

AEMO Procedure Change Working Group (APCWG)

21 February 2024

This meeting is being recorded for note taking purposes



We acknowledge the Traditional Owners of country throughout Australia and recognise their continuing connection to land, waters and culture.

We pay respect to Elders past and present.

Agenda

1. Welcome
2. Discussion Item: *WEM Procedure: Indicative Facility Class*
3. Discussion Item: *WEM Procedure: Frequency Co-Optimised Essential System Services*
4. Discussion Item: *WEM Procedure: Certification of Reserve Capacity*
5. Next Steps and Other Business

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Discussion Item

WEM Procedure: Indicative Facility Class

Gerry Devereux

Background

The 13 December 2023 WEM Rules included changes to the Expression of Interest (EOI) process and Indicative Facility Class (IFC) assessment.

13 Dec 2023

Submission of an EOI was a mandatory prerequisite for Certification of Reserve Capacity (CRC).

EOI submission is no longer a mandatory prerequisite for CRC.

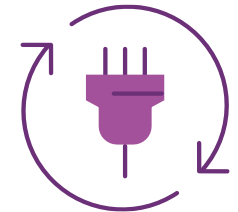
IFC assessment occurred under the EOI process.

IFC assessment can occur as part of the EOI process or independently.

Proposed Changes

There are 3 major changes to the *WEM Procedure: Indicative Facility Class* (WEMP: IFC):

1. Cosmetic changes to update formatting and presentation.
2. Procedural changes to accommodate 13 Dec 2023 WEM Rule changes.
3. Updates to IFC assessment and intermittency assessment to remove ambiguity.



Proposed Changes

1. Cosmetic changes to the formatting and presentation of the WEMP: IFC
 - a) Updates to formatting to align with AEMO’s publication guidelines for WEM procedures.
 - b) Removal of terms already defined under the WEM Rules and removal of other obsolete items, paragraphs, etc.

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	Meaning
Contract Maximum Demand	Has the meaning given in the Wholesale Electricity Market Amendment (Tranche 5 Amendments 3) Rules 2021.
Dispatch Cap	Has the meaning given in the Wholesale Electricity Market Amendment (Tranches 2 and 3 Amendments) Rules 2020.
Dispatch Target	Has the meaning given in the Wholesale Electricity Market Amendment (Tranches 2 and 3 Amendments) Rules 2020.
Energy Producing System	Has the meaning given in the Wholesale Electricity Market Amendment (Tranche 5 Amendments) Rules 2021.
Equipment	Hardware or software that form part of a Facility and affects the intermittency or level of Injection or Withdrawal capability of the Facility.

1.2. Definitions

- 1.2.1. Terms defined in the *Electricity Industry Act 2004 (WA)*, 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
Facility Upgrade	Either: <ol style="list-style-type: none"> 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 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.

Proposed Changes

2. Changes are required to the WEMP: IFC to accommodate the 13 Dec 2023 WEM Rule changes.

Updates to accommodate IFC assessment independent of the EOI process have been incorporated.

For example, the updated WEMP: IFC contains the following paragraph:

3.1.8. A person to whom clause 4.8.1(b) applies must create the intending Facility name in WEMS, in accordance with the WEM Procedure: Facility Registration Processes, at least 10 Business Days before:

- (a) the date and time specified in clause 4.1.7, where the person has submitted an Expression of Interest in relation to the new Facility or Facility Upgrade; or
- (b) the date and time specified in clause 4.1.11, where the person has not submitted an Expression of Interest under clause 4.2.6.

Failure to create the intending Facility name in WEMS will mean AEMO is unable to assign a Facility Class and the Facility will be unable to participate in Reserve Capacity Cycle.

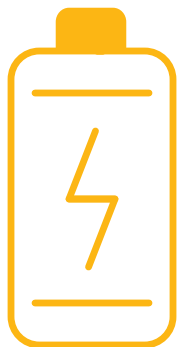
Proposed Changes

3. Updates to IFC assessment and intermittency assessment to remove ambiguity.

Consider a Facility with the following characteristics:

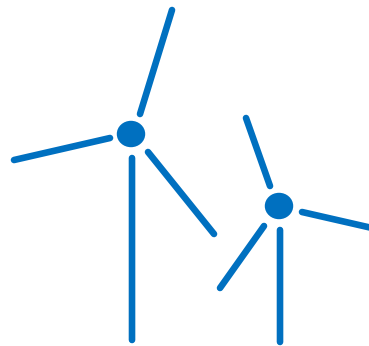
- 3 MW Electric Storage Resource (ESR).
- 5 MW Intermittent Generating System (IGS).
- Total System Size < 10 MW.

What IFC should the Facility be assigned?



3 MW

+



5 MW

=



Updates to IFC assessment and intermittency assessment to remove ambiguity.

Non-Scheduled Facility

The current WEMP: IFC paragraph 5.2.4 specifies that AEMO must assign an IFC of Non-Scheduled Facility when:

- a Facility contains a System Size < 10 MW, and
- the applicant requests an IFC of Non-Scheduled Facility.



Updates to IFC assessment and intermittency assessment to remove ambiguity.

Scheduled and Semi-Scheduled Facilities

The current WEMP: IFC paragraph 5.2.9 specifies the requirement for an intermittency assessment:

- AEMO must determine the proportion of a Facility which is intermittent for any Facility which comprises a combination of an IGS and a Non-Intermittent Generating System (NIGS) or an ESR.

The current WEMP: IFC paragraphs 5.2.11 and 5.2.12 specify how to assign IFCs to Facilities which meet the criteria under paragraph 5.2.9:

- Intermittency $\geq 50\%$ - AEMO must assign an IFC of **Semi-Scheduled Facility**, unless:
 - the applicant has requested an IFC of **Scheduled Facility** and **can respond to Dispatch Targets**.
- Intermittency $< 50\%$ - AEMO must assign an IFC of **Scheduled Facility**, unless:
 - The applicant has requested an IFC of **Semi-Scheduled Facility** and **cannot respond to Dispatch Targets**.

Updates to IFC assessment and intermittency assessment to remove ambiguity.

There is a contradiction in the current WEMP: IFC.

Facilities with multiple technology types and System Sizes < 10 MW must be assessed as both Non-Scheduled Facilities and Scheduled / Semi-Scheduled Facilities.

Paragraph 4.2.8 in the updated WEMP: IFC has been amended to remove this contradiction.

All Facilities with System Sizes smaller than 10 MW will now be assigned an IFC of Non-Scheduled Facility, except where the applicant has requested an IFC of Scheduled / Semi-Scheduled Facility.

4.2.8. AEMO will determine the proportion of a Facility that is intermittent in accordance with paragraph 4.2.9 where:

- (a) the Facility contains an Energy Producing System that comprises a combination of (first) an Intermittent Generating System and (second) a Non-Intermittent Generating System or an Electric Storage Resource, or both; and
- (b) the applicant has requested an indicative Facility Class of Semi-Scheduled Facility or Scheduled Facility.

Consultation

- Consultation on the WEMP Indicative Facility Class began on Friday 9 February 2024. Submissions close Friday 1 March 2024.
- Consultation information is available at <https://www.wa.gov.au/organisation/energy-policy-wa/consultations-and-reviews>
- More information on the consultation is available at wa.capacity@aemo.com.au

Process Stage	Indicative Date
Release of consultation	9 February 2024
Closing date for submissions on Procedure Change Proposal	1 March 2024
Publication of Final Procedure	21 March 2024
Proposed commencement of amended WEM Procedure	21 March 2024

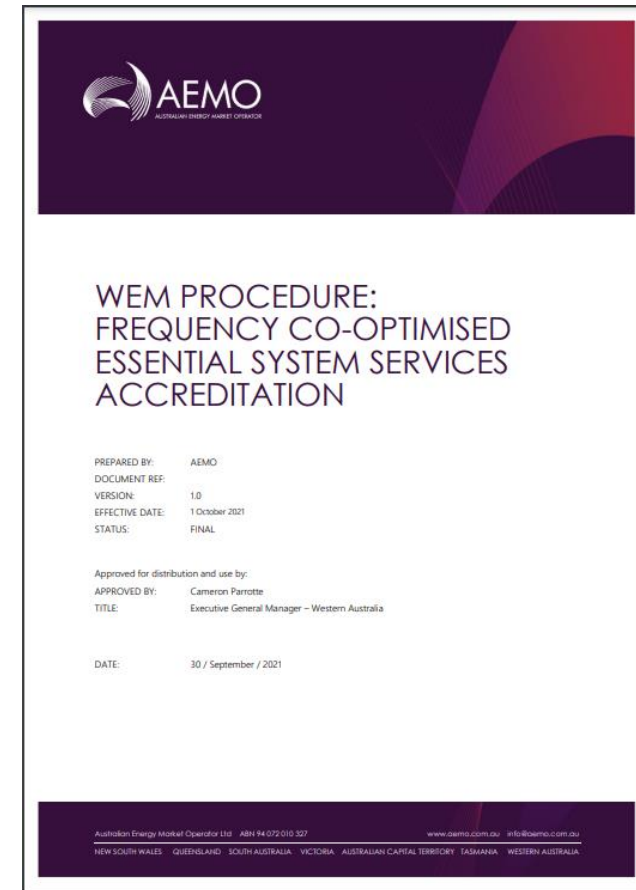
Discussion Item

WEM Procedure: Frequency Co-Optimised Essential System Services Accreditation

Ehsan Razavi

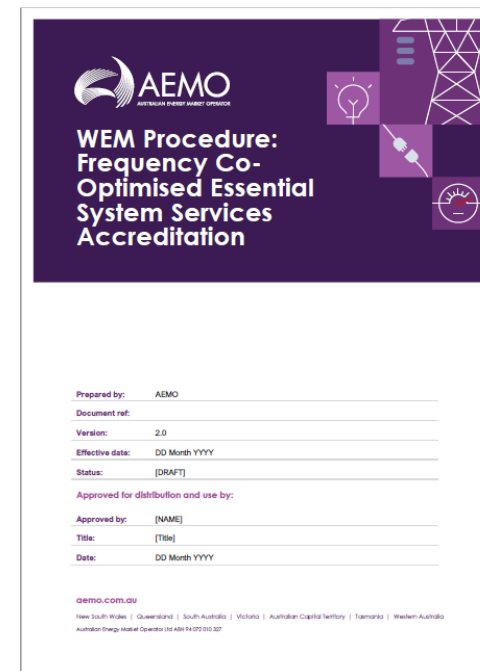
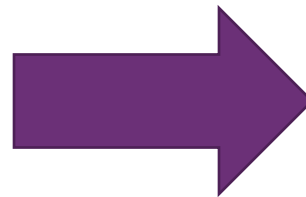
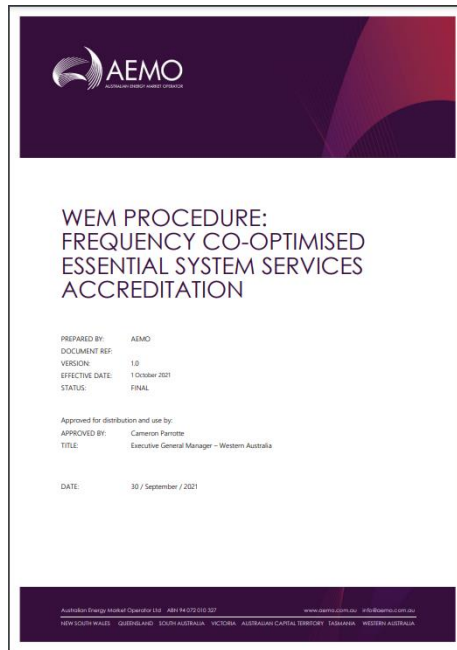
Background

- Existing WEM Procedure “Frequency Co-optimised Essential System Services Accreditation” released 1 Oct 2021
- Feedback from market and experiences have led to proposed new changes



What's new?

- New guideline version 2.0 has been produced to clarify role of this document and to simplify its use



What's new?

- AEMO has determined that several key changes are required to WEM Procedure: FCESS Accreditation.
 - Change 1: Addition of general performance requirements;
 - Change 2: Inclusion of acceptable Speed Factor range for CRR;
 - Change 3: Delay response requirement of Block Response for CRR;
 - Change 4: Clarification on the Registered GPS as a pathway for RoCoF Ride-Through Capability Accreditation.
- Additionally, AEMO has made some minor clarifications to other areas, which will be indicated as part of its publication.

Change 1: Addition of a few general performance requirements

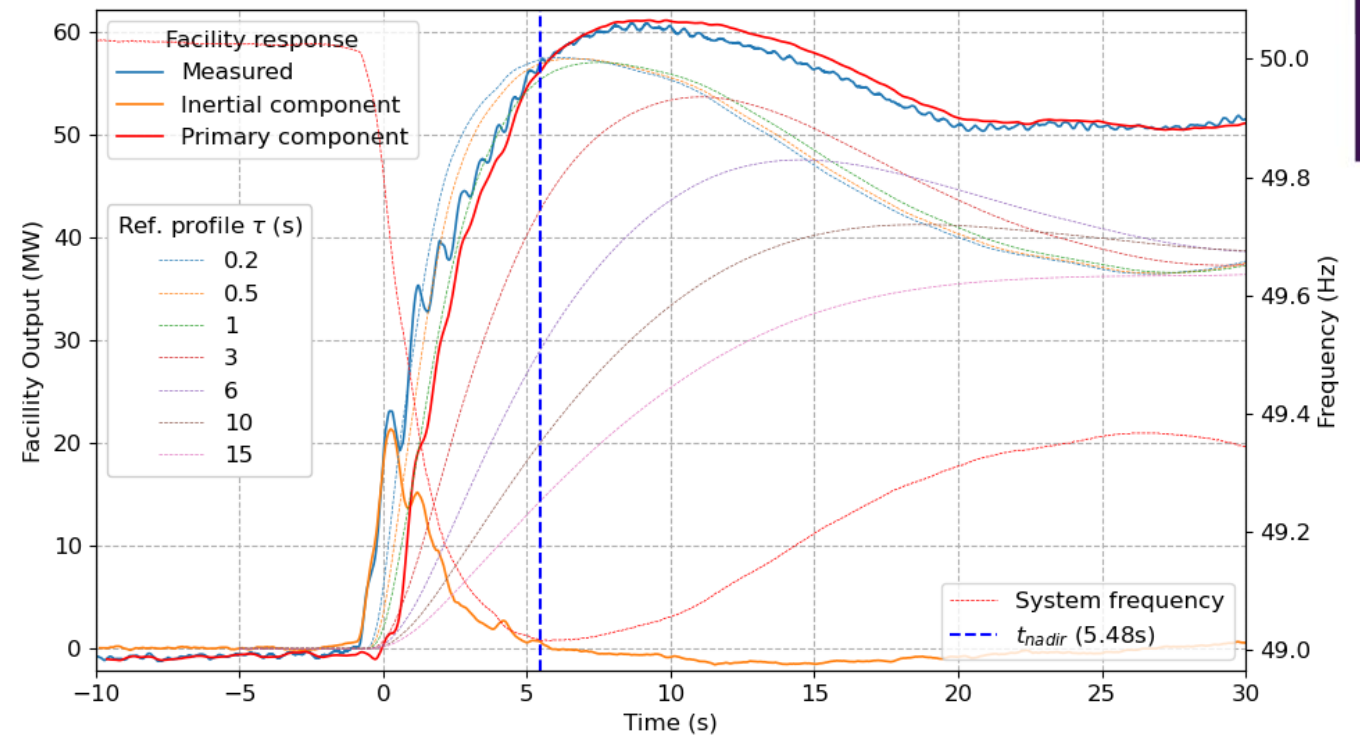
- General requirements are included to ensure Continuous Uninterrupted Operation of a Facility during frequency and voltage disturbances.
- Considering GPS already covers above requirements for generating units, these requirements are new to Inverter Based Loads and asynchronous bidirectional units.

Change 2: Inclusion of acceptable Speed Factor range for CRR

- The primary need for CRR is to arrest frequency deviation to avoid undesirable outcome, such as hitting UFLS. Therefore, CRR needs to be delivered with an acceptable speed.
- As per this procedure, AEMO will publish the desired range in WEM website.
- The current acceptable range is [0.2, 0.5, 1, 3, 6, 10, 15] seconds.

Change 2: Inclusion of acceptable Speed Factor range for CRR

- In determining Speed Factor, AEMO develops Reference Profiles based on the acceptable range



Change 3: Block Response delay requirement for CRR

- The 400ms delay response requirement for Block Response has been relaxed.
- Instead of above, Block Response is managed by Speed Factor assessment like other Facility classes.

Note: although the delay response requirement has been removed, any delay (in addition to frequency settings) directly impacts quantity of energy delivered for Speed Factor assessment.

Change 4: Registered GPS as a pathway for RoCoF Ride-Through Capability Accreditation

- A Registered GPS could be used for RoCoF Ride-Through Capability Accreditation only if it is supported by:
 - evidence where a Facility has maintained Continuous Uninterrupted Operation during a RoCoF event that demonstrate the ability of that Facility to ride through a certain limit; or
 - an engineering report, derived from an engineering study.

Note: the level of evidence required for GPS purposes could be different to that of Accreditation, where GPS is linked to GMP to validate the RoCoF Ride-Through Capability. While, for Accreditation purposes, the validation is necessary before hand.

Other changes

- Removal of paragraph related to “pre-market start frequency co-optimised essential system service accreditation”
- Clarifications of process and communications with Market Participants during accreditation and amendment processes.
- Minor editorial and formatting changes to improve readability.

Consultation

- Consultation on the WEMP Frequency Co-Optimised Essential System Services began on Monday 19 February 2024. Submissions close Monday 11 March 2024.
- Consultation information is available at <https://www.wa.gov.au/government/publications>
- If you have further questions on the consultation, please contact wa.system.engineering@aemo.com.au

Process Stage	Indicative Date
Publication of consultation	19 February 2024
Closing date for submissions on Procedure Change Proposal	11 March 2024
Publication of Final Procedure	27 March 2024
Proposed commencement of amended WEM Procedure	27 March 2024

Discussion Item

WEM Procedure: Certification of Reserve Capacity

Rebecca Petchey

Background

- The WEM Rules were amended in December 2023 to implement outcomes of the RCM Review.
- These changes included amendments to the Certified Reserve Capacity (CRC) process that will apply for the 2024 Reserve Capacity Cycle.
- Other changes are required to the WEM Procedure to reflect the new market that commenced on 1 October 2023.

Context

- The WEM Procedure: Certification of Reserve Capacity covers the processes AEMO and Market Participants must follow in submitting and assessing Certified Reserve Capacity (CRC) applications.
- This will be the enduring version of the WEM Procedure that covers the 2024 and future Reserve Capacity Cycles.
- Key changes:
 - Assessment method for Demand Side Programmes (DSP).
 - Updated outage rate calculations.
- Head of power: 4.9.10, 4.28C.15 and 4.10A.11

DSP certification changes

There are now two certification methodologies for DSPs:

1. Individual Reserve Capacity Requirement (IRCR) Contribution for DSPs with a single associated load.
2. Nominated quantity for DSPs with multiple associated loads.

The WEM Procedure has been updated to account for these methodologies.

Outage rate calculations

- AEMO has updated the Forced Outage rate calculations in the WEM Procedure to:
 - Use Capacity Adjusted Forced Outage data after 1 October 2023.
 - Treat Charge Level shortfalls for Electric Storage Resources (ESR) as Forced Outages (see clause 4.9.10(b)).
- The Planned Outage rate calculations have been removed.

Other changes

- Alignment of defined terms in the WEM Procedure and WEM Rules (e.g. references to Capability Class 1 Assessment Intervals).
- Clarification of requirements for submitting sent out capacity for ESR.
- Minor editorial and formatting changes to improve readability.

Consultation

- Consultation on the WEM Procedure: Certification of Reserve Capacity is expected to commence on Wednesday 28 February 2024.
- Consultation information is available at <https://aemo.com.au/energy-systems/electricity/wholesale-electricity-market-wem/procedures-policies-and-guides/procedures/ongoing-procedure-change-proposals>
- If you have further questions on the consultation, please contact wa.capacity@aemo.com.au

Process Stage	Indicative Date
Publication of consultation	28 February 2024 (TBC)
Closing date for submissions on Procedure Change Proposal	28 March 2024 (TBC)
Publication of final Procedure	15 April 2024
Proposed commencement of amended WEM Procedure	15 April 2024

Feedback Process



- AEMO invites stakeholders to suggest alternative options for drafting, where they consider these would improve the proposed Procedure or better meet the Wholesale Market Objectives in section 122(2) of the *Electricity Industry Act 2004* (and clause 1.2.1 of the WEM Rules).
- Should any stakeholder want to discuss the impact of the proposed changes with AEMO, please contact the relevant team via their inbox.

Indicative Facility Class	Submissions close 1 March 2024
Frequency Co-Optimised Essential System Services	Submissions close 11 March 2024
Certification of Reserve Capacity	Submissions close 28 March 2024 (TBC)

- Stakeholders are invited to submit written responses to these consultations via wa.marketdevelopment@aemo.com.au by 5pm WST on the closing date.

Questions?

- Any feedback or further questions can be sent to WA.MarketDevelopment@aemo.com.au



For more information visit

aemo.com.au