahead Projections, DAP or Week-Ahead <u>Projections</u> , (WAP) or Real Time Dispatch (RTD and RTX) market runs.	Accept
6.12.4	6.12.4 a) XXX b) Current system status. Bids and offers submitted are validated against real-time information relevant to the facility for which a bid or offer is submitted. Real-time information used for validation is the latest information on system status transmitted by the System Operator to the MMS.	6.12.4 a) XXX b) Current system status. Bids and offers submitted are validated against real-time information relevant to the facility for which a bid or offer is submitted. Real-time <u>snapshots from System Operator</u> are information used for validation and shall serve as <u>is</u> the latest information on system status to	Noted.

	c) Outages. Generation offers for generating facilities which are included in the outage list submitted by the System Operator to the MMS are automatically excluded from the scheduling and dispatch processes, and are thus not included in the generation of real-time dispatch (RTD) schedules and the WESM merit order table (MOT). d) Contingencies. Contingency requirements imposed and submitted by the System Operator are also used to validate and override bids and offers submissions. These may include, but shall not be limited to, must run unit generation, increase in reserve allocation or transmission capacity margins.	betransmitted by the System Operator to the MMS of Market Operator. c) Outages. Generation offers for generating facilities which are included in the outage list submitted by the System Operator to the MMS are automatically excluded from the scheduling and dispatch processes, and are thus not included in the generation of real-time dispatch (RTD) schedules and the WESM merit order table (MOT). d) Overriding Constraint limits. Contingencies. Contingency requirements Overriding Constraint limits imposed and submitted by the System Operator are also used to validate and shall override bids and offers submissions of Generating facilities. These may include security and non-security related requirements, but shall not be limited to, must run unit generation, increase in reserve allocation or transmission capacity margins.															
6.13.2	6.13.2 The following criteria for determining deviation from reasonable estimate of the foregoing that would require revision of bids or offer may be followed – <table><tr><th>Criteria</th><th>Deviation</th></tr><tr><td>Registration Data</td><td>Actual RR_{down}, RR_{up}, P_{min} or P_{max} differ by more than 10% from registered data unless facilities are on outage.</td></tr><tr><td>System Status</td><td>Status of generating or load resource facilities conflict with Bid/Offer submissions for a specific</td></tr></table>	Criteria	Deviation	Registration Data	Actual RR_{down} , RR_{up} , P_{min} or P_{max} differ by more than 10% from registered data unless facilities are on outage.	System Status	Status of generating or load resource facilities conflict with Bid/Offer submissions for a specific	Delete provision 6.13.2 The following criteria for determining deviation from reasonable estimate of the foregoing that would require revision of bids or offer may be followed – <table><tr><th>Criteria</th><th>Deviation</th></tr><tr><td>Registration Data</td><td>Actual RR_{down}, RR_{up}, P_{min} or P_{max} differ by more than 10% from registered data unless facilities are on outage.</td></tr><tr><td>System Status</td><td>Status of generating or load resource facilities conflict with Bid/Offer submissions for a specific trading interval.</td></tr><tr><td>Schedule and</td><td>Outage schedule or events conflict with Bid/Offer</td></tr></table>	Criteria	Deviation	Registration Data	Actual RR_{down} , RR_{up} , P_{min} or P_{max} differ by more than 10% from registered data unless facilities are on outage.	System Status	Status of generating or load resource facilities conflict with Bid/Offer submissions for a specific trading interval.	Schedule and	Outage schedule or events conflict with Bid/Offer	- Per SO, the provision is not applicable and is not used by the SO. - Noted by the RCC.
Criteria	Deviation																
Registration Data	Actual RR_{down} , RR_{up} , P_{min} or P_{max} differ by more than 10% from registered data unless facilities are on outage.																
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Schedule and	Outage schedule or events conflict with Bid/Offer																

		trading interval.		Forced Outage	submissions for a specific trading interval	
	Schedule d and Forced Outage	Outage schedule or events conflict with Bid/Offer submissions for a specific trading interval		Contingency Plans	Actual P_{min} or P_{max} differ by more than 10% from registered data due to contingency or emergency actions by SO	
	Contingency Plans	Actual P_{min} or P_{max} differ by more than 10% from registered data due to contingency or emergency actions by SO				
6.14 Cancellation of Bids and Offers	6.14.1 Trading participants may cancel their daily bids or "converted" standing bids/offers for a particular trading interval under the following conditions – a) XXX b) XXX c) XXX	6.14.1 Trading participants may cancel their daily bids or "converted" standing bids/offers for a particular trading interval under the following conditions – a) XXX b) XXX c) XXX <u>d) For this purpose, the Market Operator shall publish to the trading participants the hourly total registered minimum generating capacity (Pmin) of all scheduled generating units based on the Day-Ahead Market Projections not later than 1800H of each trading day.</u> Additional SO comments: a) Can we include the projected load of VRE Generators with the aggregated Pmin of all online generating units? This is in consideration of the Must Dispatch category of VRE plants. d) Consider including the projected load of VRE plants to the aggregated Pmin of all scheduled and non-scheduled generating units.		- For MO's review if possible to include the VREs' projected load in the Pmin of Generators - On the proposed additional item d, Mr. Olmedo clarified that the same is already being done but is provided per trading participant rather than making the same publicly available in the market information website.		
7.1.1	7.1.1 WESM Rules section 3.5.3 provides for the responsibility of the System Operator to submit to the Market Operator standing network data relating to all network elements which are included in the market	7.1.1 WESM Rules section 3.5.3 provides for the responsibility of the System Operator to submit to the Market Operator standing network data relating to all network elements for the veracity and accuracy of		Mr. Olmedo informed the RCC that the timely submission of relevant data are already reflected in the Market		

	network model. In this regard, Network Service Providers are required, under WESM Rules clause 3.5.2 to submit to the System Operator standing network data relating to all network elements under its control and included in the market network model. Data required to be submitted are set out in Appendix A2 of the WESM Rules.	which are included in the market network model. In this regard, Network Service Providers are required, under WESM Rules clause 3.5.2 to submit to the System Operator standing network data relating to all network elements under its control and included in the market network model. <u>and the data required to be submitted are set out in Appendix A2 of the WESM Rules.</u>	Performance Standards (MOPS).
7.1.2	7.1.2 The System Operator is also required in WESM Rules clause 3.5.3.2 to advise the Market Operator, when necessary, of the need to vary the market network model employed for any trading interval to take account of information provided by Network Service Providers, as well as the need to apply or vary any system security constraints, over-riding constraints or reserve requirement constraints to be applied in any trading interval to take into account current or projected system conditions.	7.1.2 The System Operator is also required under WESM Rules clause 3.5.3.2 to advise the Market Operator, when necessary, of the need to vary the market network model employed for any trading interval to take account of information provided by Network Service Providers, as well as the need to apply or vary any system security constraints, over-riding constraints or reserve requirement constraints to be applied in any trading interval to take into account current or projected system conditions.	- Mr. Ambrocio Rosales expressed that the SO does not vary the MNM, thus, recommended the deletion of the relevant provisions. - Mr. Cacho explained that the provision in the manual only mirrors the relevant provision in the WESM Rules. Thus, he recommended that the SO propose to amend / revise the WESM Rules for consistency with the proposal in the manual.
7.1.3	7.1.3 The Price Determination Methodology approved for the WESM also provide for the input data required of the System Operator which shall be considered in the market scheduling and pricing processes.	7.1.3 The Price Determination Methodology approved for the WESM also provide for the input data required of the System Operator which shall be considered in the market scheduling and pricing processes.	- Not applicable, per the SO. - Noted by the RCC.
7.2 Scope and Purpose	7.2.1 This Section contains the procedures that will be followed in the submission by the System Operator to the Market Operator of the data required to be submitted by it to be used in the market scheduling and pricing processes, as well as the submission of other System Operator data, report, messages and advisories.	7.2.1 This Section contains the procedures that shall be followed for in the submission, by the System Operator to the Market Operator, of the data required for to be submitted by it to be used in the market scheduling and pricing processes, as well as the submission of other System Operator data, report, messages and advisories.	Noted by the RCC
7.3 Respon sibilities	7.3.1 Market Operator. The Market Operator shall be responsible for – a) Providing and maintaining the data exchange and communication facilities it needs to receive data, messages and advisories transmitted by the System Operator; and b) Ensuring that data inputs required of the System Operator are considered in the market dispatch optimization runs.	XXX a) Providing and maintaining the data exchange and communication facilities it needs to <u>ensure timely submission of dispatch schedules (RTD/DAP/WAP)</u> to receive data, messages and advisories transmitted by the <u>Market Operator to the System Operator and Trading participants</u> ; and b) XXX	Mr. Olmedo informed the RCC that the timely submission of relevant data is already reflected in the Market Operator Performance Standards (MOPS).

	7.3.2 System Operator. The System Operator shall be responsible for – a) XXX; b) Preparing and submitting contingency lists for a particular trading interval or trading day; c) Approving and implementing outage schedules submitted by Network Service Providers and Trading Participants, and for submitting the approved schedules to the Market Operator; and d) Providing and maintaining the data exchange and communication facilities it needs to ensure timely data and report transmittal to the Market Operator.	7.3.2 System Operator. The System Operator shall be responsible for – a) XXX; b) Preparing and submitting additional contingency lists for a particular trading interval or trading day if necessary; and c) Approving and implementing outage schedules submitted by Network Service Providers and Trading Participants, and for submitting the approved schedules to the Market Operator; and d) Providing and maintaining the data exchange and communication facilities it needs to ensure timely data and report transmittal to the Market Operator.	- For item b, reject SO's proposed revision, thus, effectively retaining the provision in the Proposed DP Manual Issue 12; - For item c, the RCC agreed as follows: c) Approving and implementing outage schedules submitted by Network Service Providers and Trading Participants, and for sSubmitting the approved schedules to the Market Operator; and
7.4 Data and Report Requirements	7.4.1 Market run data Inputs. For each trading interval, the System Operator shall submit the following data which shall be used in the pre-dispatch projections and real time dispatch market runs – a) Outage schedules b) Contingency lists c) Overriding constraints, including but not limited to transmission limits or security limits	7.4.1 XXX a) XXX b) XXX e) Overriding constraints, including but not limited to transmission limits or security limits	Reject SO's proposed revision based on earlier agreement in the relevant provisions. It was also noted that overriding constraints shall not be limited to transmission and security limits.
7.6.1	7.6.1 XXX: - Security Limits - Must-Run Units (MRU) - Emergency de-rating/outage of specific transmission lines; - Other types as may be recommended by the System Operator - Non Security Limits: - Generating Unit Limitations - Regulatory and Commercial Testing Over-riding constraints in the scheduling and dispatch of generating units qualifying as must run units may be compensated based on the mechanism set forth in the Manual on the Management of Must-Run and Must-Stop Units. Over-riding constraints for the scheduling and dispatch of generating units undergoing Regulatory and Commercial testing process shall be considered as	7.6.1 XXX - Security Limits - Must-Run Units (MRU) - Emergency de-rating/outage of specific transmission lines; - Other types as may be recommended by the System Operator - Non Security Limits: - Generating Unit Limitations - Regulatory and Commercial Testing Over-riding constraints in the scheduling and dispatch of generating units qualifying as must run units may be compensated based on the mechanism set forth in the Manual on the Management of Must-Run and Must-Stop Units. Over-riding constraints for the scheduling and dispatch of generating units undergoing Regulatory and Commercial testing process shall be considered as	Accept SO's revision

	price takers in the WESM, for generation sold to the spot market.	price takers in the WESM, for generation traded sold to the spot market.	
7.6.2	7.6.2 Security Limits. Security limits are imposed by the System Operator to reflect system stability limits and these vary under different system conditions. Security limits include generator operating limits and transmission branch group limits, described as follows – a) XXX. b) A transmission branch group defines one or more transmission lines. Branch group limits usually reflect system stability constraints. A branch group limit means the sum of power flow on the group of transmission lines shall not exceed the limit. c) HVDC transmission limits may vary constraining power transmission from one region to another. The HVDC limits are modeled. The imposition of over-riding constraints through the security limit in the Market Dispatch Optimization Model include the following: a) Security Limits; • Must-Run Units (MRU) • Emergency de-rating/outage of specific transmission lines; • Other types as may be recommended by the System Operator b) Non Security Limits: • Generating Unit Limitations • Regulatory and Commercial Testing XXX Over-riding constraints for the scheduling and dispatch of generating units undergoing Regulatory and Commercial testing process shall be considered as price takers in the WESM, for generation sold to the spot market.	7.6.2 Security Limits. The System Operator may impose security limits and shall override the generation offers to address possible threat in system security Security limits are imposed by the System Operator to reflect system stability limits and these may vary under different system conditions. Security limits include generator operating limits and transmission branch group limits, described as follows – a) XXX. b) A transmission branch group defines one or more transmission lines. Branch group limits usually reflect system stability constraints. A branch group limit means the sum of power flow on the group of transmission lines shall not exceed the limit. c) b)XXX. The imposition of over-riding constraints through the security limit in the Market Dispatch Optimization Model include the following: • Security Limits; a. Must-Run Units (MRU) b. Emergency de-rating/outage of specific transmission lines; c. Other types as may be recommended by the System Operator • Non Security Limits: a. Generating Unit Limitations b. Regulatory and Commercial Testing XXX Over-riding constraints for the scheduling and dispatch of generating units undergoing Regulatory and Commercial testing process shall be considered as price takers in the WESM, for generation traded sold to the spot market.	• Accept SO's revision on paragraph 1 • Retain PEMC's version of paragraph items a-c. The RCC noted that the transmission branch group is used in the Visayas region for the connection between Leyte and Cebu. • Accept SO proposal to rearrange list of security and non-security limits; • Accept SO revision in last paragraph.
7.6.3	7.6.3 Transmission Limits. Transmission limits are generally thermal limits of individual	7.6.3 Transmission Limits. Transmission limits are generally thermal limits of individual	Reject SO's revision based on earlier agreement on Section 7.4.

	transmission lines, transformers, and related facilities. The transmission limits are used in security analysis application to check constraint violations.	transmission lines, transformers, and related facilities. The transmission limits are used in security analysis application to check constraint violations.	
7.7 Contingency Requirements		7.7 Contingency List Requirements	
	7.7.1 A contingency is an event for which the power system or the WESM is designed or planned to withstand without significant disturbance or interruption of normal operation without the need for drastic emergency actions.	7.7.1 A contingency is an event for which the power system or the WESM is designed or planned to withstand without significant disturbance or interruption of normal operation without the need for drastic emergency actions. The security and reliability of the grid shall be based on the single outage contingency (N-1) criterion. This criterion specifies that the grid shall continue to operate in the normal state following the loss of one generating unit, transmission line, or transformer.	Accept SO's proposal because the definition of contingency is already specified in another provision in the MO's proposal.
7.7.2	7.7.2 The System Operator shall determine all possible contingency events that may occur in a given trading interval. The contingency plan shall take into consideration weather condition, system demand, as well as the operating characteristics and physical condition of transmission lines, power transformers, switching equipment, and the like. The identified contingencies for a trading interval shall conform to the provisions of the WESM System Security & Reliability Guidelines.	7.7.2 The System Operator shall determine all possible contingency events that may occur in a given trading interval. The contingency plan shall take into consideration weather condition, system demand, as well as the operating characteristics and physical condition of transmission lines, power transformers, switching equipment, and the like. The identified contingencies for a trading interval shall conform to the provisions of the WESM System Security & Reliability Guidelines.	Noted by the RCC, for further validation, if it is not being performed by the SO.
7.7.3	7.7.3 The contingency list contains the definition of credible contingencies for power system security analysis. It includes a list of pre-defined outage scenarios that are most likely to occur in the system in faulty conditions, identifying all possible outage scenarios that may occur during a particular trading interval.	7.7.32 The default contingency list contains the definition of credible contingencies as provided by the System Operator for power system security analysis. It includes a list of (i.e. pre-defined outage scenarios) that are most likely to occur in the system in faulty conditions, identifying all possible outage scenarios and each contingency event shall be tested and loaded into the MMS database of the Market Operator. The MDOM solution shall provide an RTD which is a security-constrained dispatch schedule.	Accept SO's proposed revision, with the deletion of the word default, and the addition of the word "economic" referring to the dispatch schedule in the last sentence. 7.7.32 The default contingency list contains the definition of credible contingencies as provided by the System Operator for power system security analysis. It includes a list of (i.e. pre-defined outage scenarios) that are most likely to occur in the system in faulty conditions, identifying all outage scenarios and

		may occur during a particular trading interval.	<u>contingency event shall be tested and loaded into the MMS database of the Market Operator. The MDOM solution shall provide an RTD which is a security-constrained economic dispatch schedule.</u> may occur during a particular trading interval.
7.7.4	7.7.4 A contingency definition is relatively static with a given network model. This data does not change frequently. A default contingency definition is loaded into the MMS database upon database build. The contingency items are used in contingency analysis to evaluate the system operating condition when any of the outage scenarios happen.	7.7.4 A contingency definition is relatively static with a given network model. This data does not change frequently. A default contingency definition is loaded into the MMS database upon database build. The contingency items are used in contingency analysis to evaluate the system operating condition when any of the outage scenarios happen.	Not applicable, per SO; Noted by the RCC.
7.7.5	7.7.5 XXX – a) XXX b) XXX; c) Selective multiple circuit outage with corresponding Special Protection Schemes (SPS); and d) XXX.	7.7.5 XXX – a) XXX; b) XXX; c) Selective multiple circuit outage with corresponding Special Protection Schemes (SPS) <u>Integrity Protection Scheme (SIPS);</u> and d) XXX.	Accept SO's Proposed revision
7.7.7	7.7.7 The System Operator shall perform contingency planning for the morning and afternoon for the following day and the evening peak of the current day, as follows - Table	Delete provision	Per SO, it is not in practice. The RCC noted the SO's proposal.
7.8 System Status	7.8.1 The System Operator shall provide power system snapshot data on the status of the power system and advisories on the anticipated condition of the power system to the Market Operator. The data to be provided covers the Luzon, Visayas and Mindanao grids.	7.8.1 The System Operator shall provide power system snapshot data on the status of the power system and advisories on the anticipated condition of the power system to the Market Operator. The data to be provided covers the Luzon, Visayas and Mindanao grids.	Noted by the RCC.
7.8.2	7.8.2 XXX. a) XXX – • XXX • XXX • XXX b) The system snapshot must be consistent with the WESM Market Network Model (MNM). c) The system snapshot is an input to the Market Dispatch Optimization Model (MDOM) which calculates the WAP, DAP and RTD	7.8.2 XXX a) XXX – • XXX • XXX • XXX b) The Energy Management System (<u>EMS</u>) snapshot must be <u>converted to match</u> consistent with the WESM Market Network Model (MNM). c) XXX	Accept SO's revision

	schedules. Specifically, the system snapshot data is used for the network configuration and nodal demand forecasting processes.		
7.8.3	7.8.3 System Operator System Advisories. The System Operator system advisories contain other information not included in the system snapshots. These are messages issued by the System Operator depicting particular issues regarding existing or anticipated status of the power system.	7.8.3 System Operator System Advisories. The System Operator system advisories contain other information not included in the submission of system snapshots. These are messages issued by the System Operator depicting particular events or incidents that would transpire prior, during or after real time condition. issues regarding existing or anticipated status of the power system.	Noted by the RCC
7.10.2	7.10.2 System status. a) System snapshots shall be transmitted to the Market Management System every five (5) minutes. To the extent practicable, the system snapshot data received no earlier than five (5) minutes before the start of the trading interval shall be used as input for the ex-ante or real-time dispatch (RTD) market run for that trading interval. The system snapshot received at the end of that trading interval shall be used for the ex-post or real-time ex-post (RTX) market run. b) System advisories are transmitted upon issuance. Such advisories are to be issued upon occurrence of significant events that have substantial impact to the operations of the power system and to the WESM in the trading intervals when and after such event occurred.	7.10.2 a) System snapshots shall be transmitted to the Market Management System every five (5) minutes. To the extent practicable, the system snapshot data received no earlier than five (5) minutes before the start of the trading interval shall be used as input for the ex-ante or real-time dispatch (RTD) market run for that trading interval. The system snapshot received at the end of that trading interval shall be used for the ex-post or real-time ex-post (RTX) market run. b) System advisories are transmitted upon issuance. Such advisories are to be issued upon occurrence of significant events that have substantial impact to the operations of the power system and to the WESM in the trading intervals when and after such event occurred.	Accept SO's proposal.
7.12	7.12.1 XXX – a) XXX; and b) Security limits submitted by the System Operator in accordance with this Dispatch Protocol.	7.12.1 XXX – a) XXX; and b) Security Overriding Constraint limits submitted by the System Operator in accordance with this Dispatch Protocol.	Accept SO's revision
8.2 Scope and Purpose	8.2.1 The procedures and requirements set out in this Section shall be implemented in the in the preparation of the Week-Ahead (WAP) Market Projection and the Day-Ahead (DAP) Market Projection, collectively referred to in this Dispatch Protocol as the pre-dispatch market projections.	8.2.1 The procedures and requirements set out in this Section shall be implemented in the in the preparation of the Week-Ahead (WAP) Market Projection and the Day-Ahead (DAP) Market Projection, collectively referred to in this Dispatch Protocol as the pre-dispatch market projections.	

8.3 Responsibilities	8.3.1 Market Operator. The Market Operator shall be responsible for the following – a) Ensuring that the Week-Ahead Projection and Day-Ahead Projection market runs are carried out in accordance with the WESM timetable; b) XXX; and c) XXX	8.3.1 Market Operator. The Market Operator shall be responsible for the following – a) Ensuring the timely preparation of –that the Week-Ahead Projection, and Day-Ahead Projection and Hour-Ahead projection market runs are carried out in accordance with the WESM timetable; b) XXX; and c) XXX	
8.6.2	8.6.2 The data inputs for the market projections are as follows – a) XXX b) XXX c) XXX d) XXX e) XXX f) XXX g) Transmission limits h) Security limits i) Load pattern data determined in accordance with the WESM Load Forecasting Methodology j) System advisories	8.6.2 The data inputs for the market projections are as follows – a) XXX b) XXX c) XXX d) XXX e) XXX f) XXX g) Transmission limits h) g) Security limits Overriding Constraint limits i) Load pattern data determined in accordance with the WESM Load Forecasting Methodology j) h) System advisories	Accept SO's revision. Relative to item 1, Mr. Olmedo confirmed that it is the MO who submits the load pattern data, and not the SO.
8.8.3	8.8.3 If the market run results indicate that nodal energy prices are expected to be equal to, or exceed, nodal VoLL at any customer nodes in the market network model, the System Operator shall be notified of the likelihood of initiating load shedding at those nodes through a market advisory which shall be transmitted in the format set out in Attachment 8B.	8.8.3 If the market run results indicate that nodal energy prices are expected to be equal to, or exceed, nodal VoLL at any customer nodes in the market network model, the System Operator shall be notified of the likelihood of initiating load shedding at those nodes through a market advisory which shall be transmitted in the format set out in Attachment 8B.	Accept SO revision. Per SO, it does not implement load shedding based on nodal VoLL. Attachment 8B shall effectively be deleted. SO/MO shall likewise review the affected provisions on load shedding.
10.1.1	10.1.1 The WESM Merit Order Table (MOT) is prepared as a guide for the System Operator in selecting generating units that can be re-dispatched in the course of the operations of the power system. The use of the MOT by the System Operator shall be in accordance with the re-dispatch process described in the relevant Section of this Dispatch Protocol.		For MO to rephrase provision for the inclusion of the regional MOT.
10.1.3	10.1.3 The System Operator utilizes the MOT of Offers Dispatched as a guide in determining which generating units may be constrained-off, whereas the MOT of Offers Not Dispatched is a guide for determining which generating	10.1.3 The System Operator utilizes the MOT of Offers Dispatched as a guide in determining which generating units may be constrained ed off, whereas the MOT of Offers Not Dispatched is a guide for determining which	Delete hyphen in constrained-on and constrained-off.

	units may be constrained-on for a particular trading interval.	generating units may be constrained on for a particular trading interval.	
10.4 Timeline of the Preparation of the MOT	10.4.1 The System Operator shall prepare the MOT for each trading interval right after the completion of the RTD market run workflow for that trading interval, and shall immediately transmit the same to the System Operator through the EMS-MMS data exchange facility. The timeline is illustrated as follows, where "XX" refers to the trading interval to which the MOT will apply. XXX	10.4.1 The SystemMarketOperator shall prepare the MOT for each trading interval right after the completion of the RTD market run workflow for that trading interval, and shall immediately transmit the same to the System Operator through the EMS-MMS data exchange facility. The timeline is illustrated as follows, where "XX" refers to the trading interval to which the MOT will apply. XXX	Ms. Rodriguez stated that the use of the MOT and WESM MOT in the Rules are the same. However, the terms are used differently in the Dispatch Protocol Manual. Thus, Mr. Cacho suggested harmonizing the definitions in the relevant rules and manuals. The RCC agreed as follows: For MO and SO to crossreference the MOT with the definition of the WESM MOT, based on RCC agreement of harmonizing the definition of the terms in the WESM Rules and the Dispatch Protocol Manual. The MO shall review and revise the entire sections pertaining to the MOTs accordingly. Finally, the RCC agreed to include a definition of regional MOT of the SO in the MO's revisions.
10.6 Preparation of the MOT	10.6.1 The MOT shall include the following – a. All generating units for which offers have been submitted for the relevant trading interval; and b. All generating units which have been scheduled or included in the RTD schedule but which did not submit offers for that trading interval.	10.6.1 XXX a)XXX b) All generating units which have been scheduled or included in the RTD schedule <u>as a result of imposition of overriding constraint limit but with or without offers submitted</u> which did not submit offers for that trading interval.	Same agreement under Section 10.4
10.8 Use of MOT	10.8.1 The System Operator shall use the MOT in cases where the regulating reserve capacity has already been depleted and where the frequency has already gone beyond standards set in the Philippine Grid Code	10.8.1 The System Operator shall use the MOT <u>as reference whenever there is a requirement to constrain on or constrain off the dispatch schedule. However, the System Operator may resort to an out-of merit dispatch whenever the grid frequency is beyond the normal threshold.</u> In cases where the regulating reserve capacity has already been depleted and where the frequency has already gone beyond standards set in the Philippine Grid Code	Same agreement under Sections 10.4 and 10.6
10.8.2	10.8.2 The System Operator shall provide a post-dispatch report(s) to the Market Operator containing information on the use of the MOT in aid of monitoring each generator's dispatch. Such reports should be able to identify, but not limited to, the following	10.8.2 The System Operator shall provide a post-dispatch report(s) to the Market Operator containing <u>deviation from RTD versus actual dispatch</u> information on the use of the MOT in aid of monitoring each generator's dispatch. Such reports should be able to identify, but not limited to, the following	Same agreement above

	a. Non-compliance to dispatch instructions b. Designation of must-run units c. Utilized for ancillary services d. Testing Requirement e. Generator limitation	XXX	
11.1.1	11.1.1 Target loading levels determined for each trading interval are communicated to the Trading Participants prior to the commencement of the trading interval and in accordance with the WESM timetable.	11.1.1 The System Operator and the Trading Participants shall communicate with each other for the Target loading levels determined for each trading interval are communicated to the Trading Participants prior to the commencement of the trading interval and in accordance with the WESM timetable.	Noted by the RCC
11.1.2	11.1.2 Trading Participants that are dispatched are expected, pursuant to WESM Rules clause 3.8.4, to use reasonable endeavors to achieve a linear ramp rate over the trading interval in order to reach their target loading level by the end of the trading interval within the dispatch tolerance. Dispatched trading participants will not be required to operate in any different fashion unless required to respond in accordance with reserve or ancillary services contract or respond to a direction by the System Operator.	11.1.2 Trading Participants that are dispatched are expected, pursuant to WESM Rules clause 3.8.4, to use reasonable endeavors to achieve a linear ramp rate over the trading interval in order to reach their target loading level by the end of the trading interval within the dispatch tolerance. Dispatched trading participants will not be required to operate in any different fashion unless required to respond in accordance with reserve or ancillary services contract or respond to a direction by the System Operator. <u>11.1.2 The Dispatch Schedule shall contain the target loading levels to be achieved in MW considered at the end of that trading interval. Generators who are dispatched shall comply with a linear ramp rate over the Trading Interval. Generators shall be monitored for compliance with the Dispatch Tolerance standards and the required linear ramp rate. This is to ensure that the target loading for each Trading Participant shall be within the dispatch tolerance standards in MW and the linear ramping in MWhr from the start until the end of that Trading Interval.</u>	The SO proposed to retain section 4.1.1 of DP Issue 11. Mr. Rosales explained that the MWhr in the provision pertains to energy based on linear ramping, which reflects a triangular area, but may be a rectangular area based on actual ramping of a generating unit, where the energy produced by the generating unit at the top of the hour is more than its target load. Mr. Cacho inquired on how the area will be monitored in the implementation of the 15-minute dispatch interval, for instance. Mr. Rosales responded that the intent of computing the area (energy) is to cover the entire one hour and not for each 15-minute dispatch interval. Mr. Cacho clarified that his question refers to the applicable dispatch interval, whether it is 15-minutes or 5-minutes or the current 1-hour interval. In the end, Mr. Rosales and Mr. Cacho agreed that the expected or registered ramp rate will be compared against the metered quantity (MQ) of the Generator. Mr. Olmedo opined that the provision may possibly be changed, moving forward based on what will be agreed upon in relation to the discussions on the dispatch tolerance limits. On the part of the Generators, Mr. Sunico expressed that the concept is clear to the Generators. How

			reiterated the following concerns of the Generators as regards its implementation: - The SO lacks the capability to perform an intra-hour monitoring; and - Dispatch should be based on RTD and that the call should be made by the SO only when there is deviation to such schedule. This means that Generators will have to catch up and deviate from its linear ramp rate, assuming that they are constrained off early on during the interval, to comply with its loading level at the end of hour.
11.2.2	11.2.2 The procedures set out in this Section are associated with the following procedures – a. XXX; b. XXX; c. Procedures during market intervention and suspension which are set out in a separate SECTION 15 of this Dispatch Protocol; d. Procedures during emergency conditions which are set out in a separate market manual; and e. XXX; and f. Management of load shedding which is set out in a separate market manual.	The SO proposed to align the following items on NGCP's proposed amendment: - Item c with Proposed Amendment to the WESM Rules Chapter 6 on Intervention and Suspension - Item d with Proposed Amendment to the Manual on Emergency Procedures Issue 2 regarding emergency procedure during excess generation - Item f with Proposed Amendment to the Manual on Emergency Procedures issue 2 regarding emergency procedures during manual load dropping	Mr. Rosales explained the SO's recommendation is to harmonize the proposals. The RCC noted the SO's comments. On a related note, Ms. Rodriguez informed the RCC that the TC would be submitting to the RCC a separate proposal for amendment to the WESM Rules Chapter 6 on Intervention and Suspension, as well as on the Dispatch Protocol Manual in so far as intervention and suspension is concerned.
11.5.4	11.5.4 In cases when normal market conditions prevail but there is an increase or decrease in system demand within the trading interval or there are forecast errors, the System Operator shall issue re-dispatch instructions as it may deem necessary to address the situation.	11.5.4 In cases when normal market conditions prevail but there is an increase or decrease in system demand within the trading interval or there are forecast errors, the System Operator shall issue re-dispatch instructions as it may deem necessary to address the situation. <u>The System Operator may constrain-on or constrain-off Generators to ensure the supply and demand is balanced at all times.</u>	Noted by the RCC
11.5.6	11.5.6 Designation of Must-Run Unit to Address System Voltage Requirement. a) XXX b) XXX	11.5.6 Designation of Must-Run Unit to Address System Voltage Requirement. a) XXX b) XXX c) Submit security overriding constraint	Accept SO revision

	c) Submit security limits to Market Operator containing the hourly loading of the Must-Run Unit.	limits to Market Operator containing the hourly loading of the Must-Run Unit.	
11.6.4	11.6.4 All dispatch instructions issued by the System Operator to Trading Participants shall be recorded through operator logs which will be forwarded to the Market Operator. The System Operator shall likewise log and report to the Market Operator all dispatch instructions given to the Trading Participant which resulted in deviations from the real time dispatch schedule generated by the Market Operator. The report shall form part of the post-dispatch report required of the System Operator under this Dispatch Protocol. Operator logs and reports submitted to the Market Operator shall be used for purposes of surveillance, audit, and market settlements.	11.6.4 All dispatch instructions issued by the System Operator to Trading Participants shall be recorded through operator logs: which will be forwarded to the Market Operator. The System Operator shall likewise log and report to the Market Operator all dispatch instructions given to the Trading Participant which resulted in deviations from the real time dispatch schedule generated by the Market Operator. The report shall form part of the post-dispatch report required of the System Operator under this Dispatch Protocol. Operator logs Dispatch Deviation report and reports submitted by SO to the Market Operator shall be used for purposes of surveillance, audit, and market settlements.	The RCC accepted the SO revision. Mr. Rosales explained that the SO's Dispatch Deviation Report already contains all the data required for purposes of market surveillance and settlement, as such report reflects the generator's RTD as against its actual dispatch, ancillary, MRU, actual dispatch during market intervention, among others. Mr. Rosales pertained to the operator logs as e-log in their current practice.
11.7.1	11.7.1 Trading Participants that are dispatched shall comply with the dispatch schedules and dispatch instructions issued to them. For this purpose, Trading Participants shall ensure that their facilities adhere to a linear ramp rate over the trading interval and operate within the prescribed dispatch tolerance as well as the standards prescribed by the System Operator and as set out in the Grid Code, Distribution Code and the WESM Rules.	11.7.1 Trading Participants that are dispatched shall comply with the dispatch schedules and dispatch instructions issued to them by the System Operator. For this purpose, Trading Participants shall ensure that their facilities adhere to a linear ramp rate over the trading interval and operate within the prescribed dispatch tolerance as well as the standards prescribed by the System Operator and as set out in the Grid Code, Distribution Code and the WESM Rules.	Noted by the RCC. The RCC agreed to perform a global change to capitalize System Operator.
11.7.5	11.7.5 If the failure by a registered facility to comply with a dispatch instruction endangers the reliability of the power system, the System Operator shall declare the registered facility to be non-conforming and shall take any action allowed by the Grid Code, the Distribution Code and the WESM Rules.	11.7.5 If a registered facility fails to comply with a dispatch instruction endangers the reliability of the power system, the System Operator shall declare the registered facility to be non-conforming and shall be tagged as Must Stop unit (MSU). The SO shall take any action allowed by the Grid Code, the Distribution Code and the WESM Rules to control the situation.	The RCC accepted the SO's recommendation, with the following revisions: 11.7.5 If a registered facility fails to comply with a dispatch instruction endangers the reliability of the power system, the System Operator shall declare the registered facility to be non-conforming and shall be tagged as Must Stop unit (MSU). The SO shall take any action allowed by the Grid Code, the Distribution Code and the WESM Rules to control the situation.
12.2.2	12.2.2 Consistent with its obligations pertaining to real-time dispatch scheduling and	12.2.2 XXX a) Continuous and timely submission and updating	

	implementation, the System Operator shall ensure – a) Continuous and timely submission and updating of the outage schedules, security limits of generating units, system snapshots, and other relevant data provided to the Market Operator; b) XXX; c) XXX; and d) XXX.	of the outage schedules, <u>overriding constraint limits</u> security limits of generating units, system snapshots, and other relevant data provided to the Market Operator; XXX	
12.3.3	12.3.3 The dispatch scheduling of the generating unit that will start-up or shutdown can be managed in either of the following manner – a) XXX; or b) Through imposition of security limits by the System Operator for the trading interval in which the unit is to start-up or shutdown in accordance with the following paragraphs.	12.3.3 XXX a) XXX b) Through imposition of <u>securityoverriding constraint</u> limits by the System Operator for the trading interval in which the unit is to start-up or shutdown in accordance with the following paragraphs.	Noted by the RCC
12.3.4	12.3.4 If the Trading Participant is unable to manage the start-up and shutdown of it generating units through its offers and prefers that the same is managed through imposition of security limits, the following will apply, - a. The start-up or shutdown can be managed through the imposition of security limits on the said generating unit by the System Operator. The security limits shall override the operating limits registered for that generating unit, and shall be set in accordance with the submitted shutdown/ start-up profile. b. XXX	12.3.4 If the Trading Participant is unable to manage the start-up and shutdown of it generating units through its offers and prefers that the same is managed through imposition of <u>securityoverriding constraint</u> limits, the following shall apply, - a. The start-up or shutdown can be managed through the imposition of overriding constraint <u>security</u> limits on the said generating unit by the System Operator. The security limits shall override the operating limits registered for that generating unit, and shall be set <u>by the System Operator</u> in accordance with the submitted shutdown/ start-up profile. b. XXX	Noted by the RCC
12.3.6	12.3.6 If the System Operator defers or changes the schedule of start-up or shutdown to another date or time, it shall notify the Trading Participant and the Market Operator of the deferment or change of schedule. It shall also, as appropriate, update the outage schedule and the security limit settings, within the time required in the WESM timetable. The Trading Participant, meanwhile, shall update its offers, if shutdown is deferred, or cancel offers already made, if start-up is deferred, within the timetable.	12.3.6 If the System Operator defers or changes the schedule of start-up or shutdown to another date or time, it shall notify the Trading Participant and the Market Operator of the deferment or change of schedule. It shall also, as appropriate, update the outage schedule and the <u>securityoverriding constraint</u> limit settings, within the time required in the WESM timetable. The Trading Participant, meanwhile, shall update its offers, if shutdown is deferred, or cancel offers already	

		made, if start-up is deferred, within the timetable.	
12.4.2	12.4.2 The System Operator shall update the outage schedule submitted to the Market Operator to remove the generating unit cleared to start-up from the outage list. Submission shall be in accordance with the WESM timetable. If the start-up will be deferred, the System Operator shall update the outage schedule accordingly and within the WESM timetable for submission of outage schedules.	12.4.2 The System Operator shall update the outage schedule submitted to the Market Operator to remove the generating unit cleared to start-up from the outage list. Submission shall be in accordance with the WESM timetable. If the start-up will be deferred, the System Operator shall update the outage schedule accordingly and within the WESM timetable for submission of outage schedules.	The SO recommended for the deletion of the provision. This will be addressed through hierarchy between outage schedule, offers and breaker status, and which hierarchy shall be included in the Dispatch Protocol Manual.
12.4.3	12.4.3 If the Trading Participant chooses to submit offers such that it can ramp up greater than or equal to its Pmin, it shall submit valid energy offers starting from the trading intervals as well as for subsequent intervals as provided for in the previous paragraph 12.3.5. Offers shall be submitted consistent with the WESM timetable.	12.4.3 If the Trading Participant chooses to submit offers such that it can ramp up greater than or equal to its Pmin, it shall submit valid energy offers starting from the trading intervals as well as for subsequent intervals as provided for in the previous paragraph 12.3.5. Offers shall be submitted consistent with the WESM timetable.	Retain PEMC Provision under the proposed Dispatch Protocol Manual Issue 12. Relatedly, Mr. Olmedo informed the RCC that once the Proposed Amendment to the DP Manual is approved, which proposal already incorporates the procedure for start-up and shut-down, PEMC will propose to abolish said manual for start up and shutdown.
12.4.4	12.4.4 If the Trading Participant selected the imposition of security limits and have duly notified the System Operator of the same in its request for clearance, the System Operator shall impose and submit the appropriate security limit settings, in accordance with the WESM timetable as shown in the Figure 5.	12.4.4 If the Trading Participant selected the imposition of security limits and have duly notified the System Operator of the same in its request for clearance, the System Operator shall impose and submit the appropriate security limit settings, in accordance with the WESM timetable as shown in the Figure 5.	Retain PEMC Provision under the proposed Dispatch Protocol Manual Issue 12, but replace security limits with overriding constraints limits.
12.5.3	12.5.3 If the Trading Participant elected the imposition of security limits and has duly notified the System Operator of the same in its request for clearance, the System Operator shall submit the appropriate security limit settings within the WESM timetable as shown in the Figure 2.	12.5.3 If the Trading Participant elected the imposition of security limits and has duly notified the System Operator of the same in its request for clearance, the System Operator shall submit the appropriate security limit settings within the WESM timetable as shown in the Figure 2.	Retain PEMC Provision under the proposed Dispatch Protocol Manual Issue 12, but replace security limits with overriding constraints limits.
13.4.1	13.4.1 Daily Operations Report. The System Operator shall prepare a daily report containing the summary of its hourly operations during each trading day. The System Operator shall submit to the Market Operator the Daily Operations Report not later than 0800H of the following trading day. The report shall include the following information – a) Total System Generation b) Total System Load	13.4.1 Daily Operations Report. The System Operator shall prepare a daily report containing the summary of its hourly operations during each trading day. The System Operator shall submit to the Market Operator the Daily Operations Report not later than 0800H of the following trading day. The report shall include the following information – a) Total System Generation b) Total System Load	The RCC accepted SO's proposal

	c) Total System Reserve d) Actual Unit Generation e) Actual Customer Load f) Actual Transmission Line and Substation Loadings g) Transmission Line and Generator Outages h) Security Constraints i) Dispatch Violations and Non-Compliance j) Contingency and Emergency Actions	c) Total System Reserve d) Actual Unit Generation e) Actual Customer Load f) Actual Transmission Line and Substation Loadings g) Transmission Line and Generator Outages h) Security Constraints i) Dispatch Violations and Non-Compliance j) Contingency and Emergency Actions	
13.4.2	13.4.2 Dispatch discrepancy monitoring report. For each trading day, the System Operator shall prepare a report presenting on an hourly basis all instances in which the following occurred - a) Situations in which it became necessary for dispatch instructions to deviate from the real-time dispatch (RTD) schedule and the merit order table (MOT) determined by the Market Operator during the trading interval; b) Load shedding or other directions issued by the System Operator during the trading interval; c) Significant incidents in which contingency reserve was called upon during the trading interval; d) Network constraints which affected dispatch during the trading interval; e) Binding security constraints which affected dispatch during the trading interval; f) Operational irregularities arising during the trading interval including but not limited to any circumstances in which there was prima facie evidence of a failure to follow dispatch instructions. This shall include the results of the monitoring by the System Operator pursuant to Section 11 of this Dispatch Protocol.	13.4.2 Dispatch discrepancy <u>Deviation</u> report. For each trading day, the System Operator shall prepare a report presenting on an hourly basis all instances in which <u>deviations from the dispatch schedule per category</u> occurred.- a. Situations in which it became necessary for dispatch instructions to deviate from the real-time dispatch (RTD) schedule and the merit order table (MOT) determined by the Market Operator during the trading interval; b) Load shedding or other directions issued by the System Operator during the trading interval; c) Significant incidents in which contingency reserve was called upon during the trading interval; d) Network constraints which affected dispatch during the trading interval; e) Binding security constraints which affected dispatch during the trading interval; f) Operational irregularities arising during the trading interval including but not limited to any circumstances in which there was prima facie evidence of a failure to follow dispatch instructions.	The RCC accepted the SO's recommendation, with revision, for the MO to include the dispatch schedule per category, and for the inclusion of a list deviations from the dispatch schedule, per category. FOR FURTHER REVISION.
13.4.3	13.4.3 Significant Incident Report. The System Operator shall prepare a significant incident report, after they occur, that shall be submitted to the Market Operator the following trading day and shall include, but not limited to the following - a. Imposition of security limits	13.4.3 Significant IncidentMarket InterventionReport. The System Operator shall prepare a significant incidentmarket intervention report, after they occur, that shall be submitted to the Market Operator the following trading day and shall include, but not limited to the following -	The RCC accepted SO's recommendation.

	b. Significant incidents, particularly those that were during cases of emergencies, or those that were identified as a threat to system security c. Events that led to the declaration of a Market Intervention	a. Imposition of overriding constraint security limits b. Significant incidents, particularly those that were during cases of emergencies, or those that were identified as a threat to system security c. Events that led to the declaration of a Market Intervention The actual dispatch loading of each generating units affected by the market intervention	
14.1.3	14.1.3 The reserve effectiveness factor (REF) is defined in the WESM Rules as a factor to define the effectiveness of reserve from a particular type of reserve provider in meeting requirements for particular reserve categories. WESM Rules clause 3.3.7.4 requires the System Operator to continuously adjust the reserve effectiveness factors for each reserve facility category.	Comment: In the upcoming implementation of Reserve Market, PEMC Consultant recommended not to consider the REF initially. If ever same is implemented, it shall be given a one (1) value for all reserve provider.	The RCC noted SO's comment. The RCC agreed to all provisions pertaining to REF, pending the ERC's decision on the matter.
14.5.1	14.5.1 Reserve Levels. The reserve requirements based on the reserve levels determined by the System Operator shall be used by the Market Operator in the preparation of the Reserve Dispatch Scheduling. The second-latest DAP results shall be used as reference by the Market Operator for the determination of the hourly reserve requirements of Contingency Reserve and Dispatchable Reserve, while the 1200H DAP of the previous day shall be used for the hourly reserve requirements of Regulating Reserve.	14.5.1 Reserve Levels. The reserve requirements based on the reserve levels determined by the System Operator shall be used by the Market Operator in the preparation of the Reserve Dispatch Scheduling. The second-latest DAP results shall be used as reference by the Market Operator for the determination of the hourly reserve requirements of Contingency Reserve and Dispatchable Reserve, while the 1200H DAP of the previous day shall be used for the hourly reserve requirements of Regulating Reserve.	The RCC accepted the SO's revision.
14.6.1	14.6.1 Gathering of Reserve Provider Data. The System Operator shall gather the following data that it will use in determining the REF of each reserve provider – a) Energy schedule b) Reserve schedule c) SCADA-EMS real time data (i.e., MW readings) d) Circuit breaker status e) AGC AGC command/status f) System frequency g) Dispatch instructions issued	14.6.1 Gathering of Reserve Provider Data. The System Operator shall gather the following data that it will use in determining the REF of each reserve provider – a) Energy schedule b) Reserve schedule c) SCADA-EMS real time data (i.e., MW readings) d) Circuit breaker status e) AGC AGC command/status f) System frequency g) Dispatch instructions issued	Noted by the RCC. As agreed in previous discussions, all provisions pertaining to REFs in the MO's Proposed Dispatch Protocol Manual Issue 12 shall be retained pending the ERC's decision on REFs.

	15.1.1; 15.1.2; 15.1.3; 15.2.1; 15.2.2; 15.3.1; 15.3.2; 15.3.3; 15.4.1; 15.4.2; 15.4.3; 15.4.4; 15.5.1; 15.5.2; 15.5.3	<u>To harmonize this procedure on Market Intervention or Suspension with the SO's proposed amendment to WESM Rules on Chapter 6 Intervention and Suspension</u>	Noted by the RCC. The RCC shall also await the TC's submission of its relevant proposal on intervention and suspension. Mr. Cacho raised that one of the issues on suspension is in giving feedback to the ERC as to when the ERC shall declare and lift suspension, as was experienced during the suspension in Visayas in 2014.
15.6	15.6	<u>To align this section with the SO's proposed amendment to WESM Manual on Emergency Procedures Issue 2</u>	Noted by the RCC.
15.12	15.12 To complement the procedures set out in this Dispatch Protocol, the System Operator and the Market Operator shall formulate and maintain the following procedures – a) System Operator – • System Emergency and Restoration Procedures • EMS Disaster Recovery Procedures b) Market Operator – • MMS Disaster Recovery Procedures • Business Continuity Plan	<u>To align this section with the SO's proposed amendment to WESM Manual on Emergency Procedures Issue 2</u>	Noted by the RCC.
15.13	15.13.1 The procedures to be carried out during emergency condition are intended to mitigate the effects of emergencies or force majeure events, facilitate restoration to normal operation and account for all actions and decisions taken during emergencies.	<u>(11.2.2.d) To align this section with the SO's proposed amendment to WESM Manual on Emergency Procedures Issue 2</u>	Noted by the RCC.

The RCC noted the discussions and agreements. The Secretariat reminded the RCC that the Proposed Amendment to the Dispatch Protocol Manual shall be deliberated upon again, including comments that will be submitted by other parties, if any, once the commenting period ends.

At this point, Atty. de Castro thanked Mr. Rosales for discussing the NGCP's comments, and Mr. Olmedo for giving his inputs.

3. New Business

PEMC's Proposed Amendment to the MRU-MSU Manual on the Responsibility of Declaring MRUs/MSUs

Mr. Olmedo presented PEMC's Proposed Amendment to the MRU-MSU Manual, which essentially recommends giving the responsibility to the Market Operator in identifying those Generators that were dispatched by the System Operator "out-of-merit" based on the system-wide MOT, with the validation by SO that said generators have been dispatched by the SO. (see attached presentation material on the "Proposed Revisions to the MRU/MSU Manual Issue 6.0). By having been identified as an MRU with reference to the WMOT, said plants will be paid based on GPI, with the option to still claim for additional compensation.

The proposal, as explained by Mr. Olmedo, emanated from the clamor of Visayas generators, including Cebu Private Power Corporation (CPPC), East Asia Utilities Corporation (EAUC), and Salcon Island Power Corporation (SIPC), regarding the compensation that they receive for being dispatched based on "MOT". Based on the claim of these generators, most of the time, they are being paid at much lower prices as compared with their fuel cost.

Following are the RCC's comments and discussions arising from the presentation made by Mr. Olmedo.

- Ms. Loreto Rivera reiterated a previous concern raised by Mr. Sunico that some generators that were asked by the SO to run out-of-merit are sometimes not included in the SO's list. Thus, she asked the MO on how to address such concern if the MO is saying that it will validate whether or not a generator was called to run out-of-merit using the list from SO. Mr. Olmedo responded that this concern will be addressed by the provision in the MRU-MSU Manual under section 9.2 (Verification of MRU Data) that the Generators may controvert the SO's Dispatch Deviation Report within 2 weeks from the time it was published by the SO, otherwise, if no issues are raised, the report relative to the Generator shall be deemed as final. The Secretariat cited that this amendment was approved by the PEM Board and was endorsed to the DOE, for the latter's approval.
- In relation to MO's proposed section 5.6: "The System Operator shall be responsible for monitoring and submitting the necessary information ~~in the Dispatch Discrepancy Report~~ to the Market Operator for purposes of the settlement amount of MRUs and Displaced Generators. XXX," Mr. Bugaoisan commented that the MO should specify/clarify what type of information will be required from the SO, as it seems from the proposal that the MO will require another report other than those regularly submitted by the SO. Mr. Bugaoisan stated that in so far as the SO Dispatch Deviation report is concerned, it already contains all the necessary information on MRUs.
- On the clarification requested by Mr. Ferdinand Binondo, Mr. Olmedo explained that once the SO requires a Generator to run or to constrain-on, the Generator has no information yet whether or not such call falls under MRU. Mr. Olmedo stated that although the System Operator redispatches generators in merit based on the regional MOT, it is possible that these generators are out of merit using the WESM MOT.
- Mr. Bugaoisan remarked that the MRU can be easily identified if the call is within the MOT per grid (Luzon and Visayas). Thus, Mr. Bugaoisan suggested defining the regional MOT as this is what the MO provides to the SO.

- In relation to the foregoing, Mr. Olmedo stated that the regional MOT is defined in the Proposed Dispatch Protocol Manual Issue12. Mr. Bugaoisan opined that if the regional MOT is being referred to in the MRU-MSU Manual, then it would be necessary to also define it in that Manual.
- For his part, Mr. Rosales recognized that some plants indeed are not properly compensated as claimed by the Visayas Generators. However, he opined that MRU is not the appropriate solution in addressing the concerns regarding their compensation. Mr. Rosales expressed that it may not be appropriate to tag a Generator as MRU, and pay it as MRU, only for the reason that it became out of merit based on the WESM MOT as it may not qualify under the criteria for MRU. Moreover, Mr. Rosales stated that the SO's reference for its dispatch is the regional MOT and not the WESM MOT.
- Mr. Cacho stated that the issue basically is that the WESM adopts a single market principle and thus generates a single MOT (or the WESM MOT), while security and reliability is a regional concern. The intent of the Market Operator in relation to its proposal on MRU-MSU Manual is being able to respond to the concern of the Generators who are apparently not properly compensated.
- Mr. Binondo remarked that since the market adopts a uniform pricing, then it is assumed that the Generators accept the risk of not being scheduled for dispatch. Mr. Cacho expressed that Generators may not be scheduled but may be constrained-off by SO. The compensation would depend on whether or not it was called out-of merit.
- Ms. Rivera commented that Generators that were not scheduled to run but were forced to run should be compensated at a level that it is willing to run, effectively, based on its offer price. She expressed that it would not matter whether that generator would be called an MRU or something else, for as long as it gets proper compensation.
- Atty. de Castro expressed that additional compensation is only fair but perhaps, it should be included in some other manual but not the MRU. Mr. Olmedo responded to the suggestions of inserting the compensation mechanism either in the Dispatch Protocol Manual or the Billing and Settlement Manual. Mr. Olmedo stated that the Dispatch Protocol Manual does not tackle compensation, while the Billing and Settlement Manual primarily involves timelines. As an alternative, Mr. Olmedo suggested for the RCC's consideration of coming up with a Re-dispatch manual, which shall already cover MRU and all other types of redispatches.

In consideration of the discussions and noting the disagreement of the body to include the additional compensation for the redispatch discussed by the MO in the MRU Manual, the RCC disapproved the posting of the proposal for comments, for the following reasons:

- It is possible that those plants redispatched and not in merit were indeed redispatched but not necessarily to address security concerns as required to be considered as "MRU";

- Possibility exists that the MO may tag a certain plant as MRU using the WESM MOT which SO, on the other hand, may not necessarily consider as MRU when referring to the regional MOT, a situation which may only confuse participants;
- SO redispatches generators based on MOT to address security concerns, and thus, from SO's perspective, these redispatched generators are in merit, but which may be out of merit when using the WESM MOT.

In view of the discussions, the RCC agreed as follows:

- There should be proper and just compensation for generating plants but the proposal to appropriately compensate redispatched generators based on regional MOTs should not be included in the MRU-MSU Manual but in an appropriate manual, whatever that manual may be.
- Instead of posting the MO's proposal, for comments of participants, the RCC recommended formulating an alternative proposal through a new manual to address the issues identified. Since the Generators are the ones directly affected by the issue on compensation, Mr. Olmedo suggested the proposal come from the Generators, but nonetheless committed to help out the Generators in formulating such proposal.

As a way forward, the RCC requested for the Generators, in coordination with PEMC, to formulate the appropriate payment mechanism and reflect it in the appropriate market manual. Mr. Sunico expressed that he will have to discuss the matter with his sector. Atty. de Castro requested that the matter be included in the next meeting's agenda for further discussion and that in the meantime, the Generators shall set a meeting with PEMC within the month to discuss the matter.

The agreements were duly noted by the parties.

4. Other Matters

4.1. DOE's Letter to PEMC regarding WESM Rules Write shop and Review

The Secretariat informed the RCC that it received a letter addressed to the PEMC President, copied the RCC Chairperson, requesting PEMC's comments on the DOE's comments and recommendations relative to the WESM Rules Write shop specifically the portion on substantive rules changes. The Committee was further informed that the said changes are expected to be submitted by PEMC to the RCC in time for its discussion in January 2016.

Mr. Binondo also informed the RCC that, in addition to the minor (clerical and typographical) corrections, it has previously asked the RCC to confirm, the DOE will submit to the RCC further minor corrections to the WESM Rules. He added that said additional corrections will be emailed to the Secretariat for transmittal to the RCC members for its confirmation, possibly by email too.

4.2. Updates on the following Proposed Amendments

The Secretariat informed the RCC that as a backgrounder, these two proposals were included in the RCC's agenda, as these were among the RCC matters which PIPPA requested for updates from PEMC.

- **Battery Energy Storage System**

The RCC previously wrote to the ERC / GMC requesting assistance in identifying the proper classification for the battery energy storage system to aid the RCC in deciding on the proposal that emanated from AES.

In response to the RCC's request, the GMC expressed in its letter to the RCC that it will consider the battery energy storage in the amendment to the PGC. On the basis of that letter from the GMC, the RCC agreed to put on hold its decision on the proposal pending the ERC's approval and issuance of the amended PGC.

Subsequently, the ERC, on 18 May 2015 approved the ERC Resolution No. 09, series of 2015, "A Resolution Adopting the Grid Management Committee's Recommendation Classifying the Battery Energy Storage System as a New Source of Frequency Control Ancillary Services and the Exemption Thereof from the Conduct of System Impact Study."

Ms. Rodriguez explained that the ERC Resolution did not specify that the battery energy storage is purely ancillary, which would have otherwise addressed the concern raised by AES with the RCC through its proposal.

The Secretariat explained that the matter is being put forward to the RCC, given the ERC's Issuance of the relevant resolution on battery energy storage system, to inquire on the RCC's way forward on the proposal from AES. As an option, the RCC may decide to include the discussion of battery energy storage system in the Sub-Committee discussion on the proposal of Petron regarding cogeneration facilities, since these are new technologies being proposed for inclusion / consideration in the WESM Rules. Moreover, the Secretariat expressed that the concern of the AES and Petron primarily revolves around their ability to comply with the Must-Offer Rule given the nature of their operations.

Before responding to the Secretariat's concern above, the RCC proceeded with the updates on the proposal on cogeneration facilities (see below) to determine how the two proposals can be merged in the discussion of the Sub-committee.

- **Cogeneration Facilities**

The Secretariat informed the RCC that the Sub-committee was unable to discuss the matter given the difficulty of getting the availability of the members of the Sub-Committee.

The Secretariat further informed the RCC that inputs were already received from Petron just on that day, which inputs considered the discussions of the RCC of the comments provided by the DOE and PEMC in the previous RCC meeting.

Following the Secretariat's suggestion, the RCC agreed to include the battery energy storage systems in the discussions of the RCC Sub-Committee on cogeneration, and invite

representatives from both Petron and AES in those discussions. The Sub-Committee meeting was initially set on November 16 or 17.

The members of the RCC Sub-Committee meeting were identified, as follows: Mr. Castro (Chair), Mr. Cacho, Mr. Raymundo, Ms. Tanglao, and Mr. Meneses. Participation from the DOE, thru its observer, Mr. Binondo, was encouraged to provide the Sub-Committee with some direction from the department.

The instructions were duly noted by the parties.

4.3. Updates on the Result of Metering Audit

The Secretariat informed the RCC that updates are being provided following receipt of an email from MERALCO inquiring on the status of the Proposed Amendment to the Retail Metering Manual, which MERALCO submitted in 2014.

The Secretariat explained that said proposal, together with the combined PEMC and TC Proposal for amendment to the WESM Rules and WESM Metering Manual, were deferred by the RCC, based on its agreement to await the result of the Metering Audit.

It can be recalled that the proposed amendment to the WESM Rules and WESM metering Manual were already endorsed to the PEM Board in the latter part of 2014. However, during the presentation to the PEM Board, the issue on back-up meters was raised by one of the PEM Board Directors, for which reason the proposal was remanded to the RCC.

When the proposal was discussed at the RCC, given the information regarding the ongoing metering audit at that time, the RCC decided to put on hold its decision in all proposals pertaining to metering.

As an update, the Secretariat informed the RCC that the Metering Audit has yet to be completed and that the Metering Review Report has yet to be submitted by the External Auditor.

The RCC noted the updates provided by the Secretariat. The RCC likewise noted that the Proposed Amendment to the WESM Rules and Wholesale Metering Manual, as well as on the Retail Metering Manual, to date, remain pending for resolution as these proposals are hinged on the recommendations that will be issued by the auditor relative to the metering audit.

4.4. Protocol in providing updates to the Sector Members regarding RCC matters

The Secretariat informed the RCC that recently, PIPPA requested for updates from the Office of the PEMC President regarding certain rules change proposals. In this regard, clarification was made whether sector representatives are able to report to their sector developments in the RCC. RCC sector representatives informed the Committee that they are able to relay RCC matters to their sectors, except probably for instances when they were probably not around during certain meetings. The sectors however raised that one other limitation they face is

informing members of the sector that are not members of their sector organization (e.g. PIPPA, RESA, and PHILRECA).

As a way forward, it was agreed that an advisory be issued advising WESM Participants to address their issues to respective WESM Governance Committees or through their respective sector representatives for RCC matters.

4.5. Review of the 2015 RCC Work Plan

With the earlier agreement to include the matter in the agenda, the RCC briefly discussed the status of proposed amendments in the RCC's Work Plan, in preparation for the forthcoming RCC Planning and Work Plan formulation for 2016, which Atty. de Castro suggested to be conducted on December 2, immediately after the morning session / 107th Regular RCC meeting. Atty. de Castro likewise solicited the inputs from the sectors for the formulation of the 2016 RCC Work Plan, to be submitted to the Secretariat for consolidation, prior to the meeting/planning date.

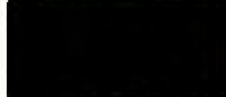
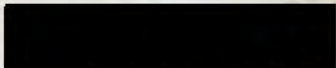
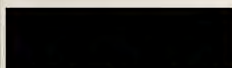
The updates and instructions were duly noted by the parties.

5. Next Meeting

The RCC was reminded of the schedule of the next RCC meeting (107th Regular Meeting) on December 2, at 9:00AM, to be followed by the RCC Planning Activity at 1:00PM, and the WESM Governance Christmas party at 4:00PM.

6. Adjournment

There being no other matter to be discussed, the meeting was adjourned at 1:50 PM.

Prepared By:	Reviewed By:	Noted By:
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Approved by:
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 Team (Philippines) Energy Corporation
 (TPEC)

Certified True and Correct:

Elaine D. Gonzales
 RCC Secretary
 PEMC

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MO-SO Joint Study on Dispatch Tolerance Standards

04 November 2015

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Summary of Discussions

- ❑ Last March 2015, SNAP presented their proposal to the RCC addressing the difficulty of power plants to comply with the current dispatch tolerance of $\pm 3\%$
- ❑ Their proposal focused on NRE generating units where the dispatch tolerance is proposed to be set at:
 - ✦ Minimum of the $\pm 10\%$ of the interconnection facilities, and the $\pm 0.1\%$ of the peak demand
- ❑ Last July 2015, PEMC provided a summary of the historical performance of different types of generating units.
- ❑ Last September 2015, PEMC presented their proposal of maintaining the $\pm 3\%$ dispatch tolerance for *large generators* (based on PGC), and 1 MW for *small generators* based on different generators' of historical performance

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Summary of Discussions

- ❑ Last October 2015, NGCP presented their proposal to further revise the +/-3% to +0% and -3%
 - ❖ This meant that no generator should have an over-dispatch
- ❑ PEMC agrees to lower the over-dispatch tolerance, but not drastically to 0%. A +1.5% may be achievable
- ❑ Also, PEMC proposes the following dispatch tolerance standard
 - ❖ Over-Dispatch Tolerance
max [1.5% RTD, 1] MW
 - ❖ Under-Dispatch Tolerance
max [3% RTD, 1] MW

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Summary of Discussions

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 - ❖ This meant that no generator should have an over-dispatch
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max [1.5% RTD, 1] MW
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max [3% RTD, 1] MW

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Overview on the AEMO Dispatch Conformance Standards



Overview on the AEMO Dispatch Conformance Standards



Dispatch Conformance Standards for Energy

- ❑ Dispatch Instructions are issued to Generators via
 - ❖ Automatic Generation Control for Scheduled Generators operating as energy or reserve
 - ❖ AEMO's interface for Semi-scheduled Generators
- ❑ Semi-scheduled generating units are generally those that are (1) Greater than 30 MW and (2) Intermittent generation (wind and solar farms)
 - ❖ Selected semi-scheduled generating units are subject to the same conformance obligations as a scheduled generating unit
 - ❖ If not selected, then the semi-scheduled generating unit is free to generate at any level.



Compliance Monitoring for Energy

- ❑ Two trigger mechanisms are utilised to identify the severity of Non-Compliance
 - ❖ Small Error Trigger
 - ❖ Large Error Trigger
- ❑ Corrective measures are then taken depending on the severity and duration of the Non-Compliance event
- ❑ The corrective measures are a logical defined sequence of actions aimed at resolving the mismatch between actual and total dispatched generation



Non-Compliance Calculations and Process

- ❑ Small Error Trigger
 - ✦ Trigger level (MW) = MAX (6, MIN [3% Offer, 2 x Ramp])
- ❑ Large Error Trigger
 - ✦ Trigger level (MW) = MAX (6, MIN [5% Offer, 4 x Ramp])
- ❑ After every DI run, the difference between the RTD of the previous Dispatch Interval (DI) and the MW of the current DI with the error trigger thresholds
- ❑ In addition to RTD, a compensation for FCAS is included to allow for regulating plant movement
- ❑ The Small and Large Error Triggers each have an associated counter. The counters each increment on detection of error and are used to progress Non-Compliance action.


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Non-Compliance Calculations and Process

- ❑ The counters are incremented for any of the following conditions
 - ✦ For error detection above RTD
 - If $MW - (RTD + FCR) > \text{Small Trigger Threshold}$ Then $SET = SET + 1$
 - If $MW - (RTD + FCR) > \text{Large Trigger Threshold}$ Then $LET = LET + 1$
 - ✦ For error detection below RTD
 - If $(RTD - FCL) - MW > \text{Small Trigger Threshold}$ Then $SET = SET + 1$
 - If $(RTD - FCL) - MW > \text{Large Trigger Threshold}$ Then $LET = LET + 1$
- ❑ The Small Error Trigger is measured over 6 consecutive dispatch intervals and the Large Error Trigger is measured over 3 consecutive dispatch intervals
- ❑ These error counter values will progress the Non-Compliance action. The error counters reset to 'zero' if no error is apparent or reset to 'one' if the direction of error reverses.


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Example – Large Error Trigger

- ❑ Generating unit A has an offer of 200 MW and a ramp rate of 2 MW/min
- ❑ The large error trigger is determined as follows:
 - ❖ Trigger level (MW) = $\text{MAX} (6, \text{MIN} [0.05 \times 200, 4 \times 2])$
 - ❖ Trigger level (MW) = $\text{MAX} (6, \text{MIN} [10, 8])$
 - ❖ Trigger level (MW) = 8 MW
- ❑ If the generation or load of the plant differs from its dispatch target by more than 8 MW the Compliance Status will be "Off Target"
- ❑ If it occurs for 3 consecutive dispatch intervals the Compliance Status will be "Non Responding"
- ❑ If this occurs for five consecutive dispatch intervals the Compliance Status will be NC Pending
- ❑ The result for the following DI will be Non-Conforming



End of Presentation





Proposed Revisions to the MRU/MSU Manual Issue 6.0

04 November 2015

Background

- ☐ Several generating units, such as CPPC, EAUC, TMO, and SIPC raised issues on the compensation of generating units that were dispatched based on "MOT"
- ☐ Based on their claims, they are being paid at a price much lower than their fuel cost most of the time

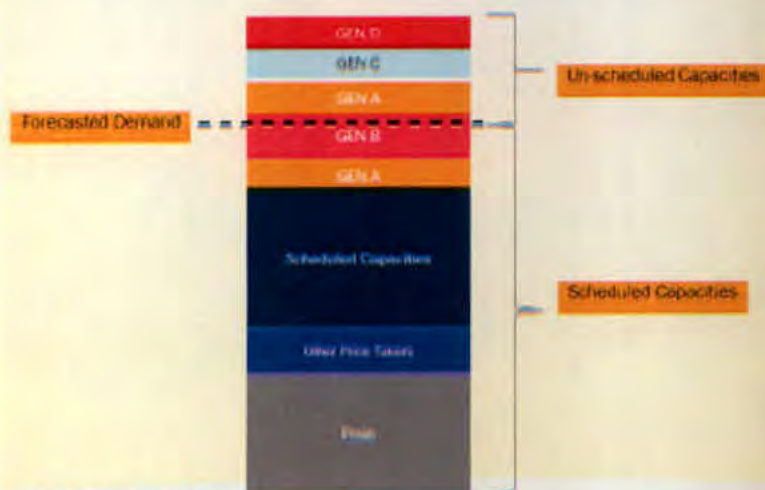


Background on MOT

- ❑ The Market Operator provides the System Operator with hourly Merit Order Tables (MOTs) for each trading interval in each grid (Luzon and Visayas)
- ❑ The MOT is used by the System Operator as basis for dispatching plants at real-time with the objective of:
 - a. Dispatch the least expensive un-scheduled capacity for upward dispatch
 - b. Constrain-off the most expensive scheduled capacity for downward dispatch
- ❑ Generators that were dispatched based on MOT, particularly the constrained-on plants, will be paid based on ex-post price (imbalance)



Why pay based on the ex-post price?

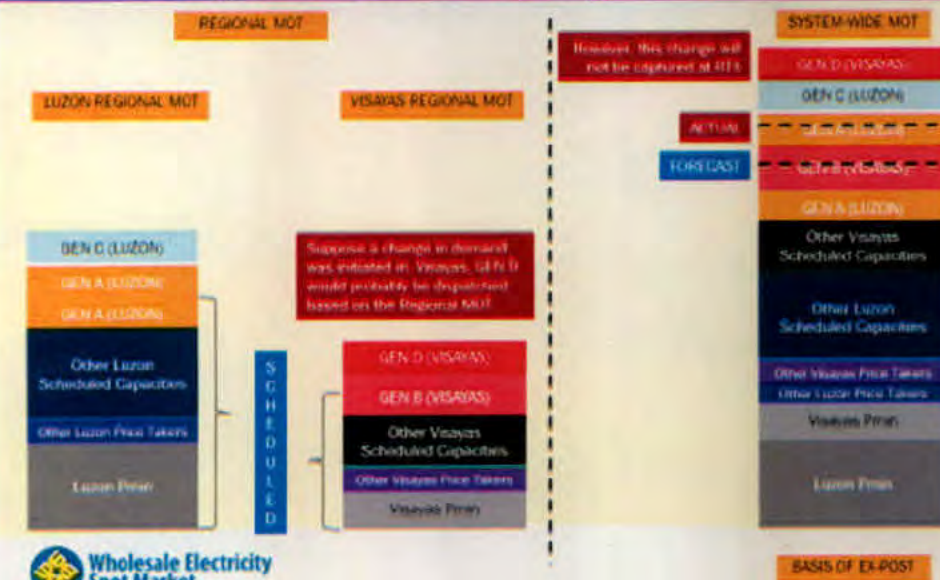


Why pay based on the ex-post price?



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Previous issues on Regional MOT with WESM's System-Wide Clearing



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How about those dispatched out of merit?

- ☐ Generating units that were dispatched "out-of-merit" are normally captured as must-run units based on the following criteria (effective 11 February 2015)
 - a. Thermal Limits of T/L and Power Equipment
 - b. System Voltage Requirements
 - c. Real Power Balance and Frequency Control
- ☐ As originally intended in the proposal leading to the MRU/MSU Manual Issue 5.0, generating units that were dispatched "out-of-merit" based on the WESM system-wide MOT shall fall under the criteria of "Real Power Balance and Frequency Control"

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Issues on Current Implementation of MRU/MSU

- ☐ During the MO-SO meetings, the System Operator says that MOTs should not be system-wide, rather should be per grid as originally practiced
- ☐ They noted that the system wide MOT shall be of no use to them and may provide confusion on its use
- ☐ During the RCC meetings, SO reiterated their concerns that there should be no such system-wide MOT since they are operating the grids on a regional basis (separate operations for Luzon and Visayas), in which the RCC agreed upon
- ☐ Hence, the same pricing issues will continue to be experienced in the WESM

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Proposed Revisions

- ☐ The Market Operator may instead, identify those generators that were dispatched by the System Operator "out-of-merit" based on the system-wide MOT



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End of Presentation



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