



Outage Data Conversion Procedure

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IMPORTANT NOTICE – EXPLANATORY NOTES

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1. Introduction

1.1. Purpose and scope

- 1.1.1. This Procedure: Outage Data Conversion (**Procedure**) is made in accordance with AEMO’s functions under clause 1.57.10 of the Wholesale Electricity Market Rules (**WEM Rules**).
- 1.1.2. The *Electricity Industry Act 2004*, the WEM Regulations and the WEM Rules prevail over this Procedure to the extent of any inconsistency.
- 1.1.3. The purpose of this Procedure is to document:
 - (a) the process AEMO will follow to undertake the Outage Data Conversion; and
 - (b) the processes to be followed by AEMO, Market Participants and the Network Operator in relation to the Outage Data Conversion to ensure compliance with obligations in respect of Outages under Chapter 3 of the Post-Amended WEM Rules.
- 1.1.4. Appendix A of this Procedure outlines the head of power clauses that this Procedure is made under, as well as other obligations in the WEM Rules covered by this Procedure.

1.2. Definitions

- 1.2.1. Terms defined in the *Electricity Industry Act 2004*, the WEM Regulations and the WEM Rules have the same meanings in this Procedure unless the context requires otherwise.
- 1.2.2. The following definitions apply in this Procedure unless the context requires otherwise.

Table 1 Definitions

Term	Definition
Outage Data Conversion	The transfer and conversion, as applicable, of Outage Records under the Pre-Amended Rules to the relevant systems under the Post-Amended Rules
Outage Quantity	The quantity of capacity (MW) which the Market Participant has recorded as being effected by the Outage to the Facility in the SM-MPI.
Outage Records	Data and other information relating to or in connection with Outages
Outage Management System	The systems used by AEMO to record data and information relating to Outages under the Post-Amended Rules
Post-Amended Rules	Means the WEM Rules as in force immediately after the New WEM Commencement Day, as defined in clause 1.57.1 of the WEM Rules.
Pre-Amended Rules	Means the WEM Rules as in force immediately before the New WEM Commencement Day, as defined in clause 1.57.1 of the WEM Rules.
RFM Environment	Means a suite of IT systems available to Market Participants for testing of Post-Amended Rules functionality.
SM-MPI	The Outage Management System used by AEMO to record data and information relating to Outages under the Pre-Amended Rules

1.3. Interpretation

- 1.3.1. The following principles of interpretation apply in this Procedure unless the context requires otherwise.
 - (a) Clauses 1.3 to 1.5 of the WEM Rules apply in this Procedure.

- (b) References to time are references to Australian Western Standard Time.
- (c) Terms that are capitalised, but not defined in this Procedure, have the meaning given in the WEM Rules.
- (d) A reference to the WEM Rules or WEM Procedures includes any associated forms required or contemplated by the WEM Rules or WEM Procedures.
- (e) Words expressed in the singular include the plural and vice versa.
- (f) A reference to a paragraph refers to a paragraph of this Procedure.
- (g) A reference to a clause refers to a clause or section of the WEM Rules.
- (h) References to WEM Rules in this Procedure in bold and square brackets [Clause XXX] are included for convenience only, and do not form part of this Procedure.
- (i) Text located in boxes and headed as Explanatory Note X in this Procedure is included by way of explanation only and does not form part of this Procedure. The Procedure prevails to the extent of any inconsistency with the explanatory notes contained within it.
- (j) The body of this Procedure prevails to the extent of any inconsistency with the figures, diagrams, appendices, schedules, annexures or attachments contained within this document.

2. Outage Data Conversion

E[A] Explanatory note - Outages

Outages recorded in the SM-MPI, which cover periods including the New WEM Commencement Day and beyond, will need to be recorded in both the OMS and the SM-MPI.

Outages that finish prior to the New WEM Commencement Day (including retrospective Forced Outages for the month of September) only need to be recorded within the SM-MPI.

2.1. Timeline

2.1.1. The Outage Data Conversion from the SM-MPI to the Outage Management System (OMS) will include the following actions which will occur at the dates and times identified in the table below:

Table 2 Outage Data Conversion Timeline

Date	Time	Action
On and from Friday 1st of September 2023	8:00am	AEMO to create a snapshot of existing Market Participant Outage Records, in the SM-MPI at that point in time, to migrate and perform the Outage Data Conversion for Market Participants as soon as practicable.
Before Friday 15th of September 2023	5:00pm	Market Participants to review and action any relevant Outage Records migrated to the OMS.
On and from Sunday 1st of October 2023	8:00am	AEMO to perform the Outage Data Conversion for the Network Operator. The Network Operator to review and action any relevant migrated Outage Records.

2.1.2. AEMO will perform assessments on new and revised Outage Records in the OMS, where applicable, in accordance with WEM Procedure: Outages.

2.2. Criteria

2.2.1. AEMO will migrate existing Outage Records in the SM-MPI which meet the following the criteria:

- (a) Has an End Interval on or after 01/10/2023 08:00AM
- (b) Has a Commencement Interval before 01/10/2026 08:00AM.
- (c) Has a latest version status of: Awaiting Acceptance, Awaiting Approval, Accepted, Accepted with Conditions, Approved, Approved with Conditions or Assessment Underway; and
- (d) Has an Outage type of: Proposed Outage Plan (POP), Opportunistic Maintenance Outage (OPP), Forced Outage (FRC) or Forced Network Limitation (FNL).

Table 3 Outage Type Conversion Table

Outage Type in SM-MPI	Outage Type in OMS
Forced (FRC)	Forced Outage
Forced Network Limitation (FNL)	Forced Outage
Proposed Outage Plan (POP)	Planned Outage
Opportunistic Maintenance Outage (OPP)	Opportunsitic Outage

Outage Status in SM-MPI	New Outage Status in OMS
Awaiting Acceptance	Awaiting Assessment
Awaiting Approval	Awaiting Assessment
Accepted	Awaiting Assessment
Accepted with Conditions	Awaiting Assessment
Approved	Approved, Accepted (if the Outage Type is a Forced Outage)
Approved with Conditions	Approved (with an “At Risk” flag of True)

3. Market Participant Outages

3.1. Process to be followed by AEMO [Clause 1.57.10(a)]

3.1.1. AEMO will convert Market Participant Outage Records that meet the criteria outlined in paragraph 2.2 with the following caveats:

- (a) The Outage Status from the latest version of the existing Outage Record is used in the conversion.
- (b) Where applicable, the Outage Quantity is translatable to Remaining Available Capacity figures at a Facility and Facility Technology Type level in accordance with the this paragraph 3.1.

- (c) Overlapping Outages are taken into consideration when calculating Remaining Available Capacity figures at a Facility and Facility Technology Type level. This is to be calculated using the Maximum Sent-Out Capacity as recorded in AEMO’s registration system minus existing overlapping Outage Quantities, cumulatively, in the order of lodgement.
- 3.1.2. Where AEMO is required to amend the information within the Outage Record to align with the Post-Amended WEM Rules the methods in 3.1.3 to 3.1.9 (as applicable) will be used.
- 3.1.3. Where a Facility has two or more Facility Technology Types the Remaining Available Capacity for the Facility and for each Facility Technology Type will be set to their respective Maximum Capacity minus the existing Outage Quantity whilst considering overlapping outages.
- 3.1.4. For Essential System Services that are Regulation Raise, Regulation Lower, Contingency Raise and Contingency Lower, the Remaining Available Capacity of the service is set to the lower of the service’s Maximum Accredited Capacity and the Facility’s Remaining Available Capacity.
- 3.1.5. If the Facility has no registered capacity, the Remaining Available Capacity of the Essential System Service is set to its Maximum Accredited Capacity minus the existing Outage Quantity.
- 3.1.6. The availability of the service (‘In Service’, ‘Partial Service’ and ‘Out Of Service’) is determined from the Remaining Available Capacity calculated under paragraphs 3.1.3 to 3.1.5 (as applicable).
- 3.1.7. For Essential System Service that is Rate of Change of Frequency, if the Facility’s Remaining Available Capacity is 0MW the Remaining Available Capacity of the service is set to 0MWs, otherwise it is set to the Maximum Accredited Capacity.
- 3.1.8. The availability of an Essential System Service that is Rate of Change of Frequency is determined (‘In Service’ or ‘Out Of Service’) from the Remaining Available Capacity calculated under paragraph 3.1.7 .
- 3.1.9. For Essential System Service that is System Restart, the availability of the service is determined (‘In Service’ or ‘Out Of Service’) based on the Facility’s Remaining Available Capacity. If the Facility has a Remaining Available Capacity of 0MW then the availability is deemed to be ‘Out Of Service’, otherwise it is ‘In Service’.
- 3.1.10. The table below outlines the conversion process that AEMO will undertake to convert the SM-MPI Outage Records to the OMS format:

Table 4 Market Participant Outage Records Conversion Process

OMS Outage Fields	Object Type	Data Type	Conversion Rule/Process
details	Object	-	-
outageNumber	Item	Text	From existing SM-MPI outage record
outageVersionNumber	Item	Text	From existing SM-MPI outage record +1
outageType	Item	Text	As per conversion table in paragraph 2.2.1
outageStatus	Item	Text	As per conversion table in paragraph 2.2.1
outageDescription	Item	Text	From existing SM-MPI outage record, concatenated from both

OMS Outage Fields	Object Type	Data Type	Conversion Rule/Process
			Outage Description and Operational Information
firstSubmissionDateTime	Item	Text	From version 0 of the existing SM-MPI outage record
lastModifiedDateTime	Item	Text	Conversion date/time
lastModifiedUser	Item	Text	wa.sm.operations@aemo.com.au
forcedOutageNotificationDate	Item	Date/Time	From version 0 of the existing SM-MPI outage record (If the outageStatus is equal to Forced, otherwise N/A)
originator	Item	Text	From version 0 of the existing SM-MPI outage record
duration	Object	-	-
commencementInterval	Item	Date/Time	From existing SM-MPI outage record
endInterval	Item	Date/Time	From existing SM-MPI outage record + 25 minutes
serviceReduction	Object	-	-
facilityCode	Item	Boolean	From existing SM-MPI outage record/Registration System
facilityRAC	Item	Text	Calculated
energy	Array	-	-
technologyTypeCode	Item	Text	From Registration System
technologyTypeRAC	Item	Numeric	Calculated
essentialSystemServices	Array	-	-
serviceType	Item	Text	From Registration System
serviceAvailability	Item	Text	Derived from serviceRAC
serviceRAC	Item	Numeric	Calculated
assessmentInformation	Object	-	-
atRiskFlag	Item	Boolean	True if the existing SM-MPI outage record status is equal to 'Approved with Conditions'
responseToParticipant	Item	Text	Default to null
contingencyPlanInformation	Object	-	Default to null if the outageStatus is Forced, otherwise build the Object
riskOfExtension	Item	Text	Default to 'Low'
estimatedRecoveryHours	Item	Numeric	Calculated
estimatedRecoveryMinutes	Item	Numeric	(Minimum of the Outage Duration and the Recovery Hours from the existing outage)
contingencyPlan	Item	Text	From existing existing SM-MPI outage record
availabilityDeclaration	Object	-	-
exemptionAppliesFlag	Item	Boolean	Default to False
exemptionReasons	Item	Text	Default to null
associatedOutageDetails	Object	-	Default to null
relatedOutages	Array	-	Default to null
outageNumber	Item	Numeric	Default to null

OMS Outage Fields	Object Type	Data Type	Conversion Rule/Process
relationshipDetails	Item	Text	Default to null
switchingRequired	Item	Boolean	From existing SM-MPI outage record
aemoUpdates	Object	-	-
dateTimeOfNotification	Item	Date/Time	Default to null

3.2. Process to be followed by Market Participant [Clause 1.57.10 (b)]

- 3.2.1. In accordance with the timeframe in paragraph 2.1, Market Participants with converted Outage data must review the converted Outages in the OMS and update any fields listed in the Table in paragraph 3.1.10 as required to match the details of the Outage Record in the SM-MPI.
- 3.2.2. Market Participants must specifically ensure that:
 - (a) All timeframes correctly reflect the details of the Outage.
 - (b) All Remaining Available Capacity figures correctly reflect the details of the Outage; and
 - (c) Contingency Plan fields are correct and correctly reflect the risk of the Outage.
- 3.2.3. Where the details of an Outage Plan change following the data conversion, Market Participants must update the details of the Outage Plan in both the SM-MPI and the OMS.
- 3.2.4. From 8am on 1 September 2023, Market Participants must only make outage data submissions/amendments for outages that occur on Trading Days prior to New WEM Commencement Day in the SM-MPI.
- 3.2.5. From the New WEM Commencement Day, Market Participants must make submissions in the OMS for Outages on Trading Days after the New WEM Commencement Day.
- 3.2.6. Converted Outage Records that span periods which include the New WEM Commencement Day will use the Start Date/Time from the SM-MPI Outage Record as the Commencement Interval (as specified in relevant tables under paragraph 3.1 and 4.1). If the converted Outage Record needs to be revised, then the Market Participant should amend the Commencement Interval should to the New WEM Commencement Day. This will prevent issues when saving revisions to the Outage Record as the OMS restricts entry of Outages with a Commencement Interval prior to the New WEM Commencement Day.
- 3.2.7. If a Market Participant is unable to update an Outage Record to reflect the correct details, then the Market Participant must notify immediately AEMO. The Market Participant may be required to update the description of the Outage Plan with additional details to reflect the necessary changes or submit a new Outage Plan with the corrected details.

4. Network Operator Outages

4.1. Process to be followed by AEMO [Clause 1.57.9(c)]

4.1.1. AEMO will convert Outage Records relating Network Operator Outages that meet the criteria outlined in paragraph 2.2 subject to the following caveats:

- (a) Where an Outage Record has indicated that it will return overnight, the Temporary Restoration Periods will be derived using the process outlined below:
- (b) A 'pauseInterval' will be created for each day of the Outage (excluding the ending day), which will be set to the time of the interval that precedes the end interval of the existing Outage.
- (c) A 'recommenceInterval' will be created for each day of the Outage (excluding the commencement day), which will be set to the time of the interval that precedes the commencement interval of the existing Outage.
- (d) The 'limitAdviceRequired' field will be defaulted to 'No', the Network Operator must update the field as required.

4.1.2. The table below outlines the conversion process that AEMO will undertake to convert the SM-MPI Outage records to the OMS format:

Table 5 Network Operator Outages Conversion Process

OMS Outage Fields	Object Type	Data Type	Conversion Rule/Process
details	Object	-	-
outageNumber	Item	Text	From existing SM-MPI outage record
outageVersionNumber	Item	Text	From existing SM-MPI outage record +1
outageType	Item	Text	As per conversion table in paragraph 2.2
outageStatus	Item	Text	As per conversion table in paragraph 2.2
outageDescription	Item	Text	From existing SM-MPI outage record, concatenating Outage Description and Operational Information
firstSubmissionDateTime	Item	Text	From version 0 of the existing SM-MPI outage record
lastModifiedDateTime	Item	Text	Conversion date/time
lastModifiedUser	Item	Text	wa.sm.operations@aemo.com.au
forcedOutageNotificationDate	Item	Date/Time	From version 0 of the existing SM-MPI outage record (If the outageStatus is equal to Forced, otherwise N/A)
originator	Item	Text	From version 0 of the existing SM-MPI outage record
duration	Object	-	-
commencementInterval	Item	Date/Time	From existing SM-MPI outage record
endInterval	Item	Date/Time	From existing SM-MPI outage record + 25 minutes

OMS Outage Fields	Object Type	Data Type	Conversion Rule/Process
equipments	Object	-	-
secondaryEquipmentFlag	Item	Boolean	From existing SM-MPI outage record
equipmentListFlag	Item	Text	Default to "EL" (Equipment List)
equipmentList	Array	-	From existing SM-MPI outage record
equipmentId	Item	Text	From existing SM-MPI outage record
assessmentInformation	Object	-	-
atRiskFlag	Item	Boolean	True if the existing SM-MPI outage record status is equal to 'Approved with Conditions'
responseToParticipant	Item	Text	Default to null
contingencyPlanInformation	Object	-	Default to null if the outageStatus is Forced, otherwise build the Object
riskOfExtension	Item	Text	Default to 'Low'
estimatedRecoveryHours	Item	Numeric	Calculated
estimatedRecoveryMinutes	Item	Numeric	(Minimum of the Outage Duration and the Recovery Hours from the existing outage)
contingencyPlan	Item	Text	From existing existing SM-MPI outage record
availabilityDeclaration	Object	-	-
exemptionAppliesFlag	Item	Boolean	Default to False
exemptionReasons	Item	Text	Default to null
associatedOutageDetails	Object	-	Default to null
relatedOutages	Array	-	Default to null
outageNumber	Item	Numeric	Default to null
relationshipDetails	Item	Text	Default to null
switchingRequired	Item	Boolean	N/A
contactInformation	Object	-	-
notifications	Array	-	-
notificationEmailAddress	Item	Text	Default to network.access.planning.engineers@westernpower.com.au
additionalDetails	Item	Text	Default to "Automatically Populated as a result of AEMO Data Migration"
permissionFlags	Object	-	-
ptpAndPtrRequired	Item	Boolean	N/A if the outageStatus is Forced, otherwise True
temporaryRestoration	Object	-	N/A if the outageStatus is Forced, otherwise build the Object
temporaryRestoredFlag	Item	Boolean	From existing SM-MPI Outage record Set to False if no Pause/Re-commence intervals are derived.
restorationPeriods	Array	-	Derived
pauseInterval	Item	Date/Time	Derived
recommenceInterval	Item	Date/Time	Derived
pointsOfIsolation	Object	-	-

OMS Outage Fields	Object Type	Data Type	Conversion Rule/Process
points	Array	-	N/A if the outageStatus is Forced, otherwise derive from existing SM-MPI Outage record.
pointsOfIsolation	Item	Text	From existing SM-MPI Outage record
impacts	Object	-	-
operationalImpact	Item	Text	From existing SM-MPI Outage record
impactsThirdParty	Item	Boolean	From existing SM-MPI Outage record (if 'ImpactLocation' text exists then True, if null then False)
facilitiesImpacted	Item	Text	From existing SM-MPI Outage record
thirdPartyNotified	Item	Boolean	Default to False
scadaChangeFlag	Item	Boolean	From existing SM-MPI Outage record
systemAlterationFlag	Item	Boolean	Default to False
permits	Object	-	-
permitType	Item	Text	From existing SM-MPI Outage record
limitAdvice	Object	-	Default to null if the outageStatus is Forced, otherwise derive
limitAdviceRequired	Item	Text	Default to "No"
limitAdviceDescription	Item	Text	Default to "Automatically Populated as a result of AEMO Data Migration. Limit Advice Required may need to be updated."
associatedConstraintSets	Array	-	Default to null
constraintSetId	Item	Text	Default to null
aemoUpdates	Object	-	-
dateTimeOfNotification	Item	Date/Time	Default to null

4.2. Process to be followed by Network Operator

4.2.1. In accordance with the timeframe in paragraph 2.1, the Network Operator must review the converted Outage Records in the OMS and update any fields listed under the Table in paragraph 4.1.2 as required to match the details of the SM-MPI Outage Record.

4.2.2. The Network Operator must specifically ensure that:

- (a) All timeframes correctly reflect the details of the Outage;
- (b) The Limit Advice details are correct;
- (c) Any third party impact details are updated;
- (d) Any system alterations are correctly identified; and
- (e) The Contingency Plan fields are correct and correctly reflect the risk of the Outage.

- 4.2.3. The Network Operator must not update the SM-MPI for Outages that occur after the New WEM Commencement Day and must contact AEMO if required to update Outage Records prior to the New WEM Commencement Day.
- 4.2.4. Where the Network Operator is unable to update an Outage field in the OMS to reflect the correct details, the Network Operator must notify AEMO. The Network Operator may be required to update the description of the Outage Plan with additional details to reflect the necessary changes or submit a new Outage Plan with the corrected details.

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Appendix A. Relevant clauses of the WEM Rules

Table 6 details the head of power clauses in the WEM Rules under which the Procedure has been developed.

Table 6 Relevant head of power clauses of the WEM Rules

Clause
1.57.9
1.57.10
1.57.11

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