



MEETING MINUTES

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ATTENDEES

	Name	Designation/Position	Department/Company
1	Maila Lourdes G. De Castro	Chairperson, Independent	RCC
2	Francisco L.R. Castro, Jr.	Member, Independent	RCC
3	Allan C. Nerves	Member, Independent	RCC
4	Concepcion I. Tanglao	Member, Independent	RCC
5	Dixie Anthony R. Banzon	Member, Generation Sector	RCC
6	Cherry A. Javier	Member, Generation Sector	RCC
7	Carlito C. Claudio	Member, Generation Sector	RCC
8	Jessie Victorio	Member (Alternate), Generation Sector	RCC
9	Mark Habana	Member, Generation Sector	RCC
10	Michelle Tuazon	Member (Alternate), Generation Sector	RCC
11	Ryan S. Morales	Member, Distribution Sector	RCC
12	Ricardo G. Gumalal	Member, Distribution Sector	RCC
13	Nelson M. Dela Cruz	Member, Distribution Sector	RCC
14	Virgilio Fortich, Jr.	Member, Distribution Sector	RCC
15	Lorreto H. Rivera	Member, Supply Sector	RCC
16	Ambrocio R. Rosales	Member, System Operator	RCC
17	Isidro E. Cacho, Jr.	Member, Market Operator	RCC
18	Elvin Hayes E. Nidea	Chief Governance Officer	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	Sheryll M. Dy	Proponent	IEMOP
24	Julius Eleazar A. Bunyi	Proponent	IEMOP
25	Edward I. Olmedo	Proponent	IEMOP
26	Valfia U. Gregorio	Proponent	IEMOP
27	Katrina Garcia-Amuyot	Proponent	IEMOP
28	Melanie C. Papa	Observer	DOE
29	Mari Josephine C. Enriquez	Observer	DOE
30	Jhannelyn D. Marasigan	Observer	DOE
31	Marvin Jay D. Masanda	Observer	DOE





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I. Call to Order	<ul style="list-style-type: none"> The meeting was conducted via Microsoft Teams and was called to order at 09:01 AM. The meeting was initially chaired by Ms. Concepcion Tanglao (Independent) and later by Atty. Maila G. De Castro (Chairperson/Independent).
II. Determination of Quorum	<ul style="list-style-type: none"> There were 15 RCC principal members and 2 alternate members in attendance.
III. Adoption of Agenda	<ul style="list-style-type: none"> The provisional agenda of the meeting was approved by the body, as presented. Ms. Cherry Javier (Generation) asked if IEMOP submitted rules change proposal on reserve market. The Secretariat replied that no submission was made prior to the meeting. Ms. Valfia Gregorio (IEMOP) said that they are still finalizing the proposal.
IV. Approval of Minutes of Previous Regular Meeting (182 nd Meeting, 16 July 2021)	<p><u>Presenter:</u> Ms. Kathleen R. Estigoy (RCC Secretariat)</p> <p><u>Action Requested:</u> For approval</p> <p><u>Proceedings:</u> Noting that no comments were received on the minutes, Mr. Virgilio Fortich, Jr. (Distribution) moved to approve the minutes of meeting, which was duly seconded by Mr. Ambrocio Rosales (System Operator). The Secretariat's request to affix the e-signature of RCC Members was also approved by the body.</p>
V. New Business	
1. Proposed Amendments to WESM Manuals for Improvements to Market Resource Modelling and Monitoring (ORCP-WM-21-04)	<p><u>Presenter:</u> Mr. Edward I. Olmedo (Proponent - IEMOP)</p> <p><u>Action Requested:</u> For continuation of discussion and approval for endorsement to PEM Board</p> <p><u>Presentation Material/s:</u> Annex A – Matrix of the proposal.</p> <p><u>Proceedings:</u></p> <p>Mr. Olmedo presented the additional changes made and continued the deliberation of the Proposed Amendments to WESM Manuals for Improvements to Market Resource Modelling and Monitoring.</p>



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	<p>A. Additional Proposed Amendments to the WESM Dispatch Protocol</p> <ul style="list-style-type: none"> In Clause 5.5.2, the proponent proposed to delete the entire clause since the regular reporting is already covered in Clause 5.5.1. In Clause 5.5.3, proposed for re-numbering to 5.5.2. <p>B. Continuation of Discussion from the previous meeting</p> <ul style="list-style-type: none"> Ms. Estigoy raised the following items for discussion in Clause 5.10.3: <ul style="list-style-type: none"> Follow-up on RCC's request for SO's data on the history of failures to provide accurate data by real-time monitoring facilities owned or managed by Trading Participants (TP) - SO responded that they are currently validating the historical data and will submit once completed. Suggestion of Mr. Carlito Claudio (Generation) during the previous meeting that SO could aid the TP in troubleshooting its remote telemetering unit (RTU) for a fee - SO responded via comment that the said business proposal needs to be discussed by the proponent thru NGCP's Revenue and Regulatory Affairs (RRA) group on a case-to-case basis. <p>Mr. Claudio added that the SO seemed to agree with his suggestion noting that the TP will request SO for their service and it will be up to the SO if they will act on the request.</p> Further on Clause 5.10.3, Mr. Claudio raised the comments from Millenium Energy, Inc./Panasia Energy Inc. (MEI/PEI) on the inclusion of a provision defining the responsibility of the SO in restoring its real-time monitoring. <p>The RCC adopted the revised wording <u>"The System Operator shall report real-time monitoring facilities"</u></p>



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	<p><u>owned or managed by the Trading Participants or owned by the System Operator ... xxx</u></p> <ul style="list-style-type: none"> On Clause 5.10.4 regarding the responsibility of correcting real-time data, Mr. Olmedo explained that the proposal is to emphasize the SO's responsibility to put some measures to mitigate erroneous data. Mr. Rosales said that even if the SO is the data owner, they are not capable to manually address the non-updating data considering that the market is already on a 5-minute interval basis. He then proposed that when TPs observe that there are non-updating data, TPs should request the SO to reflect overriding constraint inputs. SO will then send the data to the MO as input in the RTD Schedule. <p>Mr. Isidro E. Cacho (Market Operator) supported the suggestion of Mr. Rosales and reiterated that the MO is only a recipient of data.</p> <p>Ms. Tanglao clarified if Mr. Rosales' suggestion is internal between SO and MO, there would be no need to reflect such process in the proposed amendments. Mr. Rosales said that it is currently being done. He also added that this is a better option wherein the TP is the one who will send the data to SO in case there is non-updating TP data.</p> <p>Ms. Javier inquired what 5-minute data that the SO can't provide. Mr. Rosales said that the SO can't provide actual data when an RTU is non-updating. SO is not capable in encoding every 5-minute the data given by the TP. Thus, Mr. Rosales said that the best option is that the TP submits schedule to be reflected in the overriding constraint. Ms. Javier clarified that generators cannot submit offers if they are on overriding constraint. Ms. Javier also asked if it is the TP's responsibility to inform the SO on the actual value of the plant when non-updating of data occurred.</p> <p>Mr. Claudio also clarified that "scan inhibit" and "overriding constraint input" are different from each other, wherein, "scan inhibit" is manually encoding of the generated data</p>



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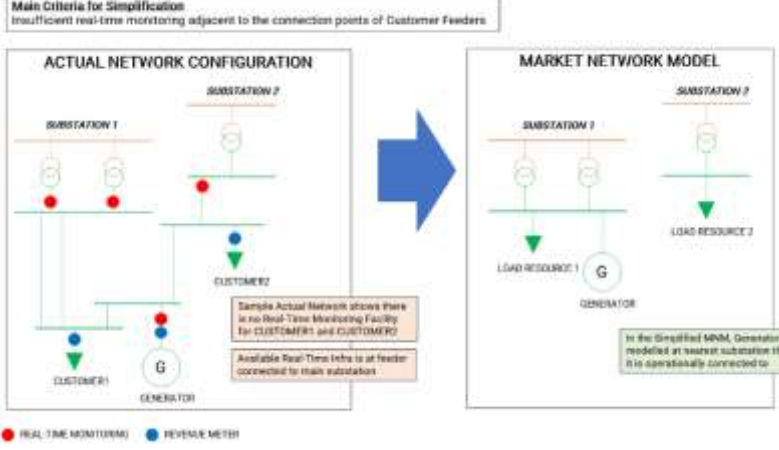
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	<p>while “overriding constraint” is the actual generation of the TP. Mr. Olmedo explained further that the TPs are expected to follow real-time schedule, thus this will reflect the real-time data during non-updating of RTU.</p> <p>Ms. Javier added that if this will be TP’s responsibility, then it will be a new process since this was not flagged and was not included in the automation of TP systems for the 5-minute interval market.</p> <p>It was then decided that this specific clause will be for further discussion among the SO, MO and TPs. Mr. Rosales also suggested to raise this concern during the regular meeting of MO-SO. Ms. Tanglao requested MO to update the RCC on the result of the discussion. Atty. De Castro asked on when the meeting will be conducted, which was responded by Mr. Olmedo to be tentatively end of August 2021.</p> <p>Mr. Olmedo suggested to reword the clause inserting “<i>in coordination with the Market Operator and Trading Participant shall jointly estimate</i>”, however Ms. Javier said that the 5-minute real-time data is SO’s responsibility.</p> <p>The RCC decided to adopt the revised wording <u>“The System Operator in coordination with the Market Operator and Trading Participant shall estimate real-time data that was reported to be erroneous or non-updating.”</u></p> <ul style="list-style-type: none"> On the given illustration below, Mr. Rosales raised that the simplified model does not represent looping configuration considering that Generator (G) is also connected in Substation 2. He suggested to add a pseudo line that signifies the connection of G to both substations 1 and 2. He also added that the MO should represent the looping in the simplification of market network model.



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	<p>Main Criteria for Simplification Insufficient real-time monitoring adjacent to the connection points of Customer Feeders.</p>  <p>Mr. Cacho said that MO needs real-time monitoring facility for data accuracy, and due to the limited availability of real-time monitoring facilities, MO needed to simplify the model.</p> <p>Mr. Claudio said that the simplification does not reflect the actual configuration. Based on the diagram, on the actual configuration, Generator (G) is connected to both Substations 1 and 2, whereas the simplified diagram shows it is only connected to Substation 1. This may also affect the draw down output of substations. Mr. Rosales agreed with Mr. Claudio.</p> <p>Mr. Ric Gumalal (Distribution) inquired if the addition of dummy or pseudo bus cannot be implemented by the MO due to a limitation of the system. Mr. Rosales responded that it is with MO to answer the query but for him, the addition of pseudo bus should be easily done in the new MMS.</p> <p>Mr. Olmedo reiterated that the proposal is to reflect in the manual of the current practice and to remain transparent on the simplification. The sample given is when there is no real-time facility adjacent to the customer connection point, and as defined, the connection point is the boundary between the DU's or customers and the grid. He also added that the MO is currently looking into possible processes to address the concerns of Mr. Morales and Mr.</p>



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	<p>Claudio which includes the estimation of loads without real-time facilities.</p> <p>Mr. Rosales asked if the given sample configuration is existing in actual. Mr. Olmedo said that such configuration are mostly from the Visayas region. Mr. Rosales clarified if the same process of simplification is also done with embedded generators, which Mr. Olmedo confirmed.</p> <ul style="list-style-type: none"> Mr. Rosales raised his concern on the approval of Clause 5.3.2, considering that this relates to the illustration provided. If the said clause will be approved, this will also include the simplification of network for cases with embedded generators modelled to the nearest market network model substation. In this case, this will not be truly reflective of the actual configuration. <p>Mr. Ryan Morales (Distribution) inquired about his request from last meeting regarding the identification of the circumstances or events of this type of configuration. He also asked if this proposal is aligned to the future Distribution System Operation (DSO) implementation as proposed by the WESM Technical Committee. Mr. Olmedo answered that the proposal is not aligned with the DSO implementation since the proposal was drafted since last 2020. Further, if there's a need for revision once the DSO is implemented, MO will submit proposed amendments.</p> <p>Mr. Morales elaborated that if this will also apply in the modelling of the DU system, the DSO structure is no longer mandatory. Mr. Olmedo said that if this will be implemented with the DSO, the Distribution Utility shall ensure that there will be real-time facilities. He also added that it will be based on the nearest substation if there will no real-time monitoring facilities.</p> <p>Ms. Javier requested clarification on who is responsible for the revenue meters. Mr. Cacho answered that there was an existing DOE Circular mandating the installation</p>



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	<p>of RTUs, considering the impacts or effects of non-compliance to this circular.</p> <p>Mr. Rosales further expressed his disagreement on the setup of the simplification of the actual configuration. This is to maintain the loop configuration and address the N-1 outages.</p> <p>Mr. Claudio suggested the following:</p> <ul style="list-style-type: none"> ○ for embedded generators which are located inside the distribution network and are connected in multiple substations, it is proper to connect these embedded generators to all its substations; and ○ for the sample given that it is connected in the grid line, it is better to include pseudo line to reflect the actual configuration. <p>The RCC agreed to adopt the revised wording <u>“Representation of downstream generating units with limited real-time monitoring facilities such as in cases of embedded generators where there is limited availability of real-time monitoring facilities between the transmission system’s main substation and the generator, in which case, the Market Operator may provisionally model the generating unit at the nearest MNM substation to which it is indirectly connected. The following illustration shows an example of this case: (insert illustration here)”</u></p> <ul style="list-style-type: none"> • Mr. Olmedo informed the body that IEMOP will submit another proposal to address the issues on the modelling of embedded generators, to be submitted to the RCC in December 2021. In addition, IEMOP will also conduct meeting with MERALCO to gather inputs and comments on same issues raised. • Ms. Estigoy reminded the RCC on the timeline of the proposal, which has a related PEM Board-approved urgent amendment that will be expiring six (6) months after the commencement of the 5-minute market. The RCC Secretariat recommended the RCC to request extension from the PEM Board of said urgent amendment.

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	<p>Atty. De Castro said that the information provided is noted and will be taken for consideration.</p> <ul style="list-style-type: none"> Atty. De Castro instructed the Secretariat to send the looping diagram to the RCC and TC and request inputs/comments within 3-5 days. She added that there's no need to present the TC's comments in the next scheduled meeting, hence, the approval will be conducted via e-mail. <p><u>Resolution:</u> The RCC approved the proposal, as amended, for submission to PEM Board pending the following items:</p> <ol style="list-style-type: none"> Comments from the Technical Committee on the revised looping configuration diagram; and IEMOP statistics on Trading Participants modelled similarly as the sample diagram.
<p>2. Proposed General Amendments to the WESM Rules and WESM Manuals regarding Market Operator and System Operator Procedures (ORCP-WR-WM-21-07)</p>	<p><u>Presenter:</u> Ms. Valfia Gregorio (IEMOP)</p> <p><u>Action Requested:</u> For continuation of deliberation and approval for endorsement to PEM Board</p> <p><u>Presentation Material/s:</u> Annex B – Matrix of the proposal.</p> <p><u>Proceedings:</u></p> <p>Ms. Gregorio continued the presentation of the proposal, comments received, and the corresponding responses of IEMOP, for deliberation of the body.</p> <ul style="list-style-type: none"> On Clause 4.5.4, Mr. Rosales requested clarification on the "official notification" being referred to. Mr. Olmedo answered that it is the official e-mail from the SO. On Clause 4.5.7, Ms. Estigoy gave a background on PEMC's comments, which include a request for clarification if the IEMOP also intends to amend WESM Rules Clause 3.2.1.5. IEMOP provided amendments to the clause, exempting new regions.



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	<p>Mr. Rosales disagreed to use the word “region” in the specific clause and suggested to revise to it with “network” instead. Mr. Claudio and Mr. Cacho agreed on using the word network, which the body adopted.</p> <p>Ms. Estigoy also added that the RCC agreed to the deletion of the MO’s Information and Communications Technology Change Management Process (ICMP) and replacing it with the MO’s Business Process.</p> <ul style="list-style-type: none"> On Clause 5.1.1, Atty. De Castro requested clarification on the meaning of “dynamically updated”. Mr. Olmedo responded that dynamically updated model means that the model or configuration is constantly changing. The RCC then agreed to use “constantly updated” instead of “dynamically updated”. On the proposed MNM timetable item 2, Atty. De Castro inquired if the term “power system topology” is a technical term. Mr. Olmedo explained that the term refers to how the power system is connected to the grid. <p>Dr. Allan Nerves (Independent) added that topology is the configuration of the network. It refers to the network interconnection. But if it refers to the equipment being change or added, it may fall outside the definition of topology. It depends on what changes are being instituted.</p> <p>Mr. Claudio also added that the power system is defined in Philippine Grid Code (PGC) and WESM Rules. Given the definition, he agreed that the using the term “power system topology” is correct.</p> <p>Mr. Rosales expressed a different opinion that the term “power system topology” is inappropriate considering that power system involves generation, transmission, distribution, etc. However, the proposed clause focuses on the new load facility. He then suggested to retain the original provision.</p>



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	<p>Mr. Morales suggested to use “electrical model” instead of “power system topology”.</p> <p>Atty. De Castro requested for more simplification on the description of the activity being referred to in subject item.</p> <p>During the resumption of the meeting, Mr. Olmedo suggested to reword the “power system topology” to “breaker-oriented single line diagram”, which the body agreed to adopt.</p> <ul style="list-style-type: none"> On the proposed MNM timetable item 3, Atty. De Castro asked how the notice is being provided. Mr. Olmedo responded that the notice is being provided thru e-mail. <p>Mr. Rosales agreed with the suggestion of the Technical Committee (TC) to remove the “or are included”, since it is already mandatory for the Network Service Provider (NSP) to provide notice of changes in the distribution network. He added that this will lessen any room for different interpretations. However, Mr. Morales said he agreed with IEMOP’s proposal.</p> <p>Atty. De Castro requested clarification on the proponent's response. Mr. Claudio explained that when the distribution network is not modelled in the MNM, there’s no need for the NSP to provide notice of this change since the MNM will not be affected. Atty. De Castro also asked if the notice of changes in the DU network will not help in the future. Mr. Claudio replied that it will only be for information of the MO and SO, but the said changes will not affect the market schedules and prices since it was not modelled.</p> <ul style="list-style-type: none"> On the proposed MNM timetable item 7, Mr. Rosales asked the responsible party for updating the market and power system models. Mr. Olmedo answered that updating both models is IEMOP’s responsibility. He further explained that during audit, there were two models



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	<p>being updated since both are being recognized by the Market Management System (MMS).</p> <ul style="list-style-type: none"> On the proposed MNM timetable item 12, Atty. De Castro inquired if there were instances that the deployment of MNM update was unsuccessful, and the kind of notification provided by the MO to the WESM Participants for unsuccessful deployment. Mr. Olmedo answered that there were incidents encountered during the MMS which were not identified during the system's testing. These incidents were part of the software limitations. He also informed the body that the MO advises during the successful deployment since they were able to fix immediately. On proposed amendments to the Market Operator Information Disclosure and Confidentiality Manual Issue 5.1 (IDC Manual), the RCC agreed to harmonize the timeline with the approved provision in WESM Manual on Dispatch Protocol Section 14.4.2. <p>At this point, the RCC agreed to have a break for lunch at 12:10 PM. The RCC resumed the meeting at 12:50 PM.</p> <ul style="list-style-type: none"> On Clause 3.8.3.4, the SO commented that Regulating Reserves (RR) do not need to be depleted to accommodate must-dispatch generating units at maximum available output. Ms. Gregorio clarified that the proposed amendment for the specific clause is to revise the reference clause and renaming of frequency reserve to regulating reserve. The provision was already existing and there were no proposed changes to the provision other than clerical enhancement. Mr. Olmedo added that if the body agreed with SO's comments, then MO will not contest. <p>Mr. Claudio disagreed with SO's comments, explaining that there's no reason not to deplete RR before tapping the Merit Order Table (MOT) to address the frequency issues since the consumers pay for the whole capacity.</p>



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	<p>The RCC approved to adopt IEMOP's proposed revision, considering that the proposed amendment is more on the clerical enhancement.</p> <ul style="list-style-type: none"> On the provided diagram illustrating AGC commands within the 5-minute dispatch interval, Mr. Olmedo said that IEMOP will provide a revised diagram for clarity. <p>Having no further questions, Mr. Francisco L.R. Castro, Jr. (Independent) moved for the approval of the proposal subject to further refinements, which was duly seconded by Mr. Ric Gumalal (Distribution). The motion was approved and adopted by the body.</p> <p><u>Resolution:</u> Approved, as amended, for endorsement to PEM Board pending the revised diagram illustrating AGC commands within the 5-minute dispatch interval.</p>
<p>3. PEM Board-Approved Proposed Amendments to the WR and WM on Information Disclosure and Confidentiality re Exceptions for Confidentiality Undertakings for Oversight Bodies (DOE-Remanded Proposal)</p>	<p><u>Presenter:</u> Ms. Kathleen R. Estigoy (RCC Secretariat)</p> <p><u>Action Requested:</u> For discussion and approval for endorsement to PEM Board</p> <p><u>Presentation Material/s:</u> Annex C – Matrix of the proposal</p> <p><u>Proceedings:</u></p> <p>Ms. Estigoy provided the background to the body and requested the DOE representatives to further explain the letter's content on remanding the proposal. The RCC also requested justification from PEMC on the reason from to exempt in the disclosure agreement.</p> <ul style="list-style-type: none"> Ms. Tanglao opined that PEMC can be removed from Clause 5.4.2 and to retain in Clause 5.4.4. She agreed that the MO and PEMC should execute a Non-Disclosure Agreement (NDA) per proposed Clause 5.4.4. IEMOP commented that Sections 5.4.2 and 5.4.4 seem to be inconsistent and thus recommends that the original



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	<p>proposal may be considered wherein the exceptions are only to DOE and ERC, as oversight bodies.</p> <ul style="list-style-type: none"> On PEMC's justification on the proposed exemption, as listed: <ul style="list-style-type: none"> The MO should be allowed to provide confidential data/information, even without NDA, when it identifies/reports to PEMC (governance arm) non-compliance with the WESM Rules and Market Manuals by any WESM Member, including any suspected/potential incidents of anti-competitive behavior as defined by relevant laws. Memorandum of Agreement (MOA) on Data Exchange Between PEMC and IEMOP wherein in Section 7.1 states that <i>"Each Party shall permit the access, use and disclosure of its data and information provided by the other Party under this Agreement, subject to compliance by the receiving Party with the requirements of the WESM Rules and the WESM Manual on Market Information Disclosure and Confidentiality, if applicable. Each Party shall also be accountable for the performance of its own Market Information System in relation to data exchange."</i> Ms. Gregorio reiterated that they would stand on their original proposal not to include PEMC in the exemption considering that there's an existing NDA between MO and PEMC. Ms. Tanglao also confirmed that she agrees with IEMOP. <p>The body adopted to remove PEMC from Clause 5.4.2.</p> <ul style="list-style-type: none"> Ms. Melanie Papa (DOE Observer) clarified the DOE's letter, remanding the proposal, noting the following: <ul style="list-style-type: none"> Inconsistencies on clauses 5.4.2 and 5.4.4. There are existing provisions in the WESM Rules on the treatment of market information under Clauses 5.2.1.4 and 5.2.1.5 even if the proposal will not push through.

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	<ul style="list-style-type: none"> ○ Strengthen PEMC's justification on the exemption, for DOE's consideration. DOE's point is that there should be boundaries set on what data are to be provided or not. This is in consideration that the PEMC is governed by PEM Board which is composed of sectoral representatives. • Ms. Tanglao inquired if the removal of PEMC in Clause 5.4.2 is still inconsistent with Clause 5.4.4. Atty. Sheryll responded that the deletion of PEMC in 5.4.2 will be consistent with 5.4.4. She added that there is already an existing agreement between PEMC and MO. She also informed the body that Clause 5.4.3 is that DOE and ERC will not need to sign NDA. • On Clause 5.4.3, Ms. Javier recalled that the MO should request confidential treatment from DOE and ERC on confidential market data considering the possible scenario that the confidential data will be disclosed. <p>Atty. Sheryll explained that there are data being provided to ERC and DOE via automatic file transfer, which will be hard for IEMOP to request confidential treatment. She also requested for enlightenment from the RCC on how this provision will be executed considering that there's no NDA between MO and DOE/ERC.</p> <p>Dr. Nerves suggested that MO identify the data that needs confidential treatment, as a way forward. Atty. Sheryll is amenable if the intent is to request ERC/DOE to maintain confidentiality. However, she emphasized not to expect obtaining confidential treatment.</p> <p>Atty. Sheryll also raised that the data owners are more concerned on the confidentiality of the data being provided to the DOE/ERC. Ms. Javier confirmed that they also need assurance that DOE/ERC will keep their data confidential.</p> <p>Atty. De Castro suggested to reword as <u>"With due regard to WESM Rules Clauses 5.2.1.4 and 5.2.1.5, for all</u></p>





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	<p><u>confidential information provided to the DOE and ERC, the Market Operator shall request for confidential treatment of such information.”</u></p> <ul style="list-style-type: none"> On Clause 5.4.4, Ms. Gregorio clarified if there's a need to the clause considering the there's already an existing NDA. Atty. De Castro and Ms. Tanglao said that it is better to also reflect Clause 5.4.4 for continuing obligations. <p>Having no further questions, Mr. Francisco L.R. Castro, Jr. (Independent) moved for the approval of the proposal for endorsement to PEM Board, which was duly seconded by Ms. Oyie Rivera (Supply). The motion was approved and adopted by the body.</p> <p><u>Resolution:</u> Approved, as amended, for endorsement to PEM Board.</p>
VI. New Business	
<p>1. Proposed General Amendments on WESM Rules and Manuals regarding Automatic Pricing Re-runs for Under-generation and Over-generation (ORCP-WR-WM-21-10)</p>	<p><u>Presenter:</u> Ms. Kathleen R. Estigoy (RCC Secretariat)</p> <p><u>Action Requested:</u> For approval for posting</p> <p><u>Presentation Material/s:</u> Annex D – Presentation Material</p> <p><u>Proceedings:</u></p> <p>Ms. Estigoy discussed the Proposed general amendments on WESM Rules and Manuals regarding automatic pricing re-runs for under-generation and over-generation.</p> <ul style="list-style-type: none"> As a background, WESM Rules provided market pricing re-runs shall be designed to produce prices reflecting: <ul style="list-style-type: none"> Supply shortage when there is load shedding – shortage pricing during under-generation (at offer price cap, PhP32,000/MWh); and Excess supply when there is excess generation – excess pricing during over-generation (at offer price floor, PhP-10,000/MWh) This rule was effectively changed by the ERC in its Decision dated 20 August 2020 (and promulgated on 29



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	<p>December 2020) on ERC Case No. 2017-042RC on Price Determination Methodology (PDM).</p> <ul style="list-style-type: none"> ERC Decision dated 20 August 2020 on PDM <ul style="list-style-type: none"> ERC acknowledges the importance of having the correct pricing signals and settlement-ready prices in real-time for efficiency and transparency in prices However, the ERC deemed that prices during under-generation should reflect the cost that the consumers are willing to pay for a continuous supply of electricity, which price is not necessarily the offer price cap (PhP32,000/MWh) ERC directed existing pricing mechanisms during under-generation and over-generation should be maintained Rationale of the proposal: <ul style="list-style-type: none"> Harmonize provisions on automatic pricing re-runs in the WESM Rules and Manuals with the ERC directives on PDM General amendment of the Urgent Amendments approved by the PEM Board on 26 May 2021 Summary of the proposal: <table border="1" data-bbox="762 1514 1481 1955"> <thead> <tr> <th>Affected Clauses</th><th>Proposed Amendment</th></tr> </thead> <tbody> <tr> <td> WESM Rules: <ul style="list-style-type: none"> 3.6.7.2 3.6.7.3 3.10.5.5 </td><td>Deletion of shortage pricing (for under-generation) and excess pricing (for over-generation)</td></tr> <tr> <td> WESM Manual on CVC-PR: <ul style="list-style-type: none"> 5.1.3 5.2.2. to 5.2.5 5.3.1 </td><td>Deletion of shortage pricing (for under-generation) and excess pricing (for over-generation)</td></tr> </tbody> </table> 	Affected Clauses	Proposed Amendment	WESM Rules: <ul style="list-style-type: none"> 3.6.7.2 3.6.7.3 3.10.5.5 	Deletion of shortage pricing (for under-generation) and excess pricing (for over-generation)	WESM Manual on CVC-PR: <ul style="list-style-type: none"> 5.1.3 5.2.2. to 5.2.5 5.3.1 	Deletion of shortage pricing (for under-generation) and excess pricing (for over-generation)
Affected Clauses	Proposed Amendment						
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	<p>Ms. Javier requested to cite sample of the “existing mechanism” mentioned by the ERC. Ms. Estigoy responded that the WESM Rules for the 5-minute market initially intended that when the MMS detects market conditions to reflect under-generation or over-generation, it automatically replaces the market price with the offer price cap (for under-generation) or offer price floor (for over-generation).</p> <p>Ms. Karen Varquez (RCC Secretariat) added that the ERC wanted the market dispatch optimization model (MDOM) to retain the dispatch schedules when results show constraints violation but the prices for energy and reserves shall be determined from an automatic re-run with relaxed constraints.</p> <p>Mr. Claudio observed that the posted manual is inconsistent with the DOE DC2021-07-0022 and suggested to reflect the proper naming for the categories of reserves. He also asked what naming convention will be adopted and suggested that it is better to use what is reflected in the DOE DC2021-07-0022 since this is also harmonized with the Philippine Grid Code (PGC). Mr. Olmedo said that their proposal is to use the previous naming convention of reserves — contingency, dispatchable and regulating reserve.</p> <p>Mr. Virgilio Fortich (Distribution) requested clarification if there’s a possibility of a market price that is more than the price cap produced during price re-run. Mr. Olmedo clarified that the original WESM design adopted was to use an automatic offer price cap of Php32,000/MWh during supply shortage and Php-10,000/MWh during excess however, on ERC’s point of view that during supply shortage the price re-run needs to find the next available price not automatically Php32,000/MWh. He added that this process is currently being implemented since the start of the Enhanced WESM Design Operation (EWDO).</p> <p>Ms. Javier asked what the methodology for other constraints violations is. Mr. Olmedo said that the ERC still adopted what is the existing methodology for different types of constraints and there is a hierarchy being followed.</p> <p>Ms. Dianne De Guzman (RCC Secretariat) requested clarification with the DOE regarding the adoption of automatic offer price cap</p>



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	<p>and floor that is mentioned in DOE DC2021-07-0022, which is inconsistent with the ERC directive in the PDM. Ms. Papa responded that they would get back to the Secretariat on this.</p> <p>Having no further questions, Mr. Virgilio Fortich, Jr. (Distribution) moved for the approval for posting for solicitation of comments, which was duly seconded by Mr. Carlito Claudio (Generation). The motion was approved and adopted by the body.</p> <p><u>Resolution:</u> Approved, as presented, for publication.</p>
<p>2. Proposed Amendments to the WESM Registration Manual for General Enhancements to the Application Process of New WESM Members in consideration of DOE DC2021-06-0013 (Adopting a General Framework Governing the Test and Commissioning of Generation Facilities)</p>	<p><u>Presenter:</u> Ms. Valfia Gregorio (IEMOP)</p> <p><u>Action Requested:</u> For approval for posting</p> <p><u>Presentation Material/s:</u> Annex E – Presentation Material</p> <p><u>Proceedings:</u></p> <p>Ms. Gregorio presented the background of the Proposed Amendments to the WESM Registration Manual for General Enhancements to the Application Process of New WESM Members in consideration of DOE DC2021-06-0013 (Adopting a General Framework Governing the Test and Commissioning of Generation Facilities).</p> <ul style="list-style-type: none"> • Background: <ul style="list-style-type: none"> ○ On 17 April 2019, IEMOP received DOE letter regarding the prolonged test and commissioning of VRE plants, and directed the same to spearhead amendments to address the issue. ○ 21 February 2021- RCC Deliberation ○ 02 July 2021 - DOE issuance, DOE DC2021-06-0013, on general framework governing the Test and Commissioning of Generation Facilities requires harmonization to the WESM Manual on Registration and Deregistration • Summary: <ul style="list-style-type: none"> ○ Registration Process – Proposed Three Phases ○ Other enhancements on the documentary requirements





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	<ul style="list-style-type: none"> Other enhancements on the test and commissioning <p>Atty. De Castro requested the proponent to identify which provisions were harmonized with the said DOE DC and have new proposed changes. Ms. Javier also requested time for the RCC to further review the proposal, which was last discussed in 2020.</p> <p><u>Resolution:</u> The RCC agreed to defer the discussion and line-by-line review on the next scheduled meeting to allow the RCC to review the proposal matrix as updated to harmonize with the DOE DC2021-06-0013.</p>
<p>3. Issue on Indirect WESM Membership</p>	<p><u>Presenter:</u> Ms. Cherry Javier (Generation)</p> <p><u>Action Requested:</u> For discussion</p> <p><u>Presentation Material/s:</u> Annex F – Presentation Material</p> <p><u>Proceedings:</u></p> <p>Ms. Javier made a presentation on the issue regarding the liability for/of defaulting Indirect WESM Members beyond the termination of power supply agreements (PSAs).</p> <ul style="list-style-type: none"> Background: IEMOP proposed the following: <ul style="list-style-type: none"> Direct WESM Member register their Indirect WESM Members, but with almost same requirements The Indirect WESM Member will no longer sign the Market Participation Agreement (MPA), which means that the Indirect WESM Members are not bound by the WESM Rules Note that even without the MPA requirement, the 8 Indirect WESM Members still lack several requirements Potential problem identified: Exposure of the Direct WESM Member after its PSA terminates with the Indirect WESM Member IEMOP Proposal:

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	<p>WESM Manual on Registration, Suspension and De-Registration Criteria and Procedures Issue 5.2</p> <p>2.5.6.3 OTHER REQUIREMENTS FOR APPROVED APPLICATIONS</p> <ol style="list-style-type: none"> a. Market Participation Agreement. The Applicant shall execute a market participation agreement in the form prescribed by the Market Operator. <u>For Indirect WESM Membership registration, its Direct WESM Member Counterparty shall execute this agreement on behalf of the Indirect WESM member.</u> b. Participant Interface Access. The Applicant shall subscribe to and allow the Market Operator to apply and install a method employing encryption in its computer to provide secure access to the Market Management System. <ul style="list-style-type: none"> • Market Participation Agreement: <p>Article II. COMPLIANCE WITH THE WESM RULES AND MARKET DOCUMENTS</p> <p>Section 1.01 Compliance Obligation. The Company hereby agrees to be bound by and to comply with all of the provisions of the WESM Rules, WESM Manuals and such guidelines and procedures approved by the PEM Board (referred to as "Market Documents"), including amendments thereto in accordance with its provisions.</p> <p>Section 1.02 Full Knowledge. The Company has read, has full knowledge of and understands the provisions of the WESM Rules, WESM Manuals and Market Documents and it understands that it must remain to be compliant with its obligations as a registered WESM Member and Trading Participant in order to maintain registration.</p> <p>Without MPA, what binds the Indirect WESM Member to the WESM Rules?</p>



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	<ul style="list-style-type: none"> What is the proof of agreement? <p>A. WESM Manual on Registration, Suspension and De-Registration Criteria and Procedures Issue 5.2</p> <p>2.8.1 A person or entity that wishes to be registered as an <i>Indirect WESM Member</i> must –</p> <p>2.8.1.1 comply with the membership criteria set forth in this Manual for <i>Trading Participants</i>, except only for the requirement to satisfy prudential requirements; and</p> <p>2.8.1.2 <u>be registered by its <i>Direct WESM Member counterparty</i></u>; identify the <i>Direct WESM Member</i> that shall stand as its counterparty for its transactions in the WESM and shall, for this purpose, submit proof of agreement by the said <u>Applicant</u> <i>Direct WESM Member</i> to stand <u>serve</u> as <u>its</u> counterparty and <u>allowing the <i>Direct WESM Member</i></u> to transact on behalf of the <i>Applicant</i>.</p> <p>Ms. Javier discussed that the proof of agreement is limited to the PSA. End of PSA is same as the end of Direct-Indirect relationship. In addition, the Direct WESM Member cannot assume responsibility beyond its PSA with the Indirect WESM Member.</p> Issue: Who assumes liability for defaulting Indirect WESM Members beyond PSA termination, which could either be due to defaulting of the customer or ending of the PSA term? <ul style="list-style-type: none"> ➤ Default Wholesale Supplier <ul style="list-style-type: none"> ○ PSALM and NPC were designated as Default Wholesale Suppliers at the start of WESM ○ DC 2010-05-006 “Terminating the Default Wholesale Supplier Arrangement for the Philippine Wholesale Electricity Spot Market (WESM) and Declaring a Disconnection Policy” <ul style="list-style-type: none"> ✓ Relieving NPC and PSALM of their responsibilities as DWS





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	<ul style="list-style-type: none"> ✓ Disconnection of non-WESM members ✓ Creation of Implementation Review Committee -ensure smooth termination of DWS arrangement and implementation of disconnection policy <ul style="list-style-type: none"> • Summary of the proposal: Indirect WESM Members to stay as WESM Members? <ul style="list-style-type: none"> ○ If yes, status quo. ○ If no, identify SoLR entities. <p>Mr. Fortich asked if the contract of the eight (8) indirect members were expired or terminated. Ms. Katrina Garcia-Amuyot (IEMOP) answered that the MO does not have PSA copies of WESM Members. Part of MO's requirements is the submission of a counterparty enrollment form, which serves as the basis that there is an existing agreement between the Direct and Indirect Members.</p> <p>Mr. Claudio commented that there is a provision in the WESM Rules that no entity can withdraw or inject power to grid unless that entity is a WESM Member. This may not result to the entity being supplied by a Supplier of Last Resort (SoLR).</p> <p>Ms. Javier responded that these entities may register with the Central Registration Body (CRB), however, Mr. Claudio said that the CRB is for the registration of Retail Suppliers. He also asked what the considerations are for Electric Cooperatives and other DUs who want to withdraw/inject to the grid. Ms. Javier replied that they must be WESM Members.</p> <p>Ms. Claudio suggested to request comments from IEMOP but Ms. Javier clarified that her presentation is only for RCC's discussion.</p> <p>Ms. Estigoy clarified that Ms. Javier, as Generation, was tasked to provide a counter proposal on the treatment of Indirect WESM Members relative to the IEMOP's prior proposal on registration.</p> <p><u>Resolution:</u> The RCC noted the information provided by Ms. Cherry Javier.</p>



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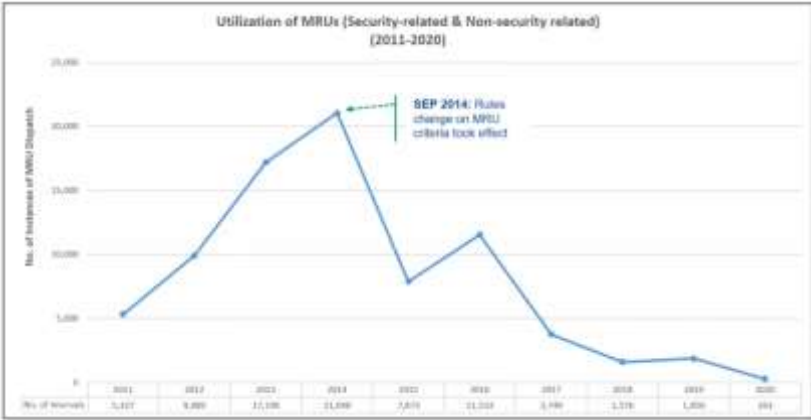
Agenda	Agreements / Action Taken / Action Required
<p>4. MRU Rules Effectiveness Study</p>	<p><u>Presenter:</u> Ms. Divine Gayle Cruz (Secretariat)</p> <p><u>Action Requested:</u> For discussion</p> <p><u>Presentation Material/s:</u> Annex G – Presentation Material</p> <p><u>Proceedings:</u></p> <p>Ms. Cruz presented the effectiveness study on MRU Utilization, for the RCC's inputs/comments. Highlights of the presentation are as follows:</p> <ul style="list-style-type: none"> • Background: On September 2014, the major amendments to the WESM Manual on Must-Run and Must-Stop Units, namely: <ul style="list-style-type: none"> ○ Criteria for selection of MRU – from 8 to 3 ○ Regional allocation of compensation in each grid, either Luzon or Visayas for all MRUs, and ○ New compensation mechanism for Displaced Generators • Scope of the Study: Revised criteria for selection of MRU – from 8 to 3 <ol style="list-style-type: none"> 1. System Voltage Requirement 2. Thermal Limits of Transmission Line and Power Equipment 3. Real-Power Balancing and Frequency Control • Reasons for Selection: <ul style="list-style-type: none"> ○ Relevance of the rules change ○ Sufficiency of data ○ Availability of data • Effectiveness Indicators: <ol style="list-style-type: none"> 1. Instances of MRU dispatch 2. Volume of MRUs dispatched 3. Trend of MRU payments <p>For effectiveness indicator 1, the considerations were:</p> <ul style="list-style-type: none"> • Pre-2014: The SO's reasons for MRU utilization were re-classified as either Security or Non-security related MRU.



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	<ul style="list-style-type: none"> If an interval is tagged as BOTH security and non-security MRU dispatch, that interval is counted under Security-related MRU. <p>Rules Change:</p> <ul style="list-style-type: none"> Revised definition of MRU to limit its use to address system security and reliability issues Revised criteria for utilizing MRUs to align with revised definition <p>Stated Objective:</p> <ul style="list-style-type: none"> To limit use of MRUs for addressing system security and reliability issues only (in compliance with DOE directive) <p>On the given diagram, it was noticed that the number of intervals for the utilization of MRUs were decreasing since the criteria for selection of MRU was decreased.</p>  <p>Therefore, it can be concluded that the rules change proposal was effective due to the following conditions:</p> <ol style="list-style-type: none"> No MRU dispatched is utilized for non-security reasons Number of instances of MRU dispatch decreased after 2014. <p>Mr. Claudio requested to breakdown the MRUs for Luzon Visayas regions. He then asked how the study will be applied in the 5-minute dispatch interval market. Ms. Cruz answered that it will be out of scope since the study only covers the implemented rules</p>

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	<p>change proposals related to MRU. Mr. Henry answered that this is possible if the consideration is on the energy.</p> <p>Ms. Javier also requested to include a diagram showing the MRU categories. She also asked if it is possible to identify the category of insufficient reserves. Ms. Cruz said that it can be identified prior 2014 but due to the revised MRU criteria, which was implemented in 2014, it will be challenging to specifically identify.</p> <p><u>Resolution:</u> The RCC noted the presentation by the Secretariat.</p>									
5. DOE-approved Revised Market Rules/Manuals	<p><u>Presenter:</u> Ms. Kathleen R. Estigoy Ms. Dianne De Guzman</p> <p><u>Action Requested:</u> For information</p> <p><u>Presentation Material/s:</u> Annex G – Presentation Material</p> <p><u>Proceedings:</u></p> <table><tr><th>DOE DC</th><th>Amended Rules / Manuals</th><th>Remarks</th></tr><tr><td>DC 2021-03-0005: Adoption of Amendments to Provisions for the Load Distribution Factors</td><td>Load Forecasting Methodology</td><td>Approved as amended</td></tr><tr><td>DC 2021-03-0006: Provisions for Must-Run Unit</td><td>Dispatch Protocol</td><td>Adopted as revised:<ul style="list-style-type: none">Management of MRU – included the word “scheduled” to describe the MRU<ul style="list-style-type: none">17.1.817.1.9 – not included in IEMOP’s proposal</td></tr></table>	DOE DC	Amended Rules / Manuals	Remarks	DC 2021-03-0005: Adoption of Amendments to Provisions for the Load Distribution Factors	Load Forecasting Methodology	Approved as amended	DC 2021-03-0006: Provisions for Must-Run Unit	Dispatch Protocol	Adopted as revised: <ul style="list-style-type: none">Management of MRU – included the word “scheduled” to describe the MRU<ul style="list-style-type: none">17.1.817.1.9 – not included in IEMOP’s proposal
DOE DC	Amended Rules / Manuals	Remarks								
DC 2021-03-0005: Adoption of Amendments to Provisions for the Load Distribution Factors	Load Forecasting Methodology	Approved as amended								
DC 2021-03-0006: Provisions for Must-Run Unit	Dispatch Protocol	Adopted as revised: <ul style="list-style-type: none">Management of MRU – included the word “scheduled” to describe the MRU<ul style="list-style-type: none">17.1.817.1.9 – not included in IEMOP’s proposal								



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			<ul style="list-style-type: none"> • 17.5.2 – subject of urgent amendment per PEM Board Resolution No. 2020-22-05 dated 25 March 2021, which deleted Section 17.5 as MRU reports are covered by the SO Dispatch Instruction Reports under Sections 14.4.7 to 14.4.9 (DPM Issue 15.1.) • 17.5.3 – revised timeline for validation from 2 weeks to 7wd ○ Management of MRU (Dispatch Intervals under Ramp Down) <ul style="list-style-type: none"> • 17.6 – included Ramp Up <p>Adopted as proposed</p> <ul style="list-style-type: none"> • 17.6.1 • 17.6.2 • 17.6.3
	DC 2021-03-0008: Implementation of Policy and Framework Governing the Operations of	WESM Rules	<p>Adopted as proposed:</p> <ul style="list-style-type: none"> ○ Categories of WESM Member – Generation Company <ul style="list-style-type: none"> • 2.3.1.1; 2.3.1.3; 2.3.1.4 ○ Glossary





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	Embedded Generators		<ul style="list-style-type: none"> • Non-Scheduled Generating Unit • Scheduled Generating Unit <p>Adopted as revised</p> <ul style="list-style-type: none"> ○ Glossary <ul style="list-style-type: none"> • Pmax – referenced to latest COC and ○ Registration of Generation Company of an Embedded Generator – renumbered to Section 2.3.13 <ul style="list-style-type: none"> • Section 2.3.1.13 (a) referred to 2.3.1.10 (a), a non-existent clause. The clause was copied from the proposal under 2.3.1.10 (new provision), which renumbering was not adopted. <p><u>Resolution:</u> The RCC noted the information provided.</p>
VI. Adjournment			
1. Updates on Proposals	<p><u>Presenter:</u> Ms. Kathleen R. Estigoy (RCC Secretariat)</p> <p><u>Action Requested:</u> For information</p> <p><u>Proceedings:</u> The Secretariat received a letter from the DOE dated 03 August 2021 disapproving the Proposed Amendments Clarifying BCQ Declaration by Pagbilao Energy Corp (PEC).</p>		





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	<p>Reasons for the disapproval:</p> <ul style="list-style-type: none"> ○ It defeats the purpose of ensuring accountability by the TPs in preventing their exposure in the WESM. This is critical for DU who are mandated to provide supply to their captive customers in the least-cost manner taking into account the trading or supply from the WESM. ○ Implementation may be subject to dispute particularly when there will be an adverse impact to the TPs, more importantly to the DU captive customers who pay pass-through generation costs. ○ Implementation of the proposal can be costly while on the other hand may run counter to our objective of instilling full compliance in the submission and confirmation of bilateral contracts by the TPs. The Php 800,000 estimated cost for the CRSS modification does not include audit cost. <p><u>Resolution:</u> The RCC noted the information provided.</p>
<p>2. DOE Public Consultation Updates</p>	<p><u>Presenter:</u> Ms. Mari Josephine Enriquez (DOE Observer)</p> <p><u>Action Requested:</u> For information</p> <p><u>Proceedings:</u></p> <p>Below are the updates on the DOE Department Circulars:</p> <p><u>A. Approved/Signed:</u></p> <ul style="list-style-type: none"> • DC2021-07-0021: Provisions for Metering Services Provider Performance, Metering Standards and Site-Specific Loss Adjustments) • DC2021-07-0022: Constraint Violation Coefficients and Pricing Re-runs. <p><u>B. Published (Effective Date 27 August 2021)</u></p> <ul style="list-style-type: none"> • DC2021-07-0022: Constraint Violation Coefficients and Pricing Re-Runs for the Implementation of





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	<p>Enhancements to WESM Design and Operations (Provisions for Self-Scheduled Generation)</p> <ul style="list-style-type: none"> • DC2021-07-0024: Amendments to WESM Rules for the Operation of the Renewable Energy Market <p>C. For Publication</p> <ul style="list-style-type: none"> • DC2021-07-0021: Provisions for Metering Services Provider Performance, Metering Standards and Site-Specific Loss Adjustments) • DC2021-07-0025: Penalty Manual • DC2021-07-0026: Provisions for Market Surveillance, Enforcement and Compliance <p><u>Resolution:</u> The RCC noted the information provided.</p>
VII. Schedule of Meetings	<p><u>Presenter:</u> Ms. Kathleen R. Estigoy (RCC Secretariat)</p> <p><u>Action Requested:</u> For information</p> <p><u>Proceedings:</u></p> <p>The RCC noted the following schedule of meetings:</p> <ul style="list-style-type: none"> • PEM Board Meeting <ul style="list-style-type: none"> ○ 25 August • RCC Regular Meeting <ul style="list-style-type: none"> ○ 17 September ○ 15 October ○ 19 November
VIII. Adjournment	<p>The meeting was adjourned at 04:14 PM, with 13 principal members and 2 alternate members.</p>




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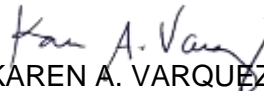
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Member, Independent


ALLAN C. NERVES
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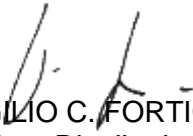

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Aboitiz Power Corp. (APC)


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Millennium Energy, Inc. / Panasia Energy, Inc.
(MEI/PEI)

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

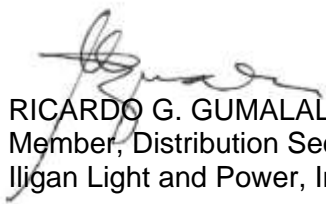

RYAN S. MORALES
Member, Distribution Sector
Manila Electric Company (MERALCO)


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


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MEETING MINUTES

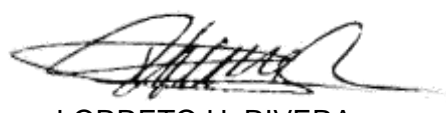
Subject/Purpose : 183rd Rules Change Committee (Regular) Meeting
Date & Time : 20 August 2021, 09:00 AM
Venue : Online via Microsoft Teams
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RICARDO G. GUMALAL
Member, Distribution Sector
Iligan Light and Power, Inc. (ILPI)




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)

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Proposed Amendments to WESM Manuals for Improvements to Market Resource Modelling and Monitoring (ORCP-WM-21-04)

A. WESM Manual on Registration, Suspension and De-Registration Criteria and Procedures Issue 5.3

Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Revised Wording based on Comments	Proponent's Response	RCC Decision
Other Considerations	2.5.4.2.	<p>Aggregation of Generating Units</p> <p>A <i>Generation Company</i> that owns multiple <i>generating units</i> located in a single generating station shall, upon application, inform the <i>Market Operator</i> if it wishes to have an aggregated representation for such <i>generating units</i> in the <i>market network model</i>. The <i>Applicant</i>, the <i>Network Services Provider</i>, <i>Metering Services Provider</i>, <i>System Operator</i> and the <i>Market Operator</i> shall agree on the manner of aggregated representation in accordance with the procedures set forth in relevant <i>Market Manuals</i>.¹⁶</p>	<p>Aggregation of Generating Units</p> <p>A <i>Generation Company</i> that owns multiple <i>generating units</i> located in a single generating station shall, upon application, inform the <i>Market Operator</i> if it wishes to have an aggregated representation for such <i>generating units</i> in the <i>market network model</i>.</p> <p>The <i>Applicant</i>, the <i>Network Services Provider</i>, <i>Metering Services Provider</i>, <i>System Operator</i> and the <i>Market Operator</i> shall agree on the manner of aggregated representation in accordance with the procedures set forth in relevant <i>Market Manuals</i>.¹⁶</p> <p><u>Should the technical information contained in the <i>Certificate of Compliance</i> issued by the <i>ERC</i> indicate details per <i>generating unit</i>,</u></p>	Clarify how Pmin and Pmax are determined for aggregated generating units				<p>Approved as revised</p> <p>xxx</p> <p><u>Should the technical information contained in the <i>Certificate of Compliance or Provisional Authority to Operate (PAO)</i> or <i>ERC Certificate with appropriate exhibit</i> issued by the <i>ERC</i> indicate details per <i>generating unit</i>, the following shall be observed when reflecting the aggregated facility's registered capacity:</u></p>

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A. WESM Manual on Registration, Suspension and De-Registration Criteria and Procedures Issue 5.3

Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Revised Wording based on Comments	Proponent's Response	RCC Decision
			<p><u>the following shall be observed when reflecting the aggregated facility's registered capacity:</u></p> <p>a. <u>Maximum Stable Load (or Pmax) shall be based on the sum of the individual generating unit's maximum capacity; and</u></p> <p>b. <u>Minimum Stable Load (or Pmin) shall be based on the smallest Pmin among the individual generating units.</u></p>					xxx
Other Considerations	2.5.4.7	(NEW)	<p><u>2.5.4.7 Real-Time Monitoring Location</u></p> <p><u>During the registration of the generating unit, the Generation Company shall specify if its real-time monitoring will be at the gross MW output of the generating unit or at the same location as its market trading node, which is at its connection point and net of its station use, in</u></p>	Require the generation company to provide the Market Operator information on the location of its real-time monitoring facilities to more efficiently facilitate its	<p>PEMC:</p> <p>1. Section 2.5.4.7 will become Section 2.5.4.8, in view of urgent amendments proposing for Section 2.5.4.7 as clarified during RCC's Urgent Meeting</p>	<p>PEMC:</p> <p><u>2.5.4.8 Real-Time Monitoring Location</u></p> <p><u>During the registration of the generating unit, the Generation Company shall</u></p>	<p>PEMC:</p> <p>Agree with the re-numbering</p> <p>This proposed amendment may be completely discussed separately with the MO-SO enhancement</p>	Approved

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			<u>accordance with the guidelines set forth in the WESM Manual on Market Network Model Development and Maintenance – Criteria and Procedures.</u>	accurate inclusion in the MNM	<p>on 26 March 2021.</p> <p>2.Proposed discussing the whole proposal along with the Proposed General Amendments on Enhancements to MO-SO Procedures for completeness</p> <p>TC:</p> <p>What happens if real-time monitoring is</p>	<u>specify if its real-time monitoring will be at the gross MW output of the generating unit or at the same location as its market trading node, which is at its connection point and net of its station use, in accordance with the guidelines set forth in the WESM Manual on Market Network Model Development and Maintenance – Criteria and Procedures.</u>	<p>proposed amendments. The MO-SO urgent amendments were also discussed separately with this proposal.</p> <p>TC:</p> <p>If the real-time monitoring is</p>	

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A. WESM Manual on Registration, Suspension and De-Registration Criteria and Procedures Issue 5.3

Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Revised Wording based on Comments	Proponent's Response	RCC Decision
					<p>NOT at the MTN?</p> <p>Aboitiz Power:</p> <p>Is this an existing process and will be added as a new clause for documentation purposes?</p>		<p>NOT at the MTN, then generator model will be reflected at the gross output of the generation, which includes its station use. Technically, there are only two options, (1) gross or (2) net of station use.</p> <p>Aboitiz Power: This is an existing process and will be added for clarity and documentation purposes.</p>	

Proposed Amendments to WESM Manuals for Improvements to Market Resource Modelling and Monitoring (ORCP-WM-21-04)

B. WESM Manual on Market Network Model Development and Maintenance - Criteria and Procedures Issue 4.2

Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Revised Wording based on Comments	Proponent's Response	RCC Decision
Definitions	2.1.5	(NEW)	<u>2.1.5 Market Resource refers to the objects defined in the Market Network Model to represent generators, battery energy storage systems, pumped-storage units, and loads.</u>	Provide general term used in MNM for all objects representing generators, BESS, pumped-storage units, and loads	<p>PEMC:</p> <p>Consider revising the definition consistent with the proposed amendments to Section 6.1.1, to clarify that the market resource is classified as either a scheduling point or a market trading node.</p> <p>TC:</p> <p><i>For Clarification:</i> The list that was provided (gen, BESS, pumped-storage, loads); is that an exhaustive list?</p>		<p>PEMC: Section 6.1.1 provides the classification of the Market Resource and may not be included in the definition of Market Resource</p> <p>TC: The definition is aligned with the current classification of resources in the WESM, as provided in Clauses 2.3.1 and 2.3.2 or as</p>	<p>Approved</p> <p>IEMOP: Market Resource: actual object being modelled in the system</p> <p>MTN: specific at the connection point for settlement</p> <p>Scheduling point: reference for scheduling; dependent on market resource</p>

Proposed Amendments to WESM Manuals for Improvements to Market Resource Modelling and Monitoring (ORCP-WM-21-04)

B. WESM Manual on Market Network Model Development and Maintenance - Criteria and Procedures Issue 4.2

Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Revised Wording based on Comments	Proponent's Response	RCC Decision
					<p>According to the proposal, <i>the Market Operator has observed that the increasing number of resource types in the WESM is resulting in the repetitive enumeration of those resource types in the WESM Manual, which negatively affects the ease of readability of the WESM Manual.</i></p> <p>In which case, they may want to keep an open list here to accommodate new resources in the future without resorting</p>		provided by DOE DC2016-01-0002	

Proposed Amendments to WESM Manuals for Improvements to Market Resource Modelling and Monitoring (ORCP-WM-21-04)

B. WESM Manual on Market Network Model Development and Maintenance - Criteria and Procedures Issue 4.2

Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Revised Wording based on Comments	Proponent's Response	RCC Decision
					to another Rules Change.			
Responsibilities	3.2.2	(NEW)	<u>3.2.2 The System Operator and the Generation Companies shall ensure that their facilities for real-time monitoring are available and that they accurately reflect the state of their generation (i.e., MW/MVAR output and generator breaker status).</u>	To include Generator Companies in the responsibility to maintain real-time facilities to cover cases when the Generation Company owns or manages its own real-time monitoring facilities	<u>Aboitiz Power:</u> Is this an existing process and will be added as a new clause for documentation purposes?		Aboitiz Power: This is an existing process and will be added for clarity and documentation purposes.	IEMOP: For revision – refinements of MO & SO responsibilities to be sent to RCC thru email
Responsibilities	3.2.3	(NEW)	<u>3.2.3 The Market Operator shall immediately inform the System Operator of any observed discrepancies in the real-time data.</u>	Provide separate responsibility for IEMOP to report any observed discrepancies in the real-time data from SO				Approved
Criteria for The Market Network Model Development	4.3.2	Network data that accurately reflects the conditions prevailing on the network, including losses, constraints and contingencies, at any trading interval	Network data that accurately reflects the conditions prevailing on the network, including losses, constraints and contingencies, at any trading <u>dispatch</u> interval	Revise term of “trading” to “dispatch” interval for consistency with the use of dispatch intervals				Approved

Proposed Amendments to WESM Manuals for Improvements to Market Resource Modelling and Monitoring (ORCP-WM-21-04)

B. WESM Manual on Market Network Model Development and Maintenance - Criteria and Procedures Issue 4.2

Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Revised Wording based on Comments	Proponent's Response	RCC Decision
MNM Components and Modeling	4.4.2	<p>Generator plant/unit representations</p> <p>These are numerical representations of generating units and its characteristics corresponding to power injection to the network. Generating units shall be modeled as the positive power injection with linear monotonically increasing cost function.</p>	<p>Generator plant/unit <u>resources</u> representations</p> <p>These are numerical representations of generating units and its characteristics corresponding to power injection to the network. Generating units shall be modeled as the positive power injection with linear monotonically increasing cost function.</p>	Reflect proposed general term for representations of generators, battery energy storage systems, pumped-storage unit, and loads	<p>PEMC:</p> <p>1. To align with the definition introduced</p> <p>2. What is the difference of this listing with Section 6.3.1?</p> <p>TC:</p> <p>The article does talk about how generating units are represented in the MNM; a change in title does not seem appropriate.</p>	<p>PEMC:</p> <p>4.4.2 <i>Generator plant/unit <u>market resources</u></i></p>	<p>PEMC:</p> <p>1. Agree with the revision</p> <p>2.This clause is an overview. Section 6.3.1 provides the different types of generator resources.</p>	<p>Approved as revised:</p> <p>Representations of Generator plant/unit Market Resources</p>
MNM Components and Modeling	4.4.3	<p>Load representations</p> <p>These are numerical representations of the customer demand corresponding to power</p>	<p>Load <u>resources</u> representations</p> <p>These are numerical representations of the customer demand</p>	Reflect proposed general term for representations of generators, battery energy storage systems, pumped-	<p>PEMC:</p> <p>1.To align with the definition introduced</p>	<p>PEMC:</p> <p>4.4.3 <i>Load <u>market resources</u></i></p>	<p>PEMC:</p> <p>1. Agree</p> <p>2. This clause is an overview. Section</p>	<p>Approved as revised:</p> <p>Representations of Load Market Resources</p>

Proposed Amendments to WESM Manuals for Improvements to Market Resource Modelling and Monitoring (ORCP-WM-21-04)

B. WESM Manual on Market Network Model Development and Maintenance - Criteria and Procedures Issue 4.2

Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Revised Wording based on Comments	Proponent's Response	RCC Decision
		capability of injecting or withdrawing power through the network.	<i>storage system</i> with its dual capability of injecting or withdrawing power through the network.	storage unit, and loads	<p>2. What is the difference of this listing with Section 6.3.1?</p> <p>TC:</p> <p>The article does talk about how generating units are represented in the MNM; a change in title does not seem appropriate.</p> <p><i>For Clarification:</i> Loads were described earlier as a constant power model, is BESS modelled as constant power as well?</p>	<p>TC:</p> <p>Battery Energy Storage System representation</p> <p>This is the mathematical model of a battery energy storage system with its dual capability of injecting <u>constant</u> power <u>to</u> or withdrawing <u>constant</u> power <u>from</u> through the network.</p>	<p>TC: Does not agree as it is not capable of providing “constant” power.</p>	<p><u>market resources</u></p>

Proposed Amendments to WESM Manuals for Improvements to Market Resource Modelling and Monitoring (ORCP-WM-21-04)

B. WESM Manual on Market Network Model Development and Maintenance - Criteria and Procedures Issue 4.2

Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Revised Wording based on Comments	Proponent's Response	RCC Decision
MNM Components and Modeling	4.4.5	<p><i>Pumped-Storage Unit</i> representation</p> <p>This is the mathematical model of a <i>pumped-storage unit</i> with its dual capability of injecting or withdrawing power through the network.</p>	<p><i>Pumped-Storage Unit</i> representation resources</p> <p>This is the mathematical model of a <i>pumped-storage unit</i> with its dual capability of injecting or withdrawing power through the network.</p>	Reflect proposed general term for representations of generators, battery energy storage systems, pumped-storage unit, and loads	<p>PEMC:</p> <p>1.To align with the definition introduced</p> <p>2. What is the difference of this listing with Section 6.3.1?</p> <p>TC:</p> <p>The article does talk about how generating units are represented in the MNM; a change in title does not seem appropriate.</p> <p><i>For Clarification:</i> Loads were described earlier as a constant power model, is</p>	<p>PEMC:</p> <p>4.4.5 <i>Pumped-Storage Unit</i> <u>market resources</u></p> <p>TC:</p> <p>This is the mathematical model of a <i>pumped-storage unit</i> with its dual capability of injecting <u>constant</u> power <u>to</u> or withdrawing <u>constant</u> power <u>from</u> through the network.</p>	<p>PEMC: Agree.</p> <p>TC: Additional revision not necessary.</p>	<p>Approved as revised:</p> <p><u>Representation of Pumped-Storage Unit market resources</u></p>

Proposed Amendments to WESM Manuals for Improvements to Market Resource Modelling and Monitoring (ORCP-WM-21-04)

B. WESM Manual on Market Network Model Development and Maintenance - Criteria and Procedures Issue 4.2

Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Revised Wording based on Comments	Proponent's Response	RCC Decision
					PSU modelled as constant power as well?			
MNM Components and Modeling	4.4.7	Transshipment Node A node in the network model that has neither a generator nor customer associated to it. A transshipment node connects at least two equipments together.	Transshipment Node A node in the network model that has neither a generator nor customer associated to it. A transshipment node connects at least two equipments together.	Clerical correction for equipment (i.e., remove 's')	TC: These are better referred to as zero-injection nodes.		TC: Does not agree. These are just connectivity points/nodes used in the market model.	Approved
Market Impact Study	4.6.3	The Market Operator shall publish the results of the market impact study as may be required by the PEM Board.	The Market Operator shall publish the results of the market impact study as may be required by the <u>DOE, ERC, and the</u> PEM Board.	Propose to include DOE and ERC	PEMC: 1.Does the market study contain confidential information? 2.Is it the intent of the proponent to provide additional approving authority to publish the market impact study? Will these		PEMC: 1. IEMOP ensures that the published study itself will not include confidential information. 2. Upon reviewing the entire MNM manual, IEMOP just deemed it appropriate to provide	Approved as revised: The Market Operator shall publish <u>submit</u> the results of the market impact study as may be required by <u>to the DOE, ERC and the PEM Board.</u> <u>The MO shall publish a public copy of the same in the</u>

Proposed Amendments to WESM Manuals for Improvements to Market Resource Modelling and Monitoring (ORCP-WM-21-04)

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Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Revised Wording based on Comments	Proponent's Response	RCC Decision
					parties (DOE, ERC and PEM Board) be given copies of the market impact study. Currently, there is no provision requiring the MO to provide copies of the market impact study to DOE, ERC and PEM Board.		also to DOE and ERC the results of the market impact study.	market information website, if required by the DOE, ERC, or the PEM Board
MNM	5	ALTERATIONS TO THE MARKET NETWORK MODEL	ALTERATIONS TO THE MARKET NETWORK MODEL <u>GUIDELINES IN THE UPDATING AND MAINTENANCE OF</u> THE MARKET NETWORK MODEL	Revised for clarity	PEMC: To avoid misinterpretation that the steps/processes are optional.	PEMC: <u>UPDATING AND MAINTENANCE OF</u> THE MARKET NETWORK MODEL	PEMC: Agree.	Approved
Network Development	5.2.2	Changes in the MNM configuration as a result of network development or aggregation or disaggregation of Trading	Updates Changes in the MNM configuration as a result of the network development or aggregation or disaggregation of <u>market</u>	Revised for clarity.	PEMC: Reference to Section 7 is misplaced.	PEMC: Updates Changes in the MNM	PEMC: Agree	Approved

Proposed Amendments to WESM Manuals for Improvements to Market Resource Modelling and Monitoring (ORCP-WM-21-04)

B. WESM Manual on Market Network Model Development and Maintenance - Criteria and Procedures Issue 4.2

Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Revised Wording based on Comments	Proponent's Response	RCC Decision
		Nodes shall be published in accordance with MNM publication requirements set forth in Section 6.0 of this document.	<u>resources</u> Trading Nodes shall be <u>made</u> published in accordance with the MNM publication requirements set forth in Section 6.0 <u>7</u> of this <u>Market Manual</u> document.		Section 7 is about the amendment and publication of market manual. Manner of publication for any changes/updates in MNM is under Section 5.5.	configuration as a result of the network development or aggregation or disaggregation of <u>market resources</u> Trading Nodes shall be <u>made</u> published in accordance with <u>the MNM</u> publication requirements set forth in Section 6.0 <u>5.5</u> of this <u>Market Manual</u> document.		
Simplifications on the Market Network Model	5.3.2	The MNM may contain simplifications related to the representation of Generation and Customer Trading Nodes upon request of a Trading Participant and approved by the Market Operator, System Operator, and if necessary,	The MNM may contain simplifications related to the representation of <u>market resources</u> Generation and Customer Trading Nodes upon request of a <i>Trading Participant</i> . <u>It should be</u> and approved <u>agreed upon</u> by	Revised for clarity. Also included provision on the treatment of Generators (e.g. Embedded Generators) that are located far from	MEI/PEI: <i>What is meant by “operationally connected” to the nearest substation? The term as used is</i>	MEI/PEI: <u>d) Representation of downstream generating units with limited real-time monitoring</u>	MEI/PEI: Agree.	Approved as revised: <u>Representation of downstream generating units with limited real-time monitoring</u>

Proposed Amendments to WESM Manuals for Improvements to Market Resource Modelling and Monitoring (ORCP-WM-21-04)

B. WESM Manual on Market Network Model Development and Maintenance - Criteria and Procedures Issue 4.2

Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Revised Wording based on Comments	Proponent's Response	RCC Decision
		the Network Service Provider. Such simplifications are listed, but not limited to the following conditions a) Aggregated representation of multiple generating units; b) Aggregated representation in the MNM may be applied to multiple generating units that are located in a single generating station; c) Disaggregated representation of customer trading nodes; and d) Single Customer Trading Nodes representing an aggregate of multiple customers maybe disaggregated into several Customer Trading Nodes corresponding to the customers represented in that Trading Node. It is provided, however, that such disaggregation shall be allowed only in cases where there are appropriate real-time monitoring points that	the <i>Trading Participant, Market Operator, System Operator</i> , and if necessary, the <i>Network Service Provider</i> . Such simplifications are listed, but not limited to the following conditions. a) Aggregated representation of multiple generating units; b) (note: aggregated representation in the MNM may be applied to multiple generating units that are located in a single generating station); e b) Disaggregated representation of customer trading nodes; and d c) Single Customer Trading Nodes representing an aggregate of multiple customers maybe disaggregated into several Customer Trading Nodes corresponding to the customers represented in that Trading Node. It is provided, however, that such	the main substation of NGCP, and there is limited real-time monitoring facilities available, or when they are in distribution networks that are not modelled in the MNM.	<i>quite vague. MEI and PEI suggest to use instead the term “indirectly connected”. This is consistent with the definition of an embedded generator as a generating unit indirectly connected to the grid through the system of the host distribution utility.</i>	<u>time monitoring facilities such as in cases of embedded generators where there is limited availability of real-time monitoring facilities between the transmission system’s main substation and the generator, in which case, the Market Operator may model the generating unit at the nearest MNM substation to which it is indirectly connected. The following illustration</u>		<u>facilities such as in cases of embedded generators where there is limited availability of real-time monitoring facilities between the transmission system’s main substation and the generator, in which case, the Market Operator may provisionally model the generating unit at the nearest MNM substation to which it is indirectly connected. The following illustration shows an</u>

Proposed Amendments to WESM Manuals for Improvements to Market Resource Modelling and Monitoring (ORCP-WM-21-04)

B. WESM Manual on Market Network Model Development and Maintenance - Criteria and Procedures Issue 4.2

Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Revised Wording based on Comments	Proponent's Response	RCC Decision
		can account for the real-time withdrawal of energy in each disaggregated individual customer trading node.	<p>disaggregation shall be allowed only in cases where there are appropriate real-time monitoring points that can account for the real-time withdrawal of energy in each disaggregated individual customer trading node.</p> <p><u>d) Representation of downstream generating units with limited real-time monitoring facilities such as in cases of embedded generators where there is limited availability of real-time monitoring facilities between the transmission system's main substation and the generator, in which case, the <i>Market Operator</i> may model the <i>generating unit</i> at the nearest substation to which it is operationally connected. The following illustration shows an example of this case:</u></p>		TC:	<p><u>shows an example of this case:</u></p> <p><u>e) Representation of downstream generating units located in a distribution network that is not reflected in the market network model. The <i>Market Operator</i> may model the <i>generating unit</i> at the nearest <i>MNM</i> substation to which it is indirectly connected.</u></p>	TC: Noted	<p><u>example of this case:</u></p> <p>IEMOP to provide example of looping</p> <p>Prof Jordan: If "provisional" is it time-bound? until when IEMOP: no control on the availability</p> <p>183rd Meeting: Sir Edward: IEMOP will assess the pseudo-bus suggestion of NGCP and will submit a separate proposal</p> <p>For discussion in PM</p>

Proposed Amendments to WESM Manuals for Improvements to Market Resource Modelling and Monitoring (ORCP-WM-21-04)

B. WESM Manual on Market Network Model Development and Maintenance - Criteria and Procedures Issue 4.2

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			<p><i>[See Appendix A.]</i></p> <p><u>e) Representation of downstream generating units located in a distribution network that is not reflected in the market network model. The Market Operator may model the generating unit at the nearest substation to which it is operationally connected.</u></p>		<p>Operationally connected” is not clear enough to be included in the rules.</p> <p>We understand that the MO is forced to do this due to limited monitoring facilities or in the absence of network models, however including this in the rules may further perpetuate this practice that leads to inaccuracy. However, the inclusion of such new provision may be useful for the MO</p> <p>We understand that inclusion of these new provisions may</p>			<p>Request TC's input on the revised diagram (3-5 days)</p>

Proposed Amendments to WESM Manuals for Improvements to Market Resource Modelling and Monitoring (ORCP-WM-21-04)

B. WESM Manual on Market Network Model Development and Maintenance - Criteria and Procedures Issue 4.2

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					<p>be used to justify current practice before an audit panel.</p> <p>MERALCO:</p> <p>In the event that the nearest substation to which it is operationally connected is not a market trading node or modeled in the MNM as mentioned in item (e), the MO should model the embedded generator at the nearest Market Trading Node to which it is operationally connected. This is already</p>	<p>MERALCO:</p> <p><u>e)</u> <u>Representation of downstream generating units located in a distribution network that is not reflected in the market network model.</u> <u>The Market Operator may model the generating unit at the nearest substation</u> <u>Market Trading Node to which</u></p>	<p>MERALCO: Suggest to adopt MEI/PEI revision instead.</p>	

Proposed Amendments to WESM Manuals for Improvements to Market Resource Modelling and Monitoring (ORCP-WM-21-04)

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Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Revised Wording based on Comments	Proponent's Response	RCC Decision
					sufficient for the purposes of the model and its use.	<u>it is operationally connected.</u>		
	5.5.2	5.5.2 The Market Operator shall regularly publish the relevant updated MNM documents within seven days after the completion of the MNM consistency monitoring in the MMS' production system. Every revision of the MNM shall have the following associated documents published in the Market Information Website: a) MNM Revisions Manual; b) Bus-Oriented Single Line Diagram; and c) Information brief	The Market Operator shall regularly publish the relevant updated MNM documents within seven days after the completion of the MNM consistency monitoring in the MMS' production system. Every revision of the MNM shall have the following associated documents published in the Market Information Website: a) MNM Revisions Manual; b) Bus-Oriented Single Line Diagram; and c) Information brief	Proposed to delete entire clause since the regular reporting is already covered in clause 5.5.1. 5.5.1 Within two (2) working days from deployment, the Market Operator shall publish advisory on the MNM updates deployed in the production system. Consistent with the provisions of Clause 4.5.7 of this Market Manual, the Market Operator shall prepare a monthly report containing all MNM updates deployed in the production system. This report shall be provided to the DOE, ERC, and the PEM Board, and				For discussion – additional change APPROVED

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				shall be similarly published in the market information website ten (10) working days after the end of the billing period. At the least, it shall contain the following: a) Summary of MNM Updates during the month b) Latest Bus-Oriented Single Line Diagram				
	5.5.3	All publication by the Market Operator regarding the MNM shall be in an un-editable electronic format. The MNM documents shall be published to the general public through the Market Information Website.	5.5.3. 5.5.2 All publication by the Market Operator regarding the MNM shall be in an un-editable electronic format. The MNM documents shall be published to the general public through the Market Information Website.	Renumbering due to proposed deletion of previous clause				For discussion – additional change APPROVED
MNM	--	MARKET NETWORK MODEL MAINTENANCE AND PUBLICATION	MARKET NETWORK MODEL MAINTENANCE AND PUBLICATION	Not necessary. Clerical edit.				Approved
Continuing Obligations and Responsibilities	5.10.2	(NEW)	<u>5.10.2 The System Operator, in coordination with Network Service Providers and Trading Participants shall continuously ensure the</u>	Proposed revision to highlight responsibility of SO in ensuring reliability of real-time data.	TC: Can we directly point to Sec 4.4.12, otherwise		TC: Real-Time Data is already defined in the WESM Dispatch Protocol, which replaces the	SO disagrees For IEMOP's revision – refinement of responsibilities to

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			<u>completeness, availability, and accuracy of the required <i>real-time data</i> in the <i>market network model</i>.</u>		<p>list here the set “real-time data”?</p> <p>We avoid any misinterpretation on the term “real-time data”</p> <p>NGCP:</p> <p>NGCP’s proposed revision requiring for a level of acceptability of required real-time data would set the sufficiency of the data for the purpose it is being provided.</p>	<p>NGCP:</p> <p>5.10.2 The System Operator, in coordination with Network Service Providers and Trading Participants shall continuously ensure the completeness, availability, and accuracy of the required real-time data in the market network model. <u>The level of completeness, availability and</u></p>	<p>previous term “system snapshot”. No revisions needed.</p> <p>NGCP:</p> <p>Agree.</p> <p>However, IEMOP notes that the additional proposed language will trigger the development by the MO and SO of the standards and that compliance with said standards will require monitoring and/or enforcement for</p>	<p>be sent to RCC via email</p> <p>RCC: Adopt NGCP’s revisions</p>

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						<u>accuracy should conform to the standards set by the System Operator and the Market Operator.</u>	compliance purposes by the ECO.	
Continuing Obligations and Responsibilities	5.10.3	(NEW)	<u>5.10.3 The System Operator shall report real-time monitoring facilities owned or managed by the Trading Participants that have been persistently erroneous or non-updating for at least two (2) business days to the Market Operator and Enforcement and Compliance Office. The Trading Participant shall endeavor to resolve the issue within one (1) month from the time it was reported.</u>	Provide Trading Participants that own or manage their real-time monitoring facilities the responsibility to correct real-time data errors in a timely manner	PEMC: A validation should be undertaken by the SO confirming that the monitoring facilities are already working properly with the resolution introduced by the Trading Participant.	PEMC: Additional Clause: <u>The System Operator shall confirm no later than fifteen (15) calendar days upon receipt of the notification of the resolution from the Trading Participant the correctness of real-time data transmitted by</u>	PEMC: Agree.	SO disagrees For IEMOP's revision – refinement of responsibilities to be sent to RCC via email 5.10.3 The System Operator shall report real-time monitoring facilities owned or managed by the Trading Participants or owned by the System Operator

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					<p>MEI/PEI:</p> <p><i>MEI and PEI suggest that a similar provision be included to define the responsibility of the System Operator in restoring its own real-time monitoring facilities.</i></p> <p>TC:</p> <p>The reporting may be delayed to the next business day but the condition for the reporting</p>	<p><u>the monitoring facilities.</u></p> <p>MEI/PEI:</p> <p><u>The System Operator shall endeavor to restore any failed real-time monitoring facility that it owns within one (1) month from the time the problem was found or reported.</u></p>	<p>MEI/PEI: Agree. Recommend change to thirty (30) calendar days as prescribed by MERALCO.</p>	<p>that have been persistently erroneous or non-updating for at least two (2) business days to the Market Operator and Enforcement and Compliance Office. The Trading Participant shall endeavor to resolve the issue <u>not later than seven (7) days within fifteen (15) calendar days</u> from the time it was reported.</p> <p>Requests from 181st Meeting</p> <p>1. SO's Data on the history of</p>

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					<p>should not exclude non-business days. One month to resolve may be adequate but a quicker report on the status may be expected (say one week to report the diagnosis, then one week to resolve)</p> <p>MERALCO:</p> <p>To avoid ambiguity, we propose to replace “one (1) month” with “thirty (30) days.”</p>	<p>MERALCO:</p> <p><u>5.10.3 The System Operator shall report real-time monitoring facilities owned or managed by the Trading Participants</u></p>	<p>MERALCO: Agree.</p>	<p>failures to provide accurate data on the part of TP</p> <p>- We are validating the historical data and will submit once completed</p> <p>2. Update on Mr. Carlito Claudio's suggestion for the SO to aid the TP in troubleshooting its RTU for a fee.</p> <p>- This is a x</p>

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						<u>that have been persistently erroneous or non-updating for at least two (2) business days to the Market Operator and Enforcement and Compliance Office. The Trading Participant shall endeavor to resolve the issue within thirty (30) days</u> <u>one (1) month from the time it was reported.</u>		
					NGCP: The proposed 1-month/30-day correction period	NGCP: 5.10.3 The System	NGCP: Agree.	

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					<p>for the Trading Participants (TPs) is quite long. This puts additional burden to the SO of estimating and manually inputting dispatch schedule, especially if we consider the 5-minute dispatch intervals.</p> <p>In view of the foregoing, NGCP proposes to reduce the correction period from one (1) month/ thirty (30) days to seven (7) days as to compel the TPs to actively</p>	<p>Operator shall report real-time monitoring facilities owned or managed by the Trading Participants that have been persistently erroneous or non-updating for at least two (2) business days to the Market Operator and Enforcement and Compliance Office. The Trading Participant shall endeavor to resolve the issue <u>not later than seven (7) days</u> from the time it was reported.</p>	<p>IEMOP notes that this provision will also require monitoring and/or enforcement by the ECO insofar as compliance by the TPs with the timeline for the resolution of issue/s.</p>	

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					resolve the issues. Additionally, the TPs should be required to submit 5-minute actual data to the SO and the MO through other means such as email.			
Continuing Obligations and Responsibilities	5.10.4	(NEW)	<u>5.10.4 The System Operator shall be responsible for estimating real-time data that was reported to be erroneous or non-updating.</u>	To ensure accuracy of scheduling and pricing, it is proposed that the System Operator submit estimated real-time data when there are erroneous or non-updated information	MERALCO: What is the existing practice in resolving erroneous or non-updating real-time data? How will the provided estimated real-time data affect the final pricing that will be used	MERALCO: <u>5.10.4 The System Operator shall be responsible for estimating real-time data that was reported to be erroneous or non-updating. The SO shall provide the basis of its</u>	MERALCO: Agree.	<u>APPROVED</u> <u>5.10.4 The System Operator in coordination with the Market Operator and Trading Participant shall estimate real-time data that was reported to be erroneous or non-updating.</u>

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					<p>in the settlement?</p> <p>Given the potential impact to prices and settlement, the SO should provide the basis of its estimation to MO and all Trading Participants.</p>	<p><u>estimation to the Market Operator and all Trading Participants.</u></p>		<p>SO disagrees</p> <p>For IEMOP's revision – refinement of responsibilities between MO & SO to be sent to RCC via email</p> <p>For discussion: Responsibility of correcting real-time data</p> <p>183rd Meeting Sir Amby's Proposal: Non-updating data: TP will send request to reflect overriding constraint input. SO will send data to MO and will be considered in the RTD. This is</p>

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								<p>subject to TP submission of request.</p> <p>When a generator encounters RTU issues, where their data is not updating, the SO cannot provide manually RTU data (encoding of data every 5 minutes).</p> <p>Ma'am Cherry: It's a new process. It was not flagged to them. Not included in their automation for 5-minute interval.</p> <p>RCC Decision: 1. For discussion of MO, SO and TP for an agreeable solution (upon</p>

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								PM resumption) 2. SPC's Comment: we suggest that since the RTU are SO's property, it is the SO's responsibility to maintain its property and ensure that its data monitoring are accurate, if ever the RTU is found not working properly then the MO/SO should reconcile it to the affected Generators from the start of the date/dispatch

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								interval were it found to be not working properly for proper settlement
Continuing Obligations and Responsibilities	5.10.5	(NEW)	<u>5.10.5 The Market Operator shall immediately inform the System Operator of any observed discrepancies in the real-time data.</u>	Provide separate responsibility for IEMOP to report any observed discrepancies in the real-time data from SO				Approved
MNM	6	MARKET TRADING NODE	MARKET TRADING NODE <u>MODELLING OF MARKET RESOURCES</u>	Reflect proposed general term for representations of generators, battery energy storage systems, pumped-storage unit, and loads	PEMC: What is the effect of the proposed changes to metering? TC: <i>For Clarification:</i> Is the section on Market trading Node removed		PEMC: This was done for clarity. This section specifies how “market resources” are actually modelled, not just MTNs. TC: This is okay. Again, this section was edited for clarity	Approved Prof Jordan: Why remove MTN? can we not have both MTN and Resources

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					<p>altogether? We should be careful in removing that. We may include a new section on Modelling of Market Resources.</p> <p>NGCP:</p> <p>The System Operator's responsibility should only be limited to reporting erroneous or non-updating data. The SO dispatch group is focused on the Grid operations; it will have no time to provide estimates and manually input</p>	<p>NGCP:</p> <p>The Market Operator shall be responsible for estimating real-time data that was reported to be erroneous or non-updating by employing system tools like state estimator.</p>	<p>on which is actually being modelled in the MNM, and that is the market resource.</p> <p>NGCP:</p> <p>IEMOP does not agree.</p> <p>As owner of data, it is SO's responsibility to ensure accuracy and quality of data</p> <p>IEMOP wants to retain original provision.</p>	

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					these every five (5) minutes. Furthermore, the Market Operator should make use of state estimation for the reported erroneous or non-updating data.			
Market Trading Node	6.1.1	The Market Trading Node in the MNM, in physical terms, represents a power substation onto which energy is injected or withdrawn through power transformers or switching equipment. The transformers and switching equipment connect the transmission network operated by the System Operator and generating equipment, distribution network operated by Network Service Provider and load customers.	The Market Trading Node in the MNM, in physical terms, represents a power substation onto which energy is injected or withdrawn through power transformers or switching equipment. The transformers and switching equipment connect the transmission network operated by the System Operator and generating equipment, distribution network operated by Network Service Provider and load customers.	Revised for clarity	TC: Notice that the removed article is totally different from this new article. Do we really want to remove the current article on MTN? NGCP:		TC: Yes. NGCP:	Approved

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			<u>Market Resources shall be modelled in the market network model to represent a generator, battery energy storage system, pumped-storage unit, or load. Subject to Section 6.1.2, each market resource shall be classified as either a scheduling point or a market trading node of the generator, battery energy storage system, pumped-storage unit, or load.</u>		Market Resources should also consider other types of Energy Storage System (ESS), such as flywheel and hybrid systems, so as not to limit the modelling of ESS to Battery Energy Storage System and Pumped Storage System.		Not necessary. If this is to be pursued, we need to propose changes again to the WESM Rules and other Market Manuals. ESS and Pump-storage resources are defined terms.	
Market Trading Node	6.1.2	(NEW)	<u>It is possible to define only one market resource to represent both the scheduling point and the market trading node.</u>	Added to clarify that some market resources can represent both scheduling point and market trading node.	TC: Suggestion to capitalize Scheduling Point (since defined in the Glossary)	TC: <u>It is possible to define only one market resource to represent both the Scheduling Point and the market trading node.</u>	TC: Agree.	<i>Approved.</i> <i>Italicized only</i>

[illegible]

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		a registered pumped-storage unit directly connected to a network operated by the System Operator. It is a node where power is injected or withdrawn through the transmission network.	network operated by the System Operator. It is a node resource where power is injected or withdrawn through the transmission network. d) Pumped-Storage Unit nodes resources – nodes resources that represent a registered pumped-storage unit directly connected to a network operated by the System Operator. It is a node resource where power is injected or withdrawn through the transmission network.		recommend that resources and nodes are clearly differentiated and not to replace “nodes” with “resources”.			
Classification of Market Trading Nodes	6.3.2	Where available remote telemetering facilities are situated at a location net of the station service, the Trading Participant shall have a generator and a customer MTN registered in the WESM to accurately reflect the direction of power flow.	<u>For generating units registered and modelled net of its station use</u> Where available remote telemetering facilities are situated at a location net of the station service, the <i>Trading Participant</i> shall have a generator and a customer MTN resource registered in the WESM to accurately reflect the direction of power flow.	Revised for clarity	PEMC: Suggest using market resource in replacing MTN. TC: <i>For Clarification:</i> What is a customer		PEMC: Agree. TC: As suggested, we can use load resource for the entire manual.	Approved

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					resource? How about customer load? Do we want to generalize resource aside from generators (earlier resource includes generator)			
Market Trading Node	6.4	CRITERIA FOR THE DEFINITION OF MTN The following are the general criteria for the definition of MTN:	CRITERIA FOR THE DEFINITION OF MTN <u>GUIDELINES FOR MODELLING A MARKET RESOURCE</u> The following are the general criteria for the definition of MTN <u>guidelines in modelling the different market resources:</u>	Replace MTN with Market Resource	PEMC: To avoid misinterpretation and redundancy	PEMC: <u>GUIDELINES FOR MODELLING A MARKET RESOURCE</u> The following are the general criteria for the definition of MTN <u>guidelines in modelling the different market resources:</u>	PEMC: Agree.	Approved

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Criteria for the Definition of MTN	6.4.5	If the Trading Participant is a dispatchable generator connected to a distribution system (embedded facility), then its MTN and scheduling point shall be assigned to the nearest scheduling point represented in the MNM. Adjustments to the real-time monitoring of the Customer scheduling point shall be made accordingly to reflect the total power consumed by that Customer scheduling point accounting for the power generated by the dispatchable generator situated downstream.	If the Trading Participant is a dispatchable generator connected to a distribution system (embedded facility), then its MTN and <i>scheduling point</i> shall be assigned to the nearest scheduling point represented in the MNM <u>substation to which it is operationally connected.</u> Adjustments to the real-time monitoring of the Customer <i>scheduling point</i> shall be made accordingly to reflect the total power consumed by that Customer <i>scheduling point</i> accounting for the power generated by the dispatchable generator situated downstream <u>consistent with the provisions in clause 5.3.2 (d).</u>	Revised for clarity and consistency on provisions relating to simplifications in the MNM.	MEI/PEI: <i>What is meant by “operationally connected” to the nearest substation? The term as used is quite vague. MEI and PEI suggest to use instead the term “indirectly connected”. This is consistent with the definition of an embedded generator as a generating unit indirectly connected to the grid through the system of the host distribution utility.</i>	MEI/PEI: 6.4.5 If the Trading Participant is a dispatchable generator connected to a distribution system (embedded facility), then its MTN and <i>scheduling point</i> shall be assigned to the nearest <i>scheduling point</i> represented in the MNM <u>substation to which it is indirectly connected.</u> Adjustments to the real-time monitoring of the Customer <i>scheduling point</i>	MEI/PEI: Agree.	For IEMOP's checking in relation to 5.3.2 (for deletion – to be confirmed)

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					<p>TC:</p> <p><i>For Clarification:</i> Formally, how do we define "operationally connected"? Do we analyze power flows?</p>	<p>shall be made accordingly to reflect the total power consumed by that Customer <i>scheduling point</i> accounting for the power generated by the dispatchable generator situated downstream <u>consistent with the provisions in clause 5.3.2 (d).</u></p>	<p>TC: MEI/PEI proposal already clarifies this.</p>	

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					How about for non-radial downstream?			
Criteria for the Definition of MTN	6.4.5	If the Trading Participant is a dispatchable generator connected to a distribution system (embedded facility), then its MTN and scheduling point shall be assigned to the nearest scheduling point represented in the MNM. Adjustments to the real-time monitoring of the Customer scheduling point shall be made accordingly to reflect the total power consumed by that Customer scheduling point accounting for the power generated by the dispatchable generator situated downstream.	If the Trading Participant is a dispatchable generator connected to a distribution system (embedded facility), then its MTN and scheduling point shall be assigned to the nearest scheduling point represented in the MNM <u>substation to which it is operationally connected.</u> Adjustments to the real-time monitoring of the Customer scheduling point shall be made accordingly to reflect the total power consumed by that Customer scheduling point accounting for the power generated by the dispatchable generator situated downstream <u>consistent with the provisions in clause 5.3.2 (d).</u>	Revised for clarity and consistency on provisions relating to simplifications in the MNM. For deletion since 5.3.2 (d) already covers this provision				Approved for deletion

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Criteria for the Definition of MTN	6.4.6	A generating facility shall be modelled as a scheduling point.	A generating facility shall be modelled as a scheduling point.	Suggest to delete since generating resources can have both MTNs and scheduling points				Approved
MNM	6.5	GENERATOR MTN	GENERATOR MTN <u>RESOURCE</u>	Replace MTN with resource	PEMC: Suggest using market resource for consistency with the proposed definition.	PEMC: GENERATOR MTN- <u>MARKET RESOURCE</u>	PEMC: Agree.	Approved
Generator MTN	6.5.1	A MTN is considered a generator node if energy is supplied into that node and the direction of the power flow is from the apparatus or equipment (i.e. generator) operated by the Trading Participant to the network operated by the Network Service Providers, including the System Operator.	A MTN is considered a generator node if energy is supplied into that node and the direction of the power flow is from the apparatus or equipment (i.e. generator) operated by the Trading Participant to the network operated by the Network Service Providers, including the System Operator.	Propose to delete since definition is already indicated in section 6.3.1				Approved
Generator MTN	6.5.2	6.5.2 During the submission of offers to supply electricity, the participant generator shall specify the location of the	6.5.2 During the submission of offers to supply electricity, the participant generator shall specify the location of the	Re-numbered. Revised for clarity where the	PEMC: 1.Suggest using market resource		PEMC: 1. Agree 2. Clause 6.5.4 has a	Approved as revised

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		connection point and the relevant market network node.	connection point and the relevant market network node. <u>6.5.1 During the registration of the generator resource, the Trading Participant shall specify if the scheduling point should represent the gross MW output of the generator or at the same location as the market trading node, which is at the connection point and net of its station use. The location of the scheduling point shall be the reference point for the registered capacity, submission of generation offers and self-scheduled nominations, scheduling, dispatch, and dispatch compliance monitoring.</u>	scheduling point shall be the reckoning/reference point capacity registration until dispatch compliance monitoring. Settlement is reckoned at the market trading node.	for consistency with the proposed definition. 2.Proposal must be merged with Proposed General Amendments to MO-SO Procedures Section 6.5.4. Needs renumbering. MEI/PEI: <i>Minor clerical edit (insertion of the word "is")</i>	 MEI/PEI: <u>6.5.1 During the registration of the generator resource, the Trading Participant shall specify if the scheduling</u>	different purpose than this clause. Hence, it should be written separately. MEI/PEI: Suggest to maintain original provision.	No change from previous decision

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						<u>point should represent the gross MW output of the generator or is at the same location as the market trading node, which is at the connection point and net of its station use. The location of the scheduling point shall be the reference point for the registered capacity, submission of generation offers and self-scheduled nominations, scheduling, dispatch, and</u>		

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					<p>NGCP:</p> <p>The Market Trading Node (MTN), which is supposedly the monitoring of net generation of the plant (less station use), needs to be checked and be made consistent with the existing analog monitoring in the Master Station. There are plants that have their analog monitoring or telemetry measure gross</p>	<p><u>dispatch compliance monitoring.</u></p>	<p>NGCP:</p> <p>This is why this change is being proposed to ensure consistency from registration to scheduling to dispatch, and until dispatch compliance.</p>	

Proposed Amendments to WESM Manuals for Improvements to Market Resource Modelling and Monitoring (ORCP-WM-21-04)

B. WESM Manual on Market Network Model Development and Maintenance - Criteria and Procedures Issue 4.2

Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Revised Wording based on Comments	Proponent's Response	RCC Decision
					while others measure net.			
Generator MTN	6.5.3	6.5.3 xxx	6.5.3 6.5.2 xxx	Re-numbered.				Approved
MNM	6.6	CUSTOMER MTN	CUSTOMER MTN <u>RESOURCE</u>	Replace MTN with resource	PEMC: Suggest using customer resource or load resource but not both.			Approved
Customer MTN	6.6.1	A customer node is the point where energy is withdrawn by the WESM participant and the direction of the power flow is from the network operated by the Network Service Providers, including the System Operator, to the energy consuming apparatus or equipment (i.e. load) owned by or connected to the customer trading participant.	A customer node is the point where energy is withdrawn by the WESM participant and the direction of the power flow is from the network operated by the Network Service Providers, including the System Operator, to the energy consuming apparatus or equipment (i.e. load) owned by or connected to the customer trading participant. <u>Should there be limitations for a customer resource to be modelled at the connection point (e.g. availability of real-time monitoring facilities), the</u>	Propose to delete original provision since definition is already indicated in section 6.3.1. Replaced instead with current modelling practice for customer resources.	PEMC: Suggest using market resource for consistency with the proposed definition.		PEMC: Agree.	Approved

Proposed Amendments to WESM Manuals for Improvements to Market Resource Modelling and Monitoring (ORCP-WM-21-04)

B. WESM Manual on Market Network Model Development and Maintenance - Criteria and Procedures Issue 4.2

Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Revised Wording based on Comments	Proponent's Response	RCC Decision
			<u>Market Operator may implement simplifications and approximations to its representation in the market network model while still ensuring its consistency and accuracy with its actual connection to the grid.</u>					
MNM	6.7	BATTERY ENERGY STORAGE SYSTEM MTN	BATTERY ENERGY STORAGE SYSTEM MTN <u>RESOURCE</u>	Replace MTN with resource	PEMC: Suggest using market resource for consistency with the proposed definition.		PEMC: Agree.	Approved
Battery Energy Storage System	6.7.1	A MTN is considered a battery energy storage system node if energy is injected or withdrawn through that node and the direction of the power flow is from the apparatus or equipment operated by the Trading Participant to the network operated by the Network	A MTN is considered a battery energy storage system node if energy is injected or withdrawn through that node and the direction of the power flow is from the apparatus or equipment operated by the Trading Participant to the network operated by the Network	Propose to delete original provision since definition is already indicated in section 6.3.1.				Approved

Proposed Amendments to WESM Manuals for Improvements to Market Resource Modelling and Monitoring (ORCP-WM-21-04)

B. WESM Manual on Market Network Model Development and Maintenance - Criteria and Procedures Issue 4.2

Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Revised Wording based on Comments	Proponent's Response	RCC Decision
			<u>nominations, scheduling, dispatch, and dispatch compliance monitoring.</u>			<u>generator or is at the same location as the market trading node, which is at the connection point and net of its station use. The location of the scheduling point shall be the reference point for the registered capacity, submission of generation offers and self-scheduled nominations, scheduling, dispatch, and dispatch compliance monitoring.</u>		

Proposed Amendments to WESM Manuals for Improvements to Market Resource Modelling and Monitoring (ORCP-WM-21-04)

B. WESM Manual on Market Network Model Development and Maintenance - Criteria and Procedures Issue 4.2

Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Revised Wording based on Comments	Proponent's Response	RCC Decision
Battery Energy Storage System	6.7.3	6.7.3 xxx	6.7.3 6.7.2 xxx	Re-numbered.				Approved
MNM	6.8	PUMPED-STORAGE UNIT MTN	PUMPED-STORAGE UNIT MTN RESOURCE	Replace MTN with resource	PEMC: Suggest using market resource for consistency with the proposed definition.		PEMC: Agree	Approved
Pumped-Storage Unit	6.8.1	A MTN is considered a pumped-storage unit node if the facility is a pumped-storage plant where energy can either be injected or withdrawn through that node and the direction of the power flow is from the apparatus or equipment operated by the Trading Participant to the network operated by the Network Service Providers, including the System Operator.	A MTN is considered a pumped-storage unit node if the facility is a pumped-storage plant where energy can either be injected or withdrawn through that node and the direction of the power flow is from the apparatus or equipment operated by the Trading Participant to the network operated by the Network Service Providers, including the System Operator.	Propose to delete original provision since definition is already indicated in section 6.3.1.				Approved
Pumped-Storage Unit	6.8.2	6.8.2 During the submission of offers to supply or consume electricity, the	6.8.2 During the submission of offers during generation mode, the participant	Re-numbered.	PEMC:		PEMC: Agree	Approved

Proposed Amendments to WESM Manuals for Improvements to Market Resource Modelling and Monitoring (ORCP-WM-21-04)

B. WESM Manual on Market Network Model Development and Maintenance - Criteria and Procedures Issue 4.2

Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Revised Wording based on Comments	Proponent's Response	RCC Decision
		participant battery energy storage system shall specify the location of the connection point and the relevant market network node.	pumped storage unit shall specify the location of the connection point and the relevant market network node <u>6.8.1 During the registration of the pumped-storage unit resource, the Trading Participant shall specify if the scheduling point should represent the gross MW output of the generator or at the same location as the market trading node (i.e. at the connection point, which is at the connection point and net of its station use. The location of the scheduling point shall be the reference point for the registered capacity, submission of generation offers and self-scheduled nominations, scheduling, dispatch, and dispatch compliance monitoring.</u>	Revised for clarity where the scheduling point shall be the reckoning/reference point capacity registration until dispatch compliance monitoring. Settlement is reckoned at the market trading node.	Suggest using market resource for consistency with the proposed definition. MEI/PEI: <i>Minor clerical edit (insertion of the word "is")</i>	MEI/PEI: <u>6.8.1 During the registration of the pumped-storage unit resource, the Trading Participant shall specify if the scheduling point should represent the gross MW output of the generator or is at the same location as the market trading</u>	MEI/PEI: Suggest to retain original provision.	

Proposed Amendments to WESM Manuals for Improvements to Market Resource Modelling and Monitoring (ORCP-WM-21-04)

B. WESM Manual on Market Network Model Development and Maintenance - Criteria and Procedures Issue 4.2

Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Revised Wording based on Comments	Proponent's Response	RCC Decision
						<u>node (i.e. at the connection point, which is at the connection point and net of its station use. The location of the scheduling point shall be the reference point for the registered capacity, submission of generation offers and self-scheduled nominations, scheduling, dispatch, and dispatch compliance monitoring.</u>		
Pumped-Storage Unit	6.8.3	6.8.3 xxx	6.8.3 6.8.2 xxx	Re-numbered.				Approved

Proposed Amendments to WESM Manuals for Improvements to Market Resource Modelling and Monitoring (ORCP-WM-21-04)

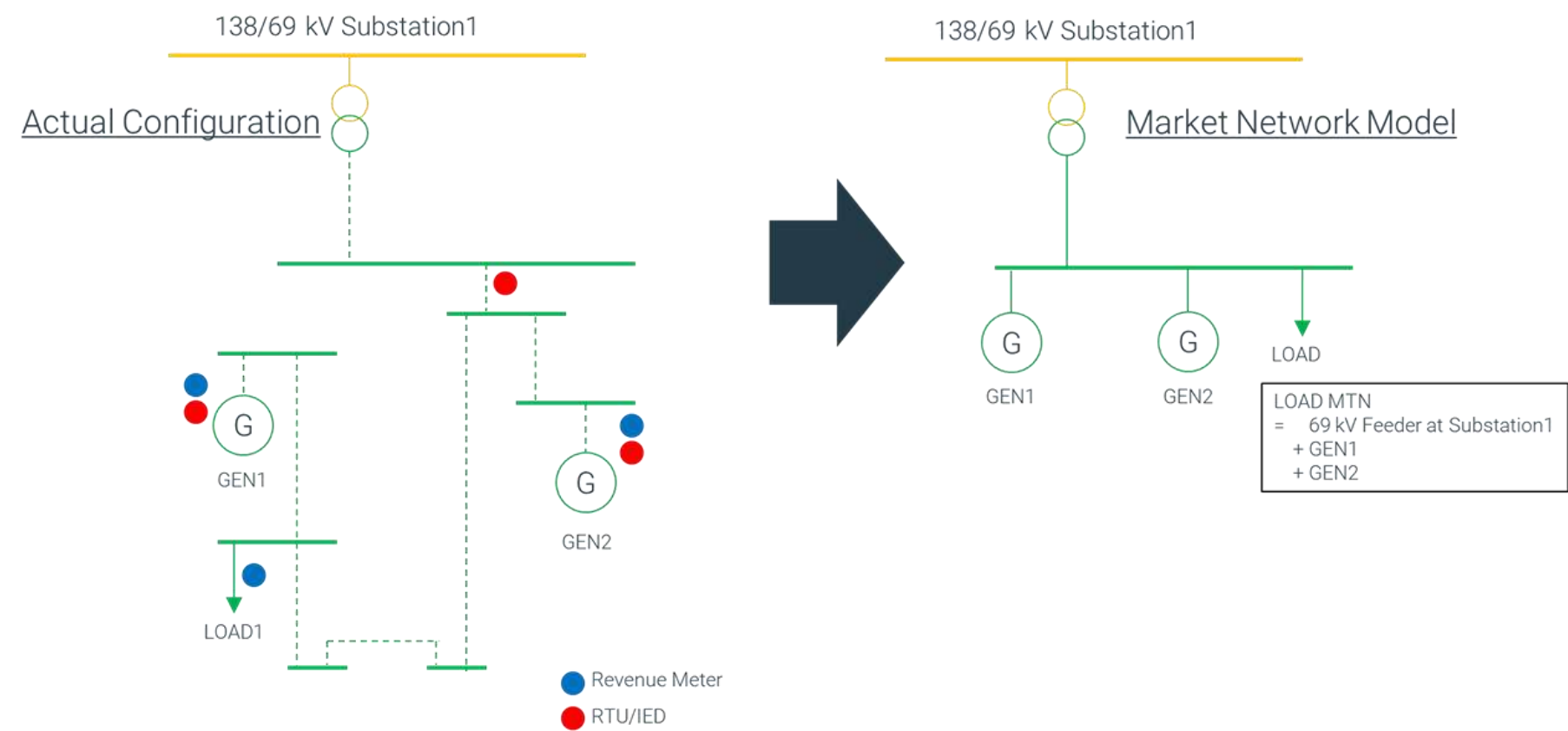
B. WESM Manual on Market Network Model Development and Maintenance - Criteria and Procedures Issue 4.2

Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Revised Wording based on Comments	Proponent's Response	RCC Decision
MNM	6.9	PROCEDURE FOR MTN IDENTIFICATION	PROCEDURE FOR MTN IDENTIFICATION REGISTRATION OF MARKET RESOURCES	Revised to better describe the section.				Approved
Procedure for MTN Identification	6.9.2	The Market Operator and the System Operator, in coordination with the Trading Participant, shall determine the MTN based on the criteria set out in Section 6.4 - Criteria For Definition of MTN of this document.	The Market Operator and the System Operator, in coordination with the Trading Participant, shall determine the MTN <u>market resource model</u> based on the criteria <u>guidelines</u> set out in of Section 6.4—Criteria For Definition of MTN of this document. <u>The agreed market resource model shall be determined in accordance with the procedures under the WESM Market Manual on Registration, Suspension, and De-Registration Criteria and Procedures.</u>	Revised for clarity.	TC: For Clarification: Is there a menu of market resource models (aside from Gen, Load, BESS and Pumped hydro)? If none, suggest to specify in this section all four resource models.		TC: No. Proposal may not be necessary.	Approved

Proposed Amendments to WESM Manuals for Improvements to Market Resource Modelling and Monitoring (ORCP-WM-21-04)

B. WESM Manual on Market Network Model Development and Maintenance - Criteria and Procedures Issue 4.2

Appendix A. Illustration of Simplified Model for Embedded Generators



Proposed General Amendments to the WESM Rules and WESM Manuals regarding Market Operator and System Operator Procedures (ORCP-WR-WM-21-07)

A. WESM Rules

Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Wording based on Comments	Proponent's Response	RCC Agreement
					<i>Write general comments here, if any.</i>			
Overriding Constraints	3.5.13.1	<p>xxx</p> <p>The <i>System Operator</i> shall advise the <i>Market Operator</i> of the actions it has taken in relation to the foregoing, including but not limited to information necessary for the proper settlement of affected <i>generating units</i>, and the <i>Market Operator</i> shall publish the said information no later than one (1) week from the relevant trading day. For proper settlement of must-run units, <i>Trading Participants</i> shall review the</p>	<p>xxx</p> <p>The <i>System Operator</i> shall advise the <i>Market Operator</i> of the actions it has taken in relation to the foregoing, including but not limited to information necessary for the proper settlement of affected <i>generating units</i>, and the <i>Market Operator</i> shall publish the said information no later than one (1) week from the relevant trading day. For proper settlement of must-run units, <i>Trading Participants</i> shall review the</p>	<p>To reinforce responsibility of Trading Participants (TP) in reporting their limitations if unable to follow RTD schedule and to encourage TP's active review of SO reports as part of their responsibilities.</p> <p>To be consistent with the proposed change of SO's reporting of their dispatch instructions, containing all dispatch instructions from the System Operator (e.g. dispatch of must-run</p>	<p>TC:</p> <p>Information from the SO shall be taken from the Dispatch Instruction Reports provided to IEMOP</p> <p>APC:</p> <p>Why is it not possible to publish the "Dispatch Instruction Report" a day or two after the relevant trading day for such information to be reviewed and validated? Useful information can be inferred from such reports by compliance officers who are supposed to respond to a Notice</p>	<p>APC:</p> <p>The <i>System Operator</i> shall advise the <i>Market Operator</i> of the actions it has taken in relation to the foregoing, including but not limited to information necessary for the proper settlement of affected <i>generating unit</i>, and the Market Operator shall</p>	<p>TC: Please clarify question/suggestion.</p> <p>APC:</p> <p>MO can publish this report from SO as suggested. However, this should be consistent with WESM IDC Manual.</p>	Approved proposal

Proposed General Amendments to the WESM Rules and WESM Manuals regarding Market Operator and System Operator Procedures (ORCP-WR-WM-21-07)

A. WESM Rules

Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Wording based on Comments	Proponent's Response	RCC Agreement
		information and notify the <i>Market Operator</i> of any discrepancies no later than two (2) weeks from the date of publication, otherwise the information contained in the report shall be deemed final for use in the settlement of <i>must-run units</i> . (As amended by DOE DC NO.2015-11-0016 dated 12 November 2015 and further amended by DOE DC No. 2018-04-0007 dated 28 March 2018)	information and notify the <i>Market Operator</i> of any discrepancies no later than two (2) weeks from the date of publication, otherwise the information contained in the report shall be deemed final, for use in the settlement of <i>must-run units</i> . (As amended by DOE DC NO.2015-11-0016 dated 12 November 2015 and further amended by DOE DC No. 2018-04-0007 dated 28 March 2018)	units), instead of dispatch deviations of generating units. Further, per proposed changes in DP Section 14.4.7, the SO Report will be named as "Dispatch Instruction Report".	in 3 days anyway, based on existing protocols.	publish the said information no later than one (1) week three (3) days from the relevant trading day. For proper settlement of must-run units, Trading Participants shall review the information and notify the <i>Market Operator</i> of any discrepancies no later than two (2) weeks from the date of publication, otherwise the information contained in the report shall be deemed final, for use in the settlement of <i>must-run units</i> .		

Proposed General Amendments to the WESM Rules and WESM Manuals regarding Market Operator and System Operator Procedures (ORCP-WR-WM-21-07)

A. WESM Rules

Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Wording based on Comments	Proponent's Response	RCC Agreement
Responsibilities of the System Operator	3.8.2	<p>3.8.2.2 After each one (1) hour interval, in accordance with the <i>timetable</i>, the <i>System Operator</i> shall advise the <i>Market Operator</i> of:</p> <p>a. xxx xxx</p> <p>The <i>System Operator</i> shall likewise provide a <i>dispatch</i> deviation report to the <i>Market Operator</i>, in accordance with the <i>timetable</i>, detailing among others the circumstances and <i>dispatch</i> levels of units that were <i>constrained-on</i> or <i>constrained-off</i> or put on must-run during that one (1) hour <i>interval</i>.</p>	<p>3.8.2.2 After each one (1) hour interval, in accordance with the <i>timetable</i>, the <i>System Operator</i> shall advise the <i>Market Operator</i> of:</p> <p>a. xxx xxx</p> <p>The <i>System Operator</i> shall likewise provide a <i>dispatch</i> deviation <i>instruction</i> report to the <i>Market Operator</i>, in accordance with the <i>timetable</i>, detailing among others the circumstances and <i>dispatch</i> levels of units that were <i>constrained-on</i> or <i>constrained-off</i> or put on must-run during that one (1) hour <i>interval</i>.</p>	To change of report name to Dispatch Instruction Report consistent with proposed changes to WESM DP	<p>TC: Information from the SO shall be taken from the Dispatch Instruction Reports provided to IEMOP</p> <p>APC: Concur</p>		<p>TC: Please clarify question/suggestion</p>	<p>SO: dispatch instruction report is generic</p> <p>Approved proposal.</p>

Proposed General Amendments to the WESM Rules and WESM Manuals regarding Market Operator and System Operator Procedures (ORCP-WR-WM-21-07)

A. WESM Rules

Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Wording based on Comments	Proponent's Response	RCC Agreement
System Operator Implementation of Real-Time Dispatch	3.8.3.4	Subject to Clause 3.8.3.4, if, in real-time, the available <i>generation</i> from a <i>must dispatch generating unit</i> differs from the available <i>generation</i> assumed in the <i>dispatch schedule</i> provided to the <i>System Operator</i> , the <i>System Operator</i> shall allow the <i>must dispatch generating unit</i> to generate at its <i>maximum available output</i> , and, if all available <i>frequency regulation</i> is exhausted during a <i>dispatch interval</i> , shall adjust the <i>dispatch</i> of other <i>generating units</i> , to compensate as required in accordance with	Subject to Clause 3.8.3.43, if, in real-time, the available <i>generation</i> from a <i>must dispatch generating unit</i> differs from the available <i>generation</i> assumed in the <i>dispatch schedule</i> provided to the <i>System Operator</i> , the <i>System Operator</i> shall allow the <i>must dispatch generating unit</i> to generate at its <i>maximum available output</i> , and, if all available <i>frequency regulation</i> <u>is-regulating reserves are</u> exhausted during a <i>dispatch interval</i> , shall adjust the <i>dispatch</i> of other <i>generating units</i> , to compensate as required in	Revised reference clause to 3.8.3.3. For consistency with the proposed changes in the WESM DP on	APC: Proposed to retain. The other ancillary services (CR and DR, which are frequency regulation services) should be exhausted first before using the output of the other generating units.		This is for SO's concurrence. MO notes that CR and DR are capacities of "last resort", only after MOT and MRU have been exhausted as well.	SO: RR does not need to be depleted to accommodate must-dispatch gen units at max available output <i>*no decision, parked</i> <i>APPROVED – 183RD</i>

Proposed General Amendments to the WESM Rules and WESM Manuals regarding Market Operator and System Operator Procedures (ORCP-WR-WM-21-07)

A. WESM Rules

Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Wording based on Comments	Proponent's Response	RCC Agreement
		relevant <i>Market Manuals</i> .	accordance with relevant <i>Market Manuals</i> .					
Dispatch Conformance Standards	3.8.5	3.8.5.6 In cases when a <i>generating unit</i> was identified as a <i>Must-Stop Unit</i> , the <i>System Operator</i> shall include such in the Dispatch Deviation Report.	3.8.5.6 In cases when a <i>generating unit</i> was identified as a <i>Must-Stop Unit</i> , the <i>System Operator</i> shall include such in the Dispatch Deviation Instruction Report.	Change of report name to Dispatch Instruction Report consistent with proposed changes to WESM DP	APC: Concur			Approved
Glossary		xxxx Contingency Reserve. The ability to respond so as to arrest a significant drop in system frequency such as would arise as a result of a credible contingency affecting one (or more) <i>generating units</i> within a region,	xxxx Contingency Reserve. The ability to respond so as to arrest a significant drop in system frequency such as would arise as a result of a credible contingency affecting one (or more) <i>generating units</i> within a region, or transmission	To harmonize with DOE DC2019-12-0018 (regulating, contingency, dispatchable).	TC: Shall be consistent with the definitions in the PGC. APC: Is it correct to assume that we are now abandoning the new set of Reserve classifications defined under PGC 2016 edition which might cause conflict on interpretation		TC: This is consistent with DOE DC APC: Yes. For consistency as provided by the DOE DC.	Approved

Proposed General Amendments to the WESM Rules and WESM Manuals regarding Market Operator and System Operator Procedures (ORCP-WR-WM-21-07)

A. WESM Rules

Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Wording based on Comments	Proponent's Response	RCC Agreement
		or transmission flows into a region. xxxx	flows into a region. <u>Synchronized generation capacity from qualified generating units and qualified interruptible loads allocated to cover the loss or failure of a synchronized generating unit or a transmission element or the power import from a circuit interconnection.</u> xxxx		later on?			
		Dispatchable Reserve. The ability to respond to a re-dispatch performed by the System operator during a trading interval, on	Dispatchable Reserve. The ability to respond to a re-dispatch performed by the System operator during a trading interval, on either a regular or an ad hoc basis.					

Proposed General Amendments to the WESM Rules and WESM Manuals regarding Market Operator and System Operator Procedures (ORCP-WR-WM-21-07)

A. WESM Rules

Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Wording based on Comments	Proponent's Response	RCC Agreement
		either a regular or an ad hoc basis. xxxx	<u>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.</u> xxxx					

Proposed General Amendments to the WESM Rules and WESM Manuals regarding Market Operator and System Operator Procedures (ORCP-WR-WM-21-07)

A. WESM Rules

Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Wording based on Comments	Proponent's Response	RCC Agreement
		Regulating Reserve. The ability to adjust generation continuously in response to small frequency changes, so a so as to cover load fluctuations or minor breakdowns, defined as an ancillary service in clause 3.3.4.2 (a).	Regulating Reserve. The ability to adjust generation continuously in response to small frequency changes, so a so as to cover load fluctuations or minor breakdowns, defined as an ancillary service in clause 3.3.4.2 (a). <u>Readily available and dispatchable generating capacity that is allocated exclusively to correct deviations from the acceptable nominal frequency caused by unpredicted variations in demand or generation output.</u>					

Proposed General Amendments to the WESM Rules and WESM Manuals regarding Market Operator and System Operator Procedures (ORCP-WR-WM-21-07)

B. WESM Manual on Dispatch Protocol Issue 13.2

Title	Claus e	Provision	Proposed Amendment	Rationale	Comments	Proposed Wording based on Comments	Proponent's Response	RCC Agreement
					Write general comments here, if any.			
DEFINITI ONS	2.1.2	<p>XXX</p> <p>u. Primary Reserve. Synchronized generating capacity that is allocated to stabilize the system <i>frequency</i> and to cover the loss or failure of a synchronized <i>generating unit</i> or a <i>transmission line</i> or the power import from a single circuit interconnection, as defined in the <i>Grid Code</i>. Also referred to as <i>contingency reserves</i>.</p> <p>XXX</p> <p>w. Red Alert. An alert issued by the <i>System Operator</i> when the <i>Primary Reserve</i> is zero, a <i>generation deficiency</i> exists, or there is critical loading or imminent</p>	<p>XXX</p> <p>a. Ancillary Service Procurement Agreement. A contractual agreement under which a WESM Member, registered as an Ancillary Service Provider, agrees with the System Operator to provide ancillary services.</p> <p>b. Automatic Generation Control. The regulation of the power output of generating units to respond to a change in system frequency or tie-line loading, as defined in the Grid Code, or to meet its target loading level.</p>	<p>To add definition of an ancillary service procurement agreement, which will be referred to in later sections.</p> <p>To add definition of automatic generation control, which will be referred to in later sections.</p>	<p>TC: How about "... as described in PGC", otherwise adopt PGC definition of AGC.</p> <p>Just qualify if the use of AGC in this section is the process or the system control.</p> <p>Suggest to just change the definition of System Snapshot instead of change the term to Real-Time data since IEMOP sets their system to capture data</p>		<p>TC: Suggest to retain.</p> <p>AGC refers to control.</p> <p>Note that IEMOP is linked to SO's real-time data via ICCP, thus the change/ switch to real-time data.</p>	<p>Adopt</p> <p>APC:</p> <p>b. Automatic Generation Control. The automatic regulation of the power output of generating units to respond to a change in system frequency or tie-line loading, as defined in the Grid Code, or to meet its target loading level.</p>

Proposed General Amendments to the WESM Rules and WESM Manuals regarding Market Operator and System Operator Procedures (ORCP-WR-WM-21-07)

B. WESM Manual on Dispatch Protocol Issue 13.2

Title	Claus e	Provision	Proposed Amendment	Rationale	Comments	Proposed Wording based on Comments	Proponent's Response	RCC Agreement
		overloading of <i>transmission lines</i> or equipment. XXX x. Secondary Reserve. Synchronized generating capacity that is allocated to restore the system frequency to the nominal <i>frequency</i> of 60Hz, as defined on the Grid Code. Also referred to as <i>regulating reserves</i> . XXX ff. System Snapshot. Otherwise known as EMS Snapshot. The <i>system snapshot</i> contains MW loadings of <i>generators</i> and <i>loads</i> . The <i>system snapshot</i> also indicates connection status of the power system. XXX	a- c. Automatic Load Dropping (ALD). xxx b- d. Availability. xxx c- e. Bid. xxx d- f. Capability. xxx e- g. Cascading Outages. xxx f- h. Contingency. xxx g- i. Primary Contingency Reserve. Synchronized generating capacity that is allocated to stabilize the system frequency and to cover the loss or failure of a synchronized generating unit or a transmission line or the power import from a single circuit interconnection, as defined in the Grid Code . Also referred to as contingency reserves . Synchronized generation capacity from qualified generating units and qualified interruptible loads allocated to cover the loss or failure of a synchronized generating unit or a transmission element or the power import	To harmonize with DOE DC2019-12-0018 (regulating, contingency, dispatchable) . This is the definition of Contingency reserve in said DOE DC.	from the SO on an interval basis. APC: For clarity. Is it correct to assume that we are now abandoning the new set of Reserve classifications defined under PGC 2016 edition which might cause conflict on interpretation later on? How to harmonize with the previous definition of ancillary services?	APC: <u>b. Automatic Generation Control. The automatic regulation of the power output of generating units to respond to a change in system frequency or tie-line loading, as defined in the Grid Code, or to meet its target loading level.</u>	APC: Reserve Types are based on DOE DC. Agree	

Proposed General Amendments to the WESM Rules and WESM Manuals regarding Market Operator and System Operator Procedures (ORCP-WR-WM-21-07)

B. WESM Manual on Dispatch Protocol Issue 13.2

Title	Claus e	Provision	Proposed Amendment	Rationale	Comments	Proposed Wording based on Comments	Proponent's Response	RCC Agreement
		hh. Tertiary Reserve. Capacity used in order to replenish the <i>Secondary Reserve</i> and for such other cases, as defined in the <i>Grid Code</i> .	<p>g- <u>j.</u> Demand Control. xxx</p> <p>h- <u>k.</u> Demand Control Imminent Warning. xxx</p> <p>hh- <u>l.</u> <u>Tertiary Dispatchable Reserve.</u> Capacity used in order to replenish the <i>Secondary Reserve</i> and for such other cases, as defined in the <i>Grid Code</i>.</p> <p><u>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.</u></p>	To harmonize with DOE DC2019-12-0018 (regulating, contingency, dispatchable) . This is the definition of Dispatchable reserve in said DOE DC.				

Proposed General Amendments to the WESM Rules and WESM Manuals regarding Market Operator and System Operator Procedures (ORCP-WR-WM-21-07)

B. WESM Manual on Dispatch Protocol Issue 13.2

Title	Claus e	Provision	Proposed Amendment	Rationale	Comments	Proposed Wording based on Comments	Proponent's Response	RCC Agreement
			<div><div>i. <u>m.</u> Disturbance. xxx</div><div>j. <u>n.</u> Frequency control. xxx</div><div>k. <u>o.</u> Generator. xxx</div><div>l. <u>p.</u> Load shedding. xxx</div><div>m. <u>q.</u> Manual Load Dropping. xxx</div><div>n. <u>r.</u> Market Management System (MMS). xxx</div><div>o. <u>s.</u> Maximum available capacity. xxx</div><div>p. <u>t.</u> MMS-Market Participant Interface (MPI). xxx</div><div>q. <u>u.</u> Multiple Outage Contingency. xxx</div><div>r. <u>v.</u> Offer. xxx</div><div>s. <u>w.</u> Operating margin. xxx</div><div>t. <u>x.</u> Preferential Dispatch Units. xxx</div><div>ff. <u>y.</u> System Snapshot Real- Time Data. Otherwise known as EMS Snapshot. The system snapshot eContains analog measurements (MW loadings and MVAR) of generators and loads. The system snapshot also indicates and the connection status of power system</div></div>	To reflect change in type of data received with the use of Inter-Control Centre Communicati ons Protocol				

Proposed General Amendments to the WESM Rules and WESM Manuals regarding Market Operator and System Operator Procedures (ORCP-WR-WM-21-07)

B. WESM Manual on Dispatch Protocol Issue 13.2

Title	Claus e	Provision	Proposed Amendment	Rationale	Comments	Proposed Wording based on Comments	Proponent's Response	RCC Agreement
			<p>breakers and disconnect switches.</p> <p>v. z. Real-Time Dispatch. xxx</p> <p>w. aa. Red Alert. An alert issued by the <i>System Operator</i> when the <i>Primary</i> <u>Contingency Reserve</u> is zero, a <i>generation</i> deficiency exists, or there is critical loading or imminent overloading of <i>transmission lines</i> or equipment.</p> <p>x. bb. <u>Secondary Regulating Reserve.</u> Synchronized generating capacity that is allocated to restore the system frequency to the nominal frequency of 60Hz, as defined on the Grid Code. Also referred to as regulating reserves. <u>Readily available and dispatchable generating capacity that is allocated exclusively to correct deviations from the acceptable nominal frequency caused by</u></p>	<p>(ICCP) of the NMMS.</p> <p>To harmonize with DOE DC2019-12-0018 (regulating, contingency, dispatchable) . This is the definition of Regulating reserve in said DOE DC.</p>				

Proposed General Amendments to the WESM Rules and WESM Manuals regarding Market Operator and System Operator Procedures (ORCP-WR-WM-21-07)

B. WESM Manual on Dispatch Protocol Issue 13.2

Title	Claus e	Provision	Proposed Amendment	Rationale	Comments	Proposed Wording based on Comments	Proponent’s Response	RCC Agreement																								
			<p><u>unpredicted variations in demand or <i>generation</i> output.</u></p> <p>y- <u>cc.</u> Security. xxx z- <u>dd.</u> Self-scheduled nomination. xxx aa- <u>ee.</u> Shutdown. xxx bb- <u>ff.</u> Stability. xxx ee- <u>gg.</u> Start-up. xxx dd- <u>hh.</u> System Integrity Protection Scheme (SIPS). xxx ee- <u>ii.</u> System Operator System Advisories. xxx ff- System Snapshot. xxx gg- <u>ii.</u> Technical Constraint. xxx hh- Tertiary Reserve. xxx ii- <u>kk.</u> Voltage Control. xxx jj- <u>ll.</u> Voltage Instability. xxx kk- <u>mm.</u> Voltage Sag. xxx</p>																													
WESM TIMETAB LE	4.4	<table><tr><td colspan="3">Table 2. DAP Timeline</td></tr><tr><th>Time</th><th>Activity</th><th>Respo nsible Party</th></tr><tr><td>XXX</td><td>XXX</td><td>XXX</td></tr><tr><td>Before [STP H1 +</td><td>Provide updates on the</td><td>Syste m Operat or</td></tr></table>	Table 2. DAP Timeline			Time	Activity	Respo nsible Party	XXX	XXX	XXX	Before [STP H1 +	Provide updates on the	Syste m Operat or	<table><tr><td colspan="3">Table 2. DAP Timeline</td></tr><tr><th>Time</th><th>Activity</th><th>Responsib le Party</th></tr><tr><td>XXX</td><td>XXX</td><td>XXX</td></tr><tr><td>Before [STP H1 + 1</td><td>Provide updates on the</td><td>System Operator</td></tr></table>	Table 2. DAP Timeline			Time	Activity	Responsib le Party	XXX	XXX	XXX	Before [STP H1 + 1	Provide updates on the	System Operator	To reflect change in type of data received with the use of ICCP of the NMMS	TC: “system snapshot" is a suitable qualifier for the real-time data; without which "real-time data" is too		TC: Suggest to retain based on previous explanation.	Approved
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		1 minut e]	following, if any: a. XXX b. XXX c. XXX d. XXX e. <i>Real- time system snapsh ot</i> f. XXX g. XXX		minut e]	following, if any: a. XXX b. XXX c. XXX d. XXX e. <i>Real- time system snapsh ot</i> data f. XXX g. XXX			broad, even vague. See 7.9.1 below. APC: Concur			
		XXX	XXX	XXX	XXX	XXX	XXX					
		XXX	XXX	XXX	XXX	XXX	XXX					
		XXX	XXX	XXX	XXX	XXX	XXX					
			XXX	XXX		XXX	XXX					
WESM TIMETAB LE	4.5	Table 4. HAP Timeline			Table 4. HAP Timeline			To reflect change in type of data received with the use of ICCP of the NMMS	TC: "system snapshot" is a suitable qualifier for the real-time data; without which "real-time data" is too broad, even vague.		TC: Suggest to retain based on previous explanation.	Approved
		Time	Activity	Respons ible Party	Time	Activity	Respon sible Party					
		XXX	XXX	XXX	XXX	XXX	XXX					
		Before [STDI 1 – 7 minut es]	Provide updates on the following, if any: • XXX • XXX	System Operato r	Before [STDI1 – 7 minutes]	Provide updates on the following, if any: 1. XXX 2. XXX	System Operat or					

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Title	Claus e	Provision			Proposed Amendment			Rationale	Comments	Proposed Wording based on Comments	Proponent's Response	RCC Agreement
			<ul style="list-style-type: none">XXXXXXXXXReal-time system snapshot			3. XXX						
		XXX	XXX	XXX	XXX	XXX	XXX					
		XXX	XXX	XXX	XXX	XXX	XXX					
		XXX	XXX	XXX	XXX	XXX	XXX					
			XXX	XXX		XXX	XXX					
WESM TIMETAB LE	4.6	Table 5. RTD Timeline			Table 5. RTD Timeline			To reflect change in type of data received with the use of ICCP of the NMMS	TC: "system snapshot" is a suitable qualifier for the real-time data; without which "real-time data" is too broad, even vague.		TC: Suggest to retain based on previous explanation.	Approved
		Time	Activity	Respon sible Party	Time	Activity	Respo nsible Party					
		XXX	XXX	XXX	XXX	XXX	XXX					
		Before [STDI – 7 minutes]	Provide updates on the following, if any: 1. XXX 2. XXX 3. XXX 4. XXX 5. Real-time	System Operator	Before [STDI – 7 minutes]	Provide updates on the following, if any: 1. XXX 2. XXX 3. XXX 4. XXX 5. Real-time	System Operator					

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			s y s t e m s n a p s h o t			y s t e m s h a p s h o t	<u>d</u> <u>a</u> <u>t</u> <u>a</u>					
		XXX	XXX	XXX								
		XXX	XXX	XXX								
		XXX	XXX	XXX	XXX	XXX	XXX					
			XXX	XXX	XXX	XXX	XXX					
					XXX	XXX	XXX					
						XXX	XXX					
SYSTEM OPERAT OR INPUT DATA AND REPORT S	7.4.1	Market run data Inputs. For each dispatch interval, the System Operator shall provide and update data, if necessary, which shall be used in the pre-dispatch projections and real-time dispatch market runs: <i>a. Outage schedules</i>			Market run data Inputs. For each dispatch interval, the System Operator shall provide and <u>or</u> update <u>the</u> data, if necessary, which shall be used in the pre-dispatch projections and real-time dispatch market runs:			Minor clerical amendment to clarify the provision	APC: Concur		Approved	

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Title	Claus e	Provision	Proposed Amendment	Rationale	Comments	Proposed Wording based on Comments	Proponent's Response	RCC Agreement
		<i>b. Contingency lists</i> <i>c. Over-riding constraints</i> <i>d. Reserve requirements</i>	1. <i>Outage schedules</i> 2. <i>Contingency lists</i> 3. <i>Over-riding constraints</i> 4. <i>Reserve requirements</i>					
SYSTEM OPERAT OR INPUT DATA AND REPORT S	7.6.4	(New)	<u>Generating units undergoing regulatory and commercial tests shall submit to the System Operator the MW profile that details the MW target for each <i>dispatch interval</i> during its requested test period on or before two (2) working days prior to the start of its testing.</u>	Gen TPs on testing and commissionin g to submit test profiles for each dispatch interval during the test period. The test profile will be the reference of the SO in its submission of overriding constraints.		APC: <u>Generating units undergoing regulatory and commercial tests shall submit to the System Operator the MW profile that details the MW target for each <i>dispatch interval</i> during its requested test period at least two (2) working days prior to the start of its testing.</u>	Agree	Adopt APC: <u>Generating units undergoing regulatory and commercial tests shall submit to the System Operator the MW profile that details the MW target for each <i>dispatch interval</i> during its requested test period at least two (2) working days prior to the start of its testing.</u>

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SYSTEM STATUS	7.9	7.9.1 System Snapshot. The <i>system snapshot</i> depicts the status of individual power facilities in the grid. The <i>system snapshot</i> is collected by the <i>Market Operator</i> from the <i>System Operator's</i> EMS/SCADA. a. The <i>system snapshot</i> contains the following information: 1. <i>Generator</i> Unit MW and MVAR (analog measurements) 2. Load MW and MVAR (analog measurements) and 3. Breaker Status 4. Bus Voltages 5. Frequency	7.9.1 System Snapshot Real-Time Data. The <i>system snapshot</i> <u>real-time data represents</u> depicts the analog measurements, and connection status of breakers and disconnect switches status of individual power facilities in the grid. The <i>system snapshot</i> <u>It</u> is collected by the <i>Market Operator</i> from the <i>System Operator's</i> EMS/SCADA. a. The <i>system snapshot</i> <u>real-time data shall</u> contains the following information <u>as prescribed in the WESM Market Manual on Market Network Model Development and Maintenance - Criteria and Procedure.</u> 1. <i>Generator</i> Unit MW and MVAR (analog measurements) 2. <i>Load</i> MW and MVAR (analog measurements) and 3. <i>Breaker</i> Status 4. <i>Bus</i> Voltages	To reflect change in type of data received with the use of ICCP of the NMMS				Approved

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Title	Claus e	Provision	Proposed Amendment	Rationale	Comments	Proposed Wording based on Comments	Proponent's Response	RCC Agreement
		b. The system snapshot is an input to the MDOM which calculates the WAP, DAP, HAP, and RTD schedules. Specifically, the system snapshot data is used for the network configuration and nodal demand forecasting processes.	5. Frequency b. The system snapshot real-time data is an input to the MDOM which calculates the WAP, DAP, HAP, and RTD schedules. Specifically, the system snapshot real-time data is used for the network configuration and nodal demand forecasting processes.					
		7.9.2 System Operator System Advisories. The <i>System Operator system advisories</i> contain other information not included in the submission of <i>system snapshots</i> . Further to the information provided in Section 7.4.2, these are messages issued by the <i>System Operator</i> depicting particular events or incidents that would transpire prior, during or after real time condition.	7.9.2 System Operator System Advisories. The System Operator system advisories contain other information not included in the submission of system snapshots . Further to the information provided in Section 7.4.2, these are messages issued by the <i>System Operator</i> depicting particular events or incidents that would transpire prior, during or after real time condition.					Approved
SYSTEM STATUS	7.10	7.10.2 The <i>System Operator</i> shall provide the information	7.10.2 The <i>System Operator</i> shall update provide the	To clarify the responsibility	TC:		TC: Suggest to	Approved

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		contained in this Section in accordance with the <i>timetable</i> set in Section 4.	information contained in this Section in accordance with <u>considering</u> the <i>timetable</i> set in Section 4.	of SO to update system status	Retain the word "provide" as it already covers all information on current system condition.		retain. This is also consistent with current practice in the system.	
MARKET PROJECT IONS - Responsibilities	8.3.3	<i>Trading Participants</i> shall be responsible for: 1. Ensuring submission of <i>self-scheduled nominations, bids, and 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; and 2. Maintaining their respective infrastructure to ensure access to the <i>MPI</i> of the <i>MMS</i> .	<i>Trading Participants</i> shall be responsible for: 1. Ensuring submission of <i>self-scheduled nominations, bids, and 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; and 2. <u>Submission of day-ahead self-scheduled nominations of its must dispatch generating units to the System Operator by 1300H; and</u> 3. Maintaining their respective infrastructure to ensure access to the <i>MPI</i> of the <i>MMS</i> .	Propose that Must Dispatch generating units provide SO day-ahead forecasts for planning purposes as also provided under PGC SD 8.3.2.6	APC: Is this mandatory or can it be altered in real time? How will this affect the Forecast?		APC: This is actually being written to be consistent with the PGC requirement for VREs to submit day-ahead forecasts. It is mandatory, and it can also be revised near real-time.	Approved

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Data Inputs/Info rmation Requirem ents	8.4.2	The data inputs for the market projections are as follows: a. XXX b. XXX c. <i>System snapshot</i> d. XXX e. XXX f. XXX g. XXX h. XXX i. XXX	The data inputs for the market projections are as follows: a. XXX b. XXX c. System snapshot <u>Real- time data</u> d. XXX e. XXX f. XXX g. XXX h. XXX i. XXX	Reflect change in type of data received with the use of ICCP of the NMMS	TC: "system snapshot" is a suitable qualifier for the real-time data; without which "real-time data" is too broad, even vague.		TC: Suggest to retain based on previous explanation.	Approved																																				
REAL- TIME DISPATC H SCHEDUL ING	9.5	Table 6. Summary of Inputs and Sources for the <i>Real-time dispatch</i> <table><tr><th>INPUTS</th><th>SOURCE</th></tr><tr><td>XXX</td><td>XXX</td></tr><tr><td>XXX</td><td>XXX</td></tr><tr><td><i>System Snapshot</i></td><td><i>System Operator</i></td></tr><tr><td>XXX</td><td>XXX</td></tr><tr><td>XXX</td><td>XXX</td></tr><tr><td>XXX</td><td>XXX</td></tr><tr><td>XXX</td><td>XXX</td></tr><tr><td>XXX</td><td>XXX</td></tr></table>	INPUTS	SOURCE	XXX	XXX	XXX	XXX	<i>System Snapshot</i>	<i>System Operator</i>	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	Table 6. Summary of Inputs and Sources for the <i>Real-time dispatch</i> <table><tr><th>INPUTS</th><th>SOURCE</th></tr><tr><td>XXX</td><td>XXX</td></tr><tr><td>XXX</td><td>XXX</td></tr><tr><td>System snapshot <u>Real- Time Data</u></td><td><i>System Operator</i></td></tr><tr><td>XXX</td><td>XXX</td></tr><tr><td>XXX</td><td>XXX</td></tr><tr><td>XXX</td><td>XXX</td></tr><tr><td>XXX</td><td>XXX</td></tr><tr><td>XXX</td><td>XXX</td></tr></table>	INPUTS	SOURCE	XXX	XXX	XXX	XXX	System snapshot <u>Real- Time Data</u>	<i>System Operator</i>	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	Reflect change in type of data received with the use of ICCP of the NMMS	TC: "system snapshot" is a suitable qualifier for the real-time data; without which "real-time data" is too broad, even vague.		TC: Suggest to retain based on previous explanation.	Approved
INPUTS	SOURCE																																											
XXX	XXX																																											
XXX	XXX																																											
<i>System Snapshot</i>	<i>System Operator</i>																																											
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System snapshot <u>Real- Time Data</u>	<i>System Operator</i>																																											
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Title	Claus e	Provision	Proposed Amendment	Rationale	Comments	Proposed Wording based on Comments	Proponent's Response	RCC Agreement
PREPARA TION OF THE WESM MERIT ORDER TABLE	10.1.2	The <i>WMOT</i> is generated by stacking in an unconstrained manner of scheduled and unscheduled capacities, excluding negative quantities through the <i>market offers</i> submitted for the <i>real-time dispatch</i> runs. <i>Energy offer</i> blocks submitted by <i>generator Trading Participants</i> for a particular dispatch interval are arranged from lowest to the highest priced offer block, without considering any <i>constraints</i> . The <i>WMOT</i> stacks <i>energy offers</i> into two, namely, the energy offers that were scheduled (or “Offers Dispatched”) and <i>energy offers</i> that were not scheduled (or “Offers Not Dispatched”).	The <i>WMOT</i> is generated by stacking, in an unconstrained manner, of scheduled and unscheduled capacities, excluding negative quantities, <u>reserve schedules, and generators on outage</u> through the <i>market offers</i> submitted for the <i>real-time dispatch</i> runs. <i>Energy offer</i> blocks submitted by <i>generator Trading Participants</i> for a particular dispatch interval are arranged from lowest to the highest priced offer block, without considering any <i>constraints</i> . The <i>WMOT</i> stacks <i>energy offers</i> into two, namely, the energy offers that were scheduled (or “Offers Dispatched”) and <i>energy offers</i> that were not scheduled (or “Offers Not Dispatched”).	To reflect more accurate presentation of available capacities for re-dispatch				Approved
PREPARA TION OF THE WESM MERIT	10.3.2	Consistent with its obligations set out in this Dispatch Protocol in respect to the issuance of dispatch instructions, the System Operator shall be responsible	Consistent with its obligations set out in this Dispatch Protocol in respect to the issuance of dispatch instructions, the System Operator shall be responsible for ensuring the	Renamed to dispatch instruction report. Also, MRU reports will be				Approved

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ORDER TABLE		for ensuring the application of the information provided in the WMOT in the real-time operation of the grid. The System Operator shall also be responsible for identifying the generating units designated as must-run units through the dispatch deviation report and report on must-run units prepared in accordance with Sections 14.4.2 and 14.4.5.	application of the information provided in the WMOT in the real-time operation of the grid. The System Operator shall also be responsible for identifying the generating units <u>that were issued dispatch instructions</u> designated as must-run units through the dispatch deviation <u>instruction</u> report and report on must-run units prepared in accordance with Sections 14.4.2 and 14.4.5.	integrated in the dispatch instruction report per proposed revisions in Section 14.4.5.				
Preparatio n of WMOT	10.4	10.4.1 The WMOT shall be prepared using the <i>offers</i> , excluding negative quantities, and the <i>real-time dispatch schedule</i> of each <i>generating system</i> for which <i>offers</i> were submitted for the relevant <i>dispatch interval</i> . The specific information that will be used is as follows: XXX 10.4.5 The “Offers Dispatched” consists of the <i>energy offer</i> blocks which have been	10.4.1 The WMOT shall be prepared using <u>the real-time dispatch schedules, and</u> the <i>offers</i> , excluding negative quantities, <u>reserve schedules, and generators on outage,</u> and the real-time dispatch schedule of each <i>generating system</i> for which <i>offers</i> were submitted for the relevant <i>dispatch interval</i> . The specific information that will be used is as follows: XXX	Proposed to amend to reflect more accurate presentation of available capacities for re-dispatch	TC: Should include "reserve schedules" to show the AS capacities scheduled by SO that has been utilized by MO in lieu of supply deficiency		TC: To clarify in the MMS, energy schedules already include A/S capacities that have already been determined by the MDOM to be scheduled	Approved

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		scheduled in the RTD schedule for the <i>dispatch interval</i> . To the extent possible, the <i>dispatch schedule</i> of each <i>generating unit</i> will be split into corresponding <i>offer</i> blocks. The scheduled <i>offer</i> blocks will then be sorted and listed from the lowest-priced to the highest-priced scheduled <i>offer</i> block, with the lowest-priced scheduled <i>offer</i> block at the bottom of the list and the highest-priced at the top of the list. The <i>generating units</i> for which no <i>offers</i> are submitted but were scheduled are considered as price takers. Their respective schedules, MW, are included in this list and are placed at the bottom of the list with <i>must dispatch generating units</i> at the bottom and followed by <i>priority dispatch generating units</i> and <i>non-scheduled generating units</i> in that order.	10.4.5 The “Offers Dispatched” consists of the <i>energy offer</i> blocks, <u>excluding reserve schedules</u> , which have been scheduled in the RTD schedule for the <i>dispatch interval</i> . To the extent possible, the <i>dispatch schedule</i> of each <i>generating unit</i> will be split into corresponding <i>offer</i> blocks. The scheduled <i>offer</i> blocks will then be sorted and listed from the lowest-priced to the highest-priced scheduled <i>offer</i> block, with the lowest-priced scheduled <i>offer</i> block at the bottom of the list and the highest-priced at the top of the list. The <i>generating units</i> for which no <i>offers</i> are submitted but were scheduled are considered as price takers. Their respective <u>MW</u> schedules, MW , are included in this list and are placed at the bottom of the list with <i>must dispatch generating units</i> at the bottom and followed by <i>priority dispatch generating units</i> and <i>non-</i>				for energy due to supply deficits. The MMS reserve schedules are those capacities that are expected to be on standby for frequency control. This proposal already tries to omit reserve schedules in the MOT since reserve schedules are meant to be separately managed by SO.	

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			<i>scheduled generating units</i> in that order.				Adding it back creates another layer of confusion in dispatch operations.	
		10.4.6 The “Offers Not Dispatched” consists of the remaining <i>energy offers</i> of each <i>generating unit</i> that are not scheduled or included in the RTD schedule for the <i>dispatch interval</i> . To the extent possible, the remaining <i>offers</i> will be sorted by <i>offer</i> blocks. The <i>offer</i> blocks not dispatched will then be sorted and listed from the lowest-priced to the highest-priced scheduled <i>offer</i> block, with the lowest-priced scheduled offer block at the bottom of the list and the highest-priced at the top of the list. Capacities that were not dispatched through their <i>energy offers</i> but have	10.4.6 The “Offers Not Dispatched” consists of the remaining <i>energy offers</i> of each available <i>generating unit</i> that are not scheduled or included in the RTD schedule for the <i>dispatch interval</i> . To the extent possible, the remaining <i>offers</i> will be sorted by <i>offer</i> blocks. The <i>offer</i> blocks not dispatched will then be sorted and listed from the lowest-priced to the highest-priced scheduled <i>offer</i> block, with the lowest-priced scheduled offer block at the bottom of the list and the highest-priced at the top of the list. Capacities that were not dispatched through their <i>energy offers</i> but have <i>reserve dispatch</i>					Approved

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		<i>reserve dispatch</i> targets shall be excluded from the list.	targets shall be excluded from the list.					
Use of WMOT	10.6.2	As far as practicable, and when <i>secondary reserves</i> have been exhausted, the <i>System Operator</i> shall issue re-dispatch instructions based on the <i>WMOT</i> . However, the <i>System Operator</i> may resort in an <i>out of merit dispatch</i> whenever the quality of the <i>grid frequency</i> is affected or the <i>security</i> of the <i>grid</i> is at risk.	As far as practicable, and when <i>secondary</i> <i>regulating</i> reserves have been exhausted, the <i>System Operator</i> shall issue re-dispatch instructions based on the <i>WMOT</i> . However, the <i>System Operator</i> may resort in an <i>out of merit dispatch</i> whenever the quality of the <i>grid frequency</i> is affected or the <i>security</i> of the <i>grid</i> is at risk.	To harmonize with DOE DC2019-12-0018 (regulating, contingency, dispatchable)				Approved
DISPATCH IMPLEMENTATION	11.1.3	11.1.3 During each <i>dispatch interval</i> , the <i>Trading Participant</i> is directed under <i>WESM Rules</i> Clause 3.8.4.1 to implement the <i>dispatch targets</i> determined by the <i>Market Operator</i> .	11.1.3 During each <i>dispatch interval</i> <u>Except for generating units operating on automatic generation control (AGC),</u> the <i>Trading Participant</i> is directed under <i>WESM Rules</i> Clause 3.8.4.1 to implement the <i>dispatch targets</i> determined by the <i>Market Operator</i> <u>for each dispatch interval.</u> <u>11.1.4 For generating units operating on AGC, the dispatch instructions shall be</u>	Proposed to provide option for automated dispatching		TC: 1.1.4 For generating units operating on AGC, <u>under a written agreement with SO,</u> the dispatch instructions shall be issued by the System Operator. The Trading Participant shall then comply with the dispatch instructions issued by the System Operator through their facilities for AGC, based on the dispatch target determined by	TC: For SO concurrence.	Retain original provision 11.1.3 <i>*RCC 181st ends here</i>

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			<u>issued by the System Operator. The Trading Participant shall then comply with the dispatch instructions issued by the System Operator through their facilities for AGC, based on the dispatch target determined by the Market Operator for each dispatch interval.</u>		<p>APC:</p> <p>Please clarify how a generating unit on AGC should “comply” with a specified target if it’s real-time output is an automatic response to frequency deviations? Should it not be exempted from possible breach (of the tolerance) if the generating unit is operating on AGC?</p> <p>What happens when SO does not or forgot to trigger the AGC signal for the plant to respond? Who</p>	<p>the Market Operator for each dispatch interval.</p> <p>APC:</p> <p>Suggest to retain</p>	<p>APC:</p> <p>One of the main reasons why we are currently in the first stage of the relaxed dispatch operations of the 5-minute WESM is the ability to discover the viability of the dispatch conformanc e standards, including for generators running on AGC.</p>	

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					bears the negative exposure?		Eventually, revisions to the DP shall be made after this 3-month period.	
DISPATCH IMPLEMENTATION	11.1.4	11.1.4 xxx	<div>11.1.45 xxx</div> <div>11.1.6 The <i>System Operator</i> shall make use of the <u>first WMOT available for the hour as reference for its re-dispatch instruction at any dispatch interval for that hour (e.g. 1005H WMOT shall be used for all dispatch intervals from 1005H to 1100H).</u></div>	<div>Re-numbered item due to additional clause in 11.1.4.</div> <div>Added new clause to specify first WMOT shall be used as reference for the rest of the hour in SO re-dispatch in consideration of the SO's operational</div>	<div>APC:</div> <div>What happens to changes in the nomination of generators as well as an outage of a generator in between the 5th to the 60th minute? This runs inconsistent to item 10.1.2 wherein MOT should exclude the generators on outage.</div>		This is being proposed for practical purposes. The MOT only serves as a guide for the cheapest available generation to be re-dispatched in real-time if necessary. Regardless, generator's re-dispatched	<u>The System Operator shall make use of the first WMOT available for the hour as reference for its re-dispatch instruction at any dispatch interval for that hour (e.g. 1005H WMOT shall be used for all dispatch intervals from 1005H to 1100H).</u>

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				issues in relying on multiple 5- minute WMOTs in a one-hour interval.			based on MOTs shall be compensate d	<u>Retain proposed</u>
RESPON SIBILITIE S	11.3	11.3.1 The <i>System Operator</i> , in coordination with the <i>Market Operator</i> , shall be responsible for the following: a. XXX b. Implementing the <i>WMOT</i> provided by the <i>Market Operator</i> ; c. Assuring the <i>security</i> and reliability of the grid at all times in compliance with the provisions of the System Security and Reliability Guidelines and <i>Grid Code</i> ; d. Dispatching <i>generators</i> as <i>constrain-on</i> or <i>constrain-off</i> , or as	11.3.1 The <i>System Operator</i> , in coordination with the <i>Market Operator</i> , shall be responsible for the following: 1. XXX <u>b. Directly issuing dispatch instructions to generating units operating on AGC</u> b-c. Implementing the <i>WMOT</i> provided by the <i>Market Operator</i> ; e-d. Assuring the <i>security</i> and reliability of the grid at all times in compliance with the provisions of the System Security and Reliability Guidelines and <i>Grid Code</i> ;	Proposed to provide option for automated dispatching consistent with revisions in Section 11.1.3.	APC: What happens when SO does not or forgot to trigger the AGC signal for the plant to respond? Who bears the negative exposure?		Same response as before. These concerns are to be observed during the 3-month period of relaxed dispatch operations.	Approved

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		<i>must-run unit</i> if all available reserves are exhausted during a <i>dispatch interval</i> ; and e. Reporting events and actions made during <i>dispatch intervals</i> 11.3.2 XXX	d.e. Dispatching <i>generators</i> as <i>constrain-on</i> or <i>constrain-off</i> , or as <i>must-run unit</i> if all available reserves are exhausted during a <i>dispatch interval</i> ; and e.f. Reporting events and actions made during <i>dispatch intervals</i> 11.3.2 XXX					
RESPON SIBILITIE S		11.3.3 All <i>Trading Participants</i> shall comply with their respective <i>dispatch schedules</i> issued by the <i>Market Operator</i> and the re-dispatch instructions issued to them by the <i>System Operator</i> , if any. For this purpose, they shall ensure that their respective internal processes, systems and infrastructure, as well as their protocols with their counterparties,	11.3.3 All <i>Trading Participants</i> shall comply with their respective <i>dispatch schedules</i> issued by the <i>Market Operator</i> , <u><i>dispatch instructions issued by the System Operator through their facilities for AGC,</i></u> and the re-dispatch instructions issued to them by the <i>System Operator</i> , if any. For this purpose, they shall ensure that their respective internal		TC: AGC operations on energy shall be subject to MOU/MOA APC: For clarity	APC: 11.3.3 All <i>Trading Participants</i> shall comply with their respective <i>dispatch schedules</i> issued by the <i>Market Operator</i> , <u>the <i>dispatch instructions issued by the System Operator through to their</i></u>	TC: For SO concurrence. APC: Agree	Adopt

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Title	Claus e	Provision	Proposed Amendment	Rationale	Comments	Proposed Wording based on Comments	Proponent's Response	RCC Agreement
		shall enable strict compliance with this Section	processes, systems and infrastructure, as well as their protocols with their counterparties, shall enable strict compliance with this Section.			facilities operating on for AGC mode, and the re-dispatch instructions issued to them by the <i>System Operator</i> , if any. For this purpose, they shall ensure that their respective internal processes, systems and infrastructure, as well as their protocols with their counterparties, shall enable strict compliance with this Section.		
ISSUANC E AND COVERA GE OF DISPATC H INSTRUC TIONS	11.4	11.4.1 <i>Dispatch instructions</i> shall include the following: 1. XXX 2. XXX 11.4.2 XXX	11.4.1 <u>Except for generating units operating on AGC, Ddispatch instructions</u> shall include the following: 1. XXX 2. XXX 11.4.2 <u>3</u> XXX	Proposed to provide option for automated dispatching consistent with revisions in Section 11.1.3.				
			<u>11.4.2 For generating units operating on AGC, the following shall be observed:</u>		APC: For clarity	APC: <u>11.4.2 For generating units operating on AGC, the following shall be observed:</u>	Agree	Sir Amby: Requested to invite SO

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Title	Claus e	Provision	Proposed Amendment	Rationale	Comments	Proposed Wording based on Comments	Proponent's Response	RCC Agreement
			<p><u>a. The <i>System Operator</i> shall send AGC commands based on a linear ramp rate specified with the <i>Generation Company</i>.</u></p> <p><u>b. The <i>Generation Company</i> shall communicate to the <i>System Operator</i> the status of the AGC operations from start, during, and end of AGC remote control mode, as necessary.</u></p> <p><u>c. The <i>Generation Company</i> shall seek clearance from the <i>System Operator</i> to change from remote to local AGC mode in cases of technical constraints.</u></p> <p><u>d. When the <i>Generation Company</i> observes AGC-related issues</u></p>			<p><u>a. The <i>System Operator</i> shall send AGC commands based on a linear ramp rate specified with <i>by</i> the <i>Generation Company</i>.</u></p> <p>xxx</p>		RCC: Retain original proposal for item a, and delete item e

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			<p><u>that affect its operations, the Generation Company shall immediately communicate such issues to the System Operator prior to changing its mode of dispatch.</u></p> <p><u>e. For an aggregated generating unit, the Generation Company shall pro-rate the AGC command to the individual generating units based on each unit's MW capability at that time.</u></p>					
		11.4.3 System Operator Clearance. When the <i>grid frequency</i> is not within the normal threshold, the <i>Trading Participants</i> shall seek clearance from the <i>System Operator</i> before ramping up or down to	11.4.34 System Operator Clearance. Generator Dispatch Compliance Beyond Normal Grid Frequency Threshold.	Proposed to ensure reliability of the grid by providing standard initial reaction from	APC: For clarity Abnormal grid frequency snapshots should also be explicit in	APC: 11.4.34 System Operator Clearance. Generator Dispatch Compliance Outside the Beyond Normal Grid Frequency Threshold.	APC: Suggest to retain all.	RCC: Adopt IEMOP

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Title	Claus e	Provision	Proposed Amendment	Rationale	Comments	Proposed Wording based on Comments	Proponent's Response	RCC Agreement												
		their respective <i>target loading levels</i> . The <i>System Operator</i> shall provide clearance and issue <i>dispatch instructions</i> as it deems appropriate.	<p><u>a.</u> When the <i>grid frequency</i> is not within the normal threshold <u>reaches 59.7Hz or lower</u>, the <i>Trading Participants</i> shall <u>operate based on the following conditions:</u> seek clearance from the <i>System Operator</i> before ramping up or down to their respective <i>target loading levels</i>. The <i>System Operator</i> shall provide clearance and issue <i>dispatch instructions</i> as it deems appropriate.</p> <table><tr><th><u>Condit ion</u></th><th><u>Status of Actual Dispatch</u></th><th><u>Expected Response</u></th></tr><tr><td><u>Frequ ency is 59.7 Hz or lower</u></td><td><u>If ramping down, or current actual loading is higher than <i>dispatch schedule</i></u></td><td><u><i>Generating unit</i> should stop ramping down and maintain current actual loading unless otherwise instructed by the <i>System Operator</i></u></td></tr></table>	<u>Condit ion</u>	<u>Status of Actual Dispatch</u>	<u>Expected Response</u>	<u>Frequ ency is 59.7 Hz or lower</u>	<u>If ramping down, or current actual loading is higher than <i>dispatch schedule</i></u>	<u><i>Generating unit</i> should stop ramping down and maintain current actual loading unless otherwise instructed by the <i>System Operator</i></u>	generation companies	the SO's Dispatch Instruction Report for common reference and to corroborate the Trading Participants' response to such occurrences.	<p><u>a.</u> When the <i>grid frequency</i> is not within the normal threshold <u>dips to 59.7Hz or lower</u>, the <i>Trading Participants</i> shall <u>operate based on the following conditions:</u> seek clearance from the <i>System Operator</i> before ramping up or down to their respective <i>target loading levels</i>. The <i>System Operator</i> shall provide clearance and issue <i>dispatch instructions</i> as it deems appropriate.</p> <table><tr><th><u>Condit ion</u></th><th><u>Status of Actual Dispatch</u></th><th><u>Expected Response</u></th></tr><tr><td></td><td></td><td></td></tr></table>	<u>Condit ion</u>	<u>Status of Actual Dispatch</u>	<u>Expected Response</u>					
<u>Condit ion</u>	<u>Status of Actual Dispatch</u>	<u>Expected Response</u>																		
<u>Frequ ency is 59.7 Hz or lower</u>	<u>If ramping down, or current actual loading is higher than <i>dispatch schedule</i></u>	<u><i>Generating unit</i> should stop ramping down and maintain current actual loading unless otherwise instructed by the <i>System Operator</i></u>																		
<u>Condit ion</u>	<u>Status of Actual Dispatch</u>	<u>Expected Response</u>																		

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Title	Claus e	Provision	Proposed Amendment		Rationale	Comments	Proposed Wording based on Comments			Proponent's Response	RCC Agreement
				<u>If ramping up, or current actual loading is lower than dispatch schedule</u>	<u>Generating unit should continue to ramp up to its dispatch schedule unless otherwise instructed by the System Operator</u>		<u>Frequ ency is 59.7 Hz or lower</u>	<u>If ramping down, or current actual loading is higher than dispatch schedule</u>	<u>Generating unit should stop ramping down and maintain current actual loading unless otherwise instructed by the System Operator</u>		
				<u>b. Once the grid frequency goes up to 60 Hz after coming off from a state in Section 11.4.4 (a), then the Trading Participants shall resume to dispatch its generating units to meet its dispatch schedule.</u>				<u>If ramping up, or current actual loading is lower than dispatch schedule</u>	<u>Generating unit should continue to ramp up to its dispatch schedule unless otherwise instructed by the System Operator</u>		
				<u>c. When the grid frequency reaches 60.3 Hz or higher, the Trading Participants shall operate based on the following conditions:</u>			<u>b. Once the grid frequency reaches the threshold of normalcy coming from a state in Section 11.4.4 (a), the Trading Participants shall resume compliance to its dispatch schedule, or as</u>				

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Title	Claus e	Provision	Proposed Amendment			Rationale	Comments	Proposed Wording based on Comments	Proponent's Response	RCC Agreement									
			<u>Condi on</u>	<u>Status of Actual Dispatch</u>	<u>Expected Response</u>			<u>otherwise instructed by the System Operator.</u> <u>c. When the <i>grid frequency</i> rises to 60.3 Hz or higher, the <i>Trading Participants</i> shall operate based on the following conditions:</u> <table><tr><td><u>Cond ition</u></td><td><u>Status of Actual Dispatch</u></td><td><u>Expected Response</u></td></tr><tr><td><u>Freq uenc y is 60.3 Hz or high er</u></td><td><u>If ramping down, or current actual loading is higher than <i>dispatch schedule</i></u></td><td><u>Generating unit should continue to ramp down to its <i>dispatch schedule</i> unless otherwise instructed by the <i>System Operator</i></u></td></tr><tr><td></td><td><u>If ramping up, or current actual loading is lower than <i>dispatch schedule</i></u></td><td><u>Generator should stop ramping up and maintain current actual loading unless otherwise instructed by the <i>System Operator</i></u></td></tr></table>	<u>Cond ition</u>	<u>Status of Actual Dispatch</u>	<u>Expected Response</u>	<u>Freq uenc y is 60.3 Hz or high er</u>	<u>If ramping down, or current actual loading is higher than <i>dispatch schedule</i></u>	<u>Generating unit should continue to ramp down to its <i>dispatch schedule</i> unless otherwise instructed by the <i>System Operator</i></u>		<u>If ramping up, or current actual loading is lower than <i>dispatch schedule</i></u>	<u>Generator should stop ramping up and maintain current actual loading unless otherwise instructed by the <i>System Operator</i></u>		
<u>Cond ition</u>	<u>Status of Actual Dispatch</u>	<u>Expected Response</u>																	
<u>Freq uenc y is 60.3 Hz or high er</u>	<u>If ramping down, or current actual loading is higher than <i>dispatch schedule</i></u>	<u>Generating unit should continue to ramp down to its <i>dispatch schedule</i> unless otherwise instructed by the <i>System Operator</i></u>																	
	<u>If ramping up, or current actual loading is lower than <i>dispatch schedule</i></u>	<u>Generator should stop ramping up and maintain current actual loading unless otherwise instructed by the <i>System Operator</i></u>																	

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			<u>d. Once the <i>grid frequency</i> comes down to 60 Hz after coming off from a state in Section 11.4.4 (c), then the <i>Trading Participants</i> shall resume to dispatch its generating units to meet its <i>dispatch schedule</i>.</u>				<u>lower than <i>dispatch schedule</i></u>	<u>maintain current actual loading unless otherwise instructed by the <i>System Operator</i></u>		
						<u>d. Once the <i>grid frequency</i> reaches the threshold of normalcy coming from a state in Section 11.4.4 (c), then the <i>Trading Participants</i> shall resume compliance to its dispatch schedule, or as otherwise instructed by the <i>System Operator</i>.</u>				
DISPATC H OF MUST AND PRIORITY DISPATC H GENERA TING UNITS	11.5	11.5.2 If, in real-time, the available <i>generation</i> from a <i>Must dispatch generating unit</i> differs from the available <i>generation</i> assumed in the <i>dispatch schedule</i> provided to the <i>System Operator</i> , the <i>System Operator</i> shall allow the <i>Must dispatch generating unit</i> to generate at its	11.5.2 If, in real-time, the available <i>generation</i> from a <i>Must dispatch generating unit</i> differs from the available <i>generation</i> assumed in the <i>dispatch schedule</i> provided to the <i>System Operator</i> , the <i>System Operator</i> shall allow the <i>Must dispatch generating unit</i> to generate at its <i>maximum</i>	To harmonize with DOE DC2019-12-0018 (regulating, contingency, dispatchable)						Adopt

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		<i>maximum available output, and, if all available secondary reserves are exhausted during a dispatch interval, shall adjust the dispatch of other generating units to compensate as required in accordance with re-dispatch process in this Section.</i>	<i>available output, and, if all available secondary regulating reserves are exhausted during a dispatch interval, shall adjust the dispatch of other generating units to compensate as required in accordance with re-dispatch process in this Section.</i>					
COMMUNICATING AND REPORTING OF DISPATCH SCHEDULES AND INSTRUCTIONS	11.8	11.8.1 The <i>real-time dispatch</i> targets shall be communicated by the <i>Market Operator</i> to the <i>Trading Participants</i> through the <i>MPI</i> . The <i>WMOT</i> generated for a <i>dispatch interval</i> shall be published in accordance with Section 10.7.2 of this Dispatch Protocol. Redispatch instructions shall be communicated by the <i>System Operator</i> to the <i>Trading Participants</i> through their respective power plant operators.	11.8.1 The <i>real-time dispatch</i> targets shall be communicated by the <i>Market Operator</i> to the <i>Trading Participants</i> through the <i>MPI</i> . The <i>WMOT</i> generated for a <i>dispatch interval</i> shall be published in accordance with Section 10.7.2 of this Dispatch Protocol. <u>Dispatch instructions through the AGC facilities shall be communicated by the System Operator through the available communication link with the power plant operator.</u> Redispatch instructions shall be communicated by the <i>System Operator</i> to the <i>Trading Participants</i> through their	Proposed to provide option for automated dispatching. Also revised dispatch deviation reports to dispatch instruction reports.				Adopt

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			respective power plant operators.					
		11.8.2 The <i>System Operator</i> shall maintain the communication facilities it needs for communicating with <i>Trading Participants</i> which may include telephones, fax, email, web pages and other means of communications. 11.8.3 XXX	11.8.2 The <i>System Operator</i> shall maintain the communication facilities it needs for communicating with <i>Trading Participants</i> which may include telephones, fax, email, web pages, <u>facilities for AGC,</u> and other means of communications. 11.8.3 XXX					Adopt
		11.8.4 All <i>dispatch instructions</i> issued by the <i>System Operator</i> to <i>Trading Participants</i> shall be recorded through operator logs. The <i>System Operator</i> shall include this information in the dispatch deviation report, in accordance with Section 14.4.	11.8.4 All <i>dispatch instructions</i> issued by the <i>System Operator</i> , <u>including those provided through the facilities for AGC,</u> to <i>Trading Participants</i> shall be recorded through operator logs. The <i>System Operator</i> shall include this information in the dispatch deviation <u>instruction</u> report, in accordance with Section 14.4.					Adopt
		11.8.5 Dispatch deviation reports submitted by the System Operator to the Market	11.8.5 Dispatch deviation <u>instruction</u> reports submitted by the System Operator to the					Adopt

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		Operator shall be used for purposes of surveillance, audit, and market settlements.	Market Operator shall be used for purposes of surveillance, audit, and market settlements.					
START-UP AND SHUTDOWN OF GENERATING UNITS	13.2.2	Consistent with its obligations pertaining to real-time dispatch scheduling and implementation, the <i>System Operator</i> shall ensure: a. Continuous and timely submission and updating of the outage schedules, <i>overriding constraint</i> limits of generating units to the <i>Market Operator</i> ; b. XXX c. XXX	Consistent with its obligations pertaining to real-time dispatch scheduling and implementation, the <i>System Operator</i> shall ensure: a. Continuous and timely submission and updating of the outage schedules, <i>overriding constraint</i> limits of generating units to the <i>Market Operator</i> ; b. XXX c. XXX	For consistency with self-commitment and dispatch principles under the EWDO				Adopt
General Procedures	13.3	13.3.4 The <i>dispatch scheduling</i> of the <i>generating unit</i> that will <i>start-up</i> or <i>shutdown</i> shall be managed through its <i>market offers</i> submitted within the <i>WESM timetable</i> . The <i>Trading Participant</i> shall submit <i>offers</i> for the <i>dispatch interval</i> during which the unit is to <i>startup</i> or <i>shutdown</i> and make	13.3.4 The <i>dispatch scheduling</i> of the <i>generating unit</i> that will <i>start-up</i> or <i>shutdown</i> shall be managed through its <i>market offers</i> submitted within the <i>WESM timetable</i> . The <i>Trading Participant</i> shall submit <u><i>market offers or nominations</i></u> for the <i>dispatch interval</i> during which the unit is to <i>startup</i> or <i>shutdown</i> and make	For consistency with self-commitment and dispatch principles under the EWDO and provide options especially				Adopt

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		adjustments to its <i>offers</i> , as appropriate.	adjustments to its <u>market offers or nominations</u> , as appropriate.	applicable to generating units with fast-start capability				
		(NEW)	<u>13.3.5 Consistent with the provisions in the WESM Manual on the Market Network Model Development and Maintenance - Criteria and Procedure, the status of generating units shall be based on their registered availability in the market network model.</u>					Adopt
Start-up of a Generatin g Unit	13.4	13.4.1 Off-line units will not be included in the <i>dispatch scheduling</i> process. Thus, the <i>generating unit</i> must then be synchronized to the <i>grid</i> prior to the execution of the <i>real-time dispatch</i> run consistent with the <i>WESM timetable</i> .	13.4.1 Off-line units will not be included in the <i>dispatch scheduling</i> process. Thus, the A <i>generating unit</i> must then be synchronized to the <i>grid</i> <u>have market offers or nominations</u> prior to the execution of the <i>real-time dispatch</i> run consistent with the <i>WESM timetable</i> .	For consistency with self-commitment and dispatch principles under the EWDO				Adopt
		13.4.2 The <i>System Operator</i> shall update the <i>outage schedule of generators</i> to	13.4.2 The System Operator shall update the outage schedule of generators to					Adopt

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Title	Claus e	Provision	Proposed Amendment	Rationale	Comments	Proposed Wording based on Comments	Proponent's Response	RCC Agreement
		remove the <i>generating unit</i> cleared to <i>start-up</i> from the <i>outage list</i> . Submission shall be in accordance with the <i>WESM timetable</i> . If the <i>start-up</i> will be deferred, the <i>System Operator</i> shall update the <i>outage schedule</i> accordingly and in accordance with the <i>WESM timetable</i> for submission of <i>outage schedules</i> .	remove the generating unit cleared to start-up from the outage list. Submission shall be in accordance with the WESM timetable. If the start-up will be deferred, the System Operator shall update the outage schedule accordingly and in accordance with the WESM timetable for submission of outage schedules.					
		(NEW)	<u>13.4.3 If the start-up will be deferred, the System Operator shall update the outage schedule accordingly and in accordance with the WESM timetable for submission of outage schedules.</u>					Adopt
		13.4.3 XXX 13.4.4 XXX	13.4. 34 XXX 13.4. 45 XXX	Re- numbered				Adopt
Shutdown of a Generatin g Unit	13.5	13.5.3 The <i>Trading Participant</i> shall update its <i>offers</i> for the <i>dispatch intervals</i> covered in the <i>shutdown</i> sequence.	13.5.3 The <i>Trading Participant</i> shall update its <u>market offers or nominations</u> for the <i>dispatch intervals</i> covered in the <i>shutdown</i> sequence.	To clarify that Trading participants also required to update				Adopt

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				their nominations.				
		13.5.4 Once the <i>generating unit</i> has completely <i>shut down</i> , the relevant <i>Trading Participant</i> shall cancel its daily <i>offer</i> profile for the affected <i>trading day</i> .	13.5.4 Once the <i>generating unit</i> has completely <i>shut down</i> , the relevant <i>Trading Participant</i> shall cancel its daily <i>market offer</i> <u>or nomination</u> profile for the affected <i>trading day</i> .					
Post-dispatch Data and Operation Reports	14.1	Background After each dispatch interval, the System Operator is required under WESM Rules Clause 3.8.2 to advise the Market Operator of the occurrence of, among other information, dispatch deviations, load shedding, network constraints, binding security constraints and operational irregularities.	Background After each dispatch interval, the System Operator is required under WESM Rules Clause 3.8.2 to advise the Market Operator of the occurrence of, among other information, dispatch deviations <u>instructions</u> , load shedding, network constraints, binding security constraints and operational irregularities.	Reflect proposed change to Dispatch Instruction Report to cover all instructions issued by SO instead of deviations only				Adopt
Post-dispatch Reports and Information	14.4.2	Dispatch Deviation Report. For each trading day, the System Operator shall submit a report to the Market Operator, on a weekly basis, containing deviation to actual dispatch	Dispatch Deviation Instruction Report. <u>On a weekly basis</u> . For each trading day, the System Operator shall submit a report to the Market Operator, on a weekly basis, containing <u>their</u>	Change to Dispatch Instruction Report to only cover instructions				Adopt

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		from the RTD schedule. The Dispatch Deviation Report shall contain, among others, the following information: a. Covered period (start time and end time) b. Resource name c. Reason for Deviation: <ul style="list-style-type: none">• Utilized for ancillary services• Testing Requirement• Re-dispatch of constrain-on and constrain-off generating units• Designation of must-run units d. Short description of the issue being addressed (e.g. frequency breached x Hz)	<u>dispatch instructions that includes, but are not limited to, generator re-dispatch (e.g. constrain-on generation, constrain-off generation, must-run generation), MW output schedule during market intervention or market suspension, and, as necessary, commands via the automatic generation control,</u> deviation to actual dispatch from the RTD schedule. The Dispatch Deviation Instruction Report shall contain, among others, the following information: a. Covered period (start time and end time) Date and Time of Incident b. Resource name c. Reason for Deviation Dispatch Instruction: <ul style="list-style-type: none">• Utilized for ancillary services• Testing Requirement• Re-dispatch of constrain-on and constrain-off generating units	issued by SO. Added proposed changes to format also.				

Proposed General Amendments to the WESM Rules and WESM Manuals regarding Market Operator and System Operator Procedures (ORCP-WR-WM-21-07)

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Title	Claus e	Provision	Proposed Amendment	Rationale	Comments	Proposed Wording based on Comments	Proponent's Response	RCC Agreement
			<ul style="list-style-type: none">• Designation of must-run units• <u>Limitation on <i>must dispatch generating units</i></u>• <u>Market Intervention or Market Suspension</u> d. Short description of the issue being addressed (e.g. frequency breached x Hz) <u>e. Type of Dispatch Instruction</u> <u>f. Target MW value instructed</u>					
Post-dispatch Reports and Information	14.4.5	Report on Must-run Units. In accordance with WESM Rules Clause 3.5.13.1, the System Operator shall submit a report to the Market Operator identifying all the generating units designated as must-run units within the trading day, as well as information necessary for the proper settlement of such generating units.	Report on Must-run Units. In accordance with WESM Rules Clause 3.5.13.1, the System Operator shall submit a report <u>information</u> to the Market Operator identifying all the generating units designated as must-run units within the trading day, as well as information necessary for the proper settlement of such generating units. <u>Such information shall be included in the Dispatch Instruction Report.</u>	To indicate that information on designation of MRUs shall be included in the Dispatch Instruction Report				Adopt
Post-dispatch	14.4.7	(NEW)	<u>14.4.7 Each generation company shall validate all the</u>	To include provision that				Adopt

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Title	Claus e	Provision	Proposed Amendment	Rationale	Comments	Proposed Wording based on Comments	Proponent's Response	RCC Agreement
Reports and Informatio n			<u>data in the Dispatch Instruction Report as published by the <i>Market Operator</i> in the <i>market information website</i>. Any discrepancy in these reports shall be reported by the <i>generation company</i> to the <i>Market Operator</i> within two (2) weeks after the <i>Market Operator's</i> publication of these reports. Failure by the <i>generation company</i> to report to the <i>Market Operator</i> any discrepancy within the period defined herein shall render the data in the report as final.</u>	discrepancie s should be reported within two weeks.				
Post- dispatch Reports and Informatio n	14.4.8	(NEW)	<u>14.4.8 Within two (2) <i>working days</i> from receipt of a report, the <i>Market Operator</i> shall request the <i>System Operator</i> to validate a reported discrepancy by a <i>generator</i>.</u>	Provide the Market Operator time to consolidate and transmit discrepancy report to the SO				Adopt
Post- dispatch Reports	14.4.9	(NEW)	<u>14.4.9 The <i>System Operator</i> shall perform reconciliation with the <i>generation company</i></u>	To include ERC directive* on	TC:		TC: IEMOP is obligated to submit all	Adopt

Proposed General Amendments to the WESM Rules and WESM Manuals regarding Market Operator and System Operator Procedures (ORCP-WR-WM-21-07)

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and Informatio n			<u>and provide the results of its validation of the reported discrepancies within two 7 working daysfrom the receipt of the request from the Market Operator. If the Market Operator has not received any validation within the prescribed timeline, the published data from the Dispatch Instruction Report shall be maintained. If the generation company claims additional compensation related to the reported discrepancies that were not validated within the prescribed timeline, the generation company may subject the said claim under the WESM dispute resolution process.</u>	<p>SO reconciliation timeline and impact of non-submission by SO of validation within the prescribed timeline.</p> <p>* Section 4.4.1.1.3 of ERC Decision dated 29 August 2020 on ERC Case No. 2017-042RC</p>	<p>IEMOP shall only submit to SO for validation those qualified as valid discrepancies based on IEMOP's assessment</p> <p>SPC/SIPC</p> <p>Market Operator should be aware on the reconciliation efforts by the System Operator with the generation company by facilitating/attending meetings/virtual meetings during the reconciliation effort or other activities as</p>	<p>SPC/SIPC</p> <p><u>14.4.9 The System Operator shall perform reconciliation with the generation company and provide the results of its validation of the reported discrepancies within two (2) weeks from the receipt of the request from the Market Operator. The Market Operator is enjoined to be aware on the reconciliation efforts by the System Operator with the generation company by facilitating/attending meetings/virtual meetings during the reconciliation effort or other activities as</u></p>	<p>discrepanci es raised by TPs to SO for validation, regardless if the said discrepancy conflicts with SO's report. Suggest to instead write a process for discrepancy validation in the DP so that MO-SO process being mentioned is documente d.</p> <p>SPC/SIPC: Suggest to retain,</p>	<p>MO: to provide additional provision (IDC)</p>

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Title	Claus e	Provision	Proposed Amendment	Rationale	Comments	Proposed Wording based on Comments	Proponent's Response	RCC Agreement
					suitable. Whenever there are changes on the published Dispatch Instruction Report as resulted by the reconciliation efforts by the System Operator with the generation company, the Market Operator should give market advisory to all Trading participants thru market information channels (i.e. info@iemop.ph, etc.) that Revised Dispatch Instruction Report for particular	<u>suitable. Whenever there are changes on the published Dispatch Instruction Report as resulted by the reconciliation efforts by the System Operator with the generation company, the Market Operator should give market advisory to all Trading participants thru market information channels (i.e. info@iemop.ph, etc.) that Revised Dispatch Instruction Report for particular</u>	except on the timeline of two weeks. Suggest to revise this to within seven (7) working days as prescribed in DOE DC2021-03- 0006.	

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					date/week is already posted in the Market Operator's public website.	generation company, the <u>generation company may subject the said claim under the WESM dispute resolution process.</u>		
Determina tion of Reserve Requirem ents	15.4.2	The level of <i>reserve</i> requirement for secondary <i>reserve</i> service shall be based on the latest issuances on the procurement of <i>ancillary services</i> 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> .	The level of <i>reserve</i> requirement for secondary <u>regulating</u> <i>reserve</i> service shall be based on the latest issuances on the procurement of <i>ancillary services</i> 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> .	To harmonize with DOE DC2019-12-0018 (regulating, contingency, dispatchable)	TC: Shall be consistent with the definitions in the PGC.		Same comment as above	Adopt
Determina tion of Reserve Requirem ents	15.4.3	For <i>primary reserve</i> service and <i>tertiary 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> .	For primary <u>contingency</u> <i>reserve</i> service and tertiary <u>dispatchable</u> <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 <i>ERC</i> .	To harmonize with DOE DC2019-12-0018 (regulating, contingency, dispatchable)	TC: Shall be consistent with the definitions in the PGC.		Same comment as above	Adopt
Managem ent of Must-Run Units	17.5.1	17.5 Reporting and Publication Each generator shall validate all the data related to MRU contained in the Dispatch	17.5 Reporting and Publication Each generator shall validate all the data related to MRU contained in the Dispatch	Suggest to delete given the proposed integration of MRU	PEMC: The deletion of this section conflicts with		PEMC: This is being removed since this is already part	Adopt IEMOP

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Title	Claus e	Provision	Proposed Amendment	Rationale	Comments	Proposed Wording based on Comments	Proponent's Response	RCC Agreement
		Deviation Report as published by the Market Operator in the Market information website. Any discrepancy in these reports shall be reported by the Generator to the Market Operator within two weeks after the Market Operator's publication of these reports. Failure by the Generator to report to the Market Operator any discrepancy within the period defined herein shall render the MRU data relative to the Generator final.	Deviation Report as published by the Market Operator in the Market information website. Any discrepancy in these reports shall be reported by the Generator to the Market Operator within two weeks after the Market Operator's publication of these reports. Failure by the Generator to report to the Market Operator any discrepancy within the period defined herein shall render the MRU data relative to the Generator final.	reporting to the Dispatch Instruction Report.	DOE Circular No. DC2021-03-0006 published on 13 May 2021 which inserts Sections 17.5.2 and 17.5.3, as follows: <i>17.5.2 Within two (2) working days from receipt of a reported discrepancy related to must-run unit, the Market Operator shall request the System Operator, copy furnished the concerned generator, to validate a reported discrepancy by a generator.</i> <i>17.5.3 The System Operator shall provide the results of its</i>		of the Dispatch Instruction Report. Hence, that section should instead be made consistent with DOE DC2021-03-0006.	

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					<p><i>validation of the reported discrepancies within seven (7) working days from receipt of the request from the Market Operator. If the Market Operator has not received any validation within the prescribed timeline, the Market Operator shall consider the submitted discrepancies by the Generator as valid.</i></p> <p>Suggest to reconcile, as applicable:</p> <p>1. DOE's Section 17.5.2 with the proposed Section</p>			

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					14.4.8, and 2. DOE's Section 17.5.3 with the proposed Section 14.4.9. Also request IEMOP to confirm whether the proposed Dispatch Report and corresponding processing already covers Sections 17.5.2 and 17.5.3.			
Managing Excess Generation for the Next Day	18.3	18.3.1 There is an impending <i>excess generation</i> when the resulting price in the <i>day-ahead projection</i> run is equivalent to the offer floor price and the aggregate unscheduled Technical Pmin of generating units with	18.3.1 There is an impending <i>excess generation</i> when the resulting price in the <i>day-ahead projection</i> run is equivalent to the offer floor price and the aggregate unscheduled Technical Pmin of generating units with floor price offers is	To harmonize with DOE DC2019-12- 0018 (regulating, contingency, dispatchable)	TC: Shall be consistent with the definitions in the PGC.		Same comment as above	Adopt

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		floor price offers is greater than or equal to the <i>secondary reserve</i> requirement.	greater than or equal to the <i>secondary</i> <i>regulating</i> reserve requirement.																	
Emergency Procedures	20.4	Emergency Procedures during Overload	<i>[See Appendix A for changes to Emergency Procedures during Overload flowchart]</i>	Proposed for refinements in the process flow from SO				Adopt												
Content Structure of <i>Real-time dispatch</i> Results for the <i>System Operator</i>	Appen dix D	XXX 1. <i>Real-time dispatch schedules</i> <table><tr><th>Column Name</th><th>Description</th></tr><tr><td>END_TIME</td><td>XXX</td></tr><tr><td>REFERENCE_NAME</td><td>Concatenates the Resource Name and the market product. The following lists the market products available. 1. “EN” for energy</td></tr></table>	Column Name	Description	END_TIME	XXX	REFERENCE_NAME	Concatenates the Resource Name and the market product. The following lists the market products available. 1. “EN” for energy	XXX a. <i>Real-time dispatch schedules</i> <table><tr><th>Column Name</th><th>Description</th></tr><tr><td>END_TIME</td><td>XXX</td></tr><tr><td>REFERENCE_NAME</td><td>Concatenates the Resource Name and the market product. The following lists the market products available. 1. “EN” for energy</td></tr></table>	Column Name	Description	END_TIME	XXX	REFERENCE_NAME	Concatenates the Resource Name and the market product. The following lists the market products available. 1. “EN” for energy	To harmonize with DOE DC2019-12-0018 (regulating, contingency, dispatchable)				Adopt
Column Name	Description																			
END_TIME	XXX																			
REFERENCE_NAME	Concatenates the Resource Name and the market product. The following lists the market products available. 1. “EN” for energy																			
Column Name	Description																			
END_TIME	XXX																			
REFERENCE_NAME	Concatenates the Resource Name and the market product. The following lists the market products available. 1. “EN” for energy																			

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		2. "RU" for Regulation raise/upward 3. "RD" for Regulation lower/downward 4. "FR" for Fast Contingency Raise 5. "FL" for Fast Contingency Lower 6. "SR" for Slow Contingency Raise 7. "SL" for Slow Contingency Lower 8. "DR" for Delayed Contingency Raise 9. "DL" for Delayed Contingency Lower XXX	2. "RU" for Regulation raise/upward 3. "RD" for Regulation lower/downward 4. "FR" for Fast Contingency Raise <u>(Contingency Reserve)</u> 5. "FL" for Fast Contingency Lower 6. "SR" for Slow Contingency Raise 7. "SL" for Slow Contingency Lower 8. "DR" for Delayed Contingency Raise <u>(Dispatchable Reserve)</u> 9. "DL" for Delayed Contingency Lower					

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		MW XXX	MW XXX					
		10. Market Requirements	b. Market Requirements					
		Column Name	Column Name					
		Description	Description					
		START_ TIME	START_ TIME					
		Start Time of the Dispatch interval	Start Time of the Dispatch interval					
		END_ TIME	END_ TIME					
		End/Target Time of the Dispatch interval	End/Target Time of the Dispatch interval					
		RUN_ TYPE	RUN_ TYPE					
		Describes the type of market run, which is RTD	Describes the type of market run, which is RTD					
		MKT_ PRODUCT	MKT_ PRODUCT					
		Describes type of requirement	Describes type of requirement					
		11. "EN" for energy	10. "EN" for energy					
		12. "RU" for Regulation	11. "RU" for Regulation raise/upward					
			12. "RD" for Regulation					

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		raise/upward 13. "RD" for Regulation lower/doward 14. "FR" for Fast Contingen cy Raise 15. "FL" for Fast Contingen cy Lower 16. "SR" for Slow Contingen cy Raise 17. "SL" for Slow Contingen cy Lower 18. "DR" for Delayed Contingen cy Raise	lower/downward 13. "FR" for Fast Contingency Raise <u>(Contingency Reserve)</u> 14. "FL" for Fast Contingency Lower 15. "SR" for Slow Contingency Raise 16. "SL" for Slow Contingency Lower 17. "DR" for Delayed Contingency Raise <u>(Dispatchable Reserve)</u> 18. "DL" for Delayed					

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		19. "DL" for Delayed Contingen cy Lower REGION XXX _ID REQ_M XXX W XXX	Contingency Lower REGION _ID XXX REQ_M XXX W XXX					
Content Structure of SO Inputs to the <i>Market Projections</i> and <i>Real-time dispatch</i>	Appe ndix E	XXX f. Reserve Requirement Column Description Name SCHEDU Refers to the LE_TYP MMS' COP E Schedule Type for Reserve Requirement. The following are the available schedule types for reserves.	XXX f. Reserve Requirement Column Description Name SCHEDULE Refers to the _TYPE MMS' COP Schedule Type for Reserve Requirement. The following are the available schedule types for reserves.	To harmonize with DOE DC2019-12- 0018 (regulating, contingency, dispatchable)				Adopt

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Title	Claus e	Provision	Proposed Amendment	Rationale	Comments	Proposed Wording based on Comments	Proponent's Response	RCC Agreement
		1. RegulationLowerReserve 2. RegulationRaiseReserve 3. FastContingencyLowerReserve 4. FastContingencyRaiseReserve 5. SlowContingencyLowerReserve 6. SlowContingencyRaiseReserve 7. DelayedContingencyLowerReserve 8. DelayedContingencyRaiseReserve VERSION XXX OBJECT_ID XXX	9. RegulationLowerReserve 10. RegulationRaiseReserve 11. FastContingencyLowerReserve 12. FastContingencyRaiseReserve <u>(Contingency Reserve)</u> 13. SlowContingencyLowerReserve 14. SlowContingencyRaiseReserve 15. DelayedContingencyLowerReserve 16. DelayedContingencyRaiseReserve <u>(Dispatchable Reserve)</u> VERSION XXX OBJECT_ID XXX					

Proposed General Amendments to the WESM Rules and WESM Manuals regarding Market Operator and System Operator Procedures (ORCP-WR-WM-21-07)

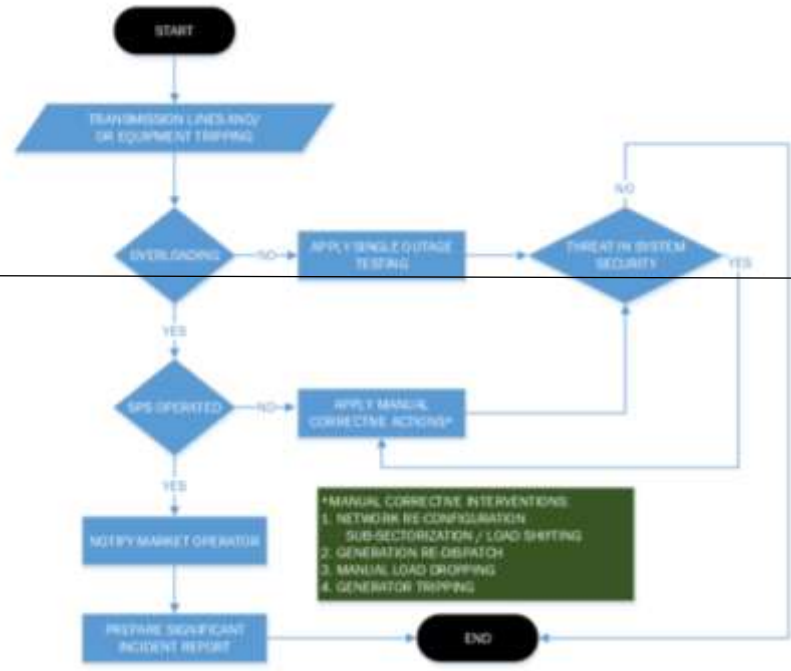
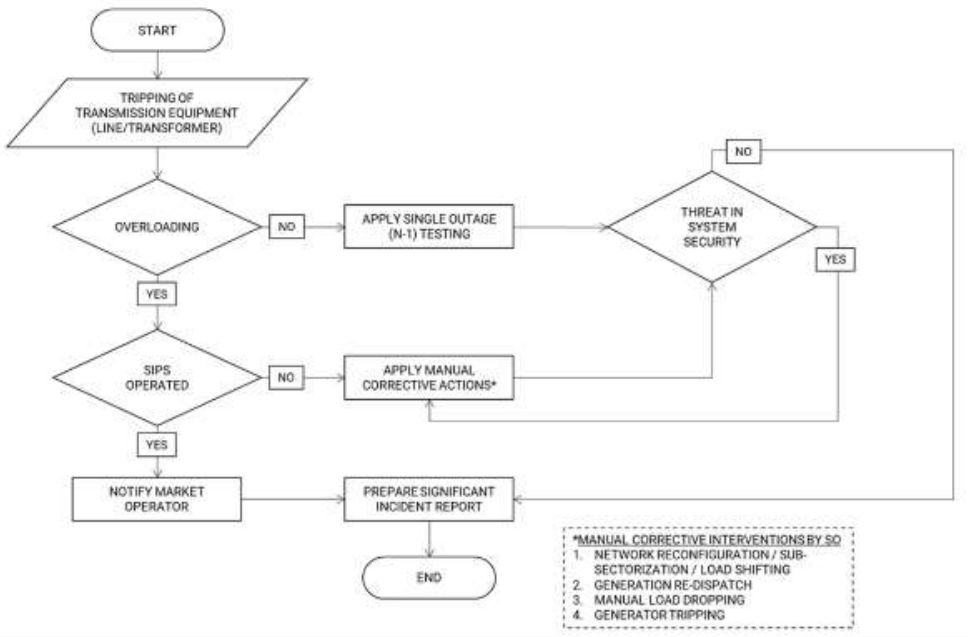
B. WESM Manual on Dispatch Protocol Issue 13.2

Title	Claus e	Provision	Proposed Amendment	Rationale	Comments	Proposed Wording based on Comments	Proponent's Response	RCC Agreement
		TARGET XXX _TIME MW XXX	TARGET_TI XXX ME MW XXX					
		(New)	<u>Appendix G. Details of Dispatch Instructions Using Automatic Generation Control</u> <i>[See AttachmentB]</i>	Proposed to provide option for automated dispatching				

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Attachment A

Provision	Proposed Amendment	Comments	Proponent's Response	RCC Agreement
<p>20.4.1 Emergency Procedures During Overload</p>  <pre>graph TD START([START]) --> TRIP[/TRIPPING OF TRANSMISSION LINES AND/OR EQUIPMENT TRIPPING/] TRIP --> OVERLOAD{OVERLOADING} OVERLOAD -- NO --> TEST[APPLY SINGLE OUTAGE TESTING] OVERLOAD -- YES --> SPS{SPS OPERATED} TEST --> THREAT{THREAT IN SYSTEM SECURITY} SPS -- NO --> MANUAL[APPLY MANUAL CORRECTIVE ACTIONS*] SPS -- YES --> NOTIFY[NOTIFY MARKET OPERATOR] THREAT -- YES --> MANUAL THREAT -- NO --> NOTIFY NOTIFY --> REPORT[PREPARE SIGNIFICANT INCIDENT REPORT] MANUAL --> END([END]) REPORT --> END</pre> <p>*MANUAL CORRECTIVE INTERVENTIONS: 1. NETWORK RE-CONFIGURATION / SUB-SECTORIZATION / LOAD SHIFTING 2. GENERATION RE-DISPATCH 3. MANUAL LOAD DROPPING 4. GENERATOR TRIPPING</p>	<p>20.4.1 Emergency Procedures During Overload</p>  <pre>graph TD START([START]) --> TRIP[/TRIPPING OF TRANSMISSION EQUIPMENT (LINE/TRANSFORMER)/] TRIP --> OVERLOAD{OVERLOADING} OVERLOAD -- NO --> TEST[APPLY SINGLE OUTAGE (N-1) TESTING] OVERLOAD -- YES --> SPS{SIPS OPERATED} TEST --> THREAT{THREAT IN SYSTEM SECURITY} SPS -- NO --> MANUAL[APPLY MANUAL CORRECTIVE ACTIONS*] SPS -- YES --> NOTIFY[NOTIFY MARKET OPERATOR] THREAT -- YES --> MANUAL THREAT -- NO --> NOTIFY NOTIFY --> REPORT[PREPARE SIGNIFICANT INCIDENT REPORT] MANUAL --> END([END]) REPORT --> END</pre> <p>*MANUAL CORRECTIVE INTERVENTIONS BY SO: 1. NETWORK RECONFIGURATION / SUB-SECTORIZATION / LOAD SHIFTING 2. GENERATION RE-DISPATCH 3. MANUAL LOAD DROPPING 4. GENERATOR TRIPPING</p>			

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Appendix G

Enhanced AGC System Command Modes

No.	RTD Schedules	Command Mode	Remarks	Lower Limit	Upper Limit	Comments	Proponent's Response	RCC Agreement
1	Energy Only	SCHED – O	Energy only	None		<p>TC:</p> <p><i>General Comment:</i></p> <p><i>Figure below has incorrect time scale: compare the indicated 1 minute with the 5 min span for the x-axis</i></p> <p><i>What do these figures try to convey?</i></p> <p><i>It would be better to show a control diagram showing the command signals and the target output signals for the AGC</i></p>	<p>TC: SO to provide correct diagram.</p>	<p>MO to provide revised diagram</p>

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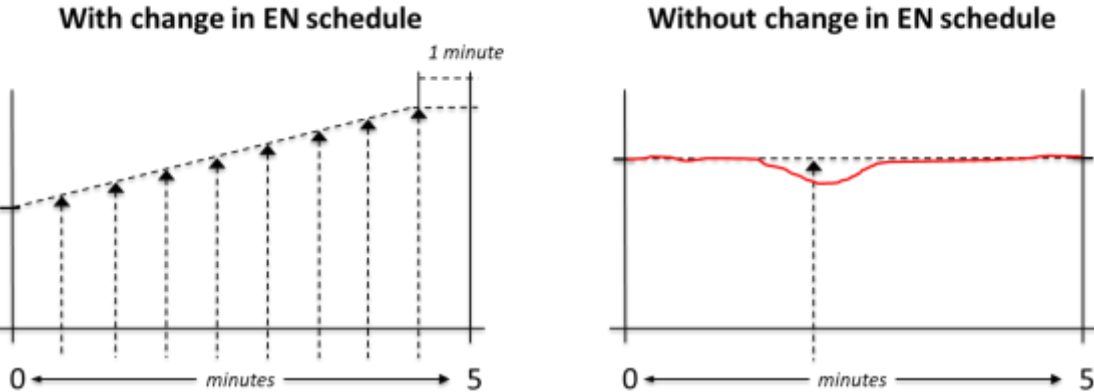
No.	RTD Schedules	Command Mode	Remarks	Lower Limit	Upper Limit	Comments	Proponent's Response	RCC Agreement
<u>2</u>	<u>Contingency Reserve (CR) Only</u>	<u>AUTO – E</u>	<u>Scheduled for Contingency Reserve only</u>	<u>Pmin</u>	<u>Pmin + CR</u>			
<u>3</u>	<u>Energy + Contingency Reserve</u>	<u>SCHED – E</u>	<u>Has energy and contingency reserve schedule</u>	<u>EN</u>	<u>EN + CR</u>			
<u>4</u>	<u>Regulating Reserve (RR)</u>	<u>AUTO – R</u>	<u>Scheduled for regulating reserve only</u>	<u>EN – RR Downward</u>	<u>EN + RR Upward</u>			
<u>5</u>	<u>Energy + Regulating Reserve</u>	<u>SCHED – R</u>	<u>It has energy and regulating reserve schedules. It also has same energy schedules in previous and current dispatch intervals.</u>					
		<u>AUTO – R</u>	<u>It has energy and regulating reserve schedules. It also has different energy schedules in previous and current dispatch intervals.</u>					
<u>6</u>	<u>Dispatchable Reserve (DR) Only</u>	<u>MANUAL</u>	<u>Scheduled for Dispatchable Reserve only</u>	<u>EN – DR Lower</u>	<u>EN + DR Raise</u>			

Proposed General Amendments to the WESM Rules and WESM Manuals regarding Market Operator and System Operator Procedures (ORCP-WR-WM-21-07)

B. WESM Manual on Dispatch Protocol Issue 13.2

No.	RTD Schedules	Command Mode	Remarks	Lower Limit	Upper Limit	Comments	Proponent's Response	RCC Agreement
7	Energy + Dispatchable Reserve	SCHED-O	Has energy and dispatchable reserve schedule					

Illustrating AGC Commands Within the 5-minute Dispatch Interval



Command Mode: SCHED-O

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C. WESM Manual on Registration, Suspension and De-Registration Criteria and Procedures Issue 5.3

Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Wordings based on Comments	Proponent's Response	RCC Agreement
					Write general comments here, if any.			
Other Considerations	(New)	(NEW)	<u>2.5.4.7 Modelling of the Generating Unit's Availability</u> <u>Upon registration, Trading Participants shall specify if the availability of its generating unit shall be based on the real-time status of its generator breaker, or on the availability of its market offers.</u>	Proposed requirement for generator modelling where TPs need to specify if generator availability is based entirely on its generator breakers, or on the availability of its market offers.				Adopt

Proposed General Amendments to the WESM Rules and WESM Manuals regarding Market Operator and System Operator Procedures (ORCP-WR-WM-21-07)

D. WESM Manual on Market Network Model Development and Maintenance - Criteria and Procedures Issue 4.2

Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Wordings based on Comments	Proponent's Response	RCC Agreement								
					<p>PEMC (general comment):</p> <p>In connection to the proposed amendment in Section 4.5.7, WESM Rules Clause 3.2.1.5 states:</p> <p><i>“Any alteration under Clause 3.2.1.4 shall be implemented in accordance with the established Information and Communications Technology Change Management Process (ICMP) of the Market Operator. The Market Operator shall regularly inform the PEM Board of any changes made to the Market Network Model (As amended by DOE DC No. 2014-08-0016 dated 22 August 2014).”</i></p> <p>WESM Rules Clause 3.2.1.4 refers to the alterations to the market network model. Given this, requesting the proponent to also clarify if:</p> <p>a. the proposal is in accordance with the ICMP of the Market Operator; and</p> <p>b. the IEMOP intends to also amend WESM Rules Clause 3.2.1.5.</p> <p>Per RCC Resolution 2014-11 which endorsed the amendments to WR Clause 3.2.1.5, the ICMP was described to contain the following details:</p> <table><tr><td>CHANGE CATEGORY</td><td>CHANGE TYPE</td><td>LEVEL OF PRIORITY</td><td>APPROVING AUTHORITY</td></tr><tr><td>Major</td><td>New</td><td>High</td><td>PEMC Board of Directors</td></tr></table>	CHANGE CATEGORY	CHANGE TYPE	LEVEL OF PRIORITY	APPROVING AUTHORITY	Major	New	High	PEMC Board of Directors		<p>Based on IEMOP's approval processes, changes to the MNM does not refer to a change to the MMS. MNM is treated as an input to the MMS, thus, changes to the MNM are covered by the IBP of IEMOP-TOD.</p> <p>We also note that the new features of the MMS allow changes or updates to the MNM as near-to-real-time as possible. Seeking PEM Board approval for any change will defeat this enhanced design. In any case, procedures are in place under the WESM Manual on Market Network Model Development and Maintenance - Criteria and Procedures Issue 4.2 to ensure that the MO will accurately reflect the changes to the MNM. It should also be noted that MO does not exercise discretion in effecting the change or update to the MNM.</p>	<p><u>Except for integration of new network, other</u> alteration under Clause 3.2.1.4 shall be implemented in accordance with the established <u>Business Processes</u> Information and Communications Technology Change Management Process (ICMP) of the Market Operator. The Market Operator shall regularly inform the PEM Board of any changes made to the Market Network Model</p>
CHANGE CATEGORY	CHANGE TYPE	LEVEL OF PRIORITY	APPROVING AUTHORITY													
Major	New	High	PEMC Board of Directors													

Proposed General Amendments to the WESM Rules and WESM Manuals regarding Market Operator and System Operator Procedures (ORCP-WR-WM-21-07)

D. WESM Manual on Market Network Model Development and Maintenance - Criteria and Procedures Issue 4.2

Title	Clause	Provision	Proposed Amendment	Rationale	Comments		Proposed Wordings based on Comments		Proponent's Response	RCC Agreement
						Maintenance	High	President	We confirm that we intend to amend that provision. Proposed amendment is to refer to "established business processes" rather than the ICT change process.	
						New/ Maintenance	Emergency	President		
					Minor	New	-	IT Steering Committee		
					Standard	Maintenance		IST Department Head		
					Is the ICMP of the Market Operator still in accordance with the above-described table? This is to ensure that the proposal is consistent with the related documents pertaining to MNM alterations.					
The information requirement for the PEM Board under the WESM Rules shall be covered by the proposed revision where a monthly report will be provided to the PEM Board, DOE and ERC.										
WESM Rules Clause 3.2.1.5										
<u>Except for integration of new regions, other</u> alteration under Clause 3.2.1.4 shall be implemented in accordance with the established Business Processes Information and Communications Technology Change Management Process (ICMP) of the Market Operator. The Market Operator shall regularly										

Proposed General Amendments to the WESM Rules and WESM Manuals regarding Market Operator and System Operator Procedures (ORCP-WR-WM-21-07)

D. WESM Manual on Market Network Model Development and Maintenance - Criteria and Procedures Issue 4.2

Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Wordings based on Comments	Proponent's Response	RCC Agreement
							inform the <i>PEM Board</i> of any changes made to the <i>Market Network Model</i>	
Definitions	2.1.5	(NEW)	<u>2.1.5 Market Resource refers to the objects defined in the Market Network Model to represent generators, battery energy storage systems, pumped-storage units, and loads.</u>	Provide general term used in MNM for all objects representing generators, BESS, pumped-storage units, and loads				Adopt
MNM Components and Modeling	4.4.12	(NEW)	<u>4.4.11 Real-Time Data</u> <u>The System Operator shall provide the following real-time data, each having its respective real-time data quality, to the Market Operator.</u> <u>17. Analog measurements</u>	Proposed addition to document provision of real-time data for the MNM.	TC: Is this different from the System Snapshot Real-Time data? What do we mean by "having its respective real-time data quality"? Why specify "analog" in measurements? How		TC: It is suggested to use real-time data now as prescribed in the DP sections. Each real-time data has an accompanying data quality Suggest to retain for clarify of data.	Adopt IEMOP

Proposed General Amendments to the WESM Rules and WESM Manuals regarding Market Operator and System Operator Procedures (ORCP-WR-WM-21-07)

D. WESM Manual on Market Network Model Development and Maintenance - Criteria and Procedures Issue 4.2

Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Wordings based on Comments	Proponent's Response	RCC Agreement
			<u>(MW/MVAR) to represent gross generation output and generation net of the station use;</u> 18. <u>Analog measurements (MW/MVAR) to represent consumption at least at the connection point;</u> 19. <u>Analog measurements (MW/MVAR) measuring loading at the high-side and low-side of the transformer;</u> 20. <u>Analog measurements (MW/MVAR) measuring the loading at both ends of an AC</u>		<p>about we drop such adjective?</p> <p>Why do we ask for both gross generation output and generation net of the station use? Do we intend to validate the station use? Which between these two (gross output or net of station use) is used in the computations?</p> <p>Why do we ask for both the high-side and low-side of the transformer, do we always have measurements at both sides? Do we intend to validate the losses across the transformer? Whichever (hi-side or lo-side) is important could be based on asset</p>		<p>For varying reasons such as: (a) accounting of station use (b) eventual use in the MMS' state estimation.</p> <p>For varying reasons such as: (a) accounting of station use (b) eventual use in the MMS' state estimation.</p>	

Proposed General Amendments to the WESM Rules and WESM Manuals regarding Market Operator and System Operator Procedures (ORCP-WR-WM-21-07)

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Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Wordings based on Comments	Proponent’s Response	RCC Agreement
			<u>line or HVDC link;</u> 21. <u>Breaker Status;</u> 22. <u>Calculated MW Demand per region; and</u> 23. <u>Power System Frequency per grid (Hz).</u>		boundary (who owns which) Why do we need the calculated MW demand per region? I suppose we do have nodal demands, anyway. Suggest to remove Calculated Demand since SO has no complete data of the DUs.		For audit purposes to ensure sum of generation is not too far from sum of load. Nodal demand is used for purposes of nodal forecasting. Suggest to retain: Calculated demand per region does not need DU data. This is the sum of generation, +/- import/export. This is already being provided by SO to ensure consistency in the regional demand reference between MO and SO.	
MNM Development Timetable	4.5.4	After the receipt of the official notification from the System Operator, the Market Operator shall initiate the approval process for the MNM uploading	After the receipt of the official notification from the System Operator, the Market Operator shall <u>start the preparations</u> initiate the approval process	Revise for clarity of existing process	TC: how about: ... shall commence the revision process.		Suggest to retain. The timetable already provides the necessary details on eventual revision. Revision is already the end result.	START for 183rd Meeting APPROVED

Proposed General Amendments to the WESM Rules and WESM Manuals regarding Market Operator and System Operator Procedures (ORCP-WR-WM-21-07)

D. WESM Manual on Market Network Model Development and Maintenance - Criteria and Procedures Issue 4.2

Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Wordings based on Comments	Proponent’s Response	RCC Agreement
		to facilitate the implementation of the notified change. Minor changes (such as but not limited to, change in equipment/resources naming conventions, additional bays for future expansions) to the transmission network that has no impact to the market operations may be implemented at a later time.	for the MNM uploading update to facilitate the implementation of the notified change. Minor changes (such as but not limited to, change in equipment/resources naming conventions, additional bays for future expansions) to the transmission network that has no impact to the market operations may be implemented at a later time.		"start the preparations" does not evoke a definite state.			
MNM Development Timetable	4.5.6	The table below describes the timeline of activities involved in updating the MNM. The variable “D” stands for the target date of uploading of the new MNM. This date is set by the Market Operator upon its	The table below describes the timeline of activities involved in updating the MNM. The variable “D” stands for the target date of uploading deployment of the new MNM update . This date is set by	Revised for clarity. Also updated MNM Development Timetable to provide more clarity and introduce				APPROVED

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Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Wordings based on Comments	Proponent’s Response	RCC Agreement
		assessment, and is based on energization date or commissioning date of a new or upgraded facility or equipment. Table 1. MNM Development Timetable	the Market Operator upon its assessment, and is based on <u>in consideration of the</u> energization date or commissioning date of a new or upgraded facility or equipment. Table 1. MNM Development Timetable <i>[See Appendix C for proposed revised Table 1. MNM Development Timetable. Existing Table 1 to be deleted]</i>	process improvements				
MNM Development Timetable	4.5.7	All MNM revisions uploaded to the production system should be ratified by the PEM Board. Ratification of the	All MNM revisions uploaded to the production system should be ratified by the PEM Board. Ratification of the	It is proposed that instead of a PEM Board Ratification, monthly MNM updates shall	TC: Are the ERC and DOE equally interested to receive this monthly		TC: Yes.	<u>APPROVED</u> <u>The Market Operator shall prepare a monthly report containing all</u>

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Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Wordings based on Comments	Proponent's Response	RCC Agreement
		said network model shall be done upon completion of the seven-day consistency monitoring.	said network model shall be done upon completion of the seven-day consistency monitoring. <u>The Market Operator shall prepare a monthly report containing all MNM updates deployed in the production system. This report shall be provided to the DOE, ERC, and the PEM Board, and shall be similarly published in the market information website ten (10) working days after the end of the billing period.</u>	instead be provided. Currently with the Existing MMS, IEMOP updates the MNM by grouping network changes in batches. But given the new features of the New MMS, IEMOP intends to update the MNM per network change, and as near-to-real-time as possible. Given the possible volume of such updates, it is proposed	report? Were they requesting for these? PEMC: <i>1. Consistency Monitoring</i> The proposed change effectively deletes the completion of the seven-day consistency monitoring performed before the PEM Board's ratification of MNM revisions. May we request IEMOP to clarify how the consistency monitoring procedure will be conducted despite proposed amendments to Section 4.5.7. We note items 8 and 14 of Appendix C. MNM Development Timetable ensuring consistency with the updated network but reporting of the results of	All MNM revisions uploaded to the production system should be ratified by the PEM Board. Ratification of the said network model shall be done upon completion of the seven-day consistency monitoring. <u>The Market Operator shall prepare a monthly report containing all MNM updates deployed in the production system. This report shall be provided to the DOE, ERC, and the PEM Board, and shall be similarly published in the market information website ten (10) working days after</u>	PEMC: Suggest to retain original provision with same reasons given to PEMC's general comments	<u>MNM updates deployed in the production system. This report shall be provided to the DOE, ERC, and the PEM Board, and shall be similarly published in the market information website ten (10) working days after the end of the billing period.</u> <u>The Market Operator shall seek the approval of the PEM Board prior to integration of new network, as described</u>

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				that all of them just be collated for a month, then be provided to the DOE, ERC, and PEM Board as the official summary report of MNM updates.	functional and technical testing is not specified. 2. Approval by the PEM Board As discussed with IEMOP, integration of the new network to the MNM must be approved by the PEM Board. Subsequent updates to the newly integrated network is considered as regular update and need not require PEM Board’s approval.	the end of the <i>billing period</i>. <u>The Market Operator shall seek the approval of the PEM Board prior to integration of new network, as described in WESM Rule Clause 3.2.1.2, to the MNM. The result of functional and technical testing for such integration shall also be submitted to the PEM Board. within three (3) calendar days after completion.</u>		<u>in WESM Rule Clause 3.2.1.2, to the MNM. The result of functional and technical testing for such integration shall also be submitted to the PEM Board. within three (3) calendar days after completion.</u>
MNM Development Timetable	4.5.8	Additional Considerations in the MNM Development are as follows: a) Network Service Providers shall ensure that they provide ample information regarding their planned	Additional Considerations in the MNM Development are as follows: a) Network Service Providers shall ensure that they provide ample information	Revised “uploading” to “deployment”. Add provision to allow “urgent MNM updates”.	TC: moved further" means scheduled earlier or later or both?		TC: Both.	APPROVED

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Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Wordings based on Comments	Proponent’s Response	RCC Agreement
		activities to the System Operator b) All planned activities should involve proper coordination between the Market Operator and the System Operator (including affected Trading Participants if necessary). c) The target date of uploading (Day ‘D’) by the Market Operator may be moved further depending on justifiable reasons from either the Market Operator or the System Operator. In such cases, the Market Operator in coordination with the System Operator should decide on the	regarding their planned activities to the System Operator b) All planned activities should involve proper coordination between the Market Operator and the System Operator (including affected Trading Participants if necessary). c) The target date of uploading deployment (Day ‘D’) by the Market Operator may be moved further depending on justifiable reasons from either the Market Operator or the System Operator. In such cases, the Market Operator in coordination with the System Operator					

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Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Wordings based on Comments	Proponent’s Response	RCC Agreement
		new target date of uploading. d) Should the target uploading of a new MNM issue be cancelled, and then other changes to the MNM were put into effect after its cancellation, the System Operator shall notify the Market Operator of its new scheduled energization date seven days prior.	should decide on the new target date of uploading <u>deployment</u> . d) Should the target uploading <u>deployment</u> of an new MNM <u>update</u> issue be cancelled, and then other changes <u>updates</u> to the MNM were put into effect after its cancellation, the System Operator shall notify the Market Operator of its new scheduled energization date seven days prior. <u>e) In cases where urgent updates to the MNM are necessary, the Network Service Provider or the System Operator shall provide the necessary</u>					

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Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Wordings based on Comments	Proponent’s Response	RCC Agreement
			<u>technical requirements to update the MNM at least two (2) working days prior to the target energization. Urgent updates do not include new market resources.</u>					
Alterations to the Market Network Model	5.1	REAL-TIME MNM CONFIGURATION	REAL-TIME MNM CONFIGURATION <u>DYNAMISM OF MNM USING REAL-TIME DATA</u>	Revised for clarity	TC: "Dynamism" is hardly used in engineering; is it common in laws and rule-making? "Real-time configuration" was not too bad; it implies that the configuration does change.		TC: Suggest to retain.	APPROVED
Alterations to the Market Network Model	5.1.1	Real time reconfiguration refers to any changes in the MNM reconfiguration of any part of the	Real time reconfiguration refers to any changes in the MNM reconfiguration of any part of the	Revised for clarity. Also removed source of “EMS” since inputs from	TC: What's with "dynamics"? "Dynamically updated" sounds redundant; "updated" should suffice		TC: Suggest to retain.	CHANGE TO CONSTANTLY UPDATED

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		transmission system that may affect the dispatch within any trading interval. These revisions shall be made automatically to the MNM based on the inputs and data provided by the System Operator through the EMS. This shall include, but may not be limited to, the following: a) Change in Transmission and Sub-transmission Network topology; b) Line, Generator and Customer Load outage; and c) Reconfiguration as initiated by the System Operator or the Network Service	transmission system that may affect the dispatch within any trading interval. The <u>static power system model of the MNM</u> These revisions shall be made automatically <u>dynamically updated</u> to the MNM based on the inputs and data provided by the System Operator through the EMS. This shall include, but may not be limited to, the following: a) Change in Transmission and Sub-transmission Network topology; b) Line, Generator and Customer Load outage; and c) Reconfiguration as initiated by the System Operator or the Network Service <u>with reference to real-time status of breakers and disconnect switches; and</u>	SO are provided through their different platforms. To add, item (c) is not part of the real-time update.				

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Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Wordings based on Comments	Proponent's Response	RCC Agreement
		Providers to maintain system security and reliability.	b) <u>Scheduled outages of power system equipment (e.g. Lines, Power Transformers, HVDC Links, Generators, and Customer Loads</u> outage); and e) Reconfiguration as initiated by the System Operator or the Network Service Providers to maintain system security and reliability.					
Alterations to the Market Network Model	5.2	NETWORK DEVELOPMENT	NETWORK DEVELOPMENT OF UPDATES TO THE MNM	Revised for clarity.	TC: Do we really intend to "develop updates"?		This refers to the process of MNM development before deployment.	APPROVED AS REVISED DEVELOPMENT OF THE MNM
Network Development	5.2.1	Network development is any reconfiguration of any part of the transmission or sub-transmission system.	<u>The Market Operator shall develop updates to the market network model and power system model in</u>	Revised for clarity.	TC: Why "develop updates"; we do update the market network and power system models, but we		This refers to the process of MNM development before deployment.	<u>Approved as revised</u> <u>The Market Operator shall develop the</u>

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Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Wordings based on Comments	Proponent's Response	RCC Agreement
		The Market Operator should be notified as the network development may affect the dispatch and are permanent in nature. This shall include the following: xxxx	view of Network development is any reconfiguration of any part of the transmission or sub-transmission system. The Market Operator should be notified as the network development may affect the dispatch and are permanent in nature. This shall include the following: xxxx		don't I don't think we "develop updates".			<u>market network model and power system model in view of</u> Network development is any reconfiguration of XXX
MNM	--	MARKET NETWORK MODEL MAINTENANCE AND PUBLICATION	MARKET NETWORK MODEL MAINTENANCE AND PUBLICATION	Not necessary. Clerical edit.				Approved
Market Network Model Maintenance	5.4.2	The Market Operator shall maintain an electronic copy of the following for all market network model revisions: a) Bus Oriented Single Line Diagram; and	The Market Operator shall maintain an electronic copy of the following for all market network model revisions <u>updates</u> :	Revised for clarity on how IEMOP maintains the repository for the MNM.				APPROVED

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Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Wordings based on Comments	Proponent's Response	RCC Agreement
		b) Breaker Oriented Single Line Diagram c) Network Parameters	a) Bus-Oriented Single Line Diagram; and b) Breaker-Oriented Single Line Diagram c) Network Technical Parameters					
Alterations to the Market Network Model	5.5	Manner of Publication	Manner of Publication Reporting of MNM Updates	Revise from Publication to Reporting				APPROVED
Manner of Publication	5.5.1	Any changes or revision initiated by the Market Operator or System Operator shall trigger the publication of the revised and approved MNM.	Any changes or revision initiated by the Market Operator or System Operator shall trigger the publication of the revised and approved MNM. <u>Within two (2) working days from deployment, the Market Operator shall publish advisory on the MNM updates deployed in the production system.</u>	Propose revision on how IEMOP will report MNM updates. Immediate information shall be published after deployment. Then a summary of the changes will be	TC: Key verb here is "publish", why remove the work publication in the section (Sec 5.5) title?		Suggest to retain	

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Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Wordings based on Comments	Proponent's Response	RCC Agreement
Manner of Publication	5.5.2	The Market Operator shall regularly publish the relevant updated MNM documents within seven days after the completion of the MNM consistency monitoring in the MMS' production system. Every revision of the MNM shall have the following associated documents published in the Market Information Website: a) MNM Revisions Manual; b) Bus-Oriented Single Line Diagram; and c) Information brief	The Market Operator shall regularly publish the relevant updated MNM documents within seven days after the completion of the MNM consistency monitoring in the MMS' production system. Every revision of the MNM shall have the following associated documents published in the Market Information Website: a) MNM Revisions Manual; b) Bus-Oriented Single Line Diagram; and c) Information brief <u>Consistent with the provisions of Clause 4.5.7 of this Market Manual, the</u>	provided every month.				APPROVED

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Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Wordings based on Comments	Proponent's Response	RCC Agreement
			<u>Market Operator shall prepare a monthly report containing all MNM updates deployed in the production system. This report shall be provided to the DOE, ERC, and the PEM Board, and shall be similarly published in the market information website ten (10) working days after the end of the billing period. At the least, it shall contain the following.</u> 24. <u>Summary of MNM Updates during the month</u> 25. <u>Latest Bus-Oriented Single Line Diagram</u>					

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Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Wordings based on Comments	Proponent’s Response	RCC Agreement
Generator MTN	6.5.4	(NEW)	<u>During the registration of the generator resource, Trading Participants shall specify if its availability shall be based on the real-time status of its generator breaker, or on the availability of its market offers.</u>	During the generator modelling, TPs need to specify if generator availability is based entirely on its generator breakers, or on the availability of its market offers.	TC: Why the option; what are the implications for MO for giving the TP those options? Are they equally beneficial or convenient to the MO?		TC: In a 5-minute dispatch interval, we are providing Generator TPs the “option” on how to exercise further the “self-commitment” principle of the WESM. This is also being provided in lieu of the fast-start capability option previously invoked in the Hourly WESM.	APPROVED
Battery Energy Storage System	6.7.4	(NEW)	<u>During the registration of the battery energy storage system resource, Trading Participants shall specify if its availability shall be based on the real-time status of its connecting breaker, or on the availability of its market offers.</u>	During the BESS modelling, TPs need to specify if generator availability is based entirely on its connecting breakers, or on the availability of	TC: Why the option; what are the implications for MO for giving the TP those options? Are they equally beneficial or convenient to the MO?		Same response as above.	APPROVED

Proposed General Amendments to the WESM Rules and WESM Manuals regarding Market Operator and System Operator Procedures (ORCP-WR-WM-21-07)

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Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Wordings based on Comments	Proponent’s Response	RCC Agreement
				its market offers.				
Pumped-Storage Unit	6.8.3	(NEW)	<u>During the registration of the pumped-storage unit resource, Trading Participants shall specify if its availability shall be based on the real-time status of its connecting breaker, or on the availability of its market offers.</u>	During the BESS modelling, TPs need to specify if generator availability is based entirely on its connecting breakers, or on the availability of its market offers.	TC: Why the option; what are the implications for MO for giving the TP those options? Are they equally beneficial or convenient to the MO?		Same response as above.	APPROVED

Proposed General Amendments to the WESM Rules and WESM Manuals regarding Market Operator and System Operator Procedures (ORCP-WR-WM-21-07)

D. WESM Manual on Market Network Model Development and Maintenance - Criteria and Procedures Issue 4.2

Appendix C. Proposed MNM Development Timetable

MNM Development Timetable

ITEM	TIMELINE	ACTIVITY	DESCRIPTION	RESPONSIBLE PARTY	Comments	Proposed Wording based on Comments	Proponent's Response	RCC Agreement
1	Before D – 9	Generator Trading Participants should provide technical specifications of its facility to the Market Operator	<p>At the very least, the technical requirements indicated in the WESM Market Manual on Registration, Suspension and De-Registration Criteria and Procedures for new generators, battery energy storage systems, or pumped-storage units should be provided.</p> <p>The same requirements are also required when requesting for the re-modelling of facilities (i.e. aggregation of disaggregation of resources).</p>	Generator Trading Participant				APPROVED
2	Before D – 9	The System Operator should provide technical specifications to the Market	The System Operator should provide the power system topology that reflects the connection of the new load facility.	System Operator	TC: What do we mean by "power system topology"? Are we		TC: Yes, how all equipment are connected.	Sir Amby: Power system topology is network system

Proposed General Amendments to the WESM Rules and WESM Manuals regarding Market Operator and System Operator Procedures (ORCP-WR-WM-21-07)

D. WESM Manual on Market Network Model Development and Maintenance - Criteria and Procedures Issue 4.2

ITEM	TIMELINE	ACTIVITY	DESCRIPTION	RESPONSIBLE PARTY	Comments	Proposed Wording based on Comments	Proponent's Response	RCC Agreement
		<u>Operator for new load facilities</u>	183rd Revision <u>The System Operator should provide the BREAKER-ORIENTED SINGLE LINE DIAGRAM that reflects the connection of the new load facility.</u>		referring here to which node do we connect the new load, or something else?			topology. Retain technical specifications Doc Allan: Topology is a configuration of the network. Changing the equipment falls outside the topology Sir Lito: Power system topology is correct Sir Ryan: Electrical model IEMOP to provide specifics of power system topology

Proposed General Amendments to the WESM Rules and WESM Manuals regarding Market Operator and System Operator Procedures (ORCP-WR-WM-21-07)

D. WESM Manual on Market Network Model Development and Maintenance - Criteria and Procedures Issue 4.2

ITEM	TIMELINE	ACTIVITY	DESCRIPTION	RESPONSIBLE PARTY	Comments	Proposed Wording based on Comments	Proponent's Response	RCC Agreement
<u>3</u>	<u>Before D – 8</u>	<u>Network Service Providers should provide notice of changes in the Distribution Network</u>	<u>Applicable only for <i>Network Service Providers</i> whose equipment should be included, or are already included, in the <i>Market Network Model</i></u>	<u><i>Network Service Providers</i></u>	TC: As a rule, this should be applicable to all embedded resources. Suggestion to remove: "or are included"		<i>Suggest to retain. To remove necessity of providing info not needed in MNM.</i>	Notice is provided via email SO agrees with TC's suggestion Sir Ryan: retain the proposal For later discussion
<u>4</u>	<u>D – 8</u>	<u>Register New <i>Market Resource</i> in the Central Registration and Settlement System (CRSS) and Market Management System (MMS)</u>	<u>Upon receiving the technical requirements for the registration of new <i>market resources</i>, the <i>Market Operator</i> shall register it in the CRSS and MMS at least eight (8) days prior to their target energization.</u>	<u><i>Market Operator</i></u>				APPROVED
<u>5</u>	<u>D – 7</u>	<u>Submit notice of changes to the Grid</u>	<u>The <i>System Operator</i> shall submit a notice of changes to the grid, which includes the following.</u> 26. Power system topology (or diagram) that	<u><i>System Operator</i></u>	TC: Timeline shall be set.		<i>TC: Timeline already indicated as D-7</i>	IEMOP to clarify: Power system topology (or diagram) For later discussion

Proposed General Amendments to the WESM Rules and WESM Manuals regarding Market Operator and System Operator Procedures (ORCP-WR-WM-21-07)

D. WESM Manual on Market Network Model Development and Maintenance - Criteria and Procedures Issue 4.2

ITEM	TIMELINE	ACTIVITY	DESCRIPTION	RESPONSIBLE PARTY	Comments	Proposed Wording based on Comments	Proponent's Response	RCC Agreement
			<p>highlights the changes;</p> <p>27. Real-time mapping definitions; and</p> <p>28. Technical parameters affected by the change.</p> <p>Revision – 183rd</p> <p>1. Breaker-oriented single line diagram that highlights the changes;</p>					
6	D – 6	Initiate Preparations for MNM Update	The <i>Market Operator</i> shall make the necessary preparations concerning the MNM update, specifically for network changes that has a material effect to the system operations and market operations as appropriately assessed by the <i>Market Operator</i> . It shall involve the changes as notified by the <i>System Operator</i> , and changes recommended by the <i>Market Operator</i> , where	<i>Market Operator</i>	TC: As a rule, "initiate preparations" sounds tentative. "The MO shall... changes recommended by the MO..."? Any reference to the NSP input from item 3 above?		<i>TC: Suggest to replace initiate with Start.</i> <i>This is based on IEMOP's modelling simplifications. IEMOP endeavors to ensure MNM is still consistent</i>	APPROVED

Proposed General Amendments to the WESM Rules and WESM Manuals regarding Market Operator and System Operator Procedures (ORCP-WR-WM-21-07)

D. WESM Manual on Market Network Model Development and Maintenance - Criteria and Procedures Issue 4.2

ITEM	TIMELINE	ACTIVITY	DESCRIPTION	RESPONSIBLE PARTY	Comments	Proposed Wording based on Comments	Proponent's Response	RCC Agreement
			<u>appropriate, including simplifications and alterations to the market network model that maintains: (a) the relationship between the market network model and the transmission network; and (b) consistency with market requirements.</u>				<i>with the Grid's current state.</i> <i>It is expected that SO is the sole NSP that provides data to IEMOP for modelling updates.</i>	
7	<u>Before D – 2</u>	<u>Market Model and Power System Model Update</u>	<u>The Market Operator shall effect changes to the MNM through the updating of the market and power system models recognized by the MMS.</u> <u>The Market Operator may create different “MNM Update Tasks” for such MNM updates. An MNM update task represents a collection of changes in the MNM. Each MNM update task can be deployed separately for production use.</u>	<u>Market Operator</u>				<u>approved</u>

Proposed General Amendments to the WESM Rules and WESM Manuals regarding Market Operator and System Operator Procedures (ORCP-WR-WM-21-07)

D. WESM Manual on Market Network Model Development and Maintenance - Criteria and Procedures Issue 4.2

ITEM	TIMELINE	ACTIVITY	DESCRIPTION	RESPONSIBLE PARTY	Comments	Proposed Wording based on Comments	Proponent's Response	RCC Agreement
<u>8</u>	<u>Before D – 2</u>	<u>Testing of “MNM Update Task”</u>	<u>The <i>Market Operator</i> shall perform functional and technical tests on the updated network model for each MNM task to ensure its consistency with the updated power system.</u>	<u><i>Market Operator</i></u>				APPROVED
<u>9</u>	<u>Before D – 1</u>	<u>Confirm schedule of energization</u>	<u>The <i>System Operator</i> shall inform the <i>Market Operator</i> of the final schedule of energization.</u>	<u><i>System Operator</i></u>				APPROVED
<u>10</u>	<u>On or Before D</u>	<u>Notice of Planned Deployment to the WESM Participants</u>	<u>The <i>Market Operator</i> shall inform the <i>WESM Participants</i> of the planned deployment date for the updating of the MNM in the production system of the MMS</u>	<u><i>Market Operator</i></u>	TC: Timeline shall be set.		<i>Already indicated as On or Before D</i>	APPROVED
<u>11</u>	<u>D</u>	<u>Deployment of MNM Update Task</u>	<u>The <i>Market Operator</i> shall deploy the MNM Update Task in the production system.</u> <u>Should the MNM update task involve changes that are not yet energized, and the updated MNM's power system model is unable to</u>	<u><i>Market Operator</i></u>	TC: Timeline shall be set.		<i>Already indicated as D</i>	APPROVED

Proposed General Amendments to the WESM Rules and WESM Manuals regarding Market Operator and System Operator Procedures (ORCP-WR-WM-21-07)

D. WESM Manual on Market Network Model Development and Maintenance - Criteria and Procedures Issue 4.2

ITEM	TIMELINE	ACTIVITY	DESCRIPTION	RESPONSIBLE PARTY	Comments	Proposed Wording based on Comments	Proponent's Response	RCC Agreement
			<u>dynamically adapt to its non-energization, then the Market Operator may defer the deployment of the MNM Update Task to a later date.</u>					
12	D	<u>Notice of Post-Deployment to the WESM Participants</u>	<u>The Market Operator shall inform the WESM Participants of the successful deployment of MNM update in the production system of the MMS</u>	<u>Market Operator</u>	TC: Timeline shall be set.		<i>Already indicated as D</i>	For unsuccessful deployment – advisory is for successful deployment only APPROVED
13	D	<u>Provide Updates on Market Model and Power System Model to the System Operator</u>	<u>The Market Operator shall provide the System Operator with relevant information to ensure reliable operation between the two entities. This primarily includes the updated mapping information between the MMS and EMS</u>	<u>Market Operator</u>	TC: Timeline shall be set. Qualify the relevant information		<i>Already indicated as D</i>	APPROVED
14	D to D+7	<u>Consistency monitoring of the updated MNM</u>	<u>The Market Operator shall continuously monitor the status of the recently updated MNM in the</u>	<u>Market Operator</u>				Approved as revised <u>Consistent monitoring of</u>

Proposed General Amendments to the WESM Rules and WESM Manuals regarding Market Operator and System Operator Procedures (ORCP-WR-WM-21-07)

D. WESM Manual on Market Network Model Development and Maintenance - Criteria and Procedures Issue 4.2

ITEM	TIMELINE	ACTIVITY	DESCRIPTION	RESPONSIBLE PARTY	Comments	Proposed Wording based on Comments	Proponent's Response	RCC Agreement
			<u>production system for the next seven days</u>					<u>the updated MNM</u>

Proposed General Amendments on WESM Rules and Manuals regarding Automatic Pricing Re-runs for Under-generation and Over-generation (ORCP-WR-WM-21-10)

Title	Clause	Provision	Proposed Amendment	Rationale	Comments	Proposed Wording based on Comments	Proponent's Response	RCC Agreement
OTHERS			[See table below]	Consistent with the proposed changes in the WESM DP Section 14.4.2			Please make this provision consistent with the proposal of APC, should the RCC pursue it.	

Category	Specific Information	Information/ Data Source	Classification	Recipient	Means of Provision	Publication Timeline
xxx						
OTHERS						
Transmission System Information	xxx	xxx	xxx	xxx	xxx	xxx
	Dispatch Deviation Instruction Report by the System Operator (in CSV) and Daily Operations Report	System Operator	Public	Public	Market Information Website	Within the next trading day <u>Weekly report to be submitted within the following week</u>

Proposed General Amendments on WESM Rules and Manuals regarding Automatic Pricing Re-runs for Under-generation and Over-generation (ORCP-WR-WM-21-10)



PROPOSED GENERAL AMENDMENTS TO THE WESM RULES AND WESM MANUAL ON CONSTRAINT VIOLATION COEFFICIENTS AND PRICING RE-RUN

183rd RCC Meeting | 20-August-2021

Via Microsoft Teams

THE PROPONENT

- Philippine Electricity Market Corporation (PEMC) is the Governance Arm of WESM



Proposed General Amendments on WESM Rules and Manuals regarding Automatic Pricing Re-runs for Under-generation and Over-generation (ORCP-WR-WM-21-10)

OUTLINE



**ACTION
REQUESTED**



**RATIONALE OF THE
PROPOSAL**



**SUMMARY OF THE
PROPOSAL**



**OTHER RELEVANT
MATTERS**



8

ACTION REQUESTED

- Approval to post proposal in the PEMC website for comments
 - Proposed Amendments to the WESM Rules and WESM Manual on Constraint Violation Coefficients and Pricing Re-run



9

Proposed General Amendments on WESM Rules and Manuals regarding Automatic Pricing Re-runs for Under-generation and Over-generation (ORCP-WR-WM-21-10)

RATIONALE OF THE PROPOSAL

Background

- WESM rules* provided market pricing re-runs shall be designed to produce prices reflecting:
 - Supply shortage when there is load shedding – shortage pricing during under-generation (at offer price cap, PhP32,000/MWh); and
 - Excess supply when there is excess generation – excess pricing during over-generation (at offer price floor, PhP-10,000/MWh)
- This rule was effectively changed by the ERC in its Decision dated 20 August 2020 (and promulgated on 29 December 2020) on ERC Case No. 2017-042RC on Price Determination Methodology (PDM)

**DOE DC No. 2016-10-0014 dated 14 October 2016*



10

RATIONALE OF THE PROPOSAL

Background

- ERC Decision dated 20 August 2020 on PDM
 - ERC acknowledges the importance of having the correct pricing signals and settlement-ready prices in real-time for efficiency and transparency in prices
 - However, the ERC deemed that prices during under-generation should reflect the cost that the consumers are willing to pay for a continuous supply of electricity, which price is not necessarily the offer price cap (PhP32,000/MWh)
 - ERC directed existing pricing mechanisms during under-generation and over-generation should be maintained



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Proposed General Amendments on WESM Rules and Manuals regarding Automatic Pricing Re-runs for Under-generation and Over-generation (ORCP-WR-WM-21-10)

RATIONALE OF THE PROPOSAL

- Harmonize provisions on automatic pricing re-runs in the WESM Rules and Manuals with the ERC directives on PDM
- General amendment of the Urgent Amendments approved by the PEM Board on 26 May 2021
 - Revised rules made effective on 26 June 2021 (Go-Live Date) until 25 November 2021



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SUMMARY OF THE PROPOSAL

Affected Clauses	Proposed Amendment	Rationale
WESM Rules: <ul style="list-style-type: none">• 3.6.7.2• 3.6.7.3• 3.10.5.5	Deletion of shortage pricing (for under-generation) and excess pricing (for over-generation)	Existing pricing mechanisms during under-generation and over-generation should be maintained. Such that, these events shall be treated just like other constraint violations
WESM Manual on CVC-PR: <ul style="list-style-type: none">• 5.1.3• 5.2.2. to 5.2.5• 5.3.1	Deletion of shortage pricing (for under-generation) and excess pricing (for over-generation)	For consistency with WESM Rules



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Proposed General Amendments on WESM Rules and Manuals regarding Automatic Pricing Re-runs for Under-generation and Over-generation (ORCP-WR-WM-21-10)

ACTION REQUESTED

- Approval to post proposal in the PEMC website for comments
 - Proposed Amendments to the WESM Rules and WESM Manual on Constraint Violation Coefficients and Pricing Re-run



16



THANK YOU!

Proposed Amendments to the WESM Registration Manual for General Enhancements to the Application Process of New WESM Members in consideration of DOE DC2021-06-0013 (Adopting a General Framework Governing the Test and Commissioning of Generation Facilities)

PROPOSED AMENDMENTS TO THE WESM MANUAL ON REGISTRATION, SUSPENSION, AND DE-REGISTRATION CRITERIA AND PROCEDURES FOR GENERAL ENHANCEMENTS TO THE APPLICATION PROCESS OF NEW WESM MEMBERS

20 AUGUST 2021



02

THE PROPONENT

- The proponent is the Independent Electricity Market Operator of the Philippines, Inc. (IEMOP)
- IEMOP is the market operator of the WESM.



Proposed Amendments to the WESM Registration Manual for General Enhancements to the Application Process of New WESM Members in consideration of DOE DC2021-06-0013 (Adopting a General Framework Governing the Test and Commissioning of Generation Facilities)

OUTLINE 03

OUTLINE

- 01** ACTION REQUESTED
- 02** RATIONALE OF THE PROPOSAL
- 03** SUMMARY OF THE PROPOSAL
- 04** OTHER RELEVANT MATTER

04

ACTION REQUESTED

- For approval for endorsement to PEMB



- › Initial: To address issues on prolonged test and commissioning of VRE plants.
- › Current: Harmonize with DOE DC2021-06-0013

BACKGROUND

- On 17 April 2019, IEMOP received DOE letter regarding the prolonged test and commissioning of VRE plants, and directed the same to spearhead amendments to address the issue.
- 21 February 2021- RCC Deliberation
- 02 July 2021 - DOE issuance, DOE DC2021-06-0013, on general framework governing the Test and Commissioning of Generation Facilities requires harmonization to the WESM Manual on Registration and Deregistration



Proposed Amendments to the WESM Registration Manual for General Enhancements to the Application Process of New WESM Members in consideration of DOE DC2021-06-0013 (Adopting a General Framework Governing the Test and Commissioning of Generation Facilities)

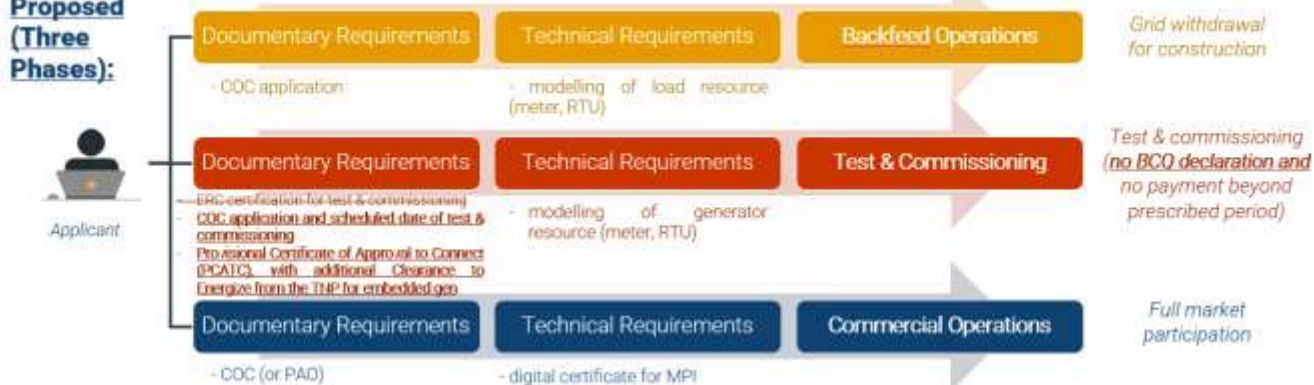
07

SUMMARY OF THE PROPOSAL

Current (One Process):



Proposed (Three Phases):



08

SUMMARY OF THE PROPOSAL

• Other enhancements

Documentary requirements

- Submission of market participation agreement (MPA) prior to approval of membership
- WESM membership at 1st entry
- Payment of registration fee only during 1st application

Test & Commissioning

- Notify GenCo, copy furnished the SO seven (7) 15 calendar days before expiration of PCATC
- No BCQ declaration and No payment beyond expiration
- GenCo to submit new ERG certification PCATC extension to proceed with T&C

Proposed Amendments to the WESM Registration Manual for General Enhancements to the Application Process of New WESM Members in consideration of DOE DC2021-06-0013 (Adopting a General Framework Governing the Test and Commissioning of Generation Facilities)

09

OTHER RELEVANT MATTERS

- None

010

ACTION REQUESTED

- For approval for endorsement to PEMB



Proposed Amendments to the WESM Registration Manual for General Enhancements to the Application Process of New WESM Members in consideration of DOE DC2021-06-0013 (Adopting a General Framework Governing the Test and Commissioning of Generation Facilities)



Issue on Indirect WESM Membership

Issues on Indirect WESM Membership

Background

- IEMOP requested for a WESM Rules/Manuals change to resolve the registration issues of 8 Indirect WESM Members
- IEMOP proposed:
 - Direct WESM Member register for their Indirect WESM Members, but with almost same requirements
 - The Indirect WESM Member will no longer sign the MPA (not bound by the WESM Rules)
 - Note that even without the MPA requirement, the 8 Indirect WESM Members still lack a number of requirements
- Potential problem identified:
 - Exposure of the Direct WESM Member after its PSA terminates with the Indirect WESM Member

Issue on Indirect WESM Membership

Background- IEMOP Proposal

WESM Manual on Registration, Suspension and De-Registration Criteria and Procedures Issue 5.2

2.5.6.3 OTHER REQUIREMENTS FOR APPROVED APPLICATIONS

a) Market Participation Agreement. The Applicant shall execute a market participation agreement in the form prescribed by the Market Operator. **For Indirect WESM Membership registration, its Direct WESM Member Counterparty shall execute this agreement on behalf of the Indirect WESM member.**

b) Participant Interface Access. The Applicant shall subscribe to and allow the Market Operator to apply and install a method employing encryption in its computer to provide secure access to the Market Management System.

Background - Market Participation Agreement

Article II. COMPLIANCE WITH THE WESM RULES AND MARKET DOCUMENTS

Section 1.01 Compliance Obligation. The Company hereby agrees to be bound by and to comply with all of the provisions of the WESM Rules, WESM Manuals and such guidelines and procedures approved by the PEM Board (referred to as "Market Documents"), including amendments thereto in accordance with its provisions.

Section 1.02 Full Knowledge. The Company has read, has full knowledge of and understands the provisions of the WESM Rules, WESM Manuals and Market Documents and it understands that it must remain to be compliant with its obligations as a registered WESM Member and Trading Participant in order to maintain registration.

- Without MPA, what binds the Indirect WESM Member to the WESM Rules?

Issue on Indirect WESM Membership

What is the proof of agreement?

A. WESM Manual on Registration, Suspension and De-Registration Criteria and Procedures Issue 5.2

2.8.1 A person or entity that wishes to be registered as an *Indirect WESM Member* must –

2.8.1.1 comply with the membership criteria set forth in this Manual for *Trading Participants*, ~~except only for the requirement to satisfy prudential requirements;~~ and

2.8.1.2 be registered by its *Direct WESM Member* counterparty; identify the *Direct WESM Member* that shall stand as its counterparty for its transactions in the WESM and shall, for this purpose, submit proof of agreement by the said *Applicant* ~~*Direct WESM Member*~~ to stand serve as its counterparty and allowing the *Direct WESM Member* to transact on behalf of the *Applicant*.

- Proof of agreement is limited to the PSA
- End of PSA = End of Direct-Indirect relationship
- The Direct WESM Member cannot assume responsibility beyond its PSA with the Indirect WESM Member

Issue

Who assumes liability for defaulting Indirect WESM Members beyond PSA termination?

PSA Termination:

- By defaulting on the PSA
- End of PSA term

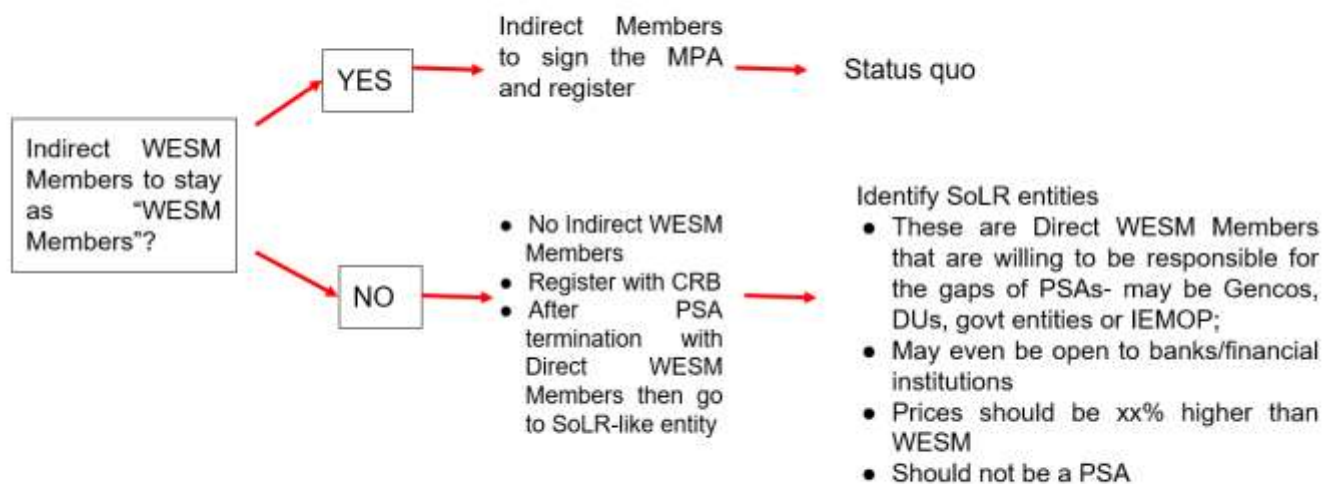


Issue on Indirect WESM Membership

Default Wholesale Supplier

- PSALM and NPC were designated as Default Wholesale Suppliers at the start of WESM
- DC 2010-05-006 "Terminating the Default Wholesale Supplier Arrangement for the Phillippine Wholesale Electricity Spot Market (WESM) and Declaring a Disconnection Policy"
 - Relieving NPC and PSALM of their responsibilities as DWS
 - Disconnection of non-WESM members
 - Creation of Implementation Review Committee -ensure smooth termination of DWS arrangement and implementation of disconnection policy

Summary of Proposal



Issue on Indirect WESM Membership

Thanks!

Update on Effectiveness Study on MRU Utilization



This is a presentation slide with a light blue background featuring a faint, abstract pattern of overlapping circles and lines. In the top right corner, there is a dashed rectangular box containing the text "I C O N" in a stylized font. The main title, "UPDATE ON EFFECTIVENESS STUDY ON MRU UTILIZATION", is centered in a bold, dark blue font. At the bottom left, there are two logos: the Philippine Electricity Market Corporation (PEMC) logo and the PEMC logo with a stylized "Go" in yellow. At the bottom right, there is a dashed rectangular box containing the text "Title of the Presentation" and the number "11".

**UPDATE ON EFFECTIVENESS STUDY
ON MRU UTILIZATION**

  Title of the Presentation 11

ACTION REQUESTED

For Information/Discussion

Update on Effectiveness Study on MRU Utilization

OUTLINE

- Background
 - Scope of Effectiveness Study
 - Revisions to Criteria for MRU Utilization
- Effectiveness Indicator
- Issues and Comments



Title of the Presentation

13

BACKGROUND

Sub-title

SEPTEMBER 2014:

Major amendments were made to the WESM Manual on Must-Run and Must-Stop Units, namely:

- Revised criteria for selection of MRUs - from eight (8) reduced to three (3):
 - 1) System Voltage Requirement
 - 2) Thermal Limits of Transmission Line and Power Equipment
 - 3) Real-Power Balancing and Frequency Control
- Revised regional allocation of compensation in each grid, either Luzon or Visayas for all MRUs, and
- New compensation mechanism for Displaced Generators



Proposed Rules Change Effectiveness Study

14



Update on Effectiveness Study on MRU Utilization

BACKGROUND

Scope of Study

Revised criteria for selection of MRUs - from eight (8) reduced to three (3):

- 1) System Voltage Requirement**
- 2) Thermal Limits of Transmission Line and Power Equipment**
- 3) Real-Power Balancing and Frequency Control**

Reasons for selection:

- **Relevance of rules change** – rules change in effect beyond transition to 5-minute market
- **Sufficiency of data** – rules change had been in effect for a significant period
- **Availability of data** – required data are already collected and being used in market processes

BACKGROUND

Scope of Study

To study/asses effectiveness of a rules change

- **Reference:** (ORCP-WR-WM-2014-14) “Proposed Amendments to the WESM Rules and Market Manuals in compliance with DOE Directives on the Proposed Amendments to the WESM Manual: Management of Must-Run Units”
- **Proponent:** RCC
- **Stated Objective of Amendment:** To limit use of MRUs for addressing system security and reliability issues only (in compliance with DOE directive)
- **DOE Approval:** DOE Department Circular No. DC2014-10-0021 (24 October 2015)



Update on Effectiveness Study on MRU Utilization

BACKGROUND

Revisions to Criteria for MRU Utilization

	MRU Criteria (Reason for Dispatch)	Since when?	Description	Deleted? (Y/N)	Deleted when?	Why?	Status
1	System Voltage Requirement	Issue 1.0	For required voltage control and reactive power	N	--	--	Prevailing
2	Thermal Limits of Transmission Line and Power Equipment	Issue 1.0	For dispatch limitations of generators affected by the actual condition of transmission lines and/or power equipment	N	--	--	Prevailing
3	Systems Tests of TransCo Facilities/Equipment	Issue 1.0	tests undertaken to certain substation equipment	Y	Issue 5.0	<ul style="list-style-type: none"> Not related to system security Deemed part of generator's cost and shouldn't be compensated as MRU 	Removed ; scheduled based on security limit submitted by SO

BACKGROUND

Revisions to Criteria for MRU Utilization (continued)

	MRU Criteria (Reason for Dispatch)	Since when?	Description	Deleted? (Y/N)	Deleted when?	Why?	Status
4	Insufficient offers from generators	Issue 3.0	to meet the demands for the real-time dispatch of energy	N	Issue 5.0		Folded under the 'Real-power Balancing and Frequency Control' criteria
5	Inadequate levels of reserve	Issue 3.0	to meet the security and reliability requirements of the Grid	N	Issue 5.0		Folded under the 'Real-power Balancing and Frequency Control' criteria
6	Regulatory Requirements	Issue 1.0	unit tests imposed by the government (i.e., boiler tests, emission tests, other environmental tests, etc.)	Y	Issue 5.0	<ul style="list-style-type: none"> Not related to system security Deemed part of generator's cost and shouldn't be compensated as MRU 	Removed ; scheduled based on security limit submitted by SO
7	Commercial Operation Requirements	Issue 1.0	unit tests imposed by the SO or required in the PGC (i.e., performance, commissioning, fuel stack sampling, Ancillary Service, etc.)	Y	Issue 5.0		Removed ; scheduled based on security limit submitted by SO

Update on Effectiveness Study on MRU Utilization

BACKGROUND

Revisions to Criteria for MRU Utilization (continued)

	MRU Criteria (Reason for Dispatch)	Since when?	Description	Deleted? (Y/N)	Deleted when?	Why?	Status
8	Local Calamities and Emergencies	Issue 1.0	short-term incidents that require designation of MRUs to avert or minimize damage to infrastructure and security of people living in affected localities	Y*	Issue 5.0		Folded under the 'Real-power Balancing and Frequency Control' criteria

EFFECTIVENESS INDICATORS

Rules Change	Stated Objective
<ul style="list-style-type: none"> Revised definition of MRU to limit its use to address system security and reliability issues Revised criteria for utilizing MRUs to align with revised definition 	To limit use of MRUs for addressing system security and reliability issues only (in compliance with DOE directive)

Indicators	Condition
1) Instances of MRU dispatch	<ul style="list-style-type: none"> No MRU dispatched is utilized for non-security reasons Number of instances of MRU dispatch decreased after 2014
2) Volume of MRUs dispatched	
3) Trend of MRU payments	



Update on Effectiveness Study on MRU Utilization

EFFECTIVENESS INDICATOR 1

Instances of MRU Dispatch

CONSIDERATIONS:

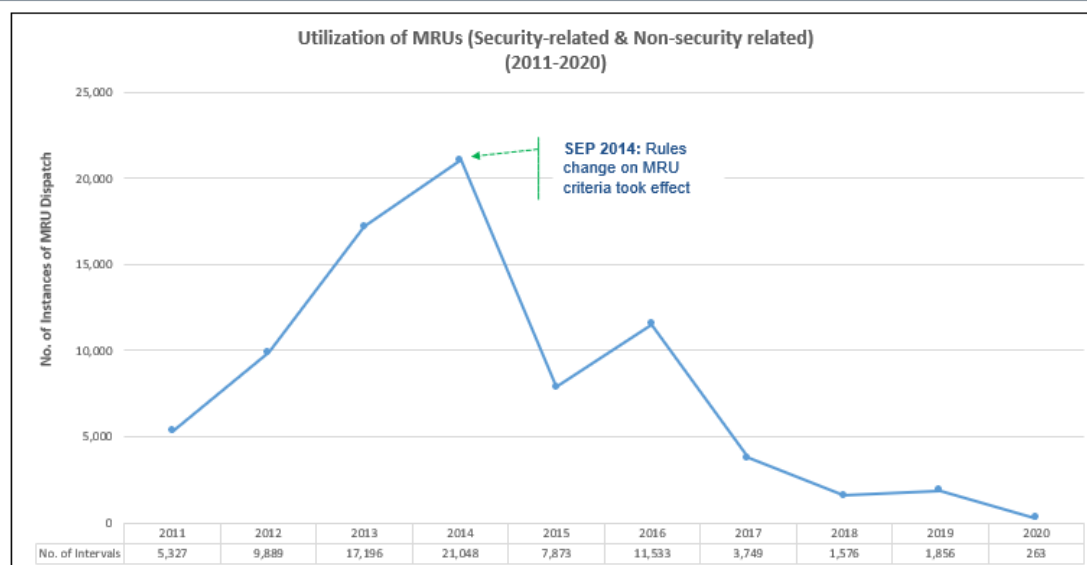
- Pre-2014: The System Operator's reasons for MRU utilization were re-classified as either Security or Non-security related MRU.
- If an interval is tagged as BOTH security and non-security MRU dispatch, that interval is counted under Security-related MRU.

2011-2015 MRU Remarks by SO

Examples of Non-security MRU Remarks	Examples of Security MRU Remarks
<ul style="list-style-type: none"> • COMMERCIAL OPERATION COMMISSIONING TEST • COMMERCIAL OPERATION FUEL EFFICIENCY TEST REQUIREMENTS • COMMERCIAL OPERATION REQUIREMENTS LOAD VARIATION TEST • ON ANCILLARY CERTIFICATION TEST COMMERCIAL OPERATION REQUIREMENTS • SYSTEM TESTS OF TRANSCO FACILITIES/EQUIPMENT ANCILLARY 	<ul style="list-style-type: none"> • INADEQUATE RESERVE LEVELS LOW OPERATING RESERVE LEVEL • INSUFFICIENT OFFERS FROM GENERATORS MRU- PUSOK FDR LINE LIMITATION • REGULATORY REQUIREMENTS MRU - SYSTEM VOLTAGE SUPPORT SYSTEM VOLTAGE REQUIREMENT MRU IN EXCESS OF RTD • THERMAL LIMITS OF T/L AND POWER EQUIPMENT MRU IN EXCESS OF RTD- NEGROS-PANAY CABLE REG

EFFECTIVENESS INDICATOR 1

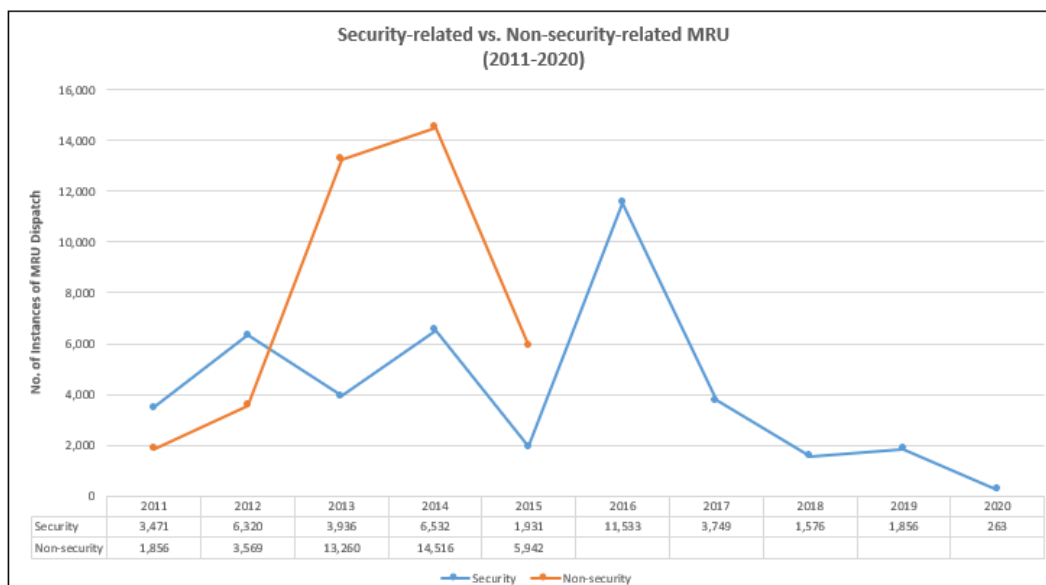
Instances of MRU Dispatch



Update on Effectiveness Study on MRU Utilization

EFFECTIVENESS INDICATOR 1

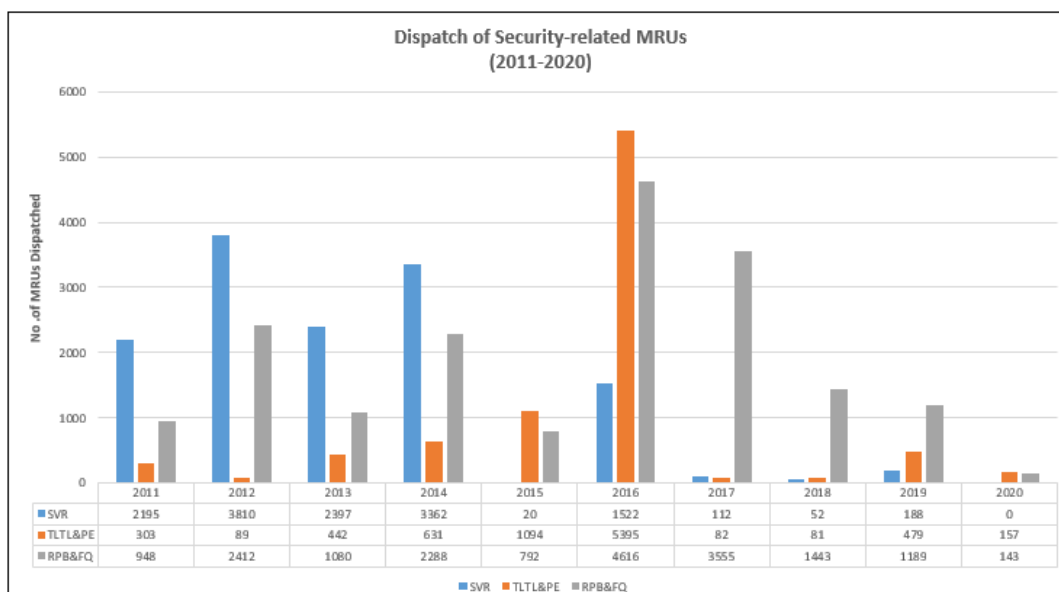
Instances of MRU Dispatch



EFFECTIVENESS INDICATOR 1

Number of Instances of MRUs Dispatch

MRU Categories	
System Voltage Requirement (SVR)	
Thermal Limits of Transmission Line and Power Equipment (TLTL&PE)	
Real-power Balancing and Frequency Control (RPB&FQ)	



Update on Effectiveness Study on MRU Utilization

EFFECTIVENESS INDICATOR 1

Instances of MRU Dispatch

Rules Change	Stated Objective
<ul style="list-style-type: none"> Revised definition of MRU to limit its use to address system security and reliability issues Revised criteria for utilizing MRUs to align with revised definition 	To limit use of MRUs for addressing system security and reliability issues only (in compliance with DOE directive)

Indicators	Condition	Conclusion
1) Instances of MRU dispatch	<ul style="list-style-type: none"> No MRU dispatched is utilized for non-security reasons Number of instances of MRU dispatch decreased after 2014 	Effective
2) Volume of MRUs dispatched		
3) Trend of MRU payments		

ISSUES AND COMMENTS

- Unclear rules change objective may lead to difficulty in developing appropriate effectiveness indicators
 - A rules change should be in service of a broader policy objective (i.e., fair compensation, transparency)
- Results/outputs directly produced by a rules change may not necessarily inform whether its primary objective is achieved
- The primary objective of proposals and possible indicators to measure effectiveness may be included as point of discussion during preliminary assessment or deliberation

Update on Effectiveness Study on MRU Utilization



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DOE-approved Revised Market Rules/Manuals



DOE-APPROVED REVISED MARKET RULES / MANUALS

20 August 2021, 183rd RCC Regular Meeting



A Premier Electricity Market & Champion of Governance

DC 2021-03-0005: Adoption of Amendments to Provisions for the Load Distribution Factors



Presentation Title

WESM MANUAL

WESM Manual on Load Forecasting Methodology

- **Description:** Amendments to add procedures for calculation of load distribution factors (LDF)
- Proposal approved as amended, to reflect conditions when Market Operator may override LDFs for specific nodal loads for a specific day and hour (Annex F, *Manual Override*)

DC 2021-03-0006: Provisions for Must-Run Unit

DISPATCH PROTOCOL

- Adopted as revised
 - Management of MRU – included the word “scheduled” to describe the MRU
 - 17.1.8
 - 17.1.9 – not included in IEMOP's proposal
 - 17.5.2 – subject of urgent amendment per PEM Board Resolution No. 2020-22-05 dated 25 March 2021, which deleted Section 17.5 as MRU reports are covered by the SO Dispatch Instruction Reports under Sections 14.4.7 to 14.4.9 (DPM Issue 15.1.)
 - 17.5.3 – revised timeline for validation from 2 weeks to 7wd

DISPATCH PROTOCOL

- Adopted as revised
 - Management of MRU (Dispatch Intervals under Ramp Down)
 - 17.6 – included Ramp Up
- Adopted as proposed
 - 17.6.1
 - 17.6.2
 - 17.6.3

DOE-approved Revised Market Rules/Manuals

DISPATCH PROTOCOL

- Not endorsed to PEM Board

- 17.6.3 (Management of MRU– Dispatch Intervals under Ramp Down) 

If the generator is designated as a *must-run unit*, the generator shall be additionally treated as a *must-run unit* up to the *dispatch interval* prior to its re-designation as a *must-run unit*.

DC 2021-03-0008: Implementation of Policy and Framework Governing the Operations of Embedded Generators

DOE-approved Revised Market Rules/Manuals

WESM RULES

- Adopted as proposed
 - Categories of WESM Member – Generation Company
 - 2.3.1.1; 2.3.1.3; 2.3.1.4
 - Glossary
 - Non-Scheduled Generating Unit
 - Scheduled Generating Unit

WESM RULES

- Adopted as revised
 - Glossary
 - Pmax – referenced to latest COC and
 - Registration of Generation Company of an Embedded Generator – renumbered to Section 2.3.13
 - Section 2.3.1.13 (a) referred to 2.3.1.10 (a), a non-existent clause. The clause was copied from the proposal under 2.3.1.10 (new provision), which renumbering was not adopted.

DOE-approved Revised Market Rules/Manuals

Title	Section	RCC Proposed Amendment	DOE-Approved Amendment	Remarks
Categories of WESM Member – Generation Company		<p>2.3.1.10</p> <p><u>A Generation Company of an Embedded Generator shall register with the Market Operator if:</u></p> <p>a) <u>the maximum stable load of its generating unit is greater than or equal to 10 MW, if the generating unit is in the Luzon Grid, or 5 MW, if the generating unit is in the Visayas or Mindanao Grids; or</u></p> <p>b) <u>the maximum stable load of its generating unit is below the regional thresholds provided under clause 2.3.1.10(a) but it has a bilateral contract outside its host distribution utility; or</u></p> <p>c) <u>its generating unit is under the Feed-In Tariff System.</u></p>	<p>2.3.1.13</p> <p>A Generation Company of an embedded generator shall register with the Market Operator if:</p> <p>(a) The <i>P_{max}</i> of its generating unit is greater than or equal to 10 MW and is located in the Luzon grid, or 5 MW and is located in the Visayas or Mindanao grids; or</p> <p>(b) The <i>P_{max}</i> of its generating unit is below the regional thresholds provided under Clause 2.3.1.10(a) but it has a bilateral contract outside its host distribution utility, or intends to sell to the WESM, or inject power to the transmission system; or</p> <p>(c) Its generating unit is under the Feed-In Tariff system.</p>	<p>Clause 2.3.1.10(a) is non-existent clause. It should be 2.3.1.13 (a). The clause was copied from the proposal under 2.3.1.10 (new provision), which renumbering was not adopted.</p>

Title	Section	RCC Proposed Amendment	DOE-Approved Amendment	Remarks
Glossary		<p>P_{max}. The maximum demand in MW that a generating unit, or generating block or module in case of a combined cycle power plant, can reliably sustain for an indefinite period of time, based on the generator capability tests.</p>	<p>P_{max}. The maximum demand in MW that a generating unit, or generating block or module in case of a combined cycle power plant, can reliably sustain for an indefinite period of time, based on time generator capability tests as provided in the latest Certificate of Compliance."</p>	<p>Made reference to the latest Certificate of Compliance</p>



DOE-approved Revised Market Rules/Manuals

WESM RULES

- Adopted as revised
 - Glossary
 - Pmax – referenced to latest COC and
 - Registration of Generation Company of an Embedded Generator – renumbered to Section 2.3.13
 - Section 2.3.1.13 (a) referred to 2.3.1.10 (a), a non-existent clause. The clause was copied from the proposal under 2.3.1.10 (new provision), which renumbering was not adopted.

Updates on Proposals — Disapproval of Proposed Amendments to WESM Rules and Various Market Manual to Clarify BCQ Declaration for the Implementation of Enhancements to WESM Design and Operations.



DISAPPROVED PROPOSAL

Proposed Amendments **Clarifying BCQ Declaration** by Pagbilao Energy Corp (PEC)

Reasons (per DOE Letter dated 03 Aug 2021:

- 1. It defeats the purpose of ensuring accountability by the TPs in preventing their exposure in the WESM. This is critical for DU who are mandated to provide supply to their captive customers in the least-cost manner taking into account the trading or supply from the WESM.*

Updates on Proposals — Disapproval of Proposed Amendments to WESM Rules and Various Market Manual to Clarify BCQ Declaration for the Implementation of Enhancements to WESM Design and Operations.

DISAPPROVED PROPOSAL

Reasons (per DOE Letter dated 03 Aug 2021)

2. *Implementation may be subject to dispute particularly when there will be an adverse impact to the TPs, more importantly to the DU captive customers who pay pass-through generation costs.*

DISAPPROVED PROPOSAL

Reasons (per DOE Letter dated 03 Aug 2021)

3. *Implementation of the proposal can be costly while on the other hand may run counter to our objective of instilling full compliance in the submission and confirmation of bilateral contracts by the TPs.*
 - PhP 800,000: cost of CRSS modification; does not include audit cost

DOE Public Consultation Updates



APPROVED/SIGNED DC

DC2021-07-0021: Provisions for Metering Services Provider Performance, Metering Standards and Site-Specific Loss Adjustments)

DC2021-07-0022: Constraint Violation Coefficients and Pricing Re-runs.

DOE Public Consultation Updates

PUBLISHED DC

1. **DC2021-07-0022:** Constraint Violation Coefficients and Pricing Re-Runs for the Implementation of Enhancements to WESM Design and Operations (Provisions for Self-Scheduled Generation)
2. **DC2021-07-0024:** Amendments to WESM Rules for the Operation of the Renewable Energy Market

Effective Date: **27 August 2021**



Presentation Title

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APPROVED/SIGNED DC | FOR PUBLICATION

1. **DC2021-07-0021:** Provisions for Metering Services Provider Performance, Metering Standards and Site-Specific Loss Adjustments)
2. **DC2021-07-0025:** Penalty Manual
3. **DC2021-07-0026:** Provisions for Market Surveillance, Enforcement and Compliance



Presentation Title

26



DOE Public Consultation Updates

