WEM RULES

POWER SYSTEM OPERATION PROCEDURE: SHORT TERM PROJECTED ASSESSMENT OF SYSTEM ADEQUACY

PREPARED BY:	System Management (WA)
DOCUMENT REF:	SO_OP_WA_3809
VERSION:	6.0
EFFECTIVE DATE:	[Enter date]
STATUS:	DRAFT FOR CONSULTATION

Approved for distribution and use by:

APPROVED BY:

TITLE:

VERSION RELEASE HISTORY

Version	Effective Date	Summary of Changes
1	21 September 2006	Power System Operation Procedure (Market Procedure) for Commissioning and Testing
2	17 July 2009	System Management amended changes to the procedure resulting from Procedure Change Report PPCL0009
3	23 June 2011	System Management amended changes to the procedure resulting from Procedure Change Report PPCL0016
4	Balancing Market Commencement Day	System Management replacement of the procedure resulting from Procedure Change Report PPCL0023
5	1 March 2014	System Management amended changes to the procedure resulting from Procedure Change Proposal PPCL 0025
6.0	DD MMM YYYY	Changes resulting from Procedure Change Proposal AEPC_2018_XX

CONTENTS

1	PROCEDURE OVERVIEW	4
1.1	Relationship with the Wholesale Electricity Market Rules	4
1.2	Interpretation	4
1.3	Purpose and application of this Procedure	4
1.4	Associated documents	4
2	TIMETABLE	5
2.1	Timing requirements	5
3	INFORMATION REQUIREMENTS	5
3.1	General requirements	5
3.2	Directions	5
3.3	Allowable use of AEMO data	5
3.4	Submission of Revised Data	5
4	PASA RESERVE MARGIN	6
4.1	General	6
4.2	Assessment of the PASA Reserve Margin	6
5	CONTENT OF PASA REPORT	7
5.1	General	7

LIST OF TABLES

Table 1	Defined Terms	4
Table 2	Background Procedures	5

1 PROCEDURE OVERVIEW

1.1 Relationship with the Wholesale Electricity Market Rules

1.1.1 This Power System Operation Procedure (PSOP): Short Term Projected Assessment of System Adequacy (Procedure) has been developed in accordance with clause 3.17.10 of the Wholesale Electricity Market Rules (WEM Rules).

1.1.2 References to particular WEM Rules within the Procedure in bold and square brackets **[Clause XX]** are included for convenience only and are not part of this Procedure.

1.2 Interpretation

In this Procedure:

(a) terms that are capitalised, but not defined, have the meaning given in the WEM Rules;

(b) to the extent that this Procedure is inconsistent with the WEM Rules, the WEM Rules prevail to the extent of the inconsistency;

(c) a reference to the WEM Rules, or Market Procedures, includes any associated forms required or contemplated by the WEM Rules or Market Procedures;

(d) words expressed in the singular include the plural and vice versa; and

(e) unless the context requires otherwise, references to AEMO include AEMO in its System Management capacity.

1.2.2 In addition, the following defined terms have the meaning given.

Table 1 Defined Terms

Term	Definition
PASA Reference Point	A value for each six-hour period of the Planning Horizon **[Clause 3.17.3]**.
PASA Reserve Margin	The value identified in step 4.1.2.
PASA Report	The results of the PASA study published as required by WEM Rule 3.17.1 and 3.17.9.
Planning Horizon	Three weeks, starting from 8 AM on the day following the day on which the Short Term PASA study is performed **[Clause 3.17.3]**.

1.3 Purpose and application of this Procedure

1.3.1 The purpose of this Procedure is to document the processes:

(a) that AEMO must follow when conducting a Short Term PASA study **[Clause 3.17.10]**; and

(b) for Rule Participants in providing information or clarifications as requested by AEMO **[Clause 3.17.5]**.

1.4 Associated documents

1.4.1 The documents in Table 2 provide background information to this Procedure.

Table 2 Background Procedures

Reference	Title	Location
SO_OP_WA_3804	PSOP: Facility Outages	Market Web Site
SO_OP_WA_3806	PSOP: Medium Term PASA	Market Web Site
SO_OP_WA_3808	PSOP: Power System Security	Market Web Site

2 TIMETABLE

2.1 Timing requirements

2.1.1 The timing requirements that AEMO must follow when completing and reviewing a Short Term PASA study, and AEMO's obligation to publish relevant information in the Short Term PASA Report, are specified in the WEM Rules **[Clause 3.17.1]**.

3 INFORMATION REQUIREMENTS

3.1 General requirements

3.1.1 Unless otherwise directed by AEMO, Rule Participants must, before 10 AM every Thursday, submit the information to AEMO detailed in clause 3.17.5 of the WEM Rules.

3.1.2 AEMO must specify the format and manner of submission of the information in step 3.1.1 on the Market Website.

3.2 Directions

3.2.1 AEMO will publish directions that the information in step 3.1.1 is not required on the Market Website.

3.2.2 AEMO may revoke the direction in step 3.2.1 for any Rule Participant or class of Rule Participant at any time.

3.2.3 To revoke the direction in step 3.2.1, AEMO must provide affected Rule Participants 5 Business Days' notice.

3.3 Allowable use of AEMO data

3.3.1 AEMO may use its own information instead of information submitted by Rule Participants **[Clause 3.17.8]** and must document reasons for doing so in the Short Term PASA report **[Clause 3.17.9(i)]**.

3.3.2 In addition to information provided by a Rule Participant, AEMO may use information that it develops in accordance with clause 3.17.7 of the WEM Rules, and any other information AEMO considers appropriate.

3.4 Submission of Revised Data

3.4.1 When a Rule Participant becomes aware of material changes to information provided in accordance with step 3.1.1 during the first week of the period covered by the previous Short Term PASA study, Rule Participants must submit revised data as soon as practicable and, in any case, within 24 hours **[Clause 3.17.6]**.

4 PASA RESERVE MARGIN

4.1 General

4.1.1 AEMO must assess the PASA Reserve Margin for each PASA Reference Point in the Short Term PASA Planning Horizon.

4.1.2 The PASA Reserve Margin is the capacity remaining in service, as detailed in step 4.2.1, used to evaluate Outage Plans **[Clause 3.18.11]** and to approve Planned Outages **[Clause 3.19.6]**.

4.1.3 AEMO must indicate in the PASA Report any PASA Reference Point within the Planning Horizon where the PASA Reserve Margin is less than zero.

4.1.4 AEMO must develop and publish methodologies detailing:

(a) Relevant assumptions related to the aggregation of data for the PASA study;

(b) The peak load forecast, where this must include:

(1) daily, weekly and monthly demand patterns;

(2) seasonal variations;

(3) weather conditions;

(4) significant loads; and

(5) assumptions regarding block loads.

(c) The determination of transmission constraints between potentially constrained regions in accordance with clause 3.17.9(f) of the WEM Rules;

(d) The allowance for the Ancillary Service Requirements;

(e) The allowance for the Ready Reserve Standard in accordance with clause 3.18.11A of the WEM Rules;

(f) The allowance for the unavailability of Scheduled Generation;

(g) The allowance for the unavailability of Non-Scheduled Generation which must consider seasonal variation and fuel type; and

(h) The allowance for the unavailability of Demand Side Programmes.

4.2 Assessment of the PASA Reserve Margin

4.2.1 AEMO must estimate the applicable PASA Reserve Margin by forecasting:

(a) The capacity of Scheduled Generators, Non-Scheduled Generators and Demand Side Programmes after allowing for outages that AEMO has knowledge of or has been informed of **[Clause 3.18.11(a)]**, less

(b) The mean plus two standard deviation system peak load forecast **[Clause 3.18.11(a)]**, calculated in accordance with step 4.1.4(b), less

(c) The effects of any generation being constrained due to insufficient transmission capacity remaining in service **[Clauses 3.18.11(b) and 3.17.9(f)]** calculated according to step 4.1.4(c), less

(d) An allowance for the quantity of generation capacity required to maintain the Ancillary Service Requirements **[Clause 3.18.11(c)]** calculated according to step 4.1.4(d), less

(e) An allowance for the Ready Reserve Standard **[Clause 3.18.11(aA)]** calculated according to step 4.1.4(e), less:

(f) An allowance for the unavailability of Scheduled Generation calculated according to step 4.1.4(f), less

(g) An allowance for the unavailability of Non-Scheduled Generation calculated according to step 4.1.4(g), less

(h) An allowance for the unavailability of Demand Side Programmes calculated according to step 4.1.4(h).

5 CONTENT OF PASA REPORT

5.1 General

5.1.1 AEMO must include in the PASA Report for each PASA Reference Point in the Planning Horizon:

(a) the information set out in WEM Rule 3.17.9; and

(b) the PASA Reserve Margin as determined under this Procedure.

5.1.2 AEMO must use reasonable endeavours to include in the PASA Report sufficient information to allow Rule Participants to identify the assumptions used from each methodology in step 4.1.4.

5.1.3 When publishing the PASA Report, AEMO must have regard to the confidentiality principle specified in clause 10.2.3(k) of the WEM Rules, which requires information to be aggregated or provided in a form which does not disclose confidential information.