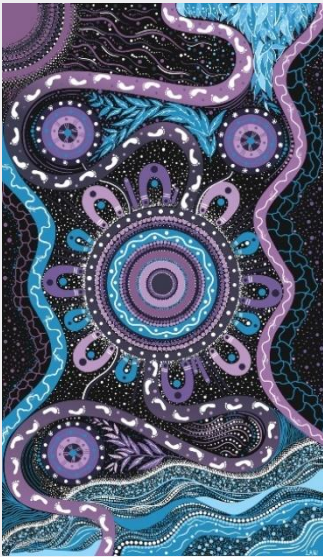


Information guide for Independent Expert Reports in the Reserve Capacity Mechanism

January 2025

A document for the Wholesale
Electricity Market





We acknowledge the Traditional Custodians of the land, seas and waters across Australia. We honour the wisdom of Aboriginal and Torres Strait Islander Elders past and present and embrace future generations.

We acknowledge that, wherever we work, we do so on Aboriginal and Torres Strait Islander lands. We pay respect to the world's oldest continuing culture and First Nations peoples' deep and continuing connection to Country; and hope that our work can benefit both people and Country.

'Journey of unity: AEMO's Reconciliation Path' by Lani Balzan

AEMO Group is proud to have launched its first [Reconciliation Action Plan](#) in May 2024. 'Journey of unity: AEMO's Reconciliation Path' was created by Wiradjuri artist Lani Balzan to visually narrate our ongoing journey towards reconciliation - a collaborative endeavour that honours First Nations cultures, fosters mutual understanding, and paves the way for a brighter, more inclusive future.

Important notice

Purpose

An Independent Expert Report (IER) is required for Facilities applying for Certified Reserve Capacity (CRC) under Clause 4.10.3 of the Wholesale Electricity Market Rules (WEM Rules).

This document will assist Market Participants and AEMO accredited experts to understand the requirements of an IER and its purpose in the Reserve Capacity Mechanism (RCM).

References to the WEM Rules within this document are outlined in bold as Clause XX or in bold and square brackets as [Clause/Appendix XIX].

Disclaimer

This document or the information in it may be subsequently updated or amended. This document does not constitute legal or business advice, and should not be relied on as a substitute for obtaining detailed advice about the WEM Rules or any other applicable laws, procedures or policies. AEMO has made reasonable efforts to ensure the quality of the information in this document but cannot guarantee its accuracy or completeness.

Accordingly, to the maximum extent permitted by law, AEMO and its officers, employees and consultants involved in the preparation of this document:

- make no representation or warranty, express or implied, as to the currency, accuracy, reliability or completeness of the information in this document; and
- are not liable (whether by reason of negligence or otherwise) for any statements or representations in this document, or any omissions from it, or for any use or reliance on the information in it.]

Copyright

© 2025 Australian Energy Market Operator Limited. The material in this publication may be used in accordance with the [copyright permissions on AEMO's website](#).



Contents

1	Overview	4
1.1	What is an IER?	4
1.2	What is an IER used for?	4
1.3	Who is required to provide an IER?	4
1.4	What are the key steps in the IER process?	5
2	The IER process	6
2.1	Who are AEMO's accredited experts?	6
2.2	How to determine whether an IER is required	6
2.3	What factors should an accredited expert consider when preparing an IER?	7
2.4	IER modelling assumptions	8
2.5	How do Market Participants provide an IER to AEMO?	9
2.6	How does AEMO assess a submitted IER?	11
2.7	How is an IER used to assign CRC?	11
2.8	How is an IER used to determine Required Level?	12
A1.	Appendix	14
A1.1	How many new IERs a Facility would be required to provide over its lifetime?	14
A1.2	How many additional new IERs is a Market Participant required to provide for an upgraded Facility?	15
	Abbreviations	16

Tables

Table 1	Determining whether an IER is required	7
Table 2	How should an accredited expert consider a Facility's DSOC when estimating the Facility's expected energy sent-out?	8

1 Overview

This section provides an overview of the important aspects of an Independent Expert Report (IER) and describes the IER process in the Reserve Capacity Mechanism (RCM).

1.1 What is an IER?

An IER is a report prepared by an expert accredited by AEMO [Clause 4.11.6] to support Certified Reserve Capacity (CRC) applications for any Facility that will be assessed under Appendix 9 (Relevant Level Method) of the WEM Rules.

Facilities which are subject to the Relevant Level Method (RLM) [Clause 4.10.3] are Facilities where energy output cannot be fully controlled at a given point in time. This includes, but is not limited to, Facilities with wind and solar generation capability as well as small batteries and other technology types. Specifically, eligible Facilities using the RLM include:

- Components of Scheduled Facilities and Semi-Scheduled Facilities that are Intermittent Generating Systems (IGS);
- Non-Scheduled Facilities (NSF), excluding NSFs that comprise only of an Electric Storage Resource (ESR) which has not been in operation for the full period of performance assessment (five years); and
- NSFs comprising only ESR that have been in operation for the full period of performance assessment [Clause 4.10.2].

CRC assessment using the RLM is subject to certain conditions [Clause 4.11.2(b)]. AEMO's assessment of CRC applications is determined by several criteria, including but not limited to network access and RLM assessment.

An IER must include a Facility's expected energy sent-out estimates expressed in megawatt hours (MWh) and a 5% probability of exceedance (POE) value expressed in megawatts (MW) [Clause 4.10.3A(c)].

1.2 What is an IER used for?

AEMO uses the expected energy sent-out estimates in the RLM to assess the CRC level for Facilities under Clause 4.11.2(b).

The 5% POE value is used to determine the Required Level of an RLM-assessed Facility. It is used to assess the eligibility of the return of Reserve Capacity Security (RCS) and for the purpose of the Reserve Capacity refund calculation.

1.3 Who is required to provide an IER?

When applying for CRC under Clause 4.11.2(b), a Market Participant must provide an IER for a Facility that [Clause 4.10.3]:

- is yet to enter service;
- is to re-enter service after significant maintenance;
- is to re-enter service after having been upgraded; or
- has not operated with the configuration outlined in Clause 4.10.1(dA) of the WEM Rules for the full period of performance assessment identified in step 1(a) of the RLM.

1.4 What are the key steps in the IER process?

Key steps in the IER process are outlined below:

1. A Market Participant identifies whether an IER is required for the Facility's CRC application (see Section 2.2).
2. The Market Participant selects an AEMO accredited expert to prepare the IER (see Section 2.1).
3. The accredited expert prepares the IER by following the requirements specified in the WEM Rules and the Certification of Reserve Capacity Market Procedure¹ (see Section 2.3). The IER must meet the required format specifications (see Section 2.5).
4. The Market Participant submits the IER in the Facility CRC application through the Wholesale Electricity Market System (WEMS) Market Participant Interface (MPI)² (see Section 2.4).
5. AEMO assesses the IER and accepts the IER if it meets the requirements outlined in Step 3 above (see Section 2.5).
6. The IER is then used by AEMO in the RLM for CRC assignment and to determine the Required Level (see Sections 2.6 to 2.8).

¹ The Certification of Reserve Capacity Market Procedure, at <https://www.aemo.com.au/Electricity/Wholesale-Electricity-Market-WEM/Procedures>.

² WEMS MPI User Guide and WEMS Submission Specifications, AEMO, at <https://www.aemo.com.au/Electricity/Wholesale-Electricity-Market-WEM/Participant-information/Guides-and-useful-information>.

2 The IER process

2.1 Who are AEMO's accredited experts?

AEMO accredits a minimum of two independent experts to prepare IERs [Clause 4.11.6]. This ensures all accredited experts are familiar with the IER process and are qualified to provide estimates of energy output on Facilities eligible to use the RLM in CRC under [Clause 4.10.2]. An accreditation is valid for two years unless AEMO removes it, which can happen at any time under [Clause 4.11.6(c)]. An accredited expert may apply for re-accreditation where its accreditation has expired.

The current list of accredited experts is provided on AEMO's website³.

2.2 How to determine whether an IER is required

For the RLM, a Facility is categorised as a new or an existing Candidate Facility based on the Facility's Full Operation Date (FOD). This represents the day the Facility became fully operational under its current configuration.

If a Facility has not been in full operation for the entire five-year period ending at 8:00 am on 1 April of Capacity Year 1 of the relevant Reserve Capacity Cycle, the Facility is a new Candidate Facility [Appendix 9] and an IER is required for its CRC application [Clause 4.10.3]. Otherwise, the Facility is considered an existing Candidate Facility and actual meter data for the entire five-year period will be used in the RLM.

A Market Participant has the following opportunities to provide and revise a FOD:

- In the Facility's CRC application under Clause 4.10.1(c)(iii)(7). This is when the Facility or Upgrade is expected to have completed a Commissioning Test and be capable of meeting all Reserve Capacity Obligations.
- In a progress report provided under Clause 4.27.11A (this is still likely to be an expected date).
- In the Facility's CRC application under Clause 4.10.1(k). This can only be provided once the Facility has become fully operational.

A Market Participant can view the Facility's FOD in WEMS Reserve Capacity Standing Data⁴.

If a Facility is being upgraded and applying for CRC in a relevant Reserve Capacity Cycle, the Upgrade is required to apply for CRC separately from the parent Facility. This is to ensure the CRC outcome of the Upgrade does not adversely impact the parent Facility's CRC outcome. If the Upgrade is assigned Capacity Credits, it will be merged into the parent Facility to apply for CRC as a combined Facility in subsequent Reserve Capacity Cycles. The combined Facility's FOD will reflect the date that the Upgrade provides under Clause 4.10.1(c)(iii)(7) or Clause

³ Certification of Reserve Capacity, AEMO, at <https://www.aemo.com.au/Electricity/Wholesale-Electricity-Market-WEM/Reserve-capacity-mechanism/Certification-of-reserve-capacity>.

⁴ WEMS MPI User Guide, AEMO, at <https://www.aemo.com.au/Electricity/Wholesale-Electricity-Market-WEM/Participant-information/Guides-and-useful-information>.

4.27.11A given the change in configuration to the parent Facility. When the Upgrade becomes operational, the combined Facility’s FOD will reflect the date provided under Clause 4.10.1(k).

Table 1 Determining whether an IER is required

Scenario	Situation	Result
A Market Participant has applied for CRC for three IGS Facilities for the 2025 Reserve Capacity Cycle: <ul style="list-style-type: none"> IGS_01 IGS_02 IGS_03 IGS_03_UPG_01 is an Upgrade to IGS_03. In accordance with step 1(a) of Appendix 9 of the WEM Rules, the 5-year period identified for the 2025 Reserve Capacity Cycle starts from 8:00 am on 1/04/2020 and ends at 8:00 am on 1/04/2025.	IGS_01 is a new Facility and the expected date for it to complete all Commissioning Tests and be capable of fully meeting its Reserve Capacity Obligations is 1/05/2027.	As the date of 1/05/2027 is later than 1/04/2025, IGS-01 is a new Candidate Facility for the RLM and an IER is required.
	IGS_02 is an existing Facility with a FOD of 30/08/2020.	Although IGS_02 is an existing Facility, it has not been fully operational for the entire five-year period and is therefore considered a new Candidate Facility for the RLM. An IER is required.
	IGS_03 is an existing Facility with a FOD of 30/01/2020.	The Facility has been in full operation for the entire five-year period and is therefore considered an existing Candidate Facility for the RLM. An IER is NOT required.
	IGS_03_UPG_01 is an Upgrade to the existing Facility IGS_03. The expected date to complete all Commissioning Tests and be capable of meeting Reserve Capacity Obligations in full is 29/09/2027.	The FOD is later than 1/04/2025 and therefore the Upgrade will be considered a new Candidate Facility for the RLM. An IER is required. When IGS_03_UPG_01 has been assigned Capacity Credits for the 2025 Reserve Capacity Cycle, the FOD of IGS_3 (parent + Upgrade) will reflect the FOD of the IGS_03_UPG_01 provided in the 2025 CRC application or a progress report. The date that the Upgrade becomes fully operational will be the combined Facility’s final FOD.

Note: FOD – the day the Facility became fully operational under its current configuration. If a Facility is upgraded, the FOD is updated to the day the Upgrade became fully operational.

As demonstrated in Table 1, where the FOD of a Facility falls within or is later than the relevant five-year period, an IER is required. This may require a Facility to provide up to eight IERs for CRC applications. Once the expected energy output estimates provided in an IER cover the entire period that falls prior to the FOD in the RLM (generally the third or fourth IER provided), this IER together with actual meter data will be sufficient for future Relevant Level calculations. If the Facility has one or more Upgrades, more IERs would be required. Please see Appendix A1 for further information and examples.

2.3 What factors should an accredited expert consider when preparing an IER?

An accredited expert must follow the requirements specified in the WEM Rules [Clause 4.10.3A] when preparing an IER and consider the following factors (outlined in step 6.2 of the Certification of Reserve Capacity Market Procedure):

- The configuration of the Facility proposed in the CRC application [Clause 4.10.1(dA)].
- The level of network access available, or expected to be available, to the Facility [Clauses 4.10.1(bA)(ii) and 4.11.1(bA)]. Energy output estimates provided in an IER should reflect the Facility’s existing or expected Declared Sent Out Capacity (DSOC) limit.
- The observed sent-out generation of similar Facilities, if applicable.

- Whether the assessed component(s) is part of a Facility that applies Facility Sub-Metering (FSM) arrangements⁵.
- Any restrictions on the availability of the Facility, as specified by the CRC applicant under Clause 4.10.1(g).

The timestamp of an AEMO Trading Interval (TI) is defined by the point in time that the TI begins, which may differ from the typical convention of meteorological data suppliers defining the timestamp⁶. For consistency and accuracy purposes, accredited experts should endeavour to make sure the development and presentation of energy sent-out estimates for CRC applications is consistent with the AEMO TI timestamp to avoid any misalignment of data. Please use the AEMO template provided on the AEMO website.⁷

For a biogas Facility, it is important to provide sufficient information and supporting evidence on fuel availability and how this affects the Facility’s expected energy sent-out estimates. The IER should confirm the level of fuel supply available to the Market Participant as if the Facility had been in operation for the relevant period. The expected energy sent-out estimates must be consistent with fuel supply information.

In general, a Facility’s expected energy sent-out estimates should be capped at the Facility’s DSOC [Clause 4.11.1].

For an Upgrade, when the combined Facility’s (parent + Upgrade) configuration exceeds its DSOC, the accredited expert should cap the Upgrade’s expected sent-out estimates to ensure that the combined Facility’s sent-out does not exceed the DSOC. This applies regardless of whether the parent Facility is an existing or new Candidate Facility.

Table 2 How should an accredited expert consider a Facility’s DSOC when estimating the Facility’s expected energy sent-out?

Situation	Result
A Market Participant has applied for CRC in respect of a Facility (IGS_03) and its Upgrade (IGS_03_UPG_01) for the 2025 Reserve Capacity Cycle. The combined Facility has a DSOC of 80 MW. IGS_03 is an existing Candidate Facility and an IER is not required. The Facility’s actual meter data will be used for the RLM.	IGS_03_UPG_01 is a new Candidate Facility and requires an IER. The accredited expert should consider the DSOC of 80 MW and cap the Upgrade’s expected energy sent-out estimates to ensure that the combined Facility (IGS_03 + IGS_03_UPG_01)’s total sent-out does not exceed the DSOC.

2.4 IER modelling assumptions

Before CRC can be assigned to an RLM-assessed Component or Facility under Clause 4.11.2, there must be five years of energy output data available for the application of the RLM to the Component or Facility.

For Facilities or components that have not generated five years of actual historical energy output data, an Independent Expert (IE) needs to supplement all, or some of those five years with modelled historical energy output estimates. For example, if the Facility has been operational for two years and has accumulated two years’

⁵ If a Facility has installed FSM, the Market Participant must provide a formula to calculate the contribution of each Separately Certified Component, refer to the FSM WEM Procedure for details: <https://aemo.com.au/energy-systems/electricity/wholesale-electricity-market-wem/procedures-policies-and-guides/procedures>

⁶ For example, Solargis uses centre of summarization interval as default. This means that time intervals 00:00-01:00 and 01:00-02:00 are represented by timestamps 00:30 and 01:30. See <https://solargis.com/docs/product-guides/time-series-and-tmy-data/data-format>

⁷ Please refer to the csv file in Section 9.

worth of operational data, then the Market Participant will need to supplement the historical data with three years of modelled historical energy output estimates.

The modelled historical energy output estimates developed by an Independent Expert should include all energy losses on the Facility side of the grid connected meter. In addition:

- The IE should consider all applied losses that are representative of the Facility's actual/projected age (rounded down to nearest whole year) at the commencement of the Capacity Year in question. For example, if at the commencement of a Capacity Year, an asset's age will be two years and three months, losses should be applied for the whole five-year energy time series that are representative of the asset at an age of two whole years.
- The Independent Expert report should clearly detail all losses that are accounted for within the time series data including but not limited to: on-site transformers, inverters, cable losses, efficiency losses, etc.

Some energy losses may be variable or intermittent in nature and the IE should apply the loss value that is statistically most likely to occur during the specific Capacity Year in question, for every data point in the five-year energy time series.

The IEs may exclude the following losses:

- Outages resulting from network downtime (consequential losses); and
- Curtailment instruction from the Network Operator (Western Power) or Market Operator (AEMO).

2.5 How do Market Participants provide an IER to AEMO?

An IER must be included in a Facility or an Upgrade's CRC application. An IER must be comprised of a CSV file and written report.

The CSV file must contain the expected energy output expressed in MWh for each TI for the entire five-year period identified. The file should be prepared using the template⁸ provided and follow the format requirements outlined below:

- Provide expected energy output by the TI start time (the first TI starts from 01/04/XXXX 08:00).
- Expected energy output should include at least three decimal places.
- If the Facility is already in full operation, provide the expected energy output up to 8:00 am of the FOD.
- For all TIs after and including 8:00 am of the FOD, enter zeros (not null). AEMO will use the Facility's actual meter data in the RLM.
- Replace negative energy output estimates with zeros.

The written report contains:

- Sufficient information for AEMO to understand how the expected energy sent-out estimates are developed, including:

⁸ The template is available under the Relevant Level Method section on the AEMO Certification of Reserve Capacity webpage: <https://www.aemo.com.au/Electricity/Wholesale-Electricity-Market-WEM/Reserve-capacity-mechanism/Certification-of-reserve-capacity>.

- A Facility description that includes the Facility’s technical specifications, location, the available network access level, and any operating restrictions. Note that AEMO must be informed of any changes to these details after Capacity Credits have been assigned [Clause 4.10.4].
- A methodology description that provides information on the credibility of the method and tool applied for developing the estimates.
- The data sources that are used as inputs for the estimates, including information on the credibility of the data sources.
- If the Facility is a biogas Facility, sufficient information on the fuel availability and its impact on the estimates.
- 5% POE value(s):
 - For a Facility that is not an Upgrade - a value expressed in MW that must equal the 5% POE of expected generation output for the Facility for all TIs that occurred within the last three years up to, and including, the last Hot Season (commencing at 8:00 am on 1 December and ending at 8:00 am on 1 April) [Clause 4.10.3A(b)].
- For an Upgrade: two values expressed in MW:
 - One for the Upgrade that must equal the 5% POE of expected generation output for the Upgrade for all TIs that occurred within the last three years up to, and including, the last Hot Season; and
 - One for the combined Facility (parent plus Upgrade) that must equal the 5% POE of expected generation output for the combined Facility for all TIs that occurred within the last three years up to, and including, the last Hot Season.
- If an alternative value to the 5% POE value is proposed [Clauses 4.10.3A(c) and 4.10.3A(d)]:
 - For a Facility that is not an Upgrade: an alternative value expressed in MW must be proposed and the reasons for the proposed alternative value must be provided.
 - For an Upgrade: two alternative values expressed in MW must be proposed, one for the Upgrade, and the other for the combined Facility (parent plus Upgrade). The reasons for the proposed alternative values must be provided.

Why an Upgrades IER must include two 5% POE values

If an Upgrade is assigned Capacity Credits, the Upgrade will be merged into the parent Facility when its Reserve Capacity Obligations commence (usually 1 October for the relevant Capacity Year). For the CRC application in Example 1, the Facility will be assessed under its new configuration (parent + Upgrade). Therefore, the 5% POE value for the combined Facility will be used to calculate the Required Level for the entire Facility for the relevant Capacity Year.

Example

A Market Participant has applied for CRC for IGS_04 and IGS_04_UPG_01 (an Upgrade to IGS_04) for the 2025 Reserve Capacity Cycle. The parent Facility (IGS_04) is an existing Candidate Facility with a nameplate capacity of 100 MW. The Upgrade (IGS_04_UPG_01) is a new Candidate Facility with a nameplate capacity of 30 MW. The combined Facility has a DSOC of 150 MW.

As an existing Candidate Facility, the parent Facility (IGS_04) does not need an IER. As a new Candidate Facility, the Upgrade (IGS_04_UPG_01) requires an IER. In the IER, two 5% POE values must be provided as follows:

- The first value is estimated as 29.685 MW for IGS_04_UPG_01, calculated based on IGS_04_UPG_01's expected energy sent-out estimates for the period between 8:00 am on 1/04/2022 and 8:00 am on 1/04/2025.
- The second value reflects the combined Facility's (IGS_04 + IGS_04_UPG_01) 5% POE and is estimated as 129.547 MW. This value should be calculated based on the combined Facility's expected energy sent-out estimates for the period 8:00 am on 1/04/2022 to 8:00 am on 1/04/2025.

When the Reserve Capacity Obligations of IGS_04_UPG_01 commences in the 2027-28 Capacity Year, the quantity of the Reserve Capacity Obligations will be rolled into the Reserve Capacity Obligations of the parent Facility IGS_04 (parent Facility and the Upgrade do not have separate metering points). IGS_04 will have a new configuration of 130 MW. The Required Level of IGS_04 will be updated based on the 5% POE value of 129.547 MW for the 2026-27 Capacity Year.

For CRC for the 2026 Reserve Capacity Cycle, the Market Participant is required to provide an IER with expected energy output and one 5% POE value estimated based on IGS_04's new configuration of 130 MW.

2.6 How does AEMO assess a submitted IER?

AEMO assesses the completeness and accuracy of an IER in line with the requirements outlined in Sections 7 to 9 of this document. If AEMO considers an IER to be incomplete, it will request the Market Participant to provide further information.

If AEMO considers the IER to be inaccurate, it may determine, in accordance with Appendix 9 step 10 of the WEM Rules, alternative estimates of the expected energy that would have been sent out by the Facility had it been in operation with the configuration proposed in the CRC application. These estimates will be used in the RLM in line with step 6.2.2 of the Certification of Reserve Capacity Market Procedure.

2.7 How is an IER used to assign CRC?

The expected energy sent-out estimates provided in an IER are used to calculate the Facility's Relevant Level in accordance with the RLM [Appendix 9].

For a Facility with sufficient access to the Network and availability to usefully address the Peak Reserve Capacity Requirement, and a DSOC higher than the Relevant Level, the Relevant Level calculated for the Facility sets the quantity of CRC that is assigned to the Facility [Clause 4.11.2(b)].

If a Facility has constrained access to the Network and availability to usefully address the Peak Reserve Capacity Requirement, the Facility's CRC level is set by the lesser of the Relevant Level and the Network Access Quantities (NAQ) as determined in Appendix 3 of the WEM Rules.

2.8 How is an IER used to determine Required Level?

The 5% POE value provided in an IER sets the Facility's initial Required Level. As the 5% POE is calculated from the expected energy sent-out estimates, it corresponds to the Facility's level of CRC assigned. The Facility's Adjusted Required Level is calculated using the formula below:

$$\text{Required Level}_{adjusted} = \text{Required Level}_{initial} \times \frac{\text{Capacity Credits}}{\text{CRC}_{assigned}}$$

A Market Participant can view the Facility's Adjusted Required Level in the Facility Management dashboard in the WEMS RCM portal⁹.

The adjustment to the initial Required Level is necessary because a Market Participant could withdraw some capacity in an IGS bilateral trade declaration, resulting in lower assigned Capacity Credits compared to the level of CRC. This decrease in Capacity Credits should be reflected by a decrease in the Facility's Required Level.

The Required Level serves two purposes for an IGS in the RCM – return of RCS and the capacity payment refund calculation.

For the return of RCS, the Capacity Credits applied in the calculation is the initial level of Capacity Credits assigned by AEMO [Clause 4.20.5A].

For capacity payment refunds, the Capacity Credits applied in the calculation is the level of Capacity Credits currently held by the Facility. Any change in the level of Capacity Credits due to a Market Participant's voluntary reduction will be accounted for [Clause 4.25.4A].

A Market Participant may provide AEMO with a report before the end of the relevant Capacity Year under Clause 4.13.10C. This report must be prepared by an AEMO accredited expert and specifies the accredited expert's best estimate of the level to which the Facility can operate. This best estimate must be expressed in MW as a sent-out value. This report can be used for the return of RCS and the refund calculation. It allows a Facility to demonstrate its sent-out capability by providing an accredited expert's best estimate, where the IGS cannot meet its Required Level due to non-operational factors (e.g. insufficient sun or wind in the first month of operation).

2.8.1 Return of RCS

For RCS to be returned for a new Facility or Upgrade before the end of the Capacity Year, the Facility must:

- Operate at a level equivalent to its Required Level, adjusted to 100 percent of the level of Capacity Credits specified in Clause 4.20.5A, in at least two TI's prior to the end of the relevant Capacity Year; and
- Be considered by AEMO to be in Commercial Operation [Clause 4.13.13].
- For a new Facility or Upgrade to receive its RCS at the end of the Capacity Year, it must be considered by AEMO to be in Commercial Operation and [Clause 4.13.10]:

⁹ WEMS MPI User Guide, AEMO, at <https://www.aemo.com.au/Electricity/Wholesale-Electricity-Market-WEM/Participant-information/Guides-and-useful-information>.

- Operate at a level which is at least equivalent to its Required Level, adjusted to 90 percent of the level of Capacity Credits specified in Clause 4.20.5A, in at least two TIs before the end of the relevant Capacity Year; or
- Provide AEMO with a report under Clause 4.13.10C, which specifies that the Facility certified under Clause 4.11.2(b) can operate at a level which is at least equivalent to its Required Level, adjusted to 90 percent of the level of Capacity Credits specified in Clause 4.20.5A.

A Market Participant may request AEMO to determine that a Facility is in Commercial Operation in accordance with Clause 4.13.10A when the Facility has [Clause 4.13.10B]:

- Completed an approved Commissioning Test under Clause 3.21A and subsequently produced energy for at least two TIs; and
- Provided a formal advice that it has completed an approved Commissioning Test under Clause 3.21A and is commercially operational.

2.8.2 Capacity payment refund calculation

An IGS must be in Commercial Operation and meet its Required Level in at least two TI, adjusted to 100 percent of Capacity Credits currently held in the first month that its Reserve Capacity Obligations apply to avoid paying refunds [Clauses 4.26.1(b) and 4.26.1A(a)ii.3].

If an IGS is not in Commercial Operation, it will pay refunds on the full amount of Capacity Credits assigned until it gains Commercial Operation status.

If an IGS is in Commercial Operation but has not met its Required Level, refunds will apply to the difference between the Required Level and the Facility's second highest value of the output achieved or the value provided in the report under Clause 4.13.10C since the Facility gained Commercial Operation status.

An Upgrade's Reserve Capacity status does not impact the parent Facility's Commercial Operation status in the capacity payment refund calculation. Note the refund calculation is based on the Required Level of the combined Upgrade and parent Facility.

A1. Appendix

A1.1 How many new IERs a Facility would be required to provide over its lifetime?

For a Facility that does not change its configuration, the number of IER's required will depend on the FOD of the Facility. Generally, for CRC purposes, a Facility will be required to provide a new IER for the first three or four Reserve Capacity Cycles. Subsequent Reserve Capacity Cycles may use a combination of a previous IER and actual meter data until the Facility has been in operation for the full five years of the RLM period.

Example

IGS_01 is a new Facility that is expected to complete all Commissioning Tests and be capable of fully meeting its Reserve Capacity Obligations on 1/05/2027. The relevant Market Participant has applied for CRC for the 2025 Reserve Capacity Cycle.

Based on the current WEM Rules¹⁰, the Market Participant is required to submit an IER for IGS_01 for each of the eight Reserve Capacity Cycles between 2025 and 2032 (see table below). From the 2033 Reserve Capacity Cycle, actual meter data is available for the entire relevant 5-year period for the RLM, so an IER is not required.

IER #	Reserve Capacity Cycle	RLM period (step 1(a) of Appendix 9)	FOD	IER required?	New IER required?	Period that requires IER data
1	2025	1/04/2020 - 31/03/2025	N/A	Yes	Yes	1/04/2020 - 31/03/2025
2	2026	1/04/2021 - 31/03/2026	N/A	Yes	Yes	1/04/2021 - 31/03/2026
3	2027	1/04/2022 - 31/03/2027	N/A	Yes	Yes	1/04/2022 - 31/03/2027
4	2028	1/04/2023 - 31/03/2028	1/05/2027	Yes	Yes	1/04/2023 - 30/04/2027
5	2029	1/04/2024 - 31/03/2029	N/A	Yes	No	1/04/2024 - 30/04/2027
6	2030	1/04/2025 - 31/03/2030	N/A	Yes	No	1/04/2025 - 30/04/2027
7	2031	1/04/2026 - 31/03/2031	N/A	Yes	No	1/04/2026 - 30/04/2027
8	2032	1/04/2027 - 31/03/2032	N/A	Yes	No	1/04/2027 - 30/04/2027

The first four Reserve Capacity Cycles require a new IER each year to cover the RLM as identified in Step 1(a) of Appendix 9 of the WEM Rules. In the 2028 Reserve Capacity Cycle for the first time the Facility's FOD falls in the RLM period. From the 2029 Reserve Capacity Cycle onwards, the previous year's IER combined with the Facility's

¹⁰ As at 1 January 2025.

actual meter data from the FOD now covers the entire period. This IER together with actual meter data will be sufficient for all future Relevant Level calculations.

However, if the Independent Expert has changed its methodology for modelling the energy sent-out data, a new IER is required regardless of the periods that mentioned in the table above.

A1.2 How many additional new IERs is a Market Participant required to provide for an upgraded Facility?

An Upgrade changes the configuration of the parent Facility. The date that the Upgrade completes Commissioning Tests and is capable of meeting Reserve Capacity Obligations in full will be the new FOD applied to the combined Facility. This new FOD will determine how many IERs are required for the Facility.

If the Facility's FOD occurs no earlier than 1 April, the Market Participant is required to provide up to four additional IERs. This is similar to examples presented in Appendix 1.1. The first IER provided for an Upgrade must present the expected energy sent-out separate to the parent Facility. All subsequent IERs must determine the expected energy sent-out for the Facility under its new configuration (parent + Upgrade).



Abbreviations

Abbreviation	Meaning
CRC	Certified Reserve Capacity
DSOC	Declared Sent Out Capacity
FOD	Full Operation Date
IER	Independent Expert Report
IGS	Intermittent Generating System
MPI	The Market Participant Interface for the WEMS
MW	Megawatt
MWh	Megawatt hour
NAQ	Network Access Quantities
NSF	Non-Scheduled Facility
POE	Probability of exceedance
RCM	Reserve Capacity Mechanism
RCS	Reserve Capacity Security
SWIS	South West Interconnected System
TI	Trading Interval
WEM	Wholesale Electricity Market
WEMS	Wholesale Electricity Market System