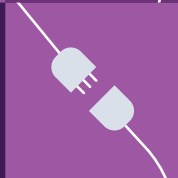




# WEM Procedure: Certification of Reserve Capacity for the ~~2022~~ ~~and 2023~~ Reserve Capacity Cycles



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1.0	1 March 2022	WEM Procedure for the 2022 and 2023 Reserve Capacity Cycles
2.0	20 December 2022	Amendments to reflect changes in Procedure Change Proposal: AEPC_2022_01
0.1	26 May 2023	WEM Procedure for the 2023 Reserve Capacity Cycle which reflects changes from <a href="#">Wholesale Electricity Market Amendment (Tranche 6 Amendments) Rules 2022</a>

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# 1. Introduction

## 1.1. Purpose and scope

- 1.1.1. This WEM Procedure: Certification of Reserve Capacity for the ~~2022 and~~ 2023 Reserve Capacity Cycles (Procedure) is made in accordance with AEMO's functions under clause 2.1A.2(h) 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. In this Procedure, where obligations are conferred on a Rule Participant, that Rule Participant must comply with the relevant obligations in accordance with clause 2.9.7A or 2.9.8, as applicable.
- 1.1.4. This Procedure documents:
  - (a) the procedures that Market Participants must follow when applying for Certified Reserve Capacity;
  - (b) the methodology AEMO uses for determining Planned Outage rates and Forced Outage rates;
  - (c) the procedures AEMO must follow when processing applications for Certified Reserve Capacity, including:
    - (i) how Certified Reserve Capacity is assigned; and
    - (ii) how AEMO will account for any degradation of an Electric Storage Resource, based on:
      - (A) the performance standards and specifications for the Electric Storage Resource provided by the relevant manufacturer; and
      - (B) the performance of the Electric Storage Resource in the Capacity Year at the time the application for certification of Reserve Capacity is required to be processed, where available;
  - (d) the process for the application of clause 4.28C and the matters AEMO will have regard to in forming its opinion under clause 4.28C.1(d); and
  - (e) the information required to be provided by a Market Participant under clause 4.10A.6 in support of its nomination that a Facility be classified as a Network Augmentation Funding Facility.
- 1.1.5. 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.
- 1.1.6. This Procedure applies to the ~~2022 and~~ 2023 Reserve Capacity Cycles only.

## 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
Component	An Electric Storage Resource, an Intermittent Generating System, or a Non-Intermittent Generating System that forms part of a Facility, other than a Demand Side Programme.
Declared Sent Out Capacity Owner	In respect of two or more Facilities that share (or that are proposed to share) a Declared Sent Out Capacity, the party or proposed party (not being a Network Operator) to the Arrangement for Access or Access Proposal to which the Declared Sent Out Capacity relates.
Firm	<u>A fuel supply or transport arrangement (or a series of fuel supply and transport arrangements) under which a party has a legally enforceable right to be supplied with or to receive delivery of a specified quantity or a nominated quantity of fuel, except in the case of events, including force majeure events, that are beyond the reasonable control of the relevant parties.</u> <del>Fuel supply or transportation that is underpinned by contractual rights to specified volumes (which may be flexible or subject to the Market Participant's nomination) and the conditions on those volumes (e.g. take or pay). For supply to be firm, the obligation to supply must be binding on the supplier and must not be interruptible (after allowing for planned and unplanned outages) or sold on an as-available (spot) basis. Gas pipeline transportation must be on a reference service basis or for a specified reserved volume.</del>
Indicative Facility Class	Has the meaning given in the WEM Procedure: Indicative Facility Class and RCM Facility Class Assessment.
Indicative Facility Technology Type	Has the meaning given in the WEM Procedure: Indicative Facility Class and RCM Facility Class Assessment.
Non-Firm	<u>A fuel supply or transport arrangement that is not Firm.</u> <del>In respect of a fuel supply or transportation contract, where the obligation to supply is not binding on the supplier, or is interruptible (excluding planned and unplanned outages), or is expressed to be on an as-available (spot) basis. Fuel supply or transportation that does not meet the definition of Firm.</del>
Non-Scheduled Facility	Has the meaning given in the Wholesale Electricity Market Amendment (Tranche 5 Amendments) Rules 2021.
Facility Upgrade	Either: <ul style="list-style-type: none"> <li>a) works that have increased the nameplate capacity of a Facility and were completed after the date and time specified in clause 4.1.11 for the previous Reserve Capacity Cycle; or</li> <li>b) works expected to be completed that will increase the nameplate capacity or available capacity of a Facility, which is yet to be demonstrated through normal market operations or a Reserve Capacity Test.</li> </ul>
RCM Facility Class	Has the meaning given in clause 1.45.1.
Scheduled Facility	Has the meaning given in the Wholesale Electricity Market Amendment (Tranche 5 Amendments) Rules 2021.
Semi-Scheduled Facility	Has the meaning given in the Wholesale Electricity Market Amendment (Tranche 5 Amendments) Rules 2021.
Wholesale Electricity Market System or WEMS	An interface software system that AEMO uses to administer and operate the Wholesale Electricity Market.

### 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 Procedure.

### 1.4. Related documents

- 1.4.1. The documents in Table 2 are associated with this Procedure.

**Table 2** Related documents

Reference	Title	Location
WEM Procedure	Market Procedure: Balancing Facility Requirements	<a href="#">WEM Website</a>
WEM Procedure	Market Procedure: Consumption Deviation Applications	<a href="#">WEM Website</a>
WEM Procedure	WEM Procedure: Declaration of Bilateral Trades	<a href="#">WEM Website</a>
WEM Procedure	Market Procedure: Facility Registration, De-registration and Transfer	<a href="#">WEM Website</a>
WEM Procedure	Market Procedure: Notices and Communications	<a href="#">WEM Website</a>
WEM Procedure	Market Procedure: Reserve Capacity Performance Monitoring	<a href="#">WEM Website</a>
WEM Procedure	Market Procedure: Reserve Capacity Security	<a href="#">WEM Website</a>
WEM Procedure	Market Procedure: Rule Participant Registration and De-Registration	<a href="#">WEM Website</a>

Reference	Title	Location
WEM Procedure	Power System Operation Procedure: Facility Outages	<a href="#">WEM Website</a>
WEM Procedure	WEM Procedure: Indicative Facility Class and RCM Facility Class Assessment	<a href="#">WEM Website</a>
WEM Procedure	WEM Procedure: Reserve Capacity Testing	<a href="#">WEM Website</a>

## 2. Modification of timeframes

- 2.1.1. AEMO (in its sole discretion) may modify or extend a date or time in this Procedure, as a result of modifying or extending a date or time under 4.1.1C or to the extent permitted under the WEM Rules.
- 2.1.2. If AEMO extends a date or time under paragraph 2.1.1, then it must publish on the WEM Website:
- (a) notice of the modified or extended date or time; and
  - (b) the effective date or time of any modification or extension under paragraph 2.1.1.



## 3. Applications for Certification of Reserve Capacity

### 3.1. Submission of applications

- 3.1.1. Clauses 4.8, 4.8A, 4.9, 4.10, 4.10A and 4.28C apply with respect to applications for certification of Reserve Capacity.
- 3.1.2. A person to whom clause 4.8.1(b) applies must create the intending facility name in WEMS, in accordance with the Market Procedure: Facility Registration, De-Registration and Transfer, at least 10 Business Days before the date and time specified in clause 4.1.7.
- 3.1.3. A Market Participant may only apply for certification of Reserve Capacity for a Facility that has been assigned an Indicative Facility Class or RCM Facility Class, as applicable, and (where relevant) has been assigned an Indicative Facility Technology Type in accordance with the WEM Procedure: Indicative Facility Class and RCM Facility Class Assessment.
- 3.1.4. The format and content required for the information specified in ~~clause 4.10.1~~ [clause 4.10](#) is set out in paragraphs 3.1.6 and 3.1.7. Further supporting information requirements are indicated by 'mandatory' and 'optional' submission fields in the application for Certified Reserve Capacity page in WEMS.
- 3.1.5. The information provided under paragraph 3.1.4 for each Facility or Component, as relevant, must be accurate for the relevant Reserve Capacity Cycle.
- 3.1.6. Subject to paragraph 3.2.1, a Market Participant must apply for certification of Reserve Capacity through WEMS, including any supporting documentation. The application must include documentation required by all mandatory submission fields, and may include documentation described in the optional submission fields, where appropriate. Supporting documentation must cover the entire relevant Capacity Year and may be submitted in any of the following formats:
- (a) compressed ZIP files (where the files in the archive must be in any of the formats listed below);
  - (b) Microsoft Office (.xlsx, .xls, .docx, .doc, .pptx, .ppt, or .msg);
  - (c) Adobe PDF;
  - (d) .txt or .csv;
  - (e) common image formats (.jpg, .png, .gif, .bmp); or
  - (f) any other format approved by AEMO.
- 3.1.7. Supporting documentation must (where applicable):
- (a) relate to the Facility or Component, as relevant;
  - (b) be signed by all relevant parties, and where the relevant party is a Market Participant, must be duly executed by an Authorised Officer of that Market Participant;
  - (c) be complete, with the exception that pricing and other commercially-sensitive information may be redacted; and
  - (d) include evidence that any contract conditions precedent have been satisfied or waived.

- 3.1.8. Where a Facility comprises more than one Component, the Market Participant may apply for certification of Reserve Capacity for one, or more than one, of the Facility's Components.
- 3.1.9. For a Facility or Component that is expected to be decommissioned during the relevant Capacity Year, the requirement to provide information under ~~clause 4.10.1~~clause 4.10 only applies to the part of the Capacity Year during which the Facility will operate [**clause 4.11.1(c)(iii)**].
- 3.1.10. AEMO (in its sole discretion) may treat a condition precedent as satisfied or waived if:
- (a) the condition precedent is incapable of being satisfied by the date and time specified in clause 4.1.11; or
  - (b) AEMO considers that it would be unreasonable for the parties to waive the condition precedent in the relevant circumstances.
- 3.1.11. A Market Participant who applies for certification of Reserve Capacity for an Intermittent Generating System may provide evidence of the temperature dependence of the Intermittent Generating System's capacity, where available, including any restrictions on the Intermittent Generating System's output at certain ambient temperatures.
- 3.1.12. AEMO may use the information provided under paragraph 3.1.11 when considering the Intermittent Generating System's operational characteristics. AEMO must not use the information to reduce the quantity of Certified Reserve Capacity that would otherwise be determined in accordance with the WEM Rules or this Procedure.

## 3.2. Specific requirements for Early Certified Reserve Capacity

- 3.2.1. Clause 4.28C and paragraph 3.1 (excluding the requirement to apply through WEMS specified in paragraph 3.1.6) apply with respect to an application for Early Certified Reserve Capacity.

## 3.3. Specific requirements for Network Augmentation Funding Facilities

- 3.3.1. A Market Participant with a Facility or Facility Upgrade that meets the criteria outlined in clause 4.10A.2 and 4.10A.3 may nominate its Facility or Facility Upgrade to be classified as a Network Augmentation Funding Facility in its application for certification of Reserve Capacity or application for Early Certified Reserve Capacity in accordance with the requirements in paragraph 3.1.
- 3.3.2. In accordance with clause 4.10A.6, where a Market Participant has nominated that its Facility or Facility Upgrade be classified as a Network Augmentation Funding Facility under paragraph 3.3.1, without limiting any other information the Market Participant may be required to provide to AEMO under ~~clause 4.10.1~~clause 4.10, the Market Participant must provide the following information to AEMO:
- (a) evidence that the Market Participant has committed to funding the Network Augmentation Works associated with the relevant Facility or Facility Upgrade;
  - (b) evidence confirming that the Network Augmentation Works are expected to be in-service by 1 October of Year 3 of the Reserve Capacity Cycle to which the application for Certified Reserve Capacity relates; and

- (c) any other information requested by AEMO or that the Market Participant considers relevant in relation to its nomination.
- 3.3.3. The information provided by a Market Participant under paragraph 3.3.2 must meet the requirements specified in paragraphs 3.1.6 and 3.1.7, and may include, but is not limited to:
- (a) interconnection works contract with the Network Operator, including evidence that conditions precedent have been satisfied or waived; and
  - (b) electricity transfer access contract with the Network Operator, including evidence that conditions precedent have been satisfied or waived.

## 4. Processing applications for Certification of Reserve Capacity

### 4.1. Acknowledgement of application

- 4.1.1. AEMO may comply with clause 4.9.6 by providing an automatic notification to an applicant through WEMS.

### 4.2. Data accuracy and sufficiency assessment

- 4.2.1. AEMO (in its sole discretion) may carry out a preliminary screening review of an application that has been submitted at least 10 Business Days before the date and time specified in clause 4.1.11, and may provide feedback to the applicant. The purpose of a preliminary screening review is to consider whether:
- (a) all required information has been provided;
  - (b) the information provided is of sufficient detail; and
  - (c) supporting information has been provided and meets the requirements in paragraphs 3.1.4, 3.1.5, 3.1.6 and 3.1.7.
- 4.2.2. AEMO's preliminary screening review is carried out as a courtesy only. AEMO is not responsible for identifying errors or omissions in a Market Participant's application as part of this review.
- 4.2.3. Where AEMO, as part of its preliminary screening review, requires clarification in relation to the information provided or additional information to process the application:
- (a) AEMO must, as soon as practicable, request clarification or additional information; and
  - (b) the applicant must respond to the request (and, if necessary, must provide the additional information requested through WEMS) prior to the date and time specified in clause 4.1.11.

- 4.2.4. AEMO must reject an invalid application. An application is invalid if (as at the date and time specified in clause 4.1.11) the information provided to AEMO through WEMSi# does not contain all of the information required under ~~clause 4.10.1~~clause 4.10.
- 4.2.5. AEMO must not accept a late application or any amendments to an in-time application (including additional information or documentation provided in support of an in-time application) after the date and time specified in clause 4.1.11.
- 4.2.6. Where a Facility contains multiple Components, and AEMO has determined that one or more of the Components does not meet the requirements of paragraph 3.1, then AEMO must not assign Certified Reserve Capacity to the Component or Components. AEMO will continue to assess the remaining Component or Components in accordance with this Procedure.

### 4.3. Assessment of application where Facility has previously been assigned Conditional Certified Reserve Capacity

- 4.3.1. Clause 4.9.5 applies with respect to an application for Certified Reserve Capacity that relates to Conditional Certified Reserve Capacity.

### 4.4. Outage assessment

- 4.4.1. For the purposes of clause 4.11.1(h), the Forced Outage rate for a Facility is calculated as:

$$\frac{\sum_{t=0}^{PH} \left( \frac{FO(t)}{CC(t)} \right) \times 0.5}{PH \times 0.5} \times 100$$

$$\frac{\sum_{t=0}^{PH} \left( \frac{FO(t)}{CC(t)} \right)}{PH} \times 100$$

where:

Variable	Units	Definition
FO(t)	MW	The quantity of capacity that was subject to a Forced Outage for Trading Interval t.
CC(t)	MW	The quantity of Capacity Credits held for Trading Interval t.
PH	hours	The total number of hours that the Facility was in Commercial Operation for the previous 36-month period, multiplied by 0.5.

- 4.4.2. For the purposes of clause 4.11.1(h), the Planned Outage rate for a Facility is calculated as:

$$\frac{\sum_{t=0}^{PH} \left( \frac{PO(t)}{CC(t)} \right) \times 0.5}{PH \times 0.5} \times 100 + \frac{\sum_{t=0}^{PH} \left( \frac{FO(t)}{CC(t)} \right)}{PH} \times 100$$

where:

Variable	Units	Definition
PO(t)	MW	The quantity of capacity that was subject to a Planned Outage for Trading Interval t.
CC(t)	MW	The quantity of Capacity Credits held for Trading Interval t.

Variable	Units	Definition
<i>PH</i>	hours	The total number of hours that the Facility was in Commercial Operation for the previous 36 month period, multiplied by 0.5.

- 4.4.3. For the purposes of clause 4.11.1(h)(ii), when assessing whether a Facility is likely to have a Forced Outage rate or a combined Planned Outage rate and Forced Outage rate greater than the applicable percentage specified in the table in clause 4.11.1D, AEMO may consider factors including, but not limited to:
- (a) information provided by the Market Participant in its Certified Reserve Capacity application;
  - (b) historical outage requests; and
  - (c) the matters specified in clause 4.11.1B.
- 4.4.4. AEMO must notify an applicant where clause 4.11.1(h)(i) or 4.11.1(h)(ii) applies to the Facility. A notification may include a request for information from the applicant in relation to the present and future performance of the Facility, including:
- (a) reasons for the outages;
  - (b) steps that have been taken, or that are being taken, to reduce the level of outages; and
  - (c) the expected level of future outages.

## 4.5. Facilities sharing a Declared Sent Out Capacity

- 4.5.1. If AEMO receives applications for Certified Reserve Capacity for a Reserve Capacity Cycle for two or more Facilities, containing an Energy Producing System, that share a Declared Sent Out Capacity in an Arrangement for Access or Access Proposal, it must:
- (a) request that each relevant applicant provides AEMO with details of how the Declared Sent Out Capacity will be shared among the Facilities; and
  - (b) limit the total quantity of Certified Reserve Capacity assigned to the Facilities so that it does not exceed the Declared Sent Out Capacity quantity in accordance with clause 4.11.1(bB).
- 4.5.2. If an applicant receives a request under paragraph 4.5.1(a), it must use its best endeavours to ensure that the Declared Sent Out Capacity Owner provides a written response to AEMO within five Business Days. The response must:
- (a) be signed:
    - (i) by an Authorised Officer of the Market Participant (or otherwise in a manner reasonably acceptable to AEMO); and
    - (ii) (if the Declared Sent Out Capacity Owner is a company as defined in the Corporations Act) in accordance with section 127 of the Corporations Act; and
  - (b) identify, for each Facility proposed to share the Declared Sent Out Capacity, the level of network access that will be available for use by that Facility in the relevant Capacity Year.
- 4.5.3. If AEMO receives a response from the Declared Sent Out Capacity Owner that meets the requirements in paragraph 4.5.2, then AEMO must:
- (a) within one Business Day, acknowledge receipt of the response; and

- (b) for each affected Facility:
  - (i) within one Business Day, notify the Market Participant of the share of the Declared Sent Out Capacity assigned to the Facility by the Declared Sent Out Capacity Owner; and
  - (ii) for the purposes of paragraphs 5.5.1 and 6.4.1, replace the level of network access provided in the application for Certified Reserve Capacity with the level specified for the Facility by the Declared Sent Out Capacity Owner in its response.

4.5.4. If AEMO does not receive a response from the Declared Sent Out Capacity Owner within 10 Business Days after the request under paragraph 4.5.1(a) that meets the requirements in paragraph 4.5.2, then AEMO must reject all the applications to which AEMO’s request under paragraph 4.5.1 relates, on the basis that the applications do not meet the requirements under clause 4.10.1(bA).

## 4.6. Component specific assessment

4.6.1. In addition to the requirements above, AEMO must further assess applications for Certified Reserve Capacity in accordance with the paragraph of this Procedure identified in Table 3.

**Table 3 Certification methods for different combinations of RCM Facility Class, Indicative Facility Class, and Component**

RCM Facility Class or Indicative Facility Class	Component	Certification method	Paragraph reference
Scheduled Facility Semi-Scheduled Facility	Non-Intermittent Generating System	Capability at 41°C	Paragraph 5
Scheduled Facility Semi-Scheduled Facility	Intermittent Generating System	Relevant Level Methodology	Paragraph 6
Scheduled Facility Semi-Scheduled Facility	Electric Storage Resource	Linearly Derating Capacity	Paragraph 7
Non-Scheduled Facility	Non-Intermittent Generating System Intermittent Generating System Electric Storage Resource	Relevant Level Methodology	Paragraph 6
Non-Scheduled Facility comprising only an Electric Storage Resource	Electric Storage Resource	Linearly Derating Capacity – if not in operation for the full period under step 1(a) of Appendix 9	Paragraph 7
Demand Side Programme		<a href="#">Curtailment Relevant Demand Capability assessment city of Associated Loads</a>	Paragraph 8

4.6.2. When assessing applications for Certified Reserve Capacity, AEMO must apply the principles of clause 4.11 as a whole, and paragraphs 5, 6, 7 and 8 are not intended to limit AEMO’s assessment.

## 4.7. Notifications regarding Certified Reserve Capacity

- 4.7.1. Clauses 4.9.8 and 4.9.9 apply with respect to notifications regarding the quantity of Certified Reserve Capacity or Conditional Certified Reserve Capacity, as applicable, assigned to each Facility. The notification to applicants may be provided through WEMS or by another means determined by AEMO.
- 4.7.2. If AEMO assigns Certified Reserve Capacity to a Facility, the notification provided in paragraph 4.7.1 must include the information specified in clause 4.9.9. The notification to applicants may be provided through WEMS or by another means determined by AEMO.
- 4.7.3. If a Facility or Facility Upgrade meets the requirements of clause 4.10A.5, the notification in paragraph 4.7.1 must specify that the Facility or Facility Upgrade will be classified as a Network Augmentation Funding Facility.
- 4.7.4. If a Market Participant requests the calculations upon which AEMO's determination of the quantity of Certified Reserve Capacity is based under clause 4.9.9(e), AEMO will endeavour to provide the Market Participant with the calculations within 10 Business Days of receiving the request.

## 5. Assessment using the capability at 41°C methodology

### 5.1. Eligibility to be assessed based on capability at 41°C

- 5.1.1. AEMO must assess the following Components or Facility Upgrades in accordance with this paragraph 5:
  - (a) Non-Intermittent Generating Systems that are Components of a Scheduled Facility; and
  - (b) Non-Intermittent Generating Systems that are Components of a Semi-Scheduled Facility.

## 5.2. Plant capability assessment

- 5.2.1. AEMO must determine its reasonable expectation of the amount of capacity likely to be available for each Component or Facility Upgrade specified in paragraph 5.1.1 as described in clause 4.11.1(a).
- 5.2.2. In accordance with clause 4.11.1(b), for a Component or Facility Upgrade specified in paragraph 5.1.1, the amount of capacity likely to be available, as determined in paragraph 5.2.1, must not exceed the capacity specified by the Market Participant under clause 4.10.1(e)(ii).
- 5.2.3. For a Component or Facility Upgrade specified in paragraph 5.1.1 that is yet to enter service or that has provided new or updated temperature dependence information under clause 4.10.1(e)(i), the amount of capacity determined under paragraph 5.2.1 must not exceed the output of the Component or Facility Upgrade at 41°C, as shown in the temperature dependence information and supporting documentation from the original equipment manufacturer or an independent engineer's report provided under clause 4.10.1(e)(i).
- 5.2.4. For all other Components specified in paragraph 5.1.1 that are not covered under paragraph 5.2.3, the amount of capacity determined under paragraph 5.2.1 must not exceed the maximum historical sent out generation of the Component in the previous 12 months, as observed from Meter Data Submissions or Facility Sub-Metering data obtained through Reserve Capacity Testing under section 4.25, where relevant, and adjusted to a temperature of 41°C using the temperature dependence information provided under clause 4.10.1(e)(i).
- 5.2.5. A Market Participant may provide additional Facility Sub-Metering data as part of an application for certification of Reserve Capacity. AEMO must use this data, if provided, instead of the data obtained through Reserve Capacity Testing for the purposes of paragraph 5.2.4.
- 5.2.6. A Market Participant must provide temperature dependence information for each fuel type specified under clause 4.10.1(e)(v)(1)(ii). AEMO must use this information to determine the amount of capacity specified in paragraph 5.2.3 or 5.2.4, as applicable, for each fuel type.
- 5.2.6-5.2.7. If AEMO, in its sole discretion, considers that the amount of capacity determined under paragraph 5.2.4 is not an accurate reflection of a Component's capability, then it may determine an alternative quantity under paragraph 5.2.1.



### 5.3. Assessment of fuel supply, staffing constraints and other restrictions

- 5.3.1. AEMO must determine whether it reasonably expects that a Component or Facility Upgrade specified in paragraph 5.1.1 is likely to be available at the level of capacity determined in paragraph 5.2.1 for Peak Trading Intervals on Business Days.
- 5.3.2. When making a determination under paragraph 5.3.1, AEMO may consider:
- (a) the expected operational characteristics of the Component or Facility Upgrade;
  - (b) information provided in relation to, or outcomes of, the plant capability assessment conducted in paragraph 5.2;
  - (c) the likelihood of any limitations on the availability of the Component or Facility Upgrade, and the potential effect of those limitations on Power System Security and Power System Reliability;
  - (d) any operating restrictions on the Component or Facility Upgrade, including, but not limited to, leasing arrangements, operating licences, or planning approvals;
  - (e) any water requirements for the Component or Facility Upgrade; and
  - (f) any other information of which AEMO is aware and considers relevant to the determination.
- 5.3.3. If AEMO reasonably expects that a Component or Facility Upgrade specified in paragraph 5.1.1 is not likely to be available at the level of capacity determined in paragraph 5.2.1, AEMO may determine that the Component or Facility Upgrade is likely to be available for Peak Trading Intervals on Business Days at a lower level of capacity.
- 5.3.4. For the purposes of clause 4.10.1(e)(v)(2), and to facilitate AEMO's assessment under paragraph 5.3.1, a Market Participant must provide the following details and supporting evidence:
- (a) in relation to each primary or alternative fuel supply or transportation contract that the Market Participant relies on for the purposes of its application under clause 4.11.1(a):
    - (i) the nature of the contract (Firm or Non-Firm);
    - (ii) the contractual entitlement quantity;
    - (iii) the actual fuel quantity delivered for each month in the previous 36 months, with reasons for instances where the actual fuel quantity delivered is materially below the contractual entitlement quantity; and
    - (iv) any other information the Market Participant considers relevant; and
  - (b) in relation to fuel supply:
    - (i) the quantity of usable fuel kept in reserve (e.g. stored or stockpiled), if any, for each month in the previous 36 months;
    - (ii) the specification of contracted fuel and any fuel kept in reserve;
    - (iii) any known or reasonably foreseeable issues that may materially restrict fuel availability, supply or delivery;

- (iv) for each matter specified in paragraph 5.3.3(b)(iii), a description (with supporting evidence) of any controls and risk mitigation activities implemented by the Market Participant; and
  - (v) any other information the Market Participant considers relevant.
- 5.3.5. When making the determination in paragraph 5.3.1, AEMO must assess the information provided by the Market Participant under clauses 4.10.1(e)(v) and 4.10.1(g), and paragraph 5.3.4.
- 5.3.6. For the purposes of AEMO's assessment under paragraph 5.3.5, where:
- (a) a fuel supply or fuel transportation arrangement (including gas pipeline capacity) includes a Non-Firm arrangement; or
  - (b) the actual fuel quantity delivered under the fuel supply or fuel transportation arrangement has been less than the contractual entitlement quantity to an extent that AEMO considers consistent, sustained, ongoing, or reasonably likely to reoccur during the relevant Capacity Year,

AEMO may take the relevant matter in paragraph 5.3.6(a) or (b), as applicable, as indicating a restriction on fuel availability that could prevent the Component or Facility Upgrade from operating at its full capacity for Peak Trading Intervals on Business Days.

- 5.3.7. A Market Participant must provide details of the quantity of fuel per MWh required to operate each Component and, if relevant, the Facility Upgrade specified in paragraph 5.1.1.
- 5.3.8. Where, in accordance with clause 4.10.1(e)(v)(1)(ii), a Market Participant specifies more than one fuel type to be used for a Component or Facility Upgrade specified in paragraph 5.1.1, AEMO must assess the information provided under clauses 4.10.1(e)(v) and 4.10.1(g) and paragraph 5.3.4 for each fuel type in accordance with paragraphs 5.3.5 and 5.3.6.
- 5.3.9. Where, in accordance with clause 4.10.1(e)(v)(1)(ii), a Market Participant specifies more than one fuel type to be used for a Component or Facility Upgrade specified in paragraph 5.1.1, the level of capacity in paragraph 5.3.1 is equal to the lowest capability calculated in accordance with paragraphs 5.3.1 or 5.3.2, using the information provided for each fuel type under paragraph 5.3.8.
- 5.3.10. Paragraphs 5.3.8 and 5.3.9 do not apply to a Component or Facility Upgrade that is capable of operating on primary and alternative fuels where the Market Participant has nominated only one fuel under clause 4.10.1(e)(v)(1)(ii).

## 5.4. Environmental approval assessment

- 5.4.1. Where a Component or Facility Upgrade specified in paragraph 5.1.1 is yet to enter service, AEMO must assess the information provided under clause 4.10.1(c)(ii) as evidence that Environmental Approvals have been granted, or as evidence that the necessary Environmental Approvals will be granted in time to meet the Component or Facility Upgrade's Reserve Capacity Obligations.
- 5.4.2. If AEMO reasonably expects that the Environmental Approvals that have been granted, or are being sought, are insufficient to satisfy the requirement of paragraph 5.3.1, AEMO may determine that the Component or Facility Upgrade is likely to be available for Peak Trading Intervals on Business Days at a lower level of capacity than it may have otherwise determined under paragraph 5.2.1.

## 5.5. Assignment of Certified Reserve Capacity

- 5.5.1. Based on the outcome of assessments in paragraphs 5.2 to 5.4, but subject to any other relevant principles in clause 4.11, AEMO must assign a quantity of Certified Reserve Capacity to a Component or Facility Upgrade specified in paragraph 5.1.1 equal to the minimum of:
- (a) the capacity determined under paragraph 5.2.1;
  - (b) the Declared Sent Out Capacity;
  - (c) a lower level of capacity as determined under paragraph 5.3.2, if applicable; and
  - (d) a lower level of capacity as determined under paragraph 5.4.2, if applicable.

## 6. Assessment using the Relevant Level Methodology

### 6.1. Eligibility to be assessed using the Relevant Level Methodology

- 6.1.1. In accordance with clause 4.10.2, AEMO must assess the following Facilities, Components and Facility Upgrades in accordance with this paragraph 6:
- (a) Components of Semi-Scheduled Facilities that are Intermittent Generating Systems;
  - (b) Components of Scheduled Facilities that are Intermittent Generating Systems;
  - (c) Non-Scheduled Facilities, except Non-Scheduled Facilities comprising only Electric Storage Resources that have not been in operation for the full period of performance assessment identified in step 1(a) of the Relevant Level Methodology; and
  - (d) Non-Scheduled Facilities comprising only Electric Storage Resources that have been in operation for the full period of performance assessment identified in step 1(a) of the Relevant Level Methodology.

### 6.2. Assessment of independent expert report

- 6.2.1. AEMO must assess the accuracy of an independent expert report provided under clause 4.10.3. This assessment may consider the following factors:
- (a) the configuration of the Facility, Component, or Facility Upgrade, as relevant, that was used to develop the report;
  - (b) the level of network access available, or expected to be available, to the Facility;
  - (c) where the Facility contains multiple Components, the level of network access allocated to each of the Components for which the Market Participant has applied for certification of Reserve Capacity;
  - (d) the Sent Out Metered Schedule or Facility Sub-Metering data, as relevant, for similar Facilities or Components, if applicable;
  - (e) if the application relates to a Facility Upgrade, the observed sent out generation of the Facility or Component excluding the Facility Upgrade;

- (f) any restrictions on the availability of the Facility, Component or Facility Upgrade, as applicable, as specified by the applicant under clause 4.10.1(g); and
- (g) any other factors that AEMO considers relevant.

6.2.2. Following the assessment in paragraph 6.2.1, if AEMO reasonably considers the independent expert report provided under clause 4.10.3 to be inaccurate, it may, in accordance with Appendix 9, Step 10, calculate alternative estimates of the expected energy that would have been sent out by the Facility, Component, or Facility Upgrade, as relevant, if it had been in operation with the configuration proposed under clause 4.10.1(dA). AEMO may use such estimates in its assessment of the application for Certified Reserve Capacity.

### 6.3. Availability restrictions

6.3.1. For a Non-Scheduled Facility that contains only Electric Storage Resources that is being assessed using the Relevant Level Methodology in accordance with paragraph 6.1.1(d), AEMO must assess the evidence that the Electric Storage Resources are expected to discharge during the Electric Storage Resource Obligation Intervals, as provided under clause 4.10.1(fD)(iv).

6.3.2. After completing the assessment in paragraph 6.3.1, AEMO may:

- (a) reject the application, where AEMO considers that the Electric Storage Resources are unlikely to discharge during the Electric Storage Resource Obligation Intervals; or
- (b) determine that the Facility is likely to be available during the Electric Storage Resource Obligation Intervals at a lower level of capacity compared to the Relevant Level.

### 6.4. Assignment of Certified Reserve Capacity

6.4.1. Subject to any other relevant principles in clause 4.11, AEMO must assign a quantity of Certified Reserve Capacity to a Facility, Component, or Facility Upgrade specified in paragraph 6.1.1 equal to the minimum of:

- (a) the Relevant Level, determined in accordance with the Relevant Level Methodology;
- (b) a lower level of capacity determined under paragraph 6.3.2(b); and
- (c) the Declared Sent Out Capacity.

## 7. Assessment using the Linearly Derating Capacity methodology

### 7.1. Eligibility to be assessed using the Linearly Derating Capacity methodology

7.1.1. In accordance with clauses 4.11.1(bC), 4.11.1(bD)(ii), and 4.11.1(bE), AEMO must assess the following Facilities, Components and Facility Upgrades in accordance with paragraph 7:

- (a) Components of Scheduled Facilities that are an Electric Storage Resource;
- (b) Components of Semi-Scheduled Facilities that are an Electric Storage Resource;

- (c) Non-Scheduled Facilities comprising only Electric Storage Resources that have not been in operation for the full period of performance assessment identified in step 1(a) of the Relevant Level Methodology.

## 7.2. Linearly Derating Capacity assessment

- 7.2.1. AEMO must determine the Linearly Derating Capacity for each Component, Facility or Facility Upgrade specified in paragraph 7.1.1 in accordance with clause 4.11.3.
- 7.2.2. In making its determination under paragraph 7.2.1, AEMO must assess and verify the sent-out capacity provided by the Market Participant under clause 4.10.1(fA)(iii), ~~4.10.1(fB)(iii)~~, ~~4.10.1(fC)(iii)~~, or 4.10.1(fD)(iii), as relevant, for the Capacity Year that commences on 1 October of Year 3 of the relevant Reserve Capacity Cycle.
- 7.2.3. In completing its assessment under paragraph 7.2.2, AEMO may consider:
  - (a) the forecast degradation rate, as specified in the manufacturer's data or in an independent engineer's report, of the Component, Facility, or Facility Upgrade over its expected life;
  - (b) Sent Out Metered Schedule or Facility Sub-Metering data from the previous 12 months; and
  - (c) any other information provided by the Market Participant in its application for certification of Reserve Capacity.
- 7.2.4. AEMO must set the Linearly Derating Capacity as a quantity equal to the sent out capacity provided by the Market Participant under clause 4.10.1(fA)(iii), ~~4.10.1(fB)(iii)~~, ~~4.10.1(fC)(iii)~~, or 4.10.1(fD)(iii), as relevant, for the Capacity Year commencing on 1 October of Year 3 of the relevant Reserve Capacity Cycle, unless AEMO is unable to verify the sent out capacity as part of the assessment in paragraph 7.2.3.
- 7.2.5. Where AEMO is unable to verify the sent out capacity as part of its assessment under paragraph 7.2.3, it must set the Linearly Derating Capacity as a quantity equal to the quantity that AEMO considers to be reflective of the Electric Storage Resource's capability over the Electric Storage Resource Obligation Duration for the Capacity Year commencing on 1 October of Year 3 of the relevant Reserve Capacity Cycle.
- 7.2.6. In determining the quantity specified in paragraph 7.2.5, and in addition to the factors considered in AEMO's assessment under paragraph 7.2.3, AEMO may consider:
  - (a) information provided by the Market Participant in its application for certification of Reserve Capacity that indicates that any factors that affected the Electric Storage Resource's previous performance have been resolved or will be resolved prior to the start of the relevant Capacity Year; and
  - (b) any other information that AEMO, in its sole discretion, considers to be relevant.

## 7.3. Assignment of Certified Reserve Capacity

- 7.3.1. Based on the outcome of assessments in paragraph 7.2, but subject to any other relevant principles in clause 4.11, AEMO must assign a quantity of Certified Reserve Capacity to a Facility, Component, or Facility Upgrade specified in paragraph 7.1.1 equal to the minimum of:
  - (a) the Linearly Derating Capacity determined under paragraph 7.2.4 or 7.2.5; and

- (b) the Declared Sent Out Capacity.

## 8. Assessment for Demand Side Programmes

### 8.1. Facility capability assessment

~~8.1.1.~~ AEMO must determine:

~~8.1.2.8.1.1.~~ the quantity of capacity that it reasonably expects to be available from the Facility during the periods specified in clause 4.10.1(f)(vi), after netting off capacity required to serve the Minimum Consumption for each of the Facility's Associated Loads for the period specified in clause 4.11.1(j). ~~for the specified period in order to meet the requirements of clause 4.11.1(j)(i); and~~

- ~~(a) the amount by which the Facility could reduce its consumption, measured as a decrease from the Facility's Relevant Demand, by the end of one Trading Interval in response to a Dispatch Instruction requiring it to reduce consumption from the beginning of the Trading Interval at the ramp rate proposed for the Facility under clause 4.10.1(f)(vii), for which purpose AEMO may have regard to the ramp rate proposed under clause 4.10.1(f)(vii) and any other information AEMO considers relevant in order to meet the requirements of clause 4.11.1(j)(ii).~~

~~8.1.3.8.1.2.~~ In determining the capacity in paragraph 8.1.1, AEMO must have regard to the following information, as applicable:

- (a) the previous performance of the Facility, including the results of Reserve Capacity Tests;
- (b) evidence of contracts with Associated Loads provided by the Market Participant;
- (c) evidence of steps being taken to enter into new contracts for loads to be associated with a Demand Side Programme;
- (d) the estimated Relevant Demand for the Facility, or loads that are expected to be associated with the Facility, determined in accordance with Appendix 10;
- (e) any restrictions on the availability of the Facility due to staffing constraints, and any other restrictions on the availability of the Facility, as specified by the Market Participant under clause 4.10.1(g);
- ~~(f) the proposed DSP Ramp Rate Limit provided to AEMO in accordance with clause 4.10.1(f)(vii);~~
- ~~(g)(f)~~ the history of the Market Participant in procuring DSM capacity; and
- ~~(g)~~ any other factors that AEMO considers relevant.

## 8.2. Assignment of Certified Reserve Capacity

8.2.1. Unless it has rejected the application in accordance with a paragraph in this Procedure, AEMO must assign a quantity of Certified Reserve Capacity to a Demand Side Programme ~~or Interruptible Load~~ that is equal to the ~~minimum of the quantities~~ determined in paragraph 8.1.1, but subject to any other relevant principles in clause 4.11.

## 9. Processing applications for Early Certified Reserve Capacity

### 9.1. Eligibility assessment

- 9.1.1. For the purposes of clause 4.28C.1(d), AEMO may have regard to the following matters:
- (a) the type of Energy Producing System for which Capacity Credits are being sought;
  - (b) any required augmentation of the SWIS;
  - (c) construction of other infrastructure that is not part of the Facility, which may include, but is not limited to, gas pipelines or other fuel delivery infrastructure;
  - (d) the lead times for obtaining equipment required to construct the Facility;
  - (e) any specialist labour requirements; and
  - (f) any other matters that AEMO considers relevant.
- 9.1.2. AEMO must determine that an Energy Producing System that is an Intermittent Generating System does not meet the requirements of clause 4.28C.1(d) unless the Market Participant provides satisfactory evidence (based on the matters specified in paragraph 9.1.1) that the Energy Producing System meets the requirements.
- 9.1.3. AEMO may request information, in addition to the information already provided in accordance with clause 4.28C.5, from the Market Participant in making its determination under paragraph 9.1.1, specifying a due date for the information to be provided.
- 9.1.4. A Market Participant may, but is not obliged to, provide additional information requested by AEMO under paragraph 9.1.3.
- 9.1.5. If a Market Participant does not provide information requested under paragraph 9.1.3 by the due date, AEMO must complete its determination under paragraph 9.1.1 using the information provided by the Market Participant under clause 4.28C.5, which may result in rejection of the application.
- 9.1.6. AEMO must make its determination under paragraph 9.1.1 within 30 Business Days of receiving an application for Early Certified Reserve Capacity.

## 9.2. Assessment of application and assignment of Early Certified Reserve Capacity

9.2.1. Unless it has rejected an application for Early Certified Reserve Capacity, and in accordance with clause 4.28C.7(a), AEMO must assign Early Certified Reserve Capacity to that amount it would normally grant the Facility if processing an application for Certified Reserve Capacity in accordance with clause 4.11.

9.2.2. The amount of Early Certified Reserve Capacity to be assigned under paragraph 9.2.1 is determined as follows:

- (a) in accordance with paragraph 5 for a Component or Facility Upgrade that is a Non-Intermittent Generating System;
- (b) in accordance with paragraph 6 for a Component, Facility, or Facility Upgrade that is being assessed using the Relevant Level Methodology; or
- (c) in accordance with paragraph 8 for a Component or Facility Upgrade that is an Electric Storage Resource.



## Appendix A. Relevant clauses of the WEM Rules

Table 3 details:

- (a) the head of power clauses in the WEM Rules under which the Procedure has been developed; and
- (b) each clause in the WEM Rules requiring an obligation, process or requirement be documented in a WEM Procedure, where the obligation, process or requirement has been documented in this Procedure.

**Table 4 Relevant clauses of the WEM Rules**

Clause
4.9.10(a)
4.9.10(b)
4.9.10(c)(i)
4.9.10(c)(ii)(1)
4.9.10(c)(ii)(2)
4.10A.6
4.10A.11
4.28C.15

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