

# Annex A

## Supplemental Operating Guidelines for the Commercial Operations of the Reserve Market

The following operating guidelines are intended to supplement the procedures defined in the existing WESM Rules and Market Manuals.

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## Supplemental Guidelines on the Submission of Offers with Mode of Operations

1. By 0830H, Ancillary Service (AS) Providers, which are generating units and Energy Storage Systems (ESS) certified to provide any type of operating reserve (i.e., regulation, contingency, or dispatchable), shall have submitted generation and reserve offers for each trading hour of the following trading day in the Market Management System's (MMS) Market Participant Interface (MPI). In submitting such offers, the AS Providers shall also comply with the following requirements, as may be applicable:
  - 1.1. For AS Facilities that have multiple AS certifications, submit one type of reserve in each trading hour;
  - 1.2. Indicate their mode of operation for each trading hour.
2. The AS Providers' mode of operations shall be:
  - 2.1. AGC to represent Automatic Generation Control;
  - 2.2. Governor to represent Governor Control Mode (GCM). ESS facilities operating on Active Power Frequency Control (APFC) shall also declare Governor in the MMS-MPI; or
  - 2.3. Manual to represent dispatch by the facility's plant operator.
3. AS Providers submitting a reserve offer for their AS Facility to provide Regulation or Contingency Reserve shall declare to operate only either via AGC or Governor provided that they are certified to operate such service in their declared mode of operations (for example, if a generator is only certified to provide regulation via AGC, then it should only declare AGC and not Governor when offering to provide regulation). AS Providers submitting a reserve offer for their AS Facility to provide Dispatchable Reserve shall only declare Manual as its mode of operations in the MMS-MPI. The following table provides a guide on how to declare the mode of operations based on AS certifications obtained from the System Operator.

Table 1. Guide on Declaring Mode of Operations

	Reserve Offered for Regulation	Reserve Offered for Contingency	Reserve Offered for Dispatchable
Certified for both AGC and GCM/APFC	Declare AGC or Governor	Declare AGC or Governor	N/A
Certified for AGC	Declare AGC	Declare AGC	N/A
Certified for GCM/APFC	Declare Governor	Declare Governor	N/A
Certified for Manual Dispatch	N/A	N/A	Declare Manual

4. All non-AS Providers shall declare "Manual" as their mode of operations in the MMS-MPI.
5. At 1800H, AS Providers contracted with the System Operator shall update their generation and reserve offers considering the Day-Ahead Ancillary Service Schedule (DAASS) from the System Operator.
  - 5.1. Contracted AS Providers shall declare their mode of operations consistent with the DAASS from the System Operator.

## **Guidelines on Replacement of Contracted AS Capacities**

1. Should a contracted AS Facility become unavailable, the relevant AS Provider which owns the unavailable AS Facility may opt to buy replacement AS capacity from other AS Providers or from the WESM.
2. An AS Provider may be allowed to buy replacement AS capacity from another AS Provider provided that an AS Capacity Replacement Protocol has been duly agreed upon among the Buying AS Provider, Selling AS Provider and the System Operator. The AS Capacity Replacement Protocol shall include the following terms:
  - 2.1. Timeline and procedures for the replacement of AS capacities.
  - 2.2. Settlement procedures among the System Operator, buying AS Providers, and selling AS Providers.
  - 2.3. Should an AS Provider buy replacement AS capacity from another AS Provider, the Buying and Selling AS Providers shall update their generation and reserve offers to reflect their arrangement which includes, but is not limited to, the cancellation by the Buying AS Provider of its generation and reserve offers for the unavailable AS Facility.
3. The System Operator shall continue to declare bilateral contract quantities (BCQs) to the scheduled contracted AS Providers, including cases where an AS Provider bought replacement capacity from other AS Providers.

## Supplemental Guidelines on the Real-Time Dispatch of Ancillary Services

The following guidelines aim to supplement the procedures for the scheduling and dispatch of ancillary services in the WESM Dispatch Protocol.

1. The System Operator is responsible for the overall coordination and dispatch of scheduled AS Facilities in real-time considering the output generated by the MMS as RTD Reserve Schedules.
2. AS Providers are expected to dispatch each of their AS Facilities to deliver their scheduled Ancillary Services in consideration of the System Operator's *dispatch instruction* (i.e., AGC, Local Control via GCM or APFC, or SO-communicated dispatch instruction).
3. AS Providers whose AS Facilities obtained non-zero RTD Reserve Schedules shall ensure that their plant operations and controls are set immediately prior to the start of the dispatch interval (e.g., for 0930H RTD, plant operations and controls should be set right before 09:25 AM).
  - 3.1. AS Facilities scheduled for Regulating Reserve and operating on AGC shall have its dead-band setting at +/- 0.3 Hz or higher as may be agreed with SO.
  - 3.2. AS Facilities scheduled for Contingency Reserve and operating on AGC shall have its dead-band setting at - 0.3 Hz or higher as may be agreed with SO.
  - 3.3. AS Facilities operating on GCM or APFC shall have dead-band and droop settings set based on the values indicated in the respective AS Certification
  - 3.4. AS Facilities scheduled to provide Dispatchable Reserve shall be ready to synchronize to the grid within 15 minutes after receipt of instruction from the System Operator.

Table 2. Expected Settings of AS Facilities

	Dead-band Settings	Droop Settings
Scheduled for Regulating Reserve and Operating on AGC	+/- 0.3 Hz or higher as may be agreed with SO	Lower than 5%
Scheduled for Contingency Reserve and Operating on AGC	- 0.3 Hz or lower as may be agreed with SO	Lower than 5%
Operating on GCM/APFC	Based on AS Certificate	Based on AS Certificate

4. The System Operator may request AS Providers to change their AS Facility's mode of operations and/or plant operations and controls (i.e., dead-band and droop settings) in consideration of the reliable dispatch of all ancillary services.
  - 4.1. Unless the relevant AS Facility has technical limitations, AS Providers shall immediately comply with the request of the System Operator.
  - 4.2. The System Operator shall record these requests in their SO Dispatch Instruction Report.
5. AS Providers shall request prior clearance from the System Operator if they intend to switch their AS Facility's mode of operation from AGC to GCM/APFC, or vice versa, at least 15 minutes before the target time. Upon receipt of clearance from the System Operator, the AS

Provider shall immediately update its AS Facility's expected mode of operations for the relevant trading hours in the MMS-MPI. Immediately prior to switching from GCM/APFC to AGC, AS Facilities should ensure that their AGC set-point at that plant side is near their current actual MW loading.

## **Guidelines on the Interim Monitoring and Reporting of Non-Compliance to Timely and Accurate Provision of Ancillary Services**

1. The System Operator shall be responsible for monitoring and reporting non-compliances of AS Providers with the standards for the timely and accurate provision of Ancillary Services using their existing current procedures and guidelines for the identification of non-compliances to the timely and accurate provision of Ancillary Services.
2. The System Operator shall identify the trading hours when an AS Facility was determined to be non-compliant and indicate the type of non-compliance during a specific trading hour.
3. On or before the 28<sup>th</sup> of every month, the System Operator shall provide to the Market Operator and ECO all the hourly non-compliances with the timely and accurate provision of Ancillary Services identified for the immediately preceding billing month (e.g., the System Operator shall provide all hourly non-compliances for the February 2024 billing month no later than 28 February 2024).

The Market Operator shall use this information as a basis for non-payment in the WESM of Ancillary Services provided by AS Provider/s which were identified by the System Operator to have committed non-compliance with the standards for the timely and accurate provision of Ancillary Services for the specific dispatch intervals contained in the report of the System Operator.

4. All supporting data and information related to the flagging of non-compliances in this section shall be provided by the System Operator to the Market Operator and ECO.
  - 4.1. ECO shall use the information provided by the System Operator to perform validation of the reported non-compliance.
  - 4.2. As applicable, the GA shall impose penalties in accordance with the WESM Manual on AS Monitoring endorsed to the DOE by the Philippine Electricity Market Board of Directors which was posted on the DOE website on 30 November 2023.
  - 4.3. The ECO shall, upon the effectivity of the WESM Manual on Ancillary Services Monitoring to be issued by the DOE, be authorized to collect the imposed penalty for breaches from the start of the implementation of this Supplemental Operating Guidelines by the concerned AS Providers as prescribed thereto.
5. AS Providers may avail of the current procedures and guidelines of the System Operator used for contracted Ancillary Services to dispute the latter's non-compliance tagging. The AS Provider and the System Operator shall furnish the Market Operator and ECO with copies of all of their communications relative to such dispute.
6. The System Operator shall resolve disputes on AS non-compliance tagging in accordance with the current procedures and guidelines used for contracted Ancillary Services.

7. Within 7 calendar days, the System Operator shall inform the Market Operator and ECO of the result of the dispute claims from the AS Providers to implement WESM payment adjustments, if necessary.

## Guidelines on the Calculation of Ancillary Service Incidental Energy

1. The Ancillary Service Incidental Energy (ASIE) of each AS Facility is measured in MWH and shall be obtained as the difference between the metered quantity (or MQ, which is the actual energy delivered of the facility expressed in MWH) and the expected energy-only quantity.

$$\text{ASIE of AS Facility} = \text{MQ} - \text{EnQ\_only}$$

Where: EnQ\_only refers to the energy-only quantity of the AS Facility

2. The energy-only quantity shall be equal to the RTD energy schedule less the capacity scheduled for regulation down, if there is any, for the relevant 5-minute dispatch interval.

$$\text{EnQ\_only of AS Facility} = \frac{\text{RTD Schedule} - \text{Regulation Down Schedule}}{12}$$

3. If the ASIE is less than zero, then the ASIE shall be set to zero.
4. The ASIE of a contracted AS Facility shall not be more than its scheduled contracted AS Capacity. For clarity, the following formula shall be used to determine the ASIE of a contracted AS Facility.

$$\text{ASIE of Contracted AS Facility} = \min [ \text{Reserve BCQ}, \text{ASIE} ]$$