

~~ELECTRICITY INDUSTRY ACT~~

~~ELECTRICITY INDUSTRY
(WHOLESALE ELECTRICITY
MARKET) REGULATIONS 2004~~

~~WHOLESALE ELECTRICITY
MARKET RULES~~

~~POWER SYSTEM OPERATION
PROCEDURE:
FACILITY OUTAGES~~

21 September 2006	Power System Operation Procedure (Market Procedure) for Facility Outages
1 April 2009	System Management amended changes to the procedure resulting from Procedure Change Report PPCL0003
21 June 2011	System Management amended changes to the procedure resulting from Procedure Change Report PPCL0017
Balancing Market Commencement Day	System Management replacement of the procedure resulting from Procedure Change Report PPCL0023
7 April 2014	System Management amendments to the procedure resulting from Procedure Change Report PPCL0026

TABLE OF CONTENTS

~~VERSION HISTORY~~ WEM RULES

POWER SYSTEM OPERATION PROCEDURE: FACILITY OUTAGES

TABLE OF CONTENTS	2
RELATIONSHIP WITH MARKET RULES	4
RELATED DOCUMENTS	4
COMMENCEMENT	4
1 SCOPE	5
2 COMMUNICATIONS AND CONTACTS	5
2.1 Rule Participant Contacts	5
2.2 System Management Contacts	5
2.3 Communication of outage information	6

3	SWIS EQUIPMENT LIST	6
3.1	Content of the equipment list	6
3.2	Reconsideration of items on the equipment list	7
4	OUTAGE SCHEDULE	7
5	OUTAGE PLANS	7
5.1	Outage Plan	7
5.2	Changes to an Outage Plan	8
5.3	Outage Plans lodged within the final six weeks	8
5.4	Grouping of Associated Outage Plans	9
6	ACCEPTANCE OF OUTAGE PLANS	9
6.1	Assessment of Outage Plans	9
6.2	Adequacy criteria for assessing the acceptability of Outage Plans	9
6.3	Criteria for selection of Outage Plans in the event of conflicting Outage Plans	10
6.4	Acceptance of non-complying Outage Plan for reasons of System Security	10
7	CHANGES TO POWER SYSTEM CONDITIONS AFFECTING SCHEDULED OUTAGES	10
8	PRE-ACCEPTED OUTAGES	11
9	APPROVAL OF SCHEDULED OUTAGES	11
10	OPPORTUNISTIC MAINTENANCE	12
10.1	Opportunistic Maintenance	12
10.2	Day-ahead Opportunistic Maintenance	13
10.3	On the day Opportunistic Maintenance	13
11	OUTAGE RECALLS	14
12	FORCED OUTAGES AND CONSEQUENTIAL OUTAGES	15
13	CALCULATION OF PLANNED OUTAGE RATE AND FORCED OUTAGE RATE	16
	APPENDIX 1: CALCULATION OF PLANNED OUTAGE RATE AND FORCED OUTAGE RATE	17

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VERSION RELEASE HISTORY

<u>Version</u>	<u>Effective Date</u>	<u>Summary of Changes</u>
<u>1.0</u>	<u>21 September 2006</u>	<u>Power System Operation Procedure (Market Procedure) for Facility Outages initial release</u>
<u>2.0</u>	<u>1 April 2009</u>	<u>System Management amended changes to the procedure resulting from Procedure Change Report PPCL0003</u>
<u>3.0</u>	<u>21 June 2011</u>	<u>System Management amended changes to the procedure resulting from Procedure Change Report PPCL0017</u>
<u>4.0</u>	<u>Balancing Market Commencement Day</u>	<u>System Management replacement of the procedure resulting from Procedure Change Report PPCL0023</u>
<u>5.0</u>	<u>7 April 2014</u>	<u>System Management amendments to the procedure resulting from Procedure Change Report PPCL0026</u>
<u>6.0</u>	<u>TBA 2018</u>	<u>AEMO restructure and rewrite of the procedure resulting from Procedure Change Report AEPC 2018 04</u>

CONTENTS

1	PROCEDURE OVERVIEW	9
1.1.	Relationship with the Wholesale Electricity Market Rules	9
1.2	Interpretation	9
1.3	Purpose and application of this Procedure	10
1.4	Associated documents	11
2	LIST OF EQUIPMENT SUBJECT TO OUTAGE PLANNING	12
2.1	Contents of the Equipment List	12
3	COMMUNICATIONS	13
3.1	Communication of Outage Information	13
4	OUTAGE SCHEDULING	15
4.1	Maintenance of the Outage Schedule	15
4.2	Outage Plan Information Requirements	15
4.3	Outage Plans lodged within six weeks of commencement	18
4.4	Network Outages that may impact a Market Participant's Facilities	18
5	CHANGES TO OR WITHDRAWAL OF AN OUTAGE PLAN	19
5.1	Re-Scheduling or Cancelling an Outage Plan	19
6	ACCEPTANCE OF OUTAGE PLANS	19
6.1	General	19
6.2	Acceptance of non-complying Outage Plan for reasons of System Security	20
6.3	Changes to Outage Contingency Plans	21
7	REQUESTS FOR OPPORTUNISTIC MAINTENANCE	22
7.1	General	22
7.2	Pre-condition for Opportunistic Maintenance	23
7.3	Day-ahead Opportunistic Maintenance (DAOM)	24
7.4	On the day Opportunistic Maintenance (ODOM)	24
8	APPROVAL OF SCHEDULED OUTAGES AND OPPORTUNISTIC MAINTENANCE	25
8.1	General	25
8.2	Approval of non-complying Scheduled Outage for reasons of System Security	26
9	CHANGES AFFECTING A PLANNED OUTAGE	26
9.1	Changes to Power System Conditions Affecting a Planned Outage	26
9.2	Extending the end time of the Planned Outage	27
10	FORCED OUTAGES AND CONSEQUENTIAL OUTAGES	27
10.1	Information Requirements	27
11	PLANNED OUTAGE RATE AND FORCED OUTAGE RATE	28
11.1	Calculation of Planned Outage Rate and Forced Outage Rate	28

LIST OF TABLES

Table 1	Defined terms	9
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LIST OF APPENDICES

APPENDIX A.CALCULATION OF FORCED OUTAGE RATE	31
APPENDIX B.CALCULATION OF PLANNED OUTAGE RATE	32

1 PROCEDURE OVERVIEW

1.1 Relationship with the Wholesale Electricity Market Rules

- 1.1.1 This Power System Operation Procedure (~~PSOP~~); Facility Outages (Procedure) has been developed in accordance with, ~~and should be read in conjunction with, clauses 3.18.21, 3.19.14, 3.21.12 and 4.11.1(h) of~~ the Wholesale Electricity Market Rules (~~MarketWEM~~ Rules).
- 1.1.2 References to particular ~~MarketWEM~~ Rules within the Procedure in bold and square brackets [~~MR Clause~~ XX] are current as at ~~728 April 2014~~ 2018. These references are included for convenience only, and are not part of this Procedure.
- ~~1. This Procedure is subservient to the Market~~References to particular Technical Rules. ~~In the event of conflict between this Procedure and the Market Rules or any other document, the order of precedence is as set out in the Market Rules [MR 1.5.2].~~
- ~~2. This Procedure may include explanatory text, including quotations from the Market Rules. Such explanatory text is for information only, does not form part of within the Procedure, in bold and is italicised curly braces {Clause XX} are current as at 1 December 2016. These references are included for convenience only and contained in a rectangular box.~~
- 1.1.3 ~~A word or phrase defined in the Electricity Industry Act 2004, or in the Regulations or Market Rules made under that Act, has the same meaning when used in~~are not part of this Procedure.

RELATED DOCUMENTS

1.2 ~~This Procedure is related to, and should be read in conjunction with~~Interpretation

- 1.2.1 In this Procedure:
- (a) terms that are capitalised but not defined in this Procedure have the meaning given in the WEM Rules;
 - (b) to the extent that this Procedure is inconsistent with the WEM Rules, the WEM Rules shall 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; and
 - (d) words expressed in the singular include the plural or vice versa.

~~4.1.41.2.2~~ In addition, the following: defined terms have the meaning given.

PSOP: CommunicationsTable 1 Defined terms

Term	Definition
<u>Day Ahead Opportunistic Maintenance (DAOM)</u>	<u>Opportunistic Maintenance detailed in step 7.1.2(a)</u>
<u>Equipment List</u>	<u>The list of equipment required by clause 3.18.2(a) of the WEM Rules to be subject to outage scheduling, detailed in step 2.1.1.</u>
<u>On the Day Opportunistic Maintenance (ODOM)</u>	<u>Opportunistic Maintenance detailed in step 7.1.2(b).</u>

<u>Term</u>	<u>Definition</u>
<u>Outage Risk Assessment</u>	<u>An assessment of risks that might extend the outage as detailed in step 4.2.3(a).</u>
<u>Outage Contingency Plans</u>	<u>Contingency plans for the early return to service of the Facility or item of equipment as detailed in step 4.2.3(b).</u>
<u>Outage Schedule</u>	<u>Information on all Scheduled Outages referred to in clause 3.18.4 of the WEM Rules held AEMO's IT system as detailed in step 6.1.1.</u>

- a. ~~— Purpose and Control;~~
- b. ~~— PSOP: Commissioning and Testing;~~
- c. ~~— PSOP: Power System Security; and~~

~~4.21.3 Market~~application of this Procedure: ~~IMS Interface.~~

~~COMMENCEMENT~~

1. ~~This revised~~The purpose of this Procedure ~~has effect from 7 April 2014.~~

2 Scope to detail

2.1.11.3.1 ~~This Procedure has been developed in accordance with the Market Rules [MR 3.18.21, 3.19.14, 3.21.12 and 4.11.1(h)] and details the processes to be followed by:~~

- (a) ~~System Management, the IMO~~AEMO, Market Participants and Network Operators when conducting outage planning for ~~an outage of a Network, Market Generator, Load or an Ancillary Service Facility;~~ [Clause 3.18.21];
- (b) ~~System Management~~AEMO, Market Participants and Network Operators when conducting final approval of outages; [Clause 3.19.14];
- (c) ~~System Management~~AEMO, Market Participants and Network Operators when determining and reporting Forced Outages and Consequential Outages; [Clause 3.21.12]; and
- (d) ~~The IMO~~AEMO when calculating Planned Outage and Forced Outage rates- [Clause 4.11.1(h)].

~~2. This Procedure includes details of the processes:~~

1.4 that enable Associated documents

1.4.1 The following documents in Table 1 (available on the Market Web Site) provide background information to this Procedure:

Table 1 Background Procedures

<u>Reference</u>	<u>Title</u>	<u>Location</u>
<u>SO_OP_WA_3805</u>	<u>IMS Interface Market Procedure: AEMO and Network Operators</u>	<u>Market Web Site</u>
<u>SO_OP_WA_3802</u>	<u>PSOP: Communications and Control Systems</u>	<u>Market Web Site</u>
<u>SO_OP_WA_3803</u>	<u>PSOP: Dispatch</u>	<u>Market Web Site</u>
<u>SO_OP_WA_3801</u>	<u>PSOP: Commissioning and Testing</u>	<u>Market Web Site</u>
<u>SO_OP_WA_3806</u>	<u>PSOP: Medium Term PASA</u>	<u>Market Web Site</u>
<u>SO_OP_WA_3808</u>	<u>PSOP: Power System Security</u>	<u>Market Web Site</u>
<u>SO_OP_WA_3809</u>	<u>PSOP: Short Term PASA</u>	<u>Market Web Site</u>
<u>SO_OP_WA_3807</u>	<u>PSOP: Network Modelling Data</u>	<u>Market Web Site</u>

2 LIST OF EQUIPMENT SUBJECT TO OUTAGE PLANNING

2.1 Contents of the Equipment List

2.1.1 Clause 3.18.2(a) of the WEM Rules requires AEMO to maintain a list of equipment that is subject to outage scheduling (Equipment List).

2.1.2 In compiling the Equipment List, AEMO must include **[Clause 3.18.2(c)]**:

- (a) all transmission network Registered Facilities;
- (b) all Registered Facilities holding Capacity Credits with a nameplate capacity of more than 10 MW **[Clause 3.18.2A(a)]**;
- (c) all generation systems with a nameplate capacity of more than 10 MW that are registered as an Intermittent Load **[Clause 3.18.2A(a)]**;
- (d) all Registered Facilities subject to an Ancillary Services Contract; and
- (e) any other equipment that AEMO determines must be subject to outage scheduling to maintain Power System Security and Power System Reliability.

2.1.3 In applying step 2.1.2(e) AEMO may include in the Equipment List Loads, Network equipment, and Market Generators with a nameplate capacity of less than 10 MW, where the maintenance of Power System Security and Power System Reliability may be impacted during an outage of that Facility.

2.1.4 AEMO may update the Equipment List in circumstances including but not limited to **[Clause 3.18.2(b)]**:

- (a) when a new Facility is registered;
- (b) where there has been a change to any of the details for an item of equipment on the Equipment List; and
- (c) when an existing item of equipment is no longer required to be included on the Equipment List.

2.1.5 Where the Equipment List is revised in step 2.1.4, AEMO must publish the revised Equipment List as soon as practicable **[Clause 3.18.2(b)]**.

2.1.6 AEMO may agree with Market Participants and Network Operators to gain on a process for Planned Outage commencement and restoration, which will be detailed and agreed in a confidential Operating Protocol.

~~2.1.22.1.7 Where there is no other agreement with System Management on the timing of outages of Facilities, in an Operating Protocol, Participants must notify AEMO immediately prior to commencement and restoration of a Planned Outage via telephone.~~

- ~~a. to resolve possible conflicts between Outage Plans of different Rule Participants; and~~
- ~~b. to assist System Management in the management of Power System Security.~~

1—COMMUNICATIONS AND CONTACTS

1.1—RuleA Market Participant Contacts

- ~~3. Depending on the circumstances, System Management may communicate directly with affected Market Participants and Network Operators or request affected Market Participants and Network Operators to seek resolution of Outage Plan conflicts amongst themselves.~~
- ~~4. Market Participants and Network Operators must provide System Management with the communication details of the operating person(s) authorised to submit Outage Plans and request cancellations of Planned Outages for each of their Facilities.~~
- ~~5. System Management must maintain a record of details as advised in Paragraph 2.1.2 and make them available to Market Participants and other involved parties on an as needed basis.~~

1.2—System Management Contacts

~~2.1.32.1.8~~ System Management must from time to time advise Market Participants and Network Operators. Operator may request that the Economic Regulation Authority reassess the inclusion or exclusion of its ~~contact details and modes of communication in respect of outages.~~ Facility from the Equipment List [Clause 3.18.3].

3 COMMUNICATIONS

2.23.1 Communication of ~~outage information~~Outage Information

~~2.2.13.1.1~~ Communication of outage requests and notifications ~~shall~~**must** be made through ~~System Management's Market Information Technology System ("SMMITS") web interface~~**AEMO's nominated IT system** as soon as practicable, unless otherwise set out in this Procedure.

~~2.2.23.1.2~~ Where this Procedure requires a Rule Participant to provide confirmation in ~~SMMITS~~**AEMO's IT system** of a request or notification made using an alternative communication method, the Rule Participant must record that confirmation in ~~SMMITS~~**AEMO's IT system** as soon as practicable after making the relevant request or notification.

3.1.3 During periods when ~~SMMITS~~**AEMO's IT system** is unavailable Rule Participants must:

- (a) provide any requests and notifications required to be communicated through ~~SMMITS~~**AEMO's IT system** under this Procedure by an alternative communication method defined in the PSOP: Communications and Control Systems or as otherwise directed by ~~System Management.~~**AEMO; and**
- (b) ~~When SMMITS~~**Once AEMO's IT system** becomes available ~~again after a period during which it has been unavailable, Rule Participants must~~ update ~~SMMITS~~**AEMO's IT system** as soon as practicable to record any requests and notifications provided under ~~Paragraph 2.3.3—step 3.1.3.~~

2—SWIS EQUIPMENT LIST

Market Rules ~~[MR 3.18.2(a) & (b)]~~ require System Management to compile and maintain a list of all equipment in the SWIS that is subject to outage scheduling by System Management.

2.1—Content of the equipment list

6. ~~In addition to the requirements of the Market Rules **[MR 3.18.2(c)]** the list of equipment must include:~~
 - a. ~~All network circuits that could affect the output from a generating Facility during a Planned Outage of that circuit; and~~
 - b. ~~All Synergy generating facilities; and~~
 - c. ~~All Non-Synergy generating facilities with output ratings in excess of 10MW; and~~
 - d. ~~Any Facilities contracted to provide Ancillary Services that are not covered by the above.~~
7. ~~Market Generators and Loads with a name plate capacity rating less than 10MW may be included in the equipment list, where outage scheduling is required for the maintenance of Power System Security and Power System Reliability, as specified in the Market Rules **[MR 3.18.2A]**.~~
8. ~~System Management must consider the following factors in making a decision as to whether to include or exclude a piece of equipment on the list:~~
 - a. ~~The safety of equipment, personnel and the public; and~~
 - b. ~~Power System Security and Power System Reliability.~~
9. ~~System Management must update the equipment list as soon as practicable after new equipment that is required to be subject to outage scheduling is added to the SWIS **[MR 3.18.2(b)]** and provide the revised equipment list to the IMO as soon as practicable **[MR 3.18.2(e)]**.~~
10. ~~Notwithstanding Paragraph 3.1.4, System Management must review the equipment list at least once every six months to determine if any updates are required.~~
11. ~~Where following the review referred to in Paragraph 3.1.5, System Management determines that an update to the equipment list is necessary it must complete the required updates and provide the revised equipment list to the IMO as soon as practicable **[MR 3.18.2(e)]**.~~

2.2—Reconsideration of items on the equipment list

12. ~~A Market Participant or Network Operator may request that the Independent Market Operator reassess the inclusion or exclusion of its Facility or item of equipment on the list in accordance with the Market Rules **[MR 3.18.3]**.~~

13. Before requesting the IMO to conduct a reassessment under Paragraph 3.2.1 a Market Participant or Network Operator may initially contact System Management to discuss the inclusion or exclusion of its Facility or item of equipment on the list.

3—OUTAGE SCHEDULE

The requirements for System Management to maintain an outage schedule, containing information on all Scheduled Outages are specified in the Market Rules [MR 3.18.4].

14. The outage schedule must contain a list of all accepted and approved outages.
15. The outage schedule must contain the identity of the item of equipment and the planned starting and completion times of each Outage Plan accepted by System Management, up to three years ahead.

The Market Rules [MR 3.18.5D] specify that System Management may disclose information from the outage schedule to a Network Operator to coordinate outage timings.

4—OUTAGE PLANS

4 OUTAGE SCHEDULING

4.1 Maintenance of the Outage Schedule

- 4.1.1 AEMO must maintain an Outage Schedule that contains details of each Outage Plan [Clause 3.18.4] that:
- (a) AEMO has accepted under step 6.1.4; or
 - (b) the ERA has directed AEMO to include as per clause 3.18.15(f) of the WEM Rules.

2.34.2 Outage Plan Information Requirements

- 2.3.14.2.1 Market Participants and Network Operators must submit requests for acceptance of Outage Plans through SMMITSAEMO's nominated IT system.

16. System Management must accept an An Outage Plan that:

- 2.3.24.2.2 contains must contain the information specified in clause 3.18.6 of the MarketWEM Rules [MR 3.18.6]; and must represent the good faith intention of the Market Participant or Network Operator to remove from service, or de-rate, the relevant Facility or item of equipment, for maintenance [Clause 3.18.7].
- a. is submitted in accordance with the requirements of this Procedure; and
 - b. meets the criteria for evaluating Outage Plans specified in the Market Rules [MR 3.18.11].

- 4.2.3 An Outage Plan submitted under step 1 must include, amongst other items, an:
- (a) Outage Risk Assessment, being an assessment of risks that might extend the outage [Clause 3.18.6(e)]; and

(b) Outage Contingency Plans, being contingency plans for the early return to service of the Facility or item of equipment [Clause 3.18.6(g)].

4.2.4 An Outage Plan submitted under step 1 is valid where the Facility:¹

- (a) is available for dispatch, or capable of being put into that state, just prior to the commencement of the proposed outage; and
- (b) is capable of being available for dispatch for the duration of the Outage Plan.

4.2.5 The Outage Contingency Plan provided in step 4.2.2 must include the following details:

- (a) the steps the Participant will follow if AEMO were to request the relevant Facility or item of equipment to return to service;
- (b) For a Network Operator, where relevant, other measures that can be employed in order to manage Power System Security and Power System Management Reliability when the Facility cannot be returned to service, including but not limited to measures such as:
 - (1) partial restoration of the Facility;
 - (2) bypass of affected equipment;
 - (3) dispatch of a Network Control Service arrangement; and
 - (4) alternative operation of other equipment (e.g. open point);
- (c) any limitations that AEMO may need to take into account in the management of Power System Security and Power System Reliability when the Outage Contingency Plan is enacted, including, but not limited to:
 - (1) For a Network Operator:
 - (A) alternative protection operation;
 - (B) revised Equipment Limits or Security Limits.; or
 - (2) For a Market Generator, any reduction in capacity as a result of early return to service.

~~2.3.34.2.6~~ AEMO may require the Market Participant or Network Operator to clarify or provide additional information in relation to an accepted Outage Plan prior to approval of enable the Outage Plan— to be assessed.

4.1—Changes to an Outage Plan

~~The requirements for Market Participants or Network Operators to revise plans to remove from service or de-rate an item of equipment are specified in the Market Rules [MR 3.18.8 and MR 3.18.9].~~

~~17. A Market Participant or Network Operator wishing to withdraw an Outage Plan pursuant to the Market Rules [MR 3.18.8] must:~~

- ~~a. if the Outage is scheduled to commence within 24 hours, as soon as practicable notify System Management by telephone and provide confirmation through SMMITS; or~~
- ~~b. otherwise, as soon as practicable inform System Management through SMMITS.~~

~~18. A Market Participant or Network Operator may request to change times in an approved Outage Plan so long as the change does not extend the~~

¹ REFERENCE BLUEWATERS CASE JUDGEMENT

Outage beyond the approved period and pursuant to the Market Rules ~~[MR 3.18.9]~~ must:

- a. ~~if Where AEMO requests further information in step 4.2.6, AEMO must determine a timeframe for the information requested that will allow adequate time for the Outage is scheduled to commence within 24 hours, as soon as practicable notify System Management by telephone and provide confirmation through SMMITS; or~~
- b. ~~otherwise, as soon as practicable inform System Management through SMMITS.~~

~~Note that it is the Market Participant's responsibility to ensure their Balancing Submissions are consistent with their Outage Plans at all times.~~

~~4.2 Outage Plans lodged within the final six weeks~~

~~The requirements applying to an Outage Plan first submitted within 6 weeks of the commencement time of the outage are specified in the Market Rules [MR 3.18.7A].~~

19. ~~In assessing whether to reject an Outage Plan [MR 3.18.7A], System Management must take into account:~~

~~2.3.44.2.7 If the Outage Plan arises from a need to carry out relatively urgent to be assessed, and unforeseen maintenance on its Facility or item of equipment, when the the Market Participant or Network Operator became aware of the need; and must provide the information requested within that timeframe.~~

- a. ~~Whether the nature of the work to be carried out on the Facility or item of equipment makes it difficult to plan times accurately in advance, or the work is contingent on actions outside the control of the Market Participant or Network Operator.~~

20. ~~When System Management is unable to assess an Outage Plan in the time available, System Management may reject the Outage Plan and require the Market Participant or Network Operator to resubmit the Outage Plan.~~

~~4.3 Grouping of Associated Outage Plans~~

~~The requirements for Market Participants and Network Operators to coordinate outages are specified in the Market Rules [MR 3.18.5C].~~

21. ~~In the situation where a close interdependency exists between outages on multiple Facilities or items of equipment, System Management may assess the associated Outage Plans together and may approve, review or reject the group as a whole.~~

~~5 ACCEPTANCE OF OUTAGE PLANS~~

~~5.1 Assessment of Outage Plans~~

- ~~4.2.8 1. System Management AEMO must use reasonable endeavours to respond to a request for a proposed assess an Outage Plan received from a Market Participant or Network Operator within:~~

(a) 10 Business Days of receipt ~~offrom~~ a ~~generation Outage Plan~~Market Generator;
and ~~within~~

~~(a)(b)~~ 20 Business Days of receipt ~~offrom~~ a ~~network Outage Plan~~Network
Operator.

~~22. System Management must take all reasonable steps to expedite~~
~~assessments of all submitted Outage Plans.~~

~~5.2 Adequacy criteria for assessing the acceptability of Outage Plans~~

~~4.3 System Management~~Outage Plans lodged within six weeks of commencement

4.3.1 Where an Outage Plan is first submitted within 6 weeks of the commencement of the
outage, if there is insufficient time for the Outage Plan to be assessed, AEMO may
reject that Outage Plan without evaluation [Clause 3.18.7A].

4.3.2 In assessing whether an Outage Plan under step 4.3.1 should not be rejected without
evaluation, AEMO must take into account:

- (a) whether the Outage Plan arises from a need to carry out urgent and unforeseen
maintenance on its Facility or item of equipment;
- (b) when the Market Participant or Network Operator first became aware of the
need; and
- (c) whether the nature of the work to be performed prevents accurate scheduling in
advance, or is contingent on actions outside the control of the Market
Participant or Network Operator.

~~4.4 Network Outages that may impact a Market Participant's Facilities~~

4.4.1 Where a Network Outage impacts any Market Generator's Facilities, the Network
Operator must provide sufficient information to AEMO to demonstrate that it has used
best endeavours to inform that Market Generator [Clause 3.18.6(h)].

4.4.2 A Network Outage will unduly impact the operation of one or more Market
Participant's Registered Facilities in circumstances that include, but are not limited to,
where, to allow the Network Outage to commence, AEMO must dispatch a
Registered Facility not in accordance with the latest Balancing Merit Order.

4.4.3 Where a Network Outage impacts the operation of a Market Participant as indicated
in step 4.4.2, then AEMO may require the Network Operator and the affected Market
Participants coordinate the timing of their outages in order to minimise the impact of
the Network Outage on the Market Participant Facilities [Clause 3.18.5C].

4.4.4 To assist with the coordination of outages in step 4.4.3, AEMO may make information
from the Outage Schedule available to a Network Operator [Clause 3.18.5D]. This
information may include, but is not limited to, the following:

- (a) details of Outage Plans;
- (b) the contact details of Market Participants with relevant Outage Plans; and
- (c) relevant technical information able to be shared by AEMO.

4.4.5 Where AEMO accepts a Network Outage to which step 4.4.2 applies, and the
impacted Market Participant has not submitted an Outage Plan, the Market
Participant must lodge a Forced Outage or Consequential Outage in accordance with
step 10.

5 CHANGES TO OR WITHDRAWAL OF AN OUTAGE PLAN

5.1 Re-Scheduling or Cancelling an Outage Plan

- 5.1.1 Where a Market Participant or Network Operator no longer plans to remove from service or de-rate a Facility or an item of equipment as per an Outage Plan then it must cancel the relevant Outage Plan in AEMO IT's system as soon as practicable **[Clause 3.18.8]**.
- 5.1.2 Where a Market Participant or Network Operator intends to change the times of an outage from those indicated in the Outage Plan it must inform AEMO and submit a revised Outage Plan as soon as practicable **[Clause 3.18.9]**.
- 5.1.3 If a Planned Outage is scheduled to commence within 24 hours the Market Participant or Network Operator must notify AEMO of the changes to the Outage Plan by telephone and provide confirmation through AEMO's IT system as soon as practicable.

6 ACCEPTANCE OF OUTAGE PLANS

6.1 General

~~2.3-56.1.1~~ AEMO must assess the acceptability of Outage Plans using the criteria specified in ~~clause 3.18.11~~ of the MarketWEM Rules ~~[MR 3.18.11 (a) to (d) & MR 3.18.12]~~, based on the information specified in the PSOP: Power System Security and any relevant guidelines.

~~23. Acceptance by System Management of an Outage Plan must be based on the 2nd standard deviation (SD) PASA load forecast as specified in the Market Rules [MR 3.18.11(a)].~~

~~Due to the fact that, during summer, the 2nd SD of the weather adapted load forecast may exceed the 2nd SD of the PASA load forecast, an outage in the summer period is only accepted conditionally. However, this does not imply that the outage can or will be approved. Due to the variability of summer loads the final assessment is normally carried out 2 days prior to the scheduled outage commencement. This is because the assessment must be based on the more reliable weather-corrected load forecast. To increase the likelihood of approval, Market Participant's are advised to plan long duration outages to occur outside of the summer months, which are typically from the beginning of December to the end of March.~~

~~System Management may find an Outage Plan to be acceptable, acceptable under some circumstances, or not acceptable. The actions System Management is required to take in each case are specified in the Market Rules [MR 3.18.13].~~

5.3 Criteria for selection of Outage Plans in the event of conflicting Outage Plans

~~System Management must adhere to the criteria for the selection and prioritisation of Outage Plans as specified in the Market Rules [MR 3.18.14].~~

~~24. System Management must notify all affected Market Participants and Network Operators of any decision made [MR 3.18.14] via SMMITS and must use reasonable endeavours to confirm its decision by telephone.~~

~~6.1.2 An Outage Plan in step 6.1.1 must be valid and meet the requirements in step 4.2.4 to be able to be assessed as acceptable.~~

~~6.1.3 AEMO may assess an outage as acceptable under step 6.1.1 subject to conditions [Clause 3.18.13(c)].~~

~~6.1.4 An Outage Plan that AEMO has assessed in step 6.1.1 as acceptable is a Scheduled Outage [Clauses 3.18.10 and 3.19.1].~~

~~6.1.5 AEMO must perform the assessment in step 6.1.1 on an ongoing basis [Clause 3.18.10(b)].~~

~~6.1.6 Where, following a re-assessment in step 6.1.5, AEMO identifies that a Scheduled Outage or group of Scheduled Outages can no longer be accepted, AEMO must change the status of that outage, or group of outages [Clause 3.18.13].~~

2.46.2 Acceptance of non-complying Outage Plan for reasons of System Security

~~The Market Rules provide for System Management to permit~~AEMO may allow an Outage Plan to proceed even if it does not meet the criteria for acceptance as specified in the Market Rules [MR 3.18.11(e)].

~~This situation could, for example, arise in relation to outages intended to address ongoing plant unreliability.~~

~~6.2.1 Where an Outage Plan that does not meet the criteria for acceptance specified in Paragraph 6.2.1 [MR 3.18.1(a) to (d)] System Management may still accept the Outage Plan in step 6.1.1 if it considers that the preventing the outage would pose a greater threat to Power System Security or Power System Reliability over the long term than allowing the outage [Clause 3.18.11(e)].~~

~~6.2.2 Circumstances in which AEMO may accept an Outage Plan in step 6.2.1 include, but are not limited to:~~

- ~~(a) where an outage is required to address ongoing equipment or Facility unreliability that may impact or has impacted on Power System Security or Power System Reliability; and~~
- ~~(b) an item of equipment or a Facility was recalled from an outage prior to completion of the planned work and the impacted equipment or Facility requires a further outage to complete the planned work so that on return to service of the equipment or Facility the SWIS is able to be operated in a secure and reliable manner.~~

~~6.2.3 Factors that AEMO must consider in making a decision in step 6.2.1 include:~~

- ~~(a) whether increased security risk over the period of the outage is less than the longer-term risk reduction that would be achieved by allowing the outage to go ahead [MR 3.18.11(e)]. proceed. This may occur in circumstances including, but not limited to where:~~

- (1) If System Management accepts an revised forecast information is available indicating a high probability of a lower demand than indicated in the PASA second standard deviation forecasts:
 - (2) the proposed Outage Plan pursuant is for a short period and is intended to Paragraph 6.4.1, System Management must document its estimation of the extent avoid an outage for a longer period at a time of the risk including higher demand:
 - (3) there is limited opportunity to re-schedule the likelihood and consequences outage, a demonstrated need to have the outage as soon as possible, and ongoing advantages AEMO is of the opinion that arise over the longer term, as a result of accepting an the associated risks of conducting the outage can be managed. This also may include where the Outage has previously been recalled under clause 3.20.1 of the WEM Rules or rejected under clause 3.19.5 of the WEM Rules:
- (b) not proceeding with the Outage Plan could endanger the safety of any person, damage equipment important, or violate any applicable law.

2.56.3 Changes to power system conditions affecting Scheduled Outages—Outage Contingency Plans

1. Where System Management's forecast of power system conditions for a period coinciding with an Outage Plan occurs, such that the Outage Plan would no longer meet the criteria for acceptance, System Management may withdraw its acceptance of the Outage Plan and either deem that the Outage Plan is unacceptable, or deem that the Outage Plan is acceptable under certain circumstances.
2. Where System Management withdraws its acceptance of an Outage Plan, it must as soon as practicable notify the relevant Market Participant or Network Operator of its decision by telephone and confirm its decision via SMMITS.

6—PRE-ACCEPTED OUTAGES

- 6.3.1 From time to time where an Outage Plan is submitted well in advance of the commencement date, AEMO may allow a Participant to revise details in the Outage Contingency Plan after it has become a Scheduled Outage.
1. A Market Participant may request the acceptance of an Outage Plan by telephone no earlier than 8:00 am on the seventh day or Network Operator must receive AEMO's permission prior to the Trading Day on which the Outage is proposed to commence ('Pre-Accepted Outage').
 2. System Management may accept a request made in accordance with Paragraph 8.1 if it considers there is a likelihood that amending the Outage can be approved.
 3. If System Management accepts a Pre-Accepted Outage then the Market Participant must confirm the details Contingency Plan of the Outage Plan and request approval in SMMITS as soon as practicable but no later than 10:00 am on the second day prior to the Trading Day on which the Pre-Accepted Outage is proposed to commence.

4. ~~For avoidance of doubt, a Market Participant will not be considered to have complied with Paragraph 8.3, unless:~~
 - a. ~~the Market Participant has first complied with Paragraph 8.1; and~~
 - b. ~~System Management has accepted the request pursuant to Paragraph 8.2.~~
5. ~~Where a request for approval has been made in accordance with Paragraph 8.3, System Management must apply the approval framework in accordance with Section 9 of this Procedure.~~
6. ~~System Management must not approve a request for approval made under Paragraph 8.3 unless it has first accepted the request by telephone in accordance with Paragraph 8.2.~~

2.5.16.3.2 ~~Approval of a Scheduled Outages~~ Outage.

~~The requirements for a Market Participant or Network Operator to request approval of a Scheduled Outage are specified in the Market Rules [MR 3.19.1].~~

~~The criteria that System Management must adhere to when assessing whether to grant approval of Scheduled Outage requests are specified in the Market Rules [MR 3.19.6].~~

25. ~~A Market Participant or Network Operator must request, and receive notice of, approval of an accepted Outage Plan via SMMITS prior to conducting the Outage referred to in the Outage Plan.~~
26. ~~Where a Market Participant requires an approval of an outage earlier than the two days in advance as specified in the Market Rules [MR 3.19.1], the Market Participant may raise a request to System Management. System Management must assess each such request on its own merits.~~
27. ~~At the time the application is made under Paragraph 9.1 the Market Participant or Network Operator must also notify System Management of any change to the information contained in the Outage Plan originally provided to System Management.~~
28. ~~Notification by System Management of either an approval or rejection of a Scheduled Outage must be made via SMMITS.~~

~~System Management would consider fuel in evaluating an Outage Plan only when there is known shortage of fuel to the extent that it may impact on the availability of generators and the security of the system. The fuel shortage can be due to restrictions arising from supply or transportation. When this happens, System Management would confirm the feasibility of its dispatch plans with the relevant Market Participants. Where the Market Participant confirms the loss of generation due to fuel, System Management would simulate accordingly in the PASA.~~

37 **REQUESTS FOR OPPORTUNISTIC MAINTENANCE**

7.1 **General**

7.1.1 **Opportunistic Maintenance** ~~refers to approved outages that are~~ is a request from a

Market Participant or Network Operator for AEMO to approve an outage of a Facility or item of equipment to be carried out without previously having been subject to Acceptance. Applications for during a Trading Day that is not a Scheduled Outage [Clause 3.19.2].

3.1.17.1.2 The WEM Rules describes two types of Opportunistic Maintenance generally carry a lower probability of approval because more of the factors governing power system security are 'locked in' by the time such an application is made.;

(a) The requirements for a Market Participant or Network Operator to request approval of Day-ahead Opportunistic Maintenance are specified in the Market Rules [MR 3.19.2(a)] ("day-ahead opportunistic maintenance") and [MR 3.19.2(b)] ("on the day(DAOM) covers requests made between 10:00 AM on the day prior to the Scheduling Day and 10:00 AM on the Scheduling Day [Clause 3.19.2(a)]; and

(b) On the Day Opportunistic Maintenance"). System Management must have regard to the requirements in the Market Rules [MR 3.19.3A] in assessing whether to grant (ODOM) covers requests made at any time on the current Trading Day not later than 1 hour prior to the commencement of the Trading Interval during which the outage is due to commence [Clause 3.19.2(b)].

3.1.27.1.3 For a request for Opportunistic Maintenance, to be valid, it must include all of the information specified in clause 3.18.6 of the WEM Rules [Clause 3.19.2].

3.1.37.1.4 The criteria that System Management must adhere to when assessing whether to grant approval for Opportunistic Maintenance requests are specified in the Market Rules [MR 3.19.6] is valid where the Facility:²

(a) is available for dispatch, or capable of being put into that state, just prior to the commencement of the Opportunistic Maintenance; and

(b) is capable of being available for dispatch for the duration of the Opportunistic Maintenance.

7.2 Pre-condition for Opportunistic Maintenance

7.2.1 AEMO may decline to approve Opportunistic Maintenance for a Facility or item of equipment where it considers that the request has been made principally to avoid exposure to Capacity Cost Refunds rather than to perform maintenance [Clause 3.19.3A(c)].

7.2.2 Before approving an Opportunistic Maintenance request, ~~System Management may at its sole discretion that AEMO considers may meet the conditions in step 7.2.1.~~ AEMO may require ~~at the Market Participant's Participant or Network Operator's authorised personnel included in the relevant contact list~~ Operator to make ~~provide~~ a written declaration that the capacity for which Opportunistic Maintenance is being sought is available prior to the outage commencing. ~~System Management is available.~~

3.1.47.2.3 AEMO must reject any Opportunistic Maintenance request where the relevant Market Participant or Network Operator does not comply with ~~such a request in step 7.2.2.~~

~~Paragraph 10.1.1, relates to System Management's right under the Market Rules [MR 3.19.3A(c)] to reject an outage request that it considers to be made principally to avoid exposure to Reserve Capacity refunds.~~

² REFERENCE BLUEWATERS CASE JUDGEMENT

3.27.3 Day-ahead Opportunistic Maintenance (DAOM)

~~3.2.17.3.1~~ A Market Participant or Network Operator ~~seeking to request day~~requesting Day-ahead Opportunistic Maintenance must submit ~~the~~its request via SMMITSAEMO's nominated IT system.

- ~~1. Requests for approval of day-ahead Opportunistic Maintenance can only be made at any time between 10:00 am on the day prior to the Scheduling Day and 10:00 am on the Scheduling Day for that Trading Day, where the request relates to an outage to occur at any time and for any duration during the following Trading Day [MR 3.19.2(a)].~~

~~Requests for day-ahead Opportunistic Maintenance in relation to Paragraph 10.2.2 must not span two consecutive Trading Days [MR 3.19.3A(b)].~~

- ~~2. Requests for approval of day-ahead Opportunistic Maintenance must be processed as follows:
 - ~~a. Applications made between 10:00 am and 3:30 pm on the day prior to the Scheduling Day must be approved or rejected by 8:00 am on the Scheduling Day; or~~
 - ~~b. Applications made between 3:30 pm on the day prior to the Scheduling Day and 6:00 am on the Scheduling Day must be approved or rejected by 8:00 am on the Scheduling Day subject to staff availability, and in any case by 12:00 pm on the Scheduling Day; or~~
 - ~~c. Applications made between 6:00 am and 10:00 am on the Scheduling Day must be approved or rejected by 12:00 pm on the Scheduling Day.~~~~

~~The time required for processing day-ahead Opportunistic Maintenance requests varies depending on the complexity of the assessment required. Participants are encouraged to allow as much time as possible as System Management must reject requests that cannot be assessed in the time available.~~

- ~~3. System Management must not approve a request for a day-ahead Opportunistic Maintenance after 12:00 pm on the Scheduling Day.~~
- ~~4. System Management must as soon as practicable provide confirmation of its approval or rejection of a day-ahead Opportunistic Maintenance request via SMMITS.~~

3.37.4 On the day Opportunistic Maintenance (ODOM)

~~29.~~ A Market Participant or Network Operator ~~seeking to request~~ Opportunistic Maintenance at any time on the Trading Day must:

~~7.4.1~~ make an application for the approval of an~~on~~requesting On the day Opportunistic Maintenance (ODOM) must:

- ~~(a)~~ make the request by telephone at least one hour before the commencement of the Trading Interval during which the requested ~~outage~~ODOM is due to commence [**MR Clause 3.19.2(b)**]; and
- ~~(b)~~ as soon as practicable, confirm the request via SMMITSAEMO's IT system.

7.4.2 The effect of AEMO may only approve ODOM where the Market Rules ~~[MR]~~ outage is to perform minor maintenance ~~[Clause 3.19.2(b)] is (i)~~.

7.4.3 Circumstances which may fulfil the requirements of step 7.4.2 include, but are not limited to:

- (a) inspections;
- (b) preventative maintenance;
- (c) corrective maintenance;
- (d) works in the vicinity of the equipment or Facility; and
- (e) testing ~~that the earliest an on the day would not otherwise require a Commissioning Test Plan.~~

7.4.4 AEMO may only approve ODOM where the outage does not require any change in scheduled energy or Ancillary Services ~~[Clause 3.19.2(b)ii]~~. This includes, but is not limited to:

- (a) for Network Outages:
 - (1) the Network Outage would constrain the operation of a Market Generator that has otherwise indicated full availability for dispatch; or
 - (2) the Network Outage would require additional Ancillary Services to be scheduled.
- (b) for Generator Outages:
 - (1) where a generator has a position in the Balancing Merit Order that, in the reasonable opinion of AEMO, could result in their dispatch during the period of the ODOM request; or
 - (2) where a generator has a position in the LFAS Upwards Merit Order or LFAS Downwards Merit Order that, in the reasonable opinion of AEMO, could result in their dispatch during the period of the ODOM request.

48 APPROVAL OF SCHEDULED OUTAGES AND OPPORTUNISTIC MAINTENANCE ~~OUTAGE CAN COMMENCE IS 9:00 AM ON THE TRADING DAY.~~

8.1 System Management must not approve an on the day General

8.1.1 A Market Participant or Network Operator must request approval of a Scheduled Outage no later than two days prior to the date of commencement of any outage ~~[Clause 3.19.1]~~.

8.1.2 AEMO must assess a request for approval of a Scheduled Outage or Opportunistic Maintenance request which it considers would require any change in energy ~~scheduled using the criteria in clause 3.19.6 of the WEM Rules based on the information available to AEMO at the time of the assessment [Clause 3.19.3]~~.

4.1.18.1.3 To approve a Scheduled Outage in step 8.1.2, AEMO must determine whether the Scheduled Outage remains acceptable in accordance with the Forecast BMO, or in scheduled Ancillary Services ~~[MR 3.19.2(b)iii]~~ steps 6.1.1 and 6.1.2.

4.1.28.1.4 As a consequence of Paragraph 10.3.2, a non-Synergy Market Generator needs to ~~To ensure that an on the day the power system can be operated within the Technical Envelope, AEMO may consider fuel availability in assessing a Scheduled Outage or Opportunistic Maintenance outage request is consistent with the Facility's position in the BMO and latest Forecast BMO.~~ ~~[Clause 3.19.6(c)]~~.

8.1.5 ~~System Management must as soon as practicable prior to the commencement of the proposed on the day AEMO must either approve or reject the Scheduled Outage or Opportunistic Maintenance, provide confirmation to a and inform the Market Participant or Network Operator of its decision to approve or reject a request for on the day as soon as practicable via AEMO's IT system [Clause 3.19.4].~~

4.1.38.1.6 ~~An outage, including Opportunistic Maintenance by telephone and confirm the approval via SMMITS, which is approved by AEMO under step 8.1.5 is a Planned Outage [Clause 3.19.11].~~

~~30. System Management must as soon as practicable log in SMMITS all approvals and rejections and the reasons for System Management's decision.~~

7—OUTAGE RECALLS

8.1.7 ~~When a situation arises where Power Except for ODOM, a Market Participant or Network Operator may not commence a Planned Outage (including Day Ahead Opportunistic Maintenance) unless AEMO has provided confirmation of its approval of the outage request via its IT system.~~

8.2 Approval of non-complying Scheduled Outage for reasons of System Security is at risk and the cancellation of outages could potentially alleviate the situation,

8.2.1 ~~AEMO may allow an Outage Plan to proceed that does not meet the criteria in step 8.1.2 if it considers that preventing the outage would pose a greater threat to Power System Security or Power System Reliability over the long term than allowing the outage [Clause 3.19.6 (e)].~~

8.2.2 ~~Circumstances in which AEMO may accept an Outage Plan in step 8.2.1 include, but are not limited those detailed in step 6.2.2.~~

8.2.3 ~~Factors that AEMO must consider in making a decision in step 8.2.1 include those detailed in step 6.2.3.~~

9 CHANGES AFFECTING A PLANNED OUTAGE

9.1 Changes to Power System Management Conditions Affecting a Planned Outage

9.1.1 ~~Where power system conditions change such that the Planned Outage would no longer be approvable, AEMO may cancel the Planned Outage [Clause 3.19.5].~~

9.1.2 ~~Circumstances that AEMO must consider all current Planned in making a decision under step 9.1.1 include but are not limited to:~~

- (a) a change in AEMO's forecast of power system conditions;
- (b) a change in weather forecast during the Scheduled Outage causing a significant increase in the forecast load; and
- (c) an unplanned outage of a major Facility or item of equipment that could restrict AEMO's ability to operate SWIS within the Technical Envelope.

9.1.3 ~~The general priority of assessment that AEMO will use to cancel outages in step 9.1.1 is:~~

- (a) Opportunistic Maintenance [Clause 3.19.6(d)(v)]:
- (b) Scheduled Outages and outages in progress and assess whether rejecting that were scheduled less than one or more Planned month ahead:
 - (1) That were deferred [Clause 3.19.6(d)(iv)]: and then
 - (2) That were not deferred [Clause 3.19.6(d)(iii)]:
- ~~(a)(c)~~ Scheduled Outages or recalling equipment to service may assist in reducing the identified risk to Power System Security that were scheduled more than one month ahead:

In a High-Risk Operating State, System Management may cancel or defer Planned Outages that have not yet commenced. In an Emergency Operating State, System Management may additionally recall to service Facilities that are on outage according to their Outage Contingency Plans.

- (1) ~~If in~~ That were deferred [Clause 3.19.6(d)(ii)]: and then
- (2) That were not deferred [Clause 3.19.6(d)(i)]:
- (d) Outages approved under step 8.2.1.

9.2 Extending the viewend time of System Management there is benefit in the action referred to in Paragraph 11.1, System Management may contactPlanned Outage

9.2.1 Where the Market Participant or Network Operator and discusswishes to extend the impactend time of rejecting the outage or recalling the equipment to service. If such contact is made, System Managementa Planned Outage a new Outage Plan must informbe submitted under step 1 for every Trading Interval beyond the end time of the existing Planned Outage.

4.1.49.2.2 Where AEMO is unable to approve an Outage Plan submitted under step 9.2.1, the Market Participant or Network Operator must submit a Forced Outage under step 1 for any part of the prevailing operating state and/or any likely change to the operating state requiring the action referred to in Paragraph 11.1. Planned Outage that exceeds its approved duration [Clause 3.21.1(b)].

10 THE MARKET PARTICIPANT OR NETWORK OPERATOR MUST COOPERATE WITH SYSTEM MANAGEMENT AND DETERMINE WHEN THE FORCED OUTAGES AND CONSEQUENTIAL OUTAGES

10.1 Information Requirements

- 1.—Where a Facility or item of equipment can be returned to service and the best way of proceeding with such action. The Market Participant or Network Operator must give this information to System Management as soon as practicable.
- 2.—Market Participants and Network Operators must comply with the directions of System Management to the extent that they are required to do so under the prevailing Operating State.
- 3.—System Management must as soon as practicable update outage cancellations and recalls in SMMITS.

8—SUFFERS A FORCED OUTAGES AND OUTAGE OR A CONSEQUENTIAL OUTAGES

The requirements for Forced or Consequential Outages are specified in the Market Rules [MR 3.21].

~~4.1.5~~10.1.1 Where a Facility or item of equipment is unavailable or de-rated ~~Outage~~, the relevant Market Participant or Network Operator ~~experiencing the unavailability or de-rating~~ must communicate the ~~nature~~details of that unavailability or de-rating ~~the outage~~ by telephone to ~~System Management~~AEMO as soon as practicable, ~~using contact details that are advised from time to time as specified in the Market Rules~~ [MR ~~[Clause 3.21.74]~~].

In addition to the notification in Paragraph 12.1, the relevant Market Participant must make a new Balancing Submission as soon as practicable taking into account the unavailability or de-rated capacity (any Internal Constraint) of the Facility [MR 7A.2.10(a)].

~~4.1.6~~10.1.2 The relevant Market Participant or Network Operator must as soon as practicable ~~confirm the notification provided under Paragraph 12.1~~step 10.1.1 must be confirmed via SMMITS ~~AEMO's nominated IT system as soon as practicable~~ [Clause 3.21.4].

31. The relevant Market Participant or Network Operator must, upon request, inform System Management of the Facility or item of equipment's status and provide a good faith estimate of the likely return to service time.
32. Whenever System Management receives communications from a Market Participant or Network Operator, including but not limited to one or more of the following (as applicable):
- a. ~~Electronic communications via e-mail or SMMITS; or~~
 - b. ~~Voice communications; or~~
 - c. ~~SCADA,~~
- ~~relating to the capabilities of their Facility or item of equipment System Management must determine whether the affected Facility or item of equipment is unavailable for any period or periods.~~

11 THE MARKET PARTICIPANT OR NETWORK OPERATOR MUST PROVIDE A FULL AND FINAL DESCRIPTION OF THE PLANNED OUTAGE RATE AND FORCED OUTAGE RATE

11.1 Calculation of Planned Outage, Rate and Forced Outage or Consequential Rate

33. ~~AEMO must calculate the Planned Outage to System Management, via SMMITS by midnight on the date specified in the Market Rules [MR 3.21.7].~~
34. ~~System Management must investigate any communication relating to the availability of a Facility or item of equipment that is not in accordance with the information contained in SMMITS [MR 3.21.7].~~

35. If the Market Participant believes it has suffered a Consequential Outage, the Market Participant may provide notice from an Authorised Officer to System Management confirming why the Outage should be considered to be a Consequential Outage within the time limit specified in the Market Rules **[MR 3.21.8]**.
36. A notice provided under Paragraph 12.7 must be signed by an Authorised Officer and may be provided to System Management in person, by email or post.
37. Where a Market Participant provides notice in accordance with Paragraph 12.7 above, System Management must provide a notification of receipt to the impacted Market Participant as soon as practicable.
38. System Management must determine whether to classify the outage as a Consequential Outage in accordance with the requirements of the Market Rules **[MR 3.21.2]**.
39. In determining whether a Facility has experienced a Consequential Outage System Management must accept the information provided under Paragraph 12.7 unless the information is inconsistent with other information held by System Management **[MR 3.21.9]**.

*The Market Rules define a rate and the Forced Outage **[MR 3.21.1]** and a Consequential Outage **[MR 3.21.2]**.*

*If a Market Participant does not provide System Management with a notice required under Paragraph 12.7 above, the Outage will not be deemed to be a Consequential Outage **[MR 3.21.10]**.*

9 — CALCULATION OF PLANNED OUTAGE RATE AND FORCED OUTAGE RATE

4.1.711.1.1 The Planned Outage rate and Forced Outage rate for a Facility must be calculated by the IMO in accordance with Appendix 4 of this Procedure, A and Appendix B **[Clauses 4.1.1(h) and 3.21.12]**.

APPENDIX 1: CALCULATION OF PLANNED OUTAGE RATE AND FORCED OUTAGE RATE

APPENDIX A. CALCULATION OF FORCED OUTAGE RATE

This Appendix presents the methodology for calculating the Forced Outage rate ~~and Planned Outage rate~~ of a Facility over a period of time (P) for the purposes of the Market Rules.

For the purposes of ~~MRWEM Rules~~ **[Clause 4.11.1(h)]**: P = 36 Months

1. Forced Outage rate calculation

<u>Forced Outage Rate Calculation</u>	Definitions
<p>Forced Outage rate (%):</p> $\frac{(\text{FOH} + \text{EFDH})}{\text{PH}} \times 100$	<p>FOH (Forced Outage Hours) = sum of all Trading Intervals,</p> <p>Where:</p> <p>Outage MW = Capacity Credit (MW) and the Outage Reason is Forced and during the period P multiplied by 0.5.</p> <p>EFDH(Equivalent Forced Derated Hours) = sum of all Trading Intervals,</p> <p>Where:</p> <p>Outage MW < Capacity Credit (MW) and the Outage Reason is Forced and during the period P multiplied by 0.5 multiplied by Outage MW/Capacity Credit (MW).</p> <p>PH (Period hours) =</p> <p>where the Facility has been operating over all of period P, the number of Trading Intervals that occurred in period P, multiplied by 0.5; or</p> <p>where the Facility has been operating for less than period P, the number of Trading Intervals that occurred in period P after the Facility commenced operation as advised by the IMO, multiplied by 0.5.</p>

APPENDIX B. CALCULATION OF PLANNED OUTAGE RATE

This

2. ~~Planned Outage rate calculation~~

Appendix presents the methodology for calculating the Planned Outage rate of a Facility over a period of time (P) for the purposes of the Market Rules.

For the purposes of WEM Rules [Clause 4.11.1(h)]: P = 36 Months

<u>Planned</u> Outage Rate Calculation	Definitions
<p>Planned Outage rate (%):</p> $\frac{(\text{POH} + \text{EPDH})}{\text{PH}} \times 100$	<p>POH (Planned Outage Hours) = sum of all trading intervals</p> <p>Where:</p> <p>Outage MW = Capacity Credit (MW) and the Outage Reason is Planned and during the period P multiplied by 0.5.</p> <p>EPDH (Equivalent Planned Derated Hours) = sum of all trading intervals</p> <p>Where:</p> <p>Outage MW < Capacity Credit (MW) and the Outage Reason is Planned and during the period P multiplied by 0.5 multiplied by Outage MW/Capacity Credit (in MW).</p> <p>PH (Period hours) =</p> <p>where the Facility has been operating over all of period P, the number of Trading Intervals that occurred within the last 36 months, multiplied by 0.5; or</p> <p>where the Facility has been operating for less than period P, the number of Trading Intervals that occurred in period P after the Facility commenced operation as advised by the IMO, multiplied by 0.5.</p>