



WESM Manual

Dispatch Criteria on Must-Run Units Issue 0.0

Abstract	This document covers the development of dispatch criteria of Must-Run Units based on pre-defined categories under the WESM regime
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Document Identity: WESM-MRU-000
Revision: 1.0
Issue: 0.0
Reason for Issue: Corrected based on MO Comment
Effective Date:



Document Approval

Author:	SO Subcommittee	Date:	
Technical Review:	SO Subcommittee	Date:	
Quality Review:		Date:	
WESM TWG Approval:		Date:	
PEMC Approval:		Date:	

Document Change History

Issue No.	Revision No.	Modifier	Date	Synopsis/Reason for Change
0.0	0.0	SOSubcom	9/27/04	New Document_New Draft Format
0.0	1.0	SOSubcom	12/13/04	Major revisions were introduced based on consolidated SO-MO Sub-Committees' comments

Related Document

Document ID	Document Title
	WESM Rules
	Philippine Grid Code
	WESM System Security and Reliability Guidelines
	NPC-TRANSCO Dispatch Planning Protocol



Table of Contents

Section	Description	Page
1.0	Introduction	5
2.0	Objective	5
3.0	Scope	5
4.0	Definition of Terms	5
5.0	Responsibilities	6
6.0	Must-Run Criteria	6
6.1	System Voltage Requirement	6
6.2	Thermal Limits of Transmission Lines and Power Equipment	6
6.3	System Tests of TransCo Facilities/Equipment	6
7.0	Additional Considerations	6
7.1	Regulatory Requirements	6
7.2	Commercial Requirements	7
7.3	Local Calamities and Emergencies	7
8.0	Scheduling and Dispatch Procedures	8



1.0 Introduction

In Section 6.6.1 of the WESM Rules, the System Operator was mandated to develop and periodically update the system security and reliability guidelines in consultation with WESM participants and Market Operator. Part of this guideline is the introduction of Must-Run Units (MRUs). Nomination of MRUs by System Operator shall be pre-qualified for dispatch to address the system security aspect of the grid. This document discusses the criteria for MRUs, additional considerations used and its treatment during scheduling and dispatch.

2.0 Objective

This document is intended to establish the criteria for Must-Run Units and define the procedures for its treatment during scheduling and dispatch.

3.0 Scope

The procedure shall be enforced in the preparation of the Dispatch Schedules for Luzon, Visayas and Mindanao Power Systems.

4.0 Definition of Terms

- 4.1 Must-Run Unit** – a generating unit identified by the System Operator to be on-line on a particular Trading Interval to address System Security requirements and other considerations as provided in this manual.
- 4.2 System Security** – the safe scheduling, operation and control of the power system on a continuous basis in accordance with the system security and reliability guidelines established under the Grid Code.
- 4.3 System Security and Reliability Guidelines** – the standards governing system security and reliability of the power system, which may include but are not limited to standards for the frequency of the power system in operation and ancillary services (including guidelines for assessing requirements and utilization), developed by the Market Operator and System Operator in accordance with the Grid Code.



- 4.4 System Test** – the set of tests which involve simulating conditions or the controlled application of unusual or extreme conditions that may have an impact on the Grid or the User System.

5.0 Responsibilities

- 5.1** The Market Operator shall prepare hour-ahead, day-ahead and week-ahead Dispatch Schedule based on their net load forecast, current system condition, accepted plant/unit bid nomination for MRU/s and either/both Ancillary Services and Energy (as applicable), and required spinning and contingency reserve level.
- 5.2** The System Operator shall dispatch MRU/s based on the submitted hour-ahead generation schedule by the Market Operator.
- 5.3** Re-dispatch shall be in accordance with the contingency plan prepared by System Operator.
- 5.4** The System Operator shall officially notify Market Operation the reason for re-dispatch instruction.

6.0 Must-Run Unit Criteria

The criteria for Must-Run Unit shall evolve on the System Security as follows:

- 6.1 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.
- 6.2 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.
- 6.3 System Tests of TransCo Facilities/Equipment** – these are tests undertaken to certain substation equipment that may have impact on the Grid if not addressed by the dispatch of MRUs.

7.0 Additional Considerations

- 7.1 Regulatory Requirements** – these are unit tests imposed by the government (i.e., boiler tests, emission tests, other environmental tests, etc.)



- 7.2 Commercial Operation Requirements** – these are unit tests imposed by the System Operator or as required by the Grid Code (i.e., performance, commissioning, fuel stack sampling, Ancillary Service, etc.)

- 7.3 Local Calamities and Emergencies** – these are short-term incidents (i.e., flooding, etc.) that could qualify generators as MRUs to avert or minimize damage to infrastructure and security of people living in nearby localities



8.0 Scheduling and Dispatch Procedures

The following flowchart outlines the treatment of Must-Run Units during the scheduling and dispatch:



