



Rule Change Notice Provision of Network Information to System Management (RC_2014_10)

This notice is given under clause 2.5.7 of the Wholesale Electricity Market Rules (Market Rules).

Submitter: Kate Ryan, Independent Market Operator

Date submitted: 13 January 2015

The Rule Change Proposal

The IMO proposes to amend the current processes prescribed in the Market Rules relating to the provision of Network information by a Network Operator to System Management. Currently under the Market Rules, as a pre-condition to registering a Network, a Network Operator is required to provide the Standing Data described in Appendix 1(a) of the Market Rules to the IMO. The IMO is then required to provide this Standing Data to System Management, which System Management uses to set the limits in each Trading Interval for the operation of the South West interconnected system (SWIS) in each SWIS Operating State.

The IMO considers that this process is impractical because the information in Appendix 1(a) of the Market Rules is dynamic (and should therefore not be provided as Standing Data). The IMO also considers that this process is inefficient because the IMO does not use or require the information in Appendix 1(a) of the Market Rules to carry out any of its functions, and therefore does not need to act as an intermediary in this information flow process. Accordingly, the IMO proposes to amend the Market Rules (and align them with current operational practice) by:

- removing the requirement for a Network Operator to provide the Standing Data described in Appendix 1(a) of the Market Rules to the IMO as a pre-condition for registering a Network; and
- requiring a Network Operator to provide System Management with access to the dynamic Network information described in Appendix 1(a) of the Market Rules from its Supervisory Control and Data Acquisition (SCADA) systems.

Additionally, the IMO proposes to align the definition of a Network in the Market Rules more closely to the definition in the Electricity Network Access Code 2004 which provides a description of what a network actually is, with reference to certain physical characteristics. This amendment to the definition of a Network will better distinguish Network equipment from non-Network equipment and therefore provide greater certainty to parties in relation to their obligations to register as a Network Operator and to register a Network Facility.

The IMO also proposes to align the wording of a number of clauses of the Market Rules related to the registration of a Network Operator and a Network with the proposed definition of a Network, to improve the integrity of the Market Rules.

Appendix 1 contains the Rule Change Proposal and gives complete information about:

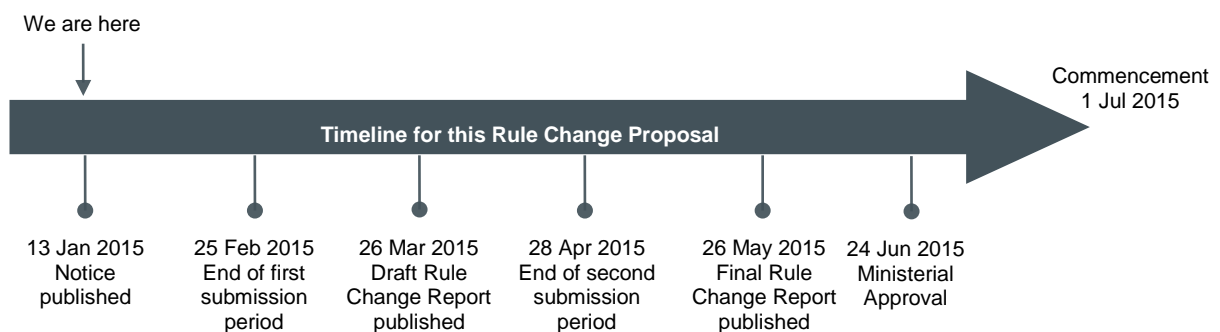
- the proposed amendments to the Market Rules;
- relevant references to clauses of the Market Rules and any proposed specific amendments to those clauses; and
- the submitter's description of how the proposed amendments would allow the Market Rules to better address the Wholesale Market Objectives.

Decision to progress the Rule Change Proposal

The IMO has decided to progress this Rule Change Proposal on the basis that the proposed amendments are expected to better achieve the Wholesale Market Objectives. In particular, the proposed amendments are expected to allow the Market Rules to better achieve Wholesale Market Objectives (a) and (d). On this basis, the IMO considers that stakeholders should be given an opportunity to provide submissions as part of the Standard Rule Change Process.

Timeline

The projected timelines for progressing this proposal are:



Call for submissions

The IMO invites interested stakeholders to make submissions on this Rule Change Proposal. The submission period is 30 Business Days from the Rule Change Notice publication date. Submissions must be delivered to the IMO by **5:00 PM** on **Wednesday 25 February 2015**.

The IMO prefers to receive submissions by email, using the submission form available at: <http://www.imowa.com.au/rule-changes> sent to market.development@imowa.com.au.



Submissions may also be sent to the IMO by post, addressed to:

Independent Market Operator

Attn: Group Manager, Development and Capacity

PO Box 7096

Cloisters Square, PERTH, WA 6850



INDEPENDENT
MARKET
OPERATOR

Wholesale Electricity Market Rule Change Proposal

Rule Change Proposal ID: RC_2014_10
Date received: 13 January 2015

Change requested by:

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Date submitted:	13 January 2015
Urgency:	Medium
Rule Change Proposal title:	Provision of Network Information to System Management
Clause(s) affected:	Clauses 2.28.2, 2.28.3, 2.28.4, 2.29.3, 2.29.3A (new), the Glossary and Appendix 1

Introduction

Clause 2.5.1 of the Wholesale Electricity Market Rules (Market Rules) provides that any person (including the IMO) may make a Rule Change Proposal by completing a Rule Change Proposal form that must be submitted to the IMO.

This Rule Change Proposal can be posted or emailed to:

Independent Market Operator

Attn: Group Manager, Development and Capacity
PO Box 7096
Cloisters Square, Perth, WA 6850
Email: market.development@imowa.com.au

The IMO will assess the proposal and, within five Business Days of receiving this Rule Change Proposal form, will notify you whether the Rule Change Proposal will be further progressed.

In order for the proposal to be progressed, all fields below must be completed and the change proposal must explain how it will enable the Market Rules to better contribute to the achievement of the Wholesale Market Objectives.

The objectives of the market are:

- (a) to promote the economically efficient, safe and reliable production and supply of electricity and electricity related services in the South West interconnected system;
- (b) to encourage competition among generators and retailers in the South West interconnected system, including by facilitating efficient entry of new competitors;
- (c) to avoid discrimination in that market against particular energy options and technologies, including sustainable energy options and technologies such as those that make use of renewable resources or that reduce overall greenhouse gas emissions;
- (d) to minimise the long-term cost of electricity supplied to customers from the South West interconnected system; and
- (e) to encourage the taking of measures to manage the amount of electricity used and when it is used.

Details of the Proposed Rule Change

1. Describe the concern with the existing Market Rules that is to be addressed by the Rule Change Proposal:

The provision of Network information

Currently, clause 2.29.3 of the Market Rules requires a Network Operator to register any transmission system or distribution system owned, operated or controlled by that Network Operator as a Network, where that transmission or distribution system forms part of the South West interconnected system (SWIS) or is electrically connected to that system¹.

Under clause 2.31.2 and Appendix 1 of the Market Rules, as a pre-condition of Facility registration, a Network Operator is required to provide the Standing Data described in Appendix 1(a) of the Market Rules. In accordance with clause 2.34.1(b) of the Market Rules, the IMO is required to provide this Standing Data to System Management.

In practice, Western Power is the only registered Network Operator and its transmission system and distribution systems are not registered in the Wholesale Electricity Market (WEM). The IMO therefore does not hold Standing Data for any Networks and does not provide any Standing Data with respect to Networks to System Management. Instead, Western Power provides System Management with direct access to all the information

¹ It should be noted that the IMO may grant an exemption from the requirement to register a Network under clause 2.29.9 of the Market Rules.

required in Appendix 1(a) of the Market Rules through its Supervisory Control and Data Acquisition (SCADA) systems (though currently it is not required to do so under the Market Rules).

The Standing Data for a Network is dynamic and is used by System Management to set the limits in each Trading Interval for the operation of the SWIS in each SWIS Operating State to maintain Power System Security and Reliability. If Network Operators were to provide the IMO with this information, and the IMO were to pass this information on to System Management as required under the Market Rules, Network Operators, the IMO and System Management would incur significant operational costs to manage this dynamic information. These costs would exceed the costs incurred by System Management and Western Power under the current practice whereby Western Power provides System Management with direct access to its SCADA systems. Furthermore, this information is not required by the IMO to carry out its current market functions and so can be provided directly to System Management.

The IMO considers that the current practice, whereby a Network Operator provides System Management with access to the information required under Appendix 1(a) of the Market Rules through SCADA systems, should be reflected in the Market Rules to ensure that the current effective and efficient process is captured in the Market Rules and an impractical pre-condition to registration of Networks in the SWIS is removed.

The IMO notes that access to the required Network information may be provided to System Management either directly by the relevant Network Operator or indirectly through a third party. This reflects current practice, as some of the private network operators provide the necessary Network information to System Management through Western Power's SCADA systems. It should be noted, however, that in such cases, the obligation to provide the Network information to System Management, by whatever means, will remain with the relevant Network Operator and not with the third party.

Proposed solution:

The IMO proposes to delete Appendix 1(a) of the Market Rules. This will effectively remove the requirement for a Network Operator to provide this data to the IMO as a pre-condition of the registration of a Network.

The IMO also proposes to introduce new clause 2.29.3A into the Market Rules to require System Management to document in a Power System Operation Procedure (PSOP) the Network information that must be provided to System Management (including the information previously contained in Appendix 1(a)), and the process relating to how access to Network information is to be provided by a Network Operator to System Management.

The definition of a Network

Currently, a Network is defined in the Market Rules as "a transmission system or distribution system registered as a Network under clause 2.29.3" of the Market Rules. The IMO notes that 'transmission system' and 'distribution system' are undefined terms and therefore this definition provides little detail around what a Network actually is. This creates the potential for ambiguity as to what does and doesn't constitute (part of) a Network for the purposes of the WEM.

The IMO notes that the definition of a network in the Electricity Networks Access Code 2004 provides a description of what a network actually is, with reference to certain physical characteristics. The IMO therefore proposes to align the definition of a Network in the Market Rules more closely to the definition in the Electricity Network Access Code 2004. The IMO proposes that the definition for a Network should be “[t]he electrical equipment that is used in order to transfer electricity within the SWIS, and between the relevant points of connection for a distribution system or transmission system, registered under clause 2.29.3”.

This amendment to the definition of a Network will better distinguish Network equipment from non-Network equipment and therefore provide greater certainty to parties in relation to their obligations to register as a Network Operator and to register a Network Facility. The inclusion of the phrase “between the relevant points of connection” will ensure that privately owned equipment behind a connection point is not captured within the definition of a Network. For example, under the proposed definition, electrical equipment used to transfer electricity between a generation system and its connection point to the SWIS would not be part of, or in itself a Network, whereas the connection point (which is connected to the SWIS), and the electrical equipment used in order to transfer electricity from that connection point to other connection points within the SWIS would be (part of) a Network.

It should be noted that the proposed definition of a Network will continue to include any electrical equipment that transfers electricity between relevant points of connection within the SWIS, even where the electrical equipment transfers electricity to a Facility which is temporarily not electrically connected to the SWIS².

The IMO also proposes to amend various clauses related to registration of a Network and a Network Operator to align the wording of these clauses with the amended term Network.

Proposed solution:

The IMO proposes to amend the definition of Network in the Glossary of the Market Rules, as described above.

The IMO also proposes to amend clauses 2.28.2, 2.28.3, 2.28.4 and 2.29.3 of the Market Rules to align the wording of these clauses with the proposed definition of a Network.

Protected Provisions, Reviewable Decisions and civil penalty provisions

The IMO notes that clauses 2.28.2, 2.28.3, 2.28.4 of the Market Rules are Protected Provisions under clause 2.8.13 of the Market Rules. Therefore, under clause 2.8.3 of the Market Rules, the proposed Amending Rules in this Rule Change Proposal must be approved by the Minister.

The proposed amendments in this Rule Change Proposal do not amend any clauses which are Reviewable Decisions or civil penalty provisions but do cross-reference, and are cross-referenced by, clauses that are Reviewable Decisions and civil penalty provisions. The IMO notes that the proposed amendments do not change these meaning or effect of these cross-referenced clauses except to the extent of this Rule Change Proposal.

The IMO will work with the Public Utilities Office (PUO) to progress the amendments in this

² Please refer to ‘Agenda item 4 Appendix 1 OoE letter re Ravensthorpe’ in the MAC Meeting No. 27 Papers available at: <http://www.imowa.com.au/home/electricity/market-advisory-committee/2010/mac-27>.

2. Explain the reason for the degree of urgency:

The IMO proposes that this Rule Change Proposal be progressed under the Standard Rule Change Process.

The IMO considers the proposed amendments will benefit the market by clarifying the obligations and facilitating the registration of Network Operators, and involve minimal costs. The IMO therefore considers it is beneficial to commence consultation prior to the completion of the State Government's Electricity Market Review.

3. Provide any proposed specific changes to particular Rules: (for clarity, please use the current wording of the Rules and place a *strikethrough* where words are deleted and underline words added)

2.28.2. Subject to clauses 2.28.3 and 2.28.16, a person who owns, controls or operates electrical equipment that is used in order to transfer electricity within the SWIS, and between the relevant points of connection for a distribution system or transmission system~~a transmission system or distribution system which forms part of the South West Interconnected System, or is electrically connected to that system~~, must register as a Rule Participant in the Network Operator class.

2.28.3. A person that owns, controls or operates electrical equipment that is used in order to transfer electricity within the SWIS, and between the relevant points of connection for a distribution system or transmission system~~a transmission system or distribution system~~ may, but is not required to, register as a Rule Participant in the Network Operator class where both the following are satisfied:

- (a) System Management informs the IMO that it has determined that it does not require information about the relevant network to maintain Power System Security and Power System Reliability; and
- (b) no Market Participant Registered Facilities are directly connected to the transmission system or distribution system.

2.28.4. A person who intends to own, control or operate electrical equipment that will be used in order to transfer electricity within the SWIS, and between the relevant points of connection for a distribution system or transmission system~~a transmission system or distribution system which will form part of the South West Interconnected System, or will be electrically connected to that system~~, may register as a Rule Participant in the Network Operator class.

...

2.29.3. Subject to clause 2.29.9, a Network Operator must register as a Network, any electrical equipment that it owns, operates or controls, where the electrical equipment is used in order to transfer electricity within the SWIS, and between the relevant points of connection for a distribution system or transmission system~~any transmission system or distribution system owned, operated or controlled by that Network Operator as a Network, where that transmission or distribution system forms part of the South West Interconnected System, or is electrically connected to that system.~~

2.29.3A. System Management must develop a Power System Operation Procedure specifying:

- (a) information that a Network Operator must provide to System Management, for each of its Networks, including:
 - (i) positive, negative and zero sequence network impedances for the network elements;
 - (ii) information on the network topology;
 - (iii) information on transmission circuit limits;
 - (iv) information on security constraints;
 - (v) overload ratings, including details of how long overload ratings can be maintained; and
 - (vi) the short circuit capability of facility equipment;
- (b) the processes to be followed by a Network Operator to enable System Management to have access to the information specified in clause 2.29.3A(a);
- (c) technical and communication criteria that a Network Operator must meet with respect to System Management's ability to access the information specified in clause 2.29.3A(a); and
- (d) the processes to be followed by System Management when accessing the information specified in clause 2.29.3A(a).

11 Glossary

Network: The electrical equipment that is used in order to transfer electricity within the SWIS, and between the relevant points of connection for a distribution system or transmission system~~A transmission system or distribution System registered as a Network under clause 2.29.3.~~

...

Appendix 1: Standing Data

This Appendix describes the Standing Data to be maintained by the IMO for use by the IMO in market processes and by System Management in dispatch processes.

Standing Data required to be provided as a pre-condition of Facility Registration and which Rule Participants are to update as necessary, is described in clauses (a) to (i).

Standing Data not required to be provided as a pre-condition of Facility Registration but which the IMO is required to maintain, and which Rule Participants are to update as necessary, includes the data described in clauses (j) to (m).

- (a) ~~[blank]for a Network:~~
- ~~i. positive, negative and zero sequence network impedances for the network elements;~~
 - ~~ii. information on the network topology;~~
 - ~~iii. information on transmission circuit limits;~~
 - ~~iv. information on security constraints;~~
 - ~~v. overload ratings, including details of how long overload ratings can be maintained; and~~
 - ~~vi. the short circuit capability of facility equipment.~~

...

4. Describe how Rule Change Proposal would allow the Market Rules to better address the Wholesale Market Objectives:

The IMO considers that the proposed amendments will better achieve Wholesale Market Objectives (a) and (d) and are consistent with the remaining Wholesale Market Objectives. The IMO's assessment is presented below:

- (a) to promote the economically efficient, safe and reliable production and supply of electricity and electricity related services in the South West interconnected system

The proposed amendments align the Market Rules with current operations and better define what constitutes a Network. These changes enhance economic efficiency by:

- clarifying and providing greater certainty to Network Operators of their obligations under the Market Rules;
- ensuring that the Market Rules provide System Management with access, at all times, to the dynamic Network information required to maintain Power System Security and Reliability; and
- providing a more practical solution to the manual process currently contemplated in the Market Rules in regard to the provision of access to Network information by each

Network Operator to System Management.

The proposed amendments also support the safe and reliable supply of electricity, by ensuring that the Market Rules provide for System Management to have direct access to the dynamic Network information relevant to each Trading Interval, rather than indirect and static information provided through the IMO as currently contemplated by the Market Rules.

- (d) to minimise the long-term cost of electricity supplied to customers from the South West interconnected system

The IMO also considers that the proposed changes to clarify definitions and obligations in the Market Rules will provide for more transparent and accurate Market Rules and therefore reducing the time and effort of compliance, reducing the cost of administering the WEM.

5. Provide any identifiable costs and benefits of the change:

Costs:

There will be minor costs associated with the documentation of the process relating to the provision of Network information between Network Operators and System Management in a PSOP. However, the IMO understands that the costs associated with this are able to be accommodated within System Management's existing budget.

The IMO anticipates minor system costs associated with removing the Standing Data fields for Network Facilities from the Market Participant Interface (MPI). However, as these changes are not necessary prior to commencement, the IMO will schedule this work with other activities related to registration to minimise the cost of these changes.

Benefits:

The proposed amendments ensure that the Market Rules provide System Management with access at all times to the dynamic Network information being captured in a Network Operator's SCADA systems. The proposed amendments remove the potential manual effort currently contemplated in the Market Rules in regard to the provision of Network information, and align the Market Rules with current operations. The proposed amendments also remove a practical impediment to registration of Networks in the SWIS.

In addition, the IMO has taken the opportunity to clarify some related clauses of the Market Rules to provide greater clarity and certainty to Network Operators of their obligations under the Market Rules.

6. Provide any identifiable issues with respect to the practicality of implementation:

The IMO will assist System Management to detail the requirements for the provision of Network information in a PSOP. The IMO expects that the requirements in the PSOP will be documented similarly to those in the Market Procedure: IMS Interface.

The IMO will make system changes to the MPI to remove the Standing Data fields for Network Facilities. However, practically this will not need to occur prior to the commencement of the proposed Amending Rules in this Rule Change Proposal. The IMO will therefore coordinate the timing of these changes with other changes that it needs to make to its systems to minimise the cost and impact of the necessary changes.

The IMO notes that the Market Procedure: Rule Participant Registration and De-Registration does not currently detail all the situations (and clauses in the Market Rules) which allow for exemption from registering as a Network Operator. The IMO proposes to more fully detail the exemption process in this Market Procedure, and make other proposed amendments to streamline and clarify the procedure.

The IMO also notes that the Market Procedure: Facility Registration, De-Registration and Transfer currently does not detail the criteria and process for applying for an exemption from registering a Facility. The IMO proposes to detail the exemption process in this Market Procedure together with other proposed amendments to streamline and clarify the process.

The IMO will assess, for each of the relevant parties and transmission and distribution systems, whether an exemption from registering as a Network Operator is appropriate, and where appropriate, will work with the relevant parties to progress the operational process of registration or exemption.

As clauses 2.28.2, 2.28.3, 2.28.4 of the Market Rules are Protected Provisions, the proposed Amending Rules in this Rule Change Proposal will require Ministerial approval. The IMO will work with the PUO to progress the proposed amendments.