



Use of Monitoring Tolerances by System Management

Presented by
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Obligation to Monitor

2.13.6. System Management must monitor Rule Participants' behaviour for compliance with the provisions of the Market Rules referred to in clause 2.13.9 and the Power System Operation Procedures developed by System Management.

2.13.6A Subject to clause 2.13.6B, System Management must report any alleged breaches of the provisions of the Market Rules referred to in clause 2.13.9 or the Power System Operation Procedures to the IMO in accordance with the Monitoring and Reporting Protocol.

Exceptions to Reporting

2.13.6B System Management is not required to report an alleged breach by a Market Participant of clause 7.10.1 or clause 3.21 of the Market Rules to the IMO if:

- (a) the extent of the alleged breach is either within the Tolerance Range established under clause 2.13.6D or the Facility Tolerance Range established under clause 2.13.6E;
or
- (b) the alleged breach is limited to occurring within a single Trading Interval; or
- (c) in the case of an alleged breach of clause 7.10.1, the alleged breach is outside the Tolerance Range or Facility Tolerance Range, as applicable,
where:
 - i. the Rule Participant has notified System Management of a Forced Outage in accordance with clause 3.21.4 that is applicable to the period of the alleged breach; and
 - ii. The alleged breach relates to the Rule Participant generating at a level below its Resource Plan or the Dispatch Instruction applicable to the relevant Forced Outage period.

Monitoring Dispatch

7.10.1. Subject to clause 7.10.2, a Market Participant other than the Electricity Generation Corporation must comply with:

(a) subject to paragraph (b), its Resource Plan except where it relates to Intermittent Generators;

(b) if a Dispatch Instruction has been issued for a Registered Facility for a Trading Interval, the most recently issued Dispatch Instruction applicable to the Registered Facility for the Trading Interval; and

(c) a direction given to the Market Participant under clauses 7.6 or 7.10.7(a).

3.21 Forced Outage

3.21.1. A Forced Outage is any outage of a Facility or item of equipment on the list described in clause 3.18.2 that has not received System Management's approval, including:

(a) outages or de-ratings for which no approval was received from System Management, excluding Consequential Outages;

(b) any part of a Planned Outage that exceeds its approved duration; and

(c) where the Market Participant or Network Operator does not follow a direction from System Management under clause 3.20.1 to return the equipment to service within the time specified in the appropriate contingency plan.

Market Rule Compliance

2.13.6C Nothing in clause 2.13.6B relieves:

- (a) System Management from its obligation to monitor Rule Participants' compliance with the provisions of the Market Rules referred to in clause 2.13.9 and the Power System Operation Procedures developed by System Management;
- (b) System Management of its obligation to report to the IMO any alleged breach by a Market Participant of clause 7.10.1 or clause 3.21 not covered under clause 2.13.6B; or
- (c) Rule Participants from the obligation to fully comply with the Market Rules and the Power System Operation Procedures, regardless of whether

General Tolerance

2.13.6D System Management may determine the Tolerance Range to apply to all Facilities for the purposes of System Management's reporting of alleged breaches of clause 7.10.1 and clause 3.21 to the IMO under clause 2.13.6A. When determining the appropriate Tolerance Range to apply for all Market Participants, System Management must:

- (a) consult with Rule Participants prior to setting the Tolerance Range; and
- (b) submit to the IMO for publication on the Market Web Site at least 14 Business Days prior to the date from which change to the Tolerance Range becomes effective, the following:
 - i. all submissions received from Rule Participants;
 - ii. the Tolerance Range; and
 - iii. an effective date for the commencement of the Tolerance Range.

Monitoring and Reporting PSOP

11. System Management may determine a specific Facility Tolerance Range to apply to a particular facility. In making this determination System Management must consider the following:
 - a. the variability of generation/load movement on the SWIS at any point in time;
 - b. individual Facility ramping behaviour;
 - c. the proportion of Facilities required to comply with Resource Plans synchronised on the system during an average Trading Day;
 - d. Standing Data and any operating constraints on the Market Participant's Facility of which System Management is aware; and
 - e. any other factors that may influence the real time operation of the SWIS. **[MR 2.13.6E]**

Dispatch PSOP

Section 13 Real Time Dispatch

2. Where a Market Participant does not provide either a Dispatch Profile (Section 13.1.1) or an Algorithm (Section 13.1.2) of its Facility's resource plan to System Management by 3pm on the Scheduling Day prior to the Trading Day, System Management must monitor a Market Participant's real time resource plan compliance in accordance with a predetermined default constant linear interpolation from the previous and following target megawatt output (over a trading interval) of a Facility's resource plan for a Trading Day. **[MR 7.10.1, MR 7.10.4, MR 7.10.5]**

General Tolerance Level

Large error trigger threshold: (From NEM)

Trigger Level (MW) is: $\text{MAX}(6, \text{MIN}[5\% \text{MWO}, 4 \cdot \text{ROC}])$

MWO: Bid Unit Availability; UIGF for a Semi Scheduled Unit

ROC: Rate of Change or Ramp Rate of a Unit.

This formula can be applied in the Wholesale Electricity Market to constitute an instantaneous Tolerance Range threshold around a real time dispatch schedule. The formula is proposed to apply to all Scheduled Generating Facilities (where all units with a nameplate capacity of 6MW or lower will receive a 6MW tolerance) in the Wholesale Electricity Market:

Tolerance Range threshold (+/-):

Trigger Level (MW) is $\text{MAX}(6, \text{MIN}[5\% \text{NPC}, 4 \cdot \text{ROC}])$

NPC: Name plate capacity of the generator, expressed in MW (MR Appendix 1(b)(ii))

ROC: Rate of Change or Ramp Rate of a Unit per minute (MR Appendix 1(b)(v))

Examples

120 MW or less = 6 MW

200 MW = 10 MW unless ramp rate < 2.5 MW

300 MW = 15 MW unless ramp rate < 3.75 MW

Ex post Monitoring

6 MW equates to 3 MWhr in a trading interval

10 MW equates to 5 MWhr in a trading interval

15 MW equates to 7.5 MWhr in a trading interval

Public Consultation

Invitation for submissions

System Management invites all sectors of the Western Australia energy industry, to make submission on this Tolerance Range threshold.

In accordance with clause 2.13.6D and the Monitoring and Reporting Protocol Power System Operation Procedure, the submission period is six weeks from the publication date of invitation. Submissions must be provided to System Management by 5:00pm (WST) on **Wednesday 14 September 2011**.

System Management prefers to receive submissions by email to market.development@westernpower.com.au