



# WHOLESALE ELECTRICITY MARKET PROCEDURE CHANGE REPORT: AEPC\_2017\_07

IMS INTERFACE MARKET PROCEDURE – NETWORK  
OPERATORS AND AEMO

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# EXECUTIVE SUMMARY

## Purpose

The publication of this Procedure Change Report, and the accompanying Market Procedure, completes the Procedure Change Process conducted by AEMO to consider a new IMS Interface Market Procedure – Network Operators and AEMO (Procedure) under the Wholesale Electricity Market (WEM) Rules.

## Proposed amendments

The proposed new Procedure has been developed in accordance with clauses 2.36A.1 and 2.36A.5 of the WEM Rules, and requires AEMO to document:

- (a) The arrangement by which Network Operators and AEMO must (subject to a limited exception<sup>1</sup>) provide each other with information under the WEM Rules.
- (b) The communications and control system requirements necessary to enable AEMO to remotely monitor the performance of a Network.

## Consultation

As the Market Advisory Committee (MAC) Working Group was not constituted in time for the Procedure Change Proposal, a draft version of the Procedure was presented at the AEMO WEM Procedure Change workshop held on 26 June 2017. Minor changes to improve clarity were recommended by stakeholders. Details of this forum are available at: <http://aemo.com.au/Stakeholder-Consultation/Industry-forums-and-working-groups/WA-Forums>.

The MAC did not meet regarding this Procedure Change Proposal, and no public workshops were held in relation to this Procedure Change Proposal.

AEMO published the Procedure Change Proposal (AEPC\_2017\_07) and issued a notice calling for submissions on 19 July 2017. The submission period closed on 16 August 2017 with one submission received. Western Power generally supported the Procedure, provided specific comments on a number of steps, and suggested that the extent of data Western Power provides to AEMO should be limited to AEMO's area of operation, as agreed with the Network Operator.

AEMO has clarified in this document that the extent of information required from each Network Operator must be sufficient for AEMO to ensure the South West Interconnected System (SWIS) is operated in accordance with the Technical Envelope for any SWIS Operating State, and that this cannot be limited to operational areas. AEMO has revised the Procedure in accordance with a number of Western Power's suggestions.

## AEMO's decision

AEMO's decision is to accept the Procedure as amended following the consultation period. AEMO considers that the new Procedure is consistent with the Wholesale Market Objectives, the Electricity Industry Act, the WEM Regulations, and the WEM Rules.

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<sup>1</sup> An alternative arrangement under clause 2.36A.2 of the WEM Rules applies in situations where the Procedure is "inadequate" to enable AEMO or a Network Operator to comply with an obligation to provide information to the other under the WEM Rules. The alternative arrangement applies until the Procedure is amended to address the inadequacy.



## Next steps

The new IMS Interface Market Procedure – Network Operators and AEMO will commence at 8:00 AM (AWST) on 13 October 2017.



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# 1. BACKGROUND

## 1.1 Regulatory requirements

AEMO has published this Procedure Change Report in accordance with the Procedure Change Process specified in clause 2.10 of the WEM Rules.

## 1.2 Context

On 31 May 2016, the Minister for Energy gazetted amendments to the WEM Rules prescribing the reasonable arrangement by which Network Operators and AEMO must provide each other with information under the WEM Rules, and the communications and control system requirements necessary to enable AEMO to remotely monitor the performance of a Network.<sup>2</sup>

The gazette notice inserted new clauses 2.36A.1 and 2.36A.5 of the WEM Rules, which commenced on 1 July 2016. These clauses provide that:

- 2.36A.1. System Management must develop an IMS Interface Market Procedure prescribing the reasonable arrangement by which Network Operators and AEMO must, subject to clause 2.36A.2, provide each other with information under these Market Rules, including:*
- (a) the format, form and manner in which that information must be provided; and*
  - (b) where the Market Rules do not provide a timeframe for the provision of the information, the time by which such information must be provided.*
- 2.36A.5 System Management must document in the Power System Operation Procedure the communications and control system requirements necessary to enable it to remotely monitor the performance of a Network described in these Market Rules. System Management, Market Participants and Network Operators must comply with that documented Market Procedure in respect of communications and control system requirements.*

The proposed Procedure would be the first version. AEMO proposes to commence the new Procedure on 13 October 2017 as part of the transition of System Management from Western Power to AEMO.

## 1.3 Procedure Change Process and timetable

On 19 July 2017, AEMO published a Procedure Change Proposal (AEPC\_2017\_07) for the Procedure and issued a call for submissions, which are available at: [http://www.aemo.com.au/Stakeholder-Consultation/Consultations/AEPC\\_2017\\_07](http://www.aemo.com.au/Stakeholder-Consultation/Consultations/AEPC_2017_07).

The proposal was progressed using the Procedure Change Process specified in clause 2.10 of the WEM Rules, with submissions required by 16 August 2017.

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<sup>2</sup> See Government Gazette No.89 dated 31 May 2016, *Wholesale Electricity Market Amending Rules 2016*.



## 2. PROPOSED PROCEDURE CHANGE

This section details the changes that AEMO proposed when the call for submissions was published.

### 2.1 Detail of the proposed procedure change

The new Procedure describes requirements for:

- (a) The arrangement by which Network Operators and AEMO must (subject to a limited exception) provide each other with information under the WEM Rules.
- (b) The communications and control system requirements necessary to enable AEMO to remotely monitor the performance of a Network.

This Procedure applies to:

- (a) AEMO in providing information needed by Network Operators.
- (b) Network Operators in providing information needed by AEMO.
- (c) AEMO and Network Operators in remotely monitoring the performance of Networks.
- (d) All Networks forming part of the power system called the South West Interconnected System (SWIS).
- (e) Where relevant, Scheduled Generators, Non-Scheduled Generators, Demand Side Programmes, Dispatchable Loads and Interruptible Loads connected to those Networks.

The Procedure also addresses data-related information transfers for which specific arrangements are not prescribed in other Market Procedures (including Power System Operation Procedures) or in the WEM Rules. It also identifies other information transfer requirements prescribed in other Market Procedures (including Power System Operation Procedures).

### 2.2 Proposed drafting

AEMO published a draft of the proposed Procedure for consultation. The Procedure as drafted is available at: [http://www.aemo.com.au/Stakeholder-Consultation/Consultations/AEPC\\_2017\\_07](http://www.aemo.com.au/Stakeholder-Consultation/Consultations/AEPC_2017_07).



## 3. CONSULTATION PROCESS

### 3.1 Market Advisory Committee or Working Group

As the Market Advisory Committee (MAC) Working Group was not constituted in time for the Procedure Change Proposal, a draft version of the Procedure was presented at the AEMO WEM Procedure Change workshop held on 26 June 2017. Minor changes to improve clarity were recommended by stakeholders. Details of this forum are available at: <http://aemo.com.au/Stakeholder-Consultation/Industry-forums-and-working-groups/WA-Forums>.

In accordance with clause 2.10.9 of the WEM Rules, AEMO notified the MAC once the Procedure Change Proposal was published, and noted that the Rule Change Panel would convene a meeting of the MAC, should two or more members request it. The Rule Change Panel did not convene a meeting of the MAC in regard to this Procedure Change Proposal.

### 3.2 Public workshop

No public workshops were held in relation to this Procedure Change Proposal.

### 3.3 Submissions received during consultation period

On 19 July 2017, AEMO published the Procedure Change Proposal (AEPC\_2017\_07) and issued a notice calling for submissions. The submission period closed on 16 August 2017, with a submission received from Western Power.

Western Power provided comments on a number of steps in the Procedure.

AEMO has responded to matters identified, and has accepted a number of suggestions to improve clarity.

Copies of submissions received during the submission period are available at: [http://www.aemo.com.au/Stakeholder-Consultation/Consultations/AEPC\\_2017\\_07](http://www.aemo.com.au/Stakeholder-Consultation/Consultations/AEPC_2017_07).

#### 3.3.1 Specific comments

##### Limitation of data

Western Power commented on step 2.2 and Table 4, suggesting that SCADA points connected downstream of zone substation power transformers are not necessary for AEMO to carry out Power System Security responsibilities.

##### AEMO's response

AEMO notes that the information provided by each Network Operator must be sufficient for AEMO to ensure the SWIS is operated in accordance with the Technical Envelope for any SWIS Operating State.

As circumstances may arise where AEMO requires operational information downstream of zone substation power transformers, to ensure Power System Security, AEMO will define the necessary SCADA points operated by each Network Operator. As the information is provided via SCADA systems, this does not impose extra cost, and is in line with requirements for Network Operators elsewhere in Australia. As such, AEMO has not amended the Procedure.

##### Availability of network topology from EMS and GIS

Western Power commented on step 2.2 and Table 4. In accordance with the Services Agreement with AEMO, Western Power provides data on current network topology through access to Western Power's





EMS and GIS tools. Western Power indicated that, once the agreement terminates, this information will only be able to be provided periodically.

### **AEMO's response**

AEMO notes that footnote 3 of the Procedure addresses this issue, and details that Western Power will provide periodic data transfers of network topology from its IT systems and tools (including its GIS).

AEMO also notes that network topology changes are required in multiple timeframes, depending on the use of the topology update:

- In real-time timeframes, network topology is constantly being updated and redetermined in the EMS model as network elements are switched out of service or switched back into service (due to power system operations, automated control, or protection operations), or are switched into service for the first time or out of service as part of commissioning or de-commissioning.
- In non real-time timeframes (pre-dispatch, operations planning and forecasting, ST PASA, and MT PASA timeframes) the base network topology changes less frequently, as items of network equipment are commissioned into service for the first time or de-commissioned from service.

For real-time network topology changes associated with real-time network switch status changes, topology updates must occur within real-time SCADA/EMS timeframes to be suitable for use in State Estimation and real-time security assessments. The ICCP link requirements and other data requirements described in new step 2.3 of the Procedure cover AEMO's requirements when access to Western Power's EMS and IT systems and tools is removed.

Non real-time commissioning or de-commissioning or other network-changing events occur less frequently than switching activities in real time. Therefore, for non real-time base model updates, AEMO accepts Western Power's use of periodic data transfers of network topology for GIS data and the base topology model to build AEMO's topology model, provided the data is current and suitable for the timeframe in which the data is used meeting the requirements indicated in Table 3 of the Procedure.

As both real-time and non real-time aspects of network topology updates are covered in the Procedure, further changes to the Procedure are considered unnecessary.

### **Timeframe of information provision**

Western Power commented on step 2.2, indicating that, on occasion, Western Power may not be able to provide a new model of network topology five business days prior to the introduction of a network element, and proposed that timeframes be qualified by agreement with AEMO.

### **AEMO's response**

AEMO accepts Western Power's suggestion on the basis that circumstances may infrequently result in late provision of data. AEMO has amended Table 3 of the Procedure accordingly.

### **Information requirements**

Western Power commented on Table 3, indicating that:

- (a) AEMO does not have control of Western Power equipment, including equipment for voltage control.
- (b) The need for design information as part of investigation data will vary depending on the situation.
- (c) Further clarification is required to establish a mutual understanding of the "network operating instructions" required to identify security limits. In many cases, Western Power's documents are guidelines and must be treated as such.



### **AEMO's response**

AEMO does not require control of Western Power equipment, and agrees that design information is only required on request. AEMO has amended the Procedure accordingly.

AEMO will work with Western Power to establish a mutual understanding of the “network operating instructions” required to fulfil the requirements of the WEM Rules. As the clarification refers to establishing a mutual understanding, AEMO has not amended the Procedure.

### **Protection and disturbance systems**

Western Power commented on Table 4, suggesting that AEMO does not require full access to Western Power's protection and disturbance systems, but rather the ability to view and extract design and disturbance information. Such information can be provided by Western Power on request from AEMO.

### **AEMO's response**

AEMO agrees that this information is not required at all times, and can be provided upon request within a reasonable timeframe. AEMO has amended Table 4 of the Procedure accordingly.

### **Generation availability**

Western Power commented on Table 6, and indicated that to fulfil voltage control responsibilities, the Network Operator requires access to planned generator availability at all times.

### **AEMO's response**

AEMO will provide generator planned availability, classified as Public or Rule Participant Network Restricted, via a web interface to AEMO, or the same information provided by an agreed system interface to SMMITS (or an equivalent system) at all times. AEMO has updated the Procedure accordingly.



## 4. AEMO'S ASSESSMENT

### 4.1 Further changes to the Procedure

In accordance with the submissions, AEMO has made the following revisions to the Procedure:

- a) Clarified that the extent of information required to be provided by Network Operators must be sufficient for AEMO to ensure the SWIS is operated within the Technical Envelope for each SWIS Operating State.
- b) Added step 2.3 to indicate data requirements and system changes to AEMO's EMS and the associated ICCP link between Western Power and AEMO following termination of the Services Agreement between Western Power and AEMO.
- c) AEMO has also revised the Procedure to improve clarity in line with its responses to the comments received.

A tracked-changes version indicating these amendments is available at:

[http://www.aemo.com.au/Stakeholder-Consultation/Consultations/AEPC\\_2017\\_07](http://www.aemo.com.au/Stakeholder-Consultation/Consultations/AEPC_2017_07).

### 4.2 Consistency with Electricity Industry Act, WEM Regulations, and WEM Rules

The proposed Procedure has been reviewed as a whole by AEMO to ensure compliance with the relevant provisions in the:

- Electricity Industry Act.
- WEM Regulations.
- WEM Rules.

### 4.3 Consistency with Wholesale Market Objectives

The steps outlined in this Procedure describe the reasonable arrangement by which Network Operators and AEMO must provide each other with information under WEM Rules, and the communications and control system requirements necessary to enable AEMO to remotely monitor the performance of a Network.

AEMO considers that the steps are drafted in a way that is consistent with the objectives of the WEM Rules. As a result, AEMO considers that the revised Procedure, as a whole, is consistent with the Wholesale Market Objectives.

### 4.4 Implementation of the Procedure

The Procedure was developed in accordance with clauses 2.36A.1 and 2.36A.5 of the WEM Rules.

This Procedure does not require system changes by AEMO and Western Power.<sup>3</sup>

This Procedure will not require Rule Participants to implement any procedural or system amendments before the Procedure can commence. Consequently, AEMO considers that commencement at 8:00 AM (AWST) on 13 October 2017 will allow Rule Participants sufficient time from the date of publication of this Procedure Change Report to ensure compliance.

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<sup>3</sup> However, system changes to AEMO's EMS and the associated ICCP link between Western Power and AEMO, as well as amendments to the Procedure, may be required on termination of the Services Agreement between Western Power and AEMO. As indicated in Section 4.1, step 3 of the Procedure details these requirements.



## 4.5 AEMO's decision and commencement

AEMO's decision is to accept the Procedure as amended following the consultation period. The new IMS Interface Market Procedure – Network Operators and AEMO will commence at 8:00 AM (AWST) on 13 October 2017.

AEMO has made this decision on the basis that the revised Procedure:

- Is consistent with the Wholesale Market Objectives.
- Is consistent with the Electricity Industry Act, WEM Regulations, and WEM Rules.
- Has the general support of submissions received during the consultation period.

Additional detail outlining the analysis behind AEMO's decision is outlined in Section 3 of this Procedure Change Report.

The new Procedure is available at:

[http://www.aemo.com.au/Stakeholder-Consultation/Consultations/AEPC\\_2017\\_07](http://www.aemo.com.au/Stakeholder-Consultation/Consultations/AEPC_2017_07).