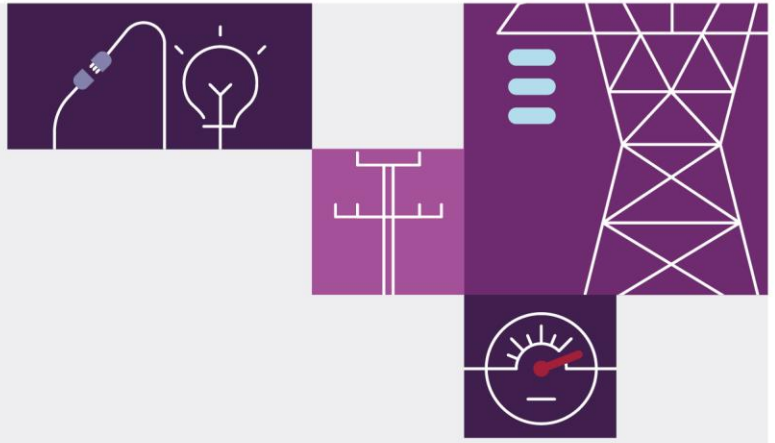


Request for Expressions of Interest for the 2023 Reserve Capacity Cycle

13 January 2023

A report for the Wholesale Electricity Market





Important notice

Purpose

The Australian Energy Market Operator (AEMO) has prepared this Request for Expressions of Interest (REOI) under clause 4.2.2 of the Wholesale Electricity Market Rules (WEM Rules). The purpose of the REOI is to invite existing and new Market Participants to notify AEMO of the amount of new Energy Producing System and Demand Side Management capacity they intend to make available as Reserve Capacity in the South West Interconnected System (SWIS) in the Capacity Year to which the REOI relates.

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 Wholesale Electricity Market (WEM), the WEM Rules and the Reserve Capacity Mechanism in Western Australia, or any other applicable laws, procedures or policies. AEMO has made every effort to ensure the quality of the information in this document but cannot guarantee its accuracy or completeness.

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Version control

Version	Release date	Changes
1	13/1/2023	N/A

Executive summary

This 2023 *Request for Expressions of Interest* (REOI) invites Market Participants and proponents (applicants) to provide information to AEMO regarding capacity (new Energy Producing Systems and Demand Side Management [DSM] capacity) they intend to make available as Reserve Capacity in the South West Interconnected System (SWIS) in the 2025-26 Capacity Year¹.

An applicant must submit an Expression of Interest (EOI) for new capacity², which includes a Facility upgrade, as a condition of being eligible to seek certification of Reserve Capacity under clause 4.8.2 of the Wholesale Electricity Market Rules (WEM Rules)³.

EOIs, including all supporting documentation, must be submitted to AEMO by **5:00 pm (Australian Western Standard Time [AWST]), 1 March 2023**.

Applicants are encouraged to commence securing all necessary approvals related to the Certified Reserve Capacity (CRC) application for the 2023 Reserve Capacity Cycle in a timely manner (see Section 2). Applicants can engage with AEMO to understand the various aspects of the Reserve Capacity Mechanism (RCM). Details on the key Year 1 activities of the 2023 Reserve Capacity Cycle have been provided in the timetable published on the WEM web page⁴.

The preliminary Reserve Capacity Requirement for the 2025-26 Capacity Year is 4,554 megawatts (MW), based on the 2022 WEM *Electricity Statement of Opportunities* (ESOO) forecasts. It is estimated that there will be a 21 MW shortfall in capacity for the 2025-26 Capacity Year⁵.

For information on any aspect of the RCM or this REOI, please contact the Reserve Capacity team at wa.capacity@aemo.com.au.

¹ The 2025-26 Capacity Year is for capacity available on Trading Days from 1 October 2025 to 1 October 2026, which is Year 3 of the 2023 Reserve Capacity Cycle.

² Except an application for Early Certified Reserve Capacity or Conditional Certified Reserve Capacity, or for a Facility subject to a Non-Co-optimised Essential System Service (NCESS) contract. See clause 4.8.3 of the WEM Rules.

³ The WEM Rules are available at <https://www.wa.gov.au/government/document-collections/wholesale-electricity-market-rules>.

⁴ Available at <https://aemo.com.au/en/energy-systems/electricity/wholesale-electricity-market-wem/wa-reserve-capacity-mechanism/reserve-capacity-timetable>.

⁵ See Table 5, 2022 WEM ES00. Available at https://aemo.com.au/-/media/files/electricity/wem/planning_and_forecasting/esoo/2022/2022-wholesale-electricity-market-esoo.pdf.



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1 Introduction

This *Request for Expressions of Interest* (REOI) has been prepared in accordance with clause 4.2.2 of the WEM Rules. It relates to the Wholesale Electricity Market (WEM), which operates in the South West Interconnected System (SWIS). The SWIS, as shown in Figure 1, covers the south-west of Western Australia (WA), extending north to Kalbarri, south to Albany, and east to Kalgoorlie.

Figure 1 Map of the SWIS



1.1 Reserve Capacity Mechanism

The SWIS is an isolated system with a high summer peak demand relative to average load. The WEM features a capacity market called the Reserve Capacity Mechanism (RCM) to ensure sufficient Energy Producing Systems and Demand Side Management (DSM) capacity is available to meet future peak demand in the SWIS.

The RCM is built around the concept of a “Capacity Credit”; this is a notional unit of capacity that can be traded via bilateral contracts among Market Participants, and between Market Participants and AEMO. Capacity Credits are assigned to Energy Producing Systems and Demand Side Programmes (DSP), and are valid for a single Capacity Year⁶. Any Energy Producing System and Demand Side Management (DSM) capacity, regardless of technology type, that can meet the timeliness and requirements outlined in the WEM Rules may participate in the RCM.

Under the WEM Rules, obligations are imposed on Capacity Credit holders in return for receiving payments for Capacity Credits. The most significant obligation is that capacity must be offered into the WEM at all times, from 1 October in Year 3 to 1 October of Year 4 of the relevant Reserve Capacity Cycle, except to the extent that the Facility is subject to a Consequential or Planned Outage. If this obligation is not met, the Capacity Credit holder is

⁶ Capacity Year is defined in Chapter 11 (Glossary) of the WEM Rules.

required to pay to AEMO a Facility Reserve Capacity Deficit Refund (including any Refund Payable Planned Outage), which is redistributed to other Market Participants under the WEM Rules.

Market Customers may purchase Capacity Credits, through the Individual Reserve Capacity Requirement, based on their consumption at system peak times in the previous year. Market Customers may purchase Capacity Credits through bilateral contracts with capacity providers, or through AEMO at the administered Reserve Capacity Price (RCP).

Each year AEMO forecasts the Reserve Capacity Target (RCT)⁷ required to meet forecast peak demand, while ensuring system reliability criteria are being met. This RCT is determined based on the peak demand forecast of 'one-in-10-year' conditions⁸, otherwise stated as the 10% probability of exceedance (POE)⁹, plus a margin to cover any Intermittent Loads and unplanned Facility Outages, and to provide frequency stability.

For details on existing Energy Producing Systems and DSM capacity and future electricity demand and supply-demand balance, please refer to the 2022 WEM *Electricity Statement of Opportunities* (ESOO)¹⁰.

A summary of the timeline for the key processes of the 2023 Reserve Capacity Cycle is shown in Figure 2.

1.2 Capacity Credit payment

Table 1 outlines the Benchmark Reserve Capacity Price (BRCP), the Reserve Capacity Price (RCP), the Facility Monthly RCP, and the corresponding quantities of Capacity Credits for the previous Capacity Years, where available. There are no Fixed Price Facilities in the 2023-24 Capacity Year.

Table 1 BRCP^A, RCP^B and, Facility Monthly Reserve Capacity Price^C in the WEM

Capacity Year	BRCP		New Facilities and DSM Facilities		Transitional Facilities		
	BRCP	RCP	Facility Monthly RCP	Capacity Credits assigned	Transitional RCP	Transitional Monthly RCP	Capacity Credits assigned
Unit	\$/MW/year	\$/MW/year	\$/MW/month	MW	\$/MW/year	\$/MW/month	MW
2021-22	\$154,200	\$78,573.33	\$6,547.78	117.500	\$114,000.00	\$9,500	4,807.347
2022-23	\$141,900	\$85,294.19	\$7,107.85	144.134	\$115,425.00	\$9,619	4,663.103
2023-24	\$151,700	\$105,949.27	\$8,829.11	189.066	\$118,599.19	\$9,883	4,537.506
2024-25	\$165,700	To be determined					
2025-26	\$193,400 ^D	To be determined					

A. Included in accordance with clauses 4.3.1(c)(v) and 4.3.1(f) of the WEM Rules.

B. Included in accordance with clause 4.3.1(c)(vi) of the WEM Rules.

C. Included in accordance with clause 4.3.1(c)(vii) of the WEM Rules.

D. The Economic Regulation Authority (ERA) has published its final determination regarding the 2023 BRCP, applicable to the 2025-26 Capacity Year ; see <https://www.erawa.com.au/electricity/wholesale-electricity-market/annual-price-setting/benchmark-reserve-capacity-price>.

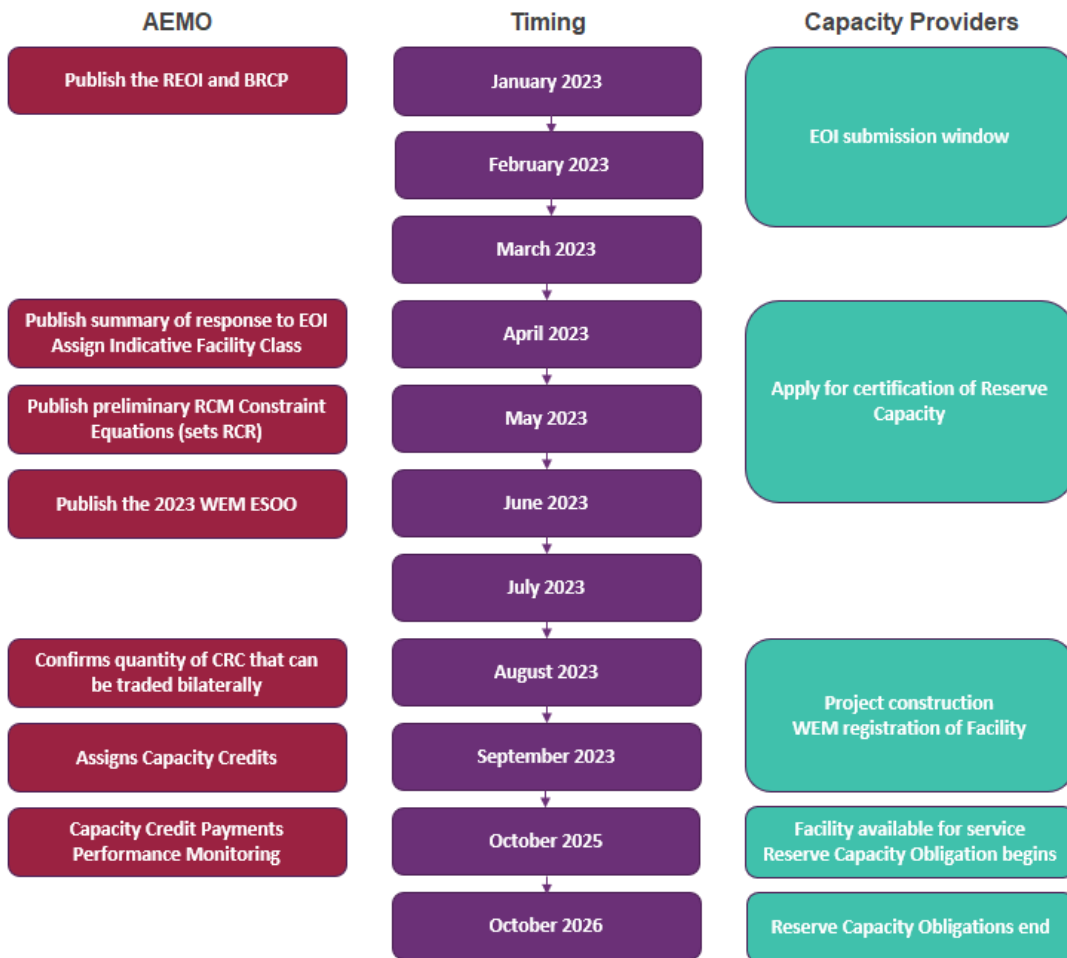
⁷ AEMO carries out the Long Term Projected Assessment of System Adequacy (PASA) study every year to forecast the RCT for each Capacity Year of a 10-Capacity-Year Long Term PASA Study Horizon and publishes the results in the WEM ESOO. The RCT is AEMO's estimate of the total amount of Energy Producing System capacity or DSM capacity required in the SWIS to satisfy the Planning Criterion. The RCT is updated in each Long Term PASA Study for the relevant Capacity Years to reflect the current forecasts.

⁸ One-in-10-year demand conditions are a common benchmark in electricity markets when considering reserve margin levels. They are used in the National Electricity Market, as well as in major US electricity markets, such as those operated by PJM (regional transmission organisation for all or parts of 13 states and the District of Columbia), the New York Independent System Operator, and the New England Independent System Operator.

⁹ POE means the likelihood a peak demand forecast will be met or exceeded. A 10% POE peak demand forecast is expected to be exceeded, on average, only one year in 10 and assumes more extreme weather than a 50% POE forecast.

¹⁰ Available at <https://aemo.com.au/en/energy-systems/electricity/wholesale-electricity-market-wem/wem-forecasting-and-planning/wem-electricity-statement-of-opportunities-wem-esoo>.

Figure 2 Timeline for bringing new capacity to the SWIS for the 2025-26 Capacity Year^A



A. Progress reports will be required for Facilities or Facility Upgrades under construction. See the WEM Market Procedure: Reserve Capacity Performance Monitoring, at <https://aemo.com.au/en/energy-systems/electricity/wholesale-electricity-market-wem/procedures-policies-and-guides/procedures>.

1.3 Changes to the RCM

The Coordinator of Energy is undertaking an RCM Review and has established an associated working group¹¹. The RCM Review was initiated to ensure the RCM continues to deliver reliable power supplies for customers in the SWIS, considering the transition to renewable generation and supporting technologies (such as energy storage), as well as changing future system demand profiles to optimise costs for consumers. It represents the most significant review of the RCM since its establishment in 2004, and will be completed in three stages:

- Changes to the regulatory framework, including consideration of the current Planning Criterion and the methodology to determine the BRCP.
- Consideration of the implications for outage management, capacity refunds, Reserve Capacity testing, and allocation of capacity costs to Market Customers via the Individual Reserve Capacity Requirement.
- Development of a detailed design for amendments to the RCM and consideration of transitional issues.

For additional details, refer to Chapter 8 of the 2022 WEM ESOO.

¹¹ See <https://www.wa.gov.au/government/document-collections/reserve-capacity-mechanism-review-working-group>.

2 Key RCM processes and requirements

2.1 EOI process

Applicants must submit an EOI to be eligible to apply for CRC for new Facilities and Facility upgrades. Clause 4.4.1 of the WEM Rules outlines the information required as part of the EOI process.

From the 2023 Reserve Capacity Cycle onwards, applicants may submit one or more EOI for the same Facility. Multiple EOIs submitted for the same Facility with different permutations are known as EOI Facility Variants. Applicants will be required to nominate one EOI where EOI Facility Variants have been submitted, which will be used by AEMO for the purposes of clauses 4.2.7(b) and 4.4B.4 of the WEM Rules.

Under clause 4.4B.2 of the WEM Rules, by 5:00 pm on the last Business Day falling on or before 8 March in Year 1 of a Reserve Capacity Cycle, AEMO is required to provide the Network Operator, in respect of its Network for the Reserve Capacity Cycle, with the following information:

- details of each Facility specified in an EOI;
- details of each Facility for which AEMO has received a notice of intention to cease operation permanently by 1 October of Year 3;
- details of each Facility for which AEMO has received an early CRC application and whether the Facility has nominated to be classified as a Network Augmentation Funding Facility (NAFF), and
- details of any Non-Co-optimised Essential System Service (NCESS) Contracts procured by AEMO which are expected to be in service by 1 October of Year 3 of the Reserve Capacity Cycle, and are expected to impact information provided by a Network Operator under clause 4.4B.5 of the WEM Rules.

This information enables the Network Operator to develop and provide AEMO with an estimate of Thermal Network Limits, which will be used to develop RCM Constraint Equations in the Network Access Quantity (NAQ) model for the NAQ determination.

The EOI submission template collects detailed locational and network connection information. This information assists the Network Operator to include new connections of Facilities in EOIs when developing an estimate of Thermal Network Limits under clause 4.4B.3 of the WEM Rules.

If a Market Participant intends to nominate a new Facility or Facility upgrade to be classified as a NAFF in the CRC application (see Section 2.3.1 of this REOI), it must include this nomination in the EOI. This enables the Network Operator to provide an estimate of the relevant Thermal Network Limits to AEMO for RCM Constraint Equations development.

2.2 Indicative Facility Class and indicative Facility Technology Type

Where an applicant submits an EOI for a new Facility or a Facility upgrade, AEMO must assign an indicative Facility Class and an indicative Facility Technology Type to the new Facility or Facility upgrade¹². The EOI template includes

¹² Clause 4.8A.1 of the WEM Rules.

the information required under paragraph 3.2.3 of the WEM Procedure: Indicative Facility Class and RCM Facility Class assessment¹³. AEMO may request additional information from the applicant to make this assessment.

Paragraph 4.1.6 of the WEM Procedure: Indicative Facility Class and RCM Facility Class assessment requires a Facility to be created in the Wholesale Electricity Market System (WEMS) at least 10 Business Days before the opening of the CRC window. An applicant must be a Market Participant to be able to create a Facility in WEMS. AEMO must assign the indicative Facility Class and indicative Facility Technology Type prior to the CRC application window opening¹⁴. Applicants are encouraged to make note of this critical timeline requirement for Facility creation.

A summary of the registration and Facility creations eligibility requirements CRC applicants should consider includes:

- The CRC applicant must be registered as a Rule Participant. The Rule Participant registration process¹⁵, including the application for Wholesale Electricity Market System (WEMS) access, is outlined in the WEM Rules and the WEM Procedure: Rule Participant Registration and De-Registration¹⁶. The Rule Participant registration process can take five to 20 Business Days.
- The Facility must have been created in WEMS once the Rule Participant registration process has been completed. The Facility creation process is outlined in Section 3.1 of the WEM Procedure: Facility Registration, De-Registration and Transfer¹⁷, and can take at least five Business Days. Facility creation merely creates a Facility name in WEMS, and reflects the Market Participant's intention to register a Facility under the WEM Rules in the future.

Satisfying these registration conditions, from the lodgement of an application for WEMS access to the creation of a Facility, generally takes between 15 and 30 Business Days. However, this process can take longer, depending on the completeness of the information provided.

To ensure registration and Facility creation requirements have been met, applicants intending to apply for CRC for a new Facility are encouraged to contact AEMO's Market Operations and Support team (WA) at wa.operations@aemo.com.au.

2.3 Certified Reserve Capacity

AEMO undertakes an annual certification process, the certification of Reserve Capacity process, to assess and certify the level of Reserve Capacity that an existing Facility, a new Facility, or an upgrade of an existing Facility, will be able to deliver to the SWIS by 1 October in Year 3, at the latest, in the relevant Reserve Capacity Cycle.

An existing or a new Market Participant may apply to AEMO for CRC for the 2025-26 Capacity Year in accordance with the 2023 Reserve Capacity Cycle timetable¹⁸. To be eligible for CRC, new Facilities or existing

¹³ Available at <https://aemo.com.au/energy-systems/electricity/wholesale-electricity-market-wem/procedures-policies-and-guides/procedures>.

¹⁴ The 2023 Reserve Capacity Cycle timetable specifies key dates associated with CRC. Available at <https://aemo.com.au/en/energy-systems/electricity/wholesale-electricity-market-wem/wa-reserve-capacity-mechanism/reserve-capacity-timetable>.

¹⁵ See <https://aemo.com.au/energy-systems/electricity/wholesale-electricity-market-wem/participate-in-the-market/registration/register-as-a-rule-participant-in-the-wem>.

¹⁶ See *WEM Procedure: Facility Registration, De-Registration and Transfer*. Available at <https://aemo.com.au/en/energy-systems/electricity/wholesale-electricity-market-wem/procedures-policies-and-guides/procedures>.

¹⁷ Available at <https://aemo.com.au/energy-systems/electricity/wholesale-electricity-market-wem/procedures-policies-and-guides/procedures>.

¹⁸ 2023 Reserve Capacity timetable. Available at <https://aemo.com.au/en/energy-systems/electricity/wholesale-electricity-market-wem/wa-reserve-capacity-mechanism/reserve-capacity-timetable>.

Facilities with upgrades must be capable of meeting Reserve Capacity Obligations by no later than 1 October 2025 for the 2025-26 Capacity Year.

Sections 4.9 to 4.11 of the WEM Rules describe the CRC application process and the process for determining the quantity of CRC to be assigned to Facilities. Information that must be provided for the CRC application process¹⁹ is listed in clause 4.10.1 of the WEM Rules and the WEM Procedure: Certification of Reserve Capacity for the 2022 and 2023 Reserve Capacity Cycles²⁰. Applicants can also refer to the 2022 Reserve Capacity Cycle certification workshop presentation²¹ which provides a guide on the CRC process and supporting documentation required with the application.

The sections below provide applicants with additional guidance on Network Augmentation Funding Facilities (NAFF) network access, and environmental approvals.

2.3.1 Network Augmentation Funding Facility

Market Participants who fund the cost of network augmentation to support the access of a new Facility or Facility upgrade will be assigned an NAQ in priority over other new Facilities that are not funding network augmentation. In accordance with clause 4.10A.2 of the WEM Rules, a Market Participant may only nominate a Facility or Facility upgrade to be classified as a NAFF in respect of a Reserve Capacity Cycle if:

- the Facility or Facility upgrade is an Energy Producing System;
- the Market Participant for the Facility has committed to funding Network Augmentation Works;
- the Network Augmentation Works are expected to be in-service (which includes having completed all required commissioning tests) by 1 October of Year 3 of the Reserve Capacity Cycle to which the application for CRC for the Facility relates; and
- the EOI for the Facility specifies that the Facility is expected to be nominated to be classified as a NAFF.

A Market Participant must provide information as part of the CRC application to support its nomination that a Facility or a Facility upgrade, be classified as a NAFF. Section 4.10A of the WEM Rules details the processes AEMO must follow to verify the information with the Network Operator and, if verified, to classify a Facility or a Facility upgrade as a NAFF.

2.3.2 Network access

A CRC applicant is required to provide evidence of network access for each Facility covered by the CRC application. Clause 4.10.1(bA) of the WEM Rules requires a CRC application to include:

- evidence that the Facility will be entitled to have network access from a specified date occurring prior to the date when the Facility will be subject to Reserve Capacity Obligations²² (typically a signed Electricity Transfer Access Contract and, for a new Facility, a signed Interconnection Works Contract or connection contract covering the entire relevant Capacity Year); and

¹⁹ See *Certification of Reserve Capacity*, available at <https://www.aemo.com.au/Electricity/Wholesale-Electricity-Market-WEM/Reserve-capacity-mechanism/Certification-of-reserve-capacity>.

²⁰ Available at <https://aemo.com.au/en/energy-systems/electricity/wholesale-electricity-market-wem/procedures-policies-and-guides/procedures>.

²¹ See https://aemo.com.au/-/media/files/electricity/wem/reserve_capacity_mechanism/certification/2022/2022-crc-workshop.pdf?la=en.

²² See paragraph 3.1.6 of the WEM Procedure: Certification of Reserve Capacity for the 2022 and 2023 Reserve Capacity Cycles. Available at <https://aemo.com.au/en/energy-systems/electricity/wholesale-electricity-market-wem/procedures-policies-and-guides/procedures>.

- the Declared Sent Out Capacity for the Facility at the relevant connection point (except where the Facility is a DSP)²³.

The timeframe to obtain network access for a new Facility varies with the type of generation, location, and existing queue of applicants. In many cases, access to the network may take longer than the two-year time horizon of the RCM. For this reason, AEMO encourages applicants who intend to apply for CRC for a new Facility or existing Facility upgrades to contact the Network Operator as early as possible to ensure that their project can progress through the RCM process.

2.3.3 Environmental approvals

Clause 4.10.1(c)(ii) of the WEM Rules requires a CRC application to include evidence with respect to any necessary environmental approvals. Applicants may be required to obtain approvals from federal, state, and local government authorities. Applicants are encouraged to allow enough time to obtain any necessary environmental approvals.

2.4 NAQ and Capacity Credits

The Network Access Quantity (NAQ) framework²⁴ is effective from the 2022 Reserve Capacity Cycle. The NAQ framework serves two purposes:

- It establishes a process for determining network capacity at peak demand periods. The NAQ, calculated in megawatts (MW), represents AEMO's forecast of a Facility's network access level.
- It provides investment certainty for capacity providers who contribute to the reliability of the system, by establishing a priority order for the assignment of NAQ to Facilities. In any given year, existing Facilities will be assessed and assigned NAQ ahead of new Facilities, with new Facilities receiving NAQ up to the residual capacity of the network.

The quantity of Capacity Credits assigned to a Facility is equal to the sum of the NAQ and the CC Uplift Quantity, where applicable, as determined in accordance with clause 4.20.5B of the WEM Rules. Capacity Credits are assigned in accordance with clause 4.20.5A of the WEM Rules.

2.5 Preliminary Reserve Capacity Requirement

The preliminary Reserve Capacity Requirement (RCR) for the 2025-26 Capacity Year is 4,554 MW, based on the 2022 WEM ESOO forecasts. It is estimated that there will be a 21 MW shortfall in capacity for the 2025-26 Capacity Year. The final RCR for the 2025-26 Capacity Year will be published in the 2023 WEM ESOO on or before 19 June 2023. Market Participants assigned CRC are required to submit a bilateral trade declaration detailing the quantity of Reserve Capacity the Market Participant intends to trade bilaterally. Based on previous Reserve Capacity Cycles, AEMO expects the entire 4,534 MW²⁵ of assigned CRC to be bilaterally traded.

²³ See network access requirements, at <http://aemo.com.au/Electricity/Wholesale-Electricity-Market-WEM/Reserve-capacity-mechanism/Certification-of-reserve-capacity>.

²⁴ See <https://www.wa.gov.au/government/publications/reserve-capacity-mechanism-changes-support-the-implementation-of-constrained-access-and-facilitate-storage-participation>.

²⁵ See Table 5, 2022 WEM ESOO. Available at <https://aemo.com.au/en/energy-systems/electricity/wholesale-electricity-market-wem/wem-forecasting-and-planning/wem-electricity-statement-of-opportunities-wem-esoo>.

2.6 Expected Facility closures

The Facility MUJA_G6, a 193 MW Scheduled Generator, has an expected closure date of 1 October 2024.

3 EOI requirements

3.1 Submitting an EOI for the 2023 Reserve Capacity Cycle

An applicant seeking CRC for a new Facility or existing Facility upgrade for the 2023 Reserve Capacity Cycle must submit an EOI to AEMO under clause 4.8.2 of the WEM Rules. A Facility upgrade in this context means²⁶:

- 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
- 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.

To submit an EOI for the 2023 Reserve Capacity Cycle, an applicant is required to complete the 2023 EOI Application Form, which can be found on the WEM web page²⁷.

The applicant must email the completed 2023 EOI Application Form and supporting documentation to AEMO by **5:00 pm AWST, 1 March 2023** to wa.capacity@aemo.com.au.

Any queries in relation to this REOI may be addressed to the Reserve Capacity team at (08) 9469 9800 or wa.capacity@aemo.com.au.

3.2 CRC applications

CRC applications for the 2023 Reserve Capacity Cycle may be submitted through WEMS **from 9:00 am AWST, 14 April 2023 to 5:00 pm AWST, 24 June 2023**. Applicants applying for CRC must provide all the information specified in clause 4.10.1 of the WEM Rules before the CRC window closes.

An application for a Facility or component of a Facility that is to be assessed using the Relevant Level Methodology and which has not operated for the full period specified in Step 1(a) of Appendix 9 of the WEM Rules (or that otherwise meets the criteria specified in clause 4.10.3 of the WEM Rules) must include an independent expert report²⁸. This includes components of Semi-Scheduled Facilities and Scheduled Facilities that are Intermittent Generating Systems, and Non-Scheduled Facilities.

²⁶ See "Facility Upgrade" definition in Table 1 of the WEM Procedure: Certification of Reserve Capacity for the 2022 and 2023 Reserve Capacity Cycles. Available at <https://aemo.com.au/en/energy-systems/electricity/wholesale-electricity-market-wem/procedures-policies-and-guides/procedures>.

²⁷ 2023 EOI Application Form. Available at <https://www.aemo.com.au/energy-systems/electricity/wholesale-electricity-market-wem/wa-reserve-capacity-mechanism/expressions-of-interest>.

²⁸ Relevant Level Methodology. Available at <https://www.aemo.com.au/energy-systems/electricity/wholesale-electricity-market-wem/wa-reserve-capacity-mechanism/certification-of-reserve-capacity>.

The current timetable for the 2023 Reserve Capacity Cycle is shown in Table 2. Interested parties are encouraged to refer to the dates published on the AEMO website²⁹ for the latest information. AEMO may amend dates in the timetable under clause 4.1.1C of the WEM Rules.

Table 2 2023 Reserve Capacity Cycle timetable^A for the WEM

Date	Time	WEM Rule	Action
Friday 13 January 2023	5:00 pm	4.1.4	AEMO publishes the Request for Expressions of Interest.
		4.1.19	AEMO publishes the Benchmark Reserve Capacity Price (BRCP) ^B .
Wednesday 1 March 2023	5:00 pm	4.1.5	Expression of Interest (EOI) submissions close.
Wednesday 8 March 2023	5:00 pm	4.4B.2	AEMO provides information to the Network Operator regarding: <ul style="list-style-type: none"> • EOIs. • Facility retirements. • Early Certified Reserve Capacity (CRC) applications, including whether the Facility has nominated to be classified as a Network Augmentation Funding Facility. • NCESS contracts.
Monday 3 April 2023	5:00 pm	4.1.6	AEMO publishes a summary of responses to the EOI.
Friday 14 April 2023	9:00 am	4.1.7	Opening date for CRC applications.
	5:00 pm	4.4B.5	Western Power must develop and provide the following information to AEMO: <ul style="list-style-type: none"> • Estimated proportion of peak demand at each Electrical Location on the network. • Thermal Network Limits. • Electrical Location and identity of new loads or increase of existing loads larger than 10 MW. • Reserve Capacity Mechanism (RCM) Limit Advice. • An explanation of any changes from previous RCM Limit Advice.
Friday 19 May 2023	5:00 pm	4.4B.6	AEMO publishes the clause 4.4B.5 information from Western Power and Preliminary RCM Constraint Equations.
Monday 19 June 2023	5:00 pm	4.1.8	AEMO publishes the 2023 Wholesale Electricity Market (WEM) Electricity Statement of Opportunities (ESOO).
		4.1.10	AEMO publishes the Reserve Capacity Information Pack.
Friday 23 June 2023	5:00 pm	4.1.11	Closing date for CRC applications.
Friday 11 August 2023	5:00 pm	4.1.12	AEMO notifies each applicant of the CRC to be assigned.
Friday 25 August 2023	5:00 pm	4.1.13	If required, Market Participants must provide Reserve Capacity Security (RCS) or Demand Side Management (DSM) RCS.
		4.1.14	Market Participants who hold CRC must notify AEMO as to how their CRC will be dealt with: <ul style="list-style-type: none"> • the total amount of Reserve Capacity they intend to trade bilaterally, and • the total amount of Reserve Capacity that they have decided will not be made available to the market.
		4.14.1B	Market Participants may nominate that the Facility be classified as a Fixed Price Facility.
Monday 28 August 2023	5:00 pm	4.1.15	AEMO confirms the quantity of CRC that can be traded bilaterally.
Tuesday 29 August 2023	5:00 pm	4.1.15A	AEMO publishes the CRC quantity for each Facility.

²⁹ 2023 Reserve Capacity timetable. Available at <https://aemo.com.au/en/energy-systems/electricity/wholesale-electricity-market-wem/wa-reserve-capacity-mechanism/reserve-capacity-timetable>.

Date	Time	WEM Rule	Action
Friday 29 September 2023	5:00 pm	4.1.16A	AEMO: <ul style="list-style-type: none"> • Assigns Capacity Credits. • Determines whether the Reserve Capacity Requirement (RCR) has been met or exceeded with the Capacity Credits assigned to Facilities for which no RCS was required, or to Demand Side Programmes determined by AEMO to be in Commercial Operation. • Notifies each Market Participant of the Network Access Quantity (NAQ) determined for each of its Facilities. • Publishes NAQ Model Inputs and the Network Access Quantity or Indicative Network Access Quantity determined for each Facility assessed in the Network Access Quantity Model.
Friday 29 September 2023	5:00 pm	4.1.18A	AEMO publishes the Reserve Capacity Price, the Facility Monthly Reserve Capacity Price for each Transitional Facility, and the Facility Monthly Reserve Capacity Price for each Fixed Price Facility (as applicable).
Friday 29 September 2023	5:00 pm	4.1.21	Market Participants may apply for a recalculation of the amount of RCS or DSM RCS required to be held for a Facility (applications may be made after this date/time).
Monday 30 October 2023	5:00 pm	4.1.21A	Market Participants must notify AEMO of the number of Capacity Credits that are to be associated with each component of a Facility, where applicable.
Monday 6 November 2023	5:00 pm	4.1.22	AEMO publishes the number of Capacity Credits associated with each component of a Facility.
Friday 15 August 2025	5:00 pm	4.1.21B	If required under clause 4.20.8 of the WEM Rules, AEMO must issue a Notice of Intention to Cancel Capacity Credits.
Sunday 1 October 2025	8:00 am	4.1.26	Start of 2025-26 Capacity Year and associated Reserve Capacity Obligations.
Thursday 1 October 2026	8:00 am	4.1.30	End of 2025-26 Capacity Year and associated Reserve Capacity Obligations.

A. In accordance with clause 4.3.1(i) of the WEM Rules.

B. The BRCP is determined by the ERA and published in AEMO's REOI publication..

A1. Results from previous Reserve Capacity Cycles

The following information is presented in accordance with clause 4.3.1(c)(ii) of the WEM Rules.

The capacity required to be provided for each Availability Class for the last three Reserve Capacity Cycles is provided in Table 3.

Two Availability Classes are defined in accordance with clause 4.11.4 of the WEM Rules, as follows:

- Availability Class 1 – the Facility contains an Intermittent Generating System or Non-Intermittent Generating System, or AEMO reasonably expects the Facility to be available to be dispatched for all Trading Intervals in a Capacity Year, allowing for Outages and any restrictions on the availability specified by the applicant under clause 4.10.1(g) of the WEM Rules.
- Availability Class 2 – any capacity that is not Availability Class 1 capacity.

Table 3 Availability Classes (MW)

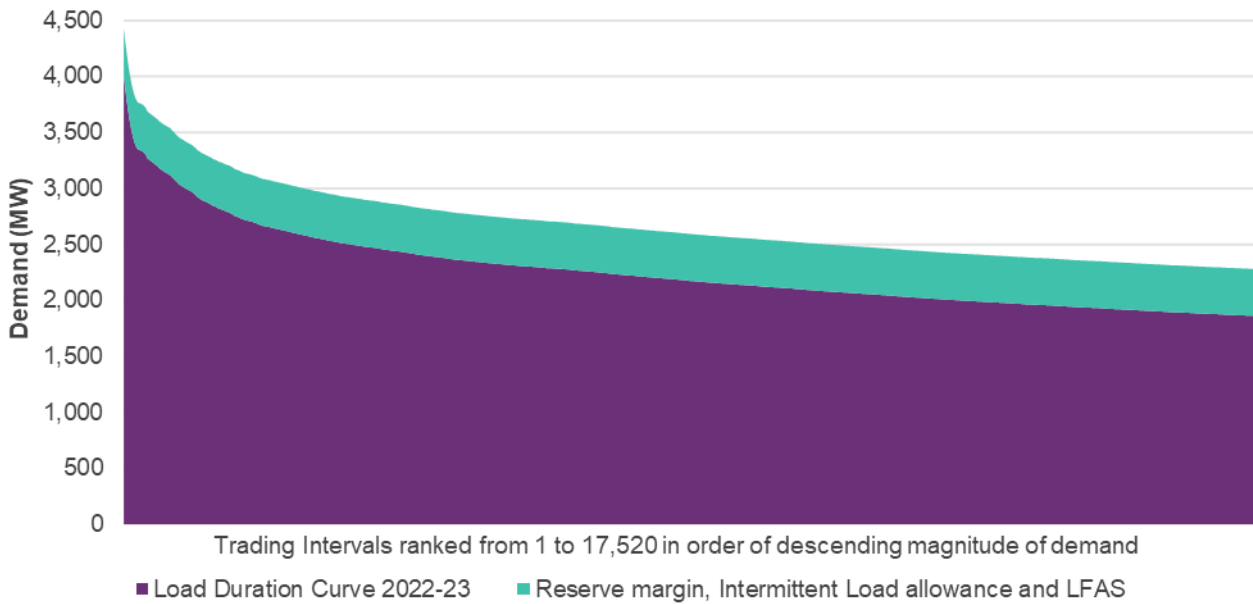
Availability Curve Information Clause 4.5.12(b) of WEM Rules	2020 Reserve Capacity Cycle (2022–23 Capacity Year)	2021 Reserve Capacity Cycle (2023-24 Capacity Year)	2022 Reserve Capacity Cycle (2024-25 Capacity Year)
Minimum capacity required to be provided from Availability Class 1	3,371	3,496	3,891
Capacity associated with Availability Class 2	1,050	900	635
RCR	4,421	4,396	4,526

The Availability Curve is a two-dimensional duration curve of the forecast minimum capacity requirement for each Trading Interval over a Capacity Year³⁰. The minimum capacity requirement for each Trading Interval is calculated as the sum of the forecast demand for that Trading Interval, reserve margin, and allowances for Intermittent Loads and Load Following Ancillary Service.

The Availability Curves for the last three Capacity Cycles, as published in the 2020, 2021, and 2022 WEM ESOOs, are shown in Figures 3, 4, and 5 respectively.

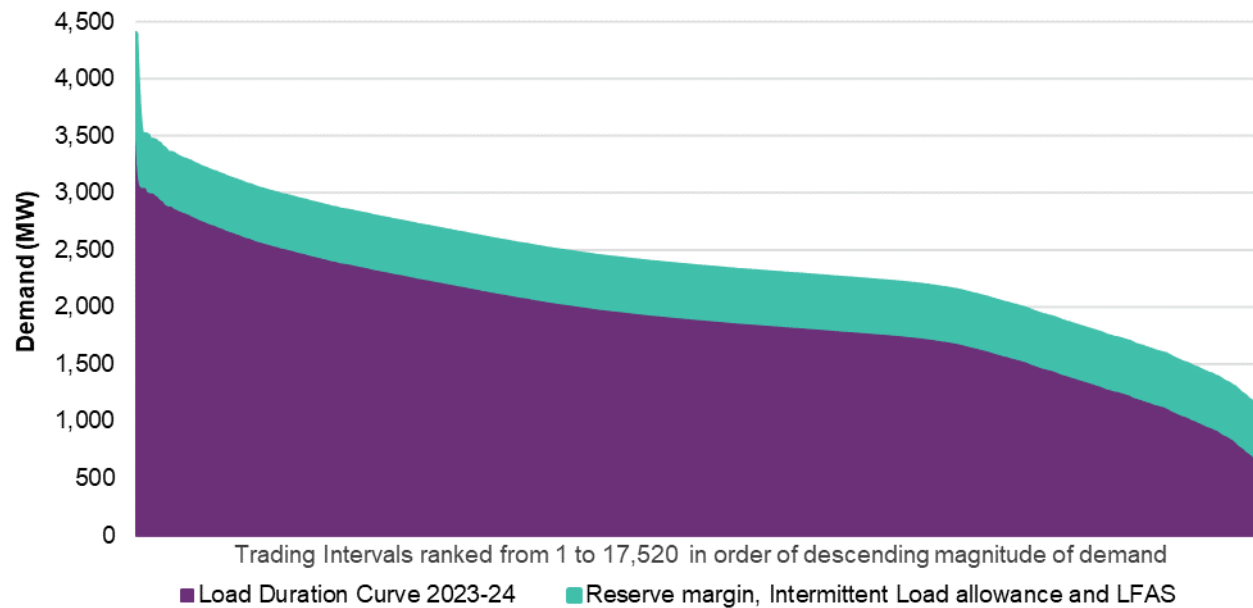
³⁰ The Availability Curve (defined in clause 4.5.10(e) of the WEM Rules) shows how demand changes over a Capacity Year, with demand on the vertical axis and time on the horizontal axis. It can be used to determine the number of hours when the capacity requirement exceeds a given level of demand plus an amount of available capacity margin.

Figure 3 2022-23 Capacity Year Availability Curve



Source: 2020 WEM ES00.

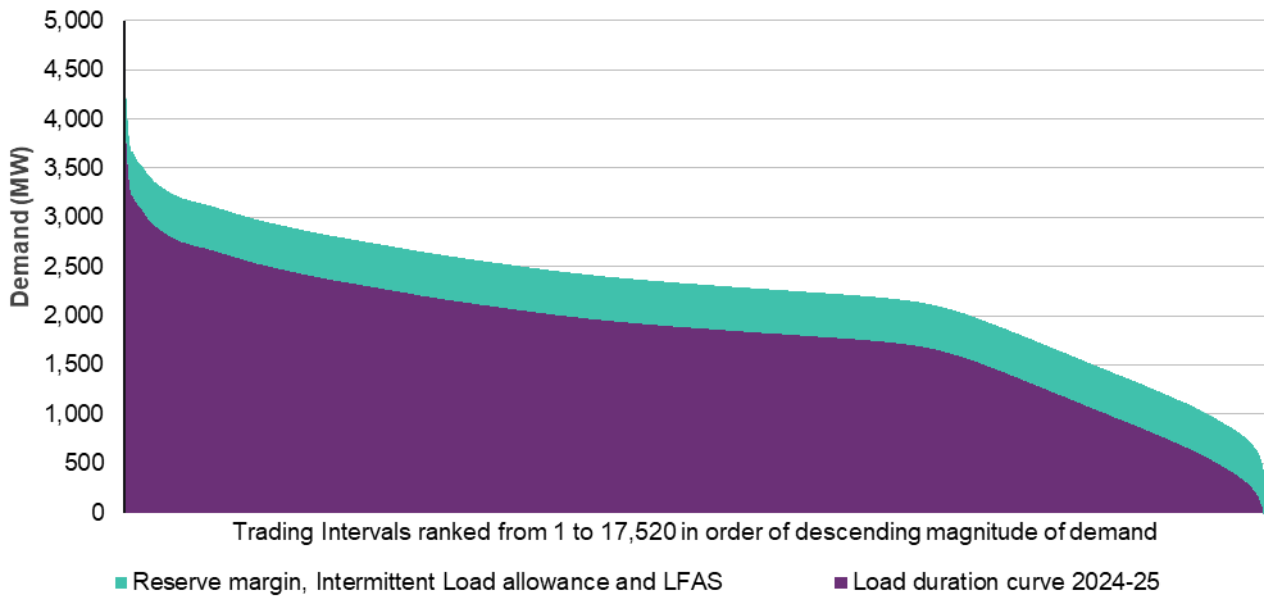
Figure 4 2023-24 Capacity Year Availability Curve



Source: 2021 WEM ES00.



Figure 5 2024-25 Capacity Year Availability Curve



Source: 2022 WEM ES00.

A2. References, measures, and abbreviations

A2.1 Key references for data in this document

Topic	Source
RCR/RCT	Table 5, 2022 WEM ES00, pg 8. Available at https://aemo.com.au/-/media/files/electricity/wem/planning_and_forecasting/esoo/2022/2022-wholesale-electricity-market-esoo.pdf?la=en
Capacity Credits assigned	Capacity Credits since the commencement of the WEM in 2006 up to 2023-24. Available at https://www.aemo.com.au/Electricity/Wholesale-Electricity-Market-WEM/Reserve-capacity-mechanism/Assignment-of-capacity-credits
Energy consumption forecasts for the SWIS	2022 WEM ES00, pg. 51.
Peak electricity demand forecasts for the SWIS	2021 WEM ES00, pg. 41.
Estimated excess capacity	Table 5, 2022 WEM ES00, pg. 8.
RCP and BRCP	2018 WEM ES00, Tables 16 and 19; 2019 WEM ES00, Table 17; 2020 WEM ES00, pg. 14, Table 27. 2021 and 2022 data available at https://aemo.com.au/en/energy-systems/electricity/wholesale-electricity-market-wem/wa-reserve-capacity-mechanism/reserve-capacity-price BRCP data, available at https://www.erawa.com.au/electricity/wholesale-electricity-market/annual-price-setting/benchmark-reserve-capacity-price
Availability Classes data	2019 WEM ES00, Table 16, p. 58; 2020 WEM ES00, Table 21, p. 75 and 2021 WEM ES00 Table 13, p. 59. 2022 WEM ES00 Table 17, pg.60.
Availability Curves	2019 WEM ES00, Figure 34, p. 71; 2020 WEM ES00, Figure 39, p. 77 and 2021 WEM ES00 Figure 40, p. 60. Figure 27 2022 WEM ES00, pg 61.

A2.2 Abbreviations

Abbreviation	Expanded name
AEMO	Australian Energy Market Operator
BRCP	Benchmark Reserve Capacity Price
CRC	Certified Reserve Capacity
DSM	Demand Side Management
DSP	Demand Side Programme
EOI	Expressions of Interest
ES00	<i>Electricity Statement of Opportunities</i>
MW	Megawatt/s
NAFF	Network Augmentation Funding Facility
NAQ	Network Access Quantity
POE	Probability of Exceedance

A2. References, measures, and abbreviations

Abbreviation	Expanded name
RCM	Reserve Capacity Mechanism
RCP	Reserve Capacity Price
RCR	Reserve Capacity Requirement
RCS	Reserve Capacity Security
RCT	Reserve Capacity Target
REOI	Request for Expressions of Interest
SWIS	South West Interconnected System
WA	Western Australia
WEM	Wholesale Electricity Market
WEMS	Wholesale Electricity Market System