



Republic of the Philippines
DEPARTMENT OF ENERGY
(Kagawaran ng Enerhiya)

DEPARTMENT CIRCULAR NO. _____

ADOPTING GENERAL AMENDMENTS TO THE WHOLESALE ELECTRICITY SPOT MARKET (WESM) RULES AND VARIOUS WESM MANUALS ON THE ENHANCEMENTS TO MARKET OPERATOR AND SYSTEM OPERATOR PROCEDURES

WHEREAS, Sections 30 and 37(f) of the Electric Power Industry Reform Act (EPIRA) provides that the DOE, jointly with the electric power industry participants, shall establish the Wholesale Electricity Spot Market (WESM) and formulate the detailed rules governing the operations thereof;

WHEREAS, on 28 June 2002, the DOE, with the endorsement of the electric power industry participants, promulgated the WESM Rules through Department Circular No. DC2002-06-003;

WHEREAS, any changes, amendments, and modifications to the WESM Rules including its Market Manuals shall be undertaken in accordance with the provisions of Chapter 8 thereof;

WHEREAS, on 23 October 2015, the Department of Energy adopted enhancements to WESM design and operations which include among others the change from a 1-hour dispatch interval to a 5-minute dispatch interval;

WHEREAS, the Market Operator was tasked to propose changes to the WESM Rules and Market Manuals, and ensure upgrading of the Market Management System and other systems which are necessary for the implementation of the enhancements to WESM design and operations;

WHEREAS, among the preparations made for the implementation of the enhanced market design were the conduct, since 26 June 2017, of the Parallel Operations Program (POP) for the New Market Management System (NMMS) by the Market Operator, System Operator and WESM Members, and the market readiness assessment by the Market Readiness Steering Committee since 26 April 2019 to, among others, evaluate the capability of the NMMS to implement the scheduling and dispatch processes in a 5-minute dispatch;

WHEREAS, based on the results of the POP and the findings of the market readiness assessment, the Market Operator and System Operator have noted possible enhancements to the processes for scheduling and dispatch that needed to

be incorporated in the WESM Manual on Dispatch Protocol Issue 13.2 (“Dispatch Protocol Manual”) and other relevant Market Manuals;

WHEREAS, the Market Operator (Independent Electricity Market Operator of the Philippines or IEMOP) submitted to the Rules Change Committee (RCC) on 23 March 2021 proposed urgent amendments to various WESM Manuals in view of the implementation of the enhanced WESM design and operations on 26 June 2021 (“Go-Live Date”);

NOW THEREFORE, after careful review of the PEM Board-approved proposal and the comments and recommendations received on the same, the DOE, pursuant to its authority under the EPIRA and the WESM Rules, hereby adopts, issues, and promulgates the following amendments to the WESM Rules and various Market Manuals on the Enhancements to Market Operator and System Operator Procedures:

Section 1. Amendments to the WESM Rules. The provisions in the WESM Rules are hereby amended:

a. Section 3.2.1.5 under 3.2.1 Market Network Model is amended to read as –

“3.2.1.5 Except for integration of new network, other alteration under Clause 3.2.1.4 shall be implemented in accordance with the established business processes of the *Market Operator*. The *Market Operator* shall regularly inform the *PEM Board* of any changes made to the *Market Network Model*.

b. Section 3.5.13.1 under 3.5.13 Overriding Constraints is amended to read as –

“3.5.13.1 The *System Operator* shall advise the *Market Operator* of the actions it has taken in relation to the foregoing, including but not limited to information necessary for the proper settlement of affected *generating units*, and the *Market Operator* shall publish the said information no later than one (1) week from the relevant trading day. *Trading Participants* shall review the information and notify the *Market Operator* of any discrepancies no later than two (2) weeks from the date of publication, otherwise the information contained in the report shall be deemed final.

c. Section 3.8.2.2 under 3.8.2 Responsibilities of the System Operator is amended to read as –

“3.8.2.2 After each one (1) hour interval, in accordance with the *timetable*, the *System Operator* shall advise the *Market Operator* of:

a. xxx
xxx

The *System Operator* shall likewise provide a *dispatch instruction* report to the *Market Operator*, in accordance with the *timetable*, detailing

among others the circumstances and *dispatch* levels of units that were *constrained-on* or *constrained-off* or put on must-run during that one (1) hour *interval*.

- d. Section 3.8.3.4 under 3.8.3 System Operator Implementation of Real-Time Dispatch is amended to read as -

“3.8.3.4 Subject to Clause 3.8.3.3, 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 *regulating reserves* are exhausted during a *dispatch interval*, shall adjust the *dispatch* of other *generating units*, to compensate as required in accordance with relevant *Market Manuals*.

- e. Section 3.8.5.6 under 3.8.5 Dispatch Conformance Standards is amended to read as -

“3.8.5.6 In cases when a *generating unit* was identified as a *Must-Stop Unit*, the *System Operator* shall include such in the *Dispatch Instruction Report*.

- f. Definition of reserves under the Glossary are amended to read as -

xxxx

Contingency Reserve. *Synchronized generation capacity from qualified generating units and qualified interruptible loads allocated to cover the loss or failure of a synchronized generating unit or a transmission element or the power import from a circuit interconnection.*

xxxx

Dispatchable Reserve. *Generating capacity that is not scheduled for regular energy supply, regulating reserve, contingency reserve, or interruptible loads not scheduled for contingency reserve, and that are readily available for dispatch in order to replenish the contingency reserve service whenever a generating unit trips or a loss of a single transmission interconnection occurs.*

xxxx

Regulating Reserve. *Readily available and dispatchable generating capacity that is allocated exclusively to correct deviations from the acceptable nominal frequency caused by unpredicted variations in demand or generation output.*

Section 2. Amendments to the WESM Manual on Dispatch Protocol. The provisions in the WESM Manual on Dispatch Protocol Issue 13.2 are hereby amended:

a) Section 2.1.2 under 2.1 Definitions is reordered, and new items are added to read as -

- a) Ancillary Service Procurement Agreement. *A contractual agreement under which a WESM Member, registered as an Ancillary Service Provider, agrees with the System Operator to provide ancillary services.*
- b) Automatic Generation Control. *The automatic regulation of the power output of generating units to respond to a change in system frequency or tie-line loading, as defined in the Grid Code, or to meet its target loading level.*
- c) Automatic Load Dropping (ALD). xxx
- d) Availability. xxx
- e) Bid xxx
- f) Capability. xxx
- g) Cascading Outages. xxx
- h) Contingency. xxx
- i) Contingency Reserve. *Synchronized generating capacity that is allocated to stabilize the system frequency and to cover the loss or failure of a synchronized generating unit or a transmission line or the power import from a single circuit interconnection, as defined in the Grid Code. Also referred to as contingency reserves. Synchronized generation capacity from qualified generating units and qualified interruptible loads allocated to cover the loss or failure of a synchronized generating unit or a transmission element or the power import from a circuit interconnection.*
- j) Demand Control. xxx
- k) Demand Control Imminent Warning. xxx
- l) Dispatchable Reserve. *Generating capacity that is not scheduled for regular energy supply, regulating reserve, contingency reserve, or interruptible loads not scheduled for contingency reserve, and that are readily available for dispatch in order to replenish the Contingency Reserve service whenever a generating unit trips or a loss of a single transmission interconnection occurs.*
- m) Disturbance. xxx
- n) Frequency control. xxx
- o) Generator. xxx
- p) Load shedding. xxx
- q) Manual Load Dropping. xxx
- r) Market Management System (MMS). xxx
- s) Maximum available capacity. xxx
- t) MMS-Market Participant Interface (MPI). xxx
- u) Multiple Outage Contingency. xxx
- v) Offer. xxx
- w) Operating margin. xxx
- x) Preferential Dispatch Units. xxx

- y) Real-Time Data. Contains analog measurements (MW and MVAR) of *generators* and *loads*, and the connection status of breakers and disconnect switches.
- z) Real-Time Dispatch. xxx
- aa) Red Alert. An alert issued by the *System Operator* when the *Contingency Reserve* is zero, a *generation* deficiency exists, or there is critical loading or imminent overloading of *transmission lines* or equipment.
- bb) Regulating Reserve. *Readily available and dispatchable generating capacity that is allocated exclusively to correct deviations from the acceptable nominal frequency caused by unpredicted variations in demand or generation output.*
- cc) Security. xxx
- dd) Self-scheduled nomination. xxx
- ee) Shutdown. xxx
- ff) Stability. xxx
- gg) Start-up. xxx
- hh) System Integrity Protection Scheme (SIPS). xxx
- ii) System Operator System Advisories. xxx
- jj) Technical Constraint. xxx
- kk) Voltage Control. xxx
- ll) Voltage Instability. xxx
- mm) Voltage Sag. Xxx

b) Table 2 under 4.4 Day-Ahead Projection (DAP) is amended to read as –

Table 2. DAP Timeline

Time	Activity	Responsible Party
XXX	XXX	XXX
Before [STPH1 + 1 minute]	Provide updates on the following, if any: <ul style="list-style-type: none"> a. XXX b. XXX c. XXX d. XXX e. <i>Real-time <u>data</u></i> f. XXX g. XXX 	<i>System Operator</i>
XXX	XXX	XXX
XXX	XXX	XXX
XXX	XXX	XXX
	XXX	XXX

c) Table 4 under 4.5 Hour-Ahead Projection (HAP) is amended to read as –

Table 4. HAP Timeline

Time	Activity	Responsible Party
XXX	XXX	XXX
Before [STDI1 – 7 minutes]	Provide updates on the following, if any: <ul style="list-style-type: none"> • XXX • XXX • XXX • XXX • <i>Real-time <u>data</u></i> 	<i>System Operator</i>
XXX	XXX	XXX
XXX	XXX	XXX
XXX	XXX	XXX
	XXX	XXX

d) Table 5 under 4.6 Real-Time Dispatch Schedule is amended to read as –

Table 5. RTD Timeline

Time	Activity	Responsible Party
XXX	XXX	XXX
Before [STDI – 7 minutes]	Provide updates on the following, if any: <ul style="list-style-type: none"> • XXX • XXX • XXX • XXX • <i>Real-time <u>data</u></i> 	<i>System Operator</i>
XXX	XXX	XXX
XXX	XXX	XXX
XXX	XXX	XXX
	XXX	XXX

e) Section 7.4.1 under 7.4 Data and Report Requirements is amended to read as –

“7.4.1 Market run data Inputs. For each dispatch interval, the System Operator shall provide *or* update the data, if necessary, which shall be used in the pre-dispatch projections and real-time dispatch market runs:

- a) *Outage* schedules
- b) *Contingency* lists
- c) *Over-riding constraints*
- d) *Reserve* requirements

f) New Section 7.6.4 under 7.6 Over-Riding Constraints is added to read as –

“7.6.4 *Generating units* undergoing regulatory and commercial tests shall submit to the System Operator the MW profile that details the MW target for each dispatch interval during its requested test period at least two (2) working days prior to the start of its testing.

g) Section 7.9.1 and 7.9.2 under 7.9 System Status are amended to read as –

“7.9.1 Real-Time Data. The *real-time data* represents the analog measurements, and connection status of breakers and disconnect switches in the *grid*. It is collected by the *Market Operator* from the *System Operator’s* EMS/SCADA.

a) The *real-time data* shall contain information as prescribed in the *WESM Market Manual* on Criteria Market Network Model Development and Maintenance - and Procedure.

b) The *real-time data* is an input to the MDOM which calculates the WAP, DAP, HAP, and RTD schedules. Specifically, the *real-time data* is used for the network configuration and nodal demand forecasting processes.

7.9.2 System Operator System Advisories. Further to the information provided in Section 7.4.2, these are messages issued by the *System Operator* depicting particular events or incidents that would transpire prior, during or after real time condition.

h) Section 7.10.2 under 7.10 Means of Submission/Transmittal is amended to read as –

“7.10.2 The *System Operator* shall update the information contained in this Section considering the *timetable* set in Section 4.

i) Additional to Section 8.3.3 under 8.3 Responsibilities to read as –

“8.3.3 *Trading Participants* shall be responsible for:

a) Ensuring submission of *self-scheduled nominations, bids, and 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) Submission of day-ahead *self-scheduled nominations* of its *must dispatch generating units* to the *System Operator* by 1300H; and

- c) Maintaining their respective infrastructure to ensure access to the *MPI* of the *MMS*.

j) Section 8.4.2 under 8.4 Data Inputs/Information Requirements is amended to read as –

“8.4.2 The data inputs for the market projections are as follows:

- a) XXX
- b) XXX
- c) *Real-time data*
- d) XXX
- e) XXX
- f) XXX
- g) XXX
- h) XXX
- i) XXX

k) Table 6. Summary of Inputs and Sources for the *Real-time dispatch under 9.5* Data Inputs/Information Requirements is amended to read as –

Table 6. Summary of Inputs and Sources for the *Real-time dispatch*

INPUTS	SOURCE
XXX	XXX
XXX	XXX
<i>Real-Time Data</i>	<i>System Operator</i>
XXX	XXX
XXX	XXX
XXX	XXX
XXX	XXX
XXX	XXX

l) Section 10.1.2 under 10.1 Background is amended to read as –

“10.1.2 The *WMOT* is generated by stacking, in an unconstrained manner, scheduled and unscheduled capacities, excluding negative quantities, *reserve schedules*, and generators on outage through the *market offers* submitted for the *real-time dispatch* 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 *WMOT* 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”).

m)Section 10.3.2 under 10.3 Responsibilities is amended to read as –

“10.3.2 Consistent with its obligations set out in this Dispatch Protocol in respect to the issuance of dispatch instructions, the System Operator shall be responsible for ensuring the application of the information provided in the WMOT in the real-time operation of the grid. The System Operator shall also be responsible for identifying the generating units that were issued *dispatch instructions* through the dispatch instruction report prepared in accordance with Sections 14.4.2 and 14.4.5.

n) Section 10.4.1 under 10.4 Preparation of the WMOT is amended to read as –

“10.4.1 The *WMOT* shall be prepared using the *real-time dispatch schedules*, and the *offers*, excluding negative quantities, *reserve schedules*, and generators on outage of each *generating system* for which *offers* were submitted for the relevant *dispatch interval*. The specific information that will be used is as follows:

xxx

o) Section 10.4.5 and 10.4.6 under 10.4 Preparation of the WMOT are amended to read as –

“10.4.5 The “Offers Dispatched” consists of the *energy offer* blocks, excluding *reserve schedules*, which have been scheduled in the RTD schedule for the *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 MW schedules are included in this list and are placed at the bottom of the list with *must dispatch generating units* at the bottom and followed by *priority dispatch generating units* and *non-scheduled generating units* in that order.

10.4.6 The “Offers Not Dispatched” consists of the remaining *energy offers* of each available *generating unit* that are not scheduled or included in the RTD schedule for the *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. Capacities that were not dispatched through their *energy offers* but have *reserve dispatch* targets shall be excluded from the list.

p) Section 10.6.2 under 10.6 Use of the WMOT is amended to read as –

“10.6.2 As far as practicable, and when *secondary regulating reserves* have been exhausted, the *System Operator* shall issue re-dispatch instructions based on the *WMOT*. However, the *System Operator* may resort in an *out of merit dispatch* whenever the quality of the *grid frequency* is affected or the *security* of the *grid* is at risk.

q) New Section under 11.1 Background is added to read as –

“11.1.4 xxx

“11.1.5 The *System Operator* shall make use of the first *WMOT* available for the hour as reference for its re-dispatch instruction at any *dispatch interval* for that hour (e.g., 1005H *WMOT* shall be used for all *dispatch intervals* from 1005H to 1100H).

r) Section 11.3.1 under 11.3 Responsibilities is reordered, and new items are added to read as –

“11.3.1 The *System Operator*, in coordination with the *Market Operator*, shall be responsible for the following:

- a) xxx
- b) Directly issuing *dispatch instructions to generating units* operating on *AGC*;
- c) Implementing the *WMOT* provided by the *Market Operator*;
- d) Assuring the *security* and reliability of the grid at all times in compliance with the provisions of the System Security and Reliability Guidelines and *Grid Code*;
- e) Dispatching *generators* as *constrain-on* or *constrain-off*, or as *must-run unit* if all available *reserves* are exhausted during a *dispatch interval*; and
- f) Reporting events and actions made during *dispatch intervals*

11.3.2 xxx

s) Section 11.3.3 under 11.3 Responsibilities is amended to read as –

“11.3.3 All *Trading Participants* shall comply with their respective *dispatch schedules* issued by the *Market Operator*, the *dispatch instructions* issued by the *System Operator* to their facilities operating on *AGC mode*, and the re-dispatch instructions issued to them by the *System Operator*, if any. For this purpose, they shall ensure that their respective internal processes, systems, and infrastructure, as well as their protocols with their counterparties, shall enable strict compliance with this Section.

t) Section 11.4.1 under 11.4 Issuance and Coverage of Dispatch Instructions is amended to read as –

“11.4.1 Except for *generating units* operating on AGC, *dispatch instructions* shall include the following:

xxx

u) Section 11.4.2 under 11.4 Issuance and Coverage of Dispatch Instructions is renumbered as 11.4.3 and new Section 11.4.2 is added to read as –

“11.4.2 For *generating units* operating on AGC, the following shall be observed:

- a) The *System Operator* shall send AGC commands based on a linear ramp rate specified by the *Generation Company*.
- b) The *Generation Company* shall communicate to the *System Operator* the status of the AGC operations from start, during, and end of AGC remote control mode, as necessary.
- c) The *Generation Company* shall seek clearance from the *System Operator* to change from remote to local AGC mode in cases of technical constraints.
- d) When the *Generation Company* observes AGC-related issues that affect its operations, the *Generation Company* shall immediately communicate such issues to the *System Operator* prior to changing its mode of dispatch.

v) Section 11.4.3 under 11.4 Issuance and Coverage of Dispatch Instructions is renumbered and amended to read as –

“11.4.4 Generator Dispatch Compliance Beyond Normal *Grid Frequency* Threshold.

- a) When the *grid frequency* reaches 59.7Hz or lower, the *Trading Participants* shall operate based on the following conditions:

Condition	Status of Actual Dispatch	Expected Response
Frequency is 59.7 Hz or lower	If ramping down, or current actual loading is higher than <i>dispatch schedule</i>	<i>Generating unit</i> should stop ramping down and maintain current actual loading unless otherwise

Condition	Status of Actual Dispatch	Expected Response
		instructed by the <i>System Operator</i>
	If ramping up, or current actual loading is lower than <i>dispatch schedule</i>	<i>Generating unit</i> should continue to ramp up to its <i>dispatch schedule</i> unless otherwise instructed by the <i>System Operator</i>

- b) Once the *grid frequency* goes up to 60 Hz after coming off from a state in Section 11.4.4 (a), then the *Trading Participants* shall resume to dispatch its *generating units* to meet its *dispatch schedule*.
- c) When the *grid frequency* reaches 60.3 Hz or higher, the *Trading Participants* shall operate based on the following conditions:

Condition	Status of Actual Dispatch	Expected Response
Frequency is 60.3 Hz or higher	If ramping down, or current actual loading is higher than <i>dispatch schedule</i>	Generating unit should continue to ramp down to its <i>dispatch schedule</i> unless otherwise instructed by the <i>System Operator</i>
	If ramping up, or current actual loading is lower than <i>dispatch schedule</i>	Generator should stop ramping up and maintain current actual loading unless otherwise instructed by the <i>System Operator</i>

- d) Once the *grid frequency* comes down to 60 Hz after coming off from a state in Section 11.4.4 (c), then the *Trading Participants*

shall resume to dispatch its generating units to meet its *dispatch schedule*.

w) Section 11.5.2 under 11.5 Dispatch of Must and Priority Dispatch Generating Units is amended to read as –

“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 *regulating reserves* are exhausted during a *dispatch interval*, shall adjust the *dispatch* of other *generating units* to compensate as required in accordance with re-dispatch process in this Section.

x) Sections 11.8.1 to 11.8.5 under 11.8 Communicating and Reporting of Dispatch Schedules and Instructions are amended to read as –

“11.8.1 The *real-time dispatch* targets shall be communicated by the *Market Operator* to the *Trading Participants* through the *MPI*. The *WMOT* generated for a *dispatch interval* shall be published in accordance with Section 10.7.2 of this Dispatch Protocol. *Dispatch instructions* through the *AGC* facilities shall be communicated by the *System Operator* through the available communication link with the power plant operator. Redispatch instructions shall be communicated by the *System Operator* to the *Trading Participants* through their respective power plant operators.

11.8.2 The *System Operator* shall maintain the communication facilities it needs for communicating with *Trading Participants* which may include telephones, fax, email, web pages, facilities for *AGC*, and other means of communications.

11.8.3 xxx

11.8.4 All *dispatch instructions* issued by the *System Operator*, including those provided through the facilities for *AGC*, to *Trading Participants* shall be recorded through operator logs. The *System Operator* shall include this information in the dispatch deviation instruction report, in accordance with Section 14.4.

11.8.5 Dispatch instruction reports submitted by the *System Operator* to the *Market Operator* shall be used for purposes of surveillance, audit, and market settlements.

y) Section 13.2.2 under 13.2 Responsibilities is amended to read as –

“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 of generating units to the *Market Operator*
- b) xxx
- c) xxx

z) Section 13.3.4 under 13.3 General Procedures is amended to read as –

“13.3.4 The *dispatch scheduling* of the *generating unit* that will *start-up* or *shutdown* shall be managed through its *market offers* submitted within the *WESM timetable*. The *Trading Participant* shall submit *market offers* or *nominations* for the *dispatch interval* during which the unit is to *startup* or *shutdown* and make adjustments to its *market offers* or *nominations*, as appropriate.

aa) New Section 13.3.5 under 13.3 General Procedures to read as –

“13.3.5 Consistent with the provisions in the *WESM Manual* on the Market Network Model Development and Maintenance - Criteria and Procedure, the status of *generating units* shall be based on their registered availability in the *market network model*.

bb) Sections 13.4.1 to 13.4.2 under 13.4 Start-up of a Generating Unit are amended to read as –

“13.4.1 A *generating unit* must have *market offers* or *nominations* prior to the execution of the *real-time dispatch* run consistent with the *WESM timetable*.

13.4.2 The System Operator shall update the outage schedule of generators to remove the generating unit cleared to start-up from the outage list. Submission shall be in accordance with the WESM timetable.

cc) Sections 13.4.3 and 13.4.4 are renumbered accordingly and New Section 13.4.3 under 13.4 Start-up of a Generating Unit is added to read as –

“13.4.3 If the start-up will be deferred, the *System Operator* shall update the outage schedule accordingly and in accordance with the *WESM timetable* for submission of outage schedules.

dd) Sections 13.5.3 to 13.5.4 under 13.5 Start-up of a Generating Unit are amended to read as –

“13.5.3 The *Trading Participant* shall update its *market offers* or *nominations* for the *dispatch intervals* covered in the *shutdown* sequence.

13.5.4 Once the *generating unit* has completely *shut down*, the relevant *Trading Participant* shall cancel its daily *market offer* or *nomination* profile for the affected *trading day*.

ee) Section 14.1 under Section 14 Post-dispatch Data and Operation Reports is amended to read as –

“14.1 Background

After each dispatch interval, the System Operator is required under WESM Rules Clause 3.8.2 to advise the Market Operator of the occurrence of, among other information, dispatch instructions, load shedding, network constraints, binding security constraints and operational irregularities.

ff) Section 14.4.2 under 14.4 Post-dispatch Data and Operation Reports is amended to read as –

“14.4.2 Dispatch Instruction Report. On a weekly basis, the System Operator shall submit a report to the Market Operator, containing their *dispatch instructions* that includes, but are not limited to, generator re-dispatch (e.g., constrain-on generation, constrain-off generation, must-run generation), MW output schedule during *market intervention* or *market suspension*, and, as necessary, commands via the *automatic generation control*. The Dispatch *Instruction* Report shall contain, among others, the following information:

- a) Date and Time of Incident
- b) Resource name
- c) Reason for Dispatch Instruction:
 - Utilized for ancillary services
 - Testing Requirement
 - Re-dispatch of constrain-on and constrain-off generating units
 - Designation of must-run units
 - Limitation on must dispatch generating units
 - Market Intervention or Market Suspension
- d) Short description of the issue being addressed (e.g., frequency breached x Hz)
- e) Type of *Dispatch Instruction*
- f) Target MW value instructed

gg) Section 14.4.5 under 14.4 Post-dispatch Reports and Information is amended to read as –

“14.4.5 Report on Must-run Units. In accordance with WESM Rules Clause 3.5.13.1, the System Operator shall submit information 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. Such information shall be included in the Dispatch Instruction Report.

hh) New Sections under 14.4 Post-dispatch Reports and Information are added to read as –

“14.4.7 Each *generation company* shall validate all the data in the Dispatch Instruction Report as published by the *Market Operator* in the *market information website*. Any discrepancy in these reports shall be reported by the *generation company* to the *Market Operator* within two (2) weeks after the *Market Operator*'s publication of these reports. Failure by the *generation company* to report to the *Market Operator* any discrepancy within the period defined herein shall render the data in the report as final.

14.4.8 Within two (2) *working days* from receipt of a report, the *Market Operator* shall request the *System Operator* to validate a reported discrepancy by a *generator*.

14.4.9 The *System Operator* shall perform reconciliation with the *generation company* and provide the results of its validation of the reported discrepancies within seven (7) *working days* from the receipt of the request from the *Market Operator*. If the *Market Operator* has not received any validation within the prescribed timeline, the published data from the Dispatch Instruction Report shall be maintained. If the *generation company* claims additional compensation related to the reported discrepancies that were not validated within the prescribed timeline, the *generation company* may subject the said claim under the WESM dispute resolution process.

ii) Sections 15.4.2 to 15.4.3 under 15.4 Determination of Reserve Requirements are amended to read as –

“15.4.2 The level of *reserve* requirement for *regulating reserve* service shall be based on the latest issuances on the procurement of *ancillary services* by the *ERC* and shall be used as reference by the *Market Operator* for the *market projections* and *real-time dispatch schedule*.

15.4.3 For *contingency reserve* service and *dispatchable reserve*, the *System Operator* shall determine the level of *reserve* requirement in accordance with the latest issuances on the procurement of *ancillary services* by the *ERC*.

jj) Section 17.5 Management of Must-Run Units is DELETED

kk) Section 18.3.1 under 18.3 Managing Excess Generation for the Next Day is amended to read as –

“18.3.1 There is an impending *excess generation* when the resulting price in the *day-ahead projection* run is equivalent to the offer floor price and the aggregate unscheduled Technical Pmin of generating units with floor price offers is greater than or equal to the *regulating reserve* requirement.

ll) Section 20.4 Emergency Procedures is amended to read as – [See Attachment A]

mm) Appendix D and E for Content Structure of *Real-time dispatch* Results for the *System Operator* are amended to read as –

Appendix D

xxx

a. Real-time dispatch schedules	
Column Name	Description
END_TIME	XXX
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 (Contingency Reserve) • “DR” for Delayed Contingency Raise (Dispatchable Reserve) XXX
MW	XXX

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

b. Market Requirements	
Column Name	Description
	<ul style="list-style-type: none"> • “RU” for Regulation raise/upward • “RD” for Regulation lower/downward • “FR” for Fast Contingency Raise (Contingency Reserve) • “DR” for Delayed Contingency Raise (Dispatchable Reserve)
REGION_ID	XXX
REQ_MW	XXX

xxx

Appendix E

f. Reserve Requirement	
Column Name	Description
SCHEDULE_TY PE	<p>Refers to the MMS’ COP Schedule Type for Reserve Requirement. The following are the available schedule types for reserves.</p> <ul style="list-style-type: none"> • Regulation Lower Reserve • Regulation Raise Reserve • Fast Contingency Raise Reserve (Contingency Reserve) • Delayed Contingency Raise Reserve (Dispatchable Reserve)
VERSION	XXX
OBJECT_ID	XXX
TARGET_TIME	XXX
MW	XXX

xxx

nn) New Appendix G for Details of Dispatch Instructions Using Automatic Generation Control is added to read as – *[See Attachment B]*

Section 3. WESM Manual on Registration, Suspension and De-Registration Criteria and Procedures. The provisions in the WESM Manual on Registration, Suspension and De-Registration Criteria and Procedures Issue 5.3 are hereby amended:

a. New Section 2.5.4.7 under 2.5.4 Other Considerations is added to read as –

“2.5.4.7 Modelling of the Generating Unit’s Availability

Upon registration, *Trading Participants* shall specify if the availability of its *generating unit* shall be based on the real-time status of its generator breaker, or on the availability of its *market offers*.

Section 4. WESM Manual on Market Network Model Development and Maintenance - Criteria and Procedures. The provisions in the WESM Manual on Market Network Model Development and Maintenance - Criteria and Procedures Issue 4.2 are hereby amended:

a. New Section 2.1.5 under Definitions is added to read as –

“2.1.5 *Market Resource* refers to the objects defined in the *Market Network Model* to represent generators, battery energy storage systems, pumped-storage units, and loads.

b. New Section 4.4.12 under 4.4 MNM Components and Modeling is added to read as –

“4.4.12 Real-Time Data

The System Operator shall provide the following real-time data, each having its respective real-time data quality, to the Market Operator:

- a) Analog measurements (MW/MVAR) to represent gross generation output and generation net of the station use;
- b) Analog measurements (MW/MVAR) to represent consumption at least at the connection point;
- c) Analog measurements (MW/MVAR) measuring loading at the high-side and low-side of the transformer;
- d) Analog measurements (MW/MVAR) measuring the loading at both ends of an AC line or HVDC link;
- e) Breaker Status;
- f) Calculated MW Demand per region; and
- g) Power System Frequency per grid (Hz).

c. Section 4.5.4 under 4.5 MNM Development Timetable is amended to read as-

“4.5.4 After the receipt of the official notification from the System Operator, the Market Operator shall start the preparations for the MNM update to facilitate the implementation of the notified change. Minor changes (such as but not limited to change in equipment/resources naming conventions, additional bays for future expansions) to the transmission network that has no impact to the market operations may be implemented at a later time.

d. Sections 4.5.6 to 4.5.8 under 4.5 MNM Development Timetable are amended to read as-

And

“4.5.6 The table below describes the timeline of activities involved in updating the MNM. The variable “D” stands for the target date of deployment of the MNM update. This date is set by the Market Operator upon its assessment and in consideration of the energization or commissioning date of a new or upgraded facility or equipment.

Table 1. MNM Development Timetable - [See Attachment C]

4.5.7 The *Market Operator* shall prepare a monthly report containing all MNM updates deployed in the production system. This report shall be provided to the *DOE, ERC, and the PEM Board*, and shall be similarly published in the *market information website* ten (10) *working days* after the end of the *billing period*.

The *Market Operator* shall seek the approval of the PEM Board prior to integration of new network, as described in WESM Rules Clauses 3.2.1.2 and 3.2.1.5, to the MNM. The result of functional and technical testing for such integration shall also be submitted to the PEM Board within three (3) calendar days after completion.

4.5.8 Additional Considerations in the MNM Development are as follows:

- a) Network Service Providers shall ensure that they provide ample information regarding their planned activities to the System Operator.
- b) All planned activities should involve proper coordination between the Market Operator and the System Operator (including affected Trading Participants if necessary).
- c) The target date of deployment (Day ‘D’) by the Market Operator may be moved further depending on justifiable reasons from either the Market Operator or the System Operator. In such cases, the Market Operator in coordination with the System Operator should decide on the new target date of deployment.
- d) Should the target deployment of an MNM update be cancelled, and then other updates to the MNM were put into effect after its cancellation, the System Operator shall notify the Market Operator of its new scheduled energization date seven days prior.
- e) In cases where urgent updates to the MNM are necessary, the *Network Service Provider* or the *System Operator* shall provide

the necessary technical requirements to update the MNM at least two (2) *working days* prior to the target energization. Urgent updates do not include new *market resources*.

e. Section 5.1 under Alterations to the Market Network Model is amended to read as-

“5.1 DYNAMISM OF MNM USING REAL-TIME DATA

f. Section 5.1.1 under 5.1 Dynamism of MNM Using Real-Time Data is amended to read as-

“5.1.1 The static power system model of the MNM constantly updated based on the inputs and data provided by the System Operator. This shall include, but may not be limited to, the following:

- a) Change in Transmission and Sub-transmission Network topology with reference to real-time status of breakers and disconnect switches; and
- b) Scheduled outages of power system equipment (e.g. Lines, Power Transformers, HVDC Links, Generators, and Customer Loads outage)

g. Section 5.2 under Alterations to the Market Network Model is amended to read as-

“5.2 DEVELOPMENT OF THE MNM

h. Section 5.2.1 under 5.2 Developments of Updates to the MNM is amended to read as-

“5.2.1 The *Market Operator* shall develop the market network model and power system model in view of any reconfiguration of any part of the transmission or sub-transmission system. This shall include the following:

xxxx

i. Section 5.4.2 under 5.4 Market Network Model Maintenance is amended to read as-

“5.4.2 The Market Operator shall maintain an electronic copy of the following for all market network model updates:

- a) Bus Oriented Single Line Diagram;
- b) Breaker Oriented Single Line Diagram; and

c) Technical Parameters

j. Section 5.5 under Market Network Model Maintenance is amended to read as-

“5.5 Reporting of MNM Updates

k. Sections 5.5.1 to 5.5.2 under 5.5 Reporting of MNM Updates are amended to read as-

“5.5.1 Within two (2) *working days* from deployment, the *Market Operator* shall publish advisory on the MNM updates deployed in the production system.

“5.5.2 Consistent with the provisions of Clause 4.5.7 of this *Market Manual*, the *Market Operator* shall prepare a monthly report containing all MNM updates deployed in the production system. This report shall be provided to the *DOE, ERC, and the PEM Board*, and shall be similarly published in the *market information website* ten (10) *working days* after the end of the *billing period*. At the least, it shall contain the following:

- a) Summary of MNM Updates during the month
- b) Latest Bus-Oriented Single Line Diagram

l. New Section 6.5.4 under 6.5 Generator MTN is added to read as-

“6.5.4 During the registration of the generator resource, *Trading Participants* shall specify if its availability shall be based on the real-time status of its generator breaker, or on the availability of its *market offers*.

m. New Section 6.7.4 under 6.7 Battery Energy Storage System is added to read as-

“6.7.4 During the registration of the *battery energy storage system resource*, *Trading Participants* shall specify if its availability shall be based on the real-time status of its connecting breaker, or on the availability of its *market offers*.

n. New Section 6.8.3 under 6.8 Pumped-Storage Unit is added to read as-

“6.8.3 During the registration of the *pumped-storage unit resource*, *Trading Participants* shall specify if its availability shall be based on the real-time status of its connecting breaker, or on the availability of its *market offers*.

Section 5. WESM Manual on Market Operator Information Disclosure and Confidentiality Manual. The provisions in the WESM Manual on Market Operator Information Disclosure and Confidentiality Manual Issue 5.1 are hereby amended:

a. New Appendix A for Market Information Catalogue is added to read as-

Appendix A. Market Information Catalogue

Market Information			Information Access			
Category	Specific Information	Information/ Data Source	Classification	Recipient	Means of Provision	Publication Timeline
xxx						
OTHERS						
Transmission System Information	xxx	xxx	xxx	xxx	xxx	xxx
	Dispatch Instruction Report by the System Operator (in CSV)	System Operator	Public	Public	Market Information Website	Weekly report to be submitted within the following week
	Revisions to the Dispatch Instruction Report by the System Operator (in CSV)	System Operator	Public	Public	Market Information Website	Within five (5) <i>working days</i> upon receipt from the System Operator

Section 6. Separability Clause. If for any reason, any section or provision of this Circular is declared unconstitutional or invalid, such parts not affected shall remain valid and subsisting.

Section 7. Repealing Clause. Except insofar as may be manifestly inconsistent herewith, nothing in this Circular shall be construed as to repeal any mechanisms already existing or responsibilities already provided for under existing rules.

Section 8. Effectivity. This Circular shall take effect immediately following its complete publication in at least two (2) newspapers of general circulation and shall remain in effect until otherwise revoked.

Issued this ____ 2022 at the DOE, Energy Center, Rizal Drive, Bonifacio Global City, Taguig City, Metro Manila.

ALFONSO G. CUSI
Secretary