

MEETING MINUTES

Subject/Purpose : 187th Rules Change Committee (Regular) Meeting
Date & Time : 19 November 2021, 09:00 AM
Venue : Online via Microsoft Teams
Page : 1 of 187

ATTENDEES

	Name	Designation/Position	Department/ Company
1	Allan C. Nerves	Chairperson, Independent (AM/PM)	RCC
2	Concepcion I. Tanglao	Member, Independent (AM)	RCC
3	Jesusito G. Morallos	Member, Independent (AM/PM)	RCC
4	Dixie Anthony R. Banzon	Member, Generation Sector (AM/PM)	RCC
5	Cherry A. Javier	Member, Generation Sector (AM/PM)	RCC
6	Carlito C. Claudio	Member, Generation Sector (AM/PM)	RCC
7	Jessie Victorio	Member (Alternate), Generation Sector (AM/PM)	RCC
8	Mark Habana	Member, Generation Sector (AM)	RCC
9	Ryan S. Morales	Member, Distribution Sector (AM/PM)	RCC
10	Ricardo G. Gumalal	Member, Distribution Sector (AM/PM)	RCC
11	Nelson M. Dela Cruz	Member, Distribution Sector (AM/PM)	RCC
12	Virgilio Fortich, Jr.	Member, Distribution Sector (AM/PM)	RCC
13	Lorreto H. Rivera	Member, Supply Sector (AM/PM)	RCC
14	Ambrocio R. Rosales	Member, System Operator (AM/PM)	RCC
15	Henry V. Dela Cruz	Member, (Alternate) System Operator (AM/PM)	RCC
16	Isidro E. Cacho, Jr.	Member, Market Operator (AM/PM)	RCC
17	Elvin Hayes E. Nidea	Chief Governance Officer	PEMC
18	John Mark S. Catriz	Head, Market Assessment Group	PEMC
19	Karen A. Varquez	RCC Secretariat	PEMC
20	Divine Gayle C. Cruz	RCC Secretariat	PEMC
21	Dianne L. De Guzman	RCC Secretariat	PEMC
22	Kathleen R. Estigoy	RCC Secretariat	PEMC
23	Geraldine A. Rodriguez	Deputy Enforcement and Compliance Officer	PEMC
24	Romellen C. Salazar	Strategy and Innovation Senior Specialist	PEMC
25	Kevin John Y. Dela Cuesta	TC Secretariat	PEMC
26	Edward I. Olmedo	Proponent	IEMOP
27	Julius Eleazar A. Bunyi	Proponent	IEMOP
28	Karen Anne Siruma	Proponent	IEMOP
29	Jenny I. Jalandoni	Proponent	IEMOP
30	Luningning G. Baltazar	Observer	DOE
31	Jhannelyn D. Marasigan	Observer	DOE
32	Marvin Jay D. Masanda	Observer	DOE
33	Antonette M. Badillo	Observer	ERC
34	Cheyenne Francis B. Batnag	Commenter	AC Energy
35	Raycell D. Baldovino	Commenter	AC Energy



MEETING MINUTES

Subject/Purpose : 187th Rules Change Committee (Regular) Meeting
 Date & Time : 19 November 2021, 09:00 AM
 Venue : Online via Microsoft Teams
 Page : 2 of 187

ATTENDEES

	Name	Designation/Position	Department/ Company
36	Nemeley Jabla	Commenter	Aboitiz Power Corp.
37	Manuel Luis Zagala	Commenter	MERALCO
38	Antonio O. Mercado	Commenter	MEI/PEI
39	Leo E. Bugarin	Commenter	NGCP
40	Joselito C. Quilala	Commenter	NGCP
41	Julius Ryan D. Datingaling	Commenter	NGCP
42	Glenn T. Peña	Commenter	NGCP
43	Lisaflor B. Kater	Commenter	NGCP
44	Armando A. Pagayon	Commenter	NGCP
45	Glenn T. Peña	Commenter	NGCP
46	Homernico Mari B. Palma	Commenter	NGCP
47	Erwill Bugaoisan	Commenter	NGCP
48	Vida Toque	Commenter	SN Aboitiz Power
49	Justin Valencia	Commenter	SN Aboitiz Power
50	Alyssa Aranzaso	Commenter	SN Aboitiz Power
51	Richard O. Arcenal	Commenter	SPC/SPIC
52	Krizzia Alyanna G. Angeles	Commenter	SPC/SPIC
53	John Paulo P. Bolivar	Commenter	SPC/SPIC
54	Kier Aborquez	Commenter	SPC/SPIC

MEETING MINUTES

Subject/Purpose : 187th Rules Change Committee (Regular) Meeting
 Date & Time : 19 November 2021, 09:00 AM
 Venue : Online via Microsoft Teams
 Page : 3 of 187

Agenda	Agreements / Action Taken / Action Required
I. Call to Order	<ul style="list-style-type: none"> The meeting was conducted via Microsoft Teams and was called to order at 09:22 AM. The meeting was presided by Mr. Allan C. Nerves (Member/Independent).
II. Determination of Quorum	<ul style="list-style-type: none"> All principal members and 2 alternate members present during the morning session. 12 principal members and 2 alternate members were present during the afternoon session.
III. Adoption of Agenda	<ul style="list-style-type: none"> Per the letter to the RCC of the PEMC-Chief Governance Officer, Atty. Elvin Hayes Nidea, requesting to prioritize the Proposed General Amendments on WESM Rules and Various Market Manuals on Reserve Market Provisions and the recommendation of the Secretariat to finalize the draft RCC Resolution No. 2021-20, the body approved and adopted to change the agenda sequence and to defer the discussion of the following agenda to December 2021 RCC Regular Meeting: <ol style="list-style-type: none"> Draft RCC Reso No. 2021-21: <i>Proposed General Amendments to the WESM Rules and WESM Manual on Constraint Violation Coefficient and Pricing Re-run regarding Under-generation and Over-generation</i> Draft RCC Reso. No. 2021-22: <i>Proposed Amendments to the WESM Rules, WESM Manual and Retail Manual on Validation Timeline Adjustment in Metering and Billing</i> DOE-remanded proposal regarding Proposed Amendments to the WESM Manual on Guidelines Governing the Constitution of PEM Board Committees Improvements to Market Resource Modelling and Monitoring DOE Public Consultation Updates
IV. Approval of Minutes of Previous Regular Meeting <ul style="list-style-type: none"> 186th Regular Meeting, 15 October 2021 	<p><u>Presenter:</u> Ms. Kathleen R. Estigoy (Secretariat)</p> <p><u>Action Requested:</u> For approval</p> <p><u>Proceedings:</u></p> <p>Ms. Kathleen R. Estigoy (Secretariat) informed the RCC that the draft minutes was sent by the Secretariat to them on 16 November</p>

MEETING MINUTES

Subject/Purpose : 187th Rules Change Committee (Regular) Meeting
 Date & Time : 19 November 2021, 09:00 AM
 Venue : Online via Microsoft Teams
 Page : 4 of 187



Philippine Electricity
Market Corporation

Agenda	Agreements / Action Taken / Action Required
	<p>2021. The comments of Ms. Concepcion I. Tanglao (Independent) were already incorporated and the following portions of the minutes needing clarification was restated:</p> <ul style="list-style-type: none"> On page 2, item IV - xxx <i>It was noted that the PEM Audit Committee (PAC) is still working on the detailed guidelines engaging external auditors and IAD and thus the PAC presented a flowchart showing their decision-making when to engage the IAD or an external auditor. She then suggested including the said flowchart in the resolution to at least initially address the concerns of the PEM Board.</i> On the discussion regarding the proposal on audit in page 6, item 5.3 - <i>Dr. Allan Nerves (Independent) said that there is a need to define the IAD's functions and tasks considering IAD's capability is still to be developed/enhanced.</i> On page 8, item 5.4 - <i>Ms. Javier asked if it is alright to sign with reservations considering that there are proposals in the general amendments based on the comments submitted by Aboitiz Power.</i> On the discussion regarding registration in page 10, item 5.5 - <i>Dr. Nerves asked if the above-mentioned tests are sufficient for the generators to comply with the System Operator and Market Operator requirements considering that the System Operator may have other criteria not just the injection of power to the grid. Mr. Rosales answered that the complete requirements and criteria for testing are provided in the PGC.</i> On the discussion regarding the proposal on additional compensation in page 12, item 5.6 - <i>Mr. Ambrocio Rosales (SO) stated his understanding that if the claim will be deemed as approved, the MO may or may not act upon the claim. There is a possibility that the claims may be charged to customers without any validation conducted.</i> On page 12, item 5.6 - xxx <i>The justification will be evaluated based on the ERC-approved criteria/requirements.</i>

MEETING MINUTES

Subject/Purpose : 187th Rules Change Committee (Regular) Meeting
 Date & Time : 19 November 2021, 09:00 AM
 Venue : Online via Microsoft Teams
 Page : 5 of 187

Agenda	Agreements / Action Taken / Action Required
	<p><u>Resolution:</u> Having no further comments, Ms. Lorreto H. Rivera (Supply) moved for the approval of the minutes and was seconded by Mr. Ricardo G. Gumalal (Distribution). The minutes of meeting was approved and adopted by the body.</p>
V. Matters Arising from Previous Meeting	
<p>5.1. Draft RCC Resolution No. 2021-20: <i>Proposed Urgent Amendments to the WESM Rules, Retail Rules and Various Market Manuals on the Implementation of the Green Energy Option Program</i></p>	<p><u>Presenter:</u> Ms. Divine Gayle C. Cruz (Secretariat)</p> <p><u>Action Requested:</u> For review and approval to affix e-signature and submission to PEM Board</p> <p><u>Proceedings:</u></p> <p>Ms. Cruz presented the revised draft resolution to the RCC which was sent to the RCC on 18 November 2021 incorporating the additional inputs submitted through email. Highlights are as follows:</p> <ul style="list-style-type: none"> Mr. Jesusito G. Morillos asked regarding the RCC's protocol in signing resolutions if the member has a reservation on the proposal. He explained his reservation by stating that his concern is structural, organic and substantial in nature for the implementation of the Green Energy Option Program (GEOP). According to him, WESM is an independent and mature market, and it should be able to resolve dispute within its ranks. He reiterated that the proposal should contain its own dispute resolution framework than resolving it by going to the Energy Regulatory Commission (ERC) as venue to settle dispute. <p>Chairperson Nerves referred to the Secretariat to clarify the protocol regarding the signing the resolution with reservation/objection by the member. Ms. Kathleen R. Estigoy (Secretariat) answered that there were committee members who previously signed resolutions with reservation/objection, and it was adopted by the body.</p> <p>Chairperson Nerves said that the rest of the Committee members recognizes the suggestion and concern of Mr. Morillos for the GEOP proposal to have its own dispute resolution framework which is not under the ERC. But, as agreed during the 187th RCC Special Meeting, the RCC is</p>



MEETING MINUTES

Subject/Purpose : 187th Rules Change Committee (Regular) Meeting
 Date & Time : 19 November 2021, 09:00 AM
 Venue : Online via Microsoft Teams
 Page : 6 of 187



Agenda	Agreements / Action Taken / Action Required
	<p>constrained in following ERC Resolution No. 08 Series of 2021 and it was explicit in said resolution that any dispute in the GEOP will be tackled by the ERC. He also acknowledged that the dispute resolution can be a subject of future change and that Mr. Morillos is entitled to his own assessment of the proposal.</p> <ul style="list-style-type: none"> Per the RCC's agreement in the last meeting to align the provisions on GEOP with the ERC's GEOP Rules, the following new sections are proposed to be added by the Secretariat: <p><i>A. <u>On Retail Rules</u></i></p> <p>New Section 3.4.3.4 was added based on ERC GEOP Rules 26.2. Unlike in the Retail Competition Open Access (RCOA) where Supplier of Last Resort (SOLR) is notified, GEOP end-user shall only notify the Central Registration Body (CRB).</p> <p>New Sections 3.4.3.5 to 3.4.3.6 were added based on GEOP Rules 26.3 and 26.3(a). The counterpart of this procedure is Retail Rules 3.4.2, which has a specific timeline for the CRB to send notices.</p> <p>Mr. Virgilio C. Fortich, Jr. (Distribution) asked if the timelines were revised by the Secretariat. Ms. Cruz responded that as confirmed with the DOE representative last 186th RCC Meeting, the DOE DC will prevail for RCOA, while the GEOP will follow the ERC GEOP Rules.</p> <p><i><u>B. On Retail Manual on Green Energy Option Program Procedures</u></i></p> <p>[Customer Relocation] Section 3.6.1 was amended to adopt verbatim ERC GEOP Rules 19.1.</p> <p>[Termination of Supply] Section 3.8.1 was amended to adopt verbatim ERC GEOP Rules 22 to provide context for 3.8.7 and 3.6.8</p>

A handwritten signature in blue ink is located at the bottom left of the page.

MEETING MINUTES

Subject/Purpose : 187th Rules Change Committee (Regular) Meeting
 Date & Time : 19 November 2021, 09:00 AM
 Venue : Online via Microsoft Teams
 Page : 7 of 187



Agenda	Agreements / Action Taken / Action Required
	<p><u>Resolution:</u> Having no additional comments received on the draft resolution, Ms. Cherry A. Javier (Generation) moved for the approval of the resolution and endorsement of the proposal to the PEM Board, which was seconded by Mr. Gumalal (Distribution).</p>
VI. New Business	
<p>6.1. Proposed General Amendments to WESM Rules and Various Market Manuals on Reserve Market Provisions</p>	<p><u>Presenter/s:</u> IEMOP Representatives (Proponent) – Mr. Julius Elazar Bunyi Mr. Edward I. Olmedo</p> <p><u>Action Requested:</u> For discussion/approval for submission to PEM Board</p> <p><u>Presentation Material/s:</u> Annex – Draft Matrix for Proposed General Amendments to WESM Rules and Various Market Manuals on Reserve Market Provisions</p> <p><u>Proceedings:</u></p> <p>Chairperson Nerves acknowledged the presence of the Independent Electricity Market Operator of the Philippines (IEMOP) as the proponent, DOE Observers and commenters from the following organizations:</p> <ol style="list-style-type: none"> 1. Aboitiz Power Corporation (APC) 2. AC Energy 3. Manila Electric Company (MERALCO) 4. Millennium Energy Inc./Panasia Energy Inc. 5. National Grid Corporation of the Philippines (NGCP) 6. SN Aboitiz Powers 7. SPC Island Power Corporation 8. Technical Committee <p>Mr. Ambrocio R. Rosales requested that the proponent present again the summary of proposal which was discussed to the RCC on 17 September 2021 for the benefit of the guests present, which was allowed by Chairperson Nerves. After the presentation by Mr. Julius Eleazar Bunyi (IEMOP), below are the discussion highlights:</p>

A handwritten signature in blue ink is located at the bottom left of the page.

MEETING MINUTES

Subject/Purpose : 187th Rules Change Committee (Regular) Meeting
 Date & Time : 19 November 2021, 09:00 AM
 Venue : Online via Microsoft Teams
 Page : 8 of 187



Philippine Electricity
Market Corporation

Agenda	Agreements / Action Taken / Action Required
	<ul style="list-style-type: none"> In the co-optimization of energy and reserves, Mr. Rosales highlighted that reserves are only used for security and reliability of the grid, which should have a firm contract that is available anytime. The reserves should not be part of the energy market as it will defeat the purpose of firm contract. Thus, firm contracts should not be mixed in the co-optimization of energy. <p>Mr. Rosales also summarily discussed NGCP's comment on the single buyer provision stating that reserves can be bought in the spot market for non-firm contracts only or from those generators certified by the NGCP or third parties which have the choice to submit offer for either regulating or contingency energy. He also said that regulating and contingency energy should not be part of the co-optimization of energy as these are only used if the dispatchable energy are already exhausted. He emphasized that firm contracts for contingency should not be part of the co-optimization, or it should not be changed since there is a possibility that generators bounded by firm contracts may be penalized if they are unable to supply for their nomination in the energy market.</p> <p>Mr. Rosales further suggested the off-setting of reserves which are not scheduled day-ahead by the NGCP, same with the bilateral contracts being implemented in the energy. He suggested that generators without Ancillary Services Procurement Agreement (ASPA) but is certified to provide reserves may nominate their capacity to the market.</p> <p>In response, Mr. Olmedo explained the that the scheduling in the energy market does not prioritize bilateral contracts. The portion of energy that is not covered by contracts is considered being purchased from the spot market based on the gross pool market concept. Despite the existence of the bilateral contract, generators ensure that they can still be able to provide for their customers. If their counterparty was not scheduled, the customers retain the safety net of being supplied with their energy purchases from the spot market.</p>

MEETING MINUTES

Subject/Purpose : 187th Rules Change Committee (Regular) Meeting
 Date & Time : 19 November 2021, 09:00 AM
 Venue : Online via Microsoft Teams
 Page : 9 of 187



Agenda	Agreements / Action Taken / Action Required
	<p>Mr. Olmedo further clarified that in the co-optimization, the objective is to meet all the requirements. If there are energy and reserves requirements, these requirements must be met by the generators through their offers of all products. The possible instance where contingency reserves can be used in the energy market is upon the occurrence of violation of constraint as defined in the Constraint Violation Coefficient Manual for hierarchy of constraints. If the generator was chosen to provide reserve energy, it does not mean that the contingency energy has already been depleted, but other generators should provide for the contingency reserve. He also said that one of the requirements for registering a generator in the reserve market is their capacity to provide different types of reserves.</p> <ul style="list-style-type: none"> Mr. Ryan S. Morales said that based on the discussion above, the Ancillary Service (AS) is likewise part of the gross pool market, hence, he inquired how double charging is avoided in the AS recovery. In response, Mr. Olmedo explained that the market will implement gross pool scheduling as part of the co-optimization process. During settlement, NGCP must declare the contracted scheduled and the bilateral contract quantities will be net out from the spot market transactions. What will be paid in the market is the reserve trading amount. The MO will collect from the NGCP, as a single buyer, the reserve trading amount, with the bills containing the reserve trading amounts. NGCP will handle the recovery for the AS cost covered by its ASPAs. <p>In addition, Mr. Morales asked if there will be a scenario that the net AS settlement will be negative in case the BCQ nominated by NGCP exceeds the requirement. Mr. Olmedo answered that the scenario is possible if there is an excess in the contracted capacity as against the scheduled capacity. For instance, if the generator was contracted for 60 MW and it was scheduled for 70 MW, the 10 MW will be paid in the spot market while the 60 MW will be paid by the NGCP.</p>

A handwritten signature in blue ink is located at the bottom left of the page.

MEETING MINUTES

Subject/Purpose : 187th Rules Change Committee (Regular) Meeting
 Date & Time : 19 November 2021, 09:00 AM
 Venue : Online via Microsoft Teams
 Page : 10 of 187



Agenda	Agreements / Action Taken / Action Required
	<p>As a follow-up, Mr. Morales asked if the NGCP must declare its BCQ for ASPA, even if the market has not dispatched the ASPA generator since it is already committed on a day-ahead basis. Mr. Olmedo responded that even it was not scheduled, it should be declared as NGCP's contract in the market. Similar with the energy market concept, if it has a 0 reserve schedule and there is a 20 declared contract, it will be a negative settlement and the generator will be charged for not submitting an offer for the contracted capacity. In this case, the generator will be incentivized to submit a reserve offer, or other generator may replace the generator which is unable to provide the contracted capacity. Hence, the market may either charge the generator for not supplying/offering or pay it by being the replacement reserve provider.</p> <ul style="list-style-type: none"> On the modality of designating SO as the single buyer, Mr. Morillos asked for clarification for its basis, to which Mr. Bunyi responded that it was based on DOE DC2019-12-0018 and DOE DC2021-03-0009 which were drafted by a technical working group. <p>Before the start of the line-by-line proposal review, Chairperson Nerves stated that the RCC must be guided by the DOE issuances in discussing the proposal, and the reserve market implementation concerns is outside the purview of the RCC as the same should be properly addressed to the DOE or the ERC. The RCC, therefore, cannot settle policy issues.</p> <p>Ms. Estigoy also informed the RCC that out of 8 comments received for the proposal, 2 of which, from MEI/PEI and NGCP were received past the deadline. Considering the relevance of the comments, the RCC admitted the comments for consideration.</p> <p>Below are the highlights of the discussion of the line-by-line review:</p> <p>A. <u>WESM Rules</u></p> <ul style="list-style-type: none"> Mr. Morillos commented that designating NGCP as a single buyer for the reserve market might be violative of the legislative design of the NGCP.

A handwritten signature in blue ink is located at the bottom left of the page.

MEETING MINUTES

Subject/Purpose : 187th Rules Change Committee (Regular) Meeting
 Date & Time : 19 November 2021, 09:00 AM
 Venue : Online via Microsoft Teams
 Page : 11 of 187



Agenda	Agreements / Action Taken / Action Required
	<ul style="list-style-type: none"> • The RCC agreed not to indicate SO as customer in Clause 2.3.7 as proposed by MEI/PEI since the said provision provides the general qualifications of WESM customers. Mr. Isidro E. Cacho (MO) clarified that NGCP is a registered WESM customer with separate meters for their station's consumption. • The determination of AS cost is not pro-rated among customers. Total cost of AS will be charged to NGCP and NGCP will charge the end-users through distribution utilities pursuant to ERC's procedures. • Follow DOE DC in indicating that procurement of reserves by NGCP is firstly through ASPA and then through the WESM. • On Section 2.3.5.3, Mr. Claudio suggested that it should be reflected in the certificate that the provider can provide individual or multiple reserve services, to which Mr. Rosales also agreed. The RCC adopted the suggestion of Mr. Claudio. • Mr. Fortich, Jr. asked if the technical result for testing a generator's capability of providing single or multiple reserve category is part of the terms of reference for ASPA procurement. Mr. Olmedo replied that as far as IEMOP is aware, testing for multiple AS categories is being conducted by the NGCP. Ms. Lisaflor Kater (NGCP) confirmed that the generation facility is first certified. If the AS certification has already been issued, negotiation and signing of ASPA follows. She also clarified that NGCP does not contract with providers which are not certified. It also contracts with multiple types of AS provider, but during a specific period, only one AS type can be provided by the generator. It cannot be a different AS type from a single unit at the same time. • On the proposed Section 3.8.6.1 to 3.8.6.5, Mr. Claudio explained that it is being introduced to have a counterpart provision for reserves market as the energy market has its

A handwritten signature in blue ink is located at the bottom left of the page.

MEETING MINUTES

Subject/Purpose : 187th Rules Change Committee (Regular) Meeting
 Date & Time : 19 November 2021, 09:00 AM
 Venue : Online via Microsoft Teams
 Page : 12 of 187



Philippine Electricity
Market Corporation

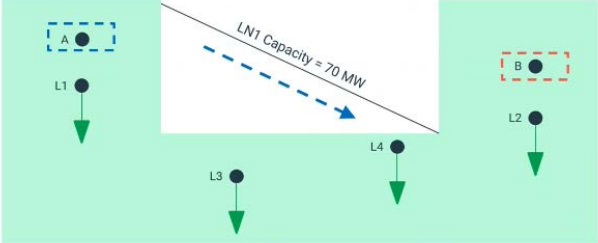
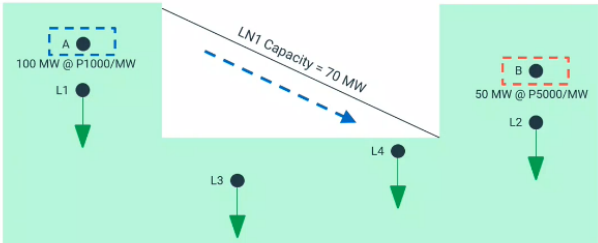
Agenda	Agreements / Action Taken / Action Required
	<p>own dispatch conformance standards. The RCC agreed that the conformance standards for reserves will be developed by the MO and will undergo the rules change process.</p> <ul style="list-style-type: none"> On Section 3.5.8.1, Chairperson Nerves proposed to use the term “reserve market” as there are other types of ancillary services which can either be power or voltage. “Ancillary services” is a general term while reserves market is specific. Mr. Rosales agreed with Chairperson Nerves and explained that there are other ancillary services like reactive power and black support that are not available in the spot market. Mr. Claudio also agreed with the changes and suggested that the term “Reserve Market” be included in the glossary. As a counterproposal, Mr. Bunyi suggested to use the term “spot market for reserves” termed in the relevant DOE DC to dispense with defining “reserve market” in the glossary as the term has no definition in the DOE DC. The RCC adopted IEMOP’s counterproposal. On Section 3.5.8.1, Mr. Bunyi clarified that the provision only covers all load facilities, not only loads under the Interruptible Load Program (ILP). It was also noted that ILP is a different service from that being provided by ancillary services. On Section 3.13.9, Chairperson Nerves opined that there is a difference between “amount” and “charge” since the former is a slope and the latter is an absolute value. Thus, the RCC adopted to revise the term “Reserve Cost Recovery Charge” to “Reserve Cost Recovery Amount” The IEMOP noted the comment of MERALCO to consider BIR Ruling No. CT-323-2021 (Tax treatment of WESM transactions) in the implementation of reserves market. The same will be implemented upon the commercial operation of the reserve market.

MEETING MINUTES

Subject/Purpose : 187th Rules Change Committee (Regular) Meeting
 Date & Time : 19 November 2021, 09:00 AM
 Venue : Online via Microsoft Teams
 Page : 13 of 187



Philippine Electricity
Market Corporation

Agenda	Agreements / Action Taken / Action Required
	<p>B. <u>WESM Manual on Price Determination Methodology (PDM)</u></p> <ul style="list-style-type: none"> The proposal follows the definition of terms and wordings under DOE DC 2021-03-0001 for the Enhanced WESM Design and Operations PDM. Mr. Olmedo presented a sample illustration for the implementation of proposed Section 6.5 (Price Substitution Methodology for Reserve Prices) as follows: <p>Understanding Nodal Price Separation in Meshed Network</p> <ol style="list-style-type: none"> In this example, all nodes are connected across a meshed network Let us assume that RTD results show that the cheaper generation from [A] cannot cross since LN1 is limited to 70 MW Therefore, generation from [B] provides the generation to alleviate the congestion at LN1  <p>Understanding Nodal Price Separation in Meshed Network</p> <ul style="list-style-type: none"> Let us simplify how nodal prices are determined given two marginal prices (neglecting losses) Remember that LMP is based on the incremental cost to serve the next MW All nodes' next requirement should choose between the two marginal plants [A] and [B] 

MEETING MINUTES

Subject/Purpose : 187th Rules Change Committee (Regular) Meeting
 Date & Time : 19 November 2021, 09:00 AM
 Venue : Online via Microsoft Teams
 Page : 14 of 187



Philippine Electricity
Market Corporation

Agenda	Agreements / Action Taken / Action Required
	<h3 data-bbox="639 477 1477 510">Understanding Nodal Price Separation in Meshed Network</h3> <ul data-bbox="639 544 1262 618" style="list-style-type: none"> For L1 <ol style="list-style-type: none"> Say that L1 is located right beside [A], then it will obviously choose [A] since it can serve its next MW at the cheapest cost Therefore, L1's LMP shall be at P1000/MW  <ul data-bbox="639 913 1406 981" style="list-style-type: none"> For L2 <ol style="list-style-type: none"> Say that L2 is located right beside [B], even if it wanted to choose [A], it will just further congest the line LN1, and the solution will opt not to overload it <h3 data-bbox="639 1037 1449 1070">Understanding Nodal Price Separation in Meshed Network</h3> <p data-bbox="639 1115 818 1131">Here are the final nodal prices</p>  <div data-bbox="1238 1149 1485 1328" style="border: 1px solid black; padding: 5px;"> <ul style="list-style-type: none"> As seen, energy prices are affected by the network congestion Reserve prices can also be affected by the energy prices determined, and vice versa Reserve price is defined as the shadow price* on the relevant reserve requirement constraint </div> <p data-bbox="1031 1440 1461 1469">*The WESM Rules define shadow price as the marginal net benefit from a unit relaxation of the capacity limitation of a constraint in the market optimization model</p> <h3 data-bbox="655 1529 1166 1563">Implementing PSM For Congestion</h3> <ul data-bbox="655 1619 1477 1760" style="list-style-type: none"> Given that cases similar to what was shown happens to WESM prices during network congestion, the mechanism of PSM for Congestion was implemented to mitigate extreme price separations across all nodes PSM for Congestion tries to dampen prices so that it will not be directly settled to Trading Participants Since energy prices are corrected, reserve prices should also be corrected <p data-bbox="655 1794 1273 1843">If there is no congestion, reserve prices (or its shadow price) is analogous to: Reserve Price = Reserve Offer Clearing Price + Opportunity Cost*</p> <p data-bbox="655 1955 1414 1977">*Opportunity Cost is the cost to produce the cheapest overall cost (combined for both energy and reserve)</p>

MEETING MINUTES

Subject/Purpose : 187th Rules Change Committee (Regular) Meeting
 Date & Time : 19 November 2021, 09:00 AM
 Venue : Online via Microsoft Teams
 Page : 15 of 187



Philippine Electricity
Market Corporation

Agenda	Agreements / Action Taken / Action Required
	<p>Chairperson Nerves noted that the above proposal is an addition from IEMOP and not taken from the DOE DC. The RCC approved and adopted the proposal.</p> <p>Mr. Rosales expressed his objection to the inclusion of opportunity cost in the formula. He also requested IEMOP to further explain opportunity cost as included in the reserve pricing.</p> <p>Mr. Bunyi explained that the equation is derived from the MDOM for the co-optimization, and thus if a variable is taken out, co-optimization may be affected. Chairperson Nerves asked if the equation can still be changed. Mr. Olmedo responded that per the ERC-approved PDM, the concept of opportunity cost is to try to arrive at the overall cheapest cost combined for energy and reserve. For instance, a generator who has a cheaper offer for reserves can be asked to provide energy instead. If the energy and reserve will be combined, it will result to an overall cheaper cost. The resulting price includes the last clearing price and the cheaper cost that it could have contributed.</p> <p>In response, Mr. Rosales noted that prices may go up since the opportunity loss will still be compensated plus the costs for additional reserve and day-ahead schedule. Chairperson Nerves noted the point of Mr. Rosales. To remove the assumption that there are additional charges being made, Mr. Olmedo further clarified that in the equation, the components of reserve price have only been broken down for transparency purpose and whether there exists a congestion or not, the equation will still be the same. Chairperson Nerves asked for confirmation if the MDOM will give only one price for opportunity cost and reserve price to which Mr. Olmedo confirmed that opportunity cost is included in as the shadow price which is the product of co-optimization..</p> <p>Mr. Manuel Luis N. Zagala (MERALCO) requested that sample calculation be included as appendix, to which the RCC agreed and adopted to clarify that there is no additional charges being added in the reserve price and to avoid wrong impressions.</p> <p>Chairperson Nerves requested IEMOP to modify the provision similar to energy market to clarify the equation and to submit the sample calculation to be attached as appendix in the PDM.</p>

MEETING MINUTES

Subject/Purpose : 187th Rules Change Committee (Regular) Meeting
 Date & Time : 19 November 2021, 09:00 AM
 Venue : Online via Microsoft Teams
 Page : 16 of 187



Agenda	Agreements / Action Taken / Action Required
	<ul style="list-style-type: none"> • The RCC noted that the computation for the reserve administered price in case of market intervention will be raised to the DOE and to the ERC as manifestation during the PDM hearing. IEMOP will provide the draft proposal for the first week of commercial operations to avoid a no-price scenario during market intervention. It was also noted that there is no need to incorporate the draft proposal in the WESM manuals. • The following questions from SPC Island Power was answered by IEMOP as follows: <ol style="list-style-type: none"> 1. Does the reserve quantity (RQ) formula eliminate the imbalance between reserve dispatch schedule (RDS) and reserve bilateral contract quantity (RBCQ)? - Yes. 2. How is the RDS that indicates ASPA without energy dispatch be settled? – The RDS are dispatch schedules in the MMS. These will be settled in the reserve market as described in the proposal. 3. For fully contracted firm ASPA capacity, will the reserve trading amount (RTA) automatically be equal to zero? - The same formula is applied even if they are fully contracted. The NGCP must declare the bilateral contract and the same must be equal to the reserves schedule. 4. For AS Providers without ASPA, what is the penalty provision in the IEMOP's RTA formula when it fails to dispatch their corresponding RDS so that the cost recovery with NGCP can be reduced? – We are proposing a formula for the settlement, but it is best for the Governance Arm to tackle the matter on penalties. <p>[Mr. Morillos temporarily presided the discussion starting Sections 2.2.5 to 4.3.7 due to technical difficulties encountered by Chairperson Nerves]</p>

A handwritten signature in blue ink is located at the bottom left of the page.

MEETING MINUTES

Subject/Purpose : 187th Rules Change Committee (Regular) Meeting
 Date & Time : 19 November 2021, 09:00 AM
 Venue : Online via Microsoft Teams
 Page : 17 of 187



Agenda	Agreements / Action Taken / Action Required
	<ul style="list-style-type: none"> On Section 4.3.2 (Resource Reserve Capacity Limits), the RCC adopted the term "contingency and dispatchable reserves" to conform with the original design of the NMMS. On Section 4.3.7 (Constraints on Simultaneous Provisions of Reserve), Mr. Claudio explained that technical constraints may lie on the generator or the SO. It was confirmed by Mr. Olmedo that the NMMS can schedule a reserve provider simultaneously. On the part of the generator, many can provide two or more reserve services simultaneously. With this, it is apparent that the constraint lies with the SO as it cannot accommodate the generator dispatch for two or more services simultaneously. Further, a study commissioned by PEMC in 2015 through Stephen Wallace of Intelligent Energy Service (IES) stated that the dispatch of generators providing two or more services simultaneously is being practiced in other jurisdictions like in Australia, without difficulty. <p>In addition, Mr. Claudio suggested adopting a provision for multiple reserve services consistent with the DOE DC. Mr. Olmedo noted that they have not imposed a limit on the proposal for multiple reserve services, but there is no specific proposal for that since they need the technical basis from the SO. No technical constraint was included in the proposal to prohibit the multiple reserve services. Upon receipt of the technical document from SO, the PDM will be revised to indicate the limitations for the provision of multiple reserve services.</p> <p>[Chairperson Nerves assumed the discussion of the WESM Manual on Registration, Suspension and De-Registration Criteria and Procedures]</p> <p>C. <u>WESM Manual on Registration, Suspension and De-Registration Criteria and Procedures</u></p> <ul style="list-style-type: none"> On Section 2.6.1.1, Mr. Claudio opined that not all hybrid systems are capable to provide ancillary services since the output of solar and run-off river are variable, unpredictable, and intermittent. Ancillary service should be available at the

A handwritten signature in blue ink is located at the bottom left of the page.

MEETING MINUTES

Subject/Purpose : 187th Rules Change Committee (Regular) Meeting
 Date & Time : 19 November 2021, 09:00 AM
 Venue : Online via Microsoft Teams
 Page : 18 of 187



Agenda	Agreements / Action Taken / Action Required
	<p>time that it is being scheduled which cannot be complied with by an intermittent source. Other hybrid systems like biomass and conventional fossil fuels are qualified.</p> <p>Chairperson Nerves noted the opinion of Mr. Claudio and said that the registration of hybrid systems as ancillary service is subject to the certification by the NGCP or third party.</p> <p>Further, Mr. Bunyi said that they are of the view that if the hybrid system wanted to participate in the ancillary service, they should register as scheduled generating unit. Mr. Rosales agreed to the opinion of Mr. Bunyi and added that there are hybrid systems which are available at a given point in time that can comply with the 5-minute interval.</p> <ul style="list-style-type: none"> As explained by Mr. Bunyi, the RCC noted that it is the responsibility of the trading participant to ensure that its Certificate of Compliance as issued by the ERC is approved and updated. The AS Certification will not be issued if it has no valid Certificate of Compliance. As explained by Mr. Olmedo in response to Mr. Fortich, Jr.'s query, the RCC noted that participation in the reserve market is not based on ASPA but based on AS Certification issued by the NGCP or a third party. On Section 3.3.8.4, the RCC adopted SNAP's proposal to include a letter of extension from the System Operator as one of the requirements for updating the certification as an AS provider to prevent automatic de-registration. <p><u>D. WESM Manual on Billing and Settlement</u></p> <ul style="list-style-type: none"> On Section 3.2 in relation to Section 7.4.1, Mr. Bunyi said that they are of the opinion that the NGCP should provide a prudential requirement, similar to the customers in the energy market. Ms. Javier recommended that a qualification "as approved by the ERC" should be indicated

A handwritten signature in blue ink is located at the bottom left of the page.

MEETING MINUTES

Subject/Purpose : 187th Rules Change Committee (Regular) Meeting
 Date & Time : 19 November 2021, 09:00 AM
 Venue : Online via Microsoft Teams
 Page : 19 of 187



Agenda	Agreements / Action Taken / Action Required
	<p>in the provision since NGCP is a regulated entity by the ERC. The RCC adopted the provision below:</p> <p><i>“Section 7.4.1 (c) The System Operator’s compliance on prudential requirement shall be subject to ERC approval”</i></p> <ul style="list-style-type: none"> • Mr. Julius Ryan Datingaling (NGCP) emphasized that without prejudice to their position as single buyer, the recovery of reserve cost should be on “as collected” basis. He explained that this is a pass-on charge to NGCP and that NGCP does not profit from it. Mr. Olmedo referred to the RCC for the decision on the mode of collection as the MO will bill and collect the NGCP for the reserves cost just like all other customers in the market. <p>Chairperson Nerves asked if the energy customers are required to pay on “as collected” basis. Mr. Olmedo answered that there is a deadline for payment and if the customer is unable to pay, the prudential requirement will be called out to pay for the bill.</p> <p>Mr. Datingaling quoted the following Sections of the DOE DC2021-03-009:</p> <p><i>Section 7.4 The SO shall be responsible for the collection of payments from the electric power industry participants in accordance with the AS Cost Recovery Mechanism (AS-CRM) as approved by the ERC.</i></p> <p><i>Section 8.2 The SO shall remit the total spot reserve trading amount to the MO within the deadline set.</i></p> <p>Anent the above, he said that it was clear that SO's mandate is just to collect the payments made by electric power industry participants and to remit the same to IEMOP. Thus, they are on the position that NGCP can only remit what is paid to them by their customer and that the responsibilities under Clause 3.2 of the WESM Manual on Billing and Settlement are not applicable to a collection agent.</p>

A handwritten signature in blue ink is located at the bottom left of the page.

MEETING MINUTES

Subject/Purpose : 187th Rules Change Committee (Regular) Meeting
 Date & Time : 19 November 2021, 09:00 AM
 Venue : Online via Microsoft Teams
 Page : 20 of 187



Agenda	Agreements / Action Taken / Action Required
	<ul style="list-style-type: none"> • Ms. Luningning Baltazar (DOE) asked for confirmation with Mr. Datingaling if the DU remit the payment to NGCP for ASPA, to which Mr. Datingaling answered that their customers pay for the AS charges. Further, she asked for NGCP's process in reconciling payments with their ASPAs if there is shortage in the remittance by the DU and if they are being imposed a penalty charge for underpaying ASPA provider. Mr. Datingaling replied that they pay their ASPA provider based on their collection efficiency and full payment is made on the next billing month. As to the penalty, he said that he has no detail on the matter. • Mr. Fortich, Jr. asked if the NGCP will recover the cost from its grid customers for the reserve market prudential requirement. He pointed out that Ancillary Service Fees is already included as one of the component of the grid customers' bill, which might cause duplicity in charges if another cost will be charged for the prudential requirement. Mr. Datingaling said that NGCP will pass on the cost of the prudential requirement to its grid customers, if imposed, since AS cost is also a pass-through amount only to NGCP. • Chairperson Nerves noted the comments and objections submitted by the NGCP as to their classification as single buyer and their need to put up a prudential requirement. Mr. Cacho, Jr. opined that the RCC is not in the position to decide on the matter since these are policy questions to which the ERC and DOE are the proper venue. • In response to SPC/SIPC's comment, Mr. Bunyi stated that there will be a separate billing for the reserves market for transparency purposes. • Mr. Datingaling inquired what billing and settlement timeline will be followed by NGCP for the reserve market. Mr. Bunyi replied that they intend to align the billing cycle for reserves market with that of the energy market because of the co-optimization. Hence, IEMOP cannot have a separate billing timeline for reserve market, but the billing statement will be separate.

A handwritten signature in blue ink is located at the bottom left of the page.

MEETING MINUTES

Subject/Purpose : 187th Rules Change Committee (Regular) Meeting
 Date & Time : 19 November 2021, 09:00 AM
 Venue : Online via Microsoft Teams
 Page : 21 of 187



Agenda	Agreements / Action Taken / Action Required
	<ul style="list-style-type: none"> Mr. Datingaling said that if the settlement data will be provided to them every 12th day of the month, it will be considered for the computation of the AS cost for that month but there will be a one-month lag for the payment thereof. Chairperson Nerves noted that the one-month lag is an unavoidable consequence of co-optimization which should be raised to the DOE or ERC due to its financial impact. <p><i>E. <u>WESM Manual on Dispatch Protocol</u></i></p> <ul style="list-style-type: none"> On Section 6.1.6 (Bids and Offers Submission), Mr. Olmedo clarified that it should be the AS providers who should decide its mode of operation (e.g. automatic generation control or governor control mode). <p>The RCC adopted that Section 6.1.6 is only applicable for Phase 1 of the reserve market.</p> <ul style="list-style-type: none"> In response to MERALCO's query, Mr. Bunyi said that there might be a cap and/or floor on reserve offers, but this is still subject to ERC's directive. On Section 9.1.4, Mr. Olmedo explained that the contracted reserve capacity is scheduled in real-time. <p>Moreover, Mr. Richard O. Arcenal (SPC/SPIC) noted that the ASPA does not contain a provision for replacement generator should the contracted reserve capacity is not available, which is different from the earlier discussions under the WESM Rules. He added that the Pmin concept in the old MMS be considered in the day ahead schedule for guidance of AS providers.</p> <ul style="list-style-type: none"> In response to Mr. Arcenal's query on what will happen to the capacity covered by ASPA which are not dispatched, Mr. Olmedo replied that NGCP's contracted capacity, whether firm or non-firm, is not included in the policy to be prioritized in the market design. The reserve market concept is akin to energy market, to which everybody must

A handwritten signature in blue ink is located at the bottom left of the page.

MEETING MINUTES

Subject/Purpose : 187th Rules Change Committee (Regular) Meeting
 Date & Time : 19 November 2021, 09:00 AM
 Venue : Online via Microsoft Teams
 Page : 22 of 187



Agenda	Agreements / Action Taken / Action Required
	<p>comply to the schedule and dispatch. The concept of prioritizing reserves over energy is a different matter which should be covered under the CVC Manual.</p> <ul style="list-style-type: none"> • In reply to the query of PEMC on Sections 15.3.1 and 11.1.7, Mr. Olmedo confirmed that IEMOP is proposing NGCP to monitor the compliance for reserve market since NGCP already has an AS monitoring in place. In this regard, as confirmed with PEMC-Enforcement and Compliance Office, the Governance Arm will no longer be included as recipient of the report under Section 15.3.1 • On Section 15.6.2, Mr. Claudio asked the NGCP if they already changed the values of allowable frequency deviations for dead-band setting since it is already different from the ancillary services procurement plan (ASPP) reference. Chairperson Nerves requested NGCP representatives to validate the dead-band setting frequency, but nobody from the NGCP responded. <p>In the absence of NGCP's confirmation to the question of Mr. Claudio, the RCC adopted MEI's proposal that reserve facilities scheduled to provide contingency reserve shall ensure that their dead-band is set greater than 0.30 Hz but less than -0.15 Hz for consistency with ASPP.</p> <ul style="list-style-type: none"> • The RCC adopted that the proposed renumbering for Section 16 be made as Section 23 to avoid further changes in the numbering. • The RCC adopted that deliberations on the penalty if the Reserve Conformance Standards are not met should be deferred pending the approval of the reference standards. • In response to the submitted NGCP's comment to delete the Reserve Effectiveness Factor and replace it with NGCP's Penalty System, Mr. Olmedo said that they are deferring the matter to the RCC. Having no further objections or comments from the body, the RCC adopted NGCP's Penalty System.

A handwritten signature in blue ink is located at the bottom left of the page.

MEETING MINUTES

Subject/Purpose : 187th Rules Change Committee (Regular) Meeting
 Date & Time : 19 November 2021, 09:00 AM
 Venue : Online via Microsoft Teams
 Page : 23 of 187



Agenda	Agreements / Action Taken / Action Required
	<p>The Secretariat asked if the NGCP's Penalty System should be appended to the manual, to which Chairperson Nerves answered in the affirmative considering that it is an unfamiliar document. The Secretariat also asked the Chairperson if the NGCP can briefly discuss the content of the penalty system for information of the body, which was allowed by the Chairperson.</p> <p>Chairperson Nerves requested the NGCP's representatives to explain the document through Mr. Rosales since they are no longer responsive when called during the meeting.</p> <p>Mr. Olmedo manifested that it would be prudent for the NGCP Penalty System to be discussed by the body as it will affect the market participants and the rest of the proposal might need revision to conform with the NGCP's mechanism as it might deviate from the intent of the proposal. He supposed that the NGCP's Penalty System contains a performance metrics for responding to AS, which is different from the conformance standard being proposed. As he understood it, NGCP automatically deducts the penalty. In the energy market, there is a due process being followed such as monitoring and investigation before penalties are imposed. If NGCP's system is adopted, there will be a need to revise the PDM as it does not automatically deduct spot amounts.</p> <p>Chairperson Nerves agreed with Mr. Olmedo that the NGCP document must be read and discussed also by the body. He also stated that the body's only option as of meeting time is to adopt IEMOP's proposal.</p> <p>Ms. Rivera asked the NGCP representative if the ASPA will be revised to align with the Reserve Effectiveness Factor as it is assumed to be in conformity with NGCP's Penalty System. Ms. Vida Toque (SN Aboitiz Power) also expressed similar concern to ensure that there will be no double penalty and the standards to be applied are not different.</p>

A handwritten signature in blue ink is located at the bottom left of the page.

MEETING MINUTES

Subject/Purpose : 187th Rules Change Committee (Regular) Meeting
 Date & Time : 19 November 2021, 09:00 AM
 Venue : Online via Microsoft Teams
 Page : 24 of 187

Agenda	Agreements / Action Taken / Action Required
	<p>Ms. Baltazar added that if the Reserve Effectiveness Factor has something to do with the penalty, she is of the opinion that it can be discussed separately outside of the Dispatch Protocol Manual.</p> <p>Considering that penalty mechanism is also a policy issue and the time constraint and unavailability of NGCP representatives, Chairperson Nerves suggested to move forward by adopting IEMOP's Reserve Effectiveness Factor, which can later be discussed with the DOE and the ERC regarding its implementation. Having no objections, the body agreed to adopt the Reserve Effectiveness Factor as the body has no information on the NGCP's Penalty System.</p> <ul style="list-style-type: none"> In response to TC's comment on Section 16.3.3.2, Mr. Olmedo explained that a transmutation table on the Reserve Effectiveness Factor for each performance range is being proposed by IEMOP since there is not enough data yet to calculate specific value and it will be re-developed as the data grows. <p><u>Resolution:</u> Having no further comments, Mr. Claudio moved to approve the proposal as revised and submit it to the PEM Board. The motion was duly seconded by Mr. Fortich, Jr. and was adopted by the body. Due to time constraints, the draft resolution will be sent by the Secretariat to the RCC for approval via email.</p>
VIII. Schedule of Next Meetings	<p><u>Presenter:</u> Ms. Kathleen R. Estigoy (Secretariat)</p> <p><u>Action Requested:</u> For information</p> <p><u>Proceedings:</u></p> <p>The RCC noted on the following schedule of meetings:</p> <ul style="list-style-type: none"> PEM Board Meeting <ul style="list-style-type: none"> 24 November 2021 RCC Presenter RCC Regular Meeting <ul style="list-style-type: none"> 17 December

Philippine Electricity
Market Corporation

MEETING MINUTES

Subject/Purpose : 187th Rules Change Committee (Regular) Meeting
 Date & Time : 19 November 2021, 09:00 AM
 Venue : Online via Microsoft Teams
 Page : 25 of 187

Agenda	Agreements / Action Taken / Action Required
	<ul style="list-style-type: none"> ○ 21 January 2022 ○ 18 February 2022 • Market Participants' Update <ul style="list-style-type: none"> ○ 26 November 2021, 2:00 pm to 4:00 pm via Zoom • WESM Governance Training <ul style="list-style-type: none"> ○ 02 December 2021 <p><u>Resolution:</u> Presenter for the PEM Board Meetings will be coordinated off-line.</p>
IX. Adjournment	The meeting was adjourned at 06:11 PM.

Prepared by:

KATHLEEN R. ESTIGOY
 Specialist, Rules Review Division
 Market Assessment Group

Reviewed by:

KAREN A. VARQUEZ
 Manager, Rules Review Division
 Market Assessment Group

Noted by:

JOHN MARK S. CATRIZ
 Head, Market Assessment Group

Approved by:

ALLAN C. NERVES
 Chairman, Independent

JESUSITO G. MORALLOS
 Member, Independent

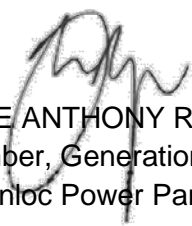
MEETING MINUTES

Subject/Purpose : 187th Rules Change Committee (Regular) Meeting
Date & Time : 19 November 2021, 09:00 AM
Venue : Online via Microsoft Teams
Page : 26 of 187




Philippine Electricity
Market Corporation


CONCEPCION I. TANGLAO
Member, Independent




DIXIE ANTHONY R. BANZON
Member, Generation Sector
Masinloc Power Partners Co. Ltd. (MPPCL)



CERRY A. JAVIER
Member, Generation Sector
Aboitiz Power Corp. (APC)



CARLITO C. CLAUDIO
Member, Generation Sector
Millennium Energy, Inc. / Panasia Energy, Inc.
(MEI/PEI)

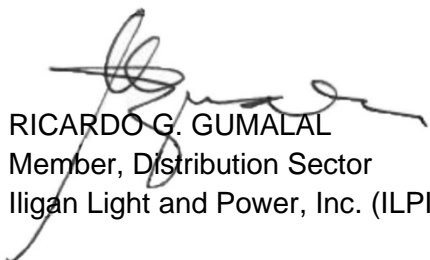


MARK D. HABANA
Member, Generation Sector
Vivant Corporation – Philippines (Vivant)




RYAN S. MORALES
Member, Distribution Sector
Manila Electric Company (MERALCO)


VIRGILIO C. FORTICH, JR.
Member, Distribution Sector
Cebu III Electric Cooperative, Inc. (CEBECO III)



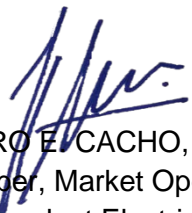
RICARDO G. GUMALAL
Member, Distribution Sector
Iligan Light and Power, Inc. (ILPI)



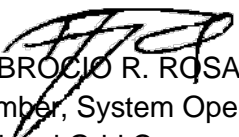
NELSON M. DELA CRUZ
Member, Distribution Sector
Nueva Ecija II Area 1 Electric Cooperative, Inc.
(NEECO II – Area I)



LORRETO H. RIVERA
Member, Supply Sector
TeaM (Philippines) Energy Corporation (TPEC)



ISIDRO E. CACHO, JR.
Member, Market Operator
Independent Electricity Market Operator of the
Philippines (IEMOP)



AMBROCIO R. ROSALES
Member, System Operator
National Grid Corporation of the Philippines
(NGCP)

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Rules								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
					<i>Please write general comments here, if any.</i>			
Responsibilities of the System Operator	1.3.4	1.3.4 Responsibilities of the System Operator Under these Rules, the System Operator shall have the following functions and responsibilities: xxx (c) Contribute towards the development of procedures, processes or systems, or to assist with any aspect of the operation of the spot market, in coordination with the Market Operator. (d) Implement the transitory provisions specified in Chapter 10; and (e) Perform those actions that are required to be taken prior to the spot market commencement date as specified in the WESM Rules and clause 10.4.	1.3.4 Responsibilities of the System Operator Under these Rules, the System Operator shall have the following functions and responsibilities: xxx <u>(c) Be responsible for the procurement of reserves through the WESM and for the settlement of such transactions pursuant to prevailing rules, regulations and issuances promulgated by the DOE or the ERC.</u> (d) (e) Contribute towards the development of procedures, processes or systems, or to assist with any aspect of the operation of the spot market, in coordination with the Market Operator. (e) (d) Implement the transitory provisions specified in Chapter 10; and (f) (e) Perform those actions that are required to be taken prior to the spot market commencement date as	Added provision to designate SO as the single buyer of reserves in the WESM pursuant to Clause 3.5 of DOE DC2021-03-0009 Clerical revisions to update numbering	<u>PEMC:</u> Per DOE DC2021-03-0009, the procurement of reserves by the SO is through combination of ASPAs and reserve market procurement. Suggest including AS Procurement Agreement.	<u>PEMC:</u> (c) Be responsible for the procurement of reserves through the WESM and Ancillary Service Procurement Agreement for the settlement of such transactions pursuant to prevailing rules, regulations and issuances promulgated by the DOE or the ERC.	IEMOP is amenable to the proposal	Change to procure in (c); same with PEMC's comment - adopted
					<u>Technical Committee:</u> To clarify that procurement of reserves by the SO is through combination of ASPAs and reserve market procurement, consistent	<u>Technical Committee:</u> c) Be responsible for the procurement of reserves through the WESM and <u>AS Procurement Agreements</u> and for the settlement of such transactions pursuant to prevailing rules,	IEMOP proposes to adopt PEMC's revision	Adopted PEMC's comment

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Rules								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
			specified in the WESM Rules and clause 10.4.		with Clause 3.5 of DOE DC2021-03-0009	regulations and issuances promulgated by the DOE or the ERC.		
					<p><u>MEI/PEI:</u></p> <p>These revisions are not included in IEMOP's proposed amendments, but are being suggested by MEI and PEI for consideration since they are relevant to the reserve market.</p> <p>Registration of the SO as a Customer Trading Participant is consistent with the general principle that all entities transacting in the WESM must register with the Market Operator. This is also in line with the single buyer policy pursuant to Section 1.4 of DOE DC2021-03-0009.</p>	<p><u>MEI/PEI:</u></p> <p>2.3.7 System operator The <i>System operator</i> of the TRANSCO shall register with the <i>Market Operator</i> as a <i>System operator</i> and as a Customer.</p>	In the WESM Manual on Registration, Suspension and De-Registration Criteria and Procedures, IEMOP proposed that SO be included as an entity that is qualified to register as a Customer.	Retain the original provision of 2.3.7. Not include SO as customer

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Rules								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
					To provide definition for Reserve Conformance Standards which is mentioned a number of times in the WESM Rules.	GLOSSARY Reserve Conformance Standards. Standards that set the criteria and procedures for determining whether the <i>Ancillary Service Providers</i> comply with their <i>reserve schedules</i> and which are required to be set out in a <i>Market Manual</i> in accordance with Clause 3.8.6.	IEMOP is amenable with this inclusion in the glossary	Adopted
					To provide definition of reserve effectiveness factor which is mentioned in Clause 3.3.7.4.	Reserve Effectiveness Factor. A performance indicator that measures the reserve facility's adequacy, accuracy, and timeliness in its actual reserve response with respect to the expected operating parameters set for a specific type of reserve.	IEMOP is amenable with this inclusion in the glossary	Adopted



Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Rules								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
					Repetition	Delete <i>Reserve Facility Category</i> after <i>Reserve</i> .	IEMOP is amendable to the clerical revision	
					<p><u>SPC/SIPC</u></p> <p>Since ASPA between NGCP and some Generation Companies (providing Ancillary Services) will be present upon the implementation of Reserve Market, we suggest to emphasize that NGCP is still accountable with the settlement of Ancillary Services (without energy dispatch / with energy dispatch) based on ERC's approved settlement of ASPA.</p>	<p><u>SPC/SIPC</u></p> <p>1.3.4 Responsibilities of the System Operator Under these Rules, the System Operator shall have the following functions and responsibilities: xxx <u>(c) Be responsible for the procurement of reserves through combination the ASPA and WESM as applicable, and for the settlement of such ASPA and WESM transactions pursuant to prevailing rules, regulations and issuances promulgated by the DOE or the ERC.</u> <u>(d)(c)</u> Contribute towards the development of procedures, processes</p>	IEMOP: Recommends adopting PEMC's revision instead	<p>Follow DOE Circular</p> <p>Adopted PEMC's comment</p>



Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Rules								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
						<p>or systems, or to assist with any aspect of the operation of the spot market, in coordination with the Market Operator.</p> <p>(e)(d) Implement the transitory provisions specified in Chapter 10; and</p> <p>(f)(e) Perform those actions that are required to be taken prior to the spot market commencement date as specified in the WESM Rules and clause 10.4.</p>		
					<p>NGCP:</p> <p>To clarify that procurement of reserves by the SO is through combination of ASPAs and reserve market procling and settleemturement, consistent with Clause 3.5 of DOE DC2021-03-0009</p>	<p>NGCP:</p> <p>For 1.3.4 (c), suggest to revise as:</p> <p><u>(c) Be responsible for the procurement of reserves through the WESM and AS Procurement Agreements and for the settlement of such transactions pursuant to prevailing rules.</u></p>	<p>IEMOP is amenable to the revisions</p>	<p>Sequence should be ASPA and WESM per DOE policy</p> <p>Adopted as revised</p>

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Rules								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
						<u>regulations and issuances promulgated by the DOE or the ERC.</u>		
Registration – Ancillary Services Provider	2.3.5.1	2.3.5.1 A Trading Participant or Network Service Provider providing ancillary services in accordance with clause 3.3: (a) Shall register with the Market Operator as an Ancillary Services Providers respect of: (1) Each reserve facility it operates; xxx (3) The reserve facility category applicable to the reserves intended to be provided by each of the reserve facilities registered under clause 2.3.5.1 (a) (1) and as authorized by the System operator under clause 2.3.5.3.	2.3.5.1 A Trading Participant or Network Service Provider providing ancillary services in accordance with clause 3.3: (a) Shall register with the Market Operator as an Ancillary Services Providers respect of: (1) Each reserve facility it operates; xxx (3) The reserve facility category <u>ies</u> applicable to the reserves intended to be provided by each of the reserve facilities registered under clause 2.3.5.1 (a) (1) and as authorized by the System operator under clause 2.3.5.3.	Revised to allow registration in multiple categories per reserve facility in line with Clause 3.1.1.3 of DOE DC2021-03-0009	<u>AC Energy:</u> For purposes of clarity, we suggest deletion of the term Network Service Provider (NSP) since the NSP may not be qualified to provide ancillary services. We suggest replacing it with “ancillary service providers accredited by the System Operator and registered with the Market Operator”. We suggest that the accredited capacity on a per unit basis, should also be included and not merely the capacity intended to be provided. Further, the capacity contracted by NGCP covered by	<u>AC Energy:</u> 2.3.5.1 A Trading Participant or Network Service Provider <u>ancillary service providers accredited by the System Operator and registered with the Market Operator</u> , providing ancillary services in accordance with clause 3.3: (a) Shall register with the Market Operator as an Ancillary Services Providers respect of: (1) Each reserve facility it operates; xxx (3) The reserve facility category <u>ies</u> applicable to the reserves intended <u>or accredited</u> to be provided by each of the reserve facilities <u>on a per unit basis, and</u>	IEMOP recommends retention of its original proposal. Details on the requirements of ancillary service providers to register in the WESM is already provided in our proposed amendments in the WESM Registration Manual.	Adopted IEMOP's recommendation of retention of original proposal

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Rules								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
					an ASPA should also be indicated.	<u>those contracted by the NGCP covered by an ASPA</u> , registered under clause 2.3.5.1 (a) (1) and as authorized by the System operator under clause 2.3.5.3.		
					<u>SPC/SIPC:</u> Add the word “with” before respect of: and “as” before applicable.	<u>SPC/SIPC:</u> 2.3.5.1 A Trading Participant or Network Service Provider providing ancillary services in accordance with clause 3.3: (a) Shall register with the Market Operator as an Ancillary Services Providers with respect of: (1) Each reserve facility it operates; xxx (3) The reserve facility category ies as applicable to the reserves intended to be provided by each of the reserve facilities registered under clause 2.3.5.1 (a) (1) and as authorized by	Original Proposal 2.3.5.1 A Trading Participant or Network Service Provider providing ancillary services in accordance with clause 3.3: (a) Shall register with the Market Operator as an Ancillary Services Providers respect of: (1) Each reserve facility it operates; xxx (3) The reserve facility category ies applicable to the reserves intended to be provided by each of the reserve facilities registered under	Adopted IEMOP's proposal

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Rules								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
						the System operator under clause 2.3.5.3.	clause 2.3.5.1 (a) (1) and as authorized by the System operator under clause 2.3.5.3.	
					<u>NGCP:</u> Request to clarify if this implies that reserve providers may provide for multiple reserve categories during operations or for only one reserve category at a time/interval		Yes, reserve providers may provide AS for multiple reserve categories as long as they are certified by the SO and it is technically feasible to implement , as per Section 3.1.1.3 of DOE DC 2021-03-0009	Noted
					<u>Meralco:</u> Section 3.1.1.3 of DOE DC2021-03-0009 states that a generating unit may be scheduled for more than one type of reserve at the same dispatch interval provided that the technical requirements that make it able to respond to both services simultaneously are addressed.		Kindly refer to our proposed changes to the registration manual. For scheduling and pricing, it is recommended that SO present technical constraints that prohibit the simultaneous provision of more than one type of reserve per facility. If there is none, then IEMOP's proposed amendments already	Noted

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Rules								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
					Considering that this is a necessary safeguard with respect to offering multiple categories, clarification is sought on how this provision was applied in the WESM Rules and Manuals. Corollary to that, further clarification is sought on whether there should also be multiple categories for ASPA involving the same generating unit.		suffice where it is possible to provide different A/S simultaneously.	
Registration – Ancillary Services Provider	2.3.5.3	2.3.5.3 Prior to the registration of a Trading Participant or a Network Services Provider as an Ancillary Services Provider eligible to provide reserves in accordance with clause 2.3.5.1, the System operator shall: (a) Certify that the relevant reserve facility is capable of providing the reserve category for which registration is sought, in accordance with the	2.3.5.3 Prior to the registration of a Trading Participant or a Network Services Provider as an Ancillary Services Provider eligible to provide reserves in accordance with clause 2.3.5.1, the System operator shall: (a) Certify that the relevant reserve facility is capable of providing the reserve category <u>ies</u> for which registration is sought, in accordance with the Grid Code and Distribution Code;	Revised to allow registration in multiple categories per reserve facility in line with Clause 3.1.1.3 of DOE DC2021-03-0009	<u>AC Energy:</u> For purposes of clarity, we suggest deletion of the term Network Service Provider (NSP) since the NSP may not be qualified to provide ancillary services. We suggest replacing it with “ancillary service providers accredited by the System Operator and	<u>AC Energy:</u> 2.3.5.3 Prior to the registration of a Trading Participant or a Network Services Provider <u>ancillary service provider accredited by the System Operator and registered with the Market Operator as an Ancillary Services Provider</u> eligible to provide reserves in	IEMOP recommends retention of its original proposal. Details on the requirements of ancillary service providers to register in the WESM is already provided in our proposed amendments in the WESM Registration Manual.	Incorporate MEI/PEI's proposal in 2.3.5.3

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Rules								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
		Grid Code and Distribution Code; xxx	xxx		<p>registered with the Market Operator”.</p> <p>The certification of the System Operator should be on a per unit basis and not on a per plant basis. The term “unit” must be inserted.</p>	<p>accordance with clause 2.3.5.1, the System operator shall:</p> <p>(a) Certify that the relevant reserve facility on a per unit basis is capable of providing the reserve category<u>ies</u> for which registration is sought, in accordance with the Grid Code and Distribution Code; xxx</p>		
					<p><u>MEI/PEI:</u></p> <p>The reserve facility must be tested and certified by the System Operator if it is technically capable of simultaneously providing multiple reserve services.</p>	<p><u>MEI/PEI:</u></p> <p>2.3.5.3 Prior to the registration of a Trading Participant or a Network Services Provider as an Ancillary Services Provider eligible to provide reserves in accordance with clause 2.3.5.1, the System operator shall:</p> <p>(a) Certify that the relevant reserve facility is capable of providing the reserve category<u>ies</u> individually and/or</p>	<p>The technical constraint of providing multiple services simultaneously should be a “global” application, not per facility. Suggest to retain proposal. If technical constraints exists, then changes should be made on the PDM's MDOM constraints as well.</p>	<p>Adopted MEI's proposal - individually and/or simultaneously</p>

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Rules								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
						<u>simultaneously</u> for which registration is sought, in accordance with the Grid Code and Distribution Code; Xxx		
Registration – Ancillary Services Provider	2.3.5.5	2.3.5.5 Ancillary Services Providers shall comply with the dispatch conformance standards developed pursuant to Clause 3.8.5.	2.3.5.5 Ancillary Services Providers shall comply with the dispatch conformance standards developed pursuant to Clause 3.8.5 <u>and the reserve conformance standards developed pursuant to Clause 3.3.7.4.</u>	Revised to specify requirement for AS Providers to comply with reserve conformance standards. Development of reserve conformance standards is included in Clause 10.3 of DC2021-03-0009. Details of the standards are incorporated in the revisions to the Dispatch Protocol Manual.	<u>PEMC:</u> Suggest defining <u>reserve conformance standards</u> . Note that Clause 3.3.7.4 refers to “reserve effectiveness factor” instead of “reserve conformance standards”. While the DOE DC2021-03-0009 states that reserve effectiveness factor could be one of the reserve conformance standards, there is no clear provision on this in the WESM Rules. Thus, the need to provide the definition for reserve conformance standards.		IEMOP recommends adopting PEI's additions in the glossary to address PEMC's suggestion	Adopted as revised by PEI

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Rules								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
					<u>NGCP:</u> Suggest to define “reserve conformance standards”		IEMOP recommends adopting PEI's additions in the glossary to address the suggestion	Adopted as revised by PEI
					<u>Technical Committee:</u> Suggest to define “reserve conformance standards”		IEMOP recommends adopting PEI's additions in the glossary to address the suggestion	Adopted as revised by PEI
					<u>MEI/PEI:</u> Clause 3.3.7.4 provides for the continuous adjustment by the System Operator of the reserve effectiveness factors for each reserve facility category, but does not explicitly specify compliance with the reserve conformance standards. MEI and PEI suggest that a separate clause entitled Reserve Conformance Standards be	<u>MEI/PEI:</u> 3.8.6.1 The <i>Market Operator</i>, in consultation with the <i>System Operator</i> and <i>Trading Participants</i>, shall develop reserve conformance standards to be set forth in the relevant <i>Market Manual</i> which shall be consistent with the <i>Grid Code</i> and <i>Distribution Code</i>.	IEMOP does not find this new provision to be necessary as this is already provided under Section 10.3 of DOE DC 2021-03-0009. To add, the PGC 2016 is not a valid reference yet for this Reserve Market Phase 1. Furthermore, IEMOP has already included its proposed reserve conformance	Adopted MEI/PEI's proposal with revision in 3.8.6.1 from IEMOP 3.8.6.1 The <i>Market Operator</i>, in consultation with the <i>System Operator</i> and <i>Trading Participants</i>, shall develop reserve conformance standards to

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Rules								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
					<p>inserted after Clause 3.8.5, and that Clause 2.3.5.5 should refer to this new clause instead.</p> <p>This new clause is being proposed to provide guidelines to the Market Operator, the System Operator and the Ancillary Service Providers for the monitoring of compliance with the reserve schedules.</p>	<p>3.8.6.2 The <i>Market Manual</i> under Clause 3.8.6.1 shall set out the following:</p> <p>(a) reserve conformance standards that will apply to <i>Ancillary Service Providers</i>;</p> <p>(b) procedures for monitoring and notifying <i>Ancillary Service Providers</i> of the non-compliance by their generating units or interruptible load facilities with their reserve schedules; and</p> <p>(c) Procedures for identifying and checking non-conformance with the <i>reserve conformance standards</i> taking into consideration any emergency directions issued to dispatched <i>Ancillary Service Providers</i>.</p>	<p>standards as part of its proposal</p> <p>3.8.6.1 The <i>Market Operator</i>, in consultation with the System Operator and Trading Participants, shall develop reserve conformance standards to be set forth in the relevant <i>Market Manual</i> which shall be consistent with the <i>Grid Code</i> and <i>Distribution Code</i>.</p>	<p>be set forth in the relevant <i>Market Manual</i> which shall be consistent with the <i>Grid Code</i> and <i>Distribution Code</i>.</p> <p>Standards will undergo rules change process</p>

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Rules								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
						<p>3.8.6.3 The <i>Market Operator</i> shall implement the procedures in Clauses 3.8.6.1 and 3.8.6.2 through a system to automatically check for non-conformance.</p> <p>3.8.6.4 The <i>Market Operator</i>, in consultation with the <i>System Operator</i> and the <i>Trading Participants</i>, shall periodically review the reserve <i>conformance standards</i> and the procedures set out in Clause 3.8.6.1 and 3.8.6.2.</p> <p>3.8.6.5 The <i>Market Operator</i> shall <i>publish</i> the <i>Market Manual</i> setting out the reserve</p>		



Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Rules								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
						<i>conformance standards.</i>		
Reserve Categories	3.3.4.2	3.3.4.2 The <i>reserve</i> categories to be traded in the <i>spot market</i> shall include: (a) <i>Regulating reserve</i> , being the ability to respond to small fluctuations in system frequency including but not limited to fluctuations caused by load fluctuations; (b) <i>Contingency reserve</i> , being the ability to respond to a significant decrease in system frequency including but not limited to a decrease in system frequency in an interconnected AC network as a result of a credible contingency affecting one (or more) <i>Generation Companies</i> within that <i>network</i> , or <i>transmission</i> flows into that <i>network</i> ; and (c) Such other <i>reserve</i> categories as may from time to	3.3.4.2 The <i>reserve</i> categories to be traded in the <i>spot market</i> shall include: (a) <i>Regulating reserve</i> , <u>readily available and dispatchable generating capacity that is allocated exclusively to correct deviations from the acceptable nominal frequency caused by unpredictable in demand our generator output; being the ability to respond to small fluctuations in system frequency including but not limited to fluctuations caused by load fluctuations;</u> (b) <i>Contingency reserve</i> , <u>synchronized generation capacity from qualified generating units or interruptible loads allocated to cover the loss or failure of a</u>	Updated definitions to be consistent with DOE DC 2021-03-0009 Section 4.1 Added Dispatchable Reserves	<u>PEMC:</u> Suggest defining Qualified Generating Units and Qualified Interruptible Loads. These were both defined in PGC2016. <u>Qualified Generating Unit. A Generating Unit tested, certified and monitored by the System Operator to provide specific types of Ancillary Services.</u> <u>Qualified Interruptible Load. A Load that is tested, certified and monitored by the System Operator to provide Tertiary Reserve Ancillary Service.</u> <u>Please see proposed inclusion</u>		IEMOP is amenable to the proposed additions in the Glossary	Adopted with proposed addition from PEMC

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Rules								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
		time be proposed by the <i>Market Operator</i> , in consultation with the <i>System operator</i> , and with <i>WESM members</i> , and approved by the <i>PEM Board</i> .	<u>generating unit or a transmission element or the power import from a circuit interconnection;</u> being the ability to respond to a significant decrease in system frequency including but not limited to a decrease in system frequency in an interconnected AC network as a result of a credible contingency affecting one (or more) <i>Generation Companies</i> within that network, or transmission flows into that network;		<u>of definition in the WESM Rules Glossary."</u>			
			<u>interconnection;</u> being the ability to respond to a significant decrease in system frequency including but not limited to a decrease in system frequency in an interconnected AC network as a result of a credible contingency affecting one (or more) <i>Generation Companies</i> within that network, or transmission flows into that network;		<u>AC Energy:</u> Clerical revision to be consistent with the definition of regulating reserve in DOE Department Circular No. DC2019-12-0018 (Adopting a General Framework Governing the Provision and Utilization of Ancillary Services in the Grid).	<u>AC Energy:</u> (a) <i>Regulating reserve</i> , readily available and dispatchable generating capacity that is allocated exclusively to correct deviations from the acceptable nominal frequency caused by unpredictable <u>led variations</u> in demand our generator output;	IEMOP is amenable to the revisions	Adopted as revised by AC Energy
			(c) <u>Dispatchable reserve, generating capacity that are readily available for dispatch in order to replenish the Contingency Reserves whenever a generating unit trips or a loss of a single transmission interconnection occurs;</u> and		<u>SN Aboitiz Power:</u> Clerical revision in the new definition "...caused by unpredictable demand or generator output"		IEMOP is amenable to the revisions	Adopted as revised by SN Aboitiz
					<u>SPC/SIPC:</u>	<u>SPC/SIPC:</u> 3.3.4.2 The <i>reserve</i> categories	IEMOP:	Adopted the DOE DC's definition

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Rules								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
			(e) (d) Such other <i>reserve</i> categories as may be prescribed by the DOE or the ERC. from time to time be proposed by the Market Operator, in consultation with the System operator, and with WESM members, and approved by the PEM Board.		Adopt the verbatim of DOE DC 2021-03-0009 Section 4.1.	to be traded in the <i>spot market</i> shall include: (a) <i>Regulating reserves</i> , readily available and dispatchable generating capacity that is allocated exclusively to correct deviations from the acceptable nominal frequency caused by unpredictable variations in demand our generation or output; being the ability to respond to small fluctuations in system frequency including but not limited to fluctuations caused by load fluctuations; (b) <i>Contingency reserves</i> , sync		



Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Rules								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
						<p>hronized generation capacity from gQualified gGenerating uUnits or and Qualified iInterruptible LLoads allocated to cover the loss or failure of a synchronized generating unit or a transmission element or the power import from a circuit interconnectio n; being the ability to respond to a significant decrease in system frequency including but not limited to a decrease in system frequency in an interconnected AC network as a result of a</p>		



Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Rules								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
						<p>credible contingency affecting one (or more) <i>Generati on Companies</i> with in that <i>network</i>, or <i>transmission</i> fl ows into that <i>network</i>;</p> <p>(c) <u>Dispatchable reserves, generating capacity that are readily available for dispatch in order to replenish the Contingency Reserves whenever a generating unit trips or a loss of a single transmission interconnection occurs</u>; and</p> <p>(c) (d) Such other <i>reserve</i> categorie</p>		



Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Rules								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
						s as may be prescribed by the DOE or the ERC. from time to time be proposed by the Market Operator, in consultation with the System operator, and with WESM members, and approved by the PEM Board.		
					<p><u>Meralco:</u></p> <p>Minor typo correction.</p> <p>Harmonized with Sec. 4.1 of the DC 2021-03-0009.</p> <p>For letter (d) on other reserve categories, the removal of the consultation with the industry stakeholders is not required by the DC 2021-03-0009. In fact, it is envisioned that its retention will promote harmony and cooperation among the industry stakeholders. In any case, as shown in the proposed rewording,</p>	<p><u>Meralco:</u></p> <p>3.3.4.2. (a) Regulating Reserve.... unpredictable variations in demand our generator output;</p> <p>xxx</p> <p>(d) Such other reserve categories as may be prescribed by the DOE or the ERC, from time to time be proposed by the Market Operator, in consultation with the System operator, and with WESM members, and approved by the PEM Board and subsequently ratified</p>	IEMOP is amenable to the revisions	Adopted MERALCO's revisions

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Rules								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
					the DOE or ERC retains the final ratification of the proposal of the Market Operator, in consultation with the industry stakeholders.	<u>or prescribed by the DOE or the ERC.</u>		
Ancillary Services Cost Recovery	3.3.5.2	3.3.5.2 The costs of <i>reserves</i> are to be recovered through the <i>settlement amounts</i> calculated by the <i>Market Operator</i> under clause 3.13.8 in accordance with the cost recovery formula to be developed by the <i>Market Operator</i> for each <i>reserve category</i> .	3.3.5.2 The costs of <i>reserves</i> are to be recovered <u>from the System Operator</u> through the <i>settlement</i> <u>reserve trading</u> amounts calculated by the <i>Market Operator</i> under clause 3.13.8 in accordance with the cost recovery formula <u>under clause 3.13.9</u> to be developed by the Market Operator for each reserve category.	Updated as prescribed by the single buyer system as prescribed in DOE DC 2021-03-0009 Section 1.4. Deleted the last part as the general mechanism for calculating the reserve recovery costs are already included in this proposal		APC: 3.3.5.2 The costs of reserves <u>transacted from the Reserves Market</u> are to be recovered from the System Operator through the reserve trading amounts calculated by the Market Operator... xxx [to provide clarity that this applies to the transactions in the Reserves Market]	IEMOP recommends retention of its original proposal as its already provides details that the amounts to be recovered from the SO is based on the reserve trading amounts	Adopted IEMOP's original proposal Noted NGCP's position that they are merely a collection agent
Ancillary Services Cost Recovery	3.3.5.3	3.3.5.3 The costs of providing each locationally specific reserve requirement shall be allocated by the <i>Market Operator</i> to those <i>Trading Participants</i> in the relevant <i>reserve cost recovery</i>	3.3.5.3 The costs of providing each locationally specific reserve requirement shall be allocated by the Market Operator to those Trading Participants in the relevant reserve cost recovery	Deleted as prescribed by the single buyer system as prescribed in DOE DC 2021-03-0009 Section 1.4.				Adopted

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Rules								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
		zone in the form of <i>reserve cost recovery charges</i> to be determined in accordance with the principles set out in clause 3.3.5.4.	zone in the form of <i>reserve cost recovery charges</i> to be determined in accordance with the principles set out in clause 3.3.5.4.					
Ancillary Services Cost Recovery	3.3.5.4	3.3.5.4 When allocating <i>reserve cost recovery charges</i> to <i>Trading Participants</i> in a particular <i>reserve cost recovery zone</i> as published in Clause 3.3.5.1 the <i>Market Operator</i> may recover the cost of reserves from <i>Trading Participants</i> and <i>Network Service Providers</i> .	3.3.5.4 When allocating <i>reserve cost recovery charges</i> to <i>Trading Participants</i> in a particular <i>reserve cost recovery zone</i> as published in Clause 3.3.5.1 the <i>Market Operator</i> may recover the cost of reserves from <i>Trading Participants</i> and <i>Network Service Providers</i>.	Deleted as prescribed by the single buyer system as prescribed in DOE DC 2021-03-0009 Section 1.4.				Adopted
Approval, Periodic Review and Evaluation of Reserve Market Arrangements	3.3.7.3	3.3.7.3 Any proposed changes to the <i>ancillary service</i> categories, <i>ancillary services</i> arrangements, <i>ancillary services cost recovery formula</i> , <i>reserve categories</i> , <i>reserve regions</i> or locationally specific <i>reserve</i> requirements that will affect the fees of <i>ancillary services</i> shall be filed by the <i>System operator</i> of <i>TRANSCO</i> with the <i>ERC</i> for approval.	3.3.7.3 Any proposed changes to the <i>ancillary service</i> categories, <i>ancillary services</i> arrangements, <i>ancillary services cost recovery formula</i> , <i>reserve categories</i> , <i>reserve regions</i> or locationally specific <i>reserve</i> requirements that will affect the fees of <i>ancillary services</i> shall be filed by the <i>System operator</i> of <i>TRAN</i> <i>SCO</i> with the <i>ERC</i> for approval.	Clerical revisions				Adopted
Approval, Periodic Review and	3.3.7.4	3.3.7.4 The <i>System operator</i> shall continuously adjust the reserve	3.3.7.4 The <i>System operator</i> shall continuously adj <i>update</i> the reserve	Clerical revisions				Adopted

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Rules								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
Evaluation of Reserve Market Arrangements		effectiveness factors for each <i>reserve facility category</i> , and the quantum of <i>reserve</i> to be scheduled to meet each locationally specific <i>reserve requirement</i> by the <i>market dispatch optimization model</i> , so as to accurately reflect the <i>power system</i> under existing or future conditions, within the relevant <i>market</i> time frames, as advised by the <i>System operator</i> under clause 3.5.3.1.	effectiveness factors for each <i>reserve facility category</i> , and the quantum of <i>reserve</i> to be scheduled to meet each locationally specific <i>reserve requirement</i> by the <i>market dispatch optimization model</i> , so as to accurately reflect the <i>power system</i> under existing or future conditions, within the relevant <i>market</i> time frames, as advised by the <i>System operator</i> under clause 3.5.3.1.					
Customer Reserve Offers	3.5.8.1	This section shall apply only upon commencement of the <i>spot market</i> for <i>ancillary services</i> established under clause 3.3.4 with the <i>ancillary service</i> certification by the <i>System Operator</i> and upon approval of <i>ERC</i> for other types of ancillary <i>reserves</i> .	This section shall apply only upon commencement of the <i>spot market</i> for <i>ancillary services</i> established under clause 3.3.4 with the <i>ancillary service</i> certification by the <i>System Operator</i> and upon <u>promulgation of accreditation guidelines by ERC.</u>	Revised to harmonize with Clause 5.3 of DOE DC2021-03-0009 on qualification of load facilities as reserve providers.		APC: This section shall apply only upon commencement of the <i>spot market for ancillary services Reserves Market</i> established under clause 3.3.4 with the <i>ancillary service</i> certification by the <i>System Operator</i> <u>or any qualified third party</u> and upon <u>promulgation of accreditation guidelines by ERC.</u>	IEMOP recommends retention of its proposed wording.	Adopted as revised: This section shall apply only upon commencement of the <u>spot market for reserves</u> established under clause 3.3.4 with the <i>ancillary service</i> certification by the <i>System Operator</i> <u>or</u>

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Rules								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
						[additional edit consistent with the Clause 5.3 of DOE DC2021-03-0009]		<u>any qualified third party</u> and upon promulgation of <u>accreditation guidelines</u> by <u>ERC</u> .
					<u>Meralco:</u> Clarification is sought on whether this provision pertains only to load facilities covered by the Interruptible Load Program (ILP), in accordance with ERC Resolution No. 8, series of 2020 (and as later amended by succeeding resolutions), or other types of load facilities are also envisioned to be included here.		This provision is envisioned to cover all load facilities, not only loads under the ILP. Note that ILP is a different service from that being provided by ancillary services.	Retain IEMOP's wording; noted
					<u>MEI/PEI:</u> Is it presumed here that interruptible load facilities will only be		Interruptible loads may compete with Generators in provision of the different types of A/S	Noted



Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Rules								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
					contracted by the System Operator upon the commencement of the reserve market? This question is posed because all reserve capacities are required to be registered and offered in the WESM in accordance with the Must Offer Rule and the Central Scheduling Protocol for Energy and Contracted Reserves? Please clarify.		in the reserve market, and they can do that as spot transactions or as contracted by NGCP. IEMOP also wishes to note that in order to fully operationalize this, a policy on demand-side bidding should also be in place. On another note, there is a need for ERC to issue certification guidelines for load facilities that wishes to provide ancillary services.	
Determination Reserve Price	3.10.6	3.10.6 Determination Reserve Price (a) When applicable, the <i>reserve price</i> for a <i>reserve category</i> in a particular <i>reserve zone</i> for each <i>dispatch interval</i> shall be determined as the <i>shadow price</i> on the relevant <i>reserve requirement constraint</i> , defined in accordance with Clause 3.6.1.4 (e), in the <i>dispatch</i> optimization for that <i>dispatch</i>	3.10.6 Determination <u>of</u> Reserve Price (a) When applicable, the <i>reserve price</i> for a <i>reserve category</i> in a particular <i>reserve zone</i> for each <i>dispatch interval</i> shall be determined as the <i>shadow price</i> on the relevant <i>reserve requirement constraint</i> , defined in accordance with Clause 3.6.1.4 (e), in the <i>dispatch</i> optimization for	Clerical revisions.				Adopted, with adjustment on the wording 3.10.6 Determination <u>of</u> Reserve Price (a) When applicable, the <i>reserve price</i> for a <i>reserve category</i> in a

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Rules								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
		<i>interval and published by the Market Operator before the start of that dispatch interval.</i> (b) When applicable, the <i>reserve settlement price</i> for each <i>reserve zone</i> and <i>reserve category</i> in each <i>settlement interval</i> shall be determined as the schedule-weighted average of the corresponding <i>reserve prices</i> for that <i>reserve category</i> .	that <i>dispatch interval and published by the Market Operator before the start of that dispatch interval.</i> (b) When applicable, the <i>reserve settlement price</i> for each <i>reserve zone</i> and <i>reserve category</i> in each <i>settlement interval</i> shall be determined as the schedule-weighted average of the corresponding <i>reserve prices</i> for that <i>reserve category</i>.	Proposed to be deleted as the reserve prices determined in 3.10.6 (a) shall already be adopted in settlement				particular <i>reserve zone</i> for each <i>dispatch interval</i> shall be determined as the <i>shadow price</i> on the relevant <i>reserve requirement constraint</i> , defined in accordance with Clause 3.6.1.4 (e), in the <i>dispatch optimization</i> for that <i>dispatch interval</i> and <i>published by the Market Operator before the start of that dispatch interval</i> .
Determining the Reserve Trading Amount	3.13.8.2	3.13.8.2 During the initial operation of the <i>interim WESM</i> , the <i>reserve trading amount</i> shall be calculated based on the cost of reserves contracted for by the <i>System Operator</i> .	3.13.8.2 During the initial operation of the <i>interim WESM</i>, the <i>reserve trading amount</i> shall be calculated based on the cost of reserves contracted for by the <i>System Operator</i>.	For Deletion This is not applicable anymore as the WESM has been operating for more than 15 years and the DOE has	<u>Meralco:</u> Noted on the rationale for the deletion; however, the rules should still provide guidance on how the cost of	<u>Meralco:</u> 3.13.8.2 During the initial operation of the <i>interim WESM</i>, <u>The reserve trading amount shall be calculated based on</u>	IEMOP recommends retention of its original proposal; provisions on determining the reserve trading amounts is already elicited in 3.13.8.1	Adopted the deletion

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Rules								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
				already issued policies in relation to the reserve market.	reserves shall be calculated.	<u>the cost of reserves contracted for by the System Operator reserve scheduled quantities less reserve contracted quantities.</u>		
Determining the Reserve Cost Recovery Charge	3.13.9	3.13.9 Determining the Reserve Cost Recovery Charge The <i>reserve cost recovery charge</i> for <i>settlement</i> purposes will be determined for each <i>Trading Participant</i> in each <i>settlement interval</i> in accordance with the procedures developed under clause 3.3.5.	3.13.9 Determining the Reserve Cost Recovery Charge <u>Amount For settlement purposes.</u> It he reserve cost recovery charge <u>amount</u> for e <u>very reserve category and reserve region settlement purposes w</u> ill <u>shall</u> be determined <u>as the negative of the aggregate sum of the reserve trading amounts of the Trading Participants who supplied for that reserve category and reserve region</u> for each Trading Participant in each <i>settlement interval</i> in accordance with the procedures developed under clause 3.3.5.	Adopt Single buyer system as prescribed in DOE DC 2021-03-0009 Section 1.4. Negative is to be aligned with the market convention that a negative value signifies that the amount is a collectible amount of the Market Operator from the relevant entity.	<u>PEMC:</u> Suggest to also reflect the changes in the glossary		It may not be necessary to include this in the glossary as this provision already specifically defines what is the reserve cost recovery amount.	Adopted as revised Use the term Reserve Cost Recovery Amount
					<u>NGCP:</u> Suggest to define "reserve cost recovery amount"		It may not be necessary to include this in the glossary as this provision already specifically defines what is the reserve cost recovery amount.	Same as above
					<u>APC:</u> Clarification: Will this include the Load Participants who will participate as AS Provider in the Reserves Market? Applicable to initial implementation?		Yes, however participation of load facilities is subject to issuance of accreditation guidelines by the ERC	Noted

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Rules								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
					<u>Meralco:</u> Minor typo correction What clause no. is being referred to if 3.3.5 is being deleted?	<u>Meralco:</u> 3.13.9 xxx for each Trading Participant in each <i>settlement interval</i> in accordance <u>with</u> the procedures developed under clause 3.3.5. (<i>what clause no. is being referred to if 3.3.5 is being deleted?</i>)	IEMOP's proposal already defines on how the reserve cost recovery amount is calculated, hence, the deletion of the reference to clause 3.3.5 IEMOP Revision (to reflect clerical edits): 3.13.9 Determining the Reserve Cost Recovery Charge <u>Amount</u> <u>For settlement purposes,</u> the <i>the reserve cost recovery charge</i> <u>amount</u> for <u>every reserve category and reserve region</u> settlement purposes will <u>shall</u> be determined <u>as the negative of the aggregate sum of the reserve trading amounts of the Trading Participants who supplied for that reserve category and</u>	Adopted IEMOP's revision in 3.13.9



Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Rules								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
							<u>reserve region</u> for each Trading Participant in each settlement interval in accordance with the procedures developed under clause 3.3.5.	
Settlement Amounts for Trading Participants	3.13.1 1	3.13.11 Settlement Amounts for Trading Participants	3.13.11 Settlement Amounts for Trading Participants <u>and the System Operator</u>	Include the System Operator as the single buyer of reserves as prescribed in DOE DC 2021-03-0009 Section 1.4.				Adopted
Settlement Amounts for Trading Participants	3.13.1 1.1	3.13.11.1 Subject to the <i>WESM Rules</i> Clause 3.13.11.4, for each <i>billing period</i> , the <i>Market Operator</i> shall determine the <i>settlement amount</i> for each <i>Trading Participant</i> as the sum of the aggregate <i>trading amounts</i> for the <i>settlement intervals</i> in that <i>billing period</i> , determined in accordance with clause 3.13.11.2: plus (a) Any amount payable by the <i>Market Operator</i> to that <i>Trading Participant</i> in respect of that <i>billing</i>	3.13.11.1 Subject to the <i>WESM Rules</i> Clause 3.13.11.4 , for each <i>billing period</i> , the <i>Market Operator</i> shall determine the <i>settlement amount</i> for each <i>Trading Participant</i> as the sum of the aggregate <i>trading amounts</i> for the <i>settlement intervals</i> in that <i>billing period</i> , determined in accordance with clause 3.13.11.2: plus (a) Any amount payable by the <i>Market Operator</i> to that <i>Trading Participant</i> in respect of that <i>billing</i>	Clerical revisions proposed to delete this part as the said clause refers to the same section.				Adopted

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Rules								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
		<p><i>period</i> and not accounted for in Clause 3.13.11.2, including payment for any <i>ancillary services</i> purchased on behalf of the <i>System Operator</i>, less the sum of</p> <p>(b) Any <i>market fees</i> which that <i>Trading Participant</i> is required to pay in respect of that <i>billing period</i> as determined in accordance with Clause 2.10; plus</p> <p>(c) Any other amounts payable by that <i>Trading Participant</i> to the <i>Market Operator</i> in respect of that <i>billing period</i>, including any <i>reserve cost recovery charges</i>.</p>	<p><i>period</i> and not accounted for in Clause 3.13.11.2, including payment for any <i>ancillary services</i> purchased on behalf of the <i>System Operator</i>, less the sum of</p> <p>(b) Any <i>market fees</i> which that <i>Trading Participant</i> is required to pay in respect of that <i>billing period</i> as determined in accordance with Clause 2.10; plus</p> <p>(c) Any other amounts payable by that <i>Trading Participant</i> to the <i>Market Operator</i> in respect of that <i>billing period</i>, including any reserve cost recovery charges.</p>	Revised (c) to Adopt Single buyer system as prescribed in DOE DC 2021-03-0009 Section 1.4.				
Settlement Amounts for Trading Participants	3.13.11.2	<p>3.13.11.2 The aggregate <i>trading amount</i> for a <i>Trading Participant</i> for a <i>settlement interval</i> equals the sum of:</p> <p style="padding-left: 40px;">a. The <i>energy trading amounts</i> for that <i>Trading Participant</i> calculated in accordance with Clause 3.13.8 (which may be positive or negative</p>	<p>3.13.11.2 The aggregate <i>trading amount</i> for a <i>Trading Participant</i> for a <i>settlement interval</i> equals the sum of:</p> <p style="padding-left: 40px;">a. The <i>energy trading amounts</i> for that <i>Trading Participant</i> calculated in accordance with Clause 3.13.8 (which may be positive or negative for</p>	Remove (d) and (f) to Adopt Single buyer system as prescribed in DOE DC 2021-03-0009 Section 1.4.				Adopted

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Rules								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
		for any <i>Trading Participant</i>); b. The reserve trading amounts for each reserve region into which that <i>Trading Participant</i> contributes reserve calculated in accordance with Clause 3.13.8 (which will always be positive for both <i>Generation Companies</i> and <i>Customers</i>); plus c. The <i>transmission right trading amounts</i> for each <i>transmission right</i> held by the <i>WESM Participant</i> calculated in accordance with Clause 3.13.10 (which will typically be positive for any <i>Trading Participant</i>); less the sum of d. The reserve cost recovery charge determined for that <i>Trading Participant</i> with	any <i>Trading Participant</i>); b. The reserve trading amounts for each reserve region into which that <i>Trading Participant</i> contributes reserve calculated in accordance with Clause 3.13.8 (which will always be positive for both <i>Generation Companies</i> and <i>Customers</i>); plus c. The <i>transmission right trading amounts</i> for each <i>transmission right</i> held by the <i>WESM Participant</i> calculated in accordance with Clause 3.13.10 (which will typically be positive for any <i>Trading Participant</i>); less the sum of d. The reserve cost recovery charge determined for that <i>Trading Participant</i> with					

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Rules								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
		<p>respect to any <i>reserve cost recovery</i> zone within which it has any <i>facility connected</i> calculated in accordance with the procedures developed under clause 3.3.5 (which will be positive for any <i>Trading Participant</i>); and</p> <p>(f) Any other <i>reserve cost recovery charges</i> determined for that <i>Trading Participant</i> in accordance with the procedures developed under clause 3.3.5 (which will be positive for any <i>Trading Participant</i>).</p>	<p>respect to any <i>reserve cost recovery</i> zone within which it has any <i>facility connected</i> calculated in accordance with the procedures developed under clause 3.3.5 (which will be positive for any <i>Trading Participant</i>); and</p> <p>(f) Any other <i>reserve cost recovery charges</i> determined for that <i>Trading Participant</i> in accordance with the procedures developed under clause 3.3.5 (which will be positive for any <i>Trading Participant</i>).</p>					
Settlement Amounts for Trading Participants	(new)	(new)	<p><u>3.13.11.4 For each <i>billing period</i>, the <i>Market Operator</i> shall determine the <i>settlement amount</i> for the <i>System Operator</i> as the sum of the aggregate <i>reserve recovery amounts</i> for the <i>settlement intervals</i> in that <i>billing period</i>.</u></p>	New provision added to define how the reserve recovery amounts is calculated for each billing period, to be recovered from the System Operator, as prescribed in DOE	<p><u>AC Energy:</u></p> <p>Reserve cost recovery charge was the term used in the WESM Rules. For uniformity and consistency, we suggest adopting the said term.</p>	<p><u>AC Energy:</u></p> <p>3.13.11.4 For each <i>billing period</i>, the <i>Market Operator</i> shall determine the <i>settlement amount</i> for the <i>System Operator</i> as the sum of the</p>	<p>IEMOP recommends retention of its original proposal.</p> <p>It is more appropriate to define them as reserve recovery amounts instead of reserve cost recovery charges, as the said</p>	Adopted IEMOP's retention of the proposal

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Rules								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
				DC 2021-03-0009 Section 1.4.		aggregate <i>reserve <u>cost</u> recovery <u>charges</u> amounts</i> for the <i>settlement intervals</i> in that <i>billing period</i> .	amounts are to be recovered from the SO as per DOE policy.	
					<u>NGCP:</u> Request to clarify if “ <i>reserve recovery amounts</i> ” is the same as “ <i>reserve cost recovery amounts</i> ”		IEMOP's revised proposal: <u>3.13.11.4 For each billing period, the Market Operator shall determine the settlement amount for the System Operator as the sum of the aggregate reserve cost recovery amounts for the settlement intervals in that billing period.</u>	Adopted 3.13.11.4 Adopted the definition of Reserve Cost Recovery Amount to be included in the glossary - the amount to be recovered from the System Operator pertaining to the negative of the aggregate sum of the reserve trading amounts of the Trading Participants



Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Rules								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
								who supplied for reserves.
					<p><u>SPC/SIPC:</u></p> <p>The reserve recovery amounts will have a definite formula upon the approval of its Price Determination Methodology, thus the Market Operator (MO) will just adopt and calculate the reserve recovery amounts based on the approved formula. We further suggest that the MO clearly indicates the Reserve Trading Amount (RTA) in their invoices/WESM bills by reflecting separate item for the RTA.</p>	<p><u>SPC/SIPC:</u></p> <p><u>3.13.11.4 For each billing period, the Market Operator shall calculate determine the settlement amount for the System Operator as the sum of the aggregate reserve recovery amounts for the settlement intervals in that billing period. Likewise, the Reserve Trading Amount will have a separate item in the invoices/WESM bills of the affected Trading Participants as applicable.</u></p>		Revisited in the BSM
					<p><u>Meralco:</u></p> <p>It is recommended that the settlement process take into account BIR Ruling No. CT-323-2021.</p>		Noted. The Guidelines to implement the BIR Ruling pertaining to WESM transactions shall be applicable to reserve transactions, upon the commercial	Noted

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Rules								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
							operation of the reserve market.	
GLOSSARY		Dispatchable Reserve. Generating capacity that is not scheduled for regular energy supply, regulating reserve, contingency reserve, or interruptible loads not scheduled for contingency reserve, and that are readily available for dispatch in order to replenish the contingency reserve service whenever a generating unit trips or a loss of a single transmission interconnection occurs.	Dispatchable Reserve. Generating capacity that is not scheduled for regular energy supply, regulating reserve, contingency reserve, or interruptible loads not scheduled for contingency reserve, and that are readily available for dispatch in order to replenish the contingency reserve service whenever a generating unit trips or a loss of a single transmission interconnection occurs.	Revised to harmonize with definition of dispatchable reserve in Section 4.1 of DOE DC2021-03-0009	SPC/SIPC: Adopt the verbatim of DOE DC 2021-03-0009 Section 4.1.	SPC/SIPC: Dispatchable Reserve . Generating capacity that is not scheduled for regular energy supply, regulating reserve, contingency reserve, or interruptible loads not scheduled for contingency reserve, and that are readily available for dispatch in order to replenish the e Contingency r Reserves service whenever a generating unit trips or a loss of a single transmission interconnection occurs.		Adopted SPC's revision
GLOSSARY					PEMC: Provide definition of Qualified Generating Unit	PEMC: <u>Qualified Generating Unit. A Generating Unit tested, certified and monitored by the System Operator to provide specific types of Ancillary Services.</u>	IEMOP is amenable to the proposal	Adopted PEMC's recommendation

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Rules								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
GLOSSARY					<p><u>PEMC:</u></p> <p>Provide definition of Qualified Interruptible Load</p>	<p><u>PEMC:</u></p> <p><u>Qualified Interruptible Load. A Load that is tested, certified and monitored by the System Operator to provide Tertiary Reserve Ancillary Service.</u></p>	IEMOP is amenable to the proposal	Adopted PEMC's recommendation
GLOSSARY					<p><u>PEMC:</u></p> <p>For consistency with the proposed changes in 3.13.19</p>	<p><u>PEMC:</u></p> <p><u>Reserve Cost Recovery Charges. Amount.</u> Charges Amount to recover the costs incurred in purchasing <i>reserve</i>, to be determined by a formula approved by the <i>ERC</i>.</p>	IEMOP is of the opinion that the definition may not be necessary.	Already defined; to be inserted in the glossary
GLOSSARY		(new)	<p><u>Reserve Cost Recovery Amount. The amount to be recovered from the <i>System Operator</i> pertaining to the negative of the aggregate sum of the reserve trading amounts of the <i>Trading Participants</i> who supplied for reserves</u></p>	Provide definition for Reserve Cost Recovery Amount.				Adopted

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Price Determination Methodology								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
					<i>Please write general comments here, if any.</i>			
Scope	1.3	<p>This <i>Market Manual</i> provides the following:</p> <ul style="list-style-type: none"> a. Methodology by which <i>energy</i> shall be priced and settled in accordance with the market design principles as issued by the <i>DOE</i>; b. Methodology by which <i>energy</i> in the <i>WESM</i> shall be priced, including the determination of prices when there is extreme price separation due to <i>network congestion</i>, and determination of <i>administered prices</i> during <i>market suspension</i> and <i>market intervention</i>; c. Methodology by which <i>energy</i> shall 	<p>This <i>Market Manual</i> provides the following:</p> <ul style="list-style-type: none"> a. Methodology by which <u>energy and reserves</u> shall be priced and settled in accordance with the market design principles as issued by the <i>DOE</i>; b. Methodology by which <u>energy and reserves</u> in the <i>WESM</i> shall be priced, including the determination of prices when there is extreme price separation due to <i>network congestion</i>, and determination of <i>administered prices</i> during <i>market suspension</i> and <i>market intervention</i>; c. Methodology by which <u>energy and reserves</u> shall be settled in the 	Included in 2017 PDM filing. For inclusion of reserve pricing and settlement in the Scope.	<p><u>AC Energy:</u></p> <p>Under the WESM Rules, reserves is defined as:</p> <p>Reserve. Contingency reserve or regulating reserve.</p> <p>May we clarify if the term ‘reserve’ as used in this draft would refer to ancillary services? To avoid confusion, we suggest that the Market Manual include a definition of the term “reserves”.</p>		<p>This is the original wording as per the original version of the EWDO PDM (DOE 2017-03-0001)</p> <p>Reserve is a global word used in WESM Rules and other Market Manuals. Also, reserves refer to specific types of ancillary services, namely: regulation, contingency, and dispatchable.</p>	Adopted IEMOP's original proposal

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

		be settled in the <i>WESM</i> , the determination of additional compensation, as applicable, and the determination and allocation of <i>net settlement surplus</i> ; and d. Computational formula that will enable the <i>WESM participants</i> to verify the correctness of the charges being imposed.	<i>WESM</i> , the determination of additional compensation, as applicable, and the determination and allocation of <i>net settlement surplus</i> ; and d. Computational formula that will enable the <i>WESM participants</i> to verify the correctness of the charges being imposed.					
Reserves	4.11	4.11 Reserves <i>Reserve and energy dispatch schedules shall be determined in a co-optimized manner in the market dispatch optimization model.</i>	4.11 Reserves <u>4.11.1</u> <i>Reserve and energy dispatch schedules shall be determined in a co-optimized manner in the market dispatch optimization model.</i>	Added numberings as this section shall contain more details with the proposed amendments	<u>SPC/SIPC:</u> Indicate the separate accounting of each type/category of reserve requirements per region/grid.	<u>SPC/SIPC:</u> <u>4.11.2 The reserve regions shall initially consist of the Luzon, Visayas, and Mindanao Grids which will had separate accounting of reserve requirements per type/category for each region/grid.</u>		Adopted IEMOP's proposal
Reserves	(new)	(New)	<u>4.11.2 The reserve regions shall initially consist of the Luzon, Visayas, and Mindanao Grids.</u>	Reflecting the System Operator's current practice that reserve				Adopted

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

				requirements are set for each Grid Initially part of the PDM filed to ERC in March 2017 (Originally 4.11.6)				
Reserves	(New)	(New)	<u>4.11.3 The reserve price for each reserve region and reserve category shall be determined as the shadow price on the relevant reserve requirement constraint in the dispatch optimization for that dispatch interval.</u>	Explains on where the reserve price is derived from the MDOM Initially part of the PDM filed to ERC in March 2017 (Originally 4.11.6)				Adopted
Application of WESM Prices	4.12.1	In general, the nodal prices resulting from the <i>real-time dispatch market run</i> as determined in Section 4.4.4, and, as applicable, Section 4.4.5, shall be used as <i>final nodal energy prices</i> in the calculation of <i>settlements</i> except if there are non-zero constraint violation variable values or pricing error notices:	In general, the nodal prices resulting from the <i>real-time dispatch market run</i> as determined in Section 4.4.4, and, as applicable, Section 4.4.5, shall be used as <i>final nodal energy prices</i> <u>and reserve prices</u> in the calculation of <i>settlements</i> except if there are non-zero constraint violation variable values or pricing error notices:	Added reserve prices Initially part of the PDM filed to ERC in March 2017. Updated to reflect verbatim wordings	<u>Technical Committee:</u> For clarification: do we have nodal prices for reserves as well? Do we still consider congestion cost and transmission loss cost for the nodal prices?		No. Reserve prices will be on a per reserve region per reserve type basis.	Noted
		a. If there are one or more non-zero <i>constraint violation variable</i> values, then	a. If there are one or more non-zero <i>constraint violation</i>		<u>SN Aboitiz Power:</u> Clarify that these prices refer to nodal energy, and regional reserve prices.	<u>SN Aboitiz Power:</u> In general, the nodal prices resulting from the <i>real-time dispatch market run</i> as determined in Section 4.4.4, and, as	Yes. IEMOP recommends its original proposal. This is the original wording as per the original version of	Adopted IEMOP's proposal

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

		<i>automatic pricing re-run</i> prices in accordance with Section 5.2 shall apply; and b. If there are pricing errors, prices from market pricing re-runs under Section 5.3 shall apply.	<i>variable values</i> , then <i>automatic pricing re-run</i> prices in accordance with Section 5.2 shall apply; and b. If there are pricing errors, prices from market pricing re-runs under Section 5.3 shall apply.			applicable, Section 4.4.5, shall be used as <i>final nodal energy prices</i> and regional reserve prices in the calculation of <i>settlements</i> except if there are non-zero constraint violation variable values or pricing error notices:	the EWDO PDM (DOE 2017-03-0001)	
Automatic Pricing Re-run	5.2.1	5.2.1 <i>Automatic pricing reruns for market projections and real-time dispatch</i> shall ensure that the <i>energy prices</i> reflect the marginal costs of supplying <i>energy</i> at each <i>node</i> , regional, or island level.	5.2.1 <i>Automatic pricing reruns for market projections and real-time dispatch</i> shall ensure that the <i>energy prices</i> and reserve prices reflect the marginal costs of supplying <i>energy</i> at each <i>node</i> , regional, or island level; and the marginal costs of supplying reserves.	Include reserves as considerations of automatic pricing reruns. Initially part of the PDM filed to ERC in March 2017. Updated to only include marginal costs of supplying reserves. Shortage pricing and excess pricing were not included.	AC Energy: To ensure clarity and avoid confusion, we suggest separating or breaking this provision into two parts.	AC Energy: 5.2.1 <i>Automatic pricing reruns for market projections and real-time dispatch</i> shall ensure that the <i>energy prices and reserve prices</i> reflect the marginal costs of supplying <i>energy</i> at each <i>node</i> , regional, or island level, while the reserve prices reflect the marginal costs of supplying reserves.	IEMOP recommends its original proposal. This is the original wording as per the original version of the EWDO PDM (DOE 2017-03-0001)	Adopted IEMOP's proposal
Automatic Pricing Re-run	5.2.2	5.2.2 The <i>automatic pricing re-run of the market dispatch optimization model</i> shall determine the prices for <i>energy</i> with relaxed <i>constraints</i> and shall have	5.2.2 The <i>automatic pricing re-run of the market dispatch optimization model</i> shall determine the prices for <i>energy</i> and reserves with relaxed <i>constraints</i> and shall	Include reserves as considerations of automatic pricing reruns. Initially part of the				Adopted

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

		approximately the same <i>dispatch schedules</i> .	have approximately the same <i>dispatch schedules</i> .	PDM filed to ERC in March 2017.																																				
Automatic Pricing Re-run	5.2.5	<div>5.2.5 The following table shows each type of <i>constraints</i> with their corresponding <i>constraint</i> relaxation formulas during pricing re-runs:</div> <table><thead><tr><th>Soft Constraint</th><th>Violation</th><th>Constraint Relaxation during Pricing Re-Run</th><th>Re-run Price¹</th></tr></thead><tbody><tr><td>Thermal Base Case</td><td>X</td><td>x + delta</td><td>EDP</td></tr><tr><td>Transmission Group</td><td>X</td><td>x + delta</td><td>EDP</td></tr><tr><td>Self-Scheduled Generation <i>Constraint</i></td><td>X</td><td>x + delta</td><td>EDP</td></tr></tbody></table>	Soft Constraint	Violation	Constraint Relaxation during Pricing Re-Run	Re-run Price ¹	Thermal Base Case	X	x + delta	EDP	Transmission Group	X	x + delta	EDP	Self-Scheduled Generation <i>Constraint</i>	X	x + delta	EDP	<div>5.2.5 The following table shows each type of <i>constraints</i> with their corresponding <i>constraint</i> relaxation formulas during pricing re-runs:</div> <table><thead><tr><th>Soft Constraint</th><th>Violation</th><th>Constraint Relaxation during Pricing Re-Run</th><th>Re-run Price²</th></tr></thead><tbody><tr><td>Thermal Base Case</td><td>X</td><td>x + delta</td><td>EDP <u>and</u> <u>RP</u></td></tr><tr><td>Transmission Group</td><td>X</td><td>x + delta</td><td>EDP <u>and</u> <u>RP</u></td></tr><tr><td>Self-Scheduled Generation <i>Constraint</i></td><td>X</td><td>x + delta</td><td>EDP <u>and</u> <u>RP</u></td></tr></tbody></table>	Soft Constraint	Violation	Constraint Relaxation during Pricing Re-Run	Re-run Price ²	Thermal Base Case	X	x + delta	EDP <u>and</u> <u>RP</u>	Transmission Group	X	x + delta	EDP <u>and</u> <u>RP</u>	Self-Scheduled Generation <i>Constraint</i>	X	x + delta	EDP <u>and</u> <u>RP</u>	Included reserve prices as part of the re-run price. Initially part of the PDM filed to ERC in March 2017.				Adopted
Soft Constraint	Violation	Constraint Relaxation during Pricing Re-Run	Re-run Price ¹																																					
Thermal Base Case	X	x + delta	EDP																																					
Transmission Group	X	x + delta	EDP																																					
Self-Scheduled Generation <i>Constraint</i>	X	x + delta	EDP																																					
Soft Constraint	Violation	Constraint Relaxation during Pricing Re-Run	Re-run Price ²																																					
Thermal Base Case	X	x + delta	EDP <u>and</u> <u>RP</u>																																					
Transmission Group	X	x + delta	EDP <u>and</u> <u>RP</u>																																					
Self-Scheduled Generation <i>Constraint</i>	X	x + delta	EDP <u>and</u> <u>RP</u>																																					

¹ EDP refers to *nodal energy dispatch price*
 Template version: 13 March 2020

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

		<table><tr><td>System Energy Balance (Over-generation and under-generation)</td><td>X</td><td>x + delta</td><td>EDP</td></tr><tr><td>Nodal Value of Lost Load or Nodal Energy Balance</td><td>X</td><td>x + delta</td><td>EDP</td></tr><tr><td>Thermal Contingency</td><td>X</td><td>x + delta</td><td>EDP</td></tr><tr><td>Reserve Requirement</td><td>X</td><td>x + delta</td><td>EDP</td></tr></table>	System Energy Balance (Over-generation and under-generation)	X	x + delta	EDP	Nodal Value of Lost Load or Nodal Energy Balance	X	x + delta	EDP	Thermal Contingency	X	x + delta	EDP	Reserve Requirement	X	x + delta	EDP	<table><tr><td>System Energy Balance (Over-generation and under-generation)</td><td>X</td><td>x + delta</td><td>EDP and RP</td></tr><tr><td>Nodal Value of Lost Load or Nodal Energy Balance</td><td>X</td><td>x + delta</td><td>EDP and RP</td></tr><tr><td>Thermal Contingency</td><td>X</td><td>x + delta</td><td>EDP and RP</td></tr><tr><td>Reserve Requirement</td><td>X</td><td>x + delta</td><td>EDP and RP</td></tr></table>	System Energy Balance (Over-generation and under-generation)	X	x + delta	EDP and RP	Nodal Value of Lost Load or Nodal Energy Balance	X	x + delta	EDP and RP	Thermal Contingency	X	x + delta	EDP and RP	Reserve Requirement	X	x + delta	EDP and RP					
System Energy Balance (Over-generation and under-generation)	X	x + delta	EDP																																					
Nodal Value of Lost Load or Nodal Energy Balance	X	x + delta	EDP																																					
Thermal Contingency	X	x + delta	EDP																																					
Reserve Requirement	X	x + delta	EDP																																					
System Energy Balance (Over-generation and under-generation)	X	x + delta	EDP and RP																																					
Nodal Value of Lost Load or Nodal Energy Balance	X	x + delta	EDP and RP																																					
Thermal Contingency	X	x + delta	EDP and RP																																					
Reserve Requirement	X	x + delta	EDP and RP																																					
Price Substitution for Reserve Prices	6.5	(new)	<p><u>6.5 Price Substitution Methodology for Reserve Prices</u></p> <p><u>In cases where price substitution methodology is applied, the <i>reserve price</i> for a certain <i>reserve category</i> in a <i>reserve region</i> shall be calculated as the sum of the <i>constrained solution's</i></u></p>	Added provision to determine the reserve prices when PSM is triggered. Based on Issue 1.0 of the PDM filed to ERC in March 2017.	<p><u>Meralco:</u></p> <p>Please provide sample calculation or illustrative example of the formula used in this provision.</p> <p>Also indicate the unit used for each defined term.</p>		<p>We find that this is not necessary as this is already part of the original EWDO PDM promulgated by the DOE in 2017.</p> <p>Each term is this provisions is in PhP/MW</p>	<p>Noted. Illustrative sample presented by Edward Olmedo</p> <p>Sample calculation</p>																																

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

			<p><u>marginal reserve offer price and the opportunity cost calculated based on the unconstrained solution. It shall be calculated as follows:</u></p> <p><u>$SRP_{j,r,a,i} =$</u> <u>$MROP_{CONS-r,a,i} +$</u> <u>$OppCost_{UNCD-r,a,i}$</u></p> <p><u>Where:</u></p> <p><u>$SRP_{j,r,a,i}$</u> refers to the <u>substitute reserve price of reserve category r in reserve region a for dispatch interval i</u></p> <p><u>$MROP_{CONS-r,a,i}$</u> refers to the <u>marginal reserve offer price in reserve category r in reserve region a for</u></p>					<p>to be appended</p> <p>IEMOP to modify the provision similar to energy</p>
--	--	--	---	--	--	--	--	--

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

			<p><u>dispatch interval i during the constrained solution</u></p> <p><u>OppCost_{UNCD-r, a, i}</u> refers to the opportunity cost based on the unconstrained solution in reserve category r in reserve region a for dispatch interval i</p>					
Administered Prices	7.1.2	<p>7.1.2 The <i>administered price</i> shall be established by the <i>Market Operator</i> in accordance with the following <i>guiding principles</i>:</p> <p>a. The <i>administered price</i> shall be fair and reasonable to both the suppliers and consumers of electricity.</p> <p>b. <i>Administered prices</i> shall be determined and shall replace <i>market prices</i> for energy, i.e. energy</p>	<p>7.1.2 The <i>administered price</i> shall be established by the <i>Market Operator</i> in accordance with the following <i>guiding principles</i>:</p> <p>a. The <i>administered price</i> shall be fair and reasonable to both the suppliers and consumers of electricity.</p> <p>b. <i>Administered prices</i> shall be determined and shall replace <i>market prices</i> for energy, i.e. energy</p>	<p>Added reserve prices in the determination of the AP</p> <p>Initially part of the PDM filed to ERC in March 2017.</p>	<p>AC Energy:</p> <p>For clarity, we suggest to include the word ‘reserve’ in the provision.</p>	<p>AC Energy:</p> <p>b. <i>Administered prices</i> shall be determined and shall replace <i>market prices</i> for energy <u>and reserve</u>, i.e. <u>the energy and reserve</u> administered prices shall replace the <i>nodal energy and reserve dispatch prices</i>, <u>respectively</u>.</p>	<p>IEMOP recommends retention of its original proposal.</p> <p>This is the original wording as per the original version of the EWDO PDM (DOE 2017-03-0001)</p>	Adopted IEMOP's original proposal

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

	<p><i>administered prices</i> shall replace the <i>nodal energy dispatch prices</i>.</p> <p>c. The process for determining the <i>administered price</i> shall be transparent to the <i>Trading Participants</i> and administratively simple to implement.</p> <p>d. The process for determining the <i>administered price</i> shall be based on the market information available prior to <i>market intervention</i> or <i>market suspension</i>.</p> <p>e. The <i>administered price</i> shall be applied in the region where the <i>market suspension</i> or <i>market intervention</i> is declared. For this purpose, the regions are Luzon, Visayas and Mindanao.</p> <p>f. The <i>administered price</i> will apply only to transactions above the declared <i>bilateral contract</i> quantities.</p> <p>g. The <i>administered price</i> will be used for settlement of transactions in dispatch intervals during market intervention and suspension where the Market Operator is unable to generate a market schedule.</p>	<p><i>administered prices</i> shall replace the <i>nodal energy dispatch prices</i>, <u>and reserves, i.e. reserve administered prices shall replace the reserve prices.</u></p> <p>c. The process for determining the <i>administered price</i> shall be transparent to the <i>Trading Participants</i> and administratively simple to implement.</p> <p>d. The process for determining the <i>administered price</i> shall be based on the market information available prior to <i>market intervention</i> or <i>market suspension</i>.</p> <p>e. The <i>administered price</i> shall be applied in the region where the <i>market suspension</i> or <i>market intervention</i> is declared. For this purpose, the regions are Luzon, Visayas and Mindanao.</p> <p>f. The <i>administered price</i> will apply only to transactions above the declared <i>bilateral contract</i> quantities.</p> <p>g. The <i>administered price</i> will be used for settlement of transactions in dispatch intervals during market intervention and suspension where the Market Operator is unable to generate a market schedule.</p>					
--	--	---	--	--	--	--	--

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

		h. Where <i>market suspension</i> or <i>market intervention</i> is declared in an island grid (“grid islanding”), the <i>administered prices</i> shall be applied only to the resources in the island grid where the <i>market suspension</i> or <i>market intervention</i> was declared.	h. Where <i>market suspension</i> or <i>market intervention</i> is declared in an island grid (“grid islanding”), the <i>administered prices</i> shall be applied only to the resources in the island grid where the <i>market suspension</i> or <i>market intervention</i> was declared.					
Reserve Administered Price	(new)	(new)	<u>7.4 Reserve Administered Price</u> <u>7.4.1 In case two (2) or more of the four (4) most recent similar trading days and similar dispatch intervals have not been administered, the reserve administered price for each reserve category in every reserve region shall be computed as follows:</u> <u>a. The aggregate reserve dispatch schedule-weighted average of the reserve prices for</u>	<p>Based the mechanism on the way Administered Prices for Energy is determined</p> <p>Generalized the market resource to consider loads acting as reserve providers.</p> <p>Reserve administered prices are to be computed per reserve region and applied to each reserve provider resource belonging to a reserve region.</p>	Meralco: Please provide sample calculation or illustrative example of the formula used in this provision. Also indicate the unit used for each defined term.		We find that this is not necessary as this is already part of the original EWDO PDM promulgated by the DOE in 2017. Each term is this provisions is in Php/MW	Adopted
					MEI/PEI: In case a market intervention happens during the first week of commercial operation of the reserve market, what will be the computation for the reserve administered price in the absence of reserve prices and		We shall defer to the DOE/ERC on this	Noted. To be raised by IEMOP during DOE/ERC meeting or public consultation or expository hearing on PDM

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

			<p><u>each reserve category in every reserve region of the four (4) most recent similar trading days and similar dispatch intervals that have not been administered, as set out in the following formula:</u></p> $RAP_{r,a,D,i} = \frac{\sum_{d=D-1}^{D-n} \left(RP_{r,a,d,i} * \sum_{k \in K_{r,a,d,i}} RDS_{k,r,a,d,i} \right)}{\sum_{d=D-1}^{D-n} \sum_{k \in K_{r,a,d,i}} RDS_{k,r,a,d,i}}$ <p><u>Where:</u></p> <p><u>$RAP_{r,a,D,i}$</u> refers to the <u>reserve administered price for reserve category r in reserve region a at dispatch interval i within trading day D</u></p>		quantities for most recent similar trading days and similar dispatch intervals?			
--	--	--	--	--	---	--	--	--

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

			<div><div><u>$RP_{r,a,d,i}$</u></div><div>refers to the <u>reserve price</u> for <u>reserve</u> <u>category r</u> in <u>reserve</u> <u>region a</u> at <u>dispatch</u> <u>interval i</u> within <u>trading</u> <u>day d</u></div></div>					
			<div><div><u>$RDS_{k,r,a,d,i}$</u></div><div>refers to the <u>reserve</u> <u>dispatch</u> <u>schedule</u> for <u>reserve</u> <u>provider</u> <u>resource k</u> for <u>reserve</u> <u>category r</u> in <u>reserve</u> <u>region a</u> at <u>dispatch</u> <u>interval i</u> within <u>trading</u> <u>day d</u></div></div>					
			<div><div><u>D</u></div><div>refers to the <u>trading day</u> with <u>dispatch</u> <u>interval</u> under <u>market</u> <u>intervention</u> or <u>market</u> <u>suspension</u></div></div>					
			<div><div><u>$d = D - n$</u></div><div>refers to the <u>n^{th} most</u></div></div>					

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

			<p><u>recent non-administered similar trading day and similar dispatch interval</u></p> <p><u><i>n</i></u> refers to the number of similar trading days and dispatch intervals that have not been administered from the four (4) most recent similar trading days and dispatch intervals</p>					
Reserve Administered Price	(new)	(new)	<p><u>7.4.2 In case three (3) or all of the four (4) most recent similar trading days and similar dispatch intervals have been administered, the reserve administered price for each reserve category in every reserve region shall be computed as follows:</u></p>	Same as previous	<p>Meralco:</p> <p>Please provide sample calculation or illustrative example of the formula used in this provision.</p> <p>Also indicate the unit used for each defined term.</p>		<p>We find that this is not necessary as this is already part of the original EWDO PDM promulgated by the DOE in 2017.</p> <p>Each term is this provisions is in PhP/MW</p>	Noted

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

			<p><u><i>a. The aggregate reserve dispatch schedule-weighted average of the reserve administered prices of the similar trading days and similar dispatch intervals as set out in the following formula:</i></u></p> <p>$\text{RAP}_{k,D,i} = \frac{\sum_{d=D-1}^{D-n} \left(\text{RAP}_{k,d,i} * \sum_{k \in K_{r,a,d,i}} \text{RDS}_{k,r,a,d,i} \right)}{\sum_{k \in K_{r,a,d,i}} \text{RDS}_{k,r,a,d,i}}$</p> <p><u>Where:</u></p> <p><u>$\text{RAP}_{k,D,i}$</u> refers to the <u>reserve administered price for reserve provider resource k at dispatch interval i within trading day D</u></p>					
--	--	--	---	--	--	--	--	--

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

			<p><u>$RAP_{k,d,i}$</u> refers to the <u>reserve</u> <u>administered</u> <u>price for reserve</u> <u>provider</u> <u>resource k for</u> <u>dispatch</u> <u>interval i within</u> <u>trading day d</u></p> <p><u>$RDS_{k,r,a,d,i}$</u> refers to the <u>reserve</u> <u>dispatch</u> <u>schedule for</u> <u>reserve provider</u> <u>resource k for</u> <u>reserve</u> <u>category r in</u> <u>reserve region a</u> <u>at dispatch</u> <u>interval i within</u> <u>trading day d</u></p> <p><u>D</u> refers to the <u>current trading</u> <u>day</u></p> <p><u>$d = D - n$</u> refers to the n^{th} <u>most recent</u> <u>similar trading</u> <u>day of D</u></p> <p><u>n</u> refers to the number <u>of similar trading</u> <u>days and dispatch</u> <u>intervals that have</u> <u>not been</u> <u>administered from</u></p>					
--	--	--	---	--	--	--	--	--

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

			<u>the four (4) most recent similar trading days and dispatch intervals</u>					
Reserve Administered Price	(new)	(new)	<u>7.4.3 For each reserve provider resource, the reserve dispatch schedule shall be set to the reserve schedules determined by the System Operator for the dispatch interval under market suspension or market intervention.</u>	Same as previous				Adopted
Reserve Administered Price	(new)	(new)	<u>7.4.4 Similar trading days refer to each day of the week (i.e., Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday) while similar dispatch intervals refer to the same period within the same settlement interval.</u>	Same as previous				Adopted
Reserve Trading Amount	(new)	(new)	<u>8.2.2 Reserve Trading Amount</u> ² <u>a. The reserve quantity for any reserve provider resource in any</u>	Provided mathematical details on how the reserve trading amounts are computed. Initially part of the	<u>Meralco:</u> Please provide sample calculation or illustrative example of the formula used in this provision.		Noted	Adopted

² WESM Rules Clause 3.13

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

			<p><u>dispatch interval shall be determined by the Market Operator as the reserve dispatch schedule less reserve contracted quantities, as shown in the following formula:</u></p> <p>$RQ_{j,r,a,i} = (RDS_{j,r,a,i} - RBCQ_{j,r,a,i})$</p> <p><u>Where:</u></p> <p><u>$RQ_{j,r,a,i}$</u> refers to the <u>reserve quantity of reserve provider resource j for reserve category r and reserve region a at dispatch interval i</u></p> <p><u>$RDS_{j,r,a,i}$</u> refers to the <u>reserve dispatch</u></p>	<p>PDM filed to ERC in March 2017 but with changes on nomenclature of reserve dispatch price to reserve price and application of reserve price per region instead of per resource.</p>	<p>In addition, indicate the unit used for each defined term.</p> <p>The changes in nomenclature of reserve dispatch price to reserve price, and application of reserve price per region instead of per resource, should also be submitted/manifested to the ERC in the PDM case for appropriate adoption by of the ERC.</p> <p>Lastly, we note that the prescribed formula is for the Reserve Trading Amount of a reserve provider that has been scheduled. We would like to seek clarification on the treatment if the reserve provider with an ASPA is not scheduled. Will the reserve provider still be paid under the ASPA, considering that another reserve provider may have been scheduled already for the</p>			
--	--	--	--	--	--	--	--	--



Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

			<p><u><i>schedule of reserve provider resource j for reserve category r and reserve region a at dispatch interval i</i></u></p> <p><u><i>RBCQ_{j, r, a, i}</i></u> refers to the <u><i>bilateral contract quantity for reserve provider resource j for reserve category r and reserve region a at dispatch interval i</i></u></p> <p><u><i>a. The reserve trading amount for each trading participant that supplies reserve to a particular reserve region in a settlement interval shall</i></u></p>	<p>provision of the same reserve type?</p> <p><u>SPC/SIPC:</u></p> <p><u>Inquiries/Comments:</u></p> <p>1. In Clause 3.13.11.2 b. – “The <i>reserve trading amounts</i> for each <i>reserve region</i> into which that <i>Trading Participant</i> contributes <i>reserve</i> calculated in accordance with Clause 3.13.8 (which will always be positive for both <i>Generation Companies</i> and <i>Custo mers</i>); plus”</p> <p>On the above clause, the <i>reserve trading amounts</i> (RTA) will always be positive for both <i>Generation Companies</i> and <i>Custo mers</i>, thus the RQ should be the absolute value of the RDS – RBCQ and the RP is a number/value that is equal to or greater than zero (0).</p> <p>2. Does the RQ formula eliminates the</p>				<p>Responded by IEMOP (see minutes)</p>
--	--	--	---	---	--	--	--	---



Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

			<p><u>be determined as the reserve prices for that reserve region multiplied by the reserve quantities for that trading participant in that reserve region for the dispatch intervals of the relevant settlement interval.</u></p> <p>$RTA_{p,r,a,h} = \sum_{i \in h} \left[\frac{1}{n} \sum_{j \in Jp} (RP_{r,a,i} * RQ_{j,r,a,i}) \right]$</p> <p><u>Where:</u></p> <p><u>$RTA_{p,r,a,h}$</u> refers to the <u>reserve trading amount of trading participant p for reserve</u></p>		<p>imbalance between RD – RBCQ?</p> <p>3. In relation to ASPA, what does RDS indicates, is it ASPA without energy dispatch or ASPA with energy dispatch that NGCP utilize during the dispatch interval. In the formula of IEMOP, how is the RDS that indicates ASPA without energy dispatch be settled?</p> <p>4. For fully contracted Firm ASPA capacities, how will the RDS be automatically given to the Ancillary Service Provider based on the Day Ahead Ancillary Service Schedule (DAASS) submitted by NGCP and its applicable revisions made by NGCP. We suggest that IEMOP automatically gives the corresponding RDS to ASPA providers based on DAASS submitted by NGCP and its</p>			
--	--	--	---	--	--	--	--	--

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

			<p><u>category <i>r</i> and reserve region <i>a</i> at settlement interval <i>h</i></u></p> <p><u>$RP_{r,a,i}$</u> refers to the <u>reserve price for reserve category <i>r</i> and reserve region <i>a</i> at dispatch interval <i>i</i> in settlement interval <i>h</i></u></p> <p><u>$RQ_{i,r,a,i}$</u> refers to the <u>reserve quantity of reserve provider resource <i>j</i> for reserve category <i>r</i> and reserve region <i>a</i> at dispatch interval <i>i</i> in settlement interval <i>h</i></u></p> <p><u>J_p</u> refers to the <u>set of reserve provider resources</u></p>		<p>applicable revisions made by NGCP.</p> <p>5. For fully contracted firm ASPA capacity, will the RTA be automatically be equal to zero? Thus, the ASPA settlement (without energy dispatch / with energy dispatch) be settled by NGCP to the ASPA provider.</p> <p>6. For Ancillary Service Providers without ASPA, what is the penalty provision in the IEMOP’s RTA formula when it fails to dispatch their corresponding RDS so that the cost recovery with NGCP can be reduced?</p>			
--	--	--	--	--	---	--	--	--

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

			<u>under trading participant p</u> <u>n</u> refers to the <u>number of dispatch intervals within a settlement interval, which is 12 for a five-minute market</u>					
Reserve Cost Recovery Amount	(new)	(new)	<u>8.2.3 Reserve Cost Recovery Amount</u> <u>a. The reserve cost shall be recovered from the System Operator.</u> <u>b. The reserve cost recovery amount for every reserve category and reserve region shall be determined as the negative of the aggregate sum of the reserve trading amounts of the trading participants who supplied for that reserve category and reserve region, using the formula represented as:</u> $RRCost_{r,a,h} = (-1) \sum_{p \in P} RTA_{p,r,a}$	As prescribed in the Single Buyer System in DOE DC 2021-03-0009 Section 1.4	<u>PEMC:</u> What is the difference between “reserve recovery amount” with “reserve cost recovery amount”?		It is the same	Noted; adopted IEMOP’s proposal
					<u>SPC/SIPC</u> <u>Inquiries/Comments:</u> 1. How is the ASPA settlement without energy dispatch be included/recovered to the IEMOP formula?			IEMOP will provide sample calculation
					<u>Meralco:</u> Please provide sample calculation or illustrative example of		Noted. We shall provide	

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

			<p><u>Where:</u></p> <p><u>$RRCost_{r,a,h}$</u> refers to the <u>reserve cost for reserve category r in reserve region a at settlement interval h</u></p> <p><u>$RTA_{p,r,a,h}$</u> refers to the <u>reserve trading amount of trading participant p for reserve category r and reserve region a at settlement interval h</u></p> <p><u>P</u> refers to the <u>set of trading participants</u></p>		<p>the formula used in this provision.</p> <p>Also indicate the unit used for each defined term.</p>			
Aggregate Trading Amount	8.2.2	8.2.2 Aggregate Trading Amount a. The aggregate <i>trading amount</i> for a <i>Trading Participant</i> for a <i>settlement</i>	8.2.24 Aggregate Trading Amount a. The aggregate <i>trading amount</i> for a <i>Trading Participant</i> for a <i>settlement interval</i> is determined shall be determined as follows: ⁴	Added reserve trading amounts in the calculation of trading amounts Initially part of the PDM filed to ERC in March 2017	<p><u>SPC/SIPC:</u></p> <p>For proper accounting, we further suggest that the MO separately indicates the Energy Trading Amount (ETA) and Reserve Trading Amount (RTA) in their</p>			Adopted IEMOP: separate line item in the billing; already implemented

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

		<p><i>interval</i> is determined shall be determined as follows:³</p> <p><i>Energy trading amounts</i>, which may be positive or negative for any <i>Trading Participant</i>.</p> <p>b. This is provided in the following formula:</p> <p>$TA_{p,h} = ETA_{p,h}$</p> <p>Where:</p> <p>$TA_{p,h}$ refers to the aggregate <i>trading amount</i> of <i>trading participant p</i> for <i>settlement interval h</i></p> <p>ETA_{ph} refers to the energy <i>trading amount</i> of <i>trading participant p</i> at <i>settlement interval h</i></p>	<p><u>(1) Energy trading amounts</u>, which may be positive or negative for any <i>Trading Participant</i>.</p> <p><u>(2) Reserve trading Amounts</u></p> <p>b. This is provided in the following formula:</p> <p><u>$TA_{p,h} = ETA_{p,h} + RTA_{p,h}$</u></p> <p>Where:</p> <p>$TA_{p,h}$ refers to the aggregate <i>trading amount</i> of <i>trading participant p</i> for <i>settlement interval h</i></p> <p>$ETA_{p,h}$ refers to the energy <i>trading amount</i> of <i>trading participant p</i> at <i>settlement interval h</i></p> <p><u>$RTA_{p,h}$ refers to the reserve trading amount of trading participant p at settlement interval h</u></p>		<p>invoices/WESM bills by reflecting separate items for the ETA and RTA.</p>			
Settlement Amounts	(new)	(new)	<u>8.4.3 For each billing period, the Market Operator shall determine the</u>	Provided provision to calculate the	<u>Meralco:</u>		H_m refers to the settlement interval	Adopted as revised – H_m to be

³ WESM Rules Clause 3.13

Template version: 13 March 2020



Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

		<p><u>settlement amount for the System Operator as the sum of the aggregate reserve recovery amounts for the settlement intervals in that billing period. This is provided in the following formula:</u></p> $SA_{so,r,a,m} = \sum_{h \in H_m} \sum_{a \in A} \sum_{r \in R} RRCost_{r,a,h}$ <p><u>Where:</u></p> <p><u>SA_{so,m}</u> refers to the <u>settlement amount of the System Operator for billing period m</u></p> <p><u>RRCost_{r,a,h}</u> refers to the <u>reserve cost for reserve category r in reserve region a at settlement interval h</u></p> <p><u>R</u> refers to the <u>set of reserve categories</u></p>	Settlement Amounts for the System Operator	<p>Please clarify the definition of H_m</p> <p>Please provide sample calculation or illustrative example of the formula used in this provision.</p> <p>Also indicate the unit used for each defined term.</p>		under billing period m	<p>included in the formula</p> <p>H_m refers to the settlement interval under billing period m</p>
--	--	--	--	---	--	------------------------	--

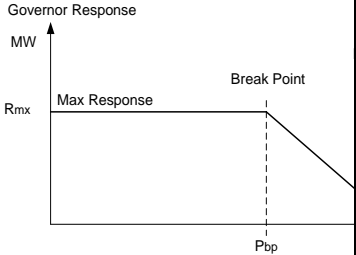
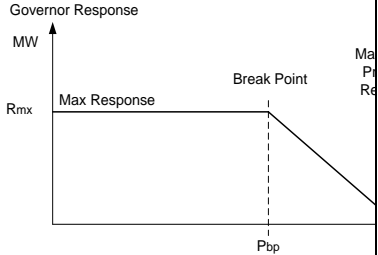
Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

			A <u>refers to the set of reserve regions</u>					
Reserve Requirements	Appendix A Section 2.2	<p>Contingency Reserve Requirements</p> <p>2.2.5 Analogously to Regulating Reserve Raise and Regulating Reserve Lower minimal requirements, regional minimum requirements can be specified for other ancillary services (AS) and for each time interval:</p> $\underline{Res}_{ASreq}^t \leq \sum_{unit \in AS} Res_{unit}^t ; t \in T$	<p>Contingency, Dispatchable and other Reserve Requirements</p> <p>2.2.5 Analogously to Regulating Reserve Raise and Regulating Reserve Lower minimal requirements, regional minimum requirements can be specified for other ancillary services (AS) and for each time interval:</p> $\underline{Res}_{ASreq}^t \leq \sum_{unit \in AS} Res_{unit}^t$	Minor edits to include Dispatchable Reserve				Adopted
Generating/ Load Resource Constraints – Reserve Model	Appendix A Section 4.3.1	<p>4.3.1 Core parts of the Reserve model are:</p> <ul style="list-style-type: none"> a. Reserve capacity limits b. Reserve ramping c. Combined Energy and reserve 	<p>4.3.1 Core parts of the Reserve model are:</p> <ul style="list-style-type: none"> a. Reserve capacity limits b. Reserve ramping c. Combined Energy and reserve capacity limits 	Added item in compliance with Section 3.1.1.3 of DC2021-03-0009	Meralco: Section 3.1.1.3 of DOE DC2021-03-0009 states that a generating unit may be scheduled for more than one type of reserve at the same dispatch interval provided that the technical requirements that		<p>Kindly refer to our proposed changes to the registration manual.</p> <p>For scheduling and pricing, same comment as previous similar question of MERALCO. Technical constraints have not</p>	Adopted

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

		<p>capacity limits</p> <p>d. Combined <i>Energy</i> and <i>reserve</i> ramping</p> <p>e. Independent model for Raise and Lower service in each <i>reserve</i> category</p>	<p>d. Combined <i>Energy</i> and <i>reserve</i> ramping</p> <p>e. Independent model for Raise and Lower service in each <i>reserve</i> category</p> <p><u>f. Constraints on Simultaneous Provisions of reserve</u></p>		<p>make it able to respond to both services simultaneously are addressed. Considering that this is a necessary safeguard with respect to offering multiple categories, clarification is sought on how this provision was applied in the WESM Rules and Manuals. Corollary to that, further clarification is sought on whether there should also be multiple categories for ASPA involving the same generating unit.</p>		<p>yet been presented in this proposed rules change. If there are any, we hope the System Operator can provide such constraints, so that IEMOP can eventually formulate detailed constraints in the PDM's MDOM formulation.</p>	
		<p>Resource Reserve capacity limits</p> <p>4.3.2 In addition to limits imposed by <i>reserve offer</i> limits, there are physical unit limits that affect <i>reserve</i> award. One example is for fast and slow <i>reserves</i> limitation by Governor response. While Governor response</p>	<p><u>4.3.2</u> Resource Reserve capacity limits</p> <p>4.3.2.1 In addition to limits imposed by <i>reserve offer</i> limits, there are physical unit limits that affect <i>reserve</i> award. One example is for fast and slow <i>reserves</i> limitation by Governor response. While Governor response also</p>	<p>Clerical revisions to correct numberings</p>	<p><u>SN Aboitiz Power:</u></p> <p>Suggest to include definitions of fast and slow reserves.</p>		<p>Suggest to replace fast and slow with contingency and dispatchable reserve, respectively. Original wording were based on original design of the NMMS.</p>	<p>Adopted as revised.</p> <p>Replace fast and slow with contingency and dispatchable reserve, respectively</p>

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

		<p>also depends on frequency deviation, it is usually one curve provided for Market purpose, where response is given as function of <i>energy</i> output only. Typical Governor response curve is provided below:</p>  <p>Figure 1: Governor <i>n</i> second raise droop characteristic</p> <p>4.3.3 Each two-piece characteristic comprises:</p> <ul style="list-style-type: none">a. maximum response amount which applies between zero <i>energy dispatch</i> and the contracted <i>energy dispatch</i> breakpoint and;b. above the <i>energy dispatch</i> breakpoint	<p>depends on frequency deviation, it is usually one curve provided for Market purpose, where response is given as function of <i>energy</i> output only. Typical Governor response curve is provided below:</p>  <p>Figure 2: Governor <i>n</i> second raise droop characteristic</p> <p>4.3.32.2 Each two-piece characteristic comprises:</p> <ul style="list-style-type: none">a. maximum response amount which applies between zero <i>energy dispatch</i> and the contracted <i>energy dispatch</i> breakpoint and;b. above the <i>energy dispatch</i> breakpoint there is linear decrease in response amount from the					
--	--	--	--	--	--	--	--	--

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

		<p>there is linear decrease in response amount from the contracted maximum response amount down to zero maximum response at the maximum <i>energy</i> capacity.</p> <p>4.3.4 The mathematical formulation using the variable designation from Figure 2 are as follows:</p> $Res_{unit}^t = R_{mx} * (P_{mx} - P^t) / (P_{mx} - P_{bp}) \forall P \geq P_{bp}$ $Res_{unit}^t = P_{mx} \forall P < P_{bp}$ <p>4.3.5 In addition to maximum quantity, contracted generators might be subject to mandatory governor response, which is modeled as <i>reserve</i> self-schedule and protected with penalty in Scheduling Run (i.e.</p>	<p>contracted maximum response amount down to zero maximum response at the maximum <i>energy</i> capacity.</p> <p>4.3.42.3 The mathematical formulation using the variable designation from Figure 2 are as follows:</p> $Res_{unit}^t = R_{mx} * (P_{mx} - P^t) / (P_{mx} - P_{bp}) \forall P \geq P_{bp}$ $Res_{unit}^t = P_{mx} \forall P < P_{bp}$ <p>4.3.52.4 In addition to maximum quantity, contracted generators might be subject to mandatory governor response, which is modeled as <i>reserve</i> self-schedule and protected with penalty in Scheduling Run (i.e. treated as price taker). Such self-schedule also</p>					
--	--	---	---	--	--	--	--	--

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

		treated as price taker). Such self-schedule also contributes to regional <i>reserve requirements</i> .	contributes to regional <i>reserve requirements</i> .					
		<p>Resource AS ramping limits</p> <p>4.3.6 The individual <i>reserve</i> ramping constraint can be posted for each resource and each time interval. These <i>constraints</i> are expressed in time domain as follows (equation is provided for Regulation Raise, but analogous equation applies for each <i>reserve</i>:</p> $\frac{Reg_{unit}^{Raise;t}}{RR_{unit}^{RegUp}} \leq T^{AS}; \quad unit \in G; t \in T$ <p>meaning that the <i>Reserve</i> ramping cannot exceed the specified <i>reserve</i> ramping (default 5 minutes).</p>	<p>4.3.3 Resource AS ramping limits</p> <p>4.3.63.1 The individual <i>reserve</i> ramping constraint can be posted for each resource and each time interval. These <i>constraints</i> are expressed in time domain as follows (equation is provided for Regulation Raise, but analogous equation applies for each <i>reserve</i>:</p> $\frac{Reg_{unit}^{Raise;t}}{RR_{unit}^{RegUp}} \leq T^{AS}; \quad unit \in G; t \in T$ <p>meaning that the <i>Reserve</i> ramping cannot exceed the specified <i>reserve</i> ramping (default 5 minutes).</p>	Clerical revisions to correct numberings				Adopted

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

		Resource Combined Energy and Reserve Capacity Limits	4.3.4 Resource Combined Energy and Reserve Capacity Limits	Clerical revisions to correct numberings					Adopted
		4.3.7 Multiple market services can be provided by the same resource at the same time, but the total resource capacity is limited. For example, the capacity range of online <i>generation</i> resources can be used for <i>energy</i> , regulation raise capacity and contingency <i>reserve</i> .	4.3.7 4.1 Multiple market services can be provided by the same resource at the same time, but the total resource capacity is limited. For example, the capacity range of online <i>generation</i> resources can be used for <i>energy</i> , regulation raise capacity and contingency <i>reserve</i> .						
		4.3.8 The capacity range binding <i>energy</i> and <i>reserve</i> depends on the services involved. For example, for combined <i>Energy</i> and Regulating reserves, the regulating range is binding.	4.3.8 4.2 The capacity range binding <i>energy</i> and reserve depends on the services involved. For example, for combined <i>Energy</i> and Regulating reserves, the regulating range is binding.						
		$En_{unit}^t + RegRaise_{unit}^t \leq RH_{unit}^t$ $En_{unit}^t - RegLower_{unit}^t \geq RL_{unit}^t$	$En_{unit}^t + RegRaise_{unit}^t \leq RH_{unit}^t$						

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

		<p>4.3.9 In a scenario when regulating limits are not separately registered for a resource, the operating limits are used instead of regulating in the above equations.</p> <p>4.3.10 For combined Energy and Contingency (Frequency Response) Service, the sum of the scheduled energy and the scheduled FCAS response ($PSRaise_{unit}^t$) must be less than or equal to the Governor Droop Raise Capacity ($GDRH_{unit}^t$) of that unit for each of the services:</p> $En_{unit}^t + PSRaise_{unit}^t \leq GDRH_{unit}^t$ <p>4.3.11 Analogous capacity limits are posted on load entities. For example of</p>	<p>$En_{unit}^t - RegLower_{unit}^t \geq RL_{unit}^t$</p> <p>4.3.9 4.3 In a scenario when regulating limits are not separately registered for a resource, the operating limits are used instead of regulating in the above equations.</p> <p>4.3.10 4.4 For combined Energy and Contingency (Frequency Response) Service, the sum of the scheduled energy and the scheduled FCAS response ($PSRaise_{unit}^t$) must be less than or equal to the Governor Droop Raise Capacity ($GDRH_{unit}^t$) of that unit for each of the services:</p> $En_{unit}^t + PSRaise_{unit}^t \leq GDRH_{unit}^t$					
--	--	---	--	--	--	--	--	--

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

		<p>Contingency reserve:</p> $En_{load}^t - SRes_{load}^t \geq EL_{load}^t$	<p>4.3.114.5 Analogous capacity limits are posted on load entities. For example of Contingency reserve:</p> $En_{load}^t - SRes_{load}^t \geq EL_{load}^t$					
		<p>Resource Combined Energy and Reserve Ramping</p> <p>4.3.12 If the <i>reserve</i> awards were dispatched for <i>contingency</i>, they would be converted into <i>energy</i> that needs to ramp, thus taking away ramping capability of dispatched <i>energy</i> award. The <i>energy</i> ramping period is the same as <i>dispatch interval</i>, so if it was fully utilized for <i>energy</i> ramping, there would be no room for additional <i>energy</i> ramping needed if <i>reserve</i> was activated. Therefore the <i>reserve</i> awards have to be taken</p>	<p>4.3.5 Resource Combined Energy and Reserve Ramping</p> <p>4.3.125.1 If the <i>reserve</i> awards were dispatched for <i>contingency</i>, they would be converted into <i>energy</i> that needs to ramp, thus taking away ramping capability of dispatched <i>energy</i> award. The <i>energy</i> ramping period is the same as <i>dispatch interval</i>, so if it was fully utilized for <i>energy</i> ramping, there would be no room for additional <i>energy</i> ramping needed if <i>reserve</i> was activated. Therefore the</p>	Clerical revisions to correct numberings				Adopted

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

		<p>into account in <i>energy</i> ramping model. <i>Energy</i> ramping capacity based on <i>energy ramp rate</i> is adjusted to address the impact from <i>reserve</i> awards. The upward and downward ramping equations can be expressed as:</p> $ \begin{aligned} P_i(t) - P_i(t - 1) &\leq RLU_i^{En}(t) - ASUp_i(t) \\ P_i(t - 1) - P_i(t) &\leq RLD_i^{En}(t) - ASDn_i(t) \end{aligned} $ <p>where: ASUp and ASDn is upward/downward <i>reserve</i> impact to <i>energy</i> ramping capacity.</p>	<p><i>reserve</i> awards have to be taken into account in <i>energy</i> ramping model. <i>Energy</i> ramping capacity based on <i>energy ramp rate</i> is adjusted to address the impact from <i>reserve</i> awards. The upward and downward ramping equations can be expressed as:</p> $ \begin{aligned} P_i(t) - P_i(t - 1) &\leq RLU_i^{En}(t) - ASUp_i(t) \\ P_i(t - 1) - P_i(t) &\leq RLD_i^{En}(t) - ASDn_i(t) \end{aligned} $ <p>where: ASUp and ASDn is upward/downward <i>reserve</i> impact to <i>energy</i> ramping capacity.</p>					
		<p>4.4 Other Operational Modes of Generators, Loads or Similar Facilities</p>	<p>4.3.6 Other Operational Modes of Generators, Loads or Similar Facilities</p>	<p>Clerical revisions to correct numberings</p>				<p>Adopted</p>



Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

		<p>4.4.1 Hybrid resources or other operational modes of generators, loads, or similar facilities include hydro pump storage and non-generating resources (NGR) like batteries, flywheel, compressed air facilities, and other forms of primary energy storage.</p> <p>4.4.2 Potential models for the treatment of these resources may incorporate variability of both supply offers and demand bids for more optimal economic results.</p>	<p>4.4.<u>3.6.1</u> Hybrid resources or other operational modes of generators, loads, or similar facilities include hydro pump storage and non-generating resources (NGR) like batteries, flywheel, compressed air facilities, and other forms of primary energy storage.</p> <p>4.4.<u>3.6.2</u> Potential models for the treatment of these resources may incorporate variability of both supply offers and demand bids for more optimal economic results.</p>					
Constraints on Simultaneous Provision of Reserve	(new)	(new)	<p><u>4.3.7 Constraints on Simultaneous Provision of Reserve</u></p> <p><u>4.3.7.1 Limitations on the provision of reserve awards are also considered in the MDOM.</u></p>	Provided details on implementation of scheduling for multiple services in compliance with Section 3.1.1.3 of DC2021-03-0009	<p><u>Meralco:</u></p> <p>We note that 4.3.7.2 contemplates a situation where a resource cannot be scheduled for both regulating and contingency reserve. We would like to seek clarification on non-price considerations, if</p>		<p>Suggest to add new clause 4.3.7.3</p> <p><u>4.3.7.3 Different ramping constraints when operating in different modes of operation (e.g., automatic generation control.</u></p>	<p>Manifestation noted.</p> <p>Adopted with inclusion of 4.3.7.3</p> <p><u>4.3.7.3 Different ramping constraints</u></p>

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

			<u>4.3.7.2 If it is defined in the MDOM where regulation and contingency reserve schedules cannot be awarded at the same time for a resource, then the MDOM will choose the most optimal reserve category the resource should be scheduled at, in consideration of the optimization objective defined in the MDOM.</u>		any, in implementing simultaneous provision of multiple reserve types (e.g. mode of operation).		<u>governor control mode).</u>	<u>when operating in different modes of operation (e.g., automatic generation control, governor control mode).</u>
					<u>MEI/PEI:</u> Please clarify if the non-awarding of regulation and contingency reserve schedules at the same time for a resource is solely due to technical reasons or generating unit limitations. MEI and PEI are of the opinion that, as a matter of policy, a resource can offer and be scheduled by the MDOM for multiple reserve categories if technically feasible and if it will result in an optimal solution.		This constraint requires technical basis which may be better defined by SO.	Adopted the provision for multiple reserve services

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Registration, Suspension and De-Registration Criteria and Procedures								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
					<i>Please write general comments here, if any.</i>			
Categories and Qualifications - Customers	2.5.1.2 b)	<p>b) The following are qualified to register as <i>Customer</i> –</p> <ul style="list-style-type: none"> Distribution Utilities, including private <i>distribution utilities</i>, <i>electric cooperatives</i> and local government utilities undertaking distribution of electricity. <p>Xxx</p>	<p>b) The following are qualified to register as <i>Customer</i> –</p> <ul style="list-style-type: none"> Distribution Utilities, including private <i>distribution utilities</i>, <i>electric cooperatives</i> and local government utilities undertaking distribution of electricity. <p>Xxx</p> <ul style="list-style-type: none"> <u>System Operator in its capacity as the entity designated to be responsible for the procurement of reserves through the WESM and for the settlement of such transactions pursuant to prevailing rules, regulations and issuances promulgated by the DOE or the</u> 	<p>Registration of the SO as a Customer Trading Participant is consistent with the general principle that all entities transacting in the WESM must register with the Market Operator. This is also in line with the single buyer policy pursuant to Section 1.4 of DOE DC2021-03-0009</p>	<p>PEMC:</p> <p>1. Clause should be 2.5.1.2</p> <p>Rewording for consistency with WESM Rules 1.3.4</p>	<p>PEMC:</p> <p>2.5.1.32</p> <p>b) The following are qualified to register as <i>Customer</i> –</p> <p>xxx</p> <ul style="list-style-type: none"> <u>System Operator in its capacity as the entity designated to be responsible for the procurement of reserves through the WESM and Ancillary Service Procurement Agreement for settlement of such transactions pursuant to prevailing rules, regulations and issuances promulgated by the DOE or the ERC. It is provided that the registration of the System Operator as single buyer of reserves traded in the WESM shall be in accordance with the prevailing rules, regulations and</u> 	<p>IEMOP is amenable to the changes</p>	<p>Adopted as revised</p>

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Registration, Suspension and De-Registration Criteria and Procedures								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
			<u>ERC. It is provided that the registration of the System Operator as single buyer of reserves traded in the WESM shall be in accordance with the prevailing rules, regulations and issuances of the DOE or the ERC and that not all the technical and legal requirements for registration of Trading Participants as set out in this Section may apply.</u>			<u>issuances of the DOE or the ERC and that not all the technical and legal requirements for registration of Trading Participants as set out in this Section may apply.</u>		
					<u>Technical Committee:</u> What do we mean by: <u>“that not all the technical and legal requirements for registration of Trading Participants as set out in this Section may apply,</u>		This considers SO's <i>sui generis</i> registration as a Customer, hence not all technical and legal requirements for registration may apply. This is dependent, however, on policy and regulatory direction.	Noted
					<u>SPC/SIPC:</u> Does the clause clearly indicate that the System Operator can only be a net buyer in its WESM transaction? Unlike with the case of	<u>SPC/SIPC:</u> Does the clause clearly indicate that the System Operator can only be a net buyer in its WESM transaction? Unlike with the case of Distribution Utilities which can be a net buyer or	IEMOP:	Noted

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Registration, Suspension and De-Registration Criteria and Procedures								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
					Distribution Utilities which can be a net buyer or net seller in its WESM transactions per dispatch interval.	net seller in its WESM transactions per dispatch interval.		
					Meralco: Minor typo correction	Meralco: ● System Operator xxx the registration of the System Operator as single buyer of reserves traded in the WESM shall be in in accordance with the prevailing rules, regulations xxx.	IEMOP recommends PEMC's revisions	Adopted as revised
Registration of Ancillary Services Providers – Qualifications and Requirements	2.6.1.1	2.6.1.1 Persons or entities wishing to register as <i>WESM member</i> under this category must – a) Be certified by the <i>System Operator</i> as qualified to provide ancillary services in accordance with WESM Rules clause 2.3.5.3. b) Comply with the membership criteria required of <i>Trading Participants</i> and shall be subject to the same	2.6.1.1 Persons or entities wishing to register as <i>WESM member</i> under this category must – a) <u>Be registered as a Generation Company or a Customer.</u> b) Be certified by the <i>System Operator</i> <u>or any qualified third party ancillary services capability testing entity accredited by the ERC</u> as qualified to provide ancillary services in accordance with	Certification by a third party provider is included as alternative, pursuant to Section 6, DOE DC 2021-03-0009.	PEMC: For clarification: What are effects of limiting generation companies who are allowed to provide A/S in item (f)? Suggest adding in the rationale the basis for such limitation.		This is to exclude self-scheduled generators, which includes intermittent RE resources. Also, the MMS can only have such types of generators offer reserve capacities. Self-scheduled generators are unable to “clear” the	Adopted

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Registration, Suspension and De-Registration Criteria and Procedures								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
		requirements set forth in this Manual. c) Comply with the same technical and commercial requirements required of <i>Trading Participants</i> . d) Comply with the technical requirements for Ancillary Service Providers set forth in the Philippine Grid Code and any other relevant documents that the ERC or DOE will promulgate on the provision of Ancillary Services.	WESM Rules clause 2.3.5.3. c) b) Comply with the membership criteria required of <i>Trading Participants</i> and shall be subject to the same requirements set forth in this Manual. d) e) Comply with the same technical and commercial requirements required of <i>Trading Participants</i> . e) d) Comply with the technical requirements for Ancillary Service Providers set forth in the Philippine Grid Code and any other relevant documents that the ERC or DOE will promulgate on the provision of Ancillary Services. f) For Generation Companies, only scheduled generating units, battery energy storage systems, and pumped-storage units can be registered as a reserve facility.	Suggest to add for more clarity in which generators are only allowed to provide A/S	AC Energy: For (f), we suggest that hybrid systems be included in the enumeration that can be registered as a reserve facility.	AC Energy: f) For <i>Generation Companies, only scheduled generating units, battery energy storage systems, and pumped-storage units, and hybrid systems can be registered as a reserve facility.</i>	market, even for reserve. IEMOP recommends retention of its original proposal. There should be a separate proposal to define hybrid systems in the WESM Rules.	Adopted IEMOP's original proposal
Registration of Ancillary Services Providers – Qualificatio	(new)	(new)	2.6.1.2 The application for registration of a Generation Company as Ancillary Services Provider shall specify the	Added to specify information needed for registration of Ancillary Services	AC Energy: We suggest that it should be the accreditation	AC Energy: b) Maximum reserve capability as determined in the ancillary services	IEMOP recommends retention of its original proposal. The	Adopted IEMOP's original proposal

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Registration, Suspension and De-Registration Criteria and Procedures								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
ns and Requirements			<p><u>following information for each of its reserve facility which has been issued a valid certification to provide ancillary services:</u></p> <p><u>a) Reserve category or categories which said generating unit intends to trade in the WESM; and</u></p> <p><u>b) Maximum reserve capability as determined in the ancillary services capability tests conducted by the System Operator or the third-party testing entity accredited by the ERC.</u></p> <p><u>c) Validity period for providing ancillary service for each reserve category</u></p>	provider and to align with Section 3.1.1.3 and 3.3 of DOE DC 2021-03-0009 on allowing schedules for multiple categories and the requirement for reserve providers to offer their maximum reserve capability, respectively.	certificate which is the basis for approval and not the test. The test may be conducted by the NGCP or a third party but accreditation can only be issued by the NGCP.	<u>accreditation of the System Operator.</u> capability tests conducted by the System Operator or the third-party testing entity accredited by the ERC.	said tests serves as the basis of accrediting the capacity. And there is no prohibition of allowing another third-party entity to certify A/S capacities as long as they are accredited by the ERC.	Adopted the additional definition
					<u>NGCP:</u> Suggest to define "maximum reserve capability"		<p>IEMOP is amenable to the proposal</p> <p>Please see below for the proposed definition</p> <p><i>Maximum reserve capability</i> – the maximum demand in MW that a facility can provide with respect to reserves based on ancillary service</p>	

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Registration, Suspension and De-Registration Criteria and Procedures								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
							capability tests.	
					<p><u>SN Aboitiz Power:</u></p> <p>To be consistent with Section 3.1.1.1 in the DOE DC 2021-03-009.</p>	<p><u>SN Aboitiz Power:</u></p> <p><u>b) Maximum reserve capability as determined in the ancillary services capability tests conducted by the System Operator or the third-party testing entity accredited by the ERC.</u></p> <p>The maximum Reserve capability should not exceed the WESM registered maximum capacity (Pmax).</p>	IEMOP is amenable to the revisions	Adopted as revised by SNAP
					<p><u>SPC/SIPC:</u></p> <p>Include if the Ancillary Services Provider's generating units have ASPA with NGCP.</p>	<p><u>SPC/SIPC:</u></p> <p><u>2.6.1.2 The application for registration of a Generation Company as Ancillary Services Provider shall specify the following information for each of its reserve facility which has been issued a valid certification to provide ancillary services:</u></p> <p><u>a) Reserve category or categories which said generating unit intends to trade in the WESM; and</u></p>		

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Registration, Suspension and De-Registration Criteria and Procedures								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
						b) <u>Maximum reserve capability as determined in the ancillary services capability tests conducted by the System Operator or the third-party testing entity accredited by the ERC.</u> c) <u>Validity period for providing ancillary service for each reserve category</u> d) Specify which generating units and its capacities have ASPA contract with the System Operator.		
					<u>Meralco:</u> In item (c.) Validity period for providing ancillary service for each reserve category – what is the validity period being envisioned here? Can it be separate or different from the COC validity period of the generation company?		Each A/S certificate is expected to have a validity period to which that A/S is certified of providing such service. It is separate from the COC. However, it should be noted that expiration of the COC can terminate a unit's	Noted



Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Registration, Suspension and De-Registration Criteria and Procedures								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
							capability to operate, and that includes operating as reserve as well. To be specific, a unit may be allowed to generate in the energy market but not be allowed to participate in the reserve market if it's A/S certificate already expires. But if its COC expires, it cannot participate in both the energy and reserve market.	
Registration of Ancillary Services Providers – Qualifications and Requirements	(new)	(new)	2.6.1.3 <u>Customers with load facilities which intend to register in the WESM as Ancillary Services Provider shall be accredited and comply with the requirements</u>	Registration of load facilities is allowed under Section 5.1, DOE DC2021-03-0009 but subject to accreditation procedures that	AC Energy: We suggest to make the submission of the information mandatory.	AC Energy: 2.6.1.3 Customers with load facilities which intend to register in the WESM as <i>Ancillary Services Provider</i> shall be accredited and comply with the	IEMOP is amenable to the changes	Adopted as revised by AC Energy

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Registration, Suspension and De-Registration Criteria and Procedures								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
			<p><u>set out in relevant procedures for accreditation promulgated by the ERC. They are expected to submit the following information:</u></p> <p>a) <u>Projected Maximum Energy Load Requirement</u></p> <p>b) <u>Reserve category or categories which said load facility intends to trade in the WESM; and</u></p> <p>c) <u>Maximum reserve capability as determined in the ancillary services capability tests conducted by System Operator or the third party testing entity accredited by the ERC.</u></p>	will be issued by the ERC.		<p>requirements set out in relevant procedures for accreditation promulgated by the ERC. They must be expected to submit the following information:</p> <p>Xxx xxx</p>		
					<p>Meralco:</p> <p>We would like to seek clarification if participants of the Interruptible Load Program (ILP), in accordance with ERC Resolution No. 8, series of 2020 (and as later amended by succeeding resolutions), will be required to register in the Reserve Market once participation of load facilities is allowed.</p> <p>In item (d), validity period for providing ancillary service for each reserve category – what is the validity</p>		<p>This includes all load facilities. ILP is a different service from reserves.</p>	<p>Noted</p>

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Registration, Suspension and De-Registration Criteria and Procedures								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
			d) <u>Validity period for providing ancillary service for each reserve category</u>		period being envisioned here?			
Facility Related Changes – Registered Capacities	3.3.1	3.3.1 Registered Capacities Changes in the registered capacities (i.e., Pmin or Pmax) of a generating unit shall require confirmation by the Market Operator before such change can be considered in the WESM scheduling and dispatch processes. Xxx	3.3.1 Registered Capacities and Reserve Capabilities Changes in the registered capacities (i.e., Pmin or Pmax) of a generating unit and its maximum reserve capabilities, if there is any , shall require confirmation by the Market Operator before such change can be considered in the WESM scheduling and dispatch processes. Xxx	Generalized terminologies to allow inclusion of load facilities as reserve providers pursuant to Section 5.1 of DOE DC2021-03-0009				Adopted
Facility Related Changes – Ancillary Services capability	(new)	(new)	3.3.8 Ancillary Services Category and Capability 3.3.8.1 A WESM Member that is registered as an Ancillary Services Provider may update the registered capability or reserve category of any of its	Allow changes in AS capability/category in line with periodic AS capability testing conducted by NGCP				Adopted

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Registration, Suspension and De-Registration Criteria and Procedures								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
			<u>registered reserve facility.</u>					
Facility Related Changes – Ancillary Services capability	(new)	(new)	3.3.8.2 <u>The <i>WESM Member</i> shall comply with the technical requirements set out in Section 2.6.1, including but not limited to the submission of the certification of the result of the ancillary services capability test carried out by the System Operator or a third-party entity duly accredited by the ERC.</u>					Adopted
Facility Related Changes – Ancillary Services capability	(new)	(new)	3.3.8.3 <u>The <i>Market Operator</i> shall assess and approve the request for the change in registered capability or reserve category in accordance with the procedures</u>					Adopted

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Registration, Suspension and De-Registration Criteria and Procedures								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
			<u>under Section 2.6.2.</u>					
Facility Related Changes – Ancillary Services capability	(new)	(new)	<p>3.3.8.4 If a reserve facility's validity period for providing ancillary service in a specific reserve category is about to expire, then the Market Operator shall inform the Ancillary Services Provider that the relevant reserve facility shall be de-registered for the affected specific reserve category at least 30 calendar days prior to the expiration of its validity period.</p> <p><u>a. The Market Operator shall not proceed with the de-registration of the reserve category if the Ancillary Services Provider is able</u></p>		<p><u>AC Energy:</u></p> <p>We suggest that the Market Operator should inform the Ancillary Services Provider and also the System Operator of the expiry of the Ancillary Service Accreditation at least 90-calendar days prior to its expiry to ensure that Ancillary Service accreditation can still be conducted within a reasonable time.</p> <p>Regarding De-registration due to delayed renewal of Ancillary Services Accreditation, may we suggest to temporarily float the status of the Ancillary Services Provider but not to automatically de-register. This way, in case the Ancillary Services Accreditation is available, it is</p>	<p><u>AC Energy:</u></p> <p>3.3.8.4 If a reserve facility's validity period for providing ancillary service in a specific reserve category is about to expire, then the Market Operator shall inform the Ancillary Services Provider <u>as well as the System Operator</u> that the relevant reserve facility shall be de-registered for the affected specific reserve category at least 9030 calendar days prior to the expiration of its validity period.</p> <p>xxx xxx xxx</p>	IEMOP is amenable to the changes.	Adopted with revisions from AC Energy

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Registration, Suspension and De-Registration Criteria and Procedures								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
			<p><u>to provide an updated certification of the result of the ancillary services capability test carried out by the System Operator or a third-party entity duly accredited by the ERC at least 7 calendar days prior to the original expiration of its validity period.</u></p> <p><u>b. Should the Ancillary Services Provider be unable to provide an updated certification of the result of the ancillary services capability test carried out by the System Operator or a third-party entity duly accredited by the ERC within the aforementioned timeline, the Market Operator shall effectively de-register the specific reserve category</u></p>		<p>easier for the Ancillary Services Provider to participate in the Reserve Market rather than go through the registration process all over again.</p> <p>In case the plant has been tested but the System Operator fails to issue the Accreditation Certificate within a reasonable period to comply with the submission of the Accreditation Certificate to the Market Operator, we suggest that the current Accreditation Certificate be deemed extended for a period of 6 months.</p>			
					<p>NGCP:</p> <p>To establish communication between the SO and the MO on the registration status of reserve providers that will affect scheduling</p>	<p>NGCP:</p> <p>Suggest to revise 3.3.8.4 as follows:</p> <p><u>3.3.8.4 If a reserve facility's validity period for providing ancillary service in a specific reserve category is about to expire,</u></p>	<p>IEMOP is amenable to the changes</p>	<p>Adopted with revision from NGCP</p>

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Registration, Suspension and De-Registration Criteria and Procedures								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
			<u>for that reserve facility effective on the original expiration of its validity period.</u>		of reserves such as DAASS	<p><u>then the Market Operator shall inform the Ancillary Services Provider and the System Operator that the relevant reserve facility shall be de-registered for the affected specific reserve category at least 30 calendar days prior to the expiration of its validity period.</u></p> <p>a. <u>The Market Operator shall not proceed with the de-registration of the reserve category if the Ancillary Services Provider is able to provide an updated certification of the result of the ancillary services capability test carried out by the System Operator or a third-party entity duly accredited by the ERC at least 7 calendar days prior to the original expiration of its validity period. The Market Operator shall inform the System Operator if the de-</u></p>		

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Registration, Suspension and De-Registration Criteria and Procedures								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
						<p><u>registration shall not proceed.</u></p> <p>b. <u>Should the Ancillary Services Provider be unable to provide an updated certification of the result of the ancillary services capability test carried out by the System Operator or a third-party entity duly accredited by the ERC within the aforementioned timeline, the Market Operator shall effectively de-register the specific reserve category for that reserve facility effective on the original expiration of its validity period. The Market Operator shall inform the System Operator of the de-registration.</u></p>		
					<p><u>SN Aboitiz Power:</u></p> <p>Instead of automatic deregistration, suggest to apply</p>	<p><u>SN Aboitiz Power:</u></p> <p>3.3.8.4 If a reserve facility's validity period for providing ancillary service in a specific reserve category is</p>	<p>IEMOP is amenable to consider the letter of extension from the SO, but is not agreeable</p>	<p>Adopted with revisions from SNAP on extension</p> <p><u>Updated certification may</u></p>

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Registration, Suspension and De-Registration Criteria and Procedures								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
					<p>temporary suspension only</p> <p>so that the ASP will not have to go through the entire registration process. The temporary suspension should only be effective after the expiry of the AS certificate.</p> <p>The suggested re-arrangement will make the provision clearer, to mean that the action of the MO 30 days prior is to inform the ASP.</p> <p>Consider also cases where AS certificates are extended by NGCP. If a generator has completed its AS testing, NGCP usually extends the validity of the AS certificate, while waiting for the release of the official document. IEMOP</p>	<p><u>about to expire, then the Market Operator shall inform the Ancillary Services Provider 30 calendar days prior to the expiration of its validity period, that the relevant reserve facility shall be de-registered suspended for the affected specific reserve category at least 30 calendar days prior to the expiration of its validity period.</u></p> <p><u>a. The Market Operator shall not proceed with the de-registration suspension of the reserve category if the Ancillary Services Provider is able to provide an updated certification of the result of the ancillary services capability test carried out by the System Operator or a third-party entity duly accredited by the ERC at least 7 calendar days prior to the original expiration of its validity</u></p>	<p>to the temporary suspension. It is the responsibility of the reserve provider to maintain its certifications and must make the appropriate arrangements to ensure the same.</p>	<p><u>include a letter of extension from the System Operator.</u></p>

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Registration, Suspension and De-Registration Criteria and Procedures								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
					should consider as valid date, the extended AS certificate.	<p>period. <u>Updated certification may include a letter of extension from the System Operator.</u></p> <p>b. <u>Should the Ancillary Services Provider be unable to provide an updated certification of the result of the ancillary services capability test carried out by the System Operator or a third-party entity duly accredited by the ERC within the aforementioned timeline, the Market Operator shall effectively de-register the specific reserve category for that reserve facility effective on the original expiration of its validity period.</u></p>		

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Billing and Settlement								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
					<i>Please write general comments here, if any.</i>			



Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

Responsibilities – Trading Participants	3.2	<p>3.2 TRADING PARTICIPANTS</p> <p>The Trading Participants shall be responsible for complying with the requirements set forth in this Market Manual and in the WESM Rules, as follows:</p> <p>a) Retrieve and review settlement statement files and supporting data issued by the Market Operator. The Trading Participants shall notify the Market Operator if files are not accessible or received within the timetable and if there are discrepancies or errors; xxx</p> <p>e) Remedy or rectify suspension.</p>	<p>3.2 TRADING PARTICIPANTS</p> <p><u>WESM MEMBERS</u></p> <p><u>WESM Members, including</u></p> <p><u>The Trading Participants and the System Operator,</u> shall be responsible for complying with the requirements set forth in this Market Manual and in the WESM Rules, as follows:</p> <p>a) Retrieve and review settlement statement files and supporting data issued by the Market Operator. The Trading Participants <u>or the System Operator</u> shall notify the Market Operator if files are not accessible or received within the timetable and if there are discrepancies or errors; xxx</p> <p>e) Remedy or rectify suspension.</p>	<p>Revised to specify System Operator as a billing entity pursuant to Section 1.4 of DC2021-03-0009.</p> <p>As defined in the WESM Rules Section 2.3, WESM Members include Trading Participants and the SO while Trading Participants only pertain to Generation Companies and Customers.</p>	<p><u>NGCP:</u></p> <p>The full context of the provision states,</p> <p><i>The Trading Participants shall be responsible for complying with the requirements set forth in this Market Manual and in the WESM Rules, as follows:</i></p> <p>a) <u>Retrieve and review settlement statement files</u> and supporting data issued by the Market Operator. The Trading Participants shall notify the Market Operator if files are not accessible or received within the timetable and if there are discrepancies or errors;</p> <p>b) <u>Payment of the settlement amount</u> in the Final and Revised Statements issued by the Market Operator;</p> <p>c) Remedy default events;</p> <p>d) <u>Provide and maintain a sufficient amount of security deposit</u> to comply</p>	<p><u>NGCP:</u></p> <p>IEMOP defers to the RCC for discussion, particularly on the compliance to prudential requirements.</p> <p>On NGCP's general comments on the single buyer system, the matter should be addressed to the DOE which is the proper authority on the matter considering the concern is one which involves policy.</p>	Adopted IEMOP's proposal
---	-----	---	--	---	---	--	--------------------------

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

					<p><i>with the Prudential Requirements;</i></p> <p>e) <i>Remedy or rectify suspension.</i></p> <p><u>Without prejudice to the attached NGCP's general comments on the single buyer system</u>, we would like to highlight Sections 7.4 and 8.2 of the DC2021-03-0009 which provides,</p> <p><i>7.4 The SO shall be responsible for the <u>collection</u> of payments from the electric power industry participants in accordance with the AS Cost Recovery Mechanism (AS-CRM) as approved by the ERC.</i></p> <p><i>8.2 The SO shall <u>remit</u> the total spot reserve trading amount to the MO within the deadline set.</i></p> <p>Clearly, the mandate of SO, based on the DOE Circular, is just to <u>collect the payments</u> made by</p>			
--	--	--	--	--	---	--	--	--

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Billing and Settlement								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
					<p>the electric power industry participants and to remit the same to IEMOP.</p> <p><u>The responsibilities under Clause 3.2 of the WESM Manual on Billing and Settlement are not applicable to a collection agent.</u></p> <p>Thus, it is NGCP's position to maintain the existing provision.</p>			
Contents of Settlement Statements and Data – Settlement Quantity and Amounts	4.1.1 b)	The trading amount billed to each Trading Participant is in accordance to WESM Rules Clauses 3.13.17 and 3.13.18.	The trading amount billed to each Trading Participant is in accordance to WESM Rules Clauses 3.13.17 and 3.13.18.	Deleted since WESM Rules Clauses 3.13.17 and 3.13.18 does not exist and to avoid redundancy with 4.1.1 e) i - ii				Adopted

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Billing and Settlement								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
Contents of Settlement Statements and Data – Settlement Quantity and Amounts	4.1.1 c)	The reserve cost recovery charge billed to each Trading Participant is in accordance to WESM Rules Clause 3.13.9	The reserve cost recovery charge billed to each Trading Participant is in accordance to WESM Rules Clause 3.13.9	Deleted to comply with DC2021-03-0009 provision that SO is the single buyer for reserves thus, no reserve cost recovery charges are to be billed to a Trading Participant.	NGCP: NGCP proposes to maintain the existing provision. NGCP has general comments on the single buyer system as attached.		IEMOP recommends retention of its original proposal. On NGCP's general comments on the single buyer system, the matter should be addressed to the DOE which is the proper authority on the matter considering the concern is one which involves policy.	Adopted
Contents of Settlement Statements and Data – Settlement Quantity and Amounts	4.1.1 d)	The transmission rights trading amount billed to each Trading Participant is in accordance to WESM Rules Clause 3.13.10	The transmission rights trading amount billed to each Trading Participant is in accordance to WESM Rules Clause 3.13.10	Deleted to avoid redundancy with 4.1.1 e) iii				Adopted

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Billing and Settlement								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
Contents of Settlement Statements and Data – Settlement Quantity and Amounts	4.1.1 e)	<p>4.1.1 e) The aggregate trading amount for a Trading Participant for a trading interval equals the sum of:</p> <p>Xxx</p> <p>iv. The reserve cost recovery charge determined for that Trading Participant with respect to any reserve cost recovery zone within which it has any facility connected calculated in accordance with the procedures developed under WESM Rules Clause 3.3.5 (which will be positive for any Trading Participant); and</p> <p>v. Any other ancillary service cost recovery charges determined for that Trading Participant in accordance with the procedures developed under WESM Rules Clause 3.3.5.</p>	<p>4.1.1 e) b) The aggregate trading amount for a Trading Participant for a trading interval equals the sum of:</p> <p>Xxx</p> <p>iv. The reserve cost recovery charge determined for that Trading Participant with respect to any reserve cost recovery zone within which it has any facility connected calculated in accordance with the procedures developed under WESM Rules Clause 3.3.5 (which will be positive for any Trading Participant); and</p> <p>v. Any other ancillary service cost recovery charges determined for that Trading Participant in accordance with the procedures developed under WESM Rules Clause 3.3.5.</p>	Deleted to comply with DC2021-03-0009 provision that SO is the single buyer for reserves thus, no reserve cost recovery charges are to be billed to a Trading Participant.	<p><u>NGCP:</u></p> <p>NGCP proposes to maintain the existing provision.</p> <p>NGCP has general comments on the single buyer system as attached.</p>		<p>IEMOP recommends retention of its original proposal</p> <p>On NGCP's general comments on the single buyer system, the matter should be addressed to the DOE which is the proper authority on the matter considering the concern is one which involves policy.</p>	Adopted

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Billing and Settlement								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
Contents of Settlement Statements and Data – Settlement Quantity and Amounts	4.1.1 f)	<p>4.1.1 f) For each billing period, the Market Operator shall determine the settlement amount for each Trading Participant as the sum of the aggregate trading amounts for the settlement intervals in that billing period, determined in accordance with WESM Rules 3.13.11.2 plus:</p> <p>XXX</p> <p>iii. Any other amounts payable by that Trading Participant to the Market Operator in respect of that billing period, including any reserves recovery charges.</p>	<p>4.1.1 f) c) For each billing period, the Market Operator shall determine the settlement amount for each Trading Participant as the sum of the aggregate trading amounts for the settlement intervals in that billing period, determined in accordance with WESM Rules 3.13.11.2 plus:</p> <p>XXX</p> <p>iii. Any other amounts payable by that Trading Participant to the Market Operator in respect of that billing period, including any reserves recovery charges.</p> <p><u>iv. It is provided, however, that the Market Operator may issue a separate settlement statement for the reserve trading amounts, if applicable, for that Trading Participant.</u></p>	<p>Deleted to comply with DC2021-03-0009 provision that SO is the single buyer for reserves thus, no reserve cost recovery charges are to be billed to a Trading Participant.</p> <p>This is to allow for the separate payments of reserve trading amounts - and not be mingled with payments for energy trading amounts. This is to ensure that the payments by the System Operator for reserve transactions shall be paid in full to the A/S providers.</p>	<p><u>Meralco:</u></p> <p>Is this an option for the Market Operator? Or is the intention to ensure separate statements for reserve and energy amounts?</p> <p><u>NGCP:</u></p> <p>NGCP proposes to maintain the existing provision.</p> <p>NGCP has general comments on the single buyer system as attached.</p>		<p>The intention is to issue separate statements for energy and reserves.</p> <p>IEMOP recommends retention of its original proposal.</p> <p>On NGCP's general comments on the single buyer system, the matter should be addressed to the DOE which is the proper authority on the matter considering the concern is one which involves policy.</p>	Noted; adopted

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

Contents of Settlement Statements and Data – Settlement Quantity and Amounts	(new)	(new)	<u>4.1.1 d) The aggregate trading amount for the System Operator for a settlement interval equals the total reserve cost recovery amount with respect to every reserve category and reserve region in accordance with WESM Rules Clause 3.13.9.</u>	Added to comply with Section 1.4 of DC2021-03-0009 provision that SO is the single buyer for reserves, thus it shall be billed the total reserve cost recovery amount.	<p><u>AC Energy:</u></p> <p>May we clarify if the System Operator's collection efficiency would affect the payment to those procured through ASPAs and those procured from the Reserve Market? In terms of payment, will those procured through ASPAs be prioritized?</p> <p>We suggest that the collection efficiency be applied to all regardless of whether Ancillary Services were procured through ASPAs or from the Reserve Market.</p> <p><u>NGCP:</u></p> <p>NGCP proposes to delete the proposal.</p> <p>NGCP has general comments on the single buyer system as attached.</p>		<p>IEMOP is not privy to the ASPA provisions between the SO and AS providers.</p> <p>IEMOP is not amenable to the proposal as scope of this manual only covers the WESM transactions for energy and reserves</p> <p>IEMOP recommends retention of its original proposal.</p> <p>On NGCP's general comments on the single buyer system, the matter should be</p>	Noted; adopted
--	-------	-------	--	--	---	--	--	----------------

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Billing and Settlement								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
							addressed to the DOE which is the proper authority on the matter considering the concern is one which involves policy.	
Contents of Settlement Statements and Data – Settlement Quantity and Amounts	(new)	(new)	<u>4.1.1 e) For each billing period, the Market Operator shall determine the settlement amount for the System Operator as the sum of the aggregate reserve cost recovery amounts for the settlement intervals in that billing period, determined in accordance with WESM Rules Clause 3.13.11.5.</u>	Added to comply with Section 1.4 DC2021-03-0009 provision that SO is the single buyer for reserves, thus it shall be billed the total reserve cost recovery amount.	<u>NGCP:</u> NGCP proposes to delete the proposal. NGCP has general comments on the single buyer system as attached.		IEMOP recommends retention of its original proposal. On NGCP's general comments on the single buyer system, the matter should be addressed to the DOE which is the proper authority on the matter considering the concern is one which involves policy.	Adopted IEMOP's proposal

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Billing and Settlement								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
Contents of Settlement Statements and Data	4.1.4	The settlement data that are being transmitted to the Trading Participants along with the preliminary and final statements including the market fee statements which includes the energy trading amounts, final nodal energy dispatch prices, energy settlement quantity, line rental trading amount of participants with bilateral		Revised to include information on final reserve prices and to delete the reserve recovery amount. Revised the provision to align with current practice of	<u>PEMC:</u> What will be the alternative way to provide settlement data if CRSS is down? Suggest providing alternative means.		The CRSS is designed to be a highly available system. Providing alternative means to provide data will incur additional system costs on the part of the Market Operator	Noted

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

		contract quantity and each of the participants' bilateral contract quantity, reserve trading amount, reserve recovery amount, net settlement surplus rebated, and line loss and congestion charges. These set of information are being transmitted to the Trading Participants via email and CD copy mailed along with the Participant's Statements.	The <u>Market Operator shall provide by electronic means to the Trading Participants their respective</u> settlement data that are being transmitted to the Trading Participants along with the preliminary and final statements, <u>which settlement data shall include, as may be applicable,</u> including the market fee statements, which includes the energy trading amounts, final nodal energy dispatch prices, energy settlement quantity, line rental trading amount of participants with bilateral contract quantity and each of the participants' bilateral contract quantity, <u>final reserve prices</u> , reserve trading amount, reserve recovery amount net settlement surplus rebated, and line loss and congestion charges. These set of information are being transmitted to the Trading Participants via email and CD copy mailed along with the Participant's Statements.	sending data and statements via the CRSS.	<u>AC Energy:</u> Following the above comment, may we be clarified on the manner and procedure on the settlement of the cost recovery charges. <u>NGCP:</u> NGCP proposes to maintain the existing provision. NGCP has general comments on the single buyer system as attached.		Please refer to the proposed changes to the PDM for this inquiry	Noted; Adopted IEMOP's proposal
Contents of Settlement Statements and Data	(new)	(new)	4.1.5 The Market Operator shall provide by electronic means to the System Operator its settlement data,	Added to specify set of information to be transmitted to SO and align	<u>NGCP:</u>		IEMOP recommends retention of its original proposal. On NGCP's general comments on the single buyer system, the matter should be addressed to the DOE which is the proper authority on the matter considering the concern is one which involves policy.	Adopted IEMOP's proposal

PS

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Billing and Settlement								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
			<u>along with the preliminary and final statements, which settlement data shall include, as applicable, the market fee statements, reserve cost recovery amounts, final reserve prices, reserve quantities and reserve bilateral contract quantities.</u>	with current practice of sending data and statements via the CRSS.	NGCP proposes to delete the proposal. NGCP has general comments on the single buyer system as attached.		On NGCP's general comments on the single buyer system, the matter should be addressed to the DOE which is the proper authority on the matter considering the concern is one which involves policy.	

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

PROCEDU RES- Payment by Trading Participant	5.3.1	Payment by Trading Participant xxx	Payment by Trading Participant <u>WESM Member</u> xxx	Revised since WESM Member is the more appropriate term. As defined in the WESM Rules Section 2.3, WESM Members include Trading Participants and the SO while Trading Participants only pertain to Generation Companies and Customers.	<u>NGCP:</u> The full context of the provision states, <i>Payment by Trading Participant</i> a) <u>Subject to</u> <u>Section 5.3.4,</u> <u>each WESM</u> <u>Member shall pay</u> <u>to the Market</u> <u>Operator in</u> <u>cleared funds, the</u> <u>settlement</u> <u>amount (if any)</u> <u>stated to be</u> <u>payable to the</u> <u>Market Operator</u> <u>by that WESM</u> <u>member in that</u> <u>WESM Member's</u> <u>final statement</u> no later than 3.00 pm on the twenty-fifth day of the calendar month following the billing period, whether or not the WESM member disputes, or continues to dispute, the amount payable. If the twenty-fifth (25 th) day of the calendar month following the billing period falls on a		IEMOP defers to the RCC for discussion, particularly on the compliance to prudential requirements. On NGCP's general comments on the single buyer system, the matter should be addressed to the DOE which is the proper authority on the matter considering the concern is one which involves policy.	Adopted IEMOP's proposal
---	-------	--	--	---	--	--	--	--------------------------------



Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

					<p><i>Non-Working Day, the payment due date shall be moved to the next immediate Working Day.</i></p> <p>b) After receiving <u>payment</u> from the WESM Member, the Market Operator shall validate and determine any discrepancy between the amount billed and the amount collected.</p> <p>c) In the <u>event of shortfall, the Market Operator shall exercise its right to draw from the existing security deposit</u> as discussed in Section 7.4.5 of this Manual.</p> <p>d) The amount collected and the amount drawn shall be paid by the Market Operator to the Trading Participant in accordance with Section 5.3.2 of this Manual.</p>			
--	--	--	--	--	--	--	--	--

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Billing and Settlement								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
					<p>As discussed above and <u>without prejudice to NGCP's general comments on the single buyer system</u>, the mandate of SO, based on the DOE Circular, is just <u>to collect</u> the payments made by the electric power industry participants and <u>to remit</u> the same to IEMOP.</p> <p>The responsibilities under Clause 5.3.1 of the WESM Manual on Billing and Settlement are not applicable to a collection agent.</p> <p>The remittance of the payments made by the electric power industry participants shall be on <u>"as collected" basis</u>, i.e., SO, as a collection agent, shall only remit to IEMOP the amount paid by the customers relative to the AS Reserve Market.</p>			



Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Billing and Settlement								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
PROCEDU RES- Payment to the Trading Participant	5.3.2	Payment to the Trading Participant xxx	Payment to the Trading Participant – <u>WESM Member</u> xxx	Revised since WESM Member is the more appropriate term. As defined in the WESM Rules Section 2.3, WESM Members include Trading Participants and the SO while Trading Participants only pertain to Generation Companies and Customers.	<u>NGCP:</u> It is NGCP's position to maintain the existing provision. NGCP has general comments on the single buyer system as attached.		IEMOP recommends retention of its original proposal. On NGCP's general comments on the single buyer system, the matter should be addressed to the DOE which is the proper authority on the matter considering the concern is one which involves policy.	Adopted IEMOP's proposal

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

PROCEDU RES- Default	6.2.1. e)	e) The Trading Participant shall remit the overdue amount to the Market Operator. Such overdue amount shall bear the default interest rate reckoned from the first day such amount is due and payable, up to and including the date on which payment is made, with interest computed based on a 360-day year. The default interest rate is equivalent to the BSP lending rate on date of payment plus 3% will accrue to the remaining unpaid amount until the full payment is received.	e) The Trading Participant WESM Member shall remit the overdue amount to the Market Operator. Such overdue amount shall bear the default interest rate reckoned from the first day such amount is due and payable, up to and including the date on which payment is made, with interest computed based on a 360-day year. The default interest rate is equivalent to the BSP lending rate on date of payment plus 3% will accrue to the remaining unpaid amount until the full payment is received.	For consistency in the terms used.	<p><u>NGCP:</u></p> <p>As discussed above and <u>without prejudice to NGCP's general comments on the single buyer system</u>, the mandate of SO, based on the DOE Circular, is just <u>to collect</u> the payments made by the electric power industry participants and <u>to remit</u> the same to IEMOP.</p> <p>This responsibility under Clause 6.2.1 (e) of the WESM Annual on Billing and Settlement is not applicable to a collection agent.</p> <p>Thus, it is NGCP's position to maintain the existing provision.</p> <p>The remittance of the payments made by the electric power industry participants shall be on <u>"as collected" basis</u>, i.e., SO, as a collection agent, shall only remit to IEMOP the amount paid by the customers</p>		<p>IEMOP recommends retention of its original proposal.</p> <p>On NGCP's general comments on the single buyer system, the matter should be addressed to the DOE which is the proper authority on the matter considering the concern is one which involves policy.</p>	Adopted IEMOP's proposal
----------------------------	--------------	---	---	------------------------------------	---	--	---	--------------------------

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Billing and Settlement								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
					relative to the AS Reserve Market.			

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

PROCEDU RES- Default	6.2.1. f)	f) The amount collected from the defaulting Trading Participant, including the default interest, shall be paid by the Market Operator to the Trading Participants in accordance with Section 5.3.2 of this Manual.	f) The amount collected from the defaulting <u>WESM Member Trading Participant</u> , including the default interest, shall be paid by the Market Operator to the <u>WESM Members Trading Participants</u> in accordance with Section Error! Reference source not found. of this Manual.	For consistency in the terms used.	<p><u>PEMC:</u></p> <p>Request clarity on the reference of the provisions</p> <p><u>NGCP:</u></p> <p>As discussed above and <u>without prejudice to NGCP's general comments on the single buyer system</u>, the mandate of SO, based on the DOE Circular, is just to collect the payments made by the electric power industry participants and to remit the same to IEMOP.</p> <p>This responsibility under Section 6.2.1 (f) of the WESM</p>		<p>IEMOP revision:</p> <p>f) The amount collected from the defaulting <u>WESM Member Trading Participant</u>, including the default interest, shall be paid by the Market Operator to the <u>WESM Members Trading Participants</u> in accordance with Section 5.3.2 of this Manual.</p> <p>IEMOP recommends retention of its original proposal.</p> <p>On NGCP's general comments on the single buyer system, the matter should be addressed to the DOE which is the proper authority on the matter considering the concern is one which involves policy.</p>	<p>Adopted with revision</p> <p>f) The amount collected from the defaulting <u>WESM Member Trading Participant</u>, including the default interest, shall be paid by the Market Operator to the <u>WESM Members Trading Participants</u> in accordance with Section 5.3.2 of this Manual.</p>
----------------------------	--------------	--	--	------------------------------------	--	--	---	---

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Billing and Settlement								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
					<p>Annual on Billing and Settlement is not applicable to a collection agent.</p> <p>Thus, it is NGCP's position to maintain the existing provision.</p> <p>The remittance of the payments made by the electric power industry participants shall be on <u>“as collected” basis</u>, i.e., SO, as a collection agent, shall only remit to IEMOP the amount paid by the customers relative to the AS Reserve Market.</p>			

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

PROVISION OF SECURITY	7.2.4	7.2.4 If, under Section 7.2.2 of this Manual, the Market Operator has exempted a Trading Participant from the requirement to provide a security for a period; then the Market Operator shall not set a Trading Limit for that WESM Member for that period during which that exemption applies.	7.2.4 If, under Section Error! Reference source not found. of this Manual, the Market Operator has exempted a Trading Participant <u>WESM Member</u> from the requirement to provide a security for a period; then the Market Operator shall not set a Trading Limit for that WESM Member for that period during which that exemption applies.	For consistency in the terms used.	<p>Meralco:</p> <p>Reference source not found.</p> <p><u>NGCP:</u></p> <p>As discussed above and <u>without prejudice to NGCP's general comments on the single buyer system</u>, the mandate of SO, based on the DOE Circular, is just to collect the payments made by the electric power industry participants and to remit the same to IEMOP.</p>	<p>IEMOP Revision:</p> <p>7.2.4 If, under Section 7.2.2 of this Manual, the Market Operator has exempted a Trading Participant <u>WESM Member</u> from the requirement to provide a security for a period; then the Market Operator shall not set a Trading Limit for that WESM Member for that period during which that exemption applies.</p> <p>IEMOP defers to the RCC for discussion, particularly on the compliance to prudential requirements.</p> <p>On NGCP's general comments on the single buyer system, the matter should be addressed to the DOE which is the proper authority on</p>	Adopted with revision
			7.2.4 If, under Section 7.2.2 of this Manual, the Market Operator has exempted a Trading Participant <u>WESM Member</u> from the requirement to provide a security for a period; then the Market Operator shall not set a Trading Limit for that WESM Member for that period during which that exemption applies.				

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Billing and Settlement								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
					<p>This responsibility under Clause 7.2.4 of the WESM Annual on Billing and Settlement is not applicable to a collection agent.</p> <p>Thus, it is NGCP's position to maintain the existing provision.</p>		the matter considering the concern is one which involves policy.	

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

Initial Assessment of Prudential Requirements	7.4.1 b)	<p>b) The projected <i>settlement amount</i> for each <i>billing period</i> of a <i>WESM Member</i> shall be calculated using the following formula:</p> $PSA = \sum_{i \in I} (PGESQ_i \times PFEDP_i) - \sum_{i \in I} \sum_{c \in C} (PBCQ_{c,i} \times PFEDP_{c,i})$ <p>Where:</p> <p>PSA projected <i>settlement amount</i> in PhP</p> <p>PGESQ_i projected <i>gross energy settlement quantity for energy</i>, in MWh, for <i>dispatch interval i</i></p> <p>PFEDP_i projected <i>final energy dispatch price for energy</i>, in PhP/MWh, for <i>dispatch interval i</i></p> <p>PBCQ_{c,i} projected <i>bilateral contract quantity for energy</i>, in MWh, from counterparty <i>c</i> for <i>dispatch interval i</i></p> <p>PFEDP_{c,i} projected <i>final energy dispatch price for energy</i>, in PhP/MWh, associated with</p>	<p>b) The projected <i>settlement amount</i> for each <i>billing period</i> of a <i>WESM Member</i> shall be calculated using the following formula:</p> $PSA = \sum_{i \in I} (PGESQ_i \times PFEDP_i) - \sum_{i \in I} \sum_{c \in C} (PBCQ_{c,i} \times PFEDP_{c,i})$ <p>Where:</p> <p>PSA projected <i>settlement amount</i> in PhP</p> <p>PGESQ_i PGESQ_i <u>PQi</u> either projected <i>gross energy settlement quantity for energy</i>, in MWh, <u>or projected reserve quantity</u> for <i>dispatch interval i</i></p> <p>PFEDP_i PFEDP_i <u>Pi</u> either projected <i>final energy dispatch price for energy</i>, <u>or projected reserve price</u> in</p>	Updated PSA formula to consider reserve transactions	Meralco: Is the proposed change intended to compute for the prudential requirement for the account of System Operator? As the provision applies to all WESM Members, please confirm that the proposed change will not affect the prudential requirements of other WESM Members.		Yes, the proposed change was intended to provide basis for computation of SO's prudential requirement. Computation of PR for other WESM Members remains the same.	Adopted with new section (c) <u>c) The System Operator's compliance on prudential requirement shall be subject to ERC approval.</u>
---	----------	---	--	--	---	--	---	---

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Billing and Settlement								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
		the <i>bilateral contract</i> with counterparty c for <i>dispatch interval i</i> set of <i>dispatch intervals</i> within the billing period set of counterparties	<p>PBCQ_{c,i}</p> <p>PhP/MWh, for <i>dispatch interval i</i> <u>either</u> projected <i>bilateral contract</i> quantity for energy <u>or</u> <u>projected reserve bilateral contract quantity</u>, in MWh, from counterparty c for <i>dispatch interval i</i></p> <p>PFEDP_{c,i} <u>Pc,i</u> <u>either</u> projected <i>final energy dispatch price</i> for energy <u>or</u> <u>projected reserve price</u>, in PhP/MWh, associated with the <i>bilateral contract</i> with counterparty c for <i>dispatch interval i</i> set of <i>dispatch intervals</i> within the billing period set of counterparties</p> <p>I</p> <p>C</p>					

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

BILLING AND SETTLEMENT TIMETABLE	Section 12 Appendix A	Payment by Trading Participants	No later than 3.00 pm on the twenty-fifth day of the calendar month following the billing period. If the twenty-fifth day of the calendar month following the billing period falls on a <i>Non-Working Day</i> , the payment due date shall be moved to the next immediate <i>Working Day</i> .	Payment by Trading Participants WESM Members	No later than 3.00 pm on the twenty-fifth day of the calendar month following the billing period. If the twenty-fifth day of the calendar month following the billing period falls on a <i>Non-Working Day</i> , the payment due date shall be moved to the next immediate <i>Working Day</i> .	For consistency in the terms used.	As discussed above and <u>without prejudice to NGCP's general comments on the single buyer system</u> , the mandate of SO, based on the DOE Circular, is just <u>to collect</u> the payments made by the electric power industry participants and <u>to remit</u> the same to IEMOP. These provisions are not applicable to a <u>collection agent</u> for the following reasons: 1. The timeline pertains to the payment to be made by the trading participants; 2. Only after this timeline that the remittance could be made. Section F4.1 of the Open Access Transmission Service (OATS) Rules provides, <i>F4.1 Billing Statement. Within</i>		IEMOP defers to the RCC for discussion, particularly on the compliance to prudential requirements. On NGCP's general comments on the single buyer system, the matter should be addressed to the DOE which is the proper authority on the matter considering the concern is one which involves policy.	Adopted IEMOP's proposal
		Payment to Trading Participants	On the following <i>Working Day</i> after the <i>Market Operator</i> is to be paid	Payment to Trading Participants WESM Members	On the following <i>Working Day</i> after the <i>Market Operator</i> is to be paid by Trading Participants <u>WESM Members</u> .					
				Payment of Adjustments by Trading	By no later than the time and date					

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	</
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	----



Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Billing and Settlement								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent’s Response	RCC Agreement
					<p><i>payable to, or owed by, the Transmission Provider for that Billing Period.</i></p> <p>3. The remittance of the payments made by the electric power industry participants shall be on “as collected” basis, i.e., SO, as a collection agent, shall only remit to IEMOP the amount paid by the customers relative to the AS Reserve Market. Thus, it is NGCP’s position that these provisions are not applicable to a collection agent. Corollary, the existing provision be maintained.</p>			

E. WESM Manual on Dispatch Protocol



Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Dispatch Protocol								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
					<i>Please write your general comments here, if any.</i>			
Overview of WESM Operations	1.1.1	In the WESM, the <i>Market Operator</i> provides the <i>System Operator</i> with <i>dispatch schedules</i> to be implemented by the <i>System Operator</i> for each <i>dispatch interval</i> using various inputs such as <i>load forecasts</i> and state-estimated data from the <i>Market Operator</i> , real-time data and <i>security constraints</i> from the <i>System Operator</i> , and <i>demand bids, market offers, and self-scheduled nominations</i> submitted by the <i>Trading Participants</i> .	In the WESM, the <i>Market Operator</i> provides the <i>System Operator</i> with <i>energy dispatch and reserve</i> schedules to be implemented by the <i>System Operator</i> <i>and the Trading Participants</i> for each <i>dispatch interval</i> using various inputs such as <i>load forecasts</i> and state-estimated data from the <i>Market Operator</i> , <i>reserve requirements,</i> real-time data and <i>security constraints</i> from the <i>System Operator</i> , and <i>demand bids, market offers, and self-scheduled nominations</i> submitted by the <i>Trading Participants</i> .	To include reserve schedule dispatch implementation by Trading Participants and required inputs in the dispatch procedures overview				Adopted

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Dispatch Protocol								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
Overview of WESM Operations	1.1.6	The scheduling process starts with the <i>week-ahead projection</i> (WAP) which gives the indicative hourly <i>dispatch schedules</i> and spot prices for the next seven (7) days. This projection takes into consideration all available information including nomination of <i>loading levels, projected outputs, bids</i> and <i>offers</i> from participants, demand forecasts, <i>outage</i> schedules and the current status of the <i>grid</i> .	The scheduling process starts with the <i>week-ahead projection</i> (WAP) which gives the indicative hourly <i>dispatch schedules</i> and spot prices for the next seven (7) days. This projection takes into consideration all available information including nomination of <i>loading levels, projected outputs, bids</i> and <i>offers</i> from participants, demand forecasts, <u>reserve requirements</u> , <i>outage</i> schedules and the current status of the <i>grid</i> .	To include reserve schedule dispatch implementation in the dispatch procedures overview	<u>NGCP:</u> To highlight the importance of MO's forecast as input in the determination of reserve requirements by SO. SO notes that reserve requirements are only indicative.	<u>NGCP:</u> Suggest to revise as follows: The scheduling process starts with the <i>week-ahead projection</i> (WAP) which gives the indicative hourly <i>dispatch schedules</i> and spot prices for the next seven (7) days. This projection takes into consideration all available information including nomination of <i>loading levels, projected outputs, bids</i> and <i>offers</i> from participants, demand forecasts, <u>reserve requirements</u> (which are based on the week ahead projection provided by the Market Operator), <i>outage</i> schedules based on the 7-day notice from the	Suggest to retain original proposal. Note that reserve requirements are inputs to the projections, such as WAP. Hence, there are no WAP results yet to serve as inputs to the same.	Adopted IEMOP's proposal

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Dispatch Protocol								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
						Trading Participants and the current status of the <i>grid</i> .		
Overview of WESM Operations	1.1.11	The <i>System Operator</i> implements the RTD schedules for the <i>dispatch interval</i> , issues <i>dispatch instructions</i> to and ensures compliance by the <i>Trading Participants</i> with such instructions, and maintains overall <i>security</i> of the <i>power system</i> .	The <i>System Operator</i> and the <u>Trading Participants</u> implements the RTD schedules for the <i>dispatch interval</i> . The <u>System Operator</u> issues <i>re-dispatch instructions</i> to and ensures compliance by the <i>Trading Participants</i> with such instructions, and maintains overall <i>security</i> of the <i>power system</i> .	To include reserve schedule dispatch implementation by Trading Participants in the dispatch procedures overview				Adopted
Responsibilities – Market Operator	3.1.1	The <i>Market Operator</i> is responsible for the administration of the Wholesale Electricity Spot Market (<i>WESM</i>) in accordance with the <i>WESM Rules</i> . Among other functions, it is responsible for determining the <i>dispatch schedule</i> of all facilities	The <i>Market Operator</i> is responsible for the administration of the Wholesale Electricity Spot Market (<i>WESM</i>) in accordance with the <i>WESM Rules</i> . Among other functions, it is responsible for determining the <i>dispatch schedule</i> of all facilities in the <i>WESM</i> , which schedule shall be submitted to the <i>System</i>	To include reserve schedule dispatch implementation by Trading Participants				Adopted

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Dispatch Protocol								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
		in the <i>WESM</i> , which schedule shall be submitted to the <i>System Operator</i> ⁴ .	<u>Operator⁵ and the Trading Participants.</u>					
Overview of Energy Management Applications	5.2.3	The <i>System Operator</i> shall also submit its <i>over-riding constraint</i> inputs to the MDOM via the Current Operating Plan using the most efficient facility in transferring data to <i>Market Operator</i> .	The <i>System Operator</i> shall also submit its <i>over-riding constraint</i> <u>and reserve requirements</u> inputs to the MDOM via the Current Operating Plan using the most efficient facility in transferring data to <i>Market Operator</i> .	To update required inputs for reserve schedule dispatch implementation				Adopted
Bids, Offers and Data Submissions and Processing – Background	(new)	(new)	<u>6.1.6 Trading Participants shall also indicate their expected mode of operations (e.g. <i>automatic generation control</i>, <i>governor control mode</i>) when submitting their reserve offer.</u>	To update required inputs for reserve schedule dispatch implementation	<u>AC Energy:</u> For clarification, will there be a hierarchy in the MDOM for the mode of operations? Should it not be the SO who will dictate the mode?		As per the System Operator, it should be the Trading Participants that will dictate the mode of operations. This can be further clarified by the SO.	Adopted IEMOP's proposal
					<u>NGCP:</u>	<u>NGCP:</u> Suggest to revise as follows:	Suggest to retain proposal. Energy dispatch is still	

⁴ WESM Rules Clause 1.3.1

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Dispatch Protocol								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
					To include operations for energy dispatch	<u>Trading Participants shall also indicate their expected mode of operations (e.g. automatic generation control, governor control mode) when submitting their energy and reserve offers.</u>	based on existing DP guidelines.	
					<u>SPC/SIPC:</u> Include manual mode which is also applicable for Dispatchable Reserve.	<u>SPC/SIPC:</u> <u>6.1.6 Trading Participants shall also indicate their expected mode of operations (e.g. automatic generation control, governor control mode, manual mode, etc.) when submitting their reserve offer.</u>		
					<u>MEI/PEI:</u> MEI and PEI would like to point out that, for a generating unit offering multiple reserve services,	<u>MEI/PEI:</u> <u>6.1.6 Trading Participants shall also indicate their expected mode of operations (e.g.</u>	We are amenable to the proposed change.	Adopted as proposed by MEI/PEI <u>6.1.6 Trading Participants shall also</u>

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Dispatch Protocol								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
					each reserve service can be performed separately by means of a distinct mode of operation. Further, in the second phase of the reserve market, the primary reserve will be provided thru governor control while the secondary reserve will be provided thru AGC in compliance with the relevant PGC 2016 provisions.	<u>automatic generation control, governor control mode) for each reserve category when submitting their reserve offer.</u>	Note that the proposal is only for the Phase 1 of the reserve market. Phase 2 will entail another set of proposals for rules changes.	<u>indicate their expected mode of operations (e.g. automatic generation control, governor control mode) for each reserve category when submitting their reserve offer.</u>
Bids, Offers and Data Submission s and Processing – Background	6.1.6	6.1.6 WESM Rules Clause 3.5.11.2 directs <i>Generation Companies</i> that have submitted <i>self-scheduled nomination</i> of their <i>non-scheduled generating units</i> to revise the same if it	6.1.7 6.1.6 WESM Rules Clause 3.5.11.2 directs <i>Generation Companies</i> that have submitted <i>self-scheduled nomination</i> of their <i>non-scheduled generating units</i> to revise the same if it reasonably expects that any of its anticipated <i>loading levels</i> will differ materially from those previously submitted.	Re-numbered	<u>Meralco:</u> Will there be a cap and/or floor on reserve offers?		IEMOP defers the setting of caps and floors to the ERC.	Adopted IEMOP's proposal

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Dispatch Protocol								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
		reasonably expects that any of its anticipated <i>loading levels</i> will differ materially from those previously submitted.						
Bids, Offers and Data Submission s and Processing – Background	6.1.7	6.1.7 WESM Rules Clause 3.5.11.5 requires <i>Trading Participants</i> to revise their <i>bids</i> or <i>offers</i> if they no longer represent a reasonable estimate of either the expected <i>availability</i> for the <i>dispatch interval</i> of the relevant <i>generating unit</i> or <i>scheduled load</i> or the <i>demand bids</i> or <i>offers</i> likely to apply in the <i>real-time dispatch</i> optimization for the <i>dispatch interval</i> .	6.1.8 6.1.7-WESM Rules Clause 3.5.11.5 requires <i>Trading Participants</i> to revise their <i>bids</i> or <i>offers</i> if they no longer represent a reasonable estimate of either the expected <i>availability</i> for the <i>dispatch interval</i> of the relevant <i>generating unit</i> or <i>scheduled load</i> or the <i>demand bids</i> or <i>offers</i> likely to apply in the <i>real-time dispatch</i> optimization for the <i>dispatch interval</i> .	Re-numbered				Adopted

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Dispatch Protocol								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
Bids, Offers and Data Submission s and Processing – Background	6.1.8	6.1.8 Pursuant to <i>WESM Rules</i> Clause 3.5.11.6, <i>Trading Participants</i> that cancel their <i>bids</i> or <i>offers</i> , or submit <i>bids</i> or <i>offers</i> less than the registered capacity or <i>maximum available capacity</i> of their <i>facility</i> or <i>generating unit</i> are required to provide information on the reasons or circumstances of such cancellation or submission.	6.1.9 6.1.8 Pursuant to <i>WESM Rules</i> Clause 3.5.11.6, <i>Trading Participants</i> that cancel their <i>bids</i> or <i>offers</i> , or submit <i>bids</i> or <i>offers</i> less than the registered capacity or <i>maximum available capacity</i> of their <i>facility</i> or <i>generating unit</i> are required to provide information on the reasons or circumstances of such cancellation or submission.	Re-numbered				Adopted
Bids, Offers and Data Submission s and Processing – Background	6.1.9	6.1.9 <i>Trading Participants</i> are also required to immediately notify the <i>System Operator</i> and the <i>Market Operator</i> of any circumstances	6.1.10 6.1.9 <i>Trading Participants</i> are also required to immediately notify the <i>System Operator</i> and the <i>Market Operator</i> of any circumstances which threaten a significant probability of material adverse change in the state of their facilities. A non-exhaustive list of events that will be deemed	Re-numbered	PEMC: Request clarity on the reference of the provisions		IEMOP Revision: 6.1.10 6.1.9 <i>Trading Participants</i> are also required to immediately notify the <i>System Operator</i> and the <i>Market Operator</i>	Adopted as revised by IEMOP

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Dispatch Protocol								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
		which threaten a significant probability of material adverse change in the state of their facilities. A non-exhaustive list of events that will be deemed to be or to cause material adverse change is required to be published. In compliance with the foregoing, a non-exhaustive list is provided under Section Error! Reference source not found. of this <i>Market Manual</i> pursuant to <i>WESM Rules</i> Clause 3.5.11.8.	to be or to cause material adverse change is required to be published. In compliance with the foregoing, a non-exhaustive list is provided under Section Error! Reference source not found. of this <i>Market Manual</i> pursuant to <i>WESM Rules</i> Clause 3.5.11.8.				of any circumstances which threaten a significant probability of material adverse change in the state of their facilities. A non-exhaustive list of events that will be deemed to be or to cause material adverse change is required to be published. In compliance with the foregoing, a non-exhaustive list is provided under Section 6.14 of this <i>Market Manual</i> pursuant to <i>WESM Rules</i> Clause 3.5.11.8.	
					<u>Meralco:</u> Reference source not found.		See corrected proposal above.	



Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Dispatch Protocol								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
Bids, Offers and Data Submission s and Processing – Formats and Contents of Submission	6.9.4	6.9.4 <i>Trading Participants</i> shall provide the following information when submitting <i>reserve offers</i> : a. A maximum response level for the relevant <i>reserve category</i> (MW); b. A maximum proportion of the forecast/ <i>sch eduled load</i> , which may be interrupted; c. Up to three (3) <i>reserve offer blocks</i> (MW/block); d. A minimum block size of one (1) MW; and	6.9.4 <i>Trading Participants</i> shall provide the following information when submitting <i>reserve offers</i> : a. A maximum response level for the relevant <i>reserve category</i> (MW); b. <u>Control mode of operations</u> b c. A maximum proportion of the forecast/ <i>scheduled load</i> , which may be interrupted; e d. Up to three (3) <i>reserve offer blocks</i> (MW/block); d e. A minimum block size of one (1) MW; and e f. Monotonically increasing prices.	To update required inputs for reserve schedule dispatch implementation Renumbered.	<u>Technical Committee:</u> What do we mean by control mode of operations? How about: Generation Control Mode then use in 6.1.6 as well.		Control mode of operations may be AGC or Governor Control Model. There is no Generation Control Mode in 6.1.6. It is Governor Control Mode.	Adopted IEMOP's proposal
					<u>SPC/SIPC:</u> Since the Market is becoming versatile, the minimum block size of one (1) MW may be needed to be lowered/reduced.	<u>SPC/SIPC:</u> 6.9.4 <i>Trading Participants</i> shall provide the following information when submitting <i>reserve offers</i> : a. A maximum response level for the relevant <i>reserve category</i> (MW); b. <u>Control mode of operations</u> b c. A maximum proportion of the forecast/ <i>schedul ed load</i> , which	IEMOP: 1MW block size is part of DOE's assessment and directive. It can be tackled separately	Noted

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Dispatch Protocol								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
		e. Monotonically increasing prices.				may be interrupted; ed. Up to three (3) <i>reserve offer</i> blocks (MW/block); ed. A minimum block size of half of one (40.5) MW; and ef. Monotonically increasing prices.		
System Operator Input and Data and Reports - Reserve Requirements	7.8.2	The level of <i>reserve requirement</i> shall be based on the provisions of the <i>Grid Code</i> and the relevant <i>ERC</i> issuances on <i>ancillary services</i> .	The level of <i>reserve requirement</i> shall be based on the provisions of the <i>Grid Code</i> and the relevant <i>ERC</i> -issuances on <i>ancillary services</i> <u>from the DOE and the <i>ERC</i></u> .	To include DOE issuances as basis for level of reserve requirements				Adopted
Real-time Dispatch Scheduling - Background	9.1.1	9.1.1 <i>WESM Rules</i> Clause 3.8 sets out the responsibilities of the Market Operator in the scheduling of <i>generation</i> and <i>load</i> in the <i>WESM</i> . Among other responsibilities, <i>WESM Rules</i> Clause 3.8.1	9.1.1 <i>WESM Rules</i> Clause 3.8 sets out the responsibilities of the <i>Market Operator</i> in the scheduling of <i>generation</i> and <i>load</i> in the <i>WESM</i> . Among other responsibilities, <i>WESM Rules</i> Clause 3.8.1 directs that prior to the commencement of each <i>dispatch interval</i> , the <i>Market</i>	To include reserve schedule dispatch implementation by Trading Participants Renumbered.				Adopted

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Dispatch Protocol								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
		directs that prior to the commencement of each <i>dispatch interval</i> , the <i>Market Operator</i> shall use the <i>market dispatch optimization model (MDOM)</i> to determine the target <i>loading level</i> in MW for each <i>non-scheduled generating unit, must dispatch generating unit, priority dispatch generating unit, scheduled generating unit</i> or each <i>scheduled load</i> and for each <i>reserve facility</i> for the end of the <i>dispatch interval</i> using the latest data from the <i>System Operator</i> and the <i>Trading Participants</i> . The <i>Market Operator</i> shall submit to the <i>System Operator</i> the <i>dispatch schedule</i> containing the <i>target loading levels</i> to be achieved at the end of the <i>dispatch interval</i> .	<p><i>Operator</i> shall use the <i>market dispatch optimization model (MDOM)</i> to determine the target <i>loading level</i> in MW for each <i>non-scheduled generating unit, must dispatch generating unit, priority dispatch generating unit, scheduled generating unit</i> or each <i>scheduled load</i> and for each reserve <i>facility</i> for the end of the <i>dispatch interval</i> using the latest data from the <i>System Operator</i> and the <i>Trading Participants</i>.</p> <p>9.1.2 The <i>Market Operator</i> shall submit to the <i>System Operator</i> and the <i>Trading Participants</i> the <i>dispatch schedule</i> containing the <i>target loading levels</i> to be achieved at the end of the <i>dispatch interval</i>.</p>					
Real-time Dispatch	9.1.2	9.1.2 The <i>WESM Rules</i> defines <i>loading level</i> as	9.1.3 9.1.2–The <i>WESM Rules</i> defines <i>loading level</i> as the	Renumbered.				Adopted

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Dispatch Protocol								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
Scheduling - Background		the instantaneous level of output or consumption in MW of a <i>generating unit</i> or <i>load</i> . The <i>target loading level</i> of a <i>generator</i> or <i>load</i> is the <i>loading level</i> determined as an end-of-period target for that scheduled <i>generator</i> or <i>load</i> .	instantaneous level of output or consumption in MW of a <i>generating unit</i> or <i>load</i> . The <i>target loading level</i> of a <i>generator</i> or <i>load</i> is the <i>loading level</i> determined as an end-of-period target for that scheduled <i>generator</i> or <i>load</i> .					
Real-time Dispatch Scheduling - Background	(new)	(new)	<u>9.1.4 The Market Operator shall submit to the System Operator and the Trading Participants the reserve schedule containing the capacity that can be used by the System Operator to maintain the frequency of the grid within the limits prescribed by the Grid Code for the entire dispatch interval.</u>	To update required information to be provided by IEMOP for reserve schedule dispatch implementation	Meralco: We would like to seek clarification if the reserve schedule can be revised by the System Operator to include ASPA capacity that was not scheduled.		WESM is expected to employ central scheduling when it comes to both energy and reserve, thus, MMS reserve schedules are expected to be fully implemented without adding any other components as mentioned.	Noted
					<u>SPC/SIPC:</u> Include the latest ASPA Schedule submitted by NGCP	<u>SPC/SIPC:</u> <u>9.1.4 The Market Operator shall submit to the System Operator</u>	IEMOP: The contracted capacity is scheduled in real-time	Noted; Adopted IEMOP's proposal

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Dispatch Protocol								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
					to the Market Operator.	<u>and the Trading Participants the reserve schedule based on the most recent ASPA schedule submitted by NGCP to the Market Operator and the results of WESM co-optimization. The reserve schedule containsing the capacity that can be used by the System Operator to maintain the frequency of the grid within the limits prescribed by the Grid Code for the entire dispatch interval.</u>		
					<u>NGCP:</u> Request to clarify on the composition of the schedule/ timeframe/duration of reserve schedule		Based on the WESM Timetable section, it is provided at the same time energy schedules are provided.	Noted
Real-time Dispatch	9.1.3	9.1.3 Additionally, the <i>Market Operator</i> is	9.1.5 9.1.3 Additionally, the <i>Market Operator</i> is required under	Renumbered.				Adopted

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Dispatch Protocol								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
Scheduling - Background		required under <i>WESM Rules</i> Clause 3.10 to calculate and publish the RTD prices.	<i>WESM Rules</i> Clause 3.10 to calculate and publish the RTD prices.					
Real-time Dispatch Scheduling – Responsibilities	9.3.1.c	Preparing and ensuring timely submission to the <i>System Operator</i> of the <i>real-time dispatch schedule</i> , including the <i>WMOT</i> , in preparation for the <i>dispatch</i> implementation as set out in the <i>WESM Rules</i> and this Dispatch Protocol; and	Preparing and ensuring timely submission to the <i>System Operator</i> of the <i>real-time dispatch schedule</i> , including the <u>reserve schedules and</u> <i>WMOT</i> , in preparation for the <i>dispatch</i> implementation as set out in the <i>WESM Rules</i> and this Dispatch Protocol; and	To update required information to be provided by IEMOP for reserve schedule dispatch implementation				Adopted
Real-time Dispatch Scheduling – Responsibilities	9.3.3	<i>Trading Participants</i> shall be responsible for: a. Ensuring submission of <i>market offers</i> and <i>reserve offers</i> as set out in the <i>WESM Rules</i> and in accordance with the <i>WESM timetable</i> and the procedures and requirements set	<i>Trading Participants</i> shall be responsible for: a. Ensuring submission of <i>market offers</i> and <i>reserve offers</i> as set out in the <i>WESM Rules</i> and in accordance with the <i>WESM timetable</i> and the procedures and requirements set forth in this Dispatch Protocol. b. For <i>scheduled generating units</i> and <i>priority dispatch generating units</i> who are	To clarify that Ancillary Service providers are required to conform with reserve schedules. Development of reserve conformance standards is consistent with Section 10.3 of DC2021-03-0009	AC Energy: Suggested refinement on the provision.	AC Energy: c. For <i>ancillary service providers who are scheduled</i> <u>the scheduled Trading Participant</u> , it shall ensure <i>reserve</i> schedules are available and respond in accordance with the technical requirements expected for each reserve category and within the <i>reserve</i>	Suggest to retain original proposal.	Adopted IEMOP's proposal

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Dispatch Protocol								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
		<p>forth in this Dispatch Protocol.</p> <p>b. For <i>scheduled generating units</i> and <i>priority dispatch generating units</i> who are <i>dispatched</i>, generating in accordance with the <i>dispatch schedule</i> communicated and within <i>dispatch conformance</i> the standards set forth in this <i>Market Manual</i>.</p> <p>c. Maintaining their respective infrastructure to ensure access to the Market Participant Interface of the <i>MMS</i>.</p>	<p><i>dispatched</i>, generating in accordance with the <i>dispatch schedule</i> communicated and within <u>the</u> <i>dispatch conformance</i> the standards set forth in this <i>Market Manual</i>.</p> <p>c. <u>For ancillary service providers who are scheduled, ensure reserve schedules are available and respond in accordance with the technical requirements expected for each reserve category and within the reserve conformance standards set forth in this Market Manual.</u></p> <p>ed. Maintaining their respective infrastructure to ensure access to the Market Participant Interface of the <i>MMS</i>.</p>			conformance standards set forth in this <i>Market Manual</i>		
					<p>NGCP:</p> <p>Suggest to define “reserve conformance standards”</p>		IEMOP is amenable with the proposed definition of MEI/PEI above.	Adopted with revision by MEI/PEI
Real-time Dispatch Scheduling	9.6.1	The MDOM simultaneously determines the following:	The MDOM simultaneously determines the following:	Clerical revisions				

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Dispatch Protocol								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
– Outputs/Results of Real-time Scheduling		a. <i>Target loading levels in MW for the end of a dispatch interval, identified as the RTD schedule</i> b. <i>Reserve allocations for the dispatch interval;</i> c. <i>Associated energy prices at all market trading nodes, and</i> d. <i>When applicable, reserve prices for all reserve regions.</i>	a. <i>Target loading levels in MW for the end of a dispatch interval, identified as the RTD schedule</i> b. <i>Reserve allocations schedules for the entire dispatch interval;</i> c. <i>Associated energy prices at all market trading nodes, and</i> d. <i>When applicable, reserve prices for all reserve regions.</i>					
Dispatch Implementation - Background	(new)	(new)	<u>11.1.7 Dispatch of scheduled reserves shall be in accordance with Error! Reference source not found. of this Manual.</u>	For clarity.	<u>PEMC:</u> 1. Request clarity on the reference of the provisions 2. How is the monitoring related to the compliance monitoring required to be done by the WESM Governance Arm under Section 11.3 of the DOE DC 2021-03-0009? Will		IEMOP Revision: <u>11.1.7 Dispatch of scheduled reserves shall be in accordance with Section 15 of this Manual.</u>	Adopted as revised by IEMOP #2: SO will monitor the compliance

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Dispatch Protocol								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
					the SO report only trigger the compliance monitoring or further investigation by the Governance Arm?			
					<u>Meralco:</u> Reference source not found.		See proposed response above	
Scheduling and Dispatch of Reserves - Responsibilities	15.3.1	The <i>System Operator</i> is responsible for monitoring the compliance of each <i>reserve</i> provider in the <i>WESM</i> . This compliance monitoring report shall be submitted to the <i>Market Operator</i> .	The <i>System Operator</i> is responsible for monitoring the compliance of each <i>reserve</i> provider in the <i>WESM</i> . This compliance monitoring report shall be submitted to the <i>Market Operator</i> <u>based on the provisions of 0 of this Manual.</u>	For clarity.	<u>PEMC:</u> 1. Request clarity on the reference of the provisions 2. In relation to the previous comment, if this compliance monitoring report is essential for the compliance monitoring of reserve dispatch conformance standards under Section 11.3 of the DOE DC 2021-03-0009, may we suggest including		IEMOP Revision: The <i>System Operator</i> is responsible for monitoring the compliance of each <i>reserve</i> provider in the <i>WESM</i> . This compliance monitoring report shall be submitted to the <i>Market Operator</i> <u>based on the provisions of Section 16 of this Manual.</u>	Adopted as revised by IEMOP No need to furnish the Governance Arm of the report

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Dispatch Protocol								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
					the WESM Governance Arm as the recipient of the report, as well?			
					<u>Meralco:</u> What is the “provisions of 0”? Section 5.2 of DC2021-03-0009 states that EGs may be allowed to participate in the WESM as ASPs, provided that protocols among concerned parties are in place, as stipulated in Section 8.2 of DC2019-02-0003, which provides that the SO, in coordination with the MO and host DUs, shall establish a protocol for the dispatch of EGs scheduled for provision of AS and initiate amendments to the Dispatch Protocol Manual and other relevant	<u>Meralco:</u> 15.3.1 The System Operator is responsible for monitoring the compliance of each reserve provider in the WESM. This compliance monitoring report shall be submitted to the Market Operator <u>based on the provisions of 0 of this Manual. In the case of Ancillary Service Providers connected to the distribution network, the System Operator shall be responsible for coordinating with the distribution utility on the scheduling and dispatch of Ancillary</u>	See response above	



Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Dispatch Protocol								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
					Market Manuals for the approval of the DOE.	<u>Service Providers in the Reserve Market.</u>		
Scheduling and Dispatch of Reserves - Responsibilities	15.3.2	The <i>Market Operator</i> is responsible for ensuring that the required <i>reserve</i> levels per <i>System Operator</i> are used as inputs in pre-dispatch <i>market projections</i> and <i>real-time dispatch</i> scheduling processes in the <i>WESM</i> . It is also responsible for providing and maintaining the facility for timely receipt of submissions from the <i>System Operator</i> .	The <i>Market Operator</i> is responsible for ensuring that the required <i>reserve</i> levels (or reserve requirements) per from the System Operator are used as inputs in pre-dispatch <i>market projections</i> and <i>real-time dispatch</i> scheduling processes in the <i>WESM</i> . It is also responsible for providing and maintaining the data exchange facility for timely receipt of submissions from the <i>System Operator</i> .	Clerical revisions for clarity.				Adopted
Scheduling and Dispatch of Reserves - Responsibilities	(new)	(new)	15.3.3 <u>Ancillary Service Providers are responsible for ensuring that their reserve schedules are available to respond to the frequency control requirements of the Grid.</u>	To clarify that Ancillary Service providers are required to conform with reserve schedules and frequency control requirements.				Adopted
Scheduling and Dispatch of Reserves –	15.4	15.4 Determination of Reserve Requirements	15.4 Determination of Reserve Requirements	To include DOE issuances as basis for level of reserve requirements				Adopted

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Dispatch Protocol								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
Determination of Reserve Requirements		<p>15.4.1 Criteria for Determining Reserve Requirements. In determining <i>reserve</i> requirements for each <i>reserve</i> type in accordance with the relevant <i>ERC</i> issuances on the procurement of <i>ancillary services</i>, the <i>System Operator</i> shall ensure compliance with the power quality and reliability performance standards set out in the Philippine <i>Grid Code</i>.</p> <p>15.4.2 The level of <i>reserve</i> requirement for regulating <i>reserve</i> service shall be based on the latest issuances on the procurement of <i>ancillary services</i></p>	<p>15.4.1 Criteria for Determining Reserve Requirements. In determining <i>reserve</i> requirements for each <i>reserve</i> type in accordance with the relevant <u>DOE and ERC</u> issuances on the procurement of <i>ancillary services</i>, the <i>System Operator</i> shall ensure compliance with the power quality and reliability performance standards set out in <u>those issuances and/or</u> the Philippine <i>Grid Code</i>.</p> <p>15.4.2 The level of <i>reserve</i> requirement for regulating <i>reserve</i> service shall be based on the latest issuances on the procurement of <i>ancillary services</i> by the <u>DOE and the ERC</u>, and shall be used as reference by the <i>Market Operator</i> for the <i>market projections</i> and <i>real-time dispatch schedule</i>.</p> <p>15.4.3 For <i>contingency reserve</i> service and <i>dispatchable</i></p>					

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Dispatch Protocol								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
		by the <i>ERC</i> , and shall be used as reference by the <i>Market Operator</i> for the <i>market projections</i> and <i>real-time dispatch schedule</i> .	<i>reserve</i> , the <i>System Operator</i> shall determine the level of <i>reserve</i> requirement in accordance with the latest issuances on the procurement of <i>ancillary services</i> by the <u>DOE and the ERC</u> .					
		15.4.3 For <i>contingency reserve</i> service and <i>dispatchable reserve</i> , the <i>System Operator</i> shall determine the level of <i>reserve</i> requirement in accordance with the latest issuances on the procurement of <i>ancillary services</i> by the <i>ERC</i> .						
		15.4.4 The <i>Market Operator</i> , in coordination with the <i>System Operator</i> , shall formulate and maintain its procedures for determining the	15.4.4 The <i>Market Operator</i> , in coordination with the <i>System Operator</i> , shall formulate and maintain its procedures for determining the MW level of the <i>reserve</i> requirements.					

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Dispatch Protocol								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
		MW level of the <i>reserve</i> requirements.						
Scheduling and Dispatch of Reserves – Deadband Settings	(new)	(new)	<p><u>15.6 Deadband Settings</u></p> <p><u>15.6.1 Reserve facilities scheduled to provide regulation reserve shall ensure that their deadband is set is at +/- 0.15 Hz.</u></p> <p><u>15.6.2 Reserve facilities scheduled to provide contingency reserve shall ensure that their deadband is set between – 0.30 Hz to + 0.15 Hz.</u></p>	To include deadband settings for reserve facilities	<p><u>AC Energy:</u></p> <p>To ensure flexibility, we suggest to make the parameters general to account for possible changes. We suggest adopting the Ancillary Services Procurement Plan as the basis of the parameters.</p> <p>Should these be set in the WESM Manual or other documents?</p>	<p><u>AC Energy:</u></p> <p>15.6.1 Reserve facilities scheduled to provide regulation reserve shall ensure that their deadband is set <u>at the required level as stated in the latest Ancillary Services Procurement Plan (ASPP) by the System Operator as approved by ERC and DOE.</u></p> <p>15.6.2 Reserve facilities scheduled to provide contingency reserve shall ensure that their deadband is set <u>at the required level as stated in the latest Ancillary Services Procurement Plan (ASPP) by the System Operator as</u></p>	Suggest to retain proposal. ASPP should not be the basis of reserve technical requirements, rather it should be the Grid Code. However, PGC 2016 is not yet expected to be implemented in this Reserve Market Phase 1. Thus, specific guidelines were proposed to be written in this DP Manual.	Adopted IEMOP's proposal

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Dispatch Protocol								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
						<u>approved by ERC and DOE.</u>		
					<u>NGCP:</u> To align reserve category and deadband based on the setting used by SO during testing	<u>NGCP:</u> Suggest to revise as follows: <u>15.6.1 Reserve facilities scheduled to provide regulation regulating reserve shall ensure that their deadband is set at within +/- 0.15 Hz.</u> <u>15.6.2 Reserve facilities scheduled to provide contingency reserve shall ensure that their deadband is set between – 0.30 Hz to +0.15 Hz – 0.16 Hz.</u>	IEMOP is amenable to this proposed revision.	Adopted NGCP's proposal for 15.6.1
					<u>MEI/PEI:</u> The deadband setting should not necessarily be fixed at ± 0.15 Hz. Reserve facilities	<u>MEI/PEI:</u> <u>15.6.1 Reserve facilities scheduled to provide regulation reserve shall ensure that their deadband</u>	IEMOP recommends NGCP proposal.	Adopted MEI's proposal for 15.6.2

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Dispatch Protocol								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
					<p>have the option to set the deadband between 0 to ± 0.15 Hz.</p> <p>Since contingency reserve is merely a raise service during the first phase of the reserve market, the deadband should be set at a negative value only and should be less than - 0.15 HZ to distinguish it from the deadband for regulation reserve.</p>	<p><u>is set between 0 to ± 0.15 Hz.</u></p> <p><u>15.6.2 Reserve facilities scheduled to provide contingency reserve shall ensure that their deadband is set greater than – 0.30 Hz but less than - 0.15 Hz.</u></p>		
Scheduling and Dispatch of Reserves – Dispatching Ancillary Service Providers through Automatic Generation Control	(new)	(new)	<p><u>15.7 Dispatching Ancillary Service Providers through Automatic Generation Control</u></p> <p><u>15.7.1 Reserve facilities operating on automatic generation control (AGC) shall receive commands from the System Operator's Energy Management System (EMS)</u></p>	To clarify mode of receipt of dispatch instructions by reserve facilities operating on AGC				

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Dispatch Protocol								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
Scheduling and Dispatch of Reserves – Dispatching Ancillary Service Providers through Governor Control Mode	(new)	(new)	<p><u>15.8 Dispatching Ancillary Service Providers through Governor Control Mode</u></p> <p><u>15.8.1 Reserve facilities operating on governor control mode (GCM) shall ensure that their deadband setting is configured based on the requirements of section 0 of this Manual to ensure that they respond to requirements of the Grid for frequency control.</u></p>	To clarify mode of receipt of dispatch instructions by reserve facilities operating on GCM	<p><u>PEMC:</u></p> <p>Request for clarification of Section 0 on Clause 15.8.1</p>		<p>IEMOP Revision:</p> <p><u>15.8 Dispatching Ancillary Service Providers through Governor Control Mode</u></p> <p><u>15.8.1 Reserve facilities operating on governor control mode (GCM) shall ensure that their deadband setting is configured based on the requirements of Section 15.6 of this Manual to ensure that they</u></p>	Adopted IEMOP's revision

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Dispatch Protocol								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
							<u>respond to requirements of the Grid for frequency control.</u>	
					<p>NGCP:</p> <p>Request to clarify the rationale of the proposed provision, and to define “reserve facilities”</p>		<p>This can be further clarified by NGCP if deadband settings are still needed for this mode of operation.</p> <p>Reserve facilities is already a defined term.</p>	
Monitoring the Effective Provision of Ancillary Services	(new)	(Insert new)	<p>SECTION 16 MONITORING THE EFFECTIVE PROVISION OF ANCILLARY SERVICES</p> <p>(see <i>Annex A</i> for contents of Section 16)</p>	To provide basis for monitoring of conformance of reserve providers to reserve schedules. Development of reserve conformance	<p>PEMC:</p> <p>1. Suggest that the new Section 16 (Monitoring the Effective Provision of Ancillary Services) be added as Chapter 23 instead. This is to</p>		<p>IEMOP Response:</p> <p>1. IEMOP is amenable to this. Section 16 was written to provide some continuity</p>	Adopted as proposed by PEMC – PEMC to provide the revision (#1)

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Dispatch Protocol								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
				standards is consistent with Section 10.3 of DC2021-03-0009	<p>ensure consistency with the references of other manuals to this Dispatch Protocol.</p> <p>2. General Comment (relative to the plan to develop penalty guidelines, as may be necessary):</p> <p>a) Is the REF also the Reserve Conformance Standards referred to in Section 10.3 of the DC 2021-03-0009?</p> <p>b) Do the REF/Standards/C riteria have straightforward application, such that, failing beyond or outside the range (as set in Sec.</p>		<p>over convenience.</p> <p>2. IEMOP thinks this needs to be approved first to serve as basis for the Financial Penalty Manual.</p> <p>a. Yes. It is expected to be the same.</p> <p>b. Yes.</p>	

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Dispatch Protocol								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
					<p>16.3 to 16.6) would necessarily mean failure to comply with the Standards?</p> <p>c) Does the failure to meet the REF (or the Reserve Conformance Standards?) have any implication in terms of their engagement with SO as A/S Provider? Is it financial in nature?</p> <p>d) Will there be a double penalty if we consider developing separate penalty guidelines in case of breach of the reserve conformance standards (similar to</p>		<p>c. We defer to SO on the matter.</p> <p>d. Penalty of not complying to energy schedules (i.e., dispatch conformance standards) is different to the penalty of being unable to respond</p>	

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Dispatch Protocol								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
					dispatch conformance standards)? On Clause 16.2.1, Will this monitoring be part of the compliance monitoring referred to in Section 11.3 of the DOE DC 2021-03-0009? Related to the comment in the matrix in Section 15.3.1		to their scheduled reserve service A/S monitoring is proposed to be done as a separate activity from the current dispatch conformance standards monitoring.	
					<u>NGCP:</u> NGCP proposes to delete the Reserve Effectiveness Factor and instead replace it with NGCP's Penalty System , as provided in the attached as Attachment 2: Annex C.		IEMOP defers to the RCC on the matter.	Adopted IEMOP's REF
					<u>Technical Committee:</u>	<u>Technical Committee:</u>	IEMOP responses.	16.1.1 – TC's suggestion adopted

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Dispatch Protocol								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
					<p>For clarification:</p> <ul style="list-style-type: none"> Section 16.1.1 – Why use “quantum” instead of capacity of reserves for each category? Section 16.1.2 – Who will assess the reserve effectiveness factor (REF)? Section 16.2 – Any responsibilities by the Market Operator or PEMC? Section 16.3.1 b – Why 1%? What 	<p>16.1.1 WESM Rules Clause 3.3.7.4 states that the System Operator shall continuously update the reserve effectiveness factors for each reserve facility category, and the <u>capacity of reserve for each category according to regions to be scheduled</u> quantum of reserve to be scheduled to meet each locationally specific reserve requirement by the market dispatch optimization model, to accurately reflect the power system.</p> <p>16.1.2 The reserve effectiveness factor (REF) measures the reserve facility's</p>	<ul style="list-style-type: none"> Reserve capacity can be used MO and SO will regularly check its appropriateness. PEMC is expected to monitor compliance to its standards. Possibly propose changes as may be appropriate. Monitoring is expected from PEMC. IEMOP defers to SO on this 	<p>16.1.2 – noted (assessment of REF)</p> <p>16.1.2 adopted as proposed by IEMOP</p> <p>16.3.1 b – noted</p>

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Dispatch Protocol								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
					<p>does this small number mean?</p> <ul style="list-style-type: none"> Section 16.3.2.2 – What was the basis for these range of values as regards response time? Why are the intervals and scale non-uniform? Section 16.3.3.1 – Is it not implied that regulating reserve facility will provide regulating capacity? – see <i>suggested revision</i>. 	<p>adequacy, accuracy, and timeliness <u>to deliver its contracted service.</u> in its actual reserve response with respect to the expected operating parameters set for a specific type of reserve.</p> <p>Xx</p> <p>16.3.3.1 The REF for a regulating reserve facility on AGC with respect to its regulating capacity shall be based on the reserve facility's maximum actual generation output and</p>	<p>matter as this was an original proposal established during the MO-SO Reserve Market TWG discussions in 2013.</p> <ul style="list-style-type: none"> Same comment as above Correct. May be revised. There is no separate REF. 	<p>16.3.3.1 – adopted iemop's proposal</p>

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Dispatch Protocol								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
					<p>Is there a separate REF for Regulating reserve facility with respect to some other performance?</p> <ul style="list-style-type: none"> • Equation on Section 16.3.3.1 - If the equation refers to a dispatch interval, suggestion to add a clause: <u>For every dispatch interval...</u> <p>Then remove subscript i in every variable</p> <p>Is the AGC command always a generation output in MW?</p> <ul style="list-style-type: none"> • Section 16.3.3.2 - Why do we need 	<p>highest generation output instructed as AGC command within a dispatch interval. It shall be computed as such:</p>	<ul style="list-style-type: none"> • IEMOP is amenable to this. • IEMOP defers to SO on this matter as this was an 	<p>Adopted IEMOP's proposal - Equation on Section 16.3.3.1 (for consistency with IEMOP's form)</p>

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Dispatch Protocol								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
					<p>a transmutation table?</p> <p>If the Performance value is from zero to close to 100, can we not publish the performance as is. If needed, we can publish REF as integers (round-off, but no need to provide a transmutation table).</p> <ul style="list-style-type: none"> Section 16.3.4 - Do we have separate equations for REF_{RT} and REF_{RC}? <p>If the function is just to average, we can simply put that in words (since this is a Rules document anyway).</p> <ul style="list-style-type: none"> Section 16.4.2.1 – We suppose there are two 		<p>original proposal established during the MO-SO Reserve Market TWG discussions in 2013.</p> <ul style="list-style-type: none"> IEMOP is amenable to this proposal. This is only based on static gain. 	<ul style="list-style-type: none"> Section 16.3.4 – TC's comment adopted <p>16.4.2.1 – Noted</p>

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Dispatch Protocol								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
					<p>separate ideas here:</p> <ul style="list-style-type: none"> a. REF is based on static gain b. Static gain definition. <p>The TC suggests we split this into two provisions.</p> <ul style="list-style-type: none"> • Equation on Section 16.4.2.1 – Are we measuring here accuracy or simply quantifying the static gain? 			16.4.2.1 – noted – static gain
					<p><u>APC:</u></p> <p>What is the purpose of this section? Will it be for pure monitoring purposes only, or will it be considered as a form of penalty criteria?</p>		It is expected to be the eventual basis for financial penalty, similar to the dispatch conformance standards.	Noted

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Dispatch Protocol								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
Procedures during Market Intervention or Suspension	Section 16	SECTION 16 PROCEDURES DURING MARKET INTERVENTION OR SUSPENSION	(Renumbered whole section to SECTION 17)	Renumbered due to inserted section				Not adopted - Renumbering of Section 16 onwards no longer needed Dispatch Conformance Standards will become Section 23 (new Section)
Management of Must-Run Units	Section 17	SECTION 17 MANAGEMENT OF MUST-RUN UNITS	(Renumbered whole section to SECTION 18)	Renumbered due to inserted section	<u>SPC/SIPC:</u> If the Trading Participant offers reserve capacity but it is not included in the Reserve Dispatch Schedule by the Market Operator and the System Operator advised to the generator to dispatch its reserve offer capacities, then settlement of that dispatch should be based on Reserve offers and not be			Renumbering not adopted – Section 16 (23)

Annex – Matrix of Proposed Amendments to the WESM Rules and Various WESM Manuals on the Implementation of Reserve Market

WESM Manual on Dispatch Protocol								
Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Re-wording based on Comments	Proponent's Response	RCC Agreement
					based on MRU settlement. As applicable, Reserve capacities should be exhausted first before dispatching MRU.			
Excess Generation	Section 18	SECTION 18 EXCESS GENERATION	(Renumbered whole section to SECTION 19)	Renumbered due to inserted section				Not adopted
Procedures for Load Shedding	Section 19	SECTION 19 PROCEDURES FOR LOAD SHEDDING	(Renumbered whole section to SECTION 20)	Renumbered due to inserted section				Not adopted
Emergency Procedures	Section 20	SECTION 20 EMERGENCY PROCEDURES	(Renumbered whole section to SECTION 21)	Renumbered due to inserted section				Not adopted
Amendment , Publication and Effectivity	Section 21	SECTION 21 AMENDMENT, PUBLICATION AND EFFECTIVITY	(Renumbered whole section to SECTION 22)	Renumbered due to inserted section				Not adopted
Appendix	Section 22	SECTION 22 APPENDIX	(Renumbered whole section to SECTION 23)	Renumbered due to inserted section				Not adopted

SECTION 16 MONITORING THE EFFECTIVE PROVISION OF ANCILLARY SERVICES**16.1. Overview**

16.1.1 WESM Rules Clause 3.3.7.4 states that the System Operator shall continuously update the reserve effectiveness factors for each reserve facility category, and the quantum of reserve to be scheduled to meet each locationally specific reserve requirement by the market dispatch optimization model, so as to accurately reflect the power system.

16.1.2 The reserve effectiveness factor (REF) measures the reserve facility's adequacy, accuracy, and timeliness in its actual reserve response with respect to the expected operating parameters set for a specific type of reserve.

16.1.3 The technical and operational data to measure the REF shall be acquired from the System Operator's SCADA-EMS.

16.2. Responsibilities

16.2.1 The System Operator shall continuously monitor the reserve facility's REF for each dispatch interval.

16.3. Measuring the Reserve Effectiveness Factor of Regulating Reserves on AGC

16.3.1 The REF for a regulating reserve facility on AGC shall be based on the following criteria:

- a. Response Time: At least 75% of the desired generation adjustment is reached at a maximum of 25 seconds
- b. Regulating Capacity: At least 1% of the scheduled regulating reserve capacity

16.3.2 Measuring REF based on Response Time

16.3.2.1 The REF for a regulating reserve facility on AGC with respect to its response time shall be based on the reserve facility's ability to comply with the AGC command sent by the SCADA-EMS within the required time.

16.3.2.2 The following table shows the REFs for each range of time the regulating reserve facility was able to provide at least 75% of the generation output instructed as AGC command.

Range of Response Time, seconds	REF
0 – 15	1.00
16 – 20	0.95
21 – 25	0.90
26 – 32	0.80
Greater Than 32	0.70
No Response	0.00

16.3.3 REF based on Regulating Capacity

- 16.3.3.1 The REF for a regulating reserve facility on AGC with respect to its regulating capacity shall be based on the reserve facility's maximum actual generation output and highest generation output instructed as AGC command within a dispatch interval. It shall be computed as such:

$$Performance_{REG-AGC,RC,i} = \frac{Maximum\ Actual\ Generation_i}{Highest\ Generation\ from\ AGC\ Command_i}$$

Where:

$Performance_{REG-AGC,RC,i}$ refers to the performance of the regulating reserve facility on AGC with respect to its regulating capacity at dispatch interval i

$Maximum\ Actual\ Generation_i$ refers to the maximum actual generation output within dispatch interval i

$Highest\ Generation\ from\ AGC\ Command_i$ refers to the highest generation output instructed as AGC command within a dispatch interval i

- 16.3.3.2 The following table shows the REFs for each performance range calculated in the previous clause.

Performance, %	REF
Greater Than 99%	1.00
95% < Performance ≤ 99%	0.97
90% < Performance ≤ 95%	0.95
85% < Performance ≤ 90%	0.90
80% < Performance ≤ 85%	0.85
75% < Performance ≤ 80%	0.80
0% < Performance ≤ 75%	0.70
0%	0.00

- 16.3.4 The overall REF for a regulating reserve facility on AGC shall be computed as such:

$$REF_{REG-AGC,i} = \frac{REF_{REG-AGC,RT,i} + REF_{REG-AGC,RC,i}}{2}$$

Where:

$REF_{REG-AGC,i}$ refers to the REF for regulating reserve facility on AGC at dispatch interval i

$REF_{REG-AGC,RT,i}$ refers to the REF for regulating reserve facility on AGC with respect to its response time at dispatch interval i

$REF_{REG-AGC,RC,i}$ refers to the REF for regulating reserve facility on AGC with respect to its regulating capacity at dispatch interval i

16.4 Measuring the Reserve Effectiveness Factor of Regulating Reserves on Governor Control Mode

16.4.1 The REF for a regulating reserve facility on Governor Control Mode (GCM) shall be based on the following criteria

- a. Accuracy: plant's ability to increase or decrease its generation when the power system frequency goes beyond the generating unit's dead-band setting, with respect to its static gain
- b. Response Time: plant's ability to increase or decrease its generation within the required response time

16.4.2 Measuring REF based on Accuracy

16.4.2.1 The REF for a regulating reserve facility on GCM with respect to its accuracy shall be based on its static gain. The static gain shall be computed as such:

$$\text{Static Gain}_{REG-GCM,i} = \frac{\text{Capacity of the Generating Unit}_i}{\text{Droop Setting} \times \text{Nominal Frequency}}$$

Where:

$\text{Static Gain}_{REG-GCM,i}$ refers to the static gain of the regulating reserve facility on GCM at dispatch interval i

$\text{Capacity of the Generating Unit}_i$ refers to the maximum available capacity of the reserve facility at dispatch interval i

Droop Setting refers to the reference setting to which a reserve facility's generation output changes with respect to the change in frequency.

Nominal frequency is defined in the *Philippine Grid Code* to be at 60 Hz

16.4.2.2 The performance of a regulating reserve facility on GCM with respect to its accuracy shall be based on the reserve facility's actual MW response and its expected response based on its static gain. It shall be computed as such:

$$\text{Performance}_{REG-GCM,ACC} = \text{ABS} \left[\frac{\text{Actual Response}}{\text{Expected Response based on Static Gain}} \right] \times 100\%$$

$$\text{Expected Response based on Static Gain} = \text{Static Gain} \times \text{Change in Frequency}$$

16.4.2.3 The following table shows the REFs for each range of the performance calculated for its reserve response accuracy.

Performance, x	REF
Within 5%	1.00
$5\% < x \leq 15\%$	0.95
$15\% < x \leq 20\%$	0.90
$20\% < x \leq 30\%$	0.85
$x > 30\%$	0.00

16.4.3 Measuring REF based on Response Time

- 16.4.3.1 The REF for a regulating reserve facility on GCM with respect to its response time shall be based on the reserve facility's ability to respond within the required time.
- 16.4.3.2 The following table shows the REFs for each range of time the regulating reserve facility was able to provide at least 75% of the generation output expected based on static gain, as prescribed in clause 16.4.2.2 of this *Manual*.

Range of Response Time, seconds	REF
0 – 15	1.00
16 – 20	0.95
21 – 25	0.90
26 – 32	0.80
Greater Than 32	0.70
No Response	0.00

16.4.4 The overall REF for a regulating reserve facility on GCM shall be computed as such:

$$REF_{REG-GCM,i} = \frac{REF_{REG-GCM,ACC,i} + REF_{REG-GCM,RT,i}}{2}$$

Where:

$REF_{REG-GCM,i}$ refers to the REF for regulating reserve facility on GCM at dispatch interval i

$REF_{REG-GCM,ACC,i}$ refers to the REF for regulating reserve facility on GCM with respect to its accuracy at dispatch interval i

$REF_{REG-GCM,RT,i}$ refers to the REF for regulating reserve facility on GCM with respect to its response time at dispatch interval i

16.5 Measuring the Reserve Effectiveness Factor of Contingency Reserves

16.5.1 The REF for a *contingency reserve* facility shall be based on the following criteria

- a. Reserve Capacity: At least 1% of the scheduled *contingency reserve* capacity

16.5.2 REF based on Reserve Capacity

- 16.5.2.1 The REF for a *contingency reserve facility* with respect to its *reserve capacity* shall be based on the *contingency reserve facility's* maximum actual generation output and the expected *reserve response* within a dispatch interval. It shall be computed as such:

$$Performance_{CON,RSC,i} = \frac{Maximum Actual Generation_i}{Expected Reserve Response_i}$$

Where:

$Performance_{CON,RSC,i}$ refers to the performance of the *contingency reserve facility* with respect to its reserve capacity at dispatch interval i

Maximum Actual Generation_i refers to the maximum actual generation output within dispatch interval *i*

Expected Reserve Response_i refers to the expected response at dispatch interval *i*

- 16.5.2.2 The following table shows the REFs for each performance range calculated in the previous clause.

Performance, %	REF
Greater Than 99%	1.00
97% < Performance ≤ 99%	0.95
96% < Performance ≤ 97%	0.90
96% < Performance ≤ 95%	0.80
0%	0.00

- 16.5.3 The overall REF for a *contingency reserve facility* shall be computed as such:

$$REF_{CON,i} = REF_{CON,RSC,i}$$

Where:

$REF_{CON,i}$ refers to the REF for *contingency reserve facility* at dispatch interval *i*

$REF_{CON,RSC,i}$ refers to the REF for *contingency reserve facility* with respect to its reserve capacity at dispatch interval *i*

16.6 Measuring the Reserve Effectiveness Factor of Dispatchable Reserves

- 16.6.1 The REF for a *dispatchable reserve facility* shall be based on the following criteria:

- Synchronization Time: Should be synchronized to the *Grid* within 15 minutes from *dispatch instruction*
- Reserve Capacity: At least 1% of the scheduled *dispatchable reserve capacity*

16.6.2 Measuring REF based on Synchronization Time

- 16.6.2.1 The following table shows the REFs for each range of time the *dispatchable reserve facility* was able to synchronize upon issuance of *dispatch instruction*.

Range of Response Time, <i>x</i> , minutes	REF
$0 < x \leq 15$	1.00
$15 < x \leq 20$	0.90
$20 < x \leq 30$	0.80
$30 < x \leq 45$	0.70
No Response	0.00

16.6.3 REF based on Reserve Capacity

- 16.6.3.1 The REF for a *dispatchable reserve facility* with respect to its *reserve capacity* shall be based on the *dispatchable reserve facility's* maximum actual generation output and the expected *reserve response* within a dispatch interval. It shall be computed as such:

$$Performance_{DIS,RSC,i} = \frac{Maximum\ Actual\ Generation_i}{Expected\ Reserve\ Response_i}$$

Where:

$Performance_{DIS,RSC,i}$ refers to the performance of the *dispatchable reserve facility* with respect to its reserve capacity at dispatch interval i

$Maximum\ Actual\ Generation_i$ refers to the maximum actual generation output within dispatch interval i

$Expected\ Reserve\ Response_i$ refers to the *dispatch instruction* issued at dispatch interval i

- 16.6.3.2 The following table shows the REFs for each performance range calculated in the previous clause.

Performance, %	REF
Greater Than 99%	1.00
97% < Performance ≤ 99%	0.95
96% < Performance ≤ 97%	0.90
96% < Performance ≤ 95%	0.80
0%	0.00

- 16.6.4 The overall REF for a *dispatchable reserve facility* shall be computed as such:

$$REF_{DIS,i} = \frac{REF_{DIS,ST,i} + REF_{DIS,RSC,i}}{2}$$

Where:

$REF_{DIS,i}$ refers to the REF for *dispatchable reserve facility* at dispatch interval i

$REF_{DIS,ST,i}$ refers to the REF for *dispatchable reserve facility* with respect to its synchronization time at dispatch interval i

$REF_{DIS,RSC,i}$ refers to the REF for *dispatchable reserve facility* with respect to its reserve capacity at dispatch interval i

Annex B
General Comments on the Single Buyer System

NGCP has reservations on the single buyer system. The rationale behind this needs to be further clarified such as the benefit added to the market participants by designating the System Operator (SO) as a single buyer, the possibility of this system to reduce overall costs or result in pancaking of charges (e.g., market fees, cost of prudential requirements, interest penalties, VAT, etc.), and if there is an existing or proposed back-to-back provision that mandates transmission customers to provide a security deposit to NGCP for this purpose.

In addition, SO as a trading participant in the electricity market might contradict the EPIRA since it is not allowed to engage in such activities. The creation of a monopsony itself is against the objectives of the EPIRA.

Emphasizing the following scenarios: What will happen if there is a market intervention? SO's motives/intentions may be suspected and be accused of conflict of interest if its decision to call upon an unscheduled reserve (or the opposite) negatively impacts the market prices? Presently, the market only has supply offers and loads/demands are price takers. What happens when demand bidding becomes operational and SO-NGCP becomes a monopsony? It will possibly be accused of manipulating/controlling the market prices for reserves.

May we note that, unlike Distribution Utilities (DUs) which have staggered collection schedules over the entire billing period, NGCP collects payments only once a month. Hence, its security deposit will have to cover a much longer trading period (hence, greater amounts) than what the DUs do. What about the reserves for embedded generators who may have no business relations with NGCP? Are they going to be free-riders?

We would like to know if there is an existing deregulated electricity market anywhere in the world wherein the same system is being observed. We find this unreasonable for NGCP since the responsibility carries some penalties (with respect to delayed payments which may result from inability of customers to pay for these pass-through charges), aside from the prudential requirements which are unnecessary burdens to NGCP and to the consumers. Also, NGCP can no longer suspend or delay payments to service providers if it is unable to collect payments from customers for whatever reason.

It would be acceptable if these would form part of WESM settlements similar to the settlements of spot energy (or similar to line rentals allocation and collection). This is also logical since the two are being co-optimized. The latter avoids pancaking of charges. Previously, it was already recommended that the reserves traded and co-optimized with energy in the WESM should be "settled" by the WESM/IEMOP rather than by NGCP, and that only long-term contracts with NGCP should be left with NGCP to collect.

The said arrangement would also be more convenient for transition into trading of reserve futures and other products that will lead to improved and more efficient market - including charging of reserves based on "causers pay." On the other hand, the proposed scheme (DC) prevents the implementation of causers pay because it will be the consumers who will pay for the low availability of ageing generators which will have to be propped up by more reserves.

Comments on the Imposition of Penalties in Cases of Non-compliance

(on the possible use of reserve effectiveness factors as written in the draft changes on the Dispatch Protocol, and incorporating such penalties in the spot reserve payment)

NGCP proposes to delete the Reserve Effectiveness Factor and instead replace it with NGCP's Penalty System. For an Ancillary Services Procurement Agreement (ASPA) with Firm Contracted Capacity arrangement, the Service Provider shall not be paid for the Non-compliant Interval/s. In addition, NGCP shall deduct an amount equivalent to fifty percent (50%) of the Applicable Rate for that particular type of Ancillary Service for the Non-compliant Interval. Such deduction shall be applied to the payment of the monthly AS cost.

NGCP would like to note that the factors in "Attachment A (Section 16 - Monitoring the Effective Provision of Ancillary Services)" likewise do not contribute for incentives to perform better. Rather, they are all penalties with the exception of the highest factor which is 1.0.

The last blackout in the Visayas requires a review of the reserve regions contemplated in the proposal. There should be sufficient reserves per island in order to provide the same level of reserves to all participants who pay for the reserves. For instance, if the reserves coming from power plants located in the island of Leyte, what happens when there is a split between Panay and Negros? Panay consumers will be paying for reserves that will never be available in such a situation. Inter-island connections should have n-1 capability, much like that of major transmission lines. The interconnection should not be loaded as to prevent the transfer of reserves between the two regions without overloading the interconnection. Each island should have, at least, its own contingency reserve and black start capability which can be done by NGCP through firm contracting. In the case of Bohol, there is a need to build more power plants to provide such a level of security.

Inasmuch as the frequency regulation in the Visayas is being provided by the HVDC which gets its power from Luzon, there should be a reallocation of Ancillary Services charges between, and among, the two main Grids.

The proposed settlements system for reserves are relatively novel for the market participants. Will NGCP be fully compensated (allowed to recover its costs) for unusually high prices or will it be forced to absorb such prices? It is difficult to predict what the Regulator will do in this case. Hence, there should be a provision or statement from the ERC that all Ancillary Services costs are pass-through, and in case of deferral or staggered recovery, such costs will include interest expense or holding cost.

Further, NGCP did not see any mention of trading surplus. Will NGCP also be entitled to the surplus? Is this going to be deducted from the amounts to be recovered through Ancillary Services charges?"