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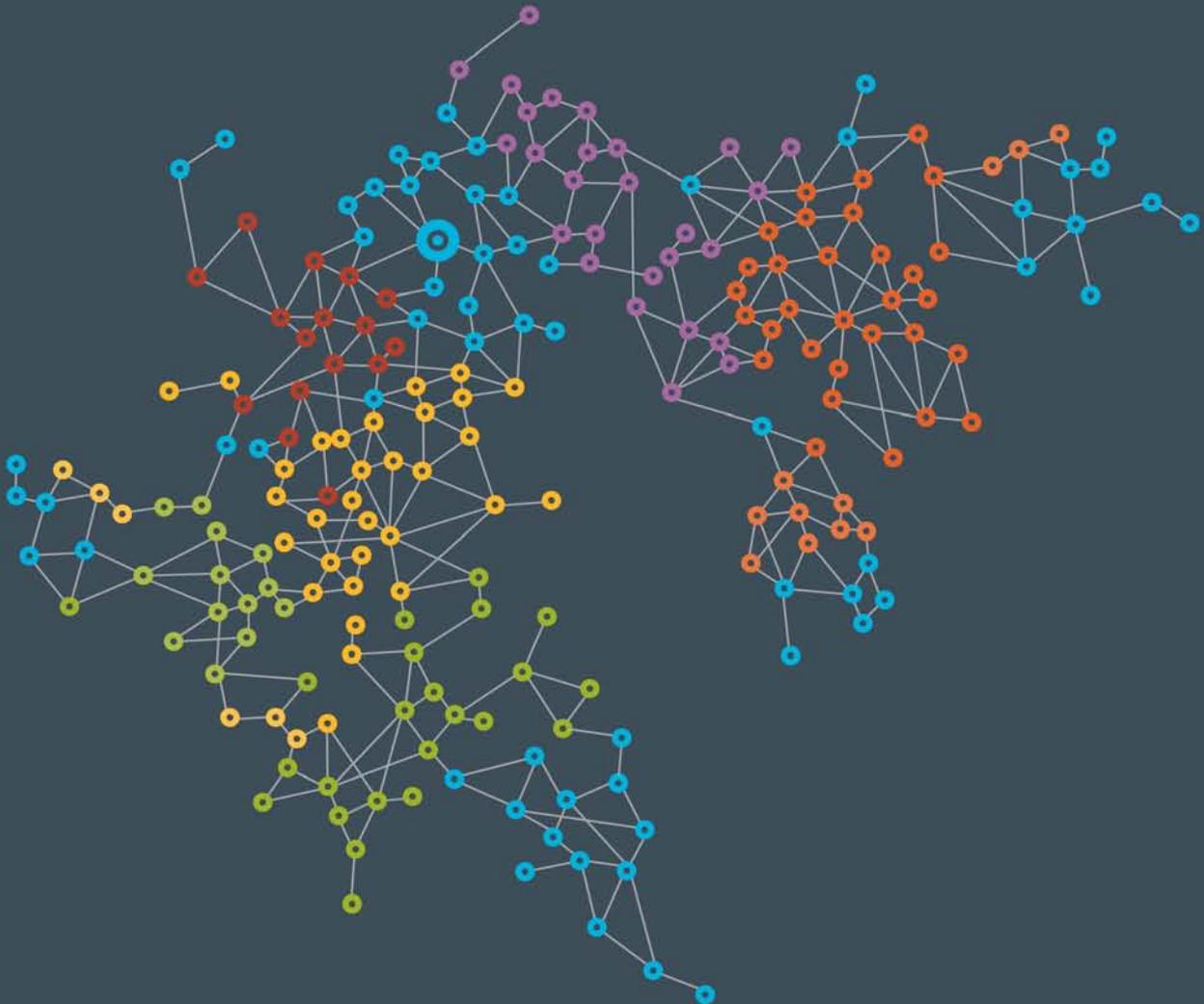
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# Discussion Paper: Dispatch Tolerance Ranges

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## 1. BACKGROUND

Since the Wholesale Electricity Market (WEM) began System Management, with the knowledge of Rule Participants, has applied a tolerance range to the deviations of Scheduled Generators from their Resource Plans before reporting alleged breaches to the IMO. The adoption of a tolerance range was a practical solution to the overly stringent obligations contained within the Wholesale Electricity Market Rules (Market Rules), particularly with respect to the reporting obligations associated with clauses 7.10.1 and 7.10.5. At an operational level, adherence to the Market Rules would have required System Management to report every deviation from a Resource Plan to the IMO.

Given the identified impracticalities of the reporting obligations, System Management put forward a Rule Change Proposal: The use of tolerance levels by System Management (RC\_2009\_22)<sup>1</sup> which introduced a process by which System Management could set a generic Tolerance Range and, where appropriate, specific Facility Tolerance Ranges (refer to clauses 2.13.6A -2.13.6K). The Tolerance Range applied to System Management's reporting obligations under clause 7.10.1 and System Management's operational obligations to request a Market Generator to move back to its Resource Plan under clause 7.10.5<sup>2</sup>. Neither of the changes introduced by RC\_2009\_22 amended a Market Generator's requirements to adhere to the Market Rules, including the requirement to adhere to Resource Plans.

At the December 2011 meeting of the Rules Development Implementation Working Group (RDIWG), concerns were raised about the ability of some Facilities to comply with Dispatch Instructions under the new Balancing Market arrangements, and in particular Facilities with less flexible ramping capabilities. Given this consideration, the IMO proposed during the further consultation period for the Rule Change Proposal: Competitive Balancing and Load Following Market (RC\_2011\_10) that the application of the Tolerance Range or Facility Tolerance Range, as applicable, be extended to apply to the output of a Market Generator<sup>3</sup>. The extended application of a Tolerance Range or Facility Tolerance enabled a Facility to ramp to a target level in increments, approximating a linear ramp rate over the instructed range. The IMO's final decision to incorporate the changes was intended to provide some flexibility to "on average" meet instructed MW target, MWh requirements, and ramp rate levels over an interval. Under the Amending Rules which commenced under RC\_2011\_10 a Market Participant that purposefully biases operation within the Tolerance Range or Facility Tolerance Range (for example, to manipulate Constrained On or Constrained Off Compensation or balancing outcomes) would be subject to a potential compliance action.

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<sup>1</sup> A copy of the Final Report for RC\_2009\_22 is available on the following webpage: [http://www.imowa.com.au/RC\\_2009\\_22](http://www.imowa.com.au/RC_2009_22)

<sup>2</sup> Note that the tolerances also applied to System Management's obligation to report Forced Outages.

<sup>3</sup> For further details refer to the further consultation document on the following webpage: [http://www.imowa.com.au/RC\\_2011\\_10](http://www.imowa.com.au/RC_2011_10)

## 2. ISSUES

### Issue 1: Settlement Tolerance Range

Under the current Market Rules it is possible for a Market Generator to generate away from the requested output amount (as notified via a Dispatch Instruction) by an amount (in MWh) which is greater than the Settlement Tolerance but less than the applicable Tolerance Range or Facility Tolerance Range. This provides for a Market Generator to be:

- compliant with the Dispatch Instruction issued by System Management via the application of the criteria outlined in clause 7.10.2; and
- either:
  - receive Constrained On Compensation for the additional generation above the Settlement Tolerance; or
  - receive Constrained Off Compensation for the reduced generation levels below the Settlement Tolerance (potentially at the Minimum STEM Price of \$1000/MWh).

The IMO considers this outcome is inconsistent with the design of Constrained On and Constrained Off Compensation (as implemented under RC\_2011\_10). Under the new Balancing Market design a Facility that is dispatched by System Management above (or below) its Net Contract Position will be paid (or will pay) the Balancing Price for the quantity involved (as part of normal settlement of Balancing amounts). Constrained On or Constrained Off Compensation may also be required to compensate for differences between the Balancing Price and the price of offers of bid tranches dispatched by System Management. Note that “Out of Merit” dispatch quantities may be the result of a system security situation or due to approximations that must be made in formulating Dispatch Instructions to follow expected trends in dispatch intervals and in calculating half hourly Balancing Prices ex-post.

The IMO notes that a Market Generator with a Facility Tolerance Range which is greater than the generic Tolerance Range can further benefit from the current identified issue with the Market Rules by generating at an even higher level of output (though still below the Facility Tolerance Range) and so receive a greater level of Constrained On Compensation than would otherwise apply. The IMO considers it inappropriate to create incentives under the Market Rules for a Market Generator to apply to System Management for purely financial reasons (and not operational reasons) to determine a Facility Tolerance Range apply for the purposes of the Facility’s compliance with clause 7.10.5.

## Proposed solution to Issue 1

The IMO proposes to amend:

- the Settlement Tolerance (clause 6.17.9) for a Facility to be equal to the loss factor adjusted MWh equivalent of the Tolerance Range or Facility Tolerance Range (as applicable) associated with the relevant Facility; and
- the Portfolio Settlement Tolerance (clause 6.17.10) for the Verve Energy Balancing Portfolio to be equal to the loss factor adjusted MWh equivalent of the Verve Energy Dispatch Tolerance applicable in that relevant Trading Interval (*refer to Issue 2*).

The IMO considers that its proposed solution will remove the potential gaming opportunities available for Market Generators to operate above (below) their settlement tolerance but below (above) the applicable Tolerance Range or Facility Tolerance Range and so receive Constrained On Compensation (Constrained Off Compensation). The IMO also notes that the proposed solution will ensure consistency in the treatment of IPPs, Verve Energy Stand Alone Facilities and the Verve Energy Balancing Portfolio with respect to the application of the dispatch tolerances.

## Issue 2: Tolerance Range for the Verve Energy Balancing Portfolio

Clause 2.13.6D requires System Management to develop a Tolerance Range to apply to all Facilities for the purposes of System Management's reporting of alleged breaches of clauses 7.10.1 and 3.21 to the IMO. Likewise clause 2.13.6E allows System Management to determine a Facility Tolerance Range to apply in the place of the Tolerance Range for a specific Facility. The Tolerance Range determined by System Management utilises the following standard formula outlined in the Power System Operation Procedure: Monitoring and Reporting:

$$\begin{aligned} \text{Tolerance Range (MW)} = & \text{from } + \text{MAX}(6, \text{MIN}[5\% \text{ NPC}, 4 * \text{ROC}]) \\ & \text{to } - \text{MAX}(6, \text{MIN}[5\% \text{ NPC}, 4 * \text{ROC}]) \end{aligned}$$

Where:

*NPC:* is the name plate capacity of the generator, expressed in MW

*ROC:* is the current dispatch ramp rate of a Scheduled Generator in a particular Trading Interval, expressed in MW per minute

*Note that the ROC term is not applied for Non-Scheduled Generators.*

As the inputs that go into the standard formula, such as name plate capacity of the generator and dispatched ramp rate, vary by Facility the Tolerance Range for each Facility will potentially differ (though note that through the application of the formula a minimum of a 6MW Tolerance

Range will be established for a Facility).

The treatment of the Verve Energy Balancing Portfolio with respect to the determination of a “dispatch tolerance” however differs to that applied for IPP Facilities and Verve Energy Stand Alone Facilities. In particular clause 7.6A.4(c) sets a dispatch non-compliance tolerance for an individual Facility in the Verve Energy Balancing Portfolio of 10MW.

The IMO does not consider that there is any reason why Facilities in the Verve Energy Balancing Portfolio should be treated differently to IPP Facilities or Verve Energy Stand Alone Facilities. Further, the IMO considers it inappropriate to “hard wire” a tolerance level for each of the Facilities within the Verve Energy Balancing Portfolio as the 10MW tolerance does not necessarily appropriately reflect the likely operational characteristics of that Facility.

### **Proposed Solution to Issue 2**

The IMO proposes to remove the 10 MW tolerance for each of the Facilities within the Verve Energy Balancing Portfolio specified in clause 7.6A.4. The Tolerance Range or Facility Tolerance Range, as applicable, will be determined by System Management for each of the relevant Facilities in accordance with the requirements in clauses 2.13.6D and 2.13.6E<sup>4</sup>. The IMO notes that the obligation for System Management to determine these values for each Facility (including those facilities in the Verve Energy Balancing Portfolio) is already contained in clauses 2.13.6D and 2.13.6E of the Market Rules.

With respect to the overall dispatch compliance of the Verve Energy Balancing Portfolio, the IMO proposes that the tolerance to apply during a Trading Interval be based on the summation of the Tolerance Range or Facility Tolerance Range (as applicable) for each Facility that was operating during the relevant Trading Interval (“Verve Energy Dispatch Tolerance”). This would create a dynamic dispatch tolerance for the Verve Energy Balancing Portfolio. The IMO notes that the Verve Energy Balancing Portfolio would not receive Out of Merit Payments unless it deviated from its Minimum or Maximum Theoretical Energy Schedule by more than the Verve Energy Dispatch Tolerance (refer to issue 1 for further details).

The IMO also proposes to amend clause 2.13.6D to clarify that the Tolerance Range no longer only applies for the purposes of System Management’s reporting of non-compliance with clauses 7.10.1 and 3.21.

### **Issue 3: Clarification of obligations relating to dispatch**

Clauses 7.10.6A and 7.10.7 of the Market Rules refer to “a request under clause 7.10.5”. Prior to the commencement of the Amending Rules for RC\_2011\_10 this meant System

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<sup>4</sup> Note that under clause 2.13.6H, a Market Participant may apply to the IMO to reassess a Facility Tolerance Range (and the IMO may direct System Management to vary the relevant Facility Tolerance Range

Management requesting a generator to cease its non-compliant behaviour. This aspect of clause 7.10.5 was removed under the new Balancing arrangements, and the only remaining request in the clause is for an explanation of the deviation. Clauses 7.10.6A and 7.10.7 were not updated to reflect this change, with the result that:

- Clause 7.10.6A asks for an explanation of why a Market Participant cannot provide an explanation; and
- Clause 7.10.7 would appear to exempt System Management from telling the IMO about a deviation if the Market Participant has provided an explanation for that deviation.

The IMO notes that these outcomes were not intended under RC\_2011\_10 and considers that further amendments to the Market Rules to clarify the application of Tolerance Ranges, and Facility Tolerance Ranges (as applicable) are required.

### **Proposed Solution to Issue 3**

To correct the identified issues the IMO proposes to make the following changes to the drafting of section 7.10:

- combine clauses 7.10.6 and 7.10.6A into a single revised clause 7.10.6, which reflects that that if a Market Participant receives a warning and a request for an explanation from System Management under clause 7.10.5(c) then the Market Participant must as soon as practicable provide to System Management an explanation for the deviation and ensure it has complied with the requirements of clause 7A.2 in relation to the Market Participant's Balancing Submission;
- modify clause 7.10.7 to reflect that where System Management has issued a warning about a deviation to a Market Participant under clause 7.10.5(c), System Management must report the deviation to the IMO (unless the deviation is within the Tolerance Range); and
- remove from clause 7.10.7 the references to a failure to comply with the "request referred to in clause 7.10.5".

The IMO notes that civil penalties apply to these provisions of the Market Rules and as such will potentially require the IMO to work with the Public Utilities Office to identify and progress any required updates to the Regulations.

### 3. RECOMMENDATIONS

The IMO recommends that the Market Advisory Committee:

- **Discuss** the IMO's proposed solutions to each of the identified issues; and
- **Note** that the IMO will prepare a Pre Rule Change Discussion Paper to reflect the proposed solutions, subject to any further amendments required following discussion by the MAC.