



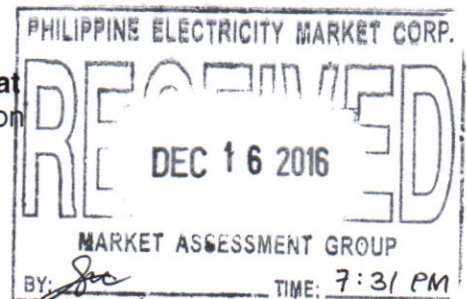
REQUEST FOR AMENDMENTS OR CHANGES TO THE WESM MANUALS

Proposals made only under this prescribed form shall be accepted and considered as submitted:

This request for amendments to the WESM Rules can be submitted to:

PEM Board

Attention: **PEM Committee Secretariat**
Philippine Electricity Market Corporation
18/F Robinsons Equitable Tower
ADB Avenue, Ortigas Center
Pasig City, 1605 Philippines
Email address: rcc@wesm.ph
Fax Number: (+632) 395-2704



I. Proposer's Information

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II. WESM Manual Amendments Information

Title of WESM Manual being commented:

Dispatch Protocol

Nature of Request (please indicate with x)

☒ Addition ☒ Alteration ☒ Deletion ☒ Clarification ☒ Clerical Correction



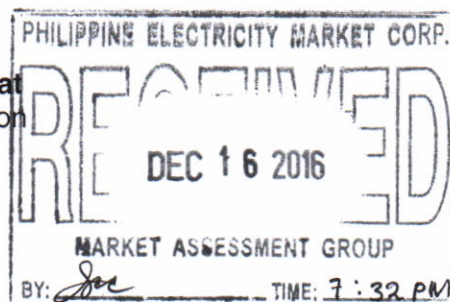
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III. Proposed Amendment

Introduction

Title	Section	Provision	Proposed Amendment	Rationale
Introduction	1			
Overview of WESM Operations	1.1	<p>1.1.1 The commencement of the operations of the WESM introduced significant changes in the functional responsibility of the System Operator in the operations of the grid. The following figure shows a simplified overview of the operational arrangements between the System Operator and the Market Operator.</p> <p>Figure 1. Overview of WESM Operations (See Attachment 1 – Figure in Section 1)</p> <p>1.1.2 As shown, dispatch implementation continues to be performed by the System Operator with the operation of the WESM, while demand forecasting and scheduling of generation and loads are functions of the Market Operator. Dispatch scheduling is performed by the Market Operator using hourly demand bids and generation offers submitted by the trading participants.</p>	<p>1.1.1 The commencement of the operations of In the WESM, introduced significant changes in the Market Operator provides functional responsibility of the System Operator in the operations of the grid. The following figure shows a simplified overview of the operational arrangements between the System Operator and the Market Operator.</p> <p>Figure 1. Overview of WESM Operations</p> <p>1.1.2 As shown, dispatch implementation continues to be performed by the System Operator with the operation of the WESM, while demand forecasting and scheduling of generation and loads are functions of dispatch schedules to be implemented for each dispatch interval using various inputs such as load forecasts and state-estimated data from the Market Operator, real-time data and security constraints from. Dispatch scheduling is performed by the System Market Operator, and using hourly demand bids, and generation offers, and self-scheduled nominations submitted by the trading participants Trading Participants.</p>	<ul style="list-style-type: none"> Revised context of the introductory paragraph since the WESM has been in operation for more than 10 years. Moved Figure 1 to Section 1.1.4.
Overview of WESM Operations	1.1	1.1.3 xxx	See Section 1.1.3 below, as revised.	

Title	Section	Provision	Proposed Amendment	Rationale
Overview of WESM Operations	1.1	1.1.4 The Market Operator uses a market dispatch optimization model with a representation of the transmission network so that transmission constraints and losses are considered in the preparation of dispatch schedules. Self-commitment is adopted in the dispatch model instead of centralized unit commitment, consistent with the policy of competition in the generation sector as set out in Section 6 of Republic Act No. 9136.	1.1.4 1.1.2 The Market Operator uses a market dispatch optimization model (MDOM) with a representation of the transmission network power system so that transmission constraints and losses are considered in the preparation of dispatch schedules. Self-commitment is adopted in the dispatch model instead of centralized unit commitment, consistent with the policy of competition in the generation sector as set out in Section 6 of Republic Act No. 9136.	Renumbering
Overview of WESM Operations	1.1	1.1.3 An economic real-time dispatch (RTD) schedule is generated by the Market Operator taking into consideration information on system status and constraints. The Market Operator likewise prepares a merit order table (MOT) that presents the list of available generating units ranked in accordance with the offer prices submitted for these units. These schedules are submitted to the System Operator for dispatch implementation. Post-dispatch reports are thereafter relayed by the System Operator to the Market Operator.	1.1.3. <u>By considering the power system's topology and characteristics through the market network model, the</u> An economic real-time dispatch (RTD) schedule is generated by the Market Operator taking into consideration information on system status and constraints <u>are security-constrained.</u> The Market Operator likewise prepares a WESM merit order table (WMOT) that presents the list of available generating units ranked in accordance with the offer prices submitted for these units. These <u>This list schedules are</u> is submitted to the System Operator for dispatch implementation <u>as a guide for managing real-time deviations if the need arises.</u> Post-dispatch reports are thereafter relayed by the System Operator to the Market Operator.	<ul style="list-style-type: none"> Clarify how the Market Operator generates RTD schedules and prepares the WMOT, and how the System Operator uses the WMOT. Revised to WMOT for consistency
Overview of WESM Operations	1.1	1.1.5 WESM Rules Clause 3.4.2 requires the Market Operator to operate the market in accordance with a timetable which it is required to maintain, publish and continuously update. The timetable shall include the schedule for –	1.1.5 WESM Rules Clause 3.4.2 requires the Market Operator to operate the market in accordance with a timetable which it is required to maintain, publish and continuously update. The timetable shall include the schedule for –	Deleted clause is provided and described in detail in Section 4 (WESM Timetable) and Section 8 (Market Projections).

Title	Section	Provision	Proposed Amendment	Rationale
		a) Determining and publishing week-ahead projections and day-ahead projections, including the precise specifications of the market horizon to be used for such projections; b) Submitting offers, bids and data; c) If necessary, for any other action to be taken by the Market Operator, the System Operator, or any WESM Member during the operation of the spot market.	a) Determining and publishing week-ahead projections and day-ahead projections, including the precise specifications of the market horizon to be used for such projections; b) Submitting offers, bids and data; c) If necessary, for any other action to be taken by the Market Operator, the System Operator, or any WESM Member during the operation of the spot market.	
Overview of WESM Operations	1.1	1.1.6 Under this timetable, trading activities in the WESM operate at different time frames starting from the week before until the day following the trading day.	1.1.6 Under this timetable, trading activities in the WESM operate at different time frames starting from the week before until the day following the trading day.	Deleted clause is provided and described in detail in Section 4 (WESM Timetable), Section 8 (Market Projections), and Section 9 (Real-Time Dispatch Scheduling).
Overview of WESM Operations	1.1	1.1.7 The scheduling process starts with the week-ahead market projection (WAP) which gives the indicative hourly dispatch schedules and spot prices for the next seven (7) days. This projection takes into consideration all available information including nomination of loading levels, projected outputs, bids and offers from participants, demand forecasts, outage schedules and the current status of the grid.	1.1.7 The scheduling process starts with the week-ahead market projection (WAP) which gives the indicative hourly dispatch schedules and spot prices for the next seven (7) days. This projection takes into consideration all available information including nomination of loading levels, projected outputs, bids and offers from participants, demand forecasts, outage schedules and the current status of the grid.	Deleted clause is provided and described in detail in Section 4 (WESM Timetable) and Section 8 (Market Projections).
Overview of WESM Operations	1.1	1.1.8 The day-ahead market projection (DAP) is prepared every four (4) hours of the day covering the hours succeeding each DAP run up to the end of the following day. It utilizes the most recent nomination of loading levels, projected outputs, bids and offers of	1.1.8 The day-ahead market projection (DAP) is prepared every four (4) hours of the day covering the hours succeeding each DAP run up to the end of the following day. It utilizes the most recent nomination of loading levels, projected outputs, bids and offers of	Deleted clause is provided and described in detail in Section 4 (WESM Timetable) and Section 8 (Market Projections).

Title	Section	Provision	Proposed Amendment	Rationale
		participants as well as information on power system status, reserve requirements and outage schedules. The day-ahead projection allows the System Operator to prepare a more accurate contingency plan for the succeeding trading intervals or dispatch day.	participants as well as information on power system status, reserve requirements and outage schedules. The day-ahead projection allows the System Operator to prepare a more accurate contingency plan for the succeeding trading intervals or dispatch day.	
Overview of WESM Operations	1.1	1.1.9 During the dispatch day, Trading Participants are allowed to revise their nomination of loading levels, projected outputs, bids and offers within the open market window which is not later than the established gate closure or cut-off time. Nominations of loading levels, projected outputs, bids and offers for a trading interval are fixed after the gate closure or cut-off time. The real-time dispatch (RTD) schedule and the merit order table (MOT) generated by the Market Operator and transmitted to the System Operator are based on the nomination of loading levels, projected outputs, bids and offers submitted by the cut-off time.	1.1.9 During the dispatch day, Trading Participants are allowed to revise their nomination of loading levels, projected outputs, bids and offers within the open market window which is not later than the established gate closure or cut-off time. Nominations of loading levels, projected outputs, bids and offers for a trading interval are fixed after the gate closure or cut-off time. The real-time dispatch (RTD) schedule and the merit order table (MOT) generated by the Market Operator and transmitted to the System Operator are based on the nomination of loading levels, projected outputs, bids and offers submitted by the cut-off time.	Deleted clause is provided and described in detail in Section 6 (Bids, Offers and Data Submission and Processing), 9 (Real-Time Dispatch Scheduling) and Section 10 (Preparation and Use of the WESM Merit Order Table).
Overview of WESM Operations	1.1	1.1.10 The real-time dispatch schedule generated by the Market Operator is comprised of the energy and reserve schedules. The energy schedule contains the target loading level, in MW, that all facilities should meet at the end of the relevant trading interval. The reserve schedule contains the capacities scheduled for provision of ancillary services, but covering only the reserves that are traded in the WESM.	1.1.10 The real-time dispatch schedule generated by the Market Operator is comprised of the energy and reserve schedules. The energy schedule contains the target loading level, in MW, that all facilities should meet at the end of the relevant trading interval. The reserve schedule contains the capacities scheduled for provision of ancillary services, but covering only the reserves that are traded in the WESM.	Deleted clause is also provided and described in detail in 9 (Real-Time Dispatch Scheduling).
Overview of WESM Operations	1.1	1.1.11 The System Operator implements the real-time dispatch schedules during the trading day, issues dispatch instructions to	1.1.11 1.1.4 The System Operator implements the real-time dispatch RTD schedules for the relevant dispatch interval	<ul style="list-style-type: none"> • Use of dispatch interval, consistent

Title	Section	Provision	Proposed Amendment	Rationale
		and ensures compliance by the Trading Participants with such instructions, and maintains overall security of the power system.	during the trading day, issues dispatch instructions to and ensures compliance by the Trading Participants with such instructions, and maintains overall security of the power system.	with the DC 2016-010-0014 <ul style="list-style-type: none"> • Renumbering
Overview of WESM Operations	1.1	1.1.12 Relevant information on the actual dispatch implementation is transmitted by the System Operator to the Market Operator to allow accounting of the deviations from the dispatch schedules or non-compliances to dispatch instructions. The determination of the ex-post prices at the end of the trading interval accounts for these deviations.	1.1.12 Relevant information on the actual dispatch implementation is transmitted by the System Operator to the Market Operator to allow accounting of the deviations from the dispatch schedules or non-compliances to dispatch instructions. The determination of the ex-post prices at the end of the trading interval accounts for these deviations.	<ul style="list-style-type: none"> • First sentence is covered under Section 1.1.4. • Deletion of second sentence is in accordance with the enhancement to implement ex-ante market runs only under DC 2015-010-0015.
Overview of WESM Operations	1.1	1.1.13 After the trading day, the System Operator provides a report of the dispatch results which incorporates all the actual dispatched generation, actual demand and other significant events that occurred during the previous trading day which had impact on market results.	1.1.13 After the trading day, the System Operator provides a report of the dispatch results which incorporates all the actual dispatched generation, actual demand and other significant events that occurred during the previous trading day which had impact on market results.	Deleted clause is also provided and described in detail in Section 14 (Post-dispatch Data and Operation Reports).
Overview of WESM Operations	1.1	1.1.14 WESM Rules Chapter 3 provides for the guidelines and procedures relevant to the various processes for the operation of the WESM, including, submission of bids, offers and data; provision of ancillary services; preparation of week ahead and day ahead projections; and scheduling and dispatch. Chapter 6, meanwhile, provides for the rules and procedures that will be followed during market suspension and intervention.	1.1.14 WESM Rules Chapter 3 provides for the guidelines and procedures relevant to the various processes for the operation of the WESM, including, submission of bids, offers and data; provision of ancillary services; preparation of week ahead and day ahead projections; and scheduling and dispatch. Chapter 6, meanwhile, provides for the rules and procedures that will be followed during market suspension and intervention.	<ul style="list-style-type: none"> • Deletion of redundant clause • Second sentence is covered in the Section 1.3 (Scope)

Title	Section	Provision	Proposed Amendment	Rationale
Overview of WESM Operations	1.1	NEW	<u>1.1.5. The Market Operator likewise uses the MDOM to provide pre-dispatch market projections to provide sufficient information to the System Operator and the Trading Participants for planning purposes.</u>	In addition to Section 1.1.2, the MDOM also provides the market projections, aside from the real-time dispatch.
Overview of WESM Operations	1.1	NEW	<u>1.1.6. The following figure shows an overview of the operational arrangements between the System Operator, Market Operator, and Trading Participants.</u> <u>Figure 1. Overview of WESM Operations</u> (See Attachment 1 – Figure in Section 1)	Enhanced Figure 1 to show the provision of real-time data and security constraints from the System Operator.
Purpose	1.2.1	This Dispatch Protocol aims to define the delineation of the functions and responsibilities between the Market Operator and the System Operator in respect to dispatch scheduling and implementation in the WESM.	xxx	
Purpose	1.2.2	More specifically, the objectives of this Dispatch Protocol are – a) Establish the WESM timetable as provided for in WESM Rules Clauses 3.4.2 and 10.4.8.1; and	More specifically, the objectives of this Dispatch Protocol are – <u>to:</u> a.) Establish the WESM timetable as provided for in WESM Rules Clauses 3.4.2 and 10.4.8.1 ; and b.) Establish the scheduling and dispatch procedures during normal system conditions and during emergency conditions that are consistent with the WESM timetable and the features of the Market Management System (<u>MMS</u>). The procedures for emergency conditions include those that will apply during market suspension and restoration.	<ul style="list-style-type: none"> • Removed reference to the pre-WESM transitory provision under the WESM Rules Section 10. • Clerical revisions.
Scope	1.3	1.3.1 This Dispatch Protocol covers the procedures for dispatch scheduling and	<u>1.3.1 In accordance with WESM Rules Chapters 3 and 6, This this Dispatch</u>	<ul style="list-style-type: none"> • Provide WESM Rules references

Title	Section	Provision	Proposed Amendment	Rationale
		<p>implementation during normal system conditions and during emergency conditions. The procedures on energy metering, billing and settlements, as well as that involving fund administration, are not covered in this Dispatch Protocol</p>	<p>Protocol covers the <u>following</u> procedures for dispatch scheduling and implementation during normal system conditions and during emergency conditions:-</p> <ul style="list-style-type: none"> <u>a. Submission and processing of bids and offers;</u> <u>b. System Operator data inputs and reports;</u> <u>c. Market projections;</u> <u>d. RTD scheduling;</u> <u>e. Preparation and use of the WESM Merit Order Table (WMOT);</u> <u>f. Dispatch implementation;</u> <u>g. Start-up and shutdown of generating units;</u> <u>h. Management of must-run units (MRU);</u> <u>i. Management of excess generation;</u> <u>j. Scheduling and dispatch of reserves;</u> <u>k. Post-dispatch reporting; and</u> <u>l. Procedures during market intervention and market suspension.</u> <p><u>1.3.2 Procedures for load forecasting and management of load shedding shall be covered in the Load Forecasting Methodology Manual and the Management Procedure for Load Shedding Manual respectively. Procedures for the actions to be taken by WESM Participants and Market Operator at the direction of the System Operator to maintain system security shall be covered in the Emergency Procedures Manual.</u></p>	<ul style="list-style-type: none"> • Provide the list of procedures covered and not covered under this Market Manual, which was originally provided in Section 5.2. • Clerical revisions • Renumbering

Title	Section	Provision	Proposed Amendment	Rationale
			The procedures on energy metering, billing and settlements, as well as that involving fund administration, are not shall be covered in this Dispatch Protocol <u>the Metering Standards and Procedures Manual, and Billing and Settlements Manual, respectively.</u>	
		1.3.2 This Dispatch Protocol shall apply to the Market Operator, the System Operator and all WESM members, including intending WESM members, and participants in the electric power industry.	1.3.2 This Dispatch Protocol shall apply to the Market Operator, the System Operator and all WESM members, including intending WESM members, and participants in the electric power industry.	Already a given.
		1.3.3 This Dispatch Protocol shall apply in the grids where the WESM is in operation.	1.3.3 This Dispatch Protocol shall apply in the grids where the WESM is in operation.	Already a given.
Definitions, References and Interpretation	2			
Definitions	2.1.1	Unless otherwise defined in the Glossary of this document or unless the context provides otherwise, all terms used in this Dispatch Protocol that are defined in the WESM Rules shall take the meaning as so defined in the WESM Rules.	Unless otherwise defined in the Glossary of this document section or unless the context provides otherwise, all the italicized terms used in this Dispatch Protocol that are <u>Market Manual shall bear the same meaning as</u> defined in the WESM Rules shall take the meaning as so defined in the WESM Rules.	
Glossary of Terms and Abbreviations	18	SECTION 18 Glossary of Terms and Abbreviations	SECTION 18 Glossary of Terms and Abbreviations <u>2.1.2 The following words and phrases as used in this Market Manual shall have the following meaning –</u>	
		AGC. xxx	AGC. xxx	Already defined in the WESM Rules
		Ancillary Services Provider. xxx	Ancillary Services Provider. xxx	
		Availability. xxx	<u>a.</u> Availability. xxx	Renumbering

Title	Section	Provision	Proposed Amendment	Rationale
		Bid. xxx	b. Bid. xxx	
		Capability. xxx	c. Capability. xxx	
		Contingency. xxx	d. Contingency. xxx	
		Dispatch Load. xxx	Dispatch Load. xxx	Already defined in the WESM Rules
		Emergency State. xxx	Emergency State. xxx	
		Generator. xxx	e. Generator. xxx	Renumbering
		Market Intervention. Xxx	Market Intervention. xxx	Already defined in the WESM Rules
		Manual Load Dropping. xxx	Manual Load Dropping. xxx	Not used in the DP
		NEW	<u>f. Market Management System (MMS). The infrastructure that supports the operations of the WESM and which includes functionalities that support the processes set out in this Market Manual.</u>	Same definition under the Load Forecasting Manual.
		Maximum available capacity. Maximum available capacity is equal to the registered maximum capacity (Pmax) of the (aggregate) unit less forced unit outages, scheduled unit outages, de-rated capacity due to weather disturbance and technical constraints. For co-generation systems, the maximum available capacity is equal to the registered maximum capacity (Pmax) of the (aggregate) unit less forced outages, scheduled unit outages, de-rated capacity due to thermal energy extraction by the energy host and due to technical constraints.	<u>g.</u> Maximum available capacity. Maximum available capacity is Equal equal to the registered maximum capacity (Pmax) of the (aggregate) unit less forced unit outages, scheduled unit outages, de-rated capacity due to <u>technical constraints and</u> weather disturbance and technical constraints <u>that causes damage to the unit or that would otherwise limit its ability to inject power to the grid.</u> For co-generation systems, the maximum available capacity is equal to the registered maximum capacity (Pmax) of the (aggregate) unit less forced outages, <u>determined by taking into account the equivalent power of the</u> thermal energy extraction by the energy host and due to technical constraints.	<ul style="list-style-type: none"> • Clarifications to facilitate the monitoring of maximum available capacity • Clerical revision • Renumbering
		Merit Order Table (MOT). The list showing the offered capacities, arranged by offer blocks,	h. Merit Order Table (MOT). The list showing the offered capacities, arranged by offer	WMOT is already defined in the WESM Rules.

Title	Section	Provision	Proposed Amendment	Rationale
		<p>of scheduled generating units arranged in descending order such that the lowest-priced offer block is on top of the list, and includes the list of non-scheduled generating units with the latter considered as price takers and are, therefore, included at the top of the list.</p> <p>This is not the same as the real-time dispatch schedule or dispatch targets or target loading levels as these terms are defined in the WESM Rules.</p>	<p>blocks, of scheduled generating units arranged in descending order such that the lowest-priced offer block is on top of the list, and includes the list of non-scheduled generating units with the latter considered as price takers and are, therefore, included at the top of the list.</p> <p>This is not the same as the real-time dispatch schedule or dispatch targets or target loading levels as these terms are defined in the WESM Rules.</p>	
		MMS-Market Participant Interface (MPI). It is a user terminal where Trading Participants can submit bids and offers as well as retrieve or receive information on WESM operations.	h. h. MMS-Market Participant Interface (MPI). It is a Refers to the user terminal where Trading Participants can submit bids and offers as well as retrieve or receive information on WESM operations, further described in Section 5.	Clerical revision
		Normal State. xxx	Normal State. xxx	Already defined in the WESM Rules
		Offer. xxx	i. i. Offer. xxx	Renumbering
		Pre-Dispatch Market Projection. Xxx	Pre-Dispatch Market Projection. xxx	Market projection is already defined under the WESM Rules
		Preferential Dispatch Units. Scheduled generating units and priority dispatch generating units.	j. j. Preferential Dispatch Units. Scheduled Must dispatch generating units and priority dispatch generating units.	<ul style="list-style-type: none"> • Correction in the definition • Renumbering
		Projected Output. xxx	k. k. Projected Output. xxx	Renumbering
		Projection. A set of results derived in accordance with Clause 3.7 of the WESM Rules from a series of market dispatch optimization model runs describing projected market conditions over a day-ahead or week-ahead market horizon for a particular scenario	Projection. A set of results derived in accordance with Clause 3.7 of the WESM Rules from a series of market dispatch optimization model runs describing projected market conditions over a day-ahead or week-ahead market horizon for a particular scenario	Already defined in the WESM Rules

Title	Section	Provision	Proposed Amendment	Rationale
		of net forecast load, and set of assumptions with respect to availability of key system elements.	of net forecast load, and set of assumptions with respect to availability of key system elements.	
		Publish. Means, in respect of a document or information, to place that document or information on the MO's web site, and publication shall be interpreted accordingly.	Publish. Means, in respect of a document or information, to place that document or information on the MO's web site, and publication shall be interpreted accordingly.	
		Real Time Dispatch. xxx	<u>I.</u> Real Time Dispatch. xxx	
		Real Time Energy Market. xxx	<u>m.</u> Real Time Energy Market. xxx	Renumbering
		Real Time Ex-post. Otherwise known as RTX. It is a real time dispatch schedule process performed at the end of a trading interval utilizing actual operations data. The RTX calculates the Ex-post Nodal Prices.	Real Time Ex-post. Otherwise known as RTX. It is a real time dispatch schedule process performed at the end of a trading interval utilizing actual operations data. The RTX calculates the Ex-post Nodal Prices.	In accordance with DOE DC 2015-010-0015.
		NEW	<u>n. Self-scheduled nomination. Nominations of loading levels by Non-Scheduled Generation Companies and projected outputs of Generation Companies with must dispatch generating units and priority dispatch generating units.</u>	Provide generic term for nominations by non-scheduled generation companies and projected outputs of must-dispatch and priority dispatch generating units.
		Shutdown. xxx	<u>o.</u> Shutdown. xxx	Renumbering
		System Operator System Advisories. xxx	<u>p.</u> System Operator System Advisories. xxx	
		Start-up. xxx	<u>q.</u> Start-up. xxx	
		System Snapshot. xxx	<u>r.</u> System Snapshot. xxx	
		Technical Constraint. Refers to plant equipment-related failure, fuel quality and ambient temperature. For hydro plants, this includes capacity limitation due to water elevation and Water Code/Rule Curve restrictions. For geothermal plants, this includes capacity limitation due to steam quality (chemical composition, condensable and non-condensable gases, steam pressure	<u>s.</u> Technical Constraint. Refers to plant equipment-related failure, fuel quality and effects of ambient temperature and resource-related constraints due to the following: (a). For hydro plants, this includes capacity limitation due to water elevation and Water Code/Rule Curve restrictions diversion requirements for domestic or irrigation use for hydro plants; (b). For geothermal	<ul style="list-style-type: none"> • Clarifications to facilitate the monitoring of maximum available capacity • Clerical revision • Renumbering

Title	Section	Provision	Proposed Amendment	Rationale
		and temperature). For co-generation systems, this pertains to steam flow limitations, station load, and electricity demand of its energy host.	plants, this includes capacity limitation due to steam quality (chemical composition, condensable and non-condensable gases, steam pressure and temperature) <u>for geothermal plants; (c) unavailability of fuel resources that are not within the control of the Generation Company for biomass power plants; and (d).</u> For co-generation systems, this pertains to steam flow limitations, station load, and electricity demand of its energy host, <u>in the case of the co-generation systems.</u>	
References	2.2	2.2.1 This Dispatch Protocol should be read in association with Chapter 3 and Chapter 6 of the WESM Rules and other Market Manuals, including but not limited to the reference documents listed in the Reference Documents table. Other references are also stated in relevant sections of this Dispatch Protocol.	2-2.4 This Dispatch Protocol should be read in association with Chapter 3 and Chapter 6 of the WESM Rules and other Market Manuals, including but not limited to the reference documents listed in the Reference Documents table. Other references are also stated in relevant sections of this Dispatch Protocol.	Deletion of paragraph number since there is no other paragraph in this sub-section.
Interpretation	2.3	2.3.1 The rules on interpretation set out in Chapter 9 of the WESM Rules, as these may be amended from time to time, shall govern the interpretation of this Dispatch Protocol.	2-3.4 The rules on interpretation set out in Chapter 9 of the WESM Rules, as these may be amended from time to time, shall govern the interpretation of this Dispatch Protocol.	
Responsibilities	3			
Market Operator	3.1.1	The Market Operator is responsible for the administration of the Wholesale Electricity Spot Market (WESM) in accordance with the WESM Rules. Among other functions, it is responsible for determining the dispatch schedule of all facilities in the WESM, which schedule shall be submitted to the System Operator (WESM Rules Clause 1.3.1).	The Market Operator is responsible for the administration of the Wholesale Electricity Spot Market (WESM) in accordance with the WESM Rules. Among other functions, it is responsible for determining the dispatch schedule of all facilities in the WESM, which schedule shall be submitted to the System Operator ¹ (WESM Rules Clause 1.3.1). <i>Footnote 1: <u>WESM Rules Clause 1.3.1</u></i>	Clerical revisions

Title	Section	Provision	Proposed Amendment	Rationale
Market Operator	3.1.3	The Market Operator is responsible for the development of Procedures, Processes and Systems relevant to its functions contained in this Market Manual as well as the regular review of this Manual to ensure consistency with the WESM Rules.	The Market Operator is responsible for the development of Procedures procedures , Processes processes and Systems systems relevant to its functions contained in this Market Manual as well as the regular review of this Market Manual to ensure consistency with the WESM Rules.	Clerical revisions
System Operator	3.2.1	The System Operator shall be responsible for the implementation of the dispatch schedule as provided by the Market Operator on an hourly basis and shall operate the power system in accordance with the WESM Rules, the Grid Code and other related rules in relation to the security and reliability guidelines. Its primary responsibilities include providing central dispatch to all generation facilities and loads connected, directly and indirectly, to the transmission system in accordance with the dispatch schedule submitted by the Market Operator (WESM Rules clause 1.3.3).	The System Operator shall be responsible for the implementation of the dispatch schedule as provided by the Market Operator on an hourly basis and shall operate the power system in accordance with the WESM Rules, the Grid Code and other related rules in relation to the security and reliability guidelines. Its primary responsibilities include providing central dispatch to all generation facilities and loads connected, directly and indirectly, to the transmission system in accordance with the dispatch schedule submitted by the Market Operator ² (WESM Rules clause 1.3.3). <i>Footnote 2: WESM Rules Clause 1.3.3</i>	Dispatch schedules and the MOT shall be provided by the MO every dispatch interval.
System Operator	3.2.3	The System Operator is responsible for the development of Procedures, Processes and Systems relevant to its functions contained in this Market Manual. Also, the System Operator shall regularly review its internal processes to ensure consistency with this manual.	The System Operator is responsible for the development of Procedures procedures , Processes processes and Systems systems relevant to its functions contained in this Market Manual. Also, the System Operator shall regularly review its internal processes to ensure consistency with this manual Market Manual .	Clerical revisions.
Trading Participants and other	3.3.2	Pursuant to WESM Rules Clause 2.3.1.7, scheduled Generation Companies are required to operate their scheduled generating units in accordance with the	Pursuant to WESM Rules Clause 2.3.1.7, Scheduled scheduled Generation Companies are required to operate their scheduled generating units in accordance with the	Clerical revisions

Title	Section	Provision	Proposed Amendment	Rationale
WESM Members		scheduling and dispatch procedures described in Chapter 3 of the WESM Rules. Among the scheduling and dispatch procedures referred to are set out in more detail in this Dispatch Protocol.	scheduling and dispatch procedures described in Chapter 3 of the WESM Rules ³ . Among the scheduling and dispatch procedures referred to are set out in more detail in this Dispatch Protocol. <i>Footnote 3: WESM Rules Clause 2.3.1.8</i>	
Trading Participants and other WESM Members	3.3.3	Trading Participants are responsible for the actions of any person or entity acting for or in their behalf, as such actions are considered the actions of the Trading Participant, pursuant to WESM Rules Clause 7.2.6.	Trading Participants are responsible for the actions of any person or entity acting for or in their behalf, as such actions are considered the actions of the Trading Participant ⁴ , pursuant to WESM Rules Clause 7.2.6. <i>Footnote 3: WESM Rules Clause 7.2.6</i>	Clerical revisions
WESM Timetable	4			
Background	4.1.1	WESM Rules Clause 3.4.2.1 requires that the Market Operator shall operate the spot market in accordance with the timetable. The timetable is to be maintained, published and continuously updated by the Market Operator, as directed in WESM Rules Clause 3.4.2.3. WESM Rules Clause 3.4.2.4 further directs that changes on the timetable and related procedures shall be approved by the DOE in accordance with the rules change process set out in Chapter 8 of the WESM Rules.	WESM Rules Clause 3.4.2.1 3.4.3.1 requires that the Market Operator shall operate the spot market in accordance with the timetable. The timetable is to be maintained, published and continuously updated by the Market Operator, as directed in WESM Rules Clause 3.4.2.3 3.4.3.3 . WESM Rules Clause 3.4.2.4 3.4.3.4 further directs that changes on the timetable and related procedures shall be approved by the DOE in accordance with the rules change process set out in Chapter 8 of the WESM Rules.	Updated references to WESM Rules, as amended by DOE DC 2016-10-0014.
Background	4.1.2	The schedules and procedures for the following processes are required, under WESM Rules clause 3.4.2.2, to be included in the WESM timetable –	The schedules and procedures for the following processes are required, under WESM Rules clause 3.4.2.2 3.4.3.2 , to be included in the WESM timetable –	Included hour-ahead projections

Title	Section	Provision	Proposed Amendment	Rationale
		a) Determining and publishing week-ahead projections including the precise specification of the market horizon to be used for such projections; b) Determining and publishing day-ahead projections including precise specification of the market horizon to be used for such projections; c) Submitting offers, bids and data; and d) If necessary, for any other action to be taken by the Market Operator, the System Operator or any WESM Member during the operation of the spot market.	a) Determining and publishing week-ahead projections including the precise specification of the market horizon to be used for such projections; b) Determining and publishing day-ahead projections including precise specification of the market horizon to be used for such projections; c) <u>Determining and publishing hour ahead projections for each dispatch interval including precise specification of the market horizon to be used for such projections;</u> d) Submitting offers, bids and data; and e) <u>Determining and publishing load forecasts, real time dispatch schedules, and market prices; and</u> f) If necessary, for any other action to be taken by the Market Operator, the System Operator or any WESM Member during the operation of the spot market.	
Scope of the WESM Timetable	4.2.1	The WESM Timetable is the overall schedule of market activities under different time frames of operations as embodied in the WESM Rules. These activities are presented in the timetable in four (4) different but inter-related time frames, as follows - a) Week-Ahead Market Projection (WAP) b) Day-Ahead Market Projection (DAP) c) Real-Time Dispatch (Hour-Ahead) Schedule (RTD) d) Real-Time Ex-Post Dispatch Schedule (RTX)	The WESM Timetable is the overall schedule of market activities under different time frames of operations as embodied in the WESM Rules. These activities are presented in the timetable in four (4) different but inter-related time frames, as follows - a) Week-Ahead Market Projection (WAP) b) Day-Ahead Market Projection (DAP) c) <u>Hour-Ahead Projection (HAP)</u> d) Real-Time Dispatch (Hour-Ahead) Schedule (RTD) e) Real-Time Ex-Post Dispatch Schedule (RTX)	Included hour ahead projections

Title	Section	Provision	Proposed Amendment	Rationale
Scope of the WESM Timetable	4.2.2	The market horizon covered by each activity is presented in the following table as the period covered.	The market horizon covered by each activity is presented in the following table as the period covered.	See Section 4.3.1, as proposed to be amended
Week-Ahead Market Projection (WAP)	4.3	Week-Ahead Market Projection (WAP) WAP Table (See Attachment 2 – Tables/Figures in Section 4)	Week-Ahead Market Projection (WAP) WAP Table	Updated the table in Section 4.3.1
		NEW	<p><u>4.3.1 WAP is executed daily and covers the hourly intervals starting from the next day (D+1) until the seventh day from Day “D” (D+7).</u></p> <p><u>4.3.2 The following activities shall be performed for the WAP, within the time specified, using inputs for the covered study period of that specific WAP run:</u></p> <p><u>Table 1 and Figure 2 WAP Timeline</u> (See Attachment 2 – Tables/Figures in Section 4)</p>	Revised for clarity. Timelines are illustrated more clearly.
Day-Ahead Market Projection (DAP)	4.4.1	The Day-Ahead Projection market runs shall be executed at the following time of the day, represented as “T” in the following timetable – DAP Table (See Attachment 2 – Tables/Figures in Section 4)	<p>The Day-Ahead Projection market runs shall be <u>DAP is</u> executed at the following time of the day, represented as “T” in the following timetable – <u>every hour and covers the hourly intervals starting from the current hour of the current day until either 2400H of the same day (for DAP runs before 12:00 NN) or 2400H of the next day (for DAP runs starting at 12:00 NN).</u></p> <p>DAP Table</p>	Revised based on new design of hourly DAP run. Timelines are illustrated more clearly.
Day-Ahead Market	4.4.2	The DAP timetable is presented in the following table –	<u>The following activities shall be performed for the DAP, within the time specified, using inputs for the covered study period</u>	Revised for clarity. Timelines are illustrated more clearly.

Title	Section	Provision	Proposed Amendment	Rationale
Projection (DAP)		DAP Table (See Attachment 2 – Tables/Figures in Section 4)	of that specific DAP run: The DAP timetable is presented in the following table— DAP Table Table 2. and Figure 3. DAP Timeline (See Attachment 2 – Tables/Figures in Section 4)	
			4.5 Hour-Ahead Projection (HAP) <u>4.5.1 HAP is executed at the same frequency as the RTD in Section 4.6, and covers all dispatch intervals in one hour, starting from the next dispatch interval.</u> <u>4.5.2 The following activities shall be performed for the HAP, within the time specified, using inputs for the covered study period of that specific HAP run.</u> <u>Table 3.</u> and <u>Figure 4 HAP Timeline</u> (See Attachment 2 – Tables/Figures in Section 4)	New provision for hour-ahead projection as prescribed in the WESM Rules
Real-Time Dispatch Schedule (RTD) or Hour-Ahead Schedule	4.5	RTD Table (See Attachment 2 – Tables/Figures in Section 4)	<u>4.6.1 RTD runs produce results for each dispatch interval.</u> <u>4.6.2 The following activities shall be performed for the RTD, within the time specified, using inputs for the covered study period of that specific RTD run:</u> RTD Table Table 4 and Figure 5 (See Attachment 2 – Tables/Figures in Section 4)	Revised to reflect frequency of execution. Timelines are illustrated more clearly.
Real-Time Ex-post Dispatch	4.6	4.6 Real-Time Ex-post Dispatch (RTX) Schedule Table (See Attachment 2 – Tables/Figures in Section 4)	4.6 Real-Time Ex-post Dispatch (RTX) Schedule Table	Consistent with enhancement to market design of having 5-minute dispatch intervals,

Title	Section	Provision	Proposed Amendment	Rationale
(RTX) Schedule				ex-ante only and no ex-post
Market Operations Procedures and Infrastructure	5	Market Operations Procedures and Infrastructure	Market Operations Procedures and Infrastructure	Revised to a new section that contains descriptions of the major parts of the Market Management System.
Background	5.1.1	<p>5.1.1 In addition to schedules, the timetable that WESM Rules Clause 3.4.2 requires to be maintained, published and continuously updated, shall also include procedures that are to be followed in carrying out the various market operations processes. These processes include the following –</p> <p>a) Determining and publishing week-ahead projections including the precise specification of the market horizon to be used for such projections;</p> <p>b) Determining and publishing day-ahead projections including precise specification of the market horizon to be used for such projections;</p> <p>c) Submitting offers, bids and data.</p>	<p>5.1.1 In addition to schedules, the timetable that WESM Rules Clause 3.4.2 requires to be maintained, published and continuously updated, shall also include procedures that are to be followed in carrying out the various market operations processes. These processes include the following –</p> <p>a) Determining and publishing week-ahead projections including the precise specification of the market horizon to be used for such projections;</p> <p>b) Determining and publishing day-ahead projections including precise specification of the market horizon to be used for such projections;</p> <p>c) Submitting offers, bids and data.</p>	Provision already covered in Section 4 (Timetable)
Background	5.1.2	<p>5.1.2 In addition to the foregoing processes, there are also other activities and processes carried out in the WESM for which schedules and procedures need to be maintained. These include, but are not limited to, the –</p> <p>a) Procedures pertaining to the scheduling of reserves that are traded in the WESM and monitoring of reserves provision, in accordance with Chapter 3 of the WESM Rules; and</p>	<p>5.1.2 In addition to the foregoing processes, there are also other activities and processes carried out in the WESM for which schedules and procedures need to be maintained. These include, but are not limited to, the –</p> <p>a) Procedures pertaining to the scheduling of reserves that are traded in the WESM and monitoring of reserves provision, in accordance with Chapter 3 of the WESM Rules; and</p>	Already covered in the Scope

Title	Section	Provision	Proposed Amendment	Rationale
		b) Procedures that are to be followed by the Market Operator, the System Operator and WESM Participants in an emergency and in the event of a threat to system security, in accordance with Chapter 6 of the WESM Rules.	b) Procedures that are to be followed by the Market Operator, the System Operator and WESM Participants in an emergency and in the event of a threat to system security, in accordance with Chapter 6 of the WESM Rules.	
Scheduling and Dispatch Procedures	5.2.1	5.2.1 The procedures pertaining to scheduling and dispatch that are to be followed in the WESM are set out in this Dispatch Protocol and other market manuals approved for implementation in the WESM.	5.2.1 The procedures pertaining to scheduling and dispatch that are to be followed in the WESM are set out in this Dispatch Protocol and other market manuals approved for implementation in the WESM.	Already covered in the Scope
Scheduling and Dispatch Procedures	5.2.2	5.2.2 The following table contains a non-exhaustive list of the various procedures that are being maintained and indicates if the procedure is contained in this Dispatch Protocol or in other market manuals. Other procedures may be formulated and listed procedures may be modified or superseded from time to time, following relevant amendatory processes, without need of amending this list – Table (See Attachment 3 – Tables in Section 5)	5.2.2 The following table contains a non-exhaustive list of the various procedures that are being maintained and indicates if the procedure is contained in this Dispatch Protocol or in other market manuals. Other procedures may be formulated and listed procedures may be modified or superseded from time to time, following relevant amendatory processes, without need of amending this list – Table	Already covered in the Scope
Market Infrastructure	5.3.1	5.3.1 The pre-dispatch projection and real-time dispatch market runs described in this Dispatch Protocol shall be carried out using the Market Management System, which is the infrastructure that supports the operations of the WESM. The MMS contains the Market Dispatch Optimization Model (MDOM) that will be used for determining week-ahead and day-ahead projections and the real-time dispatch schedules and prices.	5.3.1 5.1.1 The pre-dispatch market projections and real-time dispatch market runs described in this Dispatch Protocol shall be carried out using the Market Management System, which is the infrastructure that supports the operations of the WESM. 5.1.2 The MMS contains the Market Dispatch Optimization Model (MDOM) that will be used for determining week-ahead, and day-ahead, and hour-ahead projections and the real-time	Revised for clarity

Title	Section	Provision	Proposed Amendment	Rationale
			<p>dispatch schedules and prices <u>market runs make use of the Market Dispatch Optimization Model (MDOM), where all inputs coming from the Trading Participants, the System Operator, and the Market Operator are retrieved to produce a solution according to the principles set forth in the Price Determination Methodology Manual.</u></p> <p><u>5.1.3 The Market Operator's MMS shall obtain real-time data from the System Operator's Energy Management System (EMS) through a data exchange facility.</u></p>	
Market Infrastructure	5.3.2	5.3.2 Submissions and transmittal of data or information between the Market Operator and the System Operator shall be through a data exchange facility that supports data exchange between the MMS and the Energy Management System (EMS) of the System Operator. Unless otherwise provided, submissions and transmittal of data between the System Operator and the Market Operator shall be through this data exchange facility.	<p>5.3.2 Submissions and transmittal of data or information between the Market Operator and the System Operator shall be through a data exchange facility that supports data exchange between the MMS and the Energy Management System (EMS) of the System Operator. Unless otherwise provided, submissions and transmittal of data between the System Operator and the Market Operator shall be through this data exchange facility.</p> <p><u>5.1.4 Other submissions</u></p>	Revised based on design of new MMS
Market Infrastructure	5.3.3	5.3.3 The MMS includes the Market Participant Interface (MPI) to and from which the Trading Participants submit required data to the Market Operator and access data on market results, advisories and other information notified and published to it in accordance with this Dispatch Protocol.	<p>5.3.3 <u>5.1.5</u> The MMS includes the Market Participant Interface (MPI) to and from which the Trading Participants submit required data to the Market Operator and access data on market results, advisories and other information notified and published to it in accordance with this Dispatch Protocol.</p> <p><u>5.1.6 The Market Operator's MMS involves a variety of other energy</u></p>	Revised based on design of new MMS

Title	Section	Provision	Proposed Amendment	Rationale
			<u>management and market applications to further increase the efficiency in WESM's operations.</u>	
Market Infrastructure	5.3.4	5.3.4 Other publications required by this Dispatch Protocol are made available in the market information website, which includes a portal accessible only to registered WESM members.	5.3.4 Other publications required by this Dispatch Protocol are made available in the market information website, which includes a portal accessible only to registered WESM members.	MPI is described in Section 5.3
			<u>5.1.7 The following figure shows an overall picture of the major applications within the MMS.</u> <u>Figure 6. Overview of MMS' Infrastructure</u> (See Attachment 3 – Tables in Section 5)	New provisions to describe major components of the new MMS
			<u>5.2 Overview on the Energy Management Applications</u> <u>5.2.1 The Market Operator shall regularly obtain real-time data from the System Operator at a shorter duration than the dispatch interval through an Inter-Control Center Communications Protocol (ICCP).</u> <u>5.2.2 The Market Operator may then use an application to generate state-estimated values from the real-time data obtained from the System Operator. State estimation aims to provide a more accurate representation of the current state of the power system. State-estimated values are eventually used by the hour-ahead projection and real-time dispatch.</u> <u>5.2.3 The System Operator shall also submit their security constraint inputs to</u>	New provisions to describe major components of the new MMS, particularly those that management real-time data

Title	Section	Provision	Proposed Amendment	Rationale
			<p><u>the MDOM via the Current Operating Plan, which is based on web services that facilitates a more efficient means of transferring data to the Market Operator.</u></p> <p><u>5.2.4 The Market Operator shall maintain a load forecasting application that will create load forecasts for the market projections and the real-time dispatch.</u></p>	
			<p><u>5.3 Overview on the Market Applications</u></p> <p><u>5.3.1 Trading Participants shall submit self-scheduled nominations, bids, and offers through the Market Participant Interface (MPI). The MPI also provides user interfaces for accessing market results, reports, and information concerning their real-time status in accordance with the dispatch conformance standards.</u></p> <p><u>5.3.2 The Market Applications generate results for the market projections and the real-time dispatch in accordance with the WESM Timetable.</u></p> <p><u>5.3.3 The results of the market projections and the real-time dispatch are obtained using the Market Dispatch Optimization Model (MDOM).</u></p> <p><u>5.3.4 The results of the real-time dispatch are further subject to pricing corrections</u></p>	<p>New provisions to describe major components of the new MMS, especially the MPI, MDOM runs, and Post-Market Run Calculations</p>

Title	Section	Provision	Proposed Amendment	Rationale
			<p><u>near real-time using the application for post-market run calculations.</u></p> <p><u>5.3.5 The Market Operator shall also maintain a facility for monitoring the compliance of Trading Participants to the dispatch conformance standards.</u></p>	
Bids, Offers and Data Submission and Processing	6			
Background	6.1.1	WESM Rules section 3.5 provides for the rules in respect of the submission of generation offers. Under said section, each scheduled generation company including those with bilateral contracts shall submit standing generation offers for each of its scheduled generating units for each trading interval of each trading day. Non-scheduled generation companies, meanwhile, shall submit a standing schedule of the loading levels for each of its non-scheduled generating units, while generation companies in respect of their must dispatch generating units and priority dispatch generating units shall submit standing projected outputs of their generating units.	WESM Rules section Clause 3.5 provides for the rules in respect of the submission of generation offers. Under said section, each scheduled generation company including those with bilateral contracts shall submit standing profiles of generation offers for each of its scheduled generating units for each one (1) hour trading interval of each trading day . Non-scheduled generation companies, meanwhile, shall submit a standing profiles of the schedule of the loading levels for each of its non-scheduled generating units, while generation companies in respect of their must dispatch generating units and priority dispatch generating units shall submit standing projected outputs of their generating units.	Revised for clarity. Offers/Bids are still hourly
Background	6.1.2	Qualified customers or those registered by the Market Operator as dispatchable load may submit standing demand bids in respect of each trading interval for each of its registered scheduled load facilities for each trading day of the week in accordance with the timetable.	Qualified customers or those registered by the Market Operator as dispatchable load may submit standing profiles of demand bids in respect of each one (1) hour trading interval for each of its registered scheduled load facilities for each trading day of the week in	Revised for clarity. Offers/Bids are still hourly

Title	Section	Provision	Proposed Amendment	Rationale
		Submission of demand bids are provided for in WESM Rules Clause 3.5.6.	accordance with the timetable. Submission of demand bids are provided for in WESM Rules Clause 3.5.6.	
Background	6.1.3	Upon commencement of the trading of reserves in the WESM, each scheduled generation company registered as an ancillary services provider shall submit reserve offers for each of its relevant reserve facilities in respect of a reserve region. Customers registered as ancillary services provider, meanwhile, may submit reserve offers for their interruptible load facilities. In either case, the submissions are made for each trading interval of each trading day. Submission of reserve offers are provided for in WESM Rules Clauses 3.5.7 and 3.5.8.	Each Upon commencement of the trading of reserves in the WESM, each scheduled generation company registered as an ancillary services provider shall submit <u>standing profiles of</u> reserve offers for each of its relevant reserve facilities in respect of a reserve region. Customers registered as ancillary services provider, meanwhile, may submit <u>standing profiles of</u> reserve offers for their interruptible load facilities. In either case, the submissions are made for each <u>one (1) hour</u> trading interval of each trading day. Submission of reserve offers are provided for in WESM Rules Clauses 3.5.7 and 3.5.8.	Revised for clarity. Offers/Bids are still hourly
			<u>6.1.4 Standing profiles of the self-scheduled nominations, bids and offers are converted to a daily working profile of the self-scheduled nominations, bids and offers. Such working profiles are used by the market projections and the real-time dispatch.</u>	New provision to clearly describe standing profiles for offers/bids, or nominations
Background	6.1.4	6.1.4 Revision of market offers and bids is provided for in WESM Rules Clause 3.5.11. Trading Participants may revise any of their nomination of loading levels, projected outputs, bids, and offers but the revisions must be made within the timetable set for submission of nomination of loading levels, projected outputs, bids, and offers. Some specific revisions are directed under the WESM Rules. WESM Rules Clause 3.5.11.2 directs generation companies that have	6.1.4 <u>6.1.5</u> Revision of <u>the standing and daily working profiles representing</u> market offers and bids is provided for in WESM Rules Clause 3.5.11. Trading Participants may revise any of their nomination of loading levels, projected outputs, bids, and offers but the revisions must be made within the timetable set for submission of nomination of loading levels, projected outputs, bids, and offers. Some specific revisions are directed under the WESM Rules <u>standing and daily</u>	Revised for clarity. Replaced trading interval with dispatch interval

Title	Section	Provision	Proposed Amendment	Rationale
		submitted a schedule of the loading levels of their non-scheduled generating units to revise the same if it reasonably expects that any of its anticipated loading levels will differ materially from those previously submitted. WESM Rules Clause 3.5.11.5 requires Trading Participants to revise their bids or offers if they no longer represent a reasonable estimate of either the expected availability for the trading interval of the relevant generating unit or scheduled load or the demands bids or offers likely to apply in the real-time dispatch optimization for the trading interval.	<p><u>working profiles representing self-scheduled nominations. Such revisions should take into consideration the Open Market Window and the timelines.</u></p> <p>6.1.6 WESM Rules Clause 3.5.11.2 directs generation companies that have submitted a schedule of the loading levels <u>self-scheduled nomination</u> of their non-scheduled generating units to revise the same if it reasonably expects that any of its anticipated loading levels will differ materially from those previously submitted.</p> <p>6.1.7 WESM Rules Clause 3.5.11.5 requires Trading Participants to revise their bids or offers if they no longer represent a reasonable estimate of either the expected availability for the trading <u>dispatch</u> interval of the relevant generating unit or scheduled load or the demands bids or offers likely to apply in the real-time dispatch optimization for the trading <u>dispatch</u> interval.</p>	
Background	6.1.5	6.1.5 Trading Participants that cancel their bids or offers, or submit bids or offers less than the registered capacity of their facility or generating unit are required to provide information on the reasons or circumstances of such cancellation or submission. This is pursuant to WESM Rules Clause 3.5.11.6.	6.1.5 6.1.8 Pursuant to WESM Rule Clause 3.5.11.6, Trading Participants that cancel their bids or offers, or submit bids or offers less than the registered capacity <u>or maximum available capacity</u> of their facility or generating unit are required to provide information on the reasons or circumstances of such cancellation or submission. This is pursuant to WESM Rules Clause 3.5.11.6.	Revised for clarity
Background	6.1.6	6.1.6 Trading Participants are also required to immediately notify the System Operator and the Market Operator of any circumstances	6.1.6 6.1.9 Trading Participants are also required to immediately notify the System Operator and the Market Operator of any	

Title	Section	Provision	Proposed Amendment	Rationale
		which threaten a significant probability of material adverse change in the state of their facilities. A non-exhaustive list of events that will be deemed to be or to cause material adverse change is required to be published. In compliance with the foregoing, a non-exhaustive list is included in this Section (6.16.3 of this manual). This is pursuant to WESM Rules Clause 3.5.11.7.	circumstances which threaten a significant probability of material adverse change in the state of their facilities. A non-exhaustive list of events that will be deemed to be or to cause material adverse change is required to be published. In compliance with the foregoing, a non-exhaustive list is included in this provided under Section 6.14 (6.16.3 of this Market Manual manual). This is pursuant to WESM Rules Clause 3.5.11.7 3.5.11.8 .	
Scope	6.2.1	This Section sets out the procedures for submitting, revising and processing bids, offers, and other data for energy and reserve in the WESM. Bids, offers, and other data submitted shall be used in the pre-dispatch market projections (i.e., day-ahead and week-ahead projections) and real time dispatch market runs.	This Section sets out the procedures for submitting, revising and processing bids, offers, and other data self-scheduled nominations for energy and reserve in the WESM. Bids, offers, and other data self-scheduled nominations submitted shall be used in the pre-dispatch market projections (i.e., hour-ahead , day-ahead and week-ahead projections) and real time dispatch market runs.	Revised for clarity. Used term self-scheduled to collectively call submissions that entail MW-quantity-only values.
Scope	6.2.2	The requirements and conditions for a valid cancellation of nomination of loading levels, projected outputs, bids, and offers are also set out in this Section.	The requirements and conditions for a valid cancellation of nomination of loading levels, projected outputs self-scheduled nominations , bids, and offers are also set out in this Section.	Used term self-scheduled to collectively call submissions that entail MW-quantity-only values.
Responsibilities	6.3.1	Trading Participants are responsible for timely submission of nomination of loading levels, projected outputs, bids, and offers and associated data submissions which are compliant with the requirements of the WESM Rules, this Dispatch Protocol and other relevant market manuals, as well as to the format and procedures required for submission to the Market Management System. They are also responsible for	Trading Participants are responsible for timely submission of nomination of loading levels, projected outputs self-scheduled nominations , bids, and offers and associated data submissions which are compliant with the requirements of the WESM Rules, this Dispatch Protocol and other relevant market manuals, as well as to the format and procedures required for submission to the Market Management System. They are also	Used term self-scheduled to collectively call submissions that entail MW-quantity-only values.

Title	Section	Provision	Proposed Amendment	Rationale
		ensuring that their facilities are able to access the Market Participant Interface of the MMS at all times.	responsible for ensuring that their facilities are able to access the Market Participant Interface of the MMS at all times.	
Responsibilities	6.3.2	The Market Operators shall maintain a Market Participant Interface (MPI) to which access to the Market Management System (MMS) is provided to the Trading Participants for the submission of nomination of loading levels, projected outputs, bids, and offers and other data requirements, and for accessing market data and reports.	The Market Operators shall maintain a Market Participant Interface (MPI) to through which access to the Market Management System (MMS) is provided to the Trading Participants for the submission of nomination of loading levels, projected outputs, bids, and offers and other data requirements, and for accessing market data and reports.	Deleted provisions to maintain consistency in use of statements.
Categories of Bids and Offers	6.4	6.4 Categories of Bids and Offers	6.4 Categories of <u>Self-Scheduled Nominations</u> , Bids and Offers	For completeness
Categories of Bids and Offers	6.4.1 6.4.2	<p>6.4.1 The nomination of loading levels, projected outputs, bids, and offers that can be submitted in the WESM are as follows -</p> <ul style="list-style-type: none"> a) Real Time Energy Offers for scheduled generating units of scheduled generation companies; b) Operating Reserves Offers for certified reserve providers; c) Demand Bids from customer trading participants; <p>6.4.2 Other related submissions are as follows –</p> <ul style="list-style-type: none"> a) Schedule of loading levels (i.e., energy quantities only) for non-scheduled generating units of non-scheduled generation companies; and b) Projected output (i.e., energy quantities only) of generation companies with must dispatch generating units and priority dispatch generating units 	<p>6.4.1 The nomination of loading levels, projected outputs <u>self-scheduled nominations</u>, bids, and offers that can be submitted in the WESM are as follows -</p> <ul style="list-style-type: none"> a) Real Time Energy <u>Generation</u> Offers for scheduled generating units of scheduled generation companies; b) Operating Reserves Offers for certified reserve <u>ancillary service</u> providers; c) Demand Bids from customer trading participants; <u>and</u> <u>d) Self-scheduled nominations</u> <p>6.4.2 Other related submissions are as follows—</p> <ul style="list-style-type: none"> a) <u>i.</u> Schedule of loading levels (i.e., energy quantities only) for non-scheduled generating units of non-scheduled generation companies; and b) <u>ii.</u> Projected output (i.e., energy quantities only) of generation companies with must 	Revised for clarity

Title	Section	Provision	Proposed Amendment	Rationale
			dispatch generating units and priority dispatch generating units	
Categories of Bids and Offers	6.4.3	6.4.3 For brevity, all references to “nomination of loading levels, projected outputs, bids, and offers” or “bids or offer” or “bids” in this Section shall also include submission of the schedule of loading levels of non-scheduled generating units, projected output of must dispatch generating units and priority dispatch generating units , and demand bids of customers, unless the context clearly provides otherwise.	6.4.3 For brevity, all references to “nomination of loading levels, projected outputs, bids, and offers” or “bids or offer” or “bids” in this Section shall also include submission of the schedule of loading levels of non-scheduled generating units, projected output of must dispatch generating units and priority dispatch generating units , and demand bids of customers, unless the context clearly provides otherwise.	Deleted to avoid repetitive provisions and avoid inconsistencies
Requirements for Bids/Offer s and Data Submissions	6.5	6.5 Requirements for Bids/Offer s and Data Submissions	6.5 Requirements for Self-scheduled Nominations, Bids, and /Offer s and Data Submissions	For completeness
Requirements for Bids/Offer s and Data Submissions	6.5.1	Each nomination of loading levels, projected outputs, bids, or offers is in respect of one (1) trading interval and of one (1) registered resource. Each nomination contains one entry for each resource owned or operated by the Trading Participant concerned. For example, if the trading participant has six registered resources, that trading participant will submit six (6) separate nominations of loading levels, projected outputs, bids, and offers, one for each registered resource; each submission with its own nominated price and energy quantities.	Each daily working profile representing a self-scheduled nominations of loading levels, projected outputs, bids, or offers is in respect of one (1) trading interval and of one (1) registered resource. Each nomination contains one entry for each resource owned or operated by the Trading Participant concerned. For example, if the trading participant has six registered resources, that trading participant will submit six (6) separate daily working profiles representing self-scheduled nominations of loading levels, projected outputs, bids, and offers, one for each registered resource; each submission with its own nominated price and energy quantities.	Revised for clarity
Requirements for	6.5.2	Each nomination of loading levels, projected outputs, bids, or offer s must be compliant	Each nomination of loading levels, projected outputs self-scheduled nomination , bids, or	Revised for clarity

Title	Section	Provision	Proposed Amendment	Rationale
Bids/Offers and Data Submissions		with and must contain the information required in Appendix A1 of the WESM Rules.	offers must be compliant with and must contain the information required in <u>Section 6.9 of this Market Manual</u> Appendix A1 of the WESM Rules.	
Requirements for Bids/Offers and Data Submissions	6.5.3	Each nomination of loading levels, projected outputs, bids, or offers can consist of a complete set or a subset of the nomination of loading levels, projected outputs, bids, and offers for the 24 trading intervals of a trading day and each of the 24 trading intervals can have different bid/offer data.	Each <u>daily working profile representing nomination of loading levels, projected outputs, bids, or offers can consist of a complete set or a subset of the nomination of loading levels, projected outputs, bids, and offers for the 24 trading</u> <u>hourly</u> intervals of a trading day, <u>wherein</u> and each of the 24 trading <u>hourly</u> intervals can have different <u>price curves</u> bid/offer data. <u>Price curves represent the Price and MW Quantity Pairs bid or offered for a certain resource</u>	Revised for clarity
			<u>6.5.4 Each daily working profile representing self-scheduled nominations can consist of a complete set or a subset of the self-scheduled nominations for all dispatch intervals of a trading day, wherein each dispatch interval can have different MW nominations.</u>	Added provision to provide more clarity in the submission of nominations
Requirements for Bids/Offers and Data Submissions	6.5.4	6.5.4 The nomination of loading levels, projected outputs, bids, and offers shall be submitted through the Market Participant Interface provided by the Market Operator in the format set out in this Section.	6.5.4 <u>6.5.5</u> The nomination of loading levels, projected outputs <u>self-scheduled nominations</u> , bids, and offers shall be submitted through the Market Participant Interface provided by the Market Operator in the format set out in this Section.	Revised for clarity
Requirements for Bids/Offers and Data Submissions	6.5.5	6.5.5 The nomination of loading levels, projected outputs, bids, or offers for a particular trading interval shall be submitted within the open market window and before the gate closure.	6.5.5 <u>6.5.6</u> The nomination of loading levels, projected outputs <u>Submissions or revisions to self-scheduled nominations</u> , bids, or offers for a particular trading <u>dispatch</u> interval shall be submitted within <u>consider</u> the <u>timelines set out in the WESM Timetable in Section 4, as well as the</u> open market	Revised for clarity

Title	Section	Provision	Proposed Amendment	Rationale
			window in Section 6.6 and before the gate closure.	
Requirements for Bids/Offers and Data Submissions	6.5.6	6.5.6 Each nomination of loading levels, projected outputs, bids, or offers submission or re-submission is validated against the validation rules set for that particular market window.	6.5.6. 6.5.7 Each <u>of the submitted or revised</u> nomination of loading levels, projected outputs self-scheduled nominations , bids, or offers submission or re-submission is validated against the validation rules set for that particular market window.	Revised for clarity
Open Market Window and Gate Closure Time	6.6	6.6 Open Market Window and Gate Closure Time	6.6 Open Market Window and Gate Closure Time	Removed Gate Closure
Open Market Window and Gate Closure Time	6.6.1	Open market window. The Open Market Window covers the period seven (7) days before and after the current date. The covered dates are the trading dates where nomination of loading levels, projected outputs, bids, or offers can be created, submitted, revised, canceled, or retrieved. Trading Participants can only submit nominations of loading levels, projected outputs, bids, or offers for trading intervals that are within the Open Market Window.	Open market window. The Open Market Window covers the <u>current day up until the next</u> period seven (7) days before and after the current date. The covered dates are the trading dates where nomination of loading levels, projected outputs self-scheduled nominations , bids, or offers can be created, submitted, revised, <u>or</u> canceled, or retrieved. Trading Participants can only submit nomination of loading levels, projected outputs self-scheduled nominations , bids, or offers for trading intervals <u>days</u> that are within the Open Market Window.	Revised for clarity
			6.6.2 Self-scheduled nominations, bids, or offers for the previous seven (7) days are made available so that it can be retrieved for re-use for trading days within the Open Market Window.	Added provision to provide more clarity on availability of submissions
Open Market Window and Gate Closure Time	6.6.2	6.6.2 Only nomination of loading levels, projected outputs, bids, or offers that passed validation ("valid" nomination of loading levels, projected outputs, bids, or offers) submitted	6.6.2 6.6.3 Only nomination of loading levels, projected outputs Self-scheduled nominations , bids, or offers that passed validation ("valid" nomination of loading levels,	Revised for clarity and consistency

Title	Section	Provision	Proposed Amendment	Rationale
		within the open market window can be cancelled, changed, or retrieved.	projected outputs <u>self-scheduled nominations</u> , bids, or offers) submitted within the open market window can be cancelled, changed, or retrieved.	
Open Market Window and Gate Closure Time	6.6.3	6.6.3 Gate closure. Gate closure time is the time before which nominations of loading levels, projected outputs, bids, or offers for a particular trading interval can be accepted. Gate closure is one (1) hour before the start of the trading interval (e.g., for the target trading interval 1000H, which starts at 0901H, the gate closure time is at 0800H).	6.6.3 Gate closure. Gate closure time is the time before which nominations of loading levels, projected outputs, bids, or offers for a particular trading interval can be accepted. Gate closure is one (1) hour before the start of the trading interval (e.g., for the target trading interval 1000H, which starts at 0901H, the gate closure time is at 0800H).	Deleted. There is no significant gate closure implemented in the new MMS based on the Enhanced WESM Design
Open Market Window and Gate Closure Time	6.6.4	The most recently submitted bids which have passed validation and which had been “converted” as a valid bid shall be used for the Pre-Dispatch Market Projection (Day-Ahead Projections, DAP or Week-Ahead Projections, WAP) or Real Time Dispatch (RTD and RTX) market runs.	The most recently submitted <u>self-schedule nominations, bids, or offers</u> which have passed validation and which had been “converted” as a valid bid shall be used for the Pre-Dispatch Market Projection (Day-Ahead Projections, DAP or Week-Ahead Projections, WAP) or Real-Time Dispatch (RTD and RTX) market runs.	Revised for clarity and consistency
Open Market Window and Gate Closure Time	6.6.5	For the Real Time Dispatch Schedule (RTD) market runs, nominations of loading levels, projected outputs, bids and offers that were accepted and passed validation prior to the gate closure time are binding and are considered in the real time ex-ante scheduling and pricing processes.	<u>Self-scheduled nominations, bids and offers that passed validation and were accepted for</u> For the Real-Time Dispatch Schedule (RTD) market runs, nominations of loading levels, projected outputs, bids and offers that were accepted and passed validation prior to the gate closure time are binding and are considered in the real time ex-ante scheduling and pricing processes.	Revised for clarity and consistency
Market Participant Interface	6.7.1	Registered Trading Participants shall have an access to the WESM Market Management System (MMS) through a Market Participant Interface (MPI). The MPI shall be used by Trading Participants for submitting their loading levels, projected outputs, bids and	Registered Trading Participants shall have an access to the WESM Market Management System (MMS) through a Market Participant Interface (MPI) . <u>an MPI, which</u> shall be used by Trading Participants for submitting their loading levels, projected outputs <u>self-</u>	For completeness and clarity

Title	Section	Provision	Proposed Amendment	Rationale
		offers, and other data in the WESM, as well as access previously submitted bids, registration information, and other market information or advisories published in the form of system messages and market status displays.	scheduled nominations , bids and offers, and other data in the WESM, as well as to access previously submitted self-scheduled nominations , bids, and offers registration information, and other market information or advisories published in the form of system messages and market status displays.	
Types of Bids, Offers and Data Submissions	6.8	Types of Bids, Offers and Data Submissions	Types of Self-scheduled Nominations , Bids, and Offers and Data Submissions	For completeness and clarity
Types of Bids, Offers and Data Submissions	6.8.1	Through the MPI, a Trading Participant can create and submit either a Daily Submission or a Standing Submission.	Through the MPI, a Trading Participant can create and submit either a Daily Submission or a Standing Submission Profile or a Daily Working Profile for a specific resource .	To provide more clarity in the submission of nominations
Types of Bids, Offers and Data Submissions	6.8.2	6.8.2 Daily Submission. A daily submission is a submission for a specific trading interval or trading intervals of a specific calendar date (e.g., trading intervals 0100H to 2400H for 26 June 2006). Daily submissions that are submitted and passed validation shall become effective starting one (1) hour after its submission. A daily submission will supersede a previously submitted daily submission or a converted standing submission.	6.8.2 Daily Submission. A daily submission is a submission for a specific trading interval or trading intervals of a specific calendar date (e.g., trading intervals 0100H to 2400H for 26 June 2006). Daily submissions that are submitted and passed validation shall become effective starting one (1) hour after its submission. A daily submission will supersede a previously submitted daily submission or a converted standing submission.	Deleted to avoid repetitive statements that may cause inconsistencies
Types of Bids, Offers and Data Submissions	6.8.3	6.8.3 Standing Nominations of Loading Levels, Projected Outputs, Bids, or Offer. Standing nominations of loading levels, projected outputs, bids or offers are standard bid profiles for a given type of day of a week. A Standing Bid is submitted to ensure a default bid is used if no Daily Bid is submitted. A Standing Bid is submitted in the same way as a Daily Bid except that the bid is identified	6.8.3 6.8.2 Standing Nominations of Loading Levels, Projected Outputs Self-scheduled Nominations , Bids, or Offer. Standing nomination of loading levels, projected outputs self-scheduled nominations , bids or offers are standard bid profiles for a given type of day of a week. A Standing Bid is submitted to ensure a default bid is used if no Daily Bid is submitted. A Standing Bid is submitted in the same way as a Daily Bid	Revised for more clarity

Title	Section	Provision	Proposed Amendment	Rationale
		<p>as “Standing” and that a “Day Type” is identified.</p> <p>a) Standing nomination of loading levels, projected outputs, bids or offers for the following day types can be submitted – (table – see Attachment 4 – Tables in Section 6)</p> <p>b) The order of precedence is HOL > ALL > MON.....SUN. Thus, a nomination of loading level, projected output, bid or offer submission for day type “HOL” will supersede bids for any of the other day types.</p> <p>c) A submitted and validated standing nomination of loading level, projected output, bid or offer becomes a standing nomination of loading level, projected output, bid or offer profile of a resource or power facility starting on the seventh day after the nomination of loading level, projected output, bid or offer is submitted. For example, a standing bid submitted on 1 June will become effective on 8 June. Each day onwards, the standing nomination of loading level, projected output, bid or offer profile for that resource shall be converted to a regular bid subject to validation. Conversion of standing nomination of loading level, projected output, bid or offer is carried out in the MMS prior to a relevant market run (i.e., WAP, DAP or RTD).</p>	<p>except that the bid is identified as “Standing” and that a “Day Type” is identified.</p> <p>a) Standing nomination of loading levels, projected outputs self-scheduled nominations, bids or offers for the following day types can be submitted – (table – see Attachment 4 – Tables in Section 6)</p> <p>b) The order of precedence is HOL > MON.....SUN ALL > ALL-MON.....SUN. Thus, a nomination of loading levels, projected outputs self-scheduled nominations, bid or offer submission for day type “HOL” will supersede bids for any of the other day types.</p> <p>c) A submitted and validated standing nomination of loading levels, projected outputs self-scheduled nominations, bid or offer becomes a standing nomination of loading levels, projected outputs self-scheduled nominations, bid or offer profile of a resource or power facility starting on the seventh day after the nomination of loading levels, projected outputs self-scheduled nominations, bid or offer is submitted. For example, a standing bid submitted on 1 June will become effective on 8 June. Each day onwards, the standing nomination of loading levels, projected outputs self-scheduled nominations, bid or offer profile for that resource shall be converted</p>	

Title	Section	Provision	Proposed Amendment	Rationale
		<p>d) The standing nomination of loading level, projected output, bid or offer that passed validation stays in effect until superseded or until a defined “expiration date”. If an expiration date is specified, the standing nomination of loading level, projected output, bid or offer will be used until that expiration date and will be automatically cancelled on the trading date after the expiration date. For example, if the expiration date specified is 1 June, the standing nomination of loading level, projected output, bid or offer will be used until 1 June and will no longer be used starting 2 June. If no expiration date is given, the standing nomination of loading level, projected output, bid or offer will be used indefinitely, or until the participant cancels or supersedes the bid or exits the market.</p>	<p>to a regular bid subject to validation. Conversion of standing nomination of loading levels, projected outputs <u>self-scheduled nominations</u>, bid or offer is carried out in the MMS prior to a relevant market run (i.e., WAP, DAP, <u>HAP</u> or RTD).</p> <p>d) The standing nomination of loading levels, projected outputs <u>self-scheduled nominations</u>, bid or offer that passed validation stays in effect until superseded, or until a defined “expiration date”. If an expiration date is specified, the standing nomination of loading level, projected output, bid or offer will be used until that expiration date and will be automatically cancelled on the trading date after the expiration date. For example, if the expiration date specified is 1 June, the standing nomination of loading level, projected output, bid or offer will be used until 1 June and will no longer be used starting 2 June. If no expiration date is given, the standing nomination of loading level, projected output, bid or offer will be used indefinitely, or until the participant cancels or supersedes the bid or exits the market.</p>	
			<p><u>6.8.3 Daily Working Profile. A daily working profile represents the self-scheduled nominations, bids, or offers for the each hour or dispatch interval of a specific calendar date. Daily working profiles that are submitted and passed validation shall become effective</u></p>	<p>Added provision to describe offers/bids are always defined to be daily sets rather than the previous practice where hourly offers/bids are</p>

Title	Section	Provision	Proposed Amendment	Rationale
			<u>immediately. A daily submission will supersede an existing daily submission.</u>	independent from each other.
Format and Contents of Bids/Offers Submissions	6.9.1	Nomination of loading levels, projected outputs, bids or offers are submitted to or retrieved from the MMS using the MPI in either of two formats, namely – a) Templates (XML Format) which utilizes a “Formatted” page in the MPI where bid data is inputted or specified. The template will then be “Submitted” in the MMS. b) Web Page (HTML Format) which is a data file which contains the nomination of loading levels, projected outputs, bids and offers of a Trading Participant. The XML File will then be “Uploaded” in the MMS.	Nomination of loading levels, projected outputs <u>Self-scheduled nominations</u> , bids or offers are submitted to or retrieved from the MMS using the MPI in either of two formats, namely – <u>through the following:</u> a) Templates (XML Format) which utilizes a “Formatted” page in the MPI <u>User Interface</u> where bid data is inputted or specified. The template will then be “Submitted” in the MMS. b) Web Page (HTML Format) which is a data file which contains the nomination of loading levels, projected outputs, bids and offers of a Trading Participant. The XML <u>Bid Submission</u> File will then be “Uploaded” in the MMS.	Revised to be more concise, and also based on new MMS
Format and Contents of Bids/Offers Submissions	6.9.2	6.9.2 All nominations of loading levels, projected outputs, bids, or offers submissions shall contain the following – a) Bid Header – to identify the participant and his resource b) Bid Submission – includes the details of the Bid/Offer	6.9.2 All nominations of loading levels, projected outputs, bids, or offers submissions shall contain the following – a) Bid Header – to identify the participant and his resource b) Bid Submission – includes the details of the Bid/Offer	Not applicable in the new MMS
Format and Contents of Bids/Offers Submissions	6.9.3	The parameters and formats of the nominations of loading levels, projected outputs, bids, or offers submissions are specified in the following attachments of this Dispatch Protocol – Table – See Attachment 4 – Tables in Section 6	6.9.3 <u>6.9.2 Trading Participant shall provide the following information when submitting generation</u> The parameters and formats of the nominations of loading levels, projected outputs, bids, or offers; submissions are specified in the following attachments of this Dispatch Protocol – Table	Revised for more clarity based on the WESM Rules

Title	Section	Provision	Proposed Amendment	Rationale
			<p><u>a. May include up to ten (10) generation offer blocks per (aggregate) unit. The maximum combined capacity of generation and reserve offers must not be less than the maximum available capacity of the generator;</u></p> <p><u>b. Shall be for a minimum block size of one (1) MW;</u></p> <p><u>c. Shall have monotonically increasing prices, starting from zero generation;</u></p> <p><u>d. May include negative prices; and</u></p> <p><u>e. Shall include up to five (5) segments of ramp rate profiles for different quantity break-points. The ramp up/down rates shall range from the minimum to the maximum registered ramp rates.</u></p>	
			<p><u>6.9.3 Trading Participants shall provide the following information when submitting reserve offers:</u></p> <p><u>a. A maximum response level for the relevant reserve category (MW);</u></p> <p><u>b. A maximum proportion of the forecast/scheduled load, which may be interrupted;</u></p> <p><u>c. Up to three (3) reserve offer blocks (MW/block);</u></p> <p><u>d. A minimum block size of one (1) MW; and</u></p> <p><u>e. Monotonically increasing prices.</u></p>	<p>Added provision for more clarity on reserve offer submission, which is based on the WESM Rules</p>
			<p><u>6.9.4 Trading Participants shall provide the following information when submitting demand bids:</u></p> <p><u>a. Shall have up to 10 bid blocks per take-off point;</u></p>	<p>Added provision for more clarity on demand bid submission, which is based on the WESM Rules</p>

Title	Section	Provision	Proposed Amendment	Rationale
			<u>b. Shall have a minimum block size of one (1) MW;</u> <u>c. Shall have monotonically decreasing prices;</u> <u>d. Shall start from a zero off-take;</u> <u>e. May have bid prices that are negative; and</u> <u>f. Shall include a validity period of bids.</u>	
			<u>6.9.5 Trading Participants shall provide a MW value to represent their self-scheduled nomination for their respective preferential dispatch generating units or non-scheduled generating units.</u>	Added provision for more clarity on self-scheduled nomination, which is based on the WESM Rules
			<u>6.9.6 The Market Operator shall publish a document that will provide operational details on the submission of self-scheduled nominations, bids, and offers in the Market Information Website.</u>	Added provision to state MO responsibility to publish a separate user guide
Acknowledge ment of Nominations of Loading Levels, Projected Outputs, Bids and Offers Submissions	6.10.1	The MPI issues a unique Transaction ID for each nomination of loading level, projected output, bid, or offer submissions. The Transaction ID shall be attached to the hourly nomination of loading level, projected output, bid, or offer data whether they are accepted or determined as an invalid nomination of loading level, projected output, bid, or offer.	The MPI issues a unique Transaction ID for each nomination of loading level, projected output <u>self-scheduled nomination</u> , bid, or offer submissions. The Transaction ID shall be attached to the <u>daily working profile of</u> hourly nomination of loading level, projected output <u>self-scheduled nomination</u> , bid, or offer data whether they are accepted or determined as an invalid nomination of loading level, projected output, bid, or offer.	Revised for consistency and clarity
Acknowledge ment of Nominations of Loading Levels, Projected	6.10.2	6.10.2 The transaction ID is attached by submission. Thus, nominations of loading levels, projected outputs, bids, or offers for more than one trading interval that are submitted collectively shall have the same transaction ID. For example, if one bid	6.10.2 The transaction ID is attached by submission. Thus, nominations of loading levels, projected outputs, bids, or offers for more than one trading interval that are submitted collectively shall have the same transaction ID. For example, if one bid	Not applicable in the new MMS

Title	Section	Provision	Proposed Amendment	Rationale
Outputs, Bids and Offers Submissions		submission covers twelve (12) trading intervals, the same transaction ID will be issued for each of the 12 bids/offers data.	submission covers twelve (12) trading intervals, the same transaction ID will be issued for each of the 12 bids/offers data.	
Acknowledgement of Nominations of Loading Levels, Projected Outputs, Bids and Offers Submissions	6.10.3	6.10.3 For standing nominations of loading levels, projected outputs, bids, or offers that are converted to a regular bid, the submission will have the same transaction ID as when it was submitted as a standing nomination of loading levels, projected outputs, bids, or offers	6.10.3 6.10.2 For standing nomination of loading levels, projected outputs self-scheduled nominations , bids, or offers that are converted to a daily working profile regular bid, the submission will have the same transaction ID as when it was submitted as a standing nomination of loading levels, projected outputs self-scheduled nominations , bids, or offers.	Revised for consistency and clarity
Acknowledgement of Nominations of Loading Levels, Projected Outputs, Bids and Offers Submissions	6.10.4	The MMS keeps a database of both the “Accepted” nominations of loading level, projected output, bid, or offer and “Invalid” nominations of loading level, projected output, bid, or offer submissions.	The MMS keeps a database of both the “Accepted” valid, rejected, and invalid nomination of loading level, projected output self-scheduled nomination , bid, or offer and “Invalid” nominations of loading level, projected output, bid, or offer submissions.	Revised based on actual practice and design of the new MMS.
Updating of Nomination of Loading Level, Projected Output, Bid or Offer Submissions	6.11.1	Updating of Nomination of Loading Level, Projected Output, Bid or Offer Submissions	Updating of Nomination of Loading Level, Projected Output Self-scheduled Nominations, Bids or Offers Submissions	For consistency
Updating of Nomination of Loading Level, Projected Output, Bid or	6.11.1	Within the open market window, a nomination of loading level, projected output, bid, or offer may be updated or revised as often as the Trading Participant desires. Subject to the requirements set out in this Section for cancellation and revision of bids, previously	Within the open market window, a nomination of loading level, projected output self-scheduled nomination , bid, or offer may be updated or revised as often as the Trading Participant desires. Subject to the requirements set out in this Section for	For consistency

Title	Section	Provision	Proposed Amendment	Rationale
Offer Submissions		submitted nominations of loading level, projected output, bid, or offer may be cancelled or revised within the open market window.	cancellation and revision of bids, previously submitted nomination of loading level, projected output self-scheduled nomination , bid, or offer may be cancelled or revised within the open market window.	
Updating of Nomination of Loading Level, Projected Output, Bid or Offer Submissions	6.11.2	Retrieval of Nominations of Loading Levels, Projected Outputs, Bids or Offers Submissions. To revise nominations of loading levels, projected outputs, bids, or offers, previously submitted nominations of loading levels, projected outputs, bids, or offers can be retrieved through the MPI using the Template or XML File options as discussed in the preceding clauses. Retrieved nominations of loading levels, projected outputs, bids, or offers submissions may then be updated, modified or cancelled.	Retrieval of Nominations of Loading Levels, Projected Outputs, Bids or Offers Submissions. To revise nomination of loading levels, projected outputs self-scheduled nominations , bids, or offers, previously submitted nomination of loading levels, projected outputs self-scheduled nominations , bids, or offers can be retrieved through the MPI, which using the Template or XML File options as discussed in the preceding clauses. Retrieved nominations of loading levels, projected outputs, bids, or offers submissions may then be updated, modified or cancelled.	For consistency and clarity
Updating of Nomination of Loading Level, Projected Output, Bid or Offer Submissions	6.11.3	Updating/Revision. Nominations of loading levels, projected outputs, bids, or offers that are updated or revised will be submitted through the MPI following the same procedures for submission of nominations of loading levels, projected outputs, bids, or offers. Such revised/updated submission will be subject to the same acknowledgement and validation process set out in this Section. Standing bids which have been “converted” into a Daily Bid can be modified using the Daily Bid option.	Updating/Revision. Nominations of loading levels, projected outputs Self-scheduled nominations , bids, or offers that are updated or revised will be submitted through the MPI following the same procedures for submission of nominations of loading levels, projected outputs self-scheduled nominations , bids, or offers. Such revised/updated submission will be subject to the same acknowledgement and validation process set out in this Section. Standing bids which have been “converted” into a Daily Bid can be modified using the Daily Bid option.	For consistency
Updating of Nomination of Loading	6.11.4	Cancellation. Cancellation of previously submitted bids follows the same process as submission of nominations of loading levels,	Cancellation. Cancellation of previously submitted bids follows the same process as submission of nominations of loading levels,	For consistency

Title	Section	Provision	Proposed Amendment	Rationale
Level, Projected Output, Bid or Offer Submissions		projected outputs, bids, or offers above except that instead of “SUBMIT” entry in the MPI, a “CANCEL” entry is specified. The cancellation of a standing nominations of loading levels, projected outputs, bids, or offers shall become effective after the seventh day from cancellation but the corresponding standing bid profile must be deleted immediately upon submission of the cancellation.	projected outputs <u>self-scheduled nominations</u> , bids, or offers above except that instead of “SUBMIT” entry in the MPI, a “CANCEL” entry is specified. The cancellation of a standing nominations of loading levels, projected outputs <u>self-scheduled nominations</u> , bids, or offers shall become effective after the seventh day from cancellation but the corresponding standing bid profile must be deleted immediately upon submission of the cancellation.	
Validation of Bids/Offer Submissions	6.12.1	Validation of Bids/Offer Submissions	Validation of <u>Self-scheduled Nominations, Bids, and</u> /Offers Submissions	For consistency
Validation of Bids/Offer Submissions	6.12.1	Nominations of loading levels, projected outputs, bids, or offers submissions shall be subject to the validation set out in the following paragraphs. Validation shall be performed in the MMS.	Nominations of loading levels, projected outputs <u>Self-scheduled nominations</u> , bids, or offers submissions shall be subject to the validation set out in the following paragraphs. Validation shall be performed in the MMS.	For consistency
Validation of Bids/Offer Submissions	6.12.2	Syntax / Semantic Validation. This validation is performed to verify submitted data for consistency to required formats or data templates.	Syntax / Semantic Validation. <u>Self-scheduled nominations, bids, or offers are validated</u> This validation is performed to verify submitted data for consistency to required formats or data templates <u>with Section 6.9.1.</u>	For consistency
Validation of Bids/Offer Submissions	6.12.3	Market-Based Validation. This validation is performed to verify submitted data for consistency with the following - a) Price Curves b) Ramp Rate Curves c) Market Status d) Master File	Market-Based Validation. <u>Self-scheduled nominations, bids, or offers are also validated based on consistency with sections 6.9.2, 6.9.3, 6.9.4 and 6.9.5 as the case may be, registration data, and whether such are within the offer price floor and cap.</u> This validation is performed to verify submitted data for consistency with the following- a) Price Curves b) Ramp Rate Curves	Revised for consistency and clarity

Title	Section	Provision	Proposed Amendment	Rationale
			e) Market Status d) Master File	
Validation of Bids/Offer Submissions	6.12.4	<p>6.12.4 Market-based validation include the following criteria –</p> <p>a) Registration data. All nominations of loading levels, projected outputs, bids and offers are validated against operational data originally approved and submitted to the MMS at the time of the registration, subject to any approved amendments thereof, by the Trading Participants and/or their respective generating units, or subsequent revisions to the same data approved and submitted to the MMS in their application for registration in the WESM and revisions to the registration data which are submitted no later than seven (7) calendar days prior to the trading interval for which the nomination of loading level, projected output, bid and offer is submitted.</p> <p>b) Current system status. Nominations of loading levels, projected outputs, bids and offers submitted are validated against real-time information relevant to the facility for which a nomination of loading levels, projected outputs, bids or offers is submitted. Real-time snapshots from the System Operator are used for validation and shall serve as the latest information on system status to be transmitted to the MMS of the Market Operator.</p> <p>c) Outages. Generating facilities which are included in the outage list submitted by the System Operator to the MMS are</p>	<p>6.12.4 Market-based validation include the following criteria—</p> <p>a) Registration data. All nominations of loading levels, projected outputs, bids and offers are validated against operational data originally approved and submitted to the MMS at the time of the registration, subject to any approved amendments thereof, by the Trading Participants and/or their respective generating units, or subsequent revisions to the same data approved and submitted to the MMS in their application for registration in the WESM and revisions to the registration data which are submitted no later than seven (7) calendar days prior to the trading interval for which the nomination of loading level, projected output, bid and offer is submitted.</p> <p>b) Current system status. Nominations of loading levels, projected outputs, bids and offers submitted are validated against real-time information relevant to the facility for which a nomination of loading levels, projected outputs, bids or offers is submitted. Real-time snapshots from the System Operator are used for validation and shall serve as the latest information on system status to be transmitted to the MMS of the Market Operator.</p> <p>c) Outages. Generating facilities which are included in the outage list submitted by the System Operator to the MMS are</p>	Deleted repetitive provision

Title	Section	Provision	Proposed Amendment	Rationale
		<p>automatically excluded from the scheduling and dispatch processes, and are thus not included in the generation of real-time dispatch (RTD) schedules and the WESM merit order table (MOT).</p> <p>d) Overriding Constraint Limits. Overriding constraints imposed and submitted by the System Operator shall override the nomination of loading levels, projected outputs, bids and offers submissions of generating facilities. These include security and non-security related requirements.</p>	<p>automatically excluded from the scheduling and dispatch processes, and are thus not included in the generation of real-time dispatch (RTD) schedules and the WESM merit order table (MOT).</p> <p>d) Overriding Constraint Limits. Overriding constraints imposed and submitted by the System Operator shall override the nomination of loading levels, projected outputs, bids and offers submissions of generating facilities. These include security and non-security related requirements.</p>	
Validation of Bids/Offers Submissions	6.12.5	6.12.5 Standing Bids Validation. Standing bids will be validated upon submission and every time that they are converted into a daily bid. Upon passing validation, the participant will be informed that the standing bid was accepted. Validation of standing bids will be performed to the extent it can be done, e.g., such items as Participant Name, Price Curve Formats and Expiration Dates are validated. Standing Bids are also validated for “Day Type” consistency:	<p>6.12.5 Standing Bids Validation. Standing bids will be validated upon submission and every time that they are converted into a daily bid. Upon passing validation, the participant will be informed that the standing bid was accepted. Validation of standing bids will be performed to the extent it can be done, e.g., such items as Participant Name, Price Curve Formats and Expiration Dates are validated. Standing Bids are also validated for “Day Type” consistency:</p>	Deleted repetitive provision
Revisions Of Nomination Of Loading Levels, Projected Outputs, Bids And Offers Based On Reasonable Estimates	6.13	Revisions Of Nomination Of Loading Levels, Projected Outputs, Bids And Offers Based On Reasonable Estimates	Revisions Of Self-scheduled Nominations Of Loading Levels, Projected Outputs, Bids And Offers Based On Reasonable Estimates	For consistency

Title	Section	Provision	Proposed Amendment	Rationale
Revisions Of Nomination Of Loading Levels, Projected Outputs, Bids And Offers Based On Reasonable Estimates	6.13	<p>6.13.1 Trading Participants shall revise their nomination of loading levels, projected outputs, bids or offers, prior to gate closure time, for submission of nomination of loading levels, projected outputs, bids or offers, if the nomination of loading level, projected output, bid or offer submitted no longer represent a reasonable estimate of either the following –</p> <p>a) The expected availability for the trading interval of the relevant generating unit or scheduled load; or</p> <p>b) The loading level, projected output, bid or offer likely to apply in the real-time dispatch optimization for the trading interval.</p>	<p>6.13.1 Trading Participants shall revise their nomination of loading levels, projected outputs self-scheduled nominations, bids or offers, prior to gate closure time, for submission of nomination of loading levels, projected outputs, bids or offers, if the nomination of loading levels, projected outputs self-scheduled nominations, bids or offers submitted no longer represent a reasonable estimate of either the following –</p> <p>a) The expected availability for the trading dispatch interval of the relevant generating unit or scheduled load; or</p> <p>b) The loading level, projected output, bid or offer likely to apply in the real-time dispatch optimization for the trading dispatch interval.</p>	
Cancellation Of Nominations Of Loading Levels, Projected Outputs, Bids And Offers	6.14.1	<p>6.14 Cancellation Of Nominations Of Loading Levels, Projected Outputs, Bids And Offers</p> <p>xxx</p>	<p>6.14 Cancellation Of Nominations Of Loading Levels, Projected Outputs, Bids And Offers</p> <p>xxx</p>	Covered in Section 6.13.
Report On Cancellation Of Nominations Of Loading Levels, Projected Outputs, Bids	6.15	<p>6.15 Report On Cancellation Of Nominations Of Loading Levels, Projected Outputs, Bids And Other Information</p> <p>xxx</p>	<p>6.15 Report On Cancellation Of Nominations Of Loading Levels, Projected Outputs, Bids And Other Information</p> <p>xxx</p>	

Title	Section	Provision	Proposed Amendment	Rationale
And Other Information				
Report Of Material Adverse Change In State Of Trading Participant Facilities	6.16	6.16 Report Of Material Adverse Change In State Of Trading Participant Facilities	6.16 6.14 Report Of Material Adverse Change In State Of Trading Participant Facilities	Renumbering
Report Of Material Adverse Change In State Of Trading Participant Facilities	6.16.1	6.16.1 WESM Rules Clause 3.5.11.7 requires Trading Participants to advise the System Operator and the Market Operator of any circumstances which threaten a significant probability of material adverse change in the state of their facilities in any trading interval of any trading day in the current week-ahead market horizon. Trading Participants will give notice to the Market Operator and the System Operator within the relevant WESM timetable.	6.16.1 6.14.1 WESM Rules Clause 3.5.11.7 requires Trading Participants to advise the System Operator and the Market Operator of any circumstances which threaten a significant probability of material adverse change in the state of their facilities in any trading dispatch interval of any trading day in the current week-ahead market horizon. Trading Participants will give notice to the Market Operator and the System Operator within the relevant WESM timetable.	Renumbering and consistency with the use of dispatch interval instead of trading interval
	6.16.2	6.16.2 xxx	6.16.2 6.14.2 xxx	Renumbering
	6.16.3	6.16.3 xxx	6.16.3 6.14.3 xxx	
Report Of Material Adverse Change In State Of Trading Participant Facilities	6.16.4	6.16.4 The following is a non-exhaustive list of the material adverse changes to be reported by the Trading Participants – a) Inadvertent omissions or cancellation of nomination of loading levels, projected outputs, bids, and offers of significant quantity relative to the demand in the specific trading interval for which such nomination of loading levels, projected outputs, bids, or offers apply.	6.16.4 6.14.4 The following is a non-exhaustive list of the material adverse changes to be reported by the Trading Participants – a) Inadvertent omissions or cancellation of nomination of loading levels, projected outputs self-scheduled nominations , bids, and offers of significant quantity relative to the demand in the specific trading dispatch interval for which such nomination of loading levels, projected	Renumbering and for consistency

Title	Section	Provision	Proposed Amendment	Rationale
		<p>b) Gross errors in the submission of nomination of loading levels, projected outputs, bids, or offers by the Trading Participants which deviate from a reasonable estimate of the current state of its facilities or system.</p> <p>c) Scheduled or forced outages of the system or facilities of a Trading Participant which may impede its ability to commit to its nomination of loading levels, projected outputs, bids, or offers submission in the WESM.</p> <p>d) Impending emergencies which may require the facilities or system of a Trading Participant to be operational or to shutdown to prevent any potential disaster or threat to human life or property.</p> <p>e) Local or national calamities which may affect a significant portion of the system or facilities of a Trading Participant.</p> <p>f) Labor and management conflict which may result in work stoppage and prevent the Trading Participant or significantly reduce its ability to participate in the WESM.</p> <p>g) A significant event that is expected to cause the Trading Participant to cancel or revise its standing nomination of loading levels, projected outputs, bids or offers, or to submit offers for scheduled generating units that are less than the registered maximum capacities of said units.</p>	<p>outputs <u>self-scheduled nominations</u>, bids, or offers apply.</p> <p>b) Gross errors in the submission of nomination of loading levels, projected outputs <u>self-scheduled nominations</u>, bids, or offers by the Trading Participants which deviate from a reasonable estimate of the current state of its facilities or system.</p> <p>c) Scheduled or forced outages of the system or facilities of a Trading Participant which may impede its ability to commit to its nomination of loading levels, projected outputs <u>self-scheduled nominations</u>, bids, or offers submission in the WESM.</p> <p>d) Impending emergencies which may require the facilities or system of a Trading Participant to be operational or to shutdown to prevent any potential disaster or threat to human life or property.</p> <p>e) Local or national calamities which may affect a significant portion of the system or facilities of a Trading Participant.</p> <p>f) Labor and management conflict which may result in work stoppage and prevent the Trading Participant or significantly reduce its ability to participate in the WESM.</p> <p>g) A significant event that is expected to cause the Trading Participant to cancel or revise its standing nomination of loading levels, projected outputs <u>self-scheduled nominations</u>, bids or offers, or to submit offers for scheduled generating units that are less than the registered maximum capacities of said units.</p>	

Title	Section	Provision	Proposed Amendment	Rationale
System Operator Input Data And Reports	7			
Scope and Purpose	7.2.3	Data and report submissions relevant to the scheduling and dispatch of reserves traded in the WESM are covered in a separate section of this Dispatch Protocol.	Data and report submissions relevant to the scheduling and dispatch of reserves traded in the WESM are covered in a separate section under Section 15 of this Dispatch Protocol.	Clerical revision
Responsibilities	7.3.1	Market Operator. The Market Operator shall be responsible for – a) Providing and maintaining the data exchange and communication facilities it needs to ensure timely submission of dispatch schedules (RTD/DAP/WAP), messages and advisories transmitted by the Market Operator to the System Operator and Trading Participants; and b) Ensuring that data inputs required of the System Operator are considered in the market dispatch optimization runs.	Market Operator. The Market Operator shall be responsible for – a) Providing and maintaining the data exchange and communication facilities it needs to ensure timely submission of dispatch schedules (RTD/ HAP /DAP/WAP), messages and advisories transmitted by the Market Operator to the System Operator and Trading Participants; and b) Ensuring that data inputs required of the System Operator are considered in the market dispatch optimization runs.	Include HAP
Responsibilities	7.3.2	System Operator. The System Operator shall be responsible for – a) Preparing the data and reports required to be submitted as set out in this Dispatch Protocol and relevant provisions of the WESM Rules and other market manuals, and for transmitting the same to the Market Operator in accordance with the schedules and procedures set out in this Section;	System Operator. The System Operator shall be responsible for – a) Preparing the data and reports required to be submitted as set out in this Dispatch Protocol and relevant provisions of the WESM Rules and other market manuals, and for transmitting the same to the Market Operator in accordance with the schedules and procedures set out in this Section;	<ul style="list-style-type: none"> • To cover projections every hour and every dispatch interval. • Include submission of outage schedules by the SO to the MO

Title	Section	Provision	Proposed Amendment	Rationale
		b) Preparing and submitting additional contingency lists for a particular trading interval or trading day if necessary; c) Submitting the approved schedules to the Market Operator; and d) Providing and maintaining the data exchange and communication facilities it needs to ensure timely data and report transmittal to the Market Operator.	b) Preparing and submitting additional contingency lists for a particular trading interval , dispatch interval, hourly interval , or trading day if necessary; c) Submitting the approved outage schedules to the Market Operator; and d) Providing and maintaining the data exchange and communication facilities it needs to ensure timely data and report transmittal to the Market Operator.	
Responsibilities	7.3.4	Trading Participants. The trading participants shall ensure timely submission to the System Operator of their requests and schedules for outages of their generating units. Trading participants shall submit to the System Operator a three-year outage plan and an annual outage plan for their generating units in accordance with the Grid Operations and Management Program set out in the Grid Code.	Trading Participants. The trading participants shall ensure timely submission to the System Operator of their requests and schedules for outages of their generating units. Trading participants shall submit to the System Operator a three-year outage plan and an annual outage plan for their generating units in accordance with the Grid Operations and Management Program set out in the Grid Code.	Provision is a requirement under the PGC.
Data and Report Requirements	7.4.1	Market run data Inputs. For each trading interval, the System Operator shall submit the following data which shall be used in the pre-dispatch projections and real time dispatch market runs – a) Outage schedules b) Contingency lists c) Overriding constraints	Market run data Inputs. For each trading interval, the System Operator shall submit the following data which shall be used in the pre-dispatch projections and real time dispatch market runs – a) Outage schedules b) Contingency lists c) Overriding constraints d) Reserve requirements	Added back reserve requirement as input from SO for consistency in the WESM Rules
Data and Report Requirements	7.4.2	System Status. During a trading interval, the System Operator shall submit the following information – a) Grid snapshots; and b) System advisories on the anticipated condition of the grid.	System Status. During a trading interval, the The System Operator shall submit make the following information available to the Market Operator – a) Grid System snapshots; and	Revised for clarity

Title	Section	Provision	Proposed Amendment	Rationale
			b) System advisories on the anticipated condition of the grid <u>depicting particular events or incidents that would transpire prior, during or after real time condition.</u>	
Outage Schedules	7.5.1	The outage schedules that shall be submitted by the System Operator to the Market Operator are those outage schedules that are approved for the following – a) Generating units; b) Transmission lines; and c) Sub-station equipment	The <u>approved</u> outage schedules that shall be submitted by the System Operator to the Market Operator shall be <u>are those outage schedules that are approved for the following types of equipment –</u> a) Generating units; b) Transmission lines; and c) Sub-station equipment	Revised for clarity
Outage Schedules	7.5.2	Only outage schedules approved by the System Operator shall be submitted and shall be considered in the market dispatch optimization runs, i.e., week-ahead projections (WAP), day-ahead projections (DAP) and real-time dispatch (RTD) market runs.	Only outage schedules approved by the System Operator shall be submitted and shall be considered in the market dispatch optimization runs, i.e., week-ahead projections (WAP), day-ahead projections (DAP) and real-time dispatch (RTD) market runs.	Revised for clarity
Over-Riding Constraints	7.6.1	7.6.1 The MMS provides a functionality that allows the Market Operator to make adjustments in the Operating Constraints of the Market Dispatch Optimization Model for a particular Trading Interval. Such adjustments or overriding constraints in the Market Dispatch Optimization Model is imposed by the Market Operator upon the recommendation of the System Operator through a database interchange program between the Market Operator and System Operator.	7.6.1 The MMS provides a functionality that allows the Market Operator to make adjustments in the Operating Constraints of the Market Dispatch Optimization Model for a particular Trading Interval <u>period</u> . Such adjustments or overriding constraints in the Market Dispatch Optimization Model is imposed by the Market Operator upon the recommendation of the System Operator through a database interchange program between the Market Operator and System Operator. <u>7.6.2 The types of over-riding constraints that may be imposed</u> Imposition of	Revised for more clarity on the SO data

Title	Section	Provision	Proposed Amendment	Rationale
		<p>Imposition of Overriding Constraints in the Market Dispatch Optimization Model include the following:</p> <ul style="list-style-type: none"> • Security Limits <ul style="list-style-type: none"> o Must-Run Units (MRU) o Emergency de-rating/ outage of specific transmission lines; o Other types as may be recommended by the System Operator • Non Security Limits: <ul style="list-style-type: none"> o Generating Unit Limitations o Regulatory and Commercial Testing <p>Over-riding constraints in the scheduling and dispatch of generating units qualifying as must run units may be compensated based on the mechanism set forth in the Manual on the Management of Must-Run and Must-Stop Units. Over-riding constraints for the scheduling and dispatch of generating units undergoing Regulatory and Commercial testing process shall be considered as price takers in the WESM, for generation traded in the spot market.</p>	<p>Overriding Constraints in the Market Dispatch Optimization Model include the following:</p> <ul style="list-style-type: none"> • a. Security Limits - The System Operator may impose security limits to override the generation offers and address possible threats in system security. <ul style="list-style-type: none"> i. Generation Limits – involves the minimum and maximum operating limits for generation. Security limits for generating units shall also include scheduled must-run units. ii. Branch Group Limits – involves the maximum flow that may pass through a certain group of transmission lines iii. Transmission Limits – involves the maximum flow that may pass through a specific line or transformer iv. HVDC Limits – involves the minimum and maximum HVDC flow • b. Non Security Limits: Testing and commissioning: <ul style="list-style-type: none"> o Generating Unit Limitations o Regulatory and Commercial Testing <p>7.6.3 Over-riding constraints in the scheduling and dispatch of generating units qualifying as</p>	

Title	Section	Provision	Proposed Amendment	Rationale
			<p>must Must-run units designated under Section 7.6.2 and Section 17 shall may be compensated based on the mechanism set forth in the Price Determination Methodology Manual on the Management of Must-Run and Must-Stop Units. Over-riding constraints for the scheduling and dispatch of generating Generating units undergoing Regulatory and Commercial testing and commissioning process shall be considered as price takers in the WESM, for generation traded in the spot market.</p>	
Over-Riding Constraints	7.6.2	<p>7.6.2 Security Limits. The System Operator may impose security limits to override the generation offers and address possible threats in system security. These security limits may vary under different system conditions. Security limits include generator operating limits and transmission limits, described as follows –</p> <p>a) Generator operating limits (Pmin, Pmax) may vary based on different plant and system conditions. Some generators are required to produce no less than certain amount of output for system reliability reasons. Some generators are required to restrain their output due to stability considerations. Generating units nominated by the System Operator as a must run unit (MRU) falls in this category. Refer to the WESM Manual on Management of Must-Run and Must-Stop Units for more details.</p>	<p>7.6.2 Security Limits. The System Operator may impose security limits to override the generation offers and address possible threats in system security. These security limits may vary under different system conditions. Security limits include generator operating limits and transmission limits, described as follows –</p> <p>a) Generator operating limits (Pmin, Pmax) may vary based on different plant and system conditions. Some generators are required to produce no less than certain amount of output for system reliability reasons. Some generators are required to restrain their output due to stability considerations. Generating units nominated by the System Operator as a must run unit (MRU) falls in this category. Refer to the WESM Manual on Management of Must-Run and Must-Stop Units for more details.</p>	Deleted repetitive provisions

Title	Section	Provision	Proposed Amendment	Rationale
		<p>b) HVDC transmission limits may vary constraining power transmission from one region to another. The HVDC limits are modeled.</p> <p>The imposition of over-riding constraints in the Market Dispatch Optimization Model include the following:</p> <p>a) Security Limits;</p> <ul style="list-style-type: none"> • Must-Run Units (MRU) • Emergency de-rating/ outage of specific transmission lines; • Other types as may be recommended by the System Operator <p>b) Non Security Limits:</p> <ul style="list-style-type: none"> • Generating Unit Limitations • Regulatory and Commercial Testing <p>Over-riding constraints in the scheduling and dispatch of generating units qualifying as must run units may be compensated based on the mechanism set forth in the Manual on the Management of Must-Run and Must-Stop Units.</p> <p>Over-riding constraints for the scheduling and dispatch of generating units undergoing Regulatory and Commercial testing process shall be considered as price takers in the WESM, for generation traded in the spot market.</p>	<p>b) HVDC transmission limits may vary constraining power transmission from one region to another. The HVDC limits are modeled.</p> <p>The imposition of over-riding constraints in the Market Dispatch Optimization Model include the following:</p> <p>a) Security Limits;</p> <ul style="list-style-type: none"> • Must-Run Units (MRU) • Emergency de-rating/ outage of specific transmission lines; • Other types as may be recommended by the System Operator <p>b) Non Security Limits:</p> <ul style="list-style-type: none"> • Generating Unit Limitations • Regulatory and Commercial Testing <p>Over-riding constraints in the scheduling and dispatch of generating units qualifying as must run units may be compensated based on the mechanism set forth in the Manual on the Management of Must-Run and Must-Stop Units.</p> <p>Over-riding constraints for the scheduling and dispatch of generating units undergoing Regulatory and Commercial testing process shall be considered as price takers in the WESM, for generation traded in the spot market.</p>	
Over-Riding Constraints	7.6.3	7.6.3 Transmission Limits. Transmission limits are generally thermal limits of individual transmission lines, transformers, and related	7.6.3 Transmission Limits. Transmission limits are generally thermal limits of individual transmission lines, transformers, and related	

Title	Section	Provision	Proposed Amendment	Rationale
		facilities. The transmission limits are used in security analysis application to check constraint violations.	facilities. The transmission limits are used in security analysis application to check constraint violations.	
Contingency List Requirements	7.7.2	The identified contingencies for a trading interval shall conform to the provisions of the WESM System Security & Reliability Guidelines.	The identified contingencies for a trading dispatch interval shall conform to the provisions of the WESM System Security & Reliability Guidelines.	Use of dispatch interval instead of trading interval
Contingency List Requirements	7.7.3	The default contingency list contains the definition of credible contingencies as provided by the System Operator (i.e. pre-defined outage scenarios) and each contingency event shall be loaded into the MMS database of the Market Operator. The MDOM solution shall provide an RTD which is a security-constrained dispatch schedule.	The default contingency list contains the definition of credible contingencies as provided by the System Operator (i.e. pre-defined outage scenarios) and each contingency event shall be loaded into the MMS database of the Market Operator. The MDOM solution shall provide an RTD which is a security-constrained dispatch schedule.	Adjective not necessary
Contingency List Requirements	7.7.5	The contingency list does not include the outage of a generating unit. The MDOM considers the utilization of operating reserves in the emergency outage of a generating unit.	The contingency list does not include the outage of a generating unit. The MDOM considers the utilization of primary response and operating reserves in the emergency outage of a generating unit.	For clarity
			7.8 Reserve Requirements	Added provisions for reserve requirement as input from the System Operator
			7.8.1 The System Operator shall submit the MW reserve requirement for each type of reserve of each region for a period of time, while taking into account the covered period of the market projections and the real-time dispatch, and in accordance with the timetable.	
			7.8.2 The MW reserve requirement shall be based on the provisions of the Philippine Grid Code and the Ancillary Services Requirements and Specifications.	
System Status	7.8	7.8 System Status	7.8 7.9 System Status	Renumbering

Title	Section	Provision	Proposed Amendment	Rationale
System Status	7.8.1	7.8.1 The System Operator shall provide snapshot data on the status of the power system and advisories on the anticipated condition of the power system to the Market Operator. The data to be provided covers the Luzon, Visayas and Mindanao grids.	7.8.1 The System Operator shall provide snapshot data on the status of the power system and advisories on the anticipated condition of the power system to the Market Operator. The data to be provided covers the Luzon, Visayas and Mindanao grids.	Already covered in Section 7.8.1, above.
System Status	7.8.2	<p>7.8.2 System Snapshot. The system snapshot depicts the status of individual power facilities in the grid. The system snapshot is collected via the System Operator's EMS/SCADA system and further processed/validated by its State Estimator program.</p> <p>a) The system snapshot contains the following information –</p> <ul style="list-style-type: none"> • Generator Unit MW and MVAR (analog measurements) • Load MW and MVAR (analog measurements) and • Breaker Status <p>b) The WESM Market Network Model (MNM) shall be consistent with the system snapshot</p> <p>c) The system snapshot is an input to the Market Dispatch Optimization Model (MDOM) which calculates the WAP, DAP and RTD schedules. Specifically, the system snapshot data is used for the network configuration and nodal demand forecasting processes.</p>	<p>7.8.2 7.9.1 System Snapshot. The system snapshot depicts the status of individual power facilities in the grid. The system snapshot is collected by the Market Operator from via the System Operator's EMS/SCADA system and further processed/validated by its State Estimator program.</p> <p>a) The system snapshot contains the following information –</p> <ul style="list-style-type: none"> • Generator Unit MW and MVAR (analog measurements) • Load MW and MVAR (analog measurements) and • Breaker Status • <u>Bus Voltages</u> • <u>Frequency</u> <p>b) The WESM Market Network Model (MNM) shall be consistent with the system snapshot</p> <p>e) The system snapshot is an input to the Market Dispatch Optimization Model (MDOM) which calculates the WAP, DAP, and RTD schedules. Specifically, the system snapshot data is used for the</p>	Revised for more clarity

Title	Section	Provision	Proposed Amendment	Rationale
			network configuration and nodal demand forecasting processes.	
System Status	7.8.3	7.8.3 System Operator System Advisories. xxx	7.8.3 7.9.2 System Operator System Advisories. xxx	Renumbering
Means Of Submission/ Transmittal	7.9	7.9 Means Of Submission/ Transmittal	7.9 7.10 Means Of Submission/ Transmittal	
Means Of Submission/ Transmittal	7.9.1	7.9.1 Data and information required to be submitted under this Section shall be transmitted by the System Operator through a data exchange facility provided and maintained by the System Operator and the Market Operator specifically for this purpose.	7.9.1 7.10.1 Data and information required to be submitted under this Section shall be transmitted by the System Operator through a data exchange facility provided and maintained by the System Operator and the Market Operator specifically for this purpose, <u>based on the fields defined in Appendix E of this Market Manual.</u> <u>7.10.2 The System Operator shall provide the information contained in this Section in accordance with the timetable set in Section 4.</u>	Revised for clarity
Schedule Of Submission /Transmittal	7.10	7.10 Schedule Of Submission /Transmittal xxx	7.10 Schedule Of Submission /Transmittal xxx	
Format Of Data Submissions	7.11	7.11 Format Of Data Submissions xxx	7.11 Format Of Data Submissions xxx	
Publication Of System Operator Data	7.12	7.12 Publication Of System Operator Data	7.12 7.11 Publication Of System Operator Data	Renumbering
Publication Of System Operator Data	7.12.1	7.12.1 Consistent with the Confidentiality Manual, the Market Operator shall publish for the information of Trading Participants the following data as used in the market runs.	7.12.1 Consistent with the <u>Market Operator Information Disclosure and Confidentiality Manual</u> , the Market Operator shall publish <u>in the market information website,</u> for the	For clarity

Title	Section	Provision	Proposed Amendment	Rationale
		Other data may also be published without need of amending this Section and may include, but will not be limited to, the following data – a) Outage schedules submitted by the System Operator in accordance with this Dispatch Protocol; and b) Over-riding Constraints submitted by the System Operator in accordance with this Dispatch Protocol.	information of Trading Participants, the following data as used in the market runs:- Other data may also be published without need of amending this Section and may include, but will not be limited to, the following data – a) Outage schedules submitted by the System Operator in accordance with this Dispatch Protocol; and b) Over-riding Constraints submitted by the System Operator in accordance with this Dispatch Protocol.	
Pre-Dispatch Market Projections	8	Pre-Dispatch Market Projections	Pre-Dispatch Market Projections	
Background	8.1.1	WESM Rules Clause 3.7 sets out the requirements for the preparation and publication by the Market Operator of the week-ahead projections and day-ahead projections using the Market Dispatch Optimization Model (MDOM) and in accordance with the WESM timetable.	WESM Rules Clause 3.7 sets out the requirements for the preparation and publication by the Market Operator of the WAP, DAP, and HAP week-ahead projections and day-ahead projections using the Market Dispatch Optimization Model (MDOM) and in accordance with the WESM timetable.	Revised to include HAP
			<u>8.1.2 The WAP and DAP are required under the said WESM Rules to be prepared for all hourly intervals within the relevant market horizon as defined in the WESM timetable.</u>	Revised for clarity
Background	8.1.2	8.1.2 As set out in WESM Rules Clause 3.7.1, the week-ahead projections (WAP) are to be prepared and published daily in accordance with the WESM timetable to assist Trading Participants to anticipate and respond to a range of market conditions which might	8.1.2 8.1.3 As set out in WESM Rules Clause 3.7.1, the week-ahead projections (WAP) are to be prepared and published daily in accordance with the WESM timetable to assist Trading Participants to anticipate and respond to a range of market conditions which	Clerical revisions

Title	Section	Provision	Proposed Amendment	Rationale
		reasonably be expected to occur over the forthcoming week.	might reasonably be expected to occur over the forthcoming week.	
Background	8.1.3	8.1.3 The day-ahead projections (DAP), pursuant to WESM Rules Clause 3.7.2 are to be prepared and published regularly throughout the day in accordance with the WESM timetable. These projections are to assist the Trading Participants to anticipate and respond to a range of market conditions which might reasonably be expected to occur over the forthcoming day.	8.1.3 8.1.4 The day-ahead projections (DAP), pursuant to WESM Rules Clause 3.7.2 are to be prepared and published regularly throughout the day in accordance with the WESM timetable. These projections are to assist the Trading Participants to anticipate and respond to a range of market conditions which might reasonably be expected to occur over the forthcoming day.	Clerical revisions
			8.1.5 The HAP are required under the said WESM Rules to be prepared for all dispatch intervals within the relevant market horizon as defined in the WESM timetable. 8.1.6 The HAP allows the Market Operator to assess possible infeasible solutions that may occur and affect the succeeding execution of the RTD run. The Market Operator and System Operator can then undertake necessary actions to prevent or minimize the occurrence of infeasible solution in the forthcoming RTD runs.	Added new provisions for HAP
Background	8.1.4	8.1.4 The DAP, which runs every four (4) hours, also allows the Market Operator to assess possible infeasible solutions that may occur and affect the succeeding execution of the ex-ante or real-time dispatch (RTD) market run. The Market Operator and System Operator can then undertake necessary actions to prevent or minimize the occurrence	8.1.4 The DAP, which runs every four (4) hours, also allows the Market Operator to assess possible infeasible solutions that may occur and affect the succeeding execution of the ex-ante or real-time dispatch (RTD) market run. The Market Operator and System Operator can then undertake necessary actions to prevent or minimize the occurrence	Removed since this is available in the WESM Timetable so as to avoid inconsistency.

Title	Section	Provision	Proposed Amendment	Rationale
		of infeasible solution in the forthcoming RTD runs.	of infeasible solution in the forthcoming RTD runs.	
Background	8.1.5	8.1.5 Both sets of projections are required under the said WESM Rules to be prepared for all trading intervals within the relevant market horizon as defined in the WESM timetable.	8.1.5 Both sets of projections are required under the said WESM Rules to be prepared for all trading intervals within the relevant market horizon as defined in the WESM timetable.	Already covered in Section 4
Background	8.1.6	8.1.6 The considerations and conditions that are to be taken account of in the preparation of these market projections are set out in WESM Rules Clause 3.7.	8.1.6 8.1.7 The considerations and conditions that are to be taken account of in the preparation of these market projections are set out in WESM Rules Clause 3.7.	Renumbering
Background	8.1.7	8.1.7 The market projections prepared by the Market Operator are to be published in accordance with the WESM timetable. The information required to be published is set out in WESM Rules Clause 3.7.4.	8.1.7 8.1.8 The market projections prepared by the Market Operator are to be published in accordance with the WESM timetable. The information required to be published is set out in WESM Rules Clause 3.7.4 3.7.5 .	Renumbering and revised reference to WESM Rules, as amended by DOE DC 2016-10-0014
Scope And Purpose	8.2.1	8.2.1 The procedures and requirements set out in this Section shall be implemented in the preparation of the Week-Ahead (WAP) Market Projection and the Day-Ahead (DAP) Market Projection, collectively referred to in this Dispatch Protocol as the pre-dispatch market projections.	8.2.1 The procedures and requirements set out in this Section shall be implemented in the preparation of the Week-Ahead (WAP), Market Projection and the Day-Ahead (DAP), Market Projection and HAP , collectively referred to in this Dispatch Protocol as the pre-dispatch market projections.	Included HAP
Responsibilities	8.3.1	Market Operator. The Market Operator shall be responsible for the following – a) Ensuring the timely preparation of the Week-Ahead Projection, Day-Ahead Projection and Hour-Ahead Projection market runs are carried out in accordance with the WESM timetable; xxx	Market Operator. The Market Operator shall be responsible for the following – a) Ensuring the timely preparation of the Week-Ahead Projection, Day-Ahead Projection WAP, DAP, and Hour-Ahead Projection HAP market runs are carried out in accordance with the WESM timetable; xxx	Included HAP

Title	Section	Provision	Proposed Amendment	Rationale
Responsibilities	8.3.2	System Operator. The System Operator shall be responsible for – a) Preparing and ensuring timely submission to the Market Operator of the information required of it for the execution of the WAP and the DAP market projection runs as set out in the WESM Rules and this Dispatch Protocol; and xxx	System Operator. The System Operator shall be responsible for – a) Preparing and ensuring timely submission to the Market Operator of the information required of it for the execution of the WAP and the DAP market projection runs as set out in the WESM Rules and this Dispatch Protocol; and xxx	
Responsibilities	8.3.3	Trading Participants. Trading Participants shall be responsible for – a) Ensuring submission of generation offers and reserve offers as set out in the WESM Rules and in accordance with the WESM timetable and the procedures and requirements set forth in this Dispatch Protocol; and xxx	Trading Participants. Trading Participants shall be responsible for – a) Ensuring submission of self-scheduled nominations, bids, and offers generation offers and reserve offers as set out in the WESM Rules and in accordance with the WESM timetable and the procedures and requirements set forth in this Dispatch Protocol; and xxx	For consistency
Market Dispatch Optimization Model (MDOM)	8.4	8.4 Market Dispatch Optimization Model (MDOM) xxx	8.4 Market Dispatch Optimization Model (MDOM) xxx	Removed to avoid inconsistency with PDM
Schedule And Coverage Of Pre-Dispatch Market Projections	8.5	8.5 Schedule And Coverage Of Pre-Dispatch Market Projections xxx	8.5 Schedule And Coverage Of Pre-Dispatch Market Projections xxx	Removed because this is already discussed in the WESM Timetable

Title	Section	Provision	Proposed Amendment	Rationale
Data Inputs/ Information Requirements	8.6	8.6 Data Inputs/ Information Requirements	8-6 8.4 Data Inputs/ Information Requirements	
Data Inputs/ Information Requirements	8.6.1	8.6.1 Pursuant to WESM Rules Clause 3.7.3, the market projections shall take into consideration various data inputs. These inputs shall be made available or submitted to the Market Operator in accordance with the WESM timetable and the procedures set out in this Dispatch Protocol and relevant provisions of the WESM Rules.	8-6-1 3-7-3 8.4.1 Pursuant to WESM Rules Clause 3.7.4 , the market projections shall take into consideration various data inputs. These inputs shall be made available or submitted to the Market Operator in accordance with the WESM timetable and the procedures set out in this Dispatch Protocol and relevant provisions of the WESM Rules.	Renumbering and revised reference to WESM Rules, as amended by DOE DC 2016-10-0014
Data Inputs/ Information Requirements	8.6.2	8.6.2 The data inputs for the market projections are as follows – a) Generation energy and reserve offers, target loading levels and demand bids b) Demand/load forecast determined in accordance with the WESM Load Forecasting Methodology c) System snapshot d) Outage schedules e) Reserve Requirements f) Contingency list g) Transmission limits h) Overriding Constraints i) System advisories	8-6-2 8.4.2 The data inputs for the market projections are as follows – a) Generation energy and reserve offers, target loading levels self-scheduled nominations , and demand bids b) Demand/load forecast determined in accordance with the WESM Load Forecasting Methodology c) System snapshot d) Outage schedules e) Reserve Requirements f) Contingency list g) Transmission limits h) Over-riding Constraints i) System advisories	For consistency and renumbering
Data Inputs/ Information Requirements	8.6.3	8.6.3 Data to be submitted to and considered by the Market Operator shall be for all the trading intervals within the market horizon covered by the relevant WAP and DAP run.	8-6-3 8.4.3 Data to be submitted to and considered by the Market Operator shall be for all the trading intervals within the market horizon covered by the relevant WAP and DAP run market projection .	Renumbering and for clarity
Outputs/ Results Of	8.7	8.7 Outputs/ Results Of Market Projections	8-7 8.5 Outputs/ Results Of Market Projections	Renumbering

Title	Section	Provision	Proposed Amendment	Rationale
Market Projections				
Outputs/ Results Of Market Projections	8.7.1	8.7.1 The MDOM simultaneously determines the week-ahead and day-ahead projections for the following – a) Dispatch targets for the end of a trading interval, b) Reserve allocations for the trading interval, c) Associated energy prices at all market trading nodes, and d) When applicable, reserve prices for all reserve regions.	8.7.1 8.5.1 The market projections use the MDOM simultaneously to determine determines the week-ahead and day-ahead projections for the following – a) Energy dispatch Dispatch targets for the end of an trading interval, b) Reserve allocations schedules for the trading entire interval, c) Energy Associated energy prices at all market trading nodes, and d) Reserve region When applicable, reserve prices for all reserve regions.	Revised for clarity
Outputs/Results Of Market Projections	8.7.2	8.7.2 Where constraints are encountered in the market runs, the results will reflect constraint violation coefficients (CVCs).	8.7.2 8.5.2 Where constraint violation coefficients (CVCs) constraints are encountered in the market runs projections, the results will already reflect prices based on the automatic pricing re-run constraint violation coefficients (CVCs).	Revised for clarity. Also added statements on the application of an automatic pricing re-run based on Enhanced WESM Design
Publication And Dissemination Of WAP And DAP Results	8.8	8.8 Publication And Dissemination Of WAP And DAP Results	8.8 8.6 Publication And Dissemination Of WAP And DAP Market Projection Results	For consistency
Publication And Dissemination Of WAP And Dap Results	8.8.1	8.8.1 The results of the DAP and WAP runs shall be transmitted to the System Operator in the format prescribed in Attachment 8A and shall contain the following information – a) Resource ID b) Trading Participant Name c) Dispatch data	8.8.1 8.6.1 The results of the DAP and WAP runs market projections shall be transmitted to the System Operator in the format prescribed in Appendix A of this Market Manual. Attachment 8A, and shall contain the following information – a) Resource ID	To also cover HAP and update reference

Title	Section	Provision	Proposed Amendment	Rationale
		d) Regulation Base Point (the dispatch target) e) Regulation High Limit f) Regulation Low Limit	b) Trading Participant Name c) Dispatch data d) Regulation Base Point (the dispatch target) e) Regulation High Limit f) Regulation Low Limit	
Publication And Dissemination Of WAP And Dap Results	8.8.2	8.8.2 If the market run results show the occurrence of constraint violation coefficients, the System Operator shall be notified of these results through a market advisory which shall be transmitted in the format set out in Attachment 8B.	8.8.2 8.6.2 If the market run results show the occurrence of constraint violation coefficients, the System Operator shall be notified of these results through a market advisory which shall be transmitted in the format set out in <u>Appendix A of this Market Manual</u> Attachment 8B.	To also cover HAP and update reference
Publication And Dissemination Of WAP And Dap Results	8.8.3	8.8.3 If the market run results indicate that nodal energy prices are expected to be equal to, or exceed, nodal VoLL at any customer nodes in the market network model, the System Operator shall be notified of the likelihood of initiating loss of load at those nodes through a market advisory which shall be transmitted in the format set out in Attachment 8B.	8.8.3 8.6.3 If the <u>results of</u> market run results <u>projections</u> indicate that nodal energy <u>dispatch</u> prices are expected to be equal to, or exceed, nodal VoLL at any customer <u>market trading</u> nodes in the market network model, the System Operator shall be notified of the likelihood of initiating loss of load at those nodes through a market advisory which shall be transmitted in the format set out in <u>Appendix A of this Market Manual</u> Attachment 8B.	To also cover HAP and update reference
Publication And Dissemination Of WAP And Dap Results	8.8.4	8.8.4 The results of the WAP and DAP runs shall be published to the Trading Participants through the Market Participant Interface (MPI). Trading Participants will have access to the data pertaining to their registered generating unit or customer facility. Data to be published is as follows - a) Trading Participant Name b) Resource ID c) Bid/Offer Internal Code	8.8.4 8.6.4 The results of the WAP and DAP runs <u>market projections</u> shall be published <u>and notified</u> to the Trading Participants through the Market Participant Interface (MPI). Trading Participants <u>shall be provided with the following information</u> will have access to the data pertaining to their <u>respective</u> registered (<u>i.e.</u> generating unit or customer facility <u>load</u>): Data to be published is as follows -	Revised for clarity

Title	Section	Provision	Proposed Amendment	Rationale
		d) Energy Dispatch e) Reserve Type f) Reserve Dispatch	a) Trading Participant Name b) Resource ID c) Bid/Offer Internal Code d a) Energy Dispatch Schedule b) Nodal Energy Price e c) Reserve Schedule for specific Reserve Type f d) Regional Reserve Dispatch Price for specific Reserve Type	
Publication And Dissemination Of WAP And Dap Results	8.8.5	8.8.5 The following system data will also be published in the MPI and shall be accessible to all the Trading Participants with access to the MPI – a) Total energy dispatched b) Total dispatchable load c) Total reserve required per time point (for each class and area) d) Total system losses e) Reserve requirements f) Locational marginal prices	8.8.5 8.6.5 The following Other system data that will also be published in the MPI and be made available and shall be accessible to all the Trading Participants with access to through the MPI shall include the following: – a) Total energy dispatched b) Total dispatchable load c) Total reserve required per time point (for each class and area) d) Total system losses e d) Reserve requirements f) Locational marginal prices	For clarity
	8.8.6	8.8.6 xxx	8.8.6 xxx	Redundant provision
Save Case	8.9	8.9 Save Case	8.9 8.7 Save Case Archiving of Market Projections	For clarity
Save Case	8.9.1	Using the Save Case functionality of the Market Management System, the Market Operator shall save the input data as well as the results of each WAP and DAP run. The saved cases shall be retrieved and utilized by the Market Operator for validation as well as for the conduct of sensitivity analysis and other simulation studies. Data retention shall	The Using the Save Case functionality of the Market Management System, the Market Operator shall save archive the input data as well as the results of each WAP and DAP run market projection . The archived information saved cases shall be retrieved and utilized by the Market Operator for validation as well as for the conduct of	For clarity and to include HAP

Title	Section	Provision	Proposed Amendment	Rationale
		be in accordance with the relevant provisions of the WESM Rules 9.7.	sensitivity analysis and other simulation studies. Data retention shall be in accordance with the relevant provisions of the WESM Rules 9.7.	
Real Time Dispatch Scheduling	9			
Background	9.1.1	WESM Rules Clause 3.8 sets out the responsibilities of the Market Operator in the scheduling of generation and load in the WESM. Among other responsibilities, WESM Rules Clause 3.8.1 directs that prior to the commencement of each trading interval, the Market Operator shall use the Market Dispatch Optimization Model (MDOM) to determine the target loading level in MW for each scheduled generating unit or each scheduled load and for each reserve facility for the end of the trading interval using the latest data from the System Operator and the Trading Participants. The Market Operator shall submit to the System Operator the dispatch schedule containing the target loading levels to be achieved at the end of the trading interval.	WESM Rules Clause 3.8 sets out the responsibilities of the Market Operator in the scheduling of generation and load in the WESM. Among other responsibilities, WESM Rules Clause 3.8.1 directs that prior to the commencement of each trading dispatch interval, the Market Operator shall use the Market Dispatch Optimization Model (MDOM) to determine the target loading level in MW for each <u>non-scheduled generating unit, must dispatch generating unit, priority dispatch generating unit</u> , scheduled generating unit or each scheduled load and for each reserve facility for the end of the trading dispatch interval using the latest data from the System Operator and the Trading Participants. The Market Operator shall submit to the System Operator the dispatch schedule containing the target loading levels to be achieved at the end of the trading dispatch interval.	Revised for clarity
	9.1.2	Chapter 11 of the WESM Rules defines loading level as the instantaneous level of output or consumption in MW of a generating unit or load. The target loading level of a generator or load is the loading level determined as an end-of-period target for that scheduled generator or load.	Chapter 11 of the The WESM Rules defines loading level as the instantaneous level of output or consumption in MW of a generating unit or load. The target loading level of a generator or load is the loading level determined as an end-of-period target for that scheduled generator or load.	For consistency with the market design that has no ex-post due to shorter dispatch interval

Title	Section	Provision	Proposed Amendment	Rationale
	9.1.3	Additionally, the Market Operator is required under WESM Rules Clause 3.10 to calculate and publish the ex-ante and ex-post prices.	Additionally, the Market Operator is required under WESM Rules Clause 3.10 to calculate and publish the ex-ante and ex-post RTD prices.	
Purpose And Scope	9.2	9.2.1 This Section describes the requirements and procedures for the generation and publication of the real time dispatch schedules and prices, which include the ex-ante or real time dispatch (RTD) and the ex-post or real time ex-post (RTX) dispatch schedules and prices.	9.2.1 This Section describes the requirements and procedures for the generation and publication of the real time dispatch schedules and prices, which include the ex-ante or real time dispatch (RTD) and the ex-post or real time ex-post (RTX) dispatch schedules and prices.	For consistency with the market design that has no ex-post due to shorter dispatch interval
Responsibilities	9.3.1	Market Operator. The Market Operator shall be responsible for the following – a. Ensuring that the ex-ante (real time dispatch or RTD) and the ex-post (real time ex-post or RTX) market runs are carried out in accordance with the WESM timetable; b. Publishing and disseminating the RTD and RTX results in accordance with the WESM timetable and with the procedures, requirements and conditions set out in WESM Rules Clause 3.8 and Clause 3.9 and other relevant clauses and this Dispatch Protocol; and xxx	Market Operator. The Market Operator shall be responsible for the following – a. Ensuring that the ex-ante (real time dispatch or RTD) and the ex-post (real time ex-post or RTX) market runs are carried out in accordance with the WESM timetable; b. Publishing and disseminating the RTD and RTX results in accordance with the WESM timetable and with the procedures, requirements and conditions set out in WESM Rules Clause 3.8 and Clause 3.9 and other relevant clauses and this Dispatch Protocol; and xxx	Removed ex-post
Responsibilities	9.3.2	System Operator. The System Operator shall be responsible for – a. Preparing and ensuring timely submission to the Market Operator of the information required of it for the execution of the RTD	System Operator. The System Operator shall be responsible for – a. Preparing and ensuring timely submission to the Market Operator of the information required of it for the execution of the RTD	For consistency with the market design that has no ex-post due to shorter dispatch interval

Title	Section	Provision	Proposed Amendment	Rationale
		and the RTX market projection runs as set out in the WESM Rules and this Dispatch Protocol; and xxx	and the RTX market projection runs as set out in the WESM Rules and this Dispatch Protocol; and xxx	
Responsibilities	9.3.3	Trading Participants. Trading Participants shall be responsible for – a. Ensuring submission of generation offers and reserve offers as set out in the WESM Rules and in accordance with the WESM timetable and the procedures and requirements set forth in this Dispatch Protocol b. Meeting the target loading levels as set out in the WESM Rules and in accordance with the WESM timetable and the procedures and requirements set forth in this Dispatch Protocol xxx	Trading Participants. Trading Participants shall be responsible for – a. Ensuring submission of generation offers and reserve offers as set out in the WESM Rules and in accordance with the WESM timetable and the procedures and requirements set forth in this Dispatch Protocol b. Meeting the target loading levels as set out in the WESM Rules and in accordance with the WESM timetable and the procedures and requirements set forth in this Dispatch Protocol <u>For scheduled generating units and priority dispatch generating units who are dispatched, generating in accordance with the dispatch schedule communicated and within dispatch conformance the standards set forth in this Market Manual.</u> xxx	Revised for clarity
Market Dispatch Optimization Model (MDOM)	9.4	9.4 Market Dispatch Optimization Model (MDOM) xxx	9.4 Market Dispatch Optimization Model (MDOM) xxx	Removed to avoid inconsistency with PDM. DP should only discuss operating procedures.

Title	Section	Provision	Proposed Amendment	Rationale
Schedule And Coverage Of Real Time Dispatch Scheduling	9.5	9.5 Schedule And Coverage Of Real Time Dispatch Scheduling	9.5 9.4 Schedule And Coverage Of Real Time Dispatch Scheduling	Renumbering
Schedule And Coverage Of Real Time Dispatch Scheduling	9.5.1	9.5.1 The execution of the real time dispatch scheduling processes shall be in accordance with the WESM Timetable.	9.5.1 9.4.1 The execution of the real time dispatch scheduling processes shall be in accordance with the WESM Timetable.	
Schedule And Coverage Of Real Time Dispatch Scheduling	9.5.2	9.5.2 The ex-ante or RTD and the ex-post or RTX market runs shall be performed on the following schedules and coverage – xxx	9.5.2 The ex-ante or RTD and the ex-post or RTX market runs shall be performed on the following schedules and coverage – xxx	Removed to avoid inconsistency with WESM Timetable, which already discusses timelines and covered periods
Schedule And Coverage Of Real Time Dispatch Scheduling	9.5.3	9.5.3 The schedule of the execution of the RTD and RTX market runs and corresponding coverage are presented in the following illustration – xxx	9.5.3 The schedule of the execution of the RTD and RTX market runs and corresponding coverage are presented in the following illustration – xxx	For consistency with the market design that has no ex-post due to shorter dispatch interval
Data Inputs/ Information Requirements	9.6	9.6 Data Inputs/ Information Requirements	9.6 9.5 Data Inputs/ Information Requirements	Renumbering
Data Inputs/ Information Requirements	9.6.1	The following data and information must be available and must be submitted to the Market Operator prior to the execution of the real-time dispatch schedules in accordance with the WESM timetable. Submission shall be in accordance with the schedules and format set out in other Sections of this Dispatch Protocol or, for the load forecasts, in the relevant market manuals.	The following data and information set forth in Table 5 below must be available and must be submitted to the Market Operator prior to the execution of the real-time dispatch schedules in accordance with the WESM timetable. Submission shall be in accordance with the schedules and format set out in other Sections 6 and 7 of this Dispatch Protocol or, for the load forecasts, in under the relevant market manuals Load Forecasting Manual .	Revised for clarity

Title	Section	Provision	Proposed Amendment	Rationale
		Table (See Attachment 5 – Tables/Figures in Section 9)	Table 5. Summary of Inputs and Sources for the Real-Time Dispatch (See Attachment 5 – Tables/Figures in Section 9)	
Outputs/Results Of Real Time Dispatch Scheduling	9.7	9.7 Outputs/Results Of Real Time Dispatch Scheduling	9.7 9.6 Outputs/Results Of Real Time Dispatch Scheduling	Renumbering
Outputs/Results Of Real Time Dispatch Scheduling	9.7.1	9.7.1 The MDOM simultaneously determines the following – a. Target loading levels in MW for the end of a trading interval, identified as the ex-ante or RTD dispatch schedule, b. Reserve allocations for the trading interval, c. Associated ex-ante and ex-post energy prices at all market trading nodes, and d. When applicable, reserve prices for all reserve regions.	9.7.1 9.6.1 The MDOM simultaneously determines the following – a. Target loading levels in MW for the end of a trading dispatch interval, identified as the ex-ante or RTD dispatch schedule, b. Reserve allocations for the trading dispatch interval, c. Associated ex-ante and ex-post energy prices at all market trading nodes, and d. When applicable, reserve prices for all reserve regions.	Revised for clarity
	9.7.2	Where constraints are encountered in the market runs, the results will reflect constraint violation coefficients (CVCs).	Where constraint violation coefficients (CVCs) constraints are encountered in the market runs, the results will already reflect prices based on the automatic pricing re-run constraint violation coefficients (CVCs) .	Revised for clarity
Dissemination And Publication Of Market Run Results	9.8	9.8 Dissemination And Publication Of Market Run Results	9.8 9.7 Dissemination And Publication Of Market Run Results	Renumbering
Dissemination And Publication Of	9.8.1	9.8.1 The RTD schedule shall be transmitted to the System Operator in the format prescribed in Attachment 8A. If the market runs results in occurrence of constraint	9.8.1 9.7.1 The RTD schedule shall be transmitted to the System Operator in the format prescribed in Attachment 8A Appendix D of this Market Manual . If the	Renumbering and revised references

Title	Section	Provision	Proposed Amendment	Rationale
Market Run Results		violation coefficients (CVCs), this shall be notified to the System Operator through market advisories, which shall be transmitted in the format prescribed in Attachment 8B.	market runs results in occurrence of constraint violation coefficients (CVCs), this shall be notified to the System Operator through market advisories, which shall be transmitted in the format prescribed in Attachment 8B Appendix D of this Market Manual.	
Dissemination And Publication Of Market Run Results	9.8.2	9.8.2 The results of the Real Time Dispatch (RTD & RTX) shall be published and notified to the Trading Participants through the Market Participant Interface (MPI). The Trading Participants shall be provided following information pertaining to their respective registered resource (i.e., generating unit or load) – Table (See Attachment 5 – Tables/Figures in Section 9)	9.8.2 9.7.2 The RTD results of the Real Time Dispatch (RTD & RTX) shall be published and notified to the Trading Participants through the Market Participant Interface (MPI). The Trading Participants shall be provided following information pertaining to their respective registered resource (i.e., generating unit or load) – Table <u>a. Energy Dispatch Schedule</u> <u>b. Nodal Energy Price</u> <u>c. Reserve Schedule for specific Reserve Type</u> <u>d. Regional Reserve Price for specific Reserve Type</u>	Revised for clarity
Dissemination And Publication Of Market Run Results	9.8.3	9.8.3 Other system data that will be published and be made available to all Trading Participants through the MPI includes include the following – a) Total energy dispatched b) Total dispatchable load c) Total reserve required per time point (for each class and area) d) Total system losses e) Reserve requirements	9.8.3 9.7.3 Other system data that will be published and be made available to all Trading Participants through the MPI Market Information Website shall include the following – a) Total energy dispatched b) Total dispatchable load c) Total reserve required per time point (for each class and area) d) Total system losses	Revised for clarity

Title	Section	Provision	Proposed Amendment	Rationale
		f) Locational marginal prices	e d Reserve requirements f-e Locational marginal prices	
Dissemination And Publication Of Market Run Results	9.8.4	9.8.4 xxx	9.8.4 xxx	Redundant provision
Save Case	9.9	9.9 Save Case	9.9 9.8 Save Case Archiving of RTD Market Runs	For clarity
Save Case	9.9	9.9.1 Using the save case functionality of the MMS, the Market Operator shall save the input data as well as the results of each ex-ante and ex-post market run that have been carried out. The saved cases shall be retrieved and utilized by the Market Operator for validation as well as for the conduct of sensitivity analysis and other simulation studies. Data retention shall be in accordance with the relevant provisions of the WESM Rules.	9.9.1 The Using the save case functionality of the MMS, the Market Operator shall save archive the input data as well as the results of each ex-ante and ex-post RTD market run that have been carried out. The saved cases archived information shall be retrieved and utilized by the Market Operator for validation as well as for the conduct of sensitivity analysis and other simulation studies. Data retention shall be in accordance with the relevant provisions of the WESM Rules.	Revised for clarity. No more ex-post
Preparation And Use Of The WESM Merit Order Table	10	10 Preparation And Use Of The WESM Merit Order Table	10 Preparation And Use Of The WESM Merit Order Table	
Background	10.1.1	The WESM Merit Order Table (MOT) is prepared as a guide for the System Operator in selecting generating units that can be re-dispatched in the course of the operations of the power system. The use of the MOT by the System Operator shall be in accordance with the re-dispatch process described in the relevant Section of this Dispatch Protocol.	The WESM Merit Order Table (WMOT) is prepared as a guide for the System Operator in selecting generating units that can be re-dispatched in the course of the operations of the power system. The use of the WMOT by the System Operator shall be in accordance with the re-dispatch process described in the relevant Section of this Dispatch Protocol.	Consistency in use of WMOT, which is the MOT prepared by the Market Operator based on the WESM offers
Background	10.1.2	The WESM MOT is the stacking in an unconstrained manner of scheduled and	The WESM WMOT is the constructed by stacking in an unconstrained manner of	

Title	Section	Provision	Proposed Amendment	Rationale
		unscheduled capacities through the generation offers submitted for the real-time dispatch or ex-ante market runs. Energy offer blocks submitted by Generator Trading Participants for a particular trading interval are arranged from lowest to the highest priced offer block, without considering any constraints. The MOT stacks energy offers into two, namely, the energy offers that were scheduled (or “Offers Dispatched”) and energy offers that were not scheduled (or “Offers Not Dispatched”).	scheduled and unscheduled capacities through the generation offers submitted for the real-time dispatch or ex-ante market runs. Energy offer blocks submitted by Generator Trading Participants for a particular trading interval are arranged from lowest to the highest priced offer block, without considering any constraints. The <u>WMOT</u> stacks energy offers into two, namely, the energy offers that were scheduled (or “Offers Dispatched”) and energy offers that were not scheduled (or “Offers Not Dispatched”).	
Background	10.1.3	The System Operator utilizes the MOT of Offers Dispatched as a guide in determining which generating units may be constrained-off, whereas the MOT of Offers Not Dispatched is a guide for determining which generating units may be constrained-on for a particular trading interval.	The System Operator utilizes the <u>WMOT</u> of Offers Dispatched as a guide in determining which generating units may be constrained-off, whereas the <u>WMOT</u> of Offers Not Dispatched is a guide for determining which generating units may be constrained-on for a particular trading dispatch interval.	Consistency in use of WMOT, which is the MOT prepared by the Market Operator based on the WESM offers
Background	10.1.4	The Market Operator prepares a separate WESM MOT for each of the grids where the WESM is in commercial operation.	The Market Operator prepares a separate WESM WMOTs <u>WMOTs</u> for each of the grids where the WESM is in commercial operation.	
Purpose And Scope	10.2	10.2.1 This Section sets out the requirements and procedures for the preparation and use of the WESM Merit Order Table (MOT) in the dispatch of generating units.	10.2.1 This Section sets out the requirements and procedures for the preparation and use of the WESM Merit Order Table (<u>WMOT</u>) in the dispatch of generating units.	
Responsibilities	10.3.1	The Market Operator shall be responsible for preparing, disseminating and publishing the MOT in accordance with the procedures set out in this Section.	The Market Operator shall be responsible for preparing, disseminating and publishing the <u>WMOT</u> in accordance with the procedures set out in this Section.	
Responsibilities	10.3.2	Consistent with its obligations set out in this Dispatch Protocol in respect to the issuance or dispatch instructions, the System Operator shall be responsible for ensuring the	Consistent with its obligations set out in this Dispatch Protocol in respect to the issuance or dispatch instructions, the System Operator shall be responsible for ensuring the application of the information provided in the	Added provisions to require submission of reports

Title	Section	Provision	Proposed Amendment	Rationale
		application of the information provided in the MOT in the real-time operation of the grid.	WMOT in the real-time operation of the grid. <u>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.</u>	
Timeline Of The Preparation Of The Mot	10.4	10.4 Timeline Of The Preparation Of The MOT	10.4 Timeline Of The Preparation Of The WMOT	Consistency in use of WMOT, which is the MOT prepared by the Market Operator based on the WESM offers
Timeline Of The Preparation Of The Mot	10.4	10.4.1 The Market Operator shall prepare the MOT for each trading interval right after the completion of the RTD market run workflow for that trading interval, and shall immediately transmit the same to the System Operator through the EMS-MMS data exchange facility. The timeline is illustrated as follows, where “XX” refers to the trading interval to which the MOT will apply. xxx	10.4.1 The Market Operator shall prepare the MOT for each trading interval right after the completion of the RTD market run workflow for that trading interval, and shall immediately transmit the same to the System Operator through the EMS-MMS data exchange facility. The timeline is illustrated as follows, where “XX” refers to the trading interval to which the MOT will apply. xxx	Removed to avoid inconsistency on timelines. It already has a timeline in the RTD
Inputs And Information Requirements	10.5	10.5 Inputs And Information Requirements	10.5 Inputs And Information Requirements	Simplify sub-section
Inputs And Information Requirements	10.5	10.5.1 The MOT shall be prepared using the offers and the real-time dispatch schedule of each generating unit for which offers were submitted for the relevant trading interval. The specific information that will be used is as follows –	10.5.1 10.4.1 The WMOT shall be prepared using the offers and the real-time dispatch schedule of each generating unit for which offers were submitted for the relevant trading interval. The specific information that will be used is as follows –	Consistency in use of WMOT, which is the MOT prepared by the Market Operator based on the WESM offers

Title	Section	Provision	Proposed Amendment	Rationale
		Table (See Attachment 6 – Tables/Figures in Section10)	Table 7. Inputs for the Preparation of the WMOT (See Attachment 6 – Tables/Figures in Section10)	
Preparation of the MOT	10.6	10.6 Preparation of the MOT	10.6 Preparation of the MOT	Simplify sub-section
Preparation of the MOT	10.6.1	10.6.1 The MOT shall include the following – a. All generating units for which offers have been submitted for the relevant trading interval; and b. All generating units which have been scheduled or included in the RTD schedule as a result of the imposition of overriding constraints, with or without offers submitted for that trading interval.	10.6.1 10.4.2 The WMOT shall include the following – a. All generating units for which offers have been submitted for the relevant trading dispatch interval; and b. All generating units which have been scheduled or included in the RTD schedule as a result of the imposition of overriding constraints, with or without offers submitted for that trading dispatch interval.	Consistency in use of WMOT, which is the MOT prepared by the Market Operator based on the WESM offers
Preparation of the MOT	10.6.2	10.6.2 The following generating units shall be excluded in the MOT – a. Generating units which are on outage as reflected in the outage schedule submitted by the System Operator, and b. Generating units which are not available as reflected in the network configuration considered in the ex-ante or RTD market run.	10.6.2 10.4.3 The following generating units shall be excluded in the WMOT – a. Generating units which are on outage as reflected in the outage schedule submitted by the System Operator, and b. Generating units which are not available as reflected in the network configuration considered in the ex-ante or RTD market run.	
Preparation of the MOT	10.6.3	10.6.3 The energy offers for all generating units with offers will be segregated into two, namely, the – a) Offers dispatched b) Offers Not dispatched	10.6.3 10.4.4 The energy offers for all generating units with offers will be segregated into two, namely, the – a) Offers dispatched b) Offers Not dispatched	Renumbering

Title	Section	Provision	Proposed Amendment	Rationale
Preparation of the MOT	10.6.4	10.6.4 The “OFFERS DISPATCHED” consists of the energy offer blocks which have been scheduled in the ex-ante or RTD schedule for the trading interval. To the extent possible, the dispatch schedule of each generating unit will be split into corresponding offer blocks. The scheduled offer blocks will then be sorted and listed from the lowest-priced to the highest-priced scheduled offer block, with the lowest-priced scheduled offer block at the bottom of the list and the highest-priced at the top of the list. The generating units for which no offers 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.	10.6.4 10.4.5 The “OFFERS DISPATCHED” consists of the energy offer blocks which have been scheduled in the ex-ante or RTD schedule for the trading dispatch interval. To the extent possible, the dispatch schedule of each generating unit will be split into corresponding offer blocks. The scheduled offer blocks will then be sorted and listed from the lowest-priced to the highest-priced scheduled offer block, with the lowest-priced scheduled offer block at the bottom of the list and the highest-priced at the top of the list. The generating units for which no offers 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 <u>with must dispatch generating units at the bottom and followed by priority dispatch generating units and non-scheduled generating units in that order.</u>	Revised for clarity
Preparation of the MOT	10.6.5	10.6.5 The “OFFERS NOT DISPATCHED” consists of the remaining energy offers of each generating unit that are not scheduled or included in the RTD schedule for the trading interval. To the extent possible, the remaining offers will be sorted by offer blocks. The offer blocks not dispatched will then be sorted and listed from the lowest -priced to the highest-priced scheduled offer block, with the lowest-priced scheduled offer block at the bottom of the list and the highest-priced at the top of the list.	10.6.5 10.4.6 The “OFFERS NOT DISPATCHED” consists of the remaining energy offers of each generating unit that are not scheduled or included in the RTD schedule for the trading dispatch interval. To the extent possible, the remaining offers will be sorted by offer blocks. The offer blocks not dispatched will then be sorted and listed from the lowest -priced to the highest-priced scheduled offer block, with the lowest-priced scheduled offer block at the bottom of the list and the highest-priced at the top of the list. <u>Capacities that were not dispatched through their energy offers but have</u>	Revised for clarity

Title	Section	Provision	Proposed Amendment	Rationale
			<u>reserve dispatch targets shall be excluded from the list.</u>	
Preparation of the MOT	10.6.6	10.6.6 Attachment 10A presents a step-by-step illustration on how the MOT is prepared.	10.6.6 <u>10.4.7</u> Attachment 10A <u>Appendix B</u> presents a step-by-step illustration on how the MOT is prepared.	<ul style="list-style-type: none"> Revised references Renumbering For consistency
Output	10.7	10.7 Output	10.7 <u>10.5</u> Output <u>of the WMOT</u>	
Output	10.7.1	10.7.1 The hourly MOT shall contain the following information – Table (See Attachment 6 – Tables/Figures in Section10)	10.7.1 <u>10.5.1</u> The hourly <u>WMOT</u> shall contain the following information – <u>Table 8. Information provided in the WMOT</u> (See Attachment 6 – Tables/Figures in Section10)	
Output	10.7.2	10.7.2 The hourly MOT shall be published in substantially the form as presented in Attachment 10A of this Dispatch Protocol.	10.7.2 <u>10.5.2</u> The hourly <u>WMOT</u> shall be published in substantially the form as presented in Attachment 10A <u>Appendix C</u> of this Dispatch Protocol.	
Use of the MOT	10.8	10.8 Use of the MOT	10.8 <u>10.6</u> Use of the <u>WMOT</u>	
Use of the MOT	10.8.1	10.8.1 The System Operator shall use the MOT as reference whenever there is a requirement to constrain on or constrain off the dispatch schedule. However, the System Operator may resort in an out-of merit dispatch whenever the grid frequency is beyond the normal threshold.	10.8.1 <u>10.6.1</u> The System Operator shall use the <u>WMOT</u> as reference whenever there is a requirement to constrain on or constrain off the dispatch schedule. However, the System Operator may resort in an out-of merit dispatch whenever the grid frequency is beyond the normal threshold.	
Use of the MOT	10.8.2	10.8.2 The System Operator shall provide a post-dispatch report(s) to the Market Operator containing deviation of actual dispatch from the RTD schedule in aid of monitoring each generator's dispatch. Such reports should be able to identify, but not limited to, the following a. Non-compliance to dispatch instructions b. Designation of must-run units c. Utilized for ancillary services d. Testing Requirement	10.8.2 <u>10.6.2 As far as practicable, and when regulating reserves have been exhausted, the the System Operator shall issue re-dispatch instructions based on the merit order table. However, the System Operator may resort in an out-of merit dispatch whenever the grid frequency is beyond the normal threshold.</u> shall provide a post-dispatch report(s) to the Market Operator containing deviation of actual	Revised for clarity on use of WMOT, which shall be after regulating reserves have been exhausted. Also use of MOT should preferably be based in-merit

Title	Section	Provision	Proposed Amendment	Rationale
		e. Generator limitation	dispatch from the RTD schedule in aid of monitoring each generator's dispatch. Such reports should be able to identify, but not limited to, the following a. Non-compliance to dispatch instructions b. Designation of must-run units c. Utilized for ancillary services d. Testing Requirement e. Generator limitation	
Dissemination and Publication	10.9	10.9 Dissemination and Publication	10.9 10.7 Dissemination Reporting and Publication	Revised for clarity
Dissemination and Publication	10.9.1	10.9.1 The hourly MOT shall be transmitted to the System Operator immediately after its preparation, through the EMS-MMS data exchange facility.	10.9.1 10.7.1 The hourly WMOT shall be transmitted to the System Operator immediately after its preparation, through the EMS-MMS data exchange facility.	
Dissemination and Publication	10.9.2	10.9.2 The hourly MOT shall be published to the Trading Participants through the Market Information Website after the expiration of confidentiality of generator offer information in accordance with the relevant market manual.	10.9.2 10.7.2 The hourly WMOT shall be published to the Trading Participants through in the Market Information Website after the expiration of confidentiality of generator offer information in accordance with the relevant market manual Market Operator Information Disclosure and Confidentiality Manual.	
Dispatch Implementation	11			
Background	11.1.1	The System Operator and the Trading Participants shall communicate with each other for the target loading levels determined prior to the commencement of the trading interval and in accordance with the WESM timetable.	The System Operator and the Trading Participants shall communicate with each other for the target loading levels shall be determined and communicated prior to the commencement of the trading dispatch interval and in accordance with the WESM timetable.	Revised for clarity

Title	Section	Provision	Proposed Amendment	Rationale
Background	11.1.2	The Dispatch Schedule shall contain the target loading levels to be achieved in MW considered at the end of that trading interval. Generators who are dispatched shall use reasonable endeavours to comply with a linear ramp rate over the Trading Interval. All generators except must dispatch generating units shall be monitored for compliance with the Dispatch Tolerance standards and the required linear ramp rate. This is to ensure that the target loading for each Trading Participant shall be within the dispatch tolerance standards in MW and the linear ramping in MWhr from the start until the end of that Trading Interval. Dispatched trading participants will not be required to operate in any different fashion unless required to respond in accordance with reserve or ancillary services contract or respond to a direction by the System Operator.	The Dispatch Schedule shall contain the target loading levels to be achieved in MW considered at the end of that trading interval. Generators who are dispatched shall <u>generate in accordance with the dispatch schedule communicated and within dispatch conformance standards set forth in this Market Manual.</u> use reasonable endeavours to comply with a linear ramp rate over the Trading Interval. All generators except must dispatch generating units shall be monitored for compliance with the Dispatch Tolerance standards and the required linear ramp rate. This is to ensure that the target loading for each Trading Participant shall be within the dispatch tolerance standards in MW and the linear ramping in MWhr from the start until the end of that Trading Interval. Dispatched trading participants will not be required to operate in any different fashion <u>manner</u> unless required to respond in accordance with reserve or ancillary services contract or respond to a direction by the System Operator.	Added provisions on the use of dispatch conformance standards.
Background	11.1.3	During each trading interval, the System Operator is directed under WESM Rules Clause 3.8.2.1 to use reasonable endeavors to implement the dispatch targets determined by the Market Operator, to maintain system security consistent with the requirements of the Grid Code, and if necessary, to implement load shedding or to intervene.	During each trading <u>dispatch</u> interval, the System Operator is directed under WESM Rules Clause 3.8.2.1 to use reasonable endeavors to implement the dispatch targets determined by the Market Operator, to maintain system security consistent with the requirements of the Grid Code, and if necessary, to implement load shedding or to intervene.	Consistent with WESM Rules, as amended by DOE DC 2016-10-0014

Title	Section	Provision	Proposed Amendment	Rationale
Background	11.1.4	During a trading interval and in carrying out its responsibility of maintaining system security, it can become necessary for the System Operator to issue re-dispatch instructions. Such instructions may involve re-dispatch of generating units which can result in changes to the dispatch schedules generated by the Market Operator.	During a trading dispatch interval and in carrying out its responsibility of maintaining system security, it can become necessary for the System Operator to issue re-dispatch instructions. Such instructions may involve re-dispatch of generating units which can result in changes to the dispatch schedules generated by the Market Operator.	Consistent with WESM Rules, as amended by DOE DC 2016-10-0014
Purpose And Scope	11.2.2	<p>The procedures set out in this Section are associated with the following procedures –</p> <ul style="list-style-type: none"> a. Procedures for the dispatch of generating units which are scheduled to start up or shut down are set out in Section 12 of this Dispatch Protocol; b. Designation and dispatch of must run units which are set out in a separate Market Manual on the Management of Must Run and Must Stop Units; c. Procedures during market intervention and suspension which are set out in a separate Section 15 of this Dispatch Protocol; d. Procedures during alert or emergency conditions which are set out in a separate market manual; and e. Management of excess generation which is set out in a separate market manual; and f. Management of load shedding which is set out in a separate market manual. 	<p>The procedures set out in this Section are associated with the following procedures –</p> <ul style="list-style-type: none"> a. Procedures for the dispatch of generating units which are scheduled to start up or shut down are set out in Section 12 13 of this Dispatch Protocol; b. Designation and dispatch of must-run units which are set out in a separate Market Manual on the Management of Must Run and Must Stop Units Section 17 of this Dispatch Protocol; c. Procedures during market intervention and market suspension which are set out in a separate Section 15 16 of this Dispatch Protocol; d. Procedures during alert or emergency conditions which are set out in a separate market manual; and e. Management of excess generation which is set out in a separate market manual Section 18 of this Dispatch Protocol; and f. Management of load shedding which is set out in a separate market manual the Management of Load Shedding Manual. 	Revised references

Title	Section	Provision	Proposed Amendment	Rationale
Responsibilities	11.3.1	System Operator. The System Operator shall implement the real time dispatch schedules generated by the Market Operator and shall monitor compliance and report non-compliance with dispatch schedules and instructions by Trading Participants. It shall be responsible for assuring the security and reliability of the grid at all times in compliance with the provisions of the System Security and Reliability Guidelines, and shall issue re-dispatch instructions as it may deem necessary and in accordance with this Section.	System Operator. The System Operator shall <u>be responsible for:</u> <u>a. Monitoring the implementation of the real time dispatch targets as determined schedules generated by the Market Operator at the end of each dispatch interval;</u> <u>b. Implementing the WESM merit order table provided by the Market Operator;</u> <u>c. Assuring and shall monitor compliance and report non-compliance with dispatch schedules and instructions by Trading Participants. It shall be responsible for assuring the security and reliability of the grid at all times in compliance with the provisions of the System Security and Reliability Guidelines;</u> <u>d. Dispatching constrained-on or constrained-off generators or must run unit if all available reserves are exhausted during a dispatch interval;</u> and <u>e. Reporting events and actions made within each one (1) hour after that one (1) hour interval.</u> shall issue re-dispatch instructions as it may deem necessary and in accordance with this Section.	Revised for clarity. Added new provisions based on implications of implementing a 5-minute dispatch interval
Responsibilities	11.3.2	Market Operator. The Market Operator shall be responsible for ensuring timely transmittal to the System Operator and publication to the Trading Participants of the real time dispatch schedules, for energy and reserves, and the merit order table (MOT) determined for a trading interval, in accordance with the timelines set in the WESM timetable.	Market Operator. The Market Operator shall be responsible for ensuring timely transmittal to the System Operator and publication to the Trading Participants of the real time dispatch schedules, for energy and reserves, and the merit order table (MOT) determined for a trading <u>dispatch</u> interval, in accordance with the timelines set in the WESM timetable.	Consistent with WESM Rules, as amended by DOE DC 2016-10-0014

Title	Section	Provision	Proposed Amendment	Rationale
Issuance And Coverage Of Dispatch Instructions	11.4.1	<p>Coverage. Dispatch instructions shall include the following –</p> <ul style="list-style-type: none"> a. During normal condition, the MW dispatch of power facilities shall be the dispatch schedule for the trading interval submitted by the Market Operator. b. In cases when the conditions in real-time changes from the condition in the original ex-ante run, the System Operator shall redispatch according to Section 11.5 of this Market Manual. b. A must dispatch generating unit shall generate at its maximum available output at all times, unless the Market Operator or System Operator has instructed the generating unit to restrict output. c. If, in real-time, the available generation from a must dispatch generating unit differs from the available generation assumed in the dispatch schedule provided to the System Operator, the System Operator shall allow the must dispatch generating unit to generate at its maximum available output, and, if all available frequency regulation is exhausted during a trading interval, shall adjust the dispatch of other generating units to compensate as required in accordance with Section 4.1.5.1 of this Market Manual. 	<p>Coverage. Dispatch instructions shall include the following –</p> <ul style="list-style-type: none"> a. During normal condition, the MW dispatch of power facilities shall be the dispatch schedule for the trading interval submitted by the Market Operator. b. In cases when the conditions in real-time changes from the condition in the original ex-ante run, the System Operator shall redispatch according to Section 11.5 of this Market Manual. b. A must dispatch generating unit shall generate at its maximum available output at all times, unless the Market Operator or System Operator has instructed the generating unit to restrict output. c. If, in real-time, the available generation from a must dispatch generating unit differs from the available generation assumed in the dispatch schedule provided to the System Operator, the System Operator shall allow the must dispatch generating unit to generate at its maximum available output, and, if all available frequency regulation is exhausted during a trading interval, shall adjust the dispatch of other generating units to compensate as required in accordance with Section 4.1.5.1 of this Market Manual. 	Deleted provisions moved to Section 11.5

Title	Section	Provision	Proposed Amendment	Rationale
		d. The System Operator shall instruct a must dispatch generating unit or a priority dispatch generating unit to restrict its output or constrain its ramp rate to a level specified by the System Operator, but only while the grid is not operating in normal state. If the System Operator has instructed a must dispatch generating unit or a priority dispatch generating unit to restrict its output, the System Operator shall instruct the generating unit to remove the restriction as soon as practicable after the actual or potential system security issue has been resolved.	d. The System Operator shall instruct a must dispatch generating unit or a priority dispatch generating unit to restrict its output or constrain its ramp rate to a level specified by the System Operator, but only while the grid is not operating in normal state. If the System Operator has instructed a must dispatch generating unit or a priority dispatch generating unit to restrict its output, the System Operator shall instruct the generating unit to remove the restriction as soon as practicable after the actual or potential system security issue has been resolved.	
			11.4.2 The Market Operator shall communicate the target loading levels to the Trading Participants through the market participant interface. All dispatch targets shall be specified in units of megawatt (MW) and will apply to the end of the relevant dispatch interval unless otherwise stated.	Revised for clarity
	11.4.2	11.4.2 Review of the RTD schedule. Upon receipt from the Market Operator of the dispatch schedule determined for a trading interval, the System Operator shall review the same to determine if it shall become necessary to implement re-dispatch as provided for in this Section.	11.4.2 11.4.3 Review of the RTD schedule. Upon receipt from the Market Operator of the dispatch schedule determined for a trading interval, the System Operator shall review the same to determine if it shall become necessary to implement re-dispatch as provided for in this Section.	Renumbering
	11.4.3	11.4.3 System Operator Clearance. Upon receipt of their respective dispatch schedules, the Trading Participants shall communicate with the System Operator and seek prior clearance before ramping up or down to their respective target loading levels. The System	11.4.3 System Operator Clearance. Upon receipt of their respective dispatch schedules, the Trading Participants shall communicate with the System Operator and seek prior clearance before ramping up or down to their respective target loading levels. The System	Superseded by Section 11.4.2, as amended.

Title	Section	Provision	Proposed Amendment	Rationale
		Operator shall provide clearance and issue dispatch instructions as it deems appropriate.	Operator shall provide clearance and issue dispatch instructions as it deems appropriate.	
			<p><u>11.5 Dispatch of Must and Priority Dispatch Generating Units</u></p> <p><u>11.5.1 A must dispatch generating unit shall generate at its maximum available output at all times, unless the Market Operator or System Operator has instructed the generating unit to restrict output.</u></p> <p><u>11.5.2 If, in real-time, the available generation from a must dispatch generating unit differs from the available generation assumed in the dispatch schedule provided to the System Operator, the System Operator shall allow the must dispatch generating unit to generate at its maximum available output, and, if all available frequency regulation is 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.</u></p> <p><u>11.5.3 The System Operator shall instruct a must dispatch generating unit or a priority dispatch generating unit to restrict its output or constrain its ramp rate to a level specified by the System Operator, but only while the grid is not operating in normal state. If the System Operator has instructed a must dispatch generating unit</u></p>	Added provisions to discuss dispatch of preferential dispatch generating units

Title	Section	Provision	Proposed Amendment	Rationale
			<u>or a priority dispatch generating unit to restrict its output, the System Operator shall instruct the generating unit to remove the restriction as soon as practicable after the actual or potential system security issue has been resolved.</u>	
Re-Dispatch Process	11.5.1	11.5 Re-Dispatch Process	11.5 <u>11.6 Conditions for</u> Re-Dispatch Process	Revised for clarity
Re-Dispatch Process	11.5.1	11.5.1 Re-dispatch shall be carried out under the conditions set out in this Section. Re-dispatch instructions shall be issued by the System Operator.	11.5.1 <u>11.6.1</u> Re-dispatch shall be carried out under the conditions set out in this Section. Re-dispatch instructions shall be issued by the System Operator.	Clerical revision
Re-Dispatch Process	11.5.2	11.5.2 In cases of the occurrence of system emergencies, a threat to system security, or an event of force majeure, of the nature described in Chapter 6 of the WESM Rules and in the relevant Section of this Dispatch Protocol, the System Operator shall declare market intervention in accordance with said Chapter 6 of the WESM Rules and this Dispatch Protocol. While market intervention is in effect, the System Operator shall take control of the dispatch of generating units in accordance with the procedures set out specifically for market intervention. The System Operator shall notify the Market Operator of its actions.	11.5.2 <u>11.6.2</u> In cases of the occurrence of system emergencies, a threat to system security, or an event of force majeure, of the nature described in Chapter 6 of the WESM Rules and in the relevant Section <u>16</u> of this Dispatch Protocol, the System Operator shall declare market intervention in accordance with said Chapter 6 of the WESM Rules and this Dispatch Protocol. While market intervention is in effect, the System Operator shall take control of the dispatch of generating units in accordance with the procedures set out specifically for market intervention. The System Operator shall notify the Market Operator of its actions.	
Re-Dispatch Process	11.5.3	11.5.3 Where the results of the ex-ante or real time dispatch market runs reflect constraint violation coefficients (CVCs), the System Operator shall use all reasonable endeavors to dispatch generating units in accordance with the RTD schedules and the WESM Merit Order Table (MOT) generated and communicated by the Market Operator for the	11.5.3 <u>11.6.3</u> Where the results of the ex-ante or real time dispatch market runs reflect constraint violation coefficients (CVCs), the System Operator shall use all reasonable endeavors to dispatch generating units in accordance with the RTD schedules and the WESM Merit Order Table (<u>WMOT</u>) generated and communicated by the Market Operator for	

Title	Section	Provision	Proposed Amendment	Rationale
		relevant trading interval. The System Operator shall, however, issue the necessary re-dispatch instructions to address the condition that gave rise to the occurrence of the CVCs.	the relevant trading dispatch interval. The System Operator shall, however, issue the necessary re-dispatch instructions to address the condition that gave rise to the occurrence of the CVCs.	
Re-Dispatch Process	11.5.4	11.5.4 In cases when normal market conditions prevail but there is an increase or decrease in system demand within the trading interval or there are forecast errors, the System Operator shall issue re-dispatch instructions. The System Operator may constrain-on or constrain-off generators based on the Merit Order Table to ensure that the supply and demand is balanced at all times.	11.5.4 11.6.4 In cases when normal market conditions prevail but there is an imbalance in supply and increase or decrease in system demand within the trading dispatch interval and all available reserves have been exhausted or there are forecast errors, the System Operator shall may issue re-dispatch instructions. The System Operator may shall constrain-on or constrain-off generators based on using the Merit Order Table WMOT in accordance with Section 11.6.1. to ensure that the supply and demand is balanced at all times Constrained-on generators shall be designated as must-run units and shall be settled as must-run units in accordance with the Price Determination Methodology.	Revised for clarity on use of WMOT and designation of MRUs
			11.6.5 In an event where all available reserves have been exhausted to address a threat in system security covered under Section 11.6.2, the System Operator may re-dispatch generating units out of merit to ensure the reliability and security of the grid in accordance with the selection criteria provided in Section 11.6.3. Generating units re-dispatched out of merit shall be designated as must-run units and shall be settled as must-run units in accordance with the Price Determination Methodology.	Added provisions on the use of MRUs

Title	Section	Provision	Proposed Amendment	Rationale
			11.7 Re-dispatch Procedures	
Re-Dispatch Process	11.5.5	<p>11.5.5 Re-Dispatch Process Based on WESM Merit Order Table. When there is a need for the System Operator to re-dispatch generating units, the following shall be followed:</p> <p>a) Instruct generators to ramp-up (or ramp-down) following the WESM Merit Order Table. If the incremental MW as instructed by SO exceeds the block quantity in the WMOT, the excess quantity shall be settled in accordance with the Manual on the Management of Must-Run Unit and Must-Stop Unit.</p> <p>b) When the issue being addressed falls under the criteria for the designation of Must Run/Must Stop Units, the System Operator shall issue Must Run/Must Stop Units dispatch instruction.</p> <p>c) Once the issue being addressed in (a) or (b) is resolved, issue re-dispatch instruction to MRU/MSU to go back to the RTD schedule for the current interval.</p>	<p>11.5.5 11.7.1 Re-Dispatch Process Based on WESM Merit Order Table. When there is a need for the The System Operator to <u>shall</u> re-dispatch generating units <u>using the MOT in accordance with</u>, the following shall be followed <u>procedure</u>:</p> <p>a) Instruct generators to ramp-up (or ramp-down) following the WESM Merit Order Table. If the incremental MW as instructed by SO exceeds the block quantity in the WMOT, the excess quantity shall be settled in accordance with the Manual on the Management of Must-Run Unit and Must-Stop Unit.</p> <p>b) When the issue being addressed falls under the criteria for the designation of Must Run/Must Stop Units, the System Operator shall issue Must Run/Must Stop Units dispatch instruction.</p> <p>e b) Once the issue being addressed in (a) or (b) is resolved, issue re-dispatch <u>dispatch</u> instructions to <u>re-dispatched generating units</u> MRU/MSU to go back to the <u>their RTD schedule real-time dispatch targets</u> for the current <u>dispatch</u> interval.</p> <p>c) Report to the Market Operator the list of generating units instructed to ramp-up and would be designated as must-run units.</p>	<p>Revised for clarity. Deleted provision on MSU, which is not in the proposed WESM Rules and PDM.</p>
			11.7.2 The System Operator may re-dispatch generating units out of merit to	Added provisions on designation of MRUs

Title	Section	Provision	Proposed Amendment	Rationale
			<p><u>comply with the following operating requirements:</u></p> <p><u>a. System Voltage Requirement – this refers to the required voltage control and reactive power which the System Operator may need to take into account for the reliability of the Grid.</u></p> <p><u>b. Thermal Limits of Transmission Line and Power Equipment – this refers to the dispatch limitations of generators affected by the actual condition of the transmission lines and/or power equipment.</u></p> <p><u>c. Real-power Balancing and Frequency Control – this refers to the energy requirement to maintain supply-demand balance.</u></p>	
			<u>11.7.3 The System Operator shall select generating units to be re-dispatched out of merit in accordance with the criteria in Section 18.</u>	
Re-Dispatch Process	11.5.6	<p>11.5.6 Designation of Must-Run Unit to Address System Voltage Requirement.</p> <p>a) SO determines the need for Reactive Power Support (RPS) and identifies the generating unit/plant that can satisfy or address the problem.</p> <p>b) Inform the generating unit/plant that it will be designated as Must-Run Unit. The duration of the Must-Run Unit designation as well as the target MW loading shall also</p>	<p>11.5.6 <u>11.7.4 The System Operator shall designate a generating unit that would be re-dispatched out of merit as a Must-Run Unit in accordance with the following procedure:</u> to Address System Voltage Requirement.</p> <p>a) SO determines the need for Reactive Power Support (RPS) and identifies the generating unit/plant that can satisfy or address the problem.</p>	Revised for clarity

Title	Section	Provision	Proposed Amendment	Rationale
		<p>be communicated to the generating unit/plant.</p> <p>c) Submit overriding constraint limits to Market Operator containing the hourly loading of the Must-Run Unit.</p>	<p>b) Inform The System Operator shall inform the generating unit/plant that it will be designated as Must-Run Unit prior to the start of its operation as a must-run unit. The duration of the Must-Run Unit designation as well as the target MW loading shall also be communicated to the generating unit/plant.</p> <p>e b) The System Operator shall submit Submit over-riding constraint limits to Market Operator containing the hourly loading of the Must-Run Unit for each dispatch interval within the duration of the designation prior to the start of the must-run unit operation of the relevant generating unit.</p>	
			11.7.5 Generators whose generating plants were re-dispatched must immediately and strictly comply with the corresponding dispatch instructions of the System Operator.	Added provision for generating units to comply to dispatch instructions
Communicating And Reporting Of Dispatch Schedules And Instructions	11.6.1	11.6 Communicating And Reporting Of Dispatch Schedules And Instructions	11.6 11.8 Communicating And Reporting Of Dispatch Schedules And Instructions	Clerical revision
Communicating And Reporting Of Dispatch Schedules And Instructions	11.6.1	11.6.1 The real time dispatch schedules shall be communicated to the Trading Participants through the Market Participant Interface. The Merit Order Table (MOT) generated for a trading interval shall be published in accordance with the relevant Section of this Dispatch Protocol. Re-dispatch instructions	11.6.1 11.8.1 The real time dispatch schedules targets shall be communicated by the Market Operator to the Trading Participants through the Market Participant Interface. The Merit Order Table (MOT) generated for a trading dispatch interval shall be published in accordance with the relevant	For consistency

Title	Section	Provision	Proposed Amendment	Rationale
		shall be communicated by the System Operator to the Trading Participants through their respective power plant operators.	Section 10.10.2 of this Dispatch Protocol. Re-dispatch instructions shall be communicated by the System Operator to the Trading Participants through their respective power plant operators.	
Communicating And Reporting Of Dispatch Schedules And Instructions	11.6.2 11.6.3	11.6.2 xxx 11.6.3 xxx	11.6.2 11.8.2 xxx 11.6.3 11.8.3 xxx	Clerical revision
Communicating And Reporting Of Dispatch Schedules And Instructions	11.6.4	11.6.4 All dispatch instructions issued by the System Operator to Trading Participants shall be recorded through operator logs. The System Operator shall likewise log and report to the Market Operator all dispatch deviations from the real time dispatch schedule generated by the Market Operator. The report shall form part of the post-dispatch report required of the System Operator under this Dispatch Protocol. Deviation reports submitted by the System Operator to the Market Operator shall be used for purposes of surveillance, audit, and market settlements.	11.6.4 11.8.4 All dispatch instructions issued by the System Operator to Trading Participants shall be recorded through operator logs. The System Operator shall <u>provide a post-dispatch</u> likewise log and report to the Market Operator <u>containing all dispatch deviations of actual from the real time dispatch from the RTD schedule in aid of monitoring each generator's dispatch</u> generated by the Market Operator. The report shall form part of the post-dispatch report required of the System Operator under this Dispatch Protocol. <u>Such reports should be able to identify, but not limited to, the following:</u> <u>a. Non-compliance to dispatch instructions</u> <u>b. Designation of must-run units</u> <u>c. Utilized for ancillary services</u> <u>d. Testing Requirement</u> <u>e. Generator limitation</u>	Revised for clarity. Discussed requirement on the provision of detailed reports on SO re-dispatches

Title	Section	Provision	Proposed Amendment	Rationale
			11.8.5 Deviation reports submitted by the System Operator to the Market Operator shall be used for purposes of surveillance, audit, and market settlements.	
Communicating And Reporting Of Dispatch Schedules And Instructions	11.6.5	11.6.5 The System Operator and the Market Operator shall prepare, disseminate and publish the reports referred to in the foregoing paragraph as well as other dispatch reports and information in accordance with requirements and procedures set out in this Section and other relevant Sections of this Dispatch Protocol and other relevant market manuals.	11.6.5 11.8.6 The System Operator and the Market Operator shall prepare, disseminate and publish the reports referred to in the foregoing paragraph sections as well as other dispatch reports and information in accordance with requirements and procedures set out in this Section and other relevant Sections of this Dispatch Protocol and other relevant market manuals.	Clerical revision
Compliance With Dispatch Schedules And Instructions	11.7	11.7 Compliance With Dispatch Schedules And Instructions xxx	11.7 Compliance With Dispatch Schedules And Instructions xxx	Covered in previous sections
Dispatch Tolerance	12	12 Dispatch Tolerance	12 Dispatch Tolerance Compliance	Revised to incorporate proposed conformance standard in a 5-minute setting
Background	12.1.1	12.1.1 Dispatch tolerances define the extent to which scheduled generating units, and priority dispatch generating units may deviate from dispatch targets issued by the System Operator.	12.1.1 Dispatch tolerances define the extent to which scheduled generating units, and priority dispatch generating units may deviate from dispatch targets issued by the System Operator.	
Background	12.1.2	12.1.2 A Generation Company is required to operate their scheduled generating units and/or priority dispatch generating units within the dispatch tolerances specified in this Manual.	12.1.2 12.1.1 A Generation Company is required to operate their scheduled generating units and/or priority dispatch generating units in accordance with the scheduling and dispatch procedures described in Chapter 3 of the WESM Rules within the dispatch tolerances specified in this Manual. More specifically, scheduled	Revised for clarity See proposed revisions to WESM Rules on dispatch conformance (submitted together with this proposal)

Title	Section	Provision	Proposed Amendment	Rationale
			<u>generating units and priority dispatch generating units shall generate in accordance with the dispatch schedules communicated pursuant to WESM Rules Clause 3.8.1 and in accordance with the dispatch conformance standards specified in Clause 3.8.5. They are to follow such schedules unless otherwise restricted or instructed by the System Operator.</u>	
Background	12.1.3 12.1.4	12.1.3 xxx 12.1.4 xxx	12.1.3 xxx 12.1.4 xxx	Covered in previous sections
Background	12.1.5	12.1.5 The Market Operator shall maintain and publish dispatch tolerance standards developed by the System Operator for each type of plant, and location, in accordance with WESM Rules Clause 3.8.7, the Grid Code, and the Distribution Code.	12.1.5 <u>12.1.2</u> The Market Operator <u>is required to develop</u> shall maintain and publish the dispatch tolerance <u>conformance standards, in consultation with</u> developed by the System Operator <u>and Trading Participants. Such standards shall be for</u> each type of plant, and location, in accordance with WESM Rules Clause 3.8.7 <u>3.8.5, the Grid Code, and the Distribution Code.</u>	For clarity
			<u>12.1.3 A must dispatch generating unit shall generate at its maximum available output at all times, unless the Market Operator or System Operator has instructed the generating unit to restrict its output. If the scheduled output has been so restricted pursuant to WESM Rules Clauses 3.6.1.7 and 3.6.1.8, the must dispatch generating unit shall ensure its output does not exceed the value included in the dispatch schedule. The System Operator may also instruct a must dispatch generating unit to restrict its</u>	Added provision to state clear conformance standard for must-dispatch generation

Title	Section	Provision	Proposed Amendment	Rationale
			<u>output or constrain its ramp rate when the grid is not in a normal state</u> ^x .	
Background	12.1.6	Any Trading Participant who consistently fails to use its reasonable endeavors to act in accordance with dispatch schedules issued under WESM Rules Clause 3.8.1(g), dispatch instructions issued by the System Operator, or who breaches the dispatch tolerance standards published under WESM Rules Clause 3.8.7.2, may be liable to sanctions imposed under WESM Rules Clause 7.2.	Any <u>A</u> Trading Participant <u>that does not comply</u> who consistently fails to use its reasonable endeavors to act in accordance with the dispatch schedules issued under WESM Rules Clause 3.8.1(g), <u>conformance standards or that fails to exercise reasonable endeavors to comply with the dispatch instructions issued by the System Operator, or who breaches the dispatch tolerance standards published under WESM Rules Clause 3.8.7.2,</u> may be liable to sanctions imposed under WESM Rules Clause 7.2. ^x	Revised for clarity
Scope And Purpose	12.2	This Section describes the dispatch tolerance standards to be followed by scheduled and priority dispatch generating units when complying with their dispatch schedules in the WESM.	<u>12.2.1</u> This Section describes the dispatch tolerance standards to be followed by scheduled and priority dispatch generating units when complying with their dispatch schedules <u>dispatch compliance obligations of Trading Participants</u> in the WESM, <u>particularly in respect to compliance with energy dispatch schedules of scheduled generating units, non-scheduled generating units, priority dispatch generating units and must dispatch generating units.</u> <u>12.2.2</u> For <u>scheduled generating units and priority dispatch generating units,</u> this Section establishes the <u>dispatch conformance standards and procedures for monitoring compliance that are required to be established and be set out</u>	Added provisions for more clarity.

Title	Section	Provision	Proposed Amendment	Rationale
			<p><u>in a Market Manual pursuant to WESM Rules Clause 3.8.5.</u></p> <p><u>12.2.3 This Section shall apply to all Trading Participants that are registered as generation companies in the WESM.</u></p> <p><u>12.2.4 This Section covers only the obligations in respect to compliance with energy dispatch schedules. It does not cover standards for compliance by Ancillary Services Providers with their ancillary service or reserve schedules which shall be in accordance with the relevant provisions of the WESM Rules and other applicable Market Manual or relevant sections of this Dispatch Protocol.</u></p>	
Responsibilities	12.3.1	<p>The System Operator is responsible for –</p> <ul style="list-style-type: none"> a) Implementing the Real-Time Dispatch Schedules for both energy and reserves upon receipt of the same from the Market Operator. b) Monitoring the compliance of each generating unit registered in the WESM. This compliance monitoring report shall be submitted to the Market Operator. c) In consultation with the Market Operator, developing dispatch tolerance standards for each type of plant, and location, in accordance with the Grid Code and Distribution Code, and reviewing such, from time to time. 	<p>The System Operator is responsible for –</p> <ul style="list-style-type: none"> a) Implementing the Real-Time Dispatch Schedules for both energy and reserves upon receipt of the same from the Market Operator. <u>Coordinating with the Market Operator for the periodic review of the dispatch conformance standards as well as of the procedures set out in this Section; and</u> b) Monitoring the compliance of each generating unit registered in the WESM. This compliance monitoring report shall be submitted to the Market Operator. <u>Preparing a report of all re-dispatch instructions it has issued to Trading Participants, including but not limited</u> 	<p>Revised for clarity. Added requirement for submission of report of all re-dispatch instructions from the SO, including the actual utilization of reserves</p>

Title	Section	Provision	Proposed Amendment	Rationale
			<p><u>to the instructions pertaining to provision of ancillary services by Ancillary Services Providers, to restrictions on output or ramp rates of must dispatch generating units and priority dispatch generating units, to re-dispatch instructions as described in Section 11 of this Dispatch Protocol, and to emergency directions issued under WESM Rules Clauses 6.3 and 6.5.</u></p> <p>c) In consultation with the Market Operator, developing dispatch tolerance standards for each type of plant, and location, in accordance with the Grid Code and Distribution Code, and reviewing such, from time to time.</p>	
	12.3.2	<p>The Market Operator is responsible for –</p> <p>a) In coordination with the System Operator, developing dispatch tolerance standards for each type of plant, and location, in accordance with the Grid Code and Distribution Code, and reviewing such, from time to time.</p> <p>b) Maintaining and publishing the dispatch tolerance standards in the Market Information Website.</p>	<p>The Market Operator is responsible for –</p> <p>a) In coordination <u>Coordinating</u> with the System Operator, developing dispatch tolerance standards for each type of plant, and location, in accordance with the Grid Code and Distribution Code, and reviewing such, from time to time. <u>for the periodic review of the dispatch conformance standards as well as of the procedures set out in this Section; and</u></p> <p>b) Maintaining and publishing the dispatch tolerance standards in the Market Information Website <u>Providing a mechanism for monitoring and for notifying Trading Participants of possible breach by scheduled generating units and priority dispatch</u></p>	<p>Revised for clarity. Added requirement to report near real-time status of dispatch compliance</p>

Title	Section	Provision	Proposed Amendment	Rationale
			<u>generating units with the dispatch conformance standards.</u>	
			<u>12.3.3 Trading Participants shall comply with their dispatch compliance obligations as set out in the WESM Rules and as detailed further in this Dispatch Protocol and submit the non-conformance report required under this Section.</u>	New provision
Dispatch Tolerance Standards	12.4.1	12.4 Dispatch Tolerance Standards xxx	12.4 Dispatch Tolerance Standards xxx	Consistent with WESM Rules, as amended by DOE DC 2016-10-0014
			<u>12.4 Compliance with Dispatch Schedules and Instructions</u>	
			<u>12.4.1 Compliance by the Scheduled Generating Units and Priority Dispatch Generating Units.</u> <u>a. All scheduled generating units and priority dispatch generating units shall comply with their respective dispatch schedules. In complying with their dispatch schedules, said generating units shall generate in accordance with dispatch conformance standards prescribed in Section 12.5 of this Dispatch Protocol. In the case of a priority dispatch generating unit, compliance with the dispatch conformance standards shall also apply in cases where its dispatch schedule was restricted pursuant to WESM Rules Clauses 3.6.1.7 and 3.6.1.8 because of a potential system security contingency.</u>	Proposed procedures for compliance to dispatch instructions

Title	Section	Provision	Proposed Amendment	Rationale
			<p><u>b. If re-dispatch instructions or emergency directions were issued by the System Operator to a scheduled generating unit or priority dispatch generating unit under the circumstances described in Section 11 of this Dispatch Protocol, the generating unit so re-dispatched or directed shall comply with the dispatch instructions of the System Operator in accordance with clause 12.4.4 of this Dispatch Protocol.</u></p> <p><u>c. If a priority dispatch generating unit was instructed by the System Operator to restrict its output or constrain its ramp rate when the grid is not in a normal state , the generating unit so instructed shall comply with such instructions in accordance with clause 12.4.4 of this Dispatch Protocol.</u></p> <p><u>d. A Trading Participant that expects its registered facility to operate in a manner that, for any reason, differs materially from the System Operator’s dispatch instructions shall so notify the System Operator as soon as possible.</u></p>	
			<p><u>12.4.2 Compliance by the Must-Dispatch Generating Units</u></p> <p><u>a. A must dispatch generating unit shall generate at its maximum available</u></p>	Proposed procedures for compliance to dispatch instructions

Title	Section	Provision	Proposed Amendment	Rationale
			<p><u>output at all times, unless it has been instructed to restrict its output by the Market Operator or System Operator.</u></p> <p><u>b. If the scheduled output of a must dispatch generating unit has been restricted pursuant to WESM Rules Clauses 3.6.1.7 and 3.6.1.8, the Trading Participant shall ensure its output of that generating unit does not exceed the value stated in the dispatch schedule.</u></p> <p><u>c. If the must dispatch generating unit was instructed by the System Operator to restrict its output or constrain its ramp rate, it shall comply with such instructions in accordance with Section 12.4.4 of this Dispatch Protocol.</u></p>	
			<p><u>12.4.3 Compliance by the Non-scheduled Generating Units</u></p> <p><u>a. A non-scheduled generating unit shall generate in accordance with their dispatch schedules.</u></p> <p><u>b. If the non-scheduled generating unit was re-dispatched by the System Operator or was otherwise directed to generate differently from its dispatch schedules, it shall comply with such instructions in accordance with Section 12.4.4 of this Dispatch Protocol.</u></p>	Proposed procedures for compliance to dispatch instructions

Title	Section	Provision	Proposed Amendment	Rationale
			<p><u>12.4.4 Compliance with System Operator Instructions</u></p> <p><u>a. All generating units that were re-dispatched or were otherwise given dispatch instructions by the System Operator that differ from their respective dispatch schedules shall use reasonable endeavors to comply with said re-dispatch instructions.</u></p> <p><u>b. The foregoing shall not apply in cases where the instructions were issued to an Ancillary Service Provider for the provision of ancillary services or otherwise to comply with ancillary services schedules. In such cases, the standards for compliance shall be as set out in relevant provisions of the WESM Rules, this Dispatch Protocol or other Market Manuals.</u></p>	
			<p><u>12.5 Dispatch Conformance Standards</u></p>	
			<p><u>12.5.1 Dispatch Compliance Criteria</u></p> <p><u>a. Compliance by a generating unit with its dispatch schedule is determined based on the extent of the dispatch deviation incurred by the dispatched generating unit in relation to the applicable error threshold and is measured over a prescribed period or number of intervals.</u></p>	<p>New provision to describe dispatch deviation and the criteria for Small Error Trigger and Large Error Trigger. This part discusses the entire conformance standard that should serve as the basis for generators to comply and react to. Error triggers make use of the 1 MW setting based on the</p>

Title	Section	Provision	Proposed Amendment	Rationale
			<p><u>b. Dispatch deviation by a dispatched generating unit refers to the extent that the actual generation reached by that generating unit at the end of a dispatch interval deviates from its dispatch schedule for that dispatch interval. The deviation is determined based on a comparison between the dispatch schedule for the relevant dispatch interval and the actual generation attained at the end of the same dispatch interval, while considering the regulating reserve raise/lower schedules.</u></p> <p><u>Dispatch Deviation = [Actual Generation – (Energy Schedule + Regulating Reserve Raise Schedule)]</u></p> <p><u>Dispatch Deviation = [(Energy Schedule + Regulating Reserve Lower Schedule)- Actual Generation]</u></p> <p><u>Figure 7. Sample Illustration of Determining Dispatch Deviation</u> (See Attachment 7 – Figures in Section12)</p> <p><u>c. For generating units that are also scheduled to provide regulating reserves, the comparison shall take into consideration the regulating reserves lower schedules or regulating reserves raise schedules in order to account for regulating plant movement.</u></p>	<p>provisions in DP Issue 12, which aims to consider deviations for small generating units. The major difference now is on the use of offer as the baseline instead of the RTD schedule so as not to put too much restriction on 5-minute dispatch target compliances.</p>

Title	Section	Provision	Proposed Amendment	Rationale
			<p><u>d. Two error thresholds shall apply, namely, (a) small error threshold and (b) large error threshold, and are as follows:</u></p> <p><u>SET Level, MW = MAX (1, MIN [3% Offer, Ramp])</u></p> <p><u>LET Level, MW = MAX (20, MIN [5% Offer, Ramp])</u></p> <p><u>Where:</u></p> <p><u>SET refers to small error threshold.</u> <u>LET refers to large error threshold.</u> <u>Offer refers to the maximum energy offer submitted by the Trading Participant for the particular dispatch interval.</u></p> <p><u>e. Reaction Period. If a generating unit incurs a dispatch deviation beyond either the large error threshold or small error threshold at any dispatch interval, the Trading Participant shall take action and implement measures in order for that generating unit to dispatch within the thresholds over the following periods:</u></p> <p><u>i. Three (3) dispatch intervals for deviations beyond the large error threshold; and</u></p> <p><u>ii. Six (6) dispatch intervals for deviations beyond the small error threshold</u></p>	

Title	Section	Provision	Proposed Amendment	Rationale
			<p><u>f. If the generating unit is able to comply only on the dispatch interval immediately after the reaction period, it must additionally sustain compliance for no less than three (3) consecutive dispatch intervals.</u></p>	
			<p><u>12.5.2 Detection of Non-Compliance and Possible Breach</u></p> <p><u>a. Scheduled generating units and priority dispatch generating units shall be flagged for non-compliance with dispatch schedules and for possible breach of the dispatch conformance standards.</u></p> <p><u>b. Non-Compliance with Dispatch Schedules. If the dispatch deviation incurred by a generating unit is beyond either the large error threshold or the small error threshold applicable for a particular dispatch interval, that generating unit shall be flagged as non-compliant with its dispatch schedule for said dispatch interval. For avoidance of doubt, a generating unit shall be flagged as non-compliant at each interval when either of the following conditions occur:</u></p> <p><u>i. If Dispatch Deviation > Small Error Trigger (SET) Threshold, then increment the SET count</u></p>	<p>Proposed procedures for detecting non-compliance and possible breach. This part also discusses probationary periods that are triggered once generating units immediately go within dispatch tolerances immediately after consecutive non-compliances. Requires TPs that also triggered consecutive non-compliances to immediately report reasons near real-time.</p>

Title	Section	Provision	Proposed Amendment	Rationale
			<p data-bbox="1173 201 1711 296"><u>ii. If Dispatch Deviation > Large Error Trigger (LET) Threshold, then increment the LET count</u></p> <p data-bbox="1128 344 1733 679"><u>c. The dispatch intervals that a Trading Participant is flagged as non-compliant shall be counted, with separate count for deviations beyond the large error threshold and for deviations beyond the small error threshold. The non-compliance count increments as deviations beyond the error thresholds progress through the succeeding intervals.</u></p> <p data-bbox="1128 727 1688 823"><u>d. If the unit becomes compliant within the reaction period, the count will be stopped or reset to zero.</u></p> <p data-bbox="1128 871 1733 1414"><u>e. If the unit becomes compliant immediately after the reaction period, counting of non-compliance shall be stalled and the non-compliance count shall thus not be incremented. Counting of non-compliance will continue and the non-compliance count will again be incremented when the generating unit is flagged as non-compliant in the succeeding interval. In this case, the non-compliance count for either the large error threshold or the small error threshold shall only be stopped and be reset to zero if the generating unit is able to sustain dispatch compliance or is not flagged</u></p>	

Title	Section	Provision	Proposed Amendment	Rationale
			<p><u>as non-compliant pursuant to clause 12.5.2 (b) for at least three (3) consecutive dispatch intervals.</u></p> <p><u>f. Possible Breach. The generating unit shall be flagged for possible breach of the dispatch conformance standards if the non-compliance count for a generating unit exceeds three (3) intervals for deviations beyond the large error threshold or six (6) intervals for deviations beyond the small error threshold. In such cases, further assessment shall be carried out for the purpose of establishing, among other circumstances, whether or not the non-compliance is attributed to the following:</u></p> <p><u>i. Compliance by the Trading Participant with re-dispatch instructions of the System Operator, including but not limited to those issued pursuant to Section 11 of this Dispatch Protocol;</u></p> <p><u>ii. For Ancillary Services Providers, compliance with the System Operator instructions pertaining to provision of ancillary services; or</u></p> <p><u>iii. Compliance by the Trading Participant with emergency directions of the System Operator</u></p>	

Title	Section	Provision	Proposed Amendment	Rationale
			<p><u>under clause 6.3 and clause 6.5 of the WESM Rules.</u></p> <p><u>g. The Market Operator shall provide a mechanism to automatically monitor dispatch deviation by dispatched generating units and to flag non-compliances in accordance with the procedure set out in the preceding paragraphs.</u></p>	
Reporting	12.5	<p>12.5 Reporting</p> <p>The Market Operator shall consolidate the dispatch discrepancies for the week, including those from the System Operator and shall publish the consolidated dispatch discrepancy report in the Market Information Website.</p>	<p>12.5 <u>12.6</u> Reporting</p> <p>The Market Operator shall consolidate the dispatch discrepancies for the week, including those from the System Operator and shall publish the consolidated dispatch discrepancy report in the Market Information Website.</p> <p><u>12.6.1 In accordance with Section 14.4.2, the post-dispatch reports required of the System Operator shall include the re-dispatch instructions issued to Trading Participants, including but not limited to instructions for provision of ancillary services and emergency directions.</u></p> <p><u>12.6.2 Trading Participants shall submit to the Market Operator a daily non-conformance report that shall state, among other things, the reasons for non-compliance by their generating units for all instances when it is flagged for possible breach. The daily report shall cover flagged possible breach occurring within a trading day and shall be submitted on the</u></p>	<p>Proposed procedures on reports to be provided by the SO, as well as from non-conforming generators.</p>

Title	Section	Provision	Proposed Amendment	Rationale
			<u>following working day or within such other periods as may be notified to the Trading Participants from time to time. The reports so submitted shall be made available for market surveillance, compliance monitoring and enforcement, and market audit purposes.</u>	
			<u>12.7 Review of the Conformance Standards</u> <u>The Market Operator, in consultation with the System Operator and the Trading Participants, shall review the application and the appropriateness of the dispatch conformance standards periodically, or as may be necessary.</u>	Added provision for periodic review
Start Up and Shutdown Of Generating Units	13			Revised provisions to conform to 5-minute dispatch interval, and based on the facilities of the new MMS.
Scope And Purpose	13.1	13.1.1 xxx	13.1.1 xxx	
Responsibilities	13.2.2	Consistent with its obligations pertaining to real-time dispatch scheduling and implementation, the System Operator shall ensure – a) Continuous and timely submission and updating of the outage schedules, overriding constraint limits of generating units, system snapshots, and other relevant data provided to the Market Operator;	Consistent with its obligations pertaining to real-time dispatch scheduling and implementation, the System Operator shall ensure – a) Continuous and timely submission and updating of the outage schedules, overriding constraint limits of generating units, system snapshots, and other relevant data provided to the Market Operator;	

Title	Section	Provision	Proposed Amendment	Rationale
		b) Timely notification of the Market Operator of the implementation or cancellation of start-up and shutdown of generating units; c) Issue clearance to Trading Participants to carry out the start-up or shutdown of their generating units; and d) Carry out the procedures set out in this Section.	b) Timely notification of the Market Operator of the implementation or cancellation of start-up and shutdown of generating units; c) Issue clearance to Trading Participants to carry out the start-up or shutdown of their generating units; and d) Carry out the procedures set out in this Section.	
General Procedures	13.3.1	A Trading Participant that expects its generating unit to start-up or shutdown shall request for clearance from the System Operator to start-up or shutdown and submit the start-up/shutdown profile of the generating unit to the System Operator not later than seven (7) trading days before the trading interval in which the start-up or shutdown is scheduled.	A Trading Participant that expects its generating unit to start-up or shutdown shall request for clearance from the System Operator to start-up or shutdown and submit the start-up/shutdown profile of the generating unit to the System Operator not later than seven (7) trading days before the trading dispatch interval in which the start-up or shutdown is scheduled.	Revised provisions to conform to 5-minute dispatch interval, and based on the facilities of the new MMS.
General Procedures	13.3.3	The dispatch scheduling of the generating unit that will start-up or shutdown can be managed in either of the following manner – a) Through its generation offers submitted within the WESM timetable, in which case the Trading Participant shall submit offers for the trading interval during which the unit is to start-up or shutdown making adjustments to if offers as appropriate; or b) Through imposition of overriding constraint limits by the System Operator for the trading interval in which the unit is to start-up or shutdown in accordance with the following paragraphs.	The dispatch scheduling of the generating unit that will start-up or shutdown can be managed in either of the following manner – a) Through its generation offers submitted within the WESM timetable, in which case the Trading Participant shall submit offers for the trading dispatch interval during which the unit is to start-up or shutdown making adjustments to if offers as appropriate; or b) Through imposition of overriding constraint limits by the System Operator for the trading dispatch interval in which the unit is to start-up or shutdown in accordance with the following paragraphs.	
General Procedures	13.3.4	If the Trading Participant is unable to manage the start-up and shutdown of it generating	If the Trading Participant is unable to manage the start-up and shutdown of it generating	Revised provisions to conform to 5-minute

Title	Section	Provision	Proposed Amendment	Rationale
		<p>units through its offers and prefers that the same is managed through imposition of overriding constraint limits, the following will apply, -</p> <p>a. The start-up or shutdown can be managed through the imposition of overriding constraint limits on the said generating unit by the System Operator, provided that the load is below the registered Pmin of the generating unit and should be accommodated if start-up/shut-down profile of said generating units is more than one (1) interval. The overriding constraint limits shall override the operating limits registered for that generating unit, and shall be set in accordance with the submitted shutdown/start-up profile.</p> <p>b. As no offers are submitted, the transactions of the generating unit during the relevant trading intervals will be settled at the applicable WESM nodal prices.</p>	<p>units through its offers and prefers that the same is managed through imposition of overriding constraint limits, the following will apply, -</p> <p>a. The start-up or shutdown can be managed through the imposition of overriding constraint limits on the said generating unit by the System Operator, provided that the <u>MW loading for a certain target dispatch interval</u> load is <u>anticipated to be</u> below the <u>generating unit's</u> registered Pmin of the generating unit and should be accommodated if <u>with reference to its</u> start-up/shut-down profile of said generating units is more than one (1) interval.</p> <p><u>b.</u> The over-riding constraint limits shall override the operating limits registered for that generating unit, and shall be set in accordance with the submitted shutdown/start-up/<u>shut-down</u> profile.</p> <p><u>b c.</u> The As no offers are submitted, the transactions of the generating unit <u>on start-up/shutdown</u> during the relevant trading <u>dispatch</u> intervals will be settled at the applicable WESM nodal prices.</p>	<p>dispatch interval, and based on the facilities of the new MMS.</p>
General Procedures	13.3.5	<p>If the System Operator gives clearance to the start-up or shutdown, the Trading Participant shall, within the timetable for submission of offers, -</p>	<p>If the System Operator gives clearance to the start-up or shutdown, the Trading Participant shall <u>update their offers in accordance</u>, within the <u>WESM</u> timetable for submission of offers, —</p>	<p>Revised for more clarity</p>

Title	Section	Provision	Proposed Amendment	Rationale
		<p>a. Cancel offers submitted for the generating unit to be shutdown, starting with the offers after the trading interval when the shutdown is to be implemented; or</p> <p>b. Submit offers for the generating unit that is to start-up, starting with the trading interval immediately after the trading interval in which the generating unit is scheduled to start-up.</p>	<p>a. Cancel offers submitted for the generating unit to be shutdown, starting with the offers after the trading interval when the shutdown is to be implemented; or</p> <p>b. Submit offers for the generating unit that is to start-up, starting with the trading interval immediately after the trading interval in which the generating unit is scheduled to start-up.</p>	
General Procedures	13.3.6	If the System Operator defers or changes the schedule of start-up or shutdown to another date or time, it shall notify the Trading Participant and the Market Operator of the deferment or change of schedule. It shall also, as appropriate, update the outage schedule and the overriding constraint limit settings, within the time required in the WESM timetable. The Trading Participant, meanwhile, shall update its offers, if shutdown is deferred, or cancel offers already made, if start-up is deferred, within the timetable.	If the System Operator defers or changes the schedule of start-up or shutdown to another date or time, it shall notify the Trading Participant and the Market Operator of the deferment or change of schedule. It shall also, as appropriate, update the outage schedule and the overriding constraint limit settings, within the time required in the WESM timetable. The Trading Participant, meanwhile, shall update its offers in accordance with the WESM timetable , if the start-up or shutdown is deferred, or cancel offers already made, if start-up is deferred, within the timetable.	Revised for more clarity
Start-Up Of A Generating Unit	13.4.1	Off-line units will not be included in the dispatch scheduling process. Thus, the generating unit must then be synchronized to the grid prior to the execution of the hour-ahead (RTD) dispatch or ex-ante market run consistent with the WESM timetable.	Off-line units will not be included in the dispatch scheduling process. Thus, the generating unit must then be synchronized to the grid prior to the execution of the hour-ahead (RTD) dispatch or ex-ante market run consistent with the WESM timetable.	Consistent with WESM Rules, as amended by DOE DC 2016-10-0014
Start-Up Of A Generating Unit	13.4.2	The System Operator shall update the outage schedule of generators with normally closed breakers as modelled in the MNM submitted to the Market Operator to remove the generating unit cleared to start-up from the	The System Operator shall update the outage schedule of generators with normally closed breakers as modelled in the MNM submitted to the Market Operator to remove the generating unit cleared to start-up from the	Clerical revision

Title	Section	Provision	Proposed Amendment	Rationale
		outage list. Submission shall be in accordance with the WESM timetable. If the start-up will be deferred, the System Operator shall update the outage schedule accordingly and within the WESM timetable for submission of outage schedules.	outage list. Submission shall be in accordance with the WESM timetable. If the start-up will be deferred, the System Operator shall update the outage schedule accordingly and within in accordance with the WESM timetable for submission of outage schedules.	
Start-Up Of A Generating Unit	13.4.3	<p>Once synchronized to the grid and scheduled for dispatch, the generating unit shall ramp-up linearly to its adjusted operating limit based on its start-up profile in the next trading interval.</p> <p>Figure 5. Start-up Sequence of a Generating Unit (See Attachment 8 – Figures in Section13)</p>	<p>Once synchronized to the grid and scheduled for dispatch, the generating unit shall ramp-up linearly to its adjusted operating limit that was based on its start-up profile in the next trading dispatch interval.</p> <p>Figure 58. Start-up Sequence of a Generating Unit <u>with Over-riding Constraints</u> (See Attachment 8 – Figures in Section13)</p> <p><u>13.4.4 If the Trading Participant elected to manage the start-up of its generating units through its offers for the succeeding dispatch intervals, it shall update its hourly offers for the dispatch intervals covered in the start-up sequence.</u></p>	Revised for more clarity
Shutdown of a Generating Unit	13.5.2	13.5.2 If the Trading Participant elected to manage the shutdown through its offers such that it can ramp down to zero in the next succeeding interval, it shall update its offers for the trading intervals covered in the shutdown sequence.	13.5.2 If the Trading Participant elected to manage the shutdown through its offers such that it can ramp down to zero in the next succeeding interval, it shall update its offers for the trading intervals covered in the shutdown sequence.	Covered in Section 13.5.3, as revised below
Shutdown of a Generating Unit	13.5.3	13.5.3 The Trading Participant shall also withdraw all offers already made for the trading intervals at which the generating unit is already expected to have shutdown, consistent with the WESM timetable.	13.5.3 The Trading Participant shall also withdraw all offers already made for the trading intervals at which the generating unit is already expected to have shutdown, consistent with the WESM timetable.	Covered in Section 13.5.3, as revised below

Title	Section	Provision	Proposed Amendment	Rationale
Shutdown of a Generating Unit	13.5.4	<p>13.5.4 The generating unit shall ramp-down linearly while shutting down until it is finally disconnected from the grid.</p> <p>Figure 6. Start-up Sequence of a Generating Unit (See Attachment 8 – Figures in Section13)</p>	<p>13.5.4 13.5.2 The generating unit shall ramp-down linearly while shutting down until it is finally disconnected from the grid.</p> <p>Figure 6 9. Start-up Sequence of a Generating Unit with Over-riding Constraints (See Attachment 8 – Figures in Section13)</p> <p><u>13.5.3 If the Trading Participant elected to manage the shutdown through its offers such that it can ramp down to zero in the next succeeding interval, it shall update its offers for the dispatch intervals covered in the shutdown sequence.</u></p> <p><u>13.5.4 Once the generating unit has completely shut down, the relevant Trading Participant shall cancel its daily offer profile for the affected trading day.</u></p>	For clarity
Post Dispatch Data And Operation Reports	14			
Background	14.1	14.1.1 After each trading 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.	14.1.1 After each trading 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.	Consistent with WESM Rules, as amended by DOE DC 2016-10-0014
Post-Dispatch Reports and Information	14.4.2	Dispatch Deviation Report. For each trading day, the System Operator shall prepare a report presenting on an hourly basis all	Dispatch Deviation Report. For each trading day, the System Operator shall prepare a report presenting on an hourly basis all	Revised for clarity. Report requirement from SO on dispatch

Title	Section	Provision	Proposed Amendment	Rationale
		<p>instances in which the deviation from the dispatch schedule per category occurred.</p> <p>Pursuant to section 5.5 of the WESM Manual on Management of Must-Run and Must-Stop Units, the Dispatch Deviation Report shall contain the following information as the minimum:</p> <ul style="list-style-type: none"> a. Trading Date and interval concerned b. Criteria used for the designation of the MRU/MSU c. Short description of the issue being addressed (e.g. frequency breached x Hz) d. Loading of scheduled Ancillary Services 	<p>instances in which the deviation from the dispatch schedule per category occurred <u>all re-dispatch instructions it has issued to Trading Participants, including but not limited to the instructions pertaining to provision of ancillary services, and to emergency directions issued under WESM Rules Clauses 6.3 and 6.5.</u></p> <p>Pursuant to section 5.5 of the WESM Manual on Management of Must-Run and Must-Stop Units <u>At the minimum</u>, the Dispatch Deviation Report shall contain the following information as the minimum:</p> <ul style="list-style-type: none"> a. Trading Date and interval concerned <u>Covered period (start time and end time)</u> b. Criteria used for the designation of the MRU/MSU <u>Type of instruction (must-run unit, provision of ancillary service)</u> c. Short description of the issue being addressed (e.g. frequency breached x Hz) d. Loading of scheduled Ancillary Services 	<p>deviations shall now only cover re-dispatches from SO only.</p>
Post-Dispatch Reports and Information	14.4.3	<p>Market Intervention Report. Pursuant to Clause 6.6.2.2, the System Operator (for grid-related) and Market Operator (for market-related) shall submit a market intervention report, as soon as practicable, to the Market Surveillance Committee, Market Operator, DOE and ERC, after the resumption of the spot market. Said report shall include the details of the activities done during the duration of the market intervention that include as follows:</p>	<p>Market Intervention Report. Pursuant to Clause 6.6.2.2, the System Operator (for grid-related) and Market Operator (for market-related) shall submit a market intervention report, as soon as practicable, to the Market Surveillance Committee, Market Operator, DOE and ERC, after the resumption of the spot market. Said report shall include the details of the activities done during the duration of the market intervention that include as follows:</p>	<p>Consistent with WESM Rules, as amended by DOE DC 2016-10-0014</p>

Title	Section	Provision	Proposed Amendment	Rationale
		a. the reason for the declaration of market intervention; b. the number of trading intervals affected by the intervention; c. the actions done to address the threat in system security; and d. the actual dispatch of all generating units per interval affected.	a. the reason for the declaration of market intervention; b. the number of trading dispatch intervals affected by the intervention; c. the actions done to address the threat in system security; and d. the actual dispatch of all generating units per interval affected.	
			<p><u>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.</u></p> <p><u>14.4.6 Reports prepared pursuant to Sections 14.4.1 and 14.4.2 shall be published in the market information website in accordance with the Market Operator Information Disclosure and Confidentiality Manual. Reports prepared pursuant to Section 14.4.5 shall be published by the Market Operator in the market information website no later than one (1) week from the relevant trading day in accordance with WESM Rules Clause 3.15.13.1. Reports on market intervention, in accordance with Section 14.4.3, may be provided to the Trading Participants upon request in accordance with WESM Rules Clause 6.9.4.2.</u></p>	New provisions to clarify requirement on reporting of must run units

Title	Section	Provision	Proposed Amendment	Rationale
Scheduling and Dispatch Of Reserves				
Background	15.1.2	WESM Rules Clause 3.3.7.4 requires the System Operator to continuously adjust the quantum of reserve to be scheduled to meet each locationally specific reserve requirement by the Market Dispatch Optimization Model, so as to accurately reflect the grid under existing or future conditions, within the relevant market time frames.	WESM Rules Clause 3.3.7.4 requires the System Operator to continuously adjust the quantum of reserve capacities to be scheduled to meet each locationally location specific reserve requirement by the Market Dispatch Optimization Model, so as to accurately reflect the grid under existing or future conditions, within the relevant market time frames.	Revised for clarity
Scope	15.2	<p>15.2.1 This Section describes the criteria for determining required reserve levels by the System Operator which will be the basis of the Market Operator as input to the Market Management System.</p> <p>15.2.2 The criteria, procedures and formulae set out in this Section cover only the requirements for the types of reserves that are to be traded in the WESM. Procedures for procurement, monitoring and settlement of other types of ancillary services are not within the scope of this Section or this Dispatch Protocol.</p> <p>15.2.3 The criteria, procedures and formulae set out in this Section shall apply to the determination and submission of reserve requirements and monitoring and settlement of reserve providers in the reserve zones in the regions where the WESM is in operation.</p>	<p>15.2.1 This Section describes the criteria for determining required reserve levels by the System Operator which will be the basis of the Market Operator as input to the Market Management System.</p> <p>15.2.2 The criteria, procedures and formulae set out in this Section cover only the requirements for the types of reserves that are to be traded in the WESM. Procedures for procurement, monitoring and settlement of other types of ancillary services are not within the scope of this Section or this Dispatch Protocol.</p> <p>15.2.3 The criteria, procedures and formulae set out in this Section shall apply to the determination and submission of reserve requirements and monitoring and settlement of reserve providers in the reserve zones in the regions where the WESM is in operation.</p>	Deleted provisions to clearly delineate responsibility on submission of reserve requirements. Also deleted provision on monitoring and settlement which are not covered in the DP
		15.3.1 System Operator. The System Operator is responsible for –	15.3.1 System Operator. The System Operator is responsible for –	Clerical revision

Title	Section	Provision	Proposed Amendment	Rationale
		a. Monitoring the compliance of each reserve provider in the WESM. This compliance monitoring report shall be submitted to the Market Operator for settlement purposes.	a. Monitoring monitoring the compliance of each reserve provider in the WESM. This compliance monitoring report shall be submitted to the Market Operator for settlement purposes.	
Responsibilities	15.3.2	Market Operator. The Market Operator is responsible for – a. Determining the required reserve levels for each type of reserves that are to be traded in the WESM in accordance with the Ancillary Services Procurement Plan of the System Operator. b. Ensuring that the required reserve levels per System Operator are used as inputs in pre-dispatch market projections and real time dispatch scheduling processes in the WESM. It is also responsible for providing and maintaining the facility for timely receipt of submissions from the System Operator;	Market Operator. The Market Operator is responsible for – a. Determining the required reserve levels for each type of reserves that are to be traded in the WESM in accordance with the Ancillary Services Procurement Plan of the System Operator. b. Ensuring ensuring that the required reserve levels per System Operator are used as inputs in pre-dispatch market projections and real time dispatch scheduling processes in the WESM. It is also responsible for providing and maintaining the facility for timely receipt of submissions from the System Operator;	
Determination of Reserve Requirements	15.4.2	The level of reserve requirement for Regulating Reserve service shall be based on the latest ASPP duly approved by the ERC, and shall be used as reference by the Market Operator to come up with a Day Ahead or Hour Ahead Reserve dispatch schedule. The reserve requirement shall be equally distributed to provide upward and downward Regulating Reserve.	The level of reserve requirement for Regulating Reserve service each type of reserve shall be based on the latest ASPP duly approved by the ERC, and shall be used as reference by the Market Operator to come up with a Day Ahead or Hour Ahead Reserve for the market projections and real-time dispatch schedule. The reserve requirement shall be equally distributed to provide upward and downward Regulating Reserve.	Revised to cover general perspective of determining reserve requirements for all reserve types.

Title	Section	Provision	Proposed Amendment	Rationale
Determination of Reserve Requirements	15.4.3	15.4.3 For Contingency reserve service, the System Operator shall determine the level of reserve requirement in accordance with the latest ASPP duly approved by the ERC.	15.4.3 For Contingency reserve service, the System Operator shall determine the level of reserve requirement in accordance with the latest ASPP duly approved by the ERC.	Deleted since it only repeats previous general statement on provision of reserve requirement
Determination of Reserve Requirements	15.4.4	15.4.4 For Dispatchable Reserve, the System Operator shall determine the level of reserve requirement in accordance with the latest ASPP duly approved by the ERC.	15.4.4 For Dispatchable Reserve, the System Operator shall determine the level of reserve requirement in accordance with the latest ASPP duly approved by the ERC.	Deleted since it only repeats previous general statement on provision of reserve requirement
Determination of Reserve Requirements	15.4.5	15.4.5 The System Operator, in coordination with the Market Operator, shall formulate and maintain its procedures for determining reserve requirements.	15.4.5 15.4.3 The System Operator, in coordination with the Market Operator, shall formulate and maintain its procedures for determining the MW level of the reserve requirements.	Revised for clarity
Submission of Reserve Requirements	15.5.1	Reserve Levels. The reserve requirements based on the reserve levels as specified in the ASPP shall be used by the Market Operator in the preparation of the Reserve Dispatch Scheduling. The second-latest DAP results shall be used as reference by the Market Operator for the determination of the hourly reserve requirements of Contingency Reserve and Dispatchable Reserve, while the 1200H DAP of the previous day shall be used for the hourly reserve requirements of Regulating Reserve.	Reserve Levels. The reserve requirements based on the reserve levels as specified in the ASPP shall be used by the Market Operator in the preparation of the Reserve Dispatch Scheduling. The second-latest DAP shall submit the relevant results shall be used as reference by the of the week-ahead and day-ahead projections to the System Market Operator for the determination of the hourly reserve requirements. Reserve requirements for contingency services shall, as much as possible, be continuously updated by the System Operator. The of Contingency Reserve and Dispatchable Reserve, while the 1200H DAP of the previous day shall be used as reference for the hourly reserve requirements of Regulating Reserve for scheduling regulation capacities.	Revised for clarity. Includes proposed references for determining the different reserve requirements
Submission of Reserve Requirements	15.5.2	15.5.2 Format of Reserve Requirement. xxx	15.5.2 Format of Reserve Requirement. xxx	

Title	Section	Provision	Proposed Amendment	Rationale
Submission of Reserve Requirements	15.5.3	15.5.3 Schedule of submission. The reserve requirements for a trading interval or trading day shall be transmitted in accordance with the WESM Timetable set out in this Dispatch Protocol. The figure below shows the relevant timeline for the submission of reserve requirements with reference to item 15.5.1. Figure (See Attachment 9 – Figure in Section 15)	15.5.3 15.5.2 Schedule of submission. The reserve requirements for a trading dispatch interval or trading day shall be transmitted in accordance with the WESM Timetable set out in this Dispatch Protocol. The figure below shows the relevant timeline for the submission of reserve requirements with reference to item 15.5.1. Figure	Deleted figure since it should be consistent with WESM Timetable
Submission of Reserve Requirements	15.5.4 15.5.4	15.5.4 xxx 15.5.4 xxx	15.5.4 xxx 15.5.4 xxx	
Procedures During Market Intervention or Suspension	16			
Responsibilities	16.3.1	Market Operator. The Market Operator is responsible for the following functions and shall carry them out in accordance with the WESM Rules and the procedures set out in this Dispatch Protocol – a) Notifying the System Operator of the occurrence of an emergency or force majeure event that originates in the operations of the market. b) Notifying the DOE and the ERC of the occurrence of an event or situation that gives rise to intervention and the declaration of market intervention by the System Operator.	Market Operator. The Market Operator is responsible for the following functions and shall carry them out in accordance with the WESM Rules and the procedures set out in this Dispatch Protocol – a) Notifying the System Operator of the occurrence of an emergency or a force majeure event that originates in the operations of the market. b) Notifying the DOE and the ERC of the occurrence of an event or situation that gives rise to intervention and the declaration of market intervention by the System Operator.	Market-related interventions only emanate from force majeure events.

Title	Section	Provision	Proposed Amendment	Rationale
		<p>c) Notifying the System Operator and the Trading Participants of the declaration of market suspension by the ERC.</p> <p>d) Notifying the Trading Participants of the declaration of market intervention by the System Operator.</p> <p>e) Notifying the System Operator and the Trading Participants of the following</p> <ul style="list-style-type: none"> • Nature of the intervention or suspension • The grid or its specific portions that are affected by the intervention or suspension • The expected duration of the intervention or suspension, if known. <p>f) Restoring market operations as quickly as practicable, with due consideration to the safety of persons or facilities.</p> <p>g) Issuing a market resumption notice to the System Operator and all Trading Participants indicating clearly the time and trading interval at which normal market operations is to resume.</p> <p>h) Implementing the Administered Price Determination Methodology approved by the ERC to settle spot market transactions in the trading intervals under market intervention or suspension.</p> <p>i) Preparing a report detailing the situation that gave rise to market intervention, the steps taken to ensure reliable operations and remedy the causes of the intervention and any recommendations for avoiding a similar occurrence in the future.</p>	<p>c) Notifying the System Operator and the Trading Participants of the declaration of market suspension by the ERC.</p> <p>d) Notifying the Trading Participants of the declaration of market intervention by the System Operator.</p> <p>e) Notifying the System Operator and the Trading Participants of the following</p> <ul style="list-style-type: none"> • Nature of the intervention or suspension • The grid or its specific portions that are affected by the intervention or suspension • The expected duration of the intervention or suspension, if known. <p>f) Restoring market operations as quickly as practicable, with due consideration to the safety of persons or facilities.</p> <p>g) Issuing a market resumption notice to the System Operator and all Trading Participants indicating clearly the time and trading dispatch interval at which normal market operations is to resume.</p> <p>h) Implementing the ERC-approved Administered Price Determination Methodology approved by the ERC to settle settlement of spot market transactions in the trading dispatch intervals under market intervention or suspension.</p> <p>i) Preparing a report detailing the situation that gave rise to market intervention, the steps taken to ensure reliable operations and remedy the causes of the intervention and any recommendations for avoiding a similar occurrence in the future.</p>	

Title	Section	Provision	Proposed Amendment	Rationale
Grounds for Market Intervention and Suspension	16.4.4	<p>Force majeure event is defined in WESM Rules Clause 6.7.1 as the occurrence in the grid where a trading interval of an event or events not within the reasonable control, directly or indirectly, of the Market Operator and WESM Member, to the extent that such event, despite the exercise of reasonable diligence, cannot be or be caused to be prevented, or removed and has resulted in a reduction in the normal capacity of part or all of the power transmission system during that trading interval and such reduction is likely to materially affect the operation of the spot market or materially threaten system security. Under WESM Rules Clause 6.7.2, events of force majeure shall include –</p> <ul style="list-style-type: none"> a) Major system disturbance that caused partial or system-wide blackout; b) Market system hardware or software failure including that of the System Operator that makes it impossible to receive real-time status input data or process market offer/bid information to produce market schedules for real-time dispatch in accordance with the WESM Rules; and c) Any other event, circumstance or occurrence in nature of, or similar in effect to any of the foregoing. 	<p>Force majeure event is defined in WESM Rules Clause 6.7.1 as the occurrence in the grid where a trading dispatch interval of an event or events not within the reasonable control, directly or indirectly, of the Market Operator and WESM Member, to the extent that such event, despite the exercise of reasonable diligence, cannot be or be caused to be prevented, or removed and has resulted in a reduction in the normal capacity of part or all of the power transmission system during that trading interval and such reduction is likely to materially affect the operation of the spot market or materially threaten system security. Under WESM Rules Clause 6.7.2, events of force majeure shall include –</p> <ul style="list-style-type: none"> a) Major system disturbance that caused partial or system-wide blackout; b) Market system hardware or software failure including that of the System Operator that makes it impossible to receive real-time status input data or process market offer/bid information to produce market schedules for real-time dispatch in accordance with the WESM Rules; and c) Any other event, circumstance or occurrence in nature of, or similar in effect to any of the foregoing. 	Consistent with WESM Rules, as amended by DOE DC 2016-10-0014
Dispatch Scheduling and Implementation	16.6.1	The System Operator shall be responsible for dispatch scheduling and implementation for the trading intervals when the market suspension or market intervention is in effect.	The System Operator shall be responsible for dispatch scheduling and implementation for the trading dispatch intervals when the market suspension or market intervention is in effect.	

Title	Section	Provision	Proposed Amendment	Rationale
Market Resumption	16.8.3	Upon being notified of the lifting of the declaration of market intervention or market suspension, the Market Operator shall immediately notify the Trading Participants of the resumption of the market and the specific trading interval at which trading in the WESM shall resume. The notice to Trading Participants shall include a notice to submit initial bids or offers.	Upon being notified of the lifting of the declaration of market intervention or market suspension, the Market Operator shall immediately notify the Trading Participants of the resumption of the market and the specific trading interval dispatch interval at which trading in the WESM shall resume. The notice to Trading Participants shall include a notice to submit initial bids or offers.	Consistent with WESM Rules, as amended by DOE DC 2016-10-0014
Settlement Of Market Transactions/ Administered Price	16.9	16.9.1 Spot market transactions during the trading intervals when the market suspension or market intervention is in effect shall be settled in accordance with the Administered Price Determination Methodology approved by the ERC.	16.9.1 Spot market transactions during the trading interval dispatch intervals when the market suspension or market intervention is in effect shall be settled in accordance with the Administered Price Determination Methodology approved by the ERC.	
Communications and Notifications	16.11.1	The Market Operator shall relay notices and advisories on emergency-related incidents and declaration of market suspension or intervention and market resumption to the Trading Participants through any of the following means, whichever is applicable and available – a) Posting in the market information website; b) Email; c) Digital Telephone System; d) Commercial telephone lines (land lines or mobile); e) Microwave radio	The Market Operator shall relay notices and advisories on emergency-related incidents and declaration of market suspension or intervention and market resumption to the Trading Participants through any of the following means, whichever is applicable and available – a) Posting in the market information website; b) Email; c) Digital Telephone System; d) Commercial telephone lines (land lines or mobile); e) Microwave VHF/UHF radio	
			17 Management of Must-Runs	Moved provisions of the WESM Manual on Management of MRUs, except those related to settlement
			17.1 Overview	

Title	Section	Provision	Proposed Amendment	Rationale
			<p><u>17.1.1 WESM Rules Clause 6.6.1 states that the System Operator shall develop and periodically update the system security and reliability guidelines in consultation with WESM participants and the Market Operator. With this, Must-Run Units (MRUs) were introduced as generating units that are scheduled or dispatched in real-time to maintain the security and reliability of the grid.</u></p> <p><u>17.1.2 WESM Rules Clause 3.5.13.1 permits the System Operator, in coordination with the Market Operator, to impose constraints on the power flow, energy generation of a specific facility in the Grid to address system security and reliability of the Grid. On the other hand, relaxation of constraints on power flows, energy generation and reserves may also be implemented if the Market Operator is unable to generate a feasible dispatch schedule. For this purpose, the System Operator, in consultation with the Market Operator, is directed to develop the criteria and procedures for dispatch of generating units that are required to run as a result of the imposition or relaxation of constraints.</u></p> <p><u>17.1.3 The Market Operator shall provide a merit order table to the System Operator to serve as a guide in selecting generating units that can be re-dispatched in the</u></p>	

Title	Section	Provision	Proposed Amendment	Rationale
			<p><u>course of the operations of the power system.</u></p> <p><u>17.1.4 The merit order table is the stacking, in an unconstrained manner, of scheduled and unscheduled capacities through the generation offers submitted for the RTD market runs. Energy offer blocks submitted by generator Trading Participants for a particular dispatch interval are arranged from lowest to the highest priced offer block, without considering any constraints. The merit order table stacks energy offers into two groups, namely, the energy offers that were scheduled (or “Offers Dispatched”) and energy offers that were not scheduled (or “Offers Not Dispatched”).</u></p> <p><u>17.1.5 The System Operator utilizes the merit order table’s “Offers Dispatched” as a guide in determining which generating units may be constrained-off, whereas the merit order table’s “Offers Not Dispatched” is a guide for determining which generating units may be constrained-on for a particular dispatch interval.</u></p> <p><u>17.1.6 The Market Operator prepares a separate merit order table for each of the grids where the WESM is in commercial operation.</u></p>	

Title	Section	Provision	Proposed Amendment	Rationale
			<u>17.1.7 All generators re-dispatched in real-time by the System Operator shall be considered as a must-run unit.</u>	
			<u>17.2 Must-Run Unit Criteria</u> <u>17.2.1 In an event where all available Ancillary Services have been exhausted to address the threat in system security, the System Operator shall make use of the MRUs to ensure the reliability and security of the grid. The following operating criteria shall be observed:</u> <u>a. System Voltage Requirement – this refers to the required voltage control and reactive power which the System Operator may need to take into account for the reliability of the Grid.</u> <u>b. Thermal Limits of Transmission Line and Power Equipment – this refers to the dispatch limitations of generators affected by the actual condition of the transmission lines and/or power equipment.</u> <u>c. Real-power Balancing and Frequency Control – this refers to the energy re-dispatched to maintain the balance between supply and demand.</u>	Moved provisions of the WESM Manual on Management of MRUs, except those related to settlement
			<u>17.3 Considerations and Criteria for Selection of Must Run Units</u> <u>17.3.1 The System Operator shall select and designate the generating units that will run as an MRU for any period, in</u>	

Title	Section	Provision	Proposed Amendment	Rationale
			<p><u>accordance with the criteria set forth in this section.</u></p> <p><u>17.3.2 The criteria and considerations for selection of an MRU will depend on the reason for the designation of the MRU, as detailed in the table below.</u></p> <p><u>Table 5. Criteria and Considerations for Selection of MRUs</u> (See Attachment 10 – Table/Figure in Section17)</p>	
			<p><u>17.4 MRU Scheduling and Dispatch Procedures</u></p> <p><u>17.4.1 The Generating unit/s identified and instructed by the System Operator as MRUs shall be based on the security assessment conducted by the System Operator.</u></p> <p><u>17.4.2 Generators whose generating plants are instructed as MRUs must immediately and strictly comply with the corresponding dispatch instructions of the System Operator.</u></p> <p><u>17.4.3 The following flowchart outlines the treatment of Must-Run Units during the scheduling and dispatch.</u></p> <p><u>Figure 9. Procedure for the Scheduling and Dispatch of Must-Run Units</u> (See Attachment 10 – Table/Figure in Section17)</p>	<p>Moved provisions of the WESM Manual on Management of MRUs, except those related to settlement</p>
			<p><u>17.5 Reporting and Publication</u></p>	

Title	Section	Provision	Proposed Amendment	Rationale
			<p><u>17.5.1 Each generator shall validate all the data related to MRU contained in the Dispatch 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.</u></p>	
			<p><u>18 Excess Generation</u></p>	<p>Moved provisions on WESM Manual on Excess Generation</p>
			<p><u>18.1 Overview</u></p> <p><u>18.1.1 WESM Rules Clause 3.9.8.1 states that "should either the Dispatch Optimization, or any Market Projection, indicate Excess Generation at any Node, the Market Operator shall advise the System Operator that it may be necessary to require some Generating Systems to shut down.</u></p> <p><u>18.1.2 Excess generation is a situation where demand has reached a critical low level that selected generating plants may be forced to shut-down by the System Operator to avoid exceeding the allowable limit in system frequency deviation which can result to inadvertent power flow, system stability issues and transmission</u></p>	

Title	Section	Provision	Proposed Amendment	Rationale
			<p><u>constraints. Excess generation is clearly a threat to the security and reliability of the power system.</u></p> <p><u>18.1.3 Excess generation is encountered in the power system in the following typical scenarios:</u></p> <p><u>a. Instantaneous or sudden loss of significant amount of load demand in the power system</u></p> <p><u>b. Power system reaches off-peak condition whereby demand is so low that it is still below the minimum generating level of the generators synchronized in the power system</u></p> <p><u>18.1.4 WESM Rules Clause 3.9.8.2 states that “where necessary to shut down Generating Systems under Clause 3.9.8.1, the System Operator shall manage dispatching while the Market Operator shall manage pricing in accordance with the procedures to be developed by the Market Operator, in consultation with the System Operator and WESM Participants, and subject to approval by the PEM Board. The procedures shall also take into account the occurrence of excess generation during hour ahead projection and/or dispatch interval when the System Operator has exhausted all mitigating measures to address the excess generation”.</u></p>	

Title	Section	Provision	Proposed Amendment	Rationale
			<p><u>18.1.5 WESM Rules Clause 3.9.8.2 states that “during the hour ahead projection and/or dispatch Interval, if Excess Generation is imminent or is detected in the Power System by the System Operator in accordance with the Grid Code and it is established that the Excess Generation is being caused by a Generating System that is not following its dispatch schedule or observing a linear ramp rate, then the Generation Company representing the Generating System in the market may be liable of a sanction under Clause 7.2. The Generation Company representing the Generating System that is not following its Dispatch Schedule or observing linear ramp rate, however, shall compensate other Generation System that has been constrained-off by the System Operator. Such conditions shall also be considered in the procedures to be developed under Clause 3.9.8.2”.</u></p>	
			<p><u>18.2 Responsibilities</u></p> <p><u>18.2.1 The Market Operator shall be responsible for the following:</u></p> <p><u>18.2.1.1</u></p> <p><u>a. Prepare the Market Projections based on the WESM Timetable incorporating over-riding constraints, transmission limits and outage schedules provided by System Operator.</u></p> <p><u>b. Prepare the real-time dispatch schedules based on the WESM Timetable</u></p>	<p>Moved provisions on WESM Manual on Excess Generation</p>

Title	Section	Provision	Proposed Amendment	Rationale
			<p><u>incorporating over-riding constraints, transmission limits and outage schedules provided by SO.</u></p> <p><u>c. Coordinate and inform the System Operator and Trading Participants of any indication of excess generation in the Market Projections results.</u></p> <p><u>d. Prepare WESM Merit Order Table and submit to the System Operator. This will be the reference of the System Operator for the issuance of dispatch instruction whenever the generating unit/s will be constrained-on or constrained-off if necessary, the System Operator may opt to shut down the generators during off-peak condition or whenever there is a loss of large loads that resulted in excess generation.</u></p> <p><u>e. Issue Pricing Error Notice to Trading Participants via market advisory should the Ex-Ante Real-Time Dispatch encounter the excess generation in the pricing and scheduling results.</u></p> <p><u>18.2.2 The System Operator shall be responsible for the following:</u></p> <p><u>a. Determine the level of threat to System Security based on System Security and Reliability Guidelines.</u></p> <p><u>b. Coordinate with the Market Operator and provide necessary information which will be utilized in the real-time dispatch to mitigate or arrest possible excess generation condition as</u></p>	

Title	Section	Provision	Proposed Amendment	Rationale
			<p><u>indicated in the market projections prepared by the Market Operator.</u></p> <p><u>c. Coordinate with the Market Operator for the imposition of overriding constraint limit for certain generating unit/s that would be required not to be shut down</u></p> <p><u>d. Implement Emergency Procedures and provide instructions to generating units not elected as must-run to shutdown, as maybe necessary, based on the System Security and Reliability Guidelines and WESM Merit Order Table (WMOT) provided by the Market Operator.</u></p> <p><u>18.2.3 Trading participants shall be responsible for the following:</u></p> <p><u>18.2.3.1</u></p> <p><u>a. Review generating units' availability, maintenance schedule, energy and ramping limits in anticipation of the off-peak condition in the power system.</u></p> <p><u>b. Submit offers for intervals with expected low demand.</u></p> <p><u>c. Coordinate and implement re-dispatch instructions and generator tripping as instructed by the System Operator. In case of excess generation, the Trading Participants shall be responsible for executing the dispatch instructions from the System Operator when required to constrain-off (i.e. decrease the output to Pmin or from online to be shutdown) with due consideration to power quality, reliability and security of the grid.</u></p>	

Title	Section	Provision	Proposed Amendment	Rationale
			<p><u>18.3 Criteria and Pre-Conditions for Impending and Existing Excess Generation</u></p> <p><u>18.3.1 The results of the Week-Ahead, Day-Ahead, and Hour-Ahead Projections manifest the occurrence of an Excess Generation. The System Operator and Trading Participants are notified on the Excess Generation event.</u></p> <p><u>18.3.2 Dispatch Schedule for the real-time dispatch has resulted to a solution with significant Constraint Violation Coefficient on Excess Generation.</u></p> <p><u>18.3.3 The system or regional generation level is approaching the Regulating reserve requirement band of the minimum generating limit (Pmin) of synchronized generators.</u></p>	
			<p><u>18.4 Managing Anticipated Excess Generation based on the Day-Ahead Projection</u></p> <p><u>18.4.1 The Market Operator shall verify if there is any indication of excess generation in the 1200H Day-Ahead Projection.</u></p> <p><u>18.4.2 The Market Operator shall advise Trading Participants through system advisories of anticipated excess generation for the affected periods, and</u></p>	<p>Moved provisions on WESM Manual on Excess Generation</p>

Title	Section	Provision	Proposed Amendment	Rationale
			<p><u>shall publish the same in the market information website.</u></p> <p><u>18.4.3 Should there be any indication of excess generation at the 1200H DAP run, the Market Operator in coordination with the System Operator shall agree on the generating unit/s to be retained in case of the anticipated excess generation.</u></p> <p><u>18.4.4 The System Operator may submit over-riding constraint limits for generating units that are required to operate even at the duration of the anticipated excess generation.</u></p> <p><u>18.4.5 The objectives of the imposition of over-riding constraint limit in the dispatch scheduling process are as follows:</u></p> <p><u>a. Assure that system security is not compromised in the periods with excess generation</u></p> <p><u>b. Assure adequacy of supply in the succeeding dispatch intervals</u></p> <p><u>18.4.6 Prior to the 1600 DAP run, Trading Participants shall consider the projected off-peak system condition and assess their offers for the periods of anticipated excess generation. Likewise, the Generators, in coordination with the System Operator, may opt to conduct maintenance activities during the period where excess generation exists as identified by the Market Operator.</u></p>	

Title	Section	Provision	Proposed Amendment	Rationale
			<p><u>18.4.7 Trading participants shall exercise prudence on their bids and offers with regard to market integrity and power system security for intervals with indicated excess generation periods by:</u></p> <p><u>a. Customers – Assessing their electricity consumption, if possible, increase their electricity consumption in view of the surplus in electricity supply.</u></p> <p><u>b. Generators – Assessing the capacity and mode of operation of their generating units in view of the stiff competition for a very limited demand for electricity.</u></p> <p><u>18.4.8 The Market Operator shall confirm and inform the Trading Participants and the System Operator, if excess generation is still anticipated based on the 1600H DAP run.</u></p> <p><u>18.4.9 Prior to the 2000H DAP run, Trading Participants will make final adjustment to their market bids/offers for intervals indicated with anticipated excess generation.</u></p> <p><u>18.4.10 If the Real-Time Dispatch indicates the application of Excess Generation penalty price, then the Market Operator shall issue a Pricing Error notice to Trading Participants as soon as possible.</u></p>	

Title	Section	Provision	Proposed Amendment	Rationale
			<p><u>18.5 Managing Excess Generation based on the Real-Time Dispatch</u></p> <p><u>18.5.1 If excess generation is encountered in the real-time dispatch, then the System Operator shall issue Dispatch Instructions to generators to constrain-off their MW output based on the WESM Merit-Order Table provided by the Market Operator if the scheduled regulating reserve has been depleted (i.e. at Pmin) and the grid frequency breached 60.3Hz.</u></p> <p><u>18.5.2 If over-frequency exists (i.e. grid frequency is greater than 60.6Hz), the following corrective actions, in the order of priority, shall be followed until the frequency returns to normal:</u></p> <p><u>a. “Constrain-off” generator/s with fast ramp rate.</u></p> <p><u>b. Effect shutdown of generator/s under test.</u></p> <p><u>c. Effect shutdown of generator/s with fast start capability.</u></p> <p><u>d. Require gas turbine generator/s at combined cycle to operate at simple cycle mode.</u></p> <p><u>e. Require coal fired thermal power plants to operate on oil support mode.</u></p> <p><u>f. Require generator/s to operate on house load.</u></p> <p><u>18.5.3 In such cases where the grid frequency breached the normal range due to excess generation as a result of loss of</u></p>	

Title	Section	Provision	Proposed Amendment	Rationale
			<p><u>large load or over supply capacity in real time, the System Operator shall issue dispatch instructions to generators to constrain-off their output to mitigate the effect of the imbalance in supply and demand. However, if the generator/s failed to comply with the dispatch instructions issued by System Operator, the System Operator shall tag the generator as Must Stop Unit and shall report the non-conformance to dispatch instruction to the Market Surveillance Committee, Grid Management Committee and the Department of Energy. The System Operator may ultimately remote- trip a certain generating unit tagged as Must Stop Unit if the high risk is at stake that would eventually affect the security and reliability of the grid.</u></p>	
			<p><u>18.6 Process Flow</u></p> <p><u>Figure 12. Excess Generation Process Flow</u> (See</p>	<p>Moved provisions on WESM Manual on Excess Generation</p>
			<p><u>18.7 Provision of Reports</u></p> <p><u>18.7.1 System Operator shall be responsible for preparing reports concerning the technical implication of the anticipated excess generation event and/or actual excess generation incident.</u></p> <p><u>18.7.2 The Market Operator shall be responsible for preparing impact of the anticipated excess generation event</u></p>	

Title	Section	Provision	Proposed Amendment	Rationale
			<u>and/or actual excess generation incident to the WESM</u>	
			<p><u>18.8 Provision for Non-Reliability Must Run Dispatch Auction</u></p> <p><u>18.8.1 The WESM Rules at present has no provision for any auctioning process to be applied for managing excess generation. In this regard, the following will be taken into consideration by the WESM:</u></p> <p><u>18.8.2 The Market Operator and System Operator shall coordinate with the Market Surveillance Committee in assessing the following:</u></p> <p><u>a. Occurrence of trading intervals with excess generation.</u></p> <p><u>b. Impact of occurrence of excess generation to Trading Participants and the application of the above procedures to mitigate excess generation condition.</u></p> <p><u>c. Nomination of generating plants for reliability must-run.</u></p> <p><u>d. Applicability of Dispatch Auction for generating plants not declared as reliability must run for periods where there is imminent threat of excess generation.</u></p> <p><u>18.8.3 The assessment shall make recommendation as to the feasibility and viability of incorporating Must Run Dispatch Auction in the WESM.</u></p>	<p>Moved provisions on WESM Manual on Excess Generation</p>

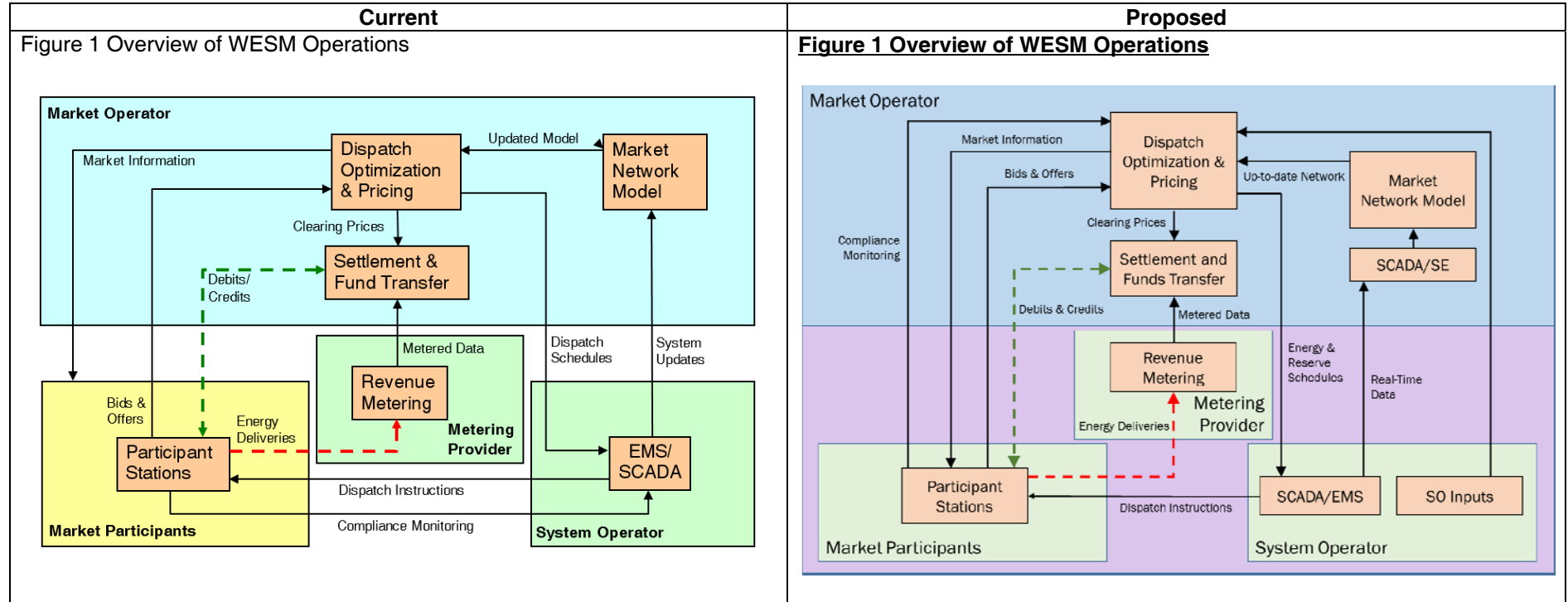
Title	Section	Provision	Proposed Amendment	Rationale
Amendment, Publication and Effectivity	17	17 Amendment, Publication and Effectivity	17 19 Amendment, Publication and Effectivity	
Amendments	17.1	17. 1 Amendments 17.1.1 xxx 17.1.2 xxx 17.1.3 xxx	17.1 19.1 Amendments 17.1.1 19.1.1 xxx 17.1.2 19.1.2 xxx 17.1.3 19.1.3 xxx	Clerical revision
Publication	17.2	17.2 Publication	17.2 19.2 Publication	
Effectivity	17.3	17.3 Effectivity	17.3 19.3 Effectivity	
Glossary of Terms And Abbreviations	18	18 Glossary of Terms And Abbreviations	18 Glossary of Terms And Abbreviations	
Attachments	19			Revamped all attachments based on the new MMS, which is referenced to the Enhanced WESM Design
	6A	ATTACHMENT 6A DATA REQUIREMENTS & VALIDATION CRITERIA FOR REAL TIME ENERGY BIDS / OFFERS	ATTACHMENT 6A DATA REQUIREMENTS & VALIDATION CRITERIA FOR REAL TIME ENERGY BIDS / OFFERS	
	6B	ATTACHMENT 6B DATA REQUIREMENTS & VALIDATION CRITERIA FOR OPERATING RESERVES	ATTACHMENT 6B DATA REQUIREMENTS & VALIDATION CRITERIA FOR OPERATING RESERVES	
	6C	ATTACHMENT 6C DATA REQUIREMENTS FOR DEMAND BIDS / OFFERS	ATTACHMENT 6C DATA REQUIREMENTS FOR DEMAND BIDS / OFFERS	
	6D	ATTACHMENT 6D DATA REQUIREMENTS & VALIDATION CRITERIA FOR NON-SCHEDULED GENERATION OFFERS	ATTACHMENT 6D DATA REQUIREMENTS & VALIDATION CRITERIA FOR NON-SCHEDULED GENERATION OFFERS	
	7A	ATTACHMENT 7A DATA FORMAT FOR OUTAGE SCHEDULES	ATTACHMENT 7A DATA FORMAT FOR OUTAGE SCHEDULES	
	7B	ATTACHMENT 7B DATA FORMAT FOR CONTINGENCY LIST	ATTACHMENT 7B DATA FORMAT FOR CONTINGENCY LIST	
	7C	ATTACHMENT 7C	ATTACHMENT 7C	

Title	Section	Provision	Proposed Amendment	Rationale
		DATA FORMAT FOR SYSTEM SNAPSHOT	DATA FORMAT FOR SYSTEM SNAPSHOT	
	7D	ATTACHMENT 7D DATA FORMAT FOR SO-SYSTEM ADVISORIES	ATTACHMENT 7D DATA FORMAT FOR SO-SYSTEM ADVISORIES	
	7E	ATTACHMENT 7E DATA FORMAT FOR TRANSMISSION LIMITS	ATTACHMENT 7E DATA FORMAT FOR TRANSMISSION LIMITS	
	7F	ATTACHMENT 7F DATA FORMAT FOR SECURITY LIMITS	ATTACHMENT 7F DATA FORMAT FOR SECURITY LIMITS	
	7G	ATTACHMENT 7G EMS-MMS NAMING CONVERSION	ATTACHMENT 7G EMS-MMS NAMING CONVERSION	
	7H	ATTACHMENT 7H TRUTH TABLE / EMS - SYSTEM SNAPSHOT VALIDATION	ATTACHMENT 7H TRUTH TABLE / EMS - SYSTEM SNAPSHOT VALIDATION	
	7I	ATTACHMENT 7I EXISTING EMS-SCADA FORMAT FOR SYSTEM SNAPSHOT	ATTACHMENT 7I EXISTING EMS-SCADA FORMAT FOR SYSTEM SNAPSHOT	
			<u>Appendix A. Content Structure of Market Projections Results for the System Operator</u> (See Attachment 12 – Proposed Appendices)	
	10A	ATTACHMENT 10A MERIT ORDER TABLE	ATTACHMENT 10A <u>Appendix B. Steps in Creating a-MERIT ORDER TABLE</u> <u>Appendix C. Sample Contents of a Merit Order Table</u> (See Attachment 12 – Proposed Appendices)	
	14A	ATTACHMENT 14A DATA FORMAT FOR RESERVE REQUIREMENTS	ATTACHMENT 14A DATA FORMAT FOR RESERVE REQUIREMENTS	
	8A	ATTACHMENT 8A DATA FORMAT FOR DISPATCH TARGETS	ATTACHMENT 8A <u>Appendix D. Content Structure of Real-Time Dispatch Results for the System Operator</u> (See Attachment 12 – Proposed Appendices) DATA FORMAT FOR DISPATCH TARGETS	

Title	Section	Provision	Proposed Amendment	Rationale
	8B	ATTACHMENT 8B DATA FORMAT FOR MO-MARKET ADVISORIES	ATTACHMENT 8B DATA FORMAT FOR MO-MARKET ADVISORIES	
		NEW	<u>Appendix E. Content Structure of SO Inputs to the Market Projections and Real- Time Dispatch</u> (See Attachment 12 – Proposed Appendices)	

Note: For convenience, please underline and put in bold letters the proposed changes to the WESM Manual.

Attachment 1 – Figure in Section 1



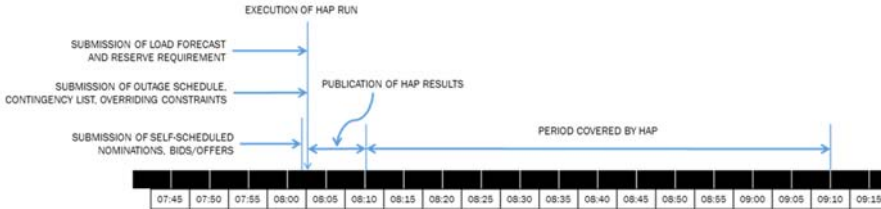
Attachment 2 – Tables/Figures in Section 4

Current						Proposed		
Section 4.3 WAP						Section 4.3.2 WAP		
DAY	TIME	ACTIVITY	From	To	PERIOD COVERED	Table 1. WAP Timeline		
D	0855H	Retrieve System Snapshot from EMS	SO	MO	0855H of D-7	<u>Time</u>	<u>Activity</u>	<u>Responsible Party</u>
		MO to determine the Reserve Requirement				<u>Before 0845H</u>	<u>Submit the most recent self-scheduled nominations, <i>bids</i> and <i>offers</i> for all relevant hours of the WAP run</u>	<u>Trading Participants</u>
D	Before 0855H	Retrieve Other Information from SO re: 1. Outage Schedules 2. Transmission Limits 3. Overriding Constraints	SO	MO	7 Days Ahead 168 Hours (=7x24) D+1 to D+7	<u>Before 0900H</u>	<u>Submit the latest information on the following:</u> 1. <u>Outage Schedules</u> 2. <u>Contingency List</u> 3. <u>Overriding Constraints</u> 4. <u>Reserve Requirements</u>	<u>System Operator</u>
D	Before 0800H	Gather Weather Forecast	MO		7 Days Ahead 168 Hours (=7x24) D+1 to D+7	<u>Before 0900H</u>	<u>Submit load forecast for the covered period</u>	<u>Market Operator</u>
D	Before 0855H	Perform Demand Forecast	MO		7 Days Ahead 168 Hours (=7x24) D+1 to D+7	<u>0900H</u>	<u>Execute WAP</u>	<u>Market Operator</u>
D	Before 0900H	MDOM Refinements ¹	MO		7 Days Ahead 168 Hours (=7x24) D+1 to D+7	<u>Before 1100H</u>	<u>Publish WAP Results in the MPI</u>	<u>Market Operator</u>
D	Before 0900H	Nomination of Loading Levels, Projected Outputs, Bids and Offers Submission <i>Trading Participants may submit nomination of loading levels, projected outputs, bids and offers for the study horizon through either the daily bid or standing bid formats.</i> <i>Nomination of loading levels, projected outputs, bids and offers must be effective prior to week-ahead projection execution.</i>	TPs	MO	7 Days Ahead 168 Hours (=7x24) D+1 to D+7		<u>Transmit WAP Results to System Operator</u>	<u>Market Operator</u>
D	0900H	Perform WAP	MO		7 Days Ahead 168 Hours (=7x24) D+1 to D+7			

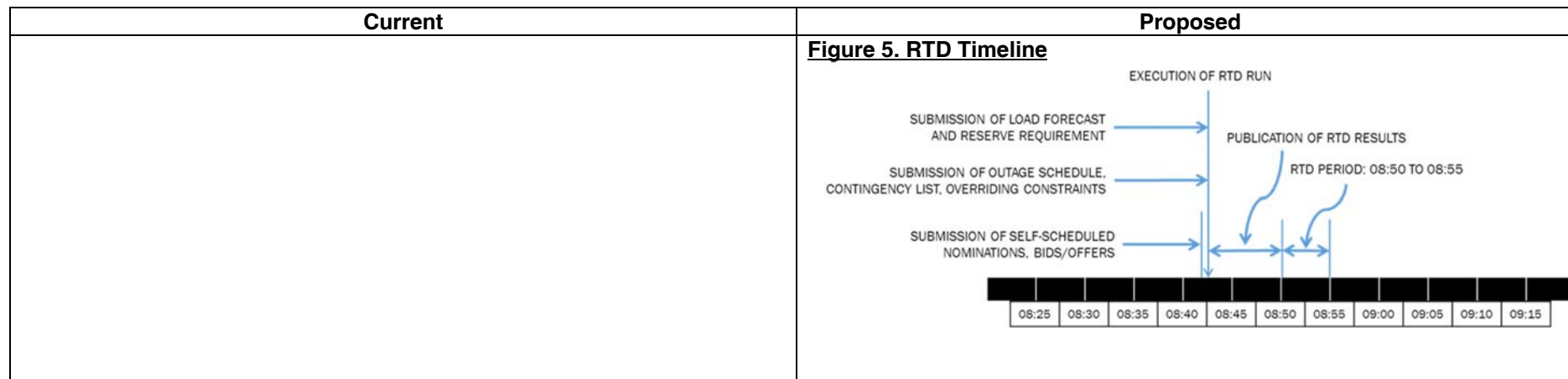
Current						Proposed																					
D	0900H to 1700H	WAP Results Analysis and Coordination with SO	MO	SO	7 Days Ahead 168 Hours (=7x24) D+1 to D+7																						
D	1700H	Publish WAP Results to the WESM Market Information Website and MPI ²	MO	TPs	7 Days Ahead 168 Hours (=7x24) D+1 to D+7																						
<p>Footnotes:</p> <p>1 - Changes to Settings in MDOM</p> <p>2 - MPI refers to the Market Participant Interface, which is a secured website used by the Trading Participants in their daily transactions with the WESM such as in the submission of offers, viewing of market results, etc. It is managed by the Market Operator.</p>						<p>Section 4.3.2 WAP</p> <p>Figure 2. WAP Timeline</p> <p>The diagram illustrates the WAP timeline for Day D. A horizontal timeline bar at the bottom is marked from 08:15 to 12:00 in 15-minute intervals. Above the timeline, several events are indicated with arrows pointing to specific times: 'SUBMISSION OF LOAD FORECAST AND RESERVE REQUIREMENT' at 08:45, 'SUBMISSION OF OUTAGE SCHEDULE, CONTINGENCY LIST, OVERRIDING CONSTRAINTS' at 09:00, and 'SUBMISSION OF SELF-SCHEDULED NOMINATIONS, BIDS/OFFERS' at 09:15. A vertical line at 09:30 marks the 'EXECUTION OF WAP RUN'. A long double-headed arrow spanning from 09:30 to 11:00 is labeled 'PUBLICATION OF WAP RESULTS FOR D+1 TO D+7'.</p>																					
<p>Section 4.4.1 DAP</p> <table><thead><tr><th>DAY</th><th>EXECUTION TIME (T)</th><th>PERIOD COVERED OR HORIZON</th></tr></thead><tbody><tr><td>D</td><td>0400H</td><td>0500H to 2400H of D</td></tr><tr><td>D</td><td>0800H</td><td>0900H to 2400H of D</td></tr><tr><td>D</td><td>1200H</td><td>1300H of D to 2400H of D+1</td></tr><tr><td>D</td><td>1600H</td><td>1700H of D to 2400H of D+1</td></tr><tr><td>D</td><td>2000H</td><td>2100H of D to 2400H of D+1</td></tr><tr><td>D</td><td>2400H</td><td>0100H to 2400H of D+1</td></tr></tbody></table>						DAY	EXECUTION TIME (T)	PERIOD COVERED OR HORIZON	D	0400H	0500H to 2400H of D	D	0800H	0900H to 2400H of D	D	1200H	1300H of D to 2400H of D+1	D	1600H	1700H of D to 2400H of D+1	D	2000H	2100H of D to 2400H of D+1	D	2400H	0100H to 2400H of D+1	<p>Deleted</p>
DAY	EXECUTION TIME (T)	PERIOD COVERED OR HORIZON																									
D	0400H	0500H to 2400H of D																									
D	0800H	0900H to 2400H of D																									
D	1200H	1300H of D to 2400H of D+1																									
D	1600H	1700H of D to 2400H of D+1																									
D	2000H	2100H of D to 2400H of D+1																									
D	2400H	0100H to 2400H of D+1																									

Current						Proposed		
Section 4.4.2 DAP						Section 4.4.2 DAP		
DAY	TIME	ACTIVITY	From	To	PERIOD COVERED	Table 2. DAP Timeline		
D	T – 5 min	Retrieve System Snapshot from EMS	SO	MO	T – 5 min of D	Time	Activity	Responsible Party
		MO to determine the Reserve Requirement				Before STPH1*	Submit the most recent self-scheduled nominations, <i>bids</i> and <i>offers</i> for all relevant hours of the DAP run	<i>Trading Participants</i>
D	Before T – 5 min	Retrieve Other Information from SO re: 1. Outage Schedules 2. Contingency Lists 3. Transmission Limits 4. Overriding Constraints	SO	MO	For the Study Horizon	Before [STPH1 + 2 minutes]	Retrieve the latest information on the following: 1. <u>Outage Schedules</u> 2. <u>Contingency List</u> 3. <u>Over-riding Constraints</u> 4. <u>Reserve Requirements</u> 5. <u>Real-time system snapshot</u> 6. <u>VRE Aggregated Generation Forecasts</u> 7. <u>Forecasts on the loading levels of <i>must dispatch</i> generating units</u>	<i>System Operator</i>
D	Before T – 5 min	Nomination of Loading Levels, Projected Outputs, Bids and Offers Submission <i>Trading Participants may submit nomination of loading levels, projected outputs, bids and offers for the study horizon through either the daily bid or standing bid formats.</i> <i>Nomination of loading levels, projected outputs, bids and offers must be effective prior to day-ahead projection execution.</i>	TPs	MO	For the Study Horizon	Before [STPH1 + 2 minutes]	Submit load forecast for the covered period	<i>Market Operator</i>
D	Before T	Gather Weather Forecast	MO		For the Study Horizon	[STPH1 + 2 minutes]	Execute DAP	<i>Market Operator</i>
D	Before T	MDOM Refinements	MO		For the Study Horizon	Before [STPH1 + 15 minutes]	Publish DAP Results in the MPI	<i>Market Operator</i>
	T	Perform DAP	MO		Study Horizon		Transmit DAP Results to <i>System Operator</i>	<i>Market Operator</i>
D	T to (T+1Hour)	DAP Results Analysis and Coordination with SO	MO	SO	For the Study Horizon	*STPH1 refers to the Start Time of the first Projected Hour (1) covered by the DAP run. For example, the Projected Hour of 0900H has a start time of 08:00 AM and an end time of 09:00 AM.		
D	T + 1Hour	Publish DAP Results to the WESM Market Information Website and MPI	MO	TPs	For the Study Horizon			

Current	Proposed												
	<p>Figure 3. DAP Timeline</p> <p>EXECUTION OF 0900H DAP RUN</p> <p>SUBMISSION OF LOAD FORECAST AND RESERVE REQUIREMENT</p> <p>SUBMISSION OF OUTAGE SCHEDULE, CONTINGENCY LIST, OVERRIDING CONSTRAINTS</p> <p>SUBMISSION OF SELF-SCHEDULED NOMINATIONS, BIDS/OFFERS</p> <p>PUBLICATION OF 0900H DAP RESULTS</p> <p>NOTE: 0900H DAP COVERS THE HOURLY INTERVALS FROM 0900H TO 2400H OF CURRENT DAY</p> <p>07:45 07:50 07:55 08:00 08:05 08:10 08:15 08:20 08:25 08:30 08:35 08:40 08:45 08:50 08:55 09:00 09:05 09:10 09:15</p> <p>FIRST PROJECTED HOUR: 0900H START TIME: 08:00 AM END TIME: 09:00 AM</p>												
	<p>Section 4.5.2</p> <p>Table 3. HAP Timeline</p> <table><tr><th><u>Time</u></th><th><u>Activity</u></th><th><u>Responsible Party</u></th></tr><tr><td><u>Before [STD1* – 8 minutes]</u></td><td><u>Submit the most recent self-scheduled nominations, bids and offers for all relevant hours of the HAP run</u></td><td><u>Trading Participants</u></td></tr><tr><td><u>Before [STD1 – 7 minutes]</u></td><td><u>Provide the latest information on the following:</u> <u>1. Outage Schedules</u> <u>2. Contingency List</u> <u>3. Over-riding Constraints</u> <u>4. Reserve Requirements</u> <u>5. Real-time system snapshot</u></td><td><u>System Operator</u></td></tr><tr><td><u>Before [STD1 – 7 minutes]</u></td><td><u>Submit load forecast for the covered period</u></td><td><u>Market Operator</u></td></tr></table>	<u>Time</u>	<u>Activity</u>	<u>Responsible Party</u>	<u>Before [STD1* – 8 minutes]</u>	<u>Submit the most recent self-scheduled nominations, bids and offers for all relevant hours of the HAP run</u>	<u>Trading Participants</u>	<u>Before [STD1 – 7 minutes]</u>	<u>Provide the latest information on the following:</u> <u>1. Outage Schedules</u> <u>2. Contingency List</u> <u>3. Over-riding Constraints</u> <u>4. Reserve Requirements</u> <u>5. Real-time system snapshot</u>	<u>System Operator</u>	<u>Before [STD1 – 7 minutes]</u>	<u>Submit load forecast for the covered period</u>	<u>Market Operator</u>
<u>Time</u>	<u>Activity</u>	<u>Responsible Party</u>											
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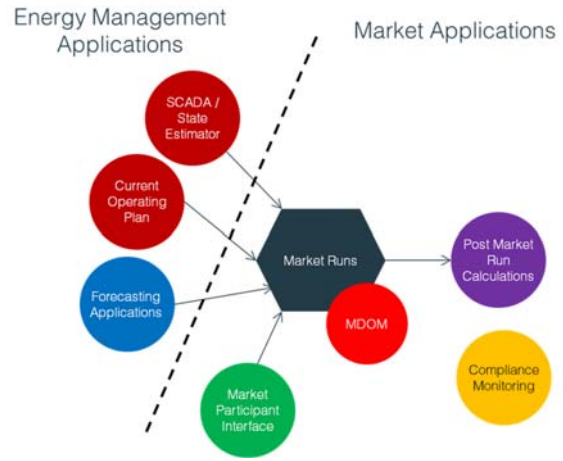
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		<u>[STDI1 – 7 minutes]</u>	<u>Execute HAP</u>	<u>Market Operator</u>																																						
	<u>Before [STDI1 – 1 minute]</u>	<u>Publish HAP Results in the MPI</u>	<u>Market Operator</u>																																							
		<u>Transmit HAP Results to System Operator</u>	<u>Market Operator</u>																																							
		<p><u>*STDI1 refers to the Start Time of the first Dispatch Interval (1) covered by the HAP run. For example, the 0815H Dispatch Interval has a start time of 08:10 AM and an end time of 08:15 AM. And if this is the first dispatch interval of the HAP run, then it will cover the period until 09:10 AM.</u></p>																																								
		<p><u>Figure 4. HAP Timeline</u></p> 																																								
Section 4.4.5 RTD		Section 4.6																																								
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D	Before T – 5 min	Submit forecasts on the loading levels of <i>must dispatch generating units</i>	SO	MO	T + 1 hour (Hour Ahead)			
D	Before T – 5 min	Nomination of Loading Levels, Projected Outputs, Bids and Offers Submission <i>Trading Participants may submit nomination of loading levels, projected outputs, bids and offers for the study horizon through either the daily bid or standing bid formats.</i> Nomination of loading levels, projected outputs, bids and offers must be effective prior to RTD execution.	TP's	MO	T + 1 hour (Hour Ahead)	<u>Before [STDI – 77 minutes]</u> <u>[STDI – 77 minutes]</u>	<u>Submit load forecast for the relevant dispatch interval</u> <u>Execute RTD</u>	<u>Market Operator</u> <u>Market Operator</u>
D	T – 5 min	Perform Nodal Demand Forecast	MO		T + 1 hour (Hour Ahead)	<u>Before [STDI – 1 minute]</u>	<u>Publish RTD Results in the MPI</u> <u>Transmittal of Energy and Reserve Schedules, and Merit Order Table to the System Operator</u>	<u>Market Operator</u> <u>Market Operator</u>
D	Before T – 5 min	MDOM Refinements	MO		T + 1 hour (Hour Ahead)			
D	T – 4.5 min	Perform RTD	MO		T + 1 hour (Hour Ahead)			
D	Before T	Transmittal of Energy and Reserve Schedules, and Merit Order Table	MO	SO	T + 1 hour (Hour Ahead)			
D	Before T	Validate dispatch schedule if necessary and issue dispatch instructions	SO	TPs	T + 1 hour (Hour Ahead)			
D	T	Publish RTD Results to the MPI	MO	TPs	T + 1 hour (Hour Ahead)			
						<u>*STDI refers to the Start Time of the relevant Dispatch Interval.</u>		



Attachment 3 – Tables in Section 5

Current	Proposed																																		
<p>Section 5.2.2</p> <table border="1"> <thead> <tr> <th data-bbox="215 360 815 384">ACTIVITY/PROCEDURE</th><th data-bbox="815 360 1108 384">DOCUMENT</th></tr> </thead> <tbody> <tr> <td data-bbox="215 384 815 408">Submission and Processing of Bids and Offers</td><td data-bbox="815 384 1108 408">Dispatch Protocol</td></tr> <tr> <td data-bbox="215 408 815 432">Demand forecasting</td><td data-bbox="815 408 1108 432">Other Market Manual</td></tr> <tr> <td data-bbox="215 432 815 632"> System Operator Data Inputs and Reports – <ul style="list-style-type: none"> Contingency lists Outage Schedules Overriding Constraints Transmission limits System snapshot System advisories </td><td data-bbox="815 432 1108 632">Dispatch Protocol</td></tr> <tr> <td data-bbox="215 632 815 711"> Pre-dispatch market projections <ul style="list-style-type: none"> Week-ahead projections (WAP) Day-ahead projections (DAP) </td><td data-bbox="815 632 1108 711">Dispatch Protocol</td></tr> <tr> <td data-bbox="215 711 815 791"> Real-time dispatch scheduling <ul style="list-style-type: none"> Ex-ante or real-time dispatch (RTD) Ex-post or real-time ex-post (RTX) </td><td data-bbox="815 711 1108 791">Dispatch Protocol</td></tr> <tr> <td data-bbox="215 791 815 815">Preparation and use of the WESM Merit Order Table (MOT)</td><td data-bbox="815 791 1108 815">Dispatch Protocol</td></tr> <tr> <td data-bbox="215 815 815 839">Dispatch implementation</td><td data-bbox="815 815 1108 839">Dispatch Protocol</td></tr> <tr> <td data-bbox="215 839 815 863">Start-up and Shutdown of Generating Units</td><td data-bbox="815 839 1108 863">Dispatch Protocol</td></tr> <tr> <td data-bbox="215 863 815 887">Management of Must Run and Must Stop Units</td><td data-bbox="815 863 1108 887">Other manual</td></tr> <tr> <td data-bbox="215 887 815 911">Management of load shedding</td><td data-bbox="815 887 1108 911">Other manual</td></tr> <tr> <td data-bbox="215 911 815 935">Emergency procedures</td><td data-bbox="815 911 1108 935">Other manual</td></tr> <tr> <td data-bbox="215 935 815 959">Management of excess generation</td><td data-bbox="815 935 1108 959">Other manual</td></tr> <tr> <td data-bbox="215 959 815 1062"> Scheduling and dispatch of reserves <ul style="list-style-type: none"> Determination of reserve requirements Reserve providers monitoring </td><td data-bbox="815 959 1108 1062">Dispatch Protocol</td></tr> <tr> <td data-bbox="215 1062 815 1110">Post-dispatch reporting</td><td data-bbox="815 1062 1108 1110"> Dispatch Protocol Other Market Manual </td></tr> <tr> <td data-bbox="215 1110 815 1134">Procedures during Market Intervention and Suspension</td><td data-bbox="815 1110 1108 1134">Dispatch Protocol</td></tr> <tr> <td data-bbox="215 1134 815 1158">Market Operator Information Disclosure and Confidentiality</td><td data-bbox="815 1134 1108 1158">Other manual</td></tr> </tbody> </table>	ACTIVITY/PROCEDURE	DOCUMENT	Submission and Processing of Bids and Offers	Dispatch Protocol	Demand forecasting	Other Market Manual	System Operator Data Inputs and Reports – <ul style="list-style-type: none"> Contingency lists Outage Schedules Overriding Constraints Transmission limits System snapshot System advisories 	Dispatch Protocol	Pre-dispatch market projections <ul style="list-style-type: none"> Week-ahead projections (WAP) Day-ahead projections (DAP) 	Dispatch Protocol	Real-time dispatch scheduling <ul style="list-style-type: none"> Ex-ante or real-time dispatch (RTD) Ex-post or real-time ex-post (RTX) 	Dispatch Protocol	Preparation and use of the WESM Merit Order Table (MOT)	Dispatch Protocol	Dispatch implementation	Dispatch Protocol	Start-up and Shutdown of Generating Units	Dispatch Protocol	Management of Must Run and Must Stop Units	Other manual	Management of load shedding	Other manual	Emergency procedures	Other manual	Management of excess generation	Other manual	Scheduling and dispatch of reserves <ul style="list-style-type: none"> Determination of reserve requirements Reserve providers monitoring 	Dispatch Protocol	Post-dispatch reporting	Dispatch Protocol Other Market Manual	Procedures during Market Intervention and Suspension	Dispatch Protocol	Market Operator Information Disclosure and Confidentiality	Other manual	<p>Deleted</p>
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Current	Proposed
	<p data-bbox="1142 236 1299 263">Section 5.1.7</p> <p data-bbox="1142 303 1668 331">Figure 6. Overview of MMS' Infrastructure</p>  <pre> graph LR subgraph Energy_Management_Applications [Energy Management Applications] SCADA(SCADA / State Estimator) COP(Current Operating Plan) FA(Forecasting Applications) end subgraph Market_Applications [Market Applications] PMRC(Post Market Run Calculations) MDOM(MDOM) CM(Compliance Monitoring) end SCADA --> MR[Market Runs] COP --> MR FA --> MR MPIM(Market Participant Interface) --> MR MR --> PMRC MR --> MDOM MR --> CM </pre> <p>The diagram illustrates the MMS' Infrastructure. It is divided into two main sections by a dashed line: Energy Management Applications on the left and Market Applications on the right. A central hexagon labeled 'Market Runs' acts as the hub. Arrows point from 'SCADA / State Estimator', 'Current Operating Plan', and 'Forecasting Applications' (all in red circles) to the 'Market Runs' hub. A green circle labeled 'Market Participant Interface' also points to the hub. From the 'Market Runs' hub, arrows point to 'Post Market Run Calculations' (purple circle), 'MDOM' (red circle), and 'Compliance Monitoring' (yellow circle).</p>

Attachment 4 – Tables in Section 6

Current	Proposed																
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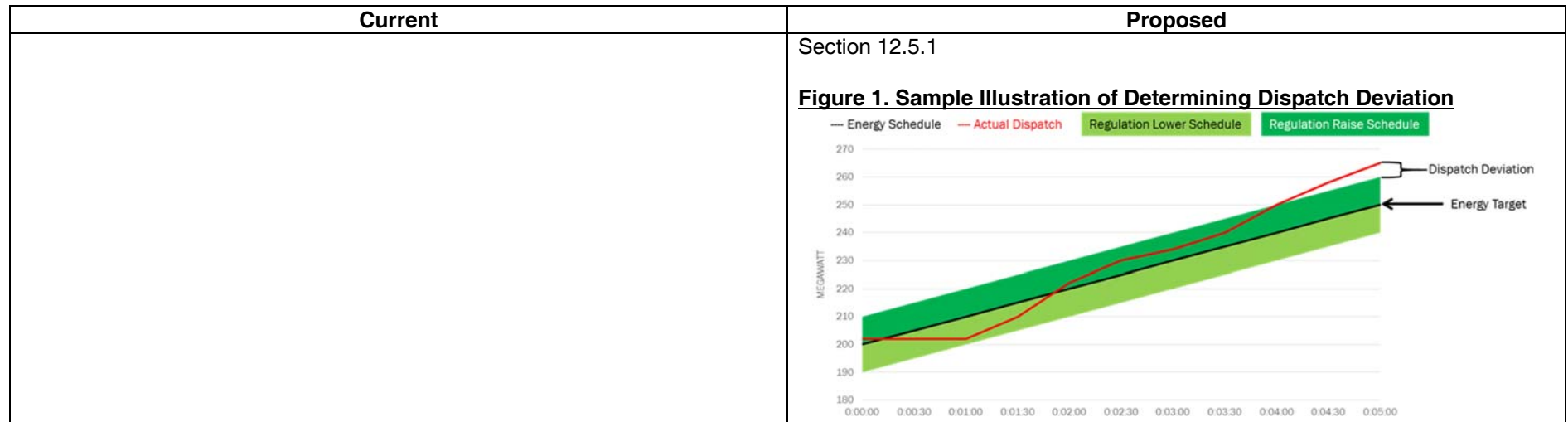
Attachment 5 – Tables/Figures in Section 9

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Section 9.6.1				Section 9.5.1																																																													
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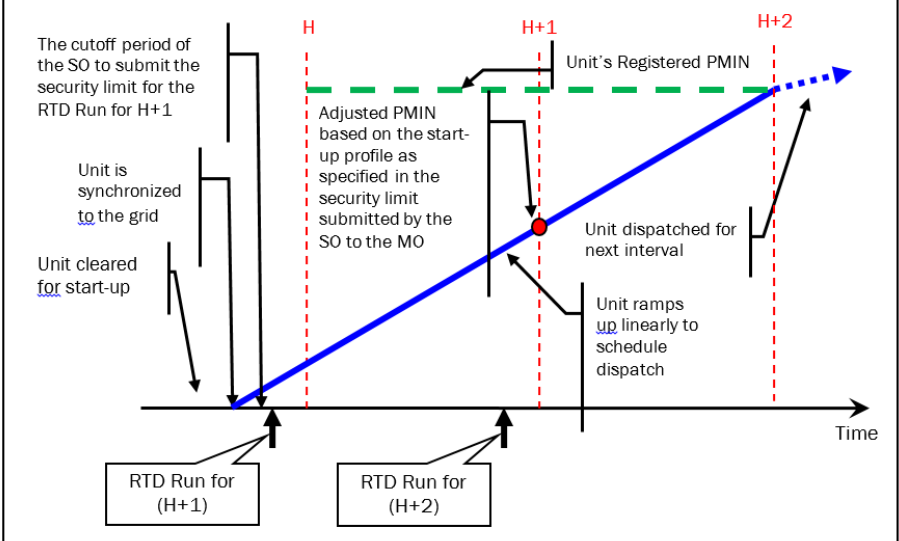
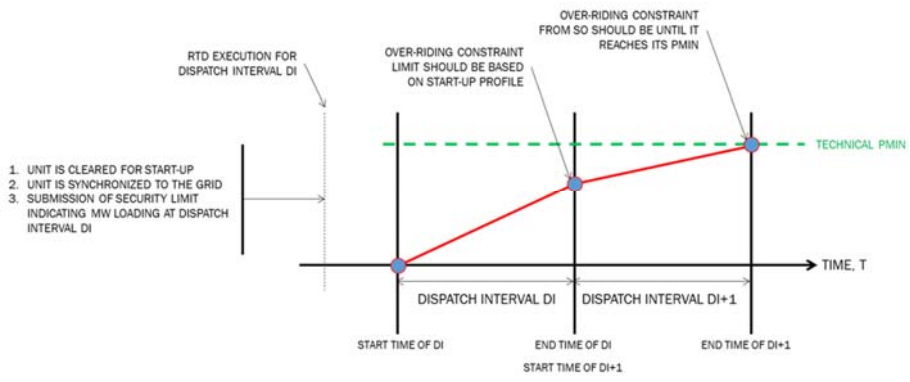
Attachment 6 – Tables/Figures in Section10

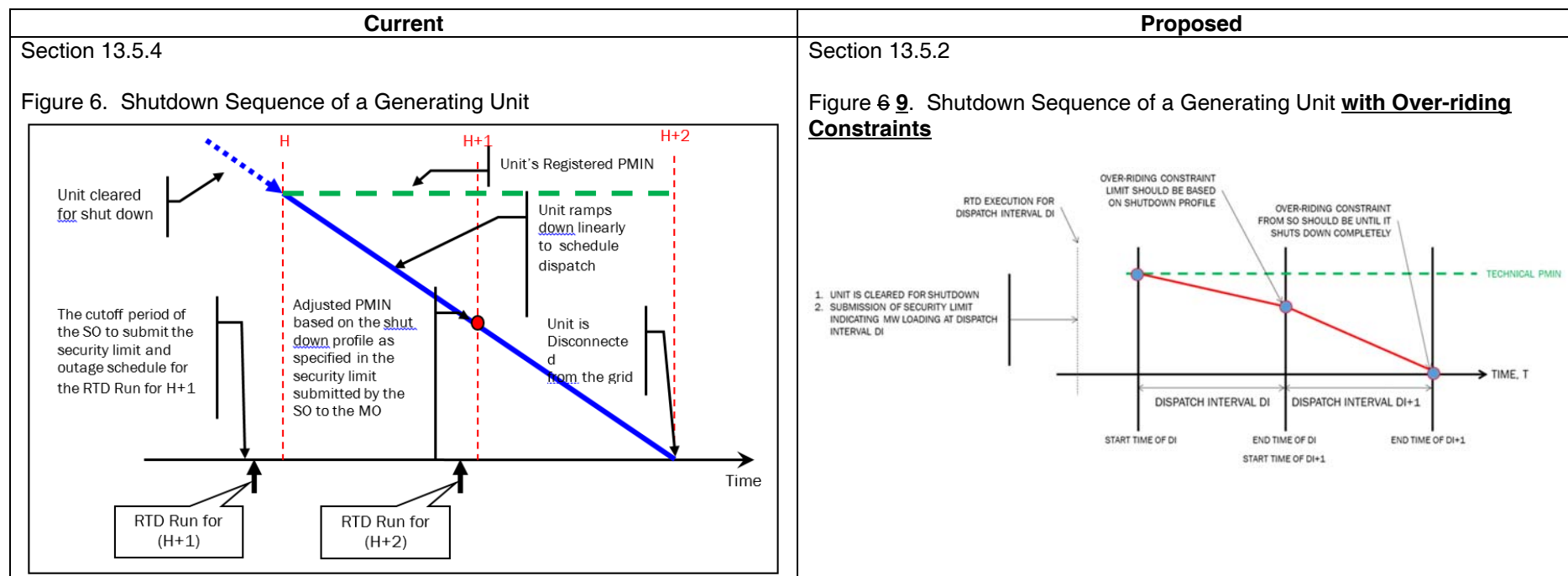
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RTD SCHEDULE																	
MW	Dispatch target for the generating unit																
<p>Section 10.7.1</p> <table> <tr> <th>Information</th><th>Description</th></tr> <tr> <td>Resource ID</td><td>Generating unit ID as registered in the MMS</td></tr> <tr> <td>MW</td><td>MW Quantity relevant to offer block</td></tr> <tr> <td>Block</td><td>Offer block number</td></tr> <tr> <td>Running Total</td><td> Incremental value based on MW Quantity <ul style="list-style-type: none"> Offers Scheduled for Dispatch – increment starts from the top of this list Offers Not Scheduled for Dispatch – increment starts from the bottom of this list </td></tr> </table>	Information	Description	Resource ID	Generating unit ID as registered in the MMS	MW	MW Quantity relevant to offer block	Block	Offer block number	Running Total	Incremental value based on MW Quantity <ul style="list-style-type: none"> Offers Scheduled for Dispatch – increment starts from the top of this list Offers Not Scheduled for Dispatch – increment starts from the bottom of this list 	<p>Section 10.5.1</p> <p>Table 5. Information provided in the MOT</p> <p>Same table</p>						
Information	Description																
Resource ID	Generating unit ID as registered in the MMS																
MW	MW Quantity relevant to offer block																
Block	Offer block number																
Running Total	Incremental value based on MW Quantity <ul style="list-style-type: none"> Offers Scheduled for Dispatch – increment starts from the top of this list Offers Not Scheduled for Dispatch – increment starts from the bottom of this list 																

Attachment 7 – Figures in Section12

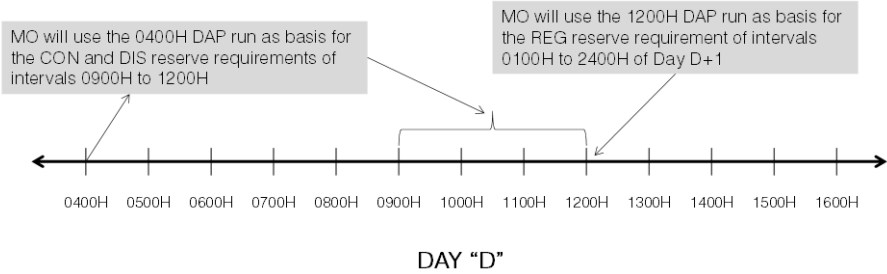


Attachment 8 – Figures in Section13

Current	Proposed
<p>Section 13.4.3</p> <p>Figure 5. Start-up Sequence of a Generating Unit</p>  <p>The cutoff period of the SO to submit the security limit for the RTD Run for H+1.</p> <p>Unit is synchronized to the grid</p> <p>Unit cleared for start-up</p> <p>RTD Run for (H+1)</p> <p>RTD Run for (H+2)</p> <p>Adjusted PMIN based on the start-up profile as specified in the security limit submitted by the SO to the MO</p> <p>Unit's Registered PMIN</p> <p>Unit dispatched for next interval</p> <p>Unit ramps up linearly to schedule dispatch</p> <p>Time</p>	<p>Section 13.4.3</p> <p>Figure 5 8. Start-up Sequence of a Generating Unit <u>with Over-riding Constraints</u></p>  <p>RTD EXECUTION FOR DISPATCH INTERVAL DI</p> <p>OVER-RIDING CONSTRAINT LIMIT SHOULD BE BASED ON START-UP PROFILE</p> <p>OVER-RIDING CONSTRAINT FROM SO SHOULD BE UNTIL IT REACHES ITS PMIN</p> <p>TECHNICAL PMIN</p> <p>1. UNIT IS CLEARED FOR START-UP 2. UNIT IS SYNCHRONIZED TO THE GRID 3. SUBMISSION OF SECURITY LIMIT INDICATING MW LOADING AT DISPATCH INTERVAL DI</p> <p>START TIME OF DI</p> <p>END TIME OF DI</p> <p>START TIME OF DI+1</p> <p>END TIME OF DI+1</p> <p>DISPATCH INTERVAL DI</p> <p>DISPATCH INTERVAL DI+1</p> <p>TIME, T</p>



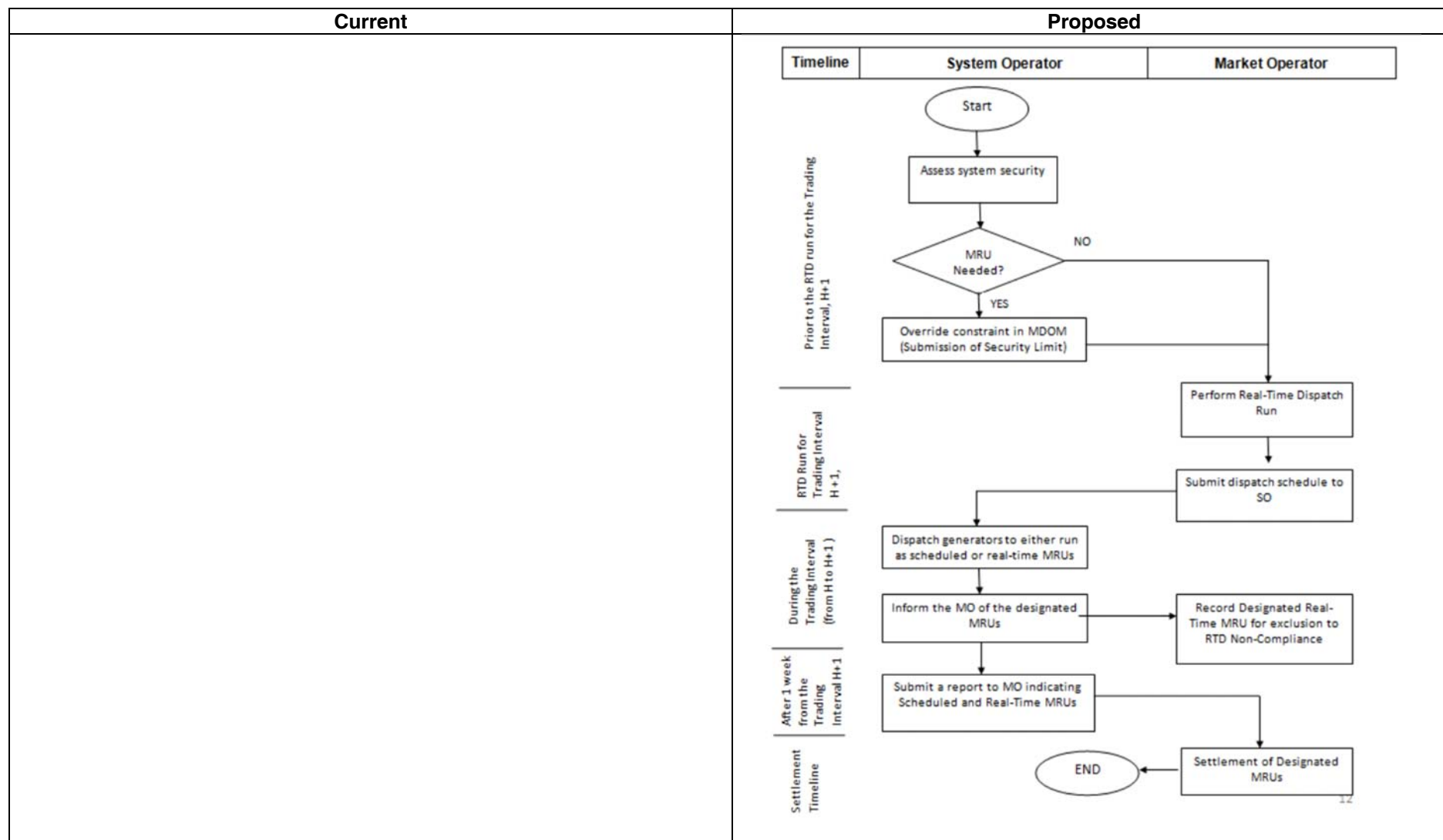
Attachment 9 – Figure in Section15

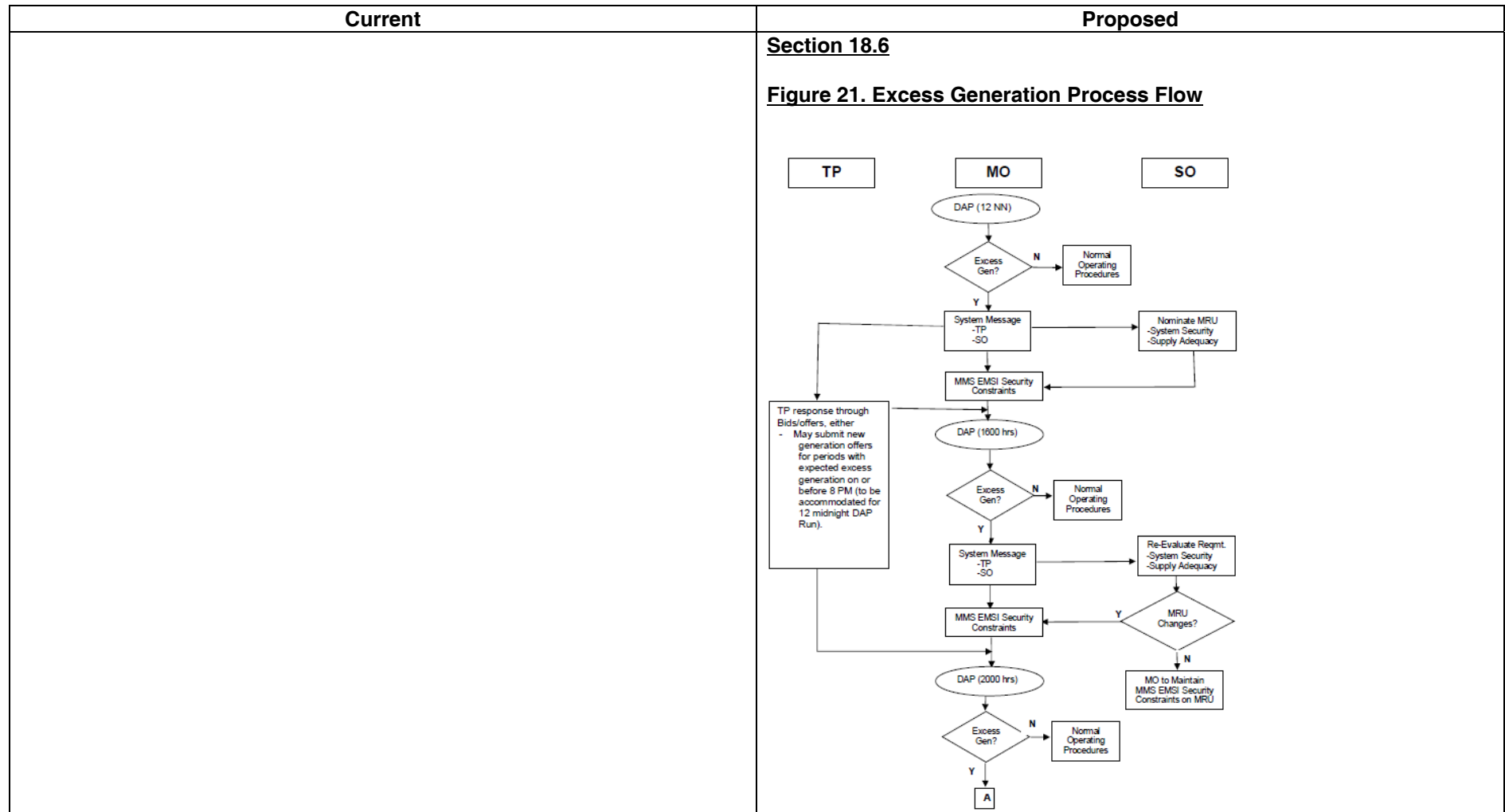
Current	Proposed
<p>Section 15.5.3</p>  <p>MO will use the 0400H DAP run as basis for the CON and DIS reserve requirements of intervals 0900H to 1200H</p> <p>MO will use the 1200H DAP run as basis for the REG reserve requirement of intervals 0100H to 2400H of Day D+1</p> <p>← 0400H 0500H 0600H 0700H 0800H 0900H 1000H 1100H 1200H 1300H 1400H 1500H 1600H →</p> <p>DAY "D"</p>	

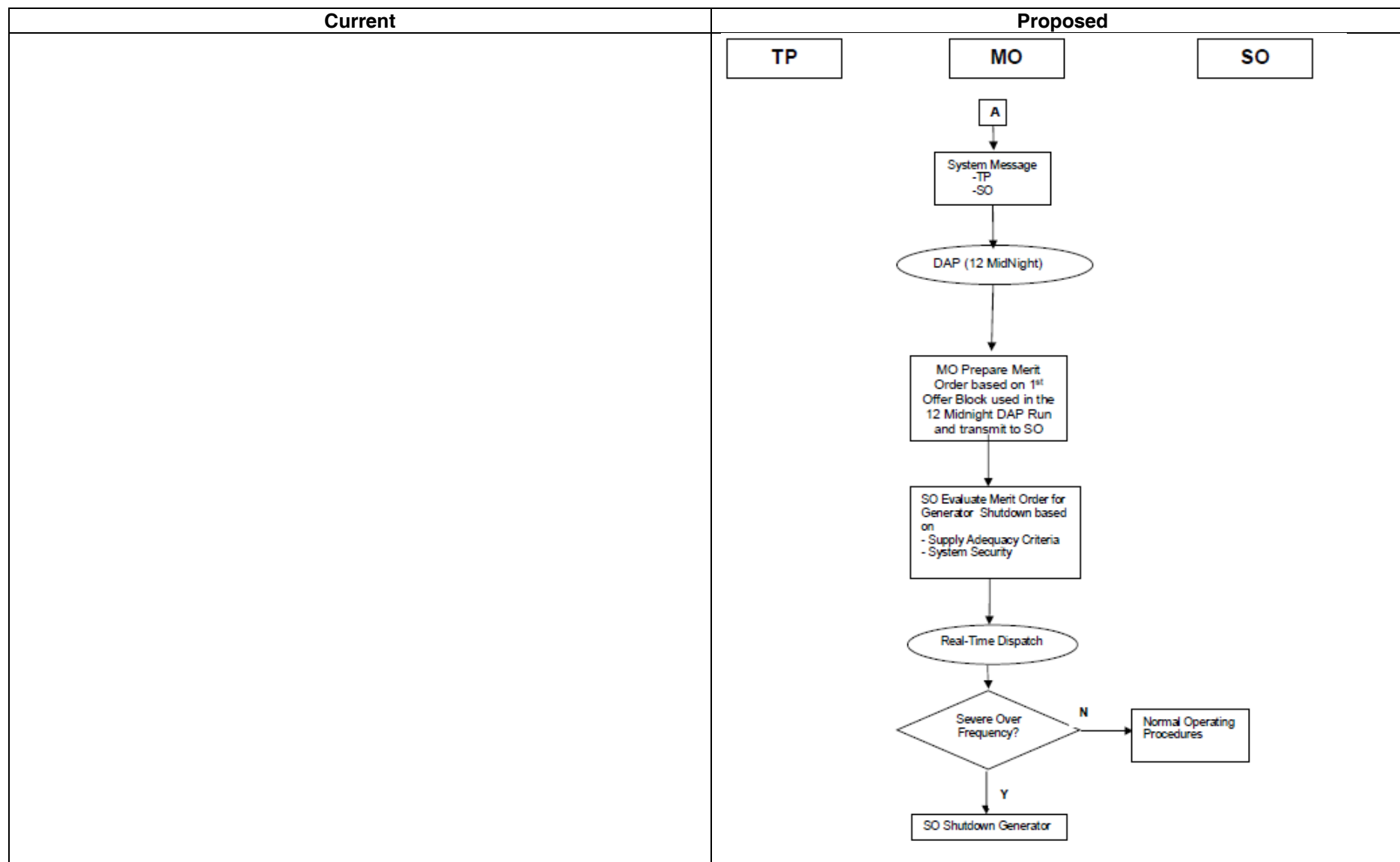
Attachment 10 – Table/Figure in Section17

Current	Proposed								
	<p data-bbox="1142 304 1312 328">Section 17.3.2</p> <p data-bbox="1142 363 1872 387">Table 6. Criteria and Considerations for Selection of MRUs</p> <table data-bbox="1142 391 2033 1359"> <tr> <th data-bbox="1142 391 1581 488"><u>MRU Criteria</u></th><th data-bbox="1581 391 2033 488"><u>Considerations for Qualifications/Selection of Must-Run Units</u></th></tr> <tr> <td data-bbox="1142 488 1581 890"> <p data-bbox="1155 493 1554 671">System Voltage Requirement refers to the required voltage control and reactive power which the System Operator may need to take into account for the reliability of the Grid</p> </td><td data-bbox="1581 488 2033 890"> <ul data-bbox="1603 493 2020 863" style="list-style-type: none"> • Generating unit/s run as MRU shall provide/absorb reactive power support in accordance with its corresponding reactive power capability curve to address under/over voltage problem. • Power plants with reactive power generation/ absorption capability. • The use of MRU shall be based on the location where voltage problem exists </td></tr> <tr> <td data-bbox="1142 890 1581 1078"> <p data-bbox="1155 895 1568 1078">Thermal Limits of Transmission Line and Power Equipment refers to the dispatch limitations of generators affected by the actual condition of the transmission lines and/or power equipment.</p> </td><td data-bbox="1581 890 2033 1078"> <ul data-bbox="1603 895 2020 986" style="list-style-type: none"> • Generating unit/s called to run as MRU to ensure the security and reliability of the grid. </td></tr> <tr> <td data-bbox="1142 1078 1581 1359"> <p data-bbox="1155 1083 1541 1233">Real-power Balancing and Frequency Control refers to the energy required to maintain the balance between supply and demand.</p> </td><td data-bbox="1581 1078 2033 1359"> <ul data-bbox="1603 1083 2020 1359" style="list-style-type: none"> • The System Operator issues re-dispatch instruction to the Generating unit/s with fast ramp rate capability to constrain-on its output to immediately address threat in security and reliability of the grid. • During islanding operation or whenever a portion or part of the </td></tr> </table>	<u>MRU Criteria</u>	<u>Considerations for Qualifications/Selection of Must-Run Units</u>	<p data-bbox="1155 493 1554 671">System Voltage Requirement refers to the required voltage control and reactive power which the System Operator may need to take into account for the reliability of the Grid</p>	<ul data-bbox="1603 493 2020 863" style="list-style-type: none"> • Generating unit/s run as MRU shall provide/absorb reactive power support in accordance with its corresponding reactive power capability curve to address under/over voltage problem. • Power plants with reactive power generation/ absorption capability. • The use of MRU shall be based on the location where voltage problem exists 	<p data-bbox="1155 895 1568 1078">Thermal Limits of Transmission Line and Power Equipment refers to the dispatch limitations of generators affected by the actual condition of the transmission lines and/or power equipment.</p>	<ul data-bbox="1603 895 2020 986" style="list-style-type: none"> • Generating unit/s called to run as MRU to ensure the security and reliability of the grid. 	<p data-bbox="1155 1083 1541 1233">Real-power Balancing and Frequency Control refers to the energy required to maintain the balance between supply and demand.</p>	<ul data-bbox="1603 1083 2020 1359" style="list-style-type: none"> • The System Operator issues re-dispatch instruction to the Generating unit/s with fast ramp rate capability to constrain-on its output to immediately address threat in security and reliability of the grid. • During islanding operation or whenever a portion or part of the
<u>MRU Criteria</u>	<u>Considerations for Qualifications/Selection of Must-Run Units</u>								
<p data-bbox="1155 493 1554 671">System Voltage Requirement refers to the required voltage control and reactive power which the System Operator may need to take into account for the reliability of the Grid</p>	<ul data-bbox="1603 493 2020 863" style="list-style-type: none"> • Generating unit/s run as MRU shall provide/absorb reactive power support in accordance with its corresponding reactive power capability curve to address under/over voltage problem. • Power plants with reactive power generation/ absorption capability. • The use of MRU shall be based on the location where voltage problem exists 								
<p data-bbox="1155 895 1568 1078">Thermal Limits of Transmission Line and Power Equipment refers to the dispatch limitations of generators affected by the actual condition of the transmission lines and/or power equipment.</p>	<ul data-bbox="1603 895 2020 986" style="list-style-type: none"> • Generating unit/s called to run as MRU to ensure the security and reliability of the grid. 								
<p data-bbox="1155 1083 1541 1233">Real-power Balancing and Frequency Control refers to the energy required to maintain the balance between supply and demand.</p>	<ul data-bbox="1603 1083 2020 1359" style="list-style-type: none"> • The System Operator issues re-dispatch instruction to the Generating unit/s with fast ramp rate capability to constrain-on its output to immediately address threat in security and reliability of the grid. • During islanding operation or whenever a portion or part of the 								

Current	Proposed	
		grid is isolated, the System Operator may require the Generator/s to come on-line to supply the corresponding demand of the localized portion of the isolated part of the grid
	<u>Section 17.4.3</u>	
	<u>Figure 10. Procedure for the Scheduling and Dispatch of Must-Run Units</u>	







Attachment 12 – Proposed Appendices

APPENDIX A. CONTENT STRUCTURE OF MARKET PROJECTIONS RESULTS FOR THE SYSTEM OPERATOR

The Market Operator shall submit the following information on the results of the market projections to the System Operator.

- a. MW schedules for each resource in the market projections
- b. Market Requirements [forecasted load (or energy requirement) and reserve requirements] per region
- c. Constraint Violations

The following tables show the fields of each information to be transmitted to the System Operator.

a. Market Projections Schedules	
Column Name	Description
START_TIME	Start Time of the Projected Hour (for WAP and DAP) or Dispatch Interval
END_TIME	End/Target Time of the Projected Hour (for WAP and DAP) or Dispatch Interval
RUN_TYPE	Describes the type of market run <ul style="list-style-type: none">• WAP• DAP• HAP
MKT_PRODUCT	Describes the type of market product <ul style="list-style-type: none">• “EN” for energy• “RU” for Regulation raise/upward• “RD” for Regulation lower/downward• “FR” for Fast Contingency Raise• “FL” for Fast Contingency Lower• “SR” for Slow Contingency Raise• “SL” for Slow Contingency Lower• “DR” for Delayed Contingency Raise• “DL” for Delayed Contingency Lower
RES_TYPE	Describes if the Resource is a generator or load <ul style="list-style-type: none">• GEN• LD
RESOURCE_ID	Generator/Load Name as represented in the Market Management System
MW	MW schedule that is referenced to the End/Target Time

b. Market Requirements	
Column Name	Description
START_TIME	Start Time of the Projected Hour (for WAP and DAP) or Dispatch Interval
END_TIME	End/Target Time of the Projected Hour (for WAP and DAP) or Dispatch Interval
RUN_TYPE	Describes type of market run <ul style="list-style-type: none">• WAP• DAP• HAP
MKT_PRODUCT	Describes type of requirement

b. Market Requirements	
Column Name	Description
	<ul style="list-style-type: none"> • “EN” for energy • “RU” for Regulation raise/upward • “RD” for Regulation lower/downward • “FR” for Fast Contingency Raise • “FL” for Fast Contingency Lower • “SR” for Slow Contingency Raise • “SL” for Slow Contingency Lower • “DR” for Delayed Contingency Raise • “DL” for Delayed Contingency Lower
REGION_ID	Region name with the specific market requirement
REQ_MW	MW schedule that is referenced to the End/Target Time

c. Constraint Violations	
Column Name	Description
START_TIME	Start Time of the Projected Hour (for WAP and DAP) or Dispatch Interval
END_TIME	End/Target Time of the Projected Hour (for WAP and DAP) or Dispatch Interval
RUN_TYPE	Describes type of market run <ul style="list-style-type: none"> • WAP • DAP • HAP
VIOLATION_TYPE	Describes the type of violation that occurred (i.e. Base Case Thermal, N-1 Contingency Thermal, under-generation, over-generation, etc.)
VIOLATED_NAME	Region, Equipment, or Load Name affected by Violation
VIOLATED_MW	MW Amount of Violation

APPENDIX B. STEPS IN CREATING A MERIT ORDER TABLE

This example uses the following data -

Resource ID	Price1	Quantity1	Price2	Quantity2	Price3	Quantity3
A	4	5	4	15	8	25
B	1	10	1	25		
C	7	15	7	30		

Note: The first block quantity (Quantity1) is the Pmin or minimum registered capacity of the generating unit. It is a price taker and the price at this first block (Price1) is not considered in the stacking of the WMOT.

Assuming that the demand is 50 MW, the resulting energy schedules shall be.

Resource ID	Schedule
A	10
B	25
C	15

The marginal plant is Generator A with a clearing price of PhP4.00/MWh.

1. Fetch the *generator ex-ante* schedules, nomination of *loading levels*, *projected outputs*, and the *generator energy offers*.

Energy Offer

Resource ID	Price1	Quantity1	Price2	Quantity2	Price3	Quantity3
A	4	5	4	15	8	25
B	1	10	1	25		
C	7	15	7	30		

Ex-ante Schedules

Resource ID	Schedule
A	10
B	25
C	15

2. Exclude generating units that are unavailable based from either the *outage* schedule or from the network configuration captured at ex-ante. *For this example, this step is not illustrated and all generating units included are scheduled.*
3. Sort the *offers* by energy *offer* blocks for each generating unit as follows -

- 3.a. If possible, split the ex-ante schedule of each generating unit based on its energy *offer* blocks. These blocks shall belong to the list of “**OFFERS DISPATCHED**”. The list should contain the Resource ID, MW, block, and price. For generators scheduled with no *offers*, these shall be included in the WMOT as price takers.

Resource ID	MW	Block	Price
A	5	1	Price_Taker
A	5	2	4
B	10	1	Price_Taker
B	15	2	1
C	15	1	Price_Taker

- 3.b. If there is a remaining offered quantity for a generating unit that is not scheduled, split this to the extent possible based on its energy *offer* blocks. These blocks shall belong to the list of “**OFFERS NOT DISPATCHED**”, and the list should contain the Resource ID, MW, block, and price.

Resource ID	MW	Block	Price
A	5	2	4
A	10	3	8
C	15	2	7

4. Create the **OFFERS DISPATCHED** WMOT as follows –

- a. Sort the list of energy *offer* blocks in the list starting with the lowest priced *offer* block at the bottom to the highest-priced *offer* block at the top, i.e., sorting using data on the Price column.

Resource ID	MW	Block	Price
A	5	2	4
B	15	2	1
C	15	1	Price_Taker
B	10	1	Price_Taker
A	5	1	Price_Taker

- b. For dissemination purposes, the price column is deleted in the **OFFERS DISPATCHED** list, so that the WMOT to be disseminated will contain the following information only -

Resource ID	MW	Block
A	5	2

Resource ID	MW	Block
B	15	2
C	15	1
B	10	1
A	5	1

- c. Add the scheduled *offer* blocks in MW and indicate the running total in the “Running Total” column. The running total is simply the incremental value based on the MW column and should start from the top of this list.

Resource ID	MW	Block	Running Total
A	5	2	5
B	15	2	20
C	15	1	35
B	10	1	45
A	5	1	50

5. Create the **OFFERS NOT DISPATCHED WMOT** as follows –

- a. Sort the list of energy *offer* blocks in **OFFERS NOT SCHEDULED FOR DISPATCH** from the cheapest at the bottom to the most expensive at the top based on the Price column.

Resource ID	MW	Block	Price
A	10	3	8
C	15	2	7
A	5	2	4

- b. Remove the price column in the WMOT that will be disseminated and published.

Resource ID	MW	Block
A	10	3
C	15	2
A	5	2

- c. Indicate the “Running Total” which is the incremental value based on the MW column and should start from the bottom of this list.

Resource ID	MW	Block	Running Total
A	10	3	30

C	15	2	20
A	5	2	5

6. Place the **OFFERS NOT SCHEDULED FOR DISPATCH** list on top of the **OFFERS SCHEDULED FOR DISPATCH** list.

Resource ID	MW	Block	Running Total
*****Offers Not Scheduled for Dispatch*****			
A	10	3	30
C	15	2	20
A	5	2	5
*****Offers Scheduled for Dispatch*****			
A	5	2	5
B	15	2	20
C	15	1	35
B	10	1	45
A	5	1	50

7. Place the *dispatch interval* date and hour at the top-most part of the file

10/4/2011 2:00:00 PM			
Resource ID	MW	Block	Running Total
*****Offers Not Scheduled for Dispatch*****			
A	10	3	30
C	15	2	20
A	5	2	5
*****Offers Scheduled for Dispatch*****			
A	5	2	5
B	15	2	20
C	15	1	35
B	10	1	45
A	5	1	50

APPENDIX C. SAMPLE CONTENTS OF A MERIT ORDER TABLE

	A	B	C	D	E
1	1/21/2012 2:00				
2	Resource ID	MW	Block	Running Total	
3	***** Offers Not Scheduled For Dispatch *****				
4	BAUANG_G01	180	1	1504.8	
5	BAUANG_G01	0	Pmin	1324.8	
6	SROQUE_G01	50	10	1324.8	
7	SROQUE_G01	50	9	1274.8	
8	SROQUE_G01	50	8	1224.8	
9	SROQUE_G01	40	7	1174.8	
10	SROQUE_G01	10	6	1134.8	
11	SROQUE_G01	20	5	1124.8	
12	SROQUE_G01	50	4	1104.8	
13	SROQUE_G01	35	3	1054.8	
14	S_ENRO_G01	110	1	1019.8	
15	S_ENRO_G01	0	Pmin	909.8	
16	T_ASIA_G01	5	2	909.8	
17	AMBUK_G01	104.6	1	904.8	
18	AMBUK_G01	0	Pmin	800.2	
19	ILIJAN_G01	10	10	800.2	
52	***** Offers Scheduled For Dispatch *****				
53	SUAL_G02	3.8	4	3.8	
54	SUAL_G02	21	3	24.8	
55	MSINLO_G01	15	8	39.8	
56	MSINLO_G01	20	7	59.8	
57	PAGBIL_G01	18	3	77.8	
58	SUAL_G02	9	2	86.8	
59	SUAL_G01	43.5	2	130.3	
60	PAGBIL_G01	44	2	174.3	
61	MSINLO_G01	30	6	204.3	
62	SUAL_G01	62.5	1	266.8	
63	MSINLO_G01	50	5	316.8	
64	PAGBIL_G01	200	1	516.8	

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APPENDIX D. CONTENT STRUCTURE OF REAL-TIME DISPATCH RESULTS FOR THE SYSTEM OPERATOR

The Market Operator shall submit the following information on the results of the real-time dispatch to the System Operator.

- a. MW schedules for each resource in the real-time dispatch
- b. Market Requirements [forecasted load (or energy requirement) and reserve requirements] per region
- c. Merit Order Table (as shown in Appendix C)

The following tables show the fields of each information to be transmitted to the System Operator.

a. Real-Time Dispatch Schedules	
Column Name	Description
END_TIME	End/Target Time of the Dispatch Interval
REFERENCE_NAME	Concatenates the Resource Name and the market product. The following lists the market products available. <ul style="list-style-type: none"> • “EN” for energy • “RU” for Regulation raise/upward • “RD” for Regulation lower/downward • “FR” for Fast Contingency Raise • “FL” for Fast Contingency Lower • “SR” for Slow Contingency Raise • “SL” for Slow Contingency Lower • “DR” for Delayed Contingency Raise • “DL” for Delayed Contingency Lower <p>Let us say that a generator’s resource name is 3GEN, hence, it will have a line item of 3GEN_EN to represent its Energy Schedule</p>
MW	MW schedule that is referenced to the End/Target Time

b. Market Requirements	
Column Name	Description
START_TIME	Start Time of the Dispatch Interval
END_TIME	End/Target Time of the Dispatch Interval
RUN_TYPE	Describes the type of market run, which is RTD
MKT_PRODUCT	Describes type of requirement <ul style="list-style-type: none"> • “EN” for energy • “RU” for Regulation raise/upward • “RD” for Regulation lower/downward • “FR” for Fast Contingency Raise • “FL” for Fast Contingency Lower • “SR” for Slow Contingency Raise • “SL” for Slow Contingency Lower • “DR” for Delayed Contingency Raise • “DL” for Delayed Contingency Lower
REGION_ID	Region name with the specific market requirement

b. Market Requirements	
Column Name	Description
REQ_MW	MW schedule that is referenced to the End/Target Time

c. Constraint Violations	
Column Name	Description
START_TIME	Start Time of the Projected Hour (for WAP and DAP) or Dispatch Interval
END_TIME	End/Target Time of the Projected Hour (for WAP and DAP) or Dispatch Interval
RUN_TYPE	Describes the type of market run, which is RTD
VIOLATION_TYPE	Describes the type of violation that occurred (i.e. Base Case Thermal, N-1 Contingency Thermal, under-generation, over-generation, etc.)
VIOLATED_NAME	Region, Equipment, or Load Name affected by Violation
VIOLATED_MW	MW Amount of Violation

APPENDIX E. CONTENT STRUCTURE OF SO INPUTS TO THE MARKET PROJECTIONS AND REAL-TIME DISPATCH

The System Operator shall provide inputs to the Market Management System for the determination of the market projections and the real-time dispatch

a. Outage Schedules	
Column Name	Description
SCHEDULE_TYPE	Refers to the MMS' COP Schedule Type <ul style="list-style-type: none"> “UnitOutageStatus” refers to the outage schedule for Generating Units “EquipmentOutageStatus” refers to the outage schedule for Equipment (lines, transformers, reactors, capacitors, switches)
VERSION	Version number of the Entry
OBJECT_ID	Complete MMS Map ID of the generating unit or equipment
START_TIME	Start Time
END_TIME	End Time
STATUS	Refers to the status of the unit/equipment, which should be “Out” in this schedule type

b. Security Limit	
Column Name	Description
SCHEDULE_TYPE1	Refers to the MMS' Schedule Type for the minimum operating limit, which should be “SecurityMinLimit” in this schedule type
SCHEDULE_TYPE2	Refers to the MMS' Schedule Type for the maximum operating limit, which should be “SecurityMaxLimit” in this schedule type
VERSION	Version number of the Entry
OBJECT_ID	Complete MMS Map ID of the generating unit
START_TIME	Start Time
END_TIME	End Time
VALUE1	Refers to the numerical value representing the minimum operating limit
VALUE2	Refers to the numerical value representing the maximum operating limit

c. HVDC Limit	
Column Name	Description
SCHEDULE_TYPE1	Refers to the MMS' Schedule Type for the Minimum HVDC Flow for the Forward Direction (Visayas-To-Luzon), which should be “HVDCForwardMin” in this schedule type
SCHEDULE_TYPE2	Refers to the MMS' Schedule Type for the Maximum HVDC Flow for the Forward Direction (Visayas-To-Luzon), which should be “HVDCForwardMax” in this schedule type
SCHEDULE_TYPE3	Refers to the MMS' Schedule Type for the Minimum HVDC Flow for the Reverse Direction (Luzon-To-Visayas), which should be “HVDCReverseMin” in this schedule type
SCHEDULE_TYPE4	Refers to the MMS' Schedule Type for the Maximum HVDC Flow for the Reverse Direction (Luzon-To-Visayas), which should be “HVDCReverseMax” in this schedule type
VERSION	Version number of the Entry
OBJECT_ID	Complete MMS Map ID of the HVDC
START_TIME	Start Time

c. HVDC Limit	
Column Name	Description
END_TIME	End Time
VALUE1	Refers to the numerical value representing the minimum HVDC flow for the Forward Direction (Visayas-To-Luzon)
VALUE2	Refers to the numerical value representing the maximum HVDC flow for the Forward Direction (Visayas-To-Luzon)
VALUE3	Refers to the numerical value representing the minimum HVDC flow for the Reverse Direction (Visayas-To-Luzon)
VALUE4	Refers to the numerical value representing the maximum HVDC flow for the Reverse Direction (Visayas-To-Luzon)

d. Transmission Limits	
Column Name	Description
SCHEDULE_TYPE1	Refers to the MMS' Schedule Type for the limit during normal conditions, which should be "TransmissionLimitNormal" in this schedule type
SCHEDULE_TYPE2	Refers to the MMS' Schedule Type for the limit during contingency (emergency) events, which should be "TransmissionLimitContingency" in this schedule type
VERSION	Version number of the Entry
OBJECT_ID	Complete MMS Map ID of the equipment (line or transformer)
START_TIME	Start Time
END_TIME	End Time
VALUE1	Refers to the numerical value representing the normal limit
VALUE2	Refers to the numerical value representing the contingency limit

e. Contingency List	
Column Name	Description
SCHEDULE_TYPE	Refers to the MMS' COP Schedule Type, which should be "ContingencyList" in this schedule type
VERSION	Version number of the Entry
OBJECT_ID	Complete MMS Map ID of the equipment
START_TIME	Start Time
END_TIME	End Time
STATUS	Refers to the status of the unit/equipment, which should be "Out" in this schedule type

f. Reserve Requirement	
Column Name	Description
SCHEDULE_TYPE	Refers to the MMS' COP Schedule Type for Reserve Requirement. The following are the available schedule types for reserves. <ul style="list-style-type: none"> • RegulationLowerReserve • RegulationRaiseReserve • FastContingencyLowerReserve • FastContingencyRaiseReserve • SlowContingencyLowerReserve • SlowContingencyRaiseReserve • DelayedContingencyLowerReserve • DelayedContingencyRaiseReserve

f. Reserve Requirement	
Column Name	Description
VERSION	Version number of the Entry
OBJECT_ID	Complete MMS Map ID of Reserve Region
TARGET_TIME	Target Time
MW	MW value of the reserve region's requirement

IV. Proposed Scheme to Monitor the Effectiveness of the Proposed Changes to the WESM Manual

V. Referral

MAG Date Received: DEC 16 2016 *see* 7:31 PM

Proposed Amendment: ☐ Urgent ☐ Minor ☒ General

A. For Urgent Amendment (For the use of PEMC President only)

Date Referred to PEMC President	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Certifies as urgent	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Convene the RCC within 48 hrs.		
Remarks:		

B. For Minor and General Amendment (For the use of RCC only)

Date Referred to RCC:	
Remarks:	
Action taken:	
Request for comments:	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Request written comments from: <input type="checkbox"/> DRG <input type="checkbox"/> MSC <input type="checkbox"/> PA <input type="checkbox"/> MO <input type="checkbox"/> ECO <input type="checkbox"/> RCC <input type="checkbox"/> TC <input type="checkbox"/> Other PEM Board Committees <input type="checkbox"/> Other Interested Parties
For further review of the Technical Sub-Committee:	<input type="checkbox"/> Yes Assigned to: <input type="checkbox"/> SO Sub-Committee <input type="checkbox"/> MO Sub-Committee <input type="checkbox"/> Metering Sub-Committee <input type="checkbox"/> Billing and Settlement Sub-Committee <input type="checkbox"/> Legal and Regulatory Sub-Committee <input type="checkbox"/> No
For public consultation:	<input type="checkbox"/> Yes <input type="checkbox"/> No
RCC Resolution:	<input type="checkbox"/> Approved <input type="checkbox"/> Disapproved
RCC Resolution No.:	
Date of Resolution:	
RCC Meeting No.	
Date of endorsement to the PEM Board:	