

## Meeting Agenda

<b>Meeting Title:</b>	Market Advisory Committee (MAC)
<b>Date:</b>	Thursday 2 May 2024
<b>Time:</b>	9:30 AM – 11:30 AM
<b>Location:</b>	On-line

Item	Item	Responsibility	Type	Duration
1	Welcome and Agenda <ul style="list-style-type: none"> <li>Conflicts of interest</li> <li>Competition Law</li> </ul>	Chair	Noting	2 min
2	Meeting Apologies/Attendance	Chair	Noting	1 min
3	Minutes of Meeting 2024_03_21 <a href="#">Published 23 April 2024</a>	Chair	Noting	2 min
4	Action Items	Chair	Noting	5 min
5	Update on Working Groups			
	(a) AEMO Procedure Change Working Group	AEMO	Noting	5 min
	(b) ERA BRCP WEM Procedure Review	BRCPPWG Review Chair	Discussion	20 min
	(c) Power System Security and Reliability (PSSR) Standards Review	PSSRSWG Chair	Noting	5 min
	(d) WEM Investment Certainty (WIC) Review	WICRWG Chair	Discussion	30 min
6	Update on the MAC Review Process and the Procedure Review.	Chair/Secretariat	Discussion	10 min
7	WEM Procedures Content Assessment	Chair/Secretariat	Discussion	15 min
8	Review of the Essential System Service Framework including: <ul style="list-style-type: none"> <li>Scope of Work; and</li> <li>Terms of Reference for a MAC Working Group</li> </ul>	Chair/Secretariat	Discussion	20 min
9	Market Development Forward Work Program	Chair/Secretariat	Noting	2 min
10	General Business	Chair	Discussion	3 min
	Next meeting: 9:30am Thursday 13 June 2024			

Please note, this meeting will be recorded.

## Competition and Consumer Law Obligations

Members of the MAC (**Members**) note their obligations under the *Competition and Consumer Act 2010 (CCA)*.

If a Member has a concern regarding the competition law implications of any issue being discussed at any meeting, please bring the matter to the immediate attention of the Chairperson.

Part IV of the CCA (titled “Restrictive Trade Practices”) contains several prohibitions (rules) targeting anti-competitive conduct. These include:

- (a) **cartel conduct**: cartel conduct is an arrangement or understanding between competitors to fix prices; restrict the supply or acquisition of goods or services by parties to the arrangement; allocate customers or territories; and or rig bids.
- (b) **concerted practices**: a concerted practice can be conceived of as involving cooperation between competitors which has the purpose, effect or likely effect of substantially lessening competition, in particular, sharing Competitively Sensitive Information with competitors such as future pricing intentions and this end:
  - a concerted practice, according to the ACCC, involves a lower threshold between parties than a contract arrangement or understanding; and accordingly; and
  - a forum like the MAC is capable being a place where such cooperation could occur.
- (c) **anti-competitive contracts, arrangements understandings**: any contract, arrangement or understanding which has the purpose, effect or likely effect of substantially lessening competition.
- (d) **anti-competitive conduct (market power)**: any conduct by a company with market power which has the purpose, effect or likely effect of substantially lessening competition.
- (e) **collective boycotts**: where a group of competitors agree not to acquire goods or services from, or not to supply goods or services to, a business with whom the group is negotiating, unless the business accepts the terms and conditions offered by the group.

A contravention of the CCA could result in a significant fine (up to \$500,000 for individuals and more than \$10 million for companies). Cartel conduct may also result in criminal sanctions, including gaol terms for individuals.

**Sensitive Information** means and includes:

- (a) commercially sensitive information belonging to a Member’s organisation or business (in this document such bodies are referred to as an Industry Stakeholder); and
- (b) information which, if disclosed, would breach an Industry Stakeholder’s obligations of confidence to third parties, be against laws or regulations (including competition laws), would waive legal professional privilege, or cause unreasonable prejudice to the Coordinator of Energy or the State of Western Australia).

### Guiding Principle – what not to discuss

In any circumstance in which Industry Stakeholders are or are likely to be in competition with one another a Member must not discuss or exchange with any of the other Members information that is not otherwise in the public domain about commercially sensitive matters, including without limitation the following:

- (a) the rates or prices (including any discounts or rebates) for the goods produced or the services produced by the Industry Stakeholders that are paid by or offered to third parties;
- (b) the confidential details regarding a customer or supplier of an Industry Stakeholder;
- (c) any strategies employed by an Industry Stakeholder to further any business that is or is likely to be in competition with a business of another Industry Stakeholder, (including, without limitation, any strategy related to an Industry Stakeholder’s approach to bilateral contracting or bidding in the energy or ancillary/essential system services markets);
- (d) the prices paid or offered to be paid (including any aspects of a transaction) by an Industry Stakeholder to acquire goods or services from third parties; and
- (e) the confidential particulars of a third party supplier of goods or services to an Industry Stakeholder, including any circumstances in which an Industry Stakeholder has refused to or would refuse to acquire goods or services from a third party supplier or class of third party supplier.

### Compliance Procedures for Meetings

If any of the matters listed above is raised for discussion, or information is sought to be exchanged in relation to the matter, the relevant Member must object to the matter being discussed. If, despite the objection, discussion of the relevant matter continues, then the relevant Member should advise the Chairperson and cease participation in the meeting/discussion and the relevant events must be recorded in the minutes for the meeting, including the time at which the relevant Member ceased to participate.

## Agenda Item 4: MAC Action Items

Market Advisory Committee (**MAC**) Meeting 2024\_05\_02

Shaded	Shaded action items are actions that have been completed since the last MAC meeting. Updates from last MAC meeting provided for information in <b>RED</b> .
Unshaded	Unshaded action items are still being progressed.
Missing	Action items missing in sequence have been completed from previous meetings and subsequently removed from log.

Item	Action	Responsibility	Meeting Arising	Status
2/2024	EPWA and Mr Stephen to discuss how an agenda item on the operation of the new WEM can be structured in a way that provides a benefit to both the MAC and the WEM more generally.	EPWA	2024_02_08	<b>Open</b> This item was discussed at the 21 March meeting and EPWA agreed to keep this item open. A separate action item was created for the FCESS cost review (see item 9/2024 below).
4/2024	Western Power to advise the MAC on: <ul style="list-style-type: none"> <li>the reason for the discrepancy between the figures presented and the Transmissions System Plan (TSP);</li> </ul>	Western Power	2024_02_08	<b>Open</b> Western Power provided the below response via email on 20 March 2024: <ul style="list-style-type: none"> <li>The existing network capacity in the slide pack differs from the TSP because the results do not ignore the MARNET scheme operation which is the real worst-case contingency on the existing network. However, for historical reasons MARNET</li> </ul>

Item	Action	Responsibility	Meeting Arising	Status
	<ul style="list-style-type: none"> <li>the difference between transfer capacity and the quantum of generation that can connect; and</li> <li>whether the current TSP will be updated.</li> </ul>			<p>is not considered as the TSP's worst-case contingency when assessing transfer boundary capacity.</p> <ul style="list-style-type: none"> <li>The transfer capacity is the maximum power that can be transmitted at any instant across the boundary in question. Due to the intermittent nature of renewable resources (wind/sun etc), in order to take advantage of this transfer capacity a greater level of installed renewable generation can be implemented. The actual level of appropriate and optimised generation in a given region cannot be determined without detailed market modelling.</li> <li>Western Powers updates the Transmission System Plan on an annual basis. We will update the plan in line with new and relevant information in October 2024</li> </ul>
6/2024	AEMO to provide an update on the next steps, if any, and indicative date for the Procedure Change Proposal AEPC_2023_03.	AEMO	2024_02_08	<p><b>Closed</b></p> <p>AEMO provided an update at the 21 March 2024 MAC meeting.</p>
8/2024	MAC Secretariat to publish the minutes of the 2 February 2024 MAC meeting on the Coordinator's Website as final	MAC Secretariat	2024_02_08	<p><b>Closed</b></p> <p>The minutes were approved out of session and published on the Coordinator's Website on 21 March 2024</p>
9/2024	EPWA and the ERA to discuss the review of the FCESS prices and provide an update at the next MAC meeting.	EPWA and ERA	2024_03_21	<p><b>Open</b></p>

Item	Action	Responsibility	Meeting Arising	Status
10/2024	MAC members to contact AEMO directly regarding the prioritisation framework or specific procedures	MAC Members	2024_03_21	Open
11/2024	EPWA to include the Terms of Reference for the Procedure Content Assessment Working Group as an agenda item	EPWA	2024_03_21	Open This is provided at Agenda Item 7

# MARKET ADVISORY COMMITTEE MEETING, 02 May 2024

FOR DISCUSSION

SUBJECT: UPDATE ON AEMO'S WEM PROCEDURES

AGENDA ITEM: 5(A)

## 1. PURPOSE

Provide a status update on the activities of the AEMO Procedure Change Working Group and AEMO Procedure Change Proposals.

## 2. AEMO PROCEDURE CHANGE WORKING GROUP (APCWG)

	Most recent meetings	Next meeting
Date	06 March 2024	As required
WEM Procedures for discussion	<ul style="list-style-type: none"> <li>WEM Procedure: Supplementary Capacity</li> <li>WEM Procedure: Facility Dispatch Process</li> <li>WEM Procedure: Dispatch Algorithm Formulation</li> <li>WEM Procedure: Market Schedules</li> </ul>	

### 3. AEMO PROCEDURE CHANGE PROPOSALS

The status of AEMO Procedure Change Proposals is described below, current as at 2 May 2024. Changes since the previous MAC meeting are in **red text**. A procedure change is removed from this report after its commencement has been reported or a decision has been taken not to proceed with a potential Procedure Change Proposal.

ID	Summary of changes	Status	Next steps	Indicative Date
Procedure Change Proposal AEPC_2024_01  WEM Procedure: Supplementary Capacity	<p>AEMO initiated this Procedure Change Proposal to amend the WEM Procedure following amendments to the WEM Rules arising from Stage 2 of a review by the Coordinator into potential improvements in the procurement and activation of supplementary capacity.</p> <p>In response to the Amending Rules, gazetted on 18 July 2023, the amended WEM Procedure will:</p> <ul style="list-style-type: none"> <li>clarify the role of Western Power in supporting AEMO to measure the performance of supplementary capacity services that have been activated in accordance with a Supplementary Capacity Contract and timelines for the provision of this information and assistance.</li> <li>document the process and information requirements for those intending to respond to a call for expression of interest under clause 4.24.1A of the WEM Rules or intending to provide supplementary capacity in response to a call for tender or direct negotiation under clause 4.24.2 of the WEM Rules who request assistance or an assessment by Western Power.</li> </ul>	Commenced	N/A	1 April 2024

ID	Summary of changes	Status	Next steps	Indicative Date
Procedure Change Proposal AEPC_2024_02  WEM Procedure: Certification of Reserve Capacity	AEMO initiated this Procedure Change Proposal to amend the WEM Procedure following amendments to the WEM Rules in December 2023 to implement the outcomes from the RCM Review, affecting the 2024 Reserve Capacity Cycle. These amendments included: <ul style="list-style-type: none"> <li>• Changes to the certification methodology for Demand Side Programmes.</li> <li>• Removal of Planned Outage rate calculations.</li> </ul>	Commenced	N/A	15 April 2024



## Agenda Item 5(b): Update on the Benchmark Reserve Capacity Price WEM Procedure Review

Market Advisory Committee (MAC) Meeting 2024\_05\_02

### 1. Purpose

- The Chair of the Benchmark Reserve Capacity Price (BRCP) Wholesale Electricity Market (WEM) Procedure Review Working Group (BRCPWG) to provide an update on the activities.

### 2. Recommendation

That the MAC:

- (1) notes the update from the BRCPWG.

### 3. Background

- An outcome of the Reserve Capacity Mechanism Review was the introduction of a provision in the WEM Rules that required the Coordinator to review the BRCP reference technologies for the Peak Capacity Product and the new Flexible Capacity product.
- The Coordinator's review of the BRCP reference technology was required before the Economic Regulation Authority's (ERA's) review of the BRCP Methodology and to enable the implementation of the Flexible Capacity Product.
- The Coordinator's determination of the Benchmark Capacity Providers, under clause 4.16.11 of the WEM Rules was published on the 18 December 2023 and is available [here](#).
- The Coordinator has determined that both Flexible and Peak Benchmark Capacity Providers will be a lithium battery energy storage system (BESS) with:
  - 200 MW injection and 800 MWh energy storage;
  - connected at 330 kV line, in an uncongested location near Kwinana or Pinjar; and
  - assume gross cost of new entry.
- The ERA determines the BRCP annually using a WEM Procedure and is required under clause 4.16.9 of the WEM Rules to review the WEM Procedure that documents the method it must follow to determine the BRCP:
  - at least once in every five year period; and
  - within one year of the Coordinator changing the BRCP reference technology.
- The ERA in consultation with the MAC is undertaking the BRCP WEM Procedure Review (Review) under clause 4.16.9 of the WEM Rules. The Review is supported by a MAC Working Group, that was established at the 23 November 2023 MAC meeting.

- The ERA's Review aims to:
  - reflect the Coordinators determination of the Benchmark Capacity Providers;
  - include all reasonable and material capital costs and fixed operating and maintenance costs expected to be incurred in developing and operating a BESS in the WEM;
  - allow the ERA to annually undertake a technical bottom-up cost evaluation of the BESS to determine a Flexible BRCP and Peak BRCP;
  - be clear and unambiguous;
  - provide certainty on how the BRCP will be determined;
  - complement WEM reforms; and
  - be consistent with the WEM Rules
- In undertaking the review, the ERA sought advice from GDD (technical consultant), financial institutions that finance BESS projects, Western Power, Landgate and the BRCPWG.
- On 5 April 2024, the ERA published a Procedure Change Proposal: Benchmark Reserve Capacity Price and draft WEM Procedure for consultation and is available [here](#).
- The ERA is seeking feedback on the proposal and draft WEM Procedure with consultations closing on the 6 May 2024.
- The Terms of Reference, papers and minutes for the BRCPWG can be found on the ERA's website: [BRCP WEM Procedure Review Working Group - Economic Regulation Authority Australia \(erawa.com.au\)](https://erawa.com.au).

## Attachments

Agenda Item 5(b) – Attachment 1 - BRCP WEM Procedure Review Working Group Presentation

Agenda Item 5(b) – Attachment 2 – ERAs BRCP WEM Procedure Review Working Group

# BRCP WEM Procedure Review

An update on the Working Group



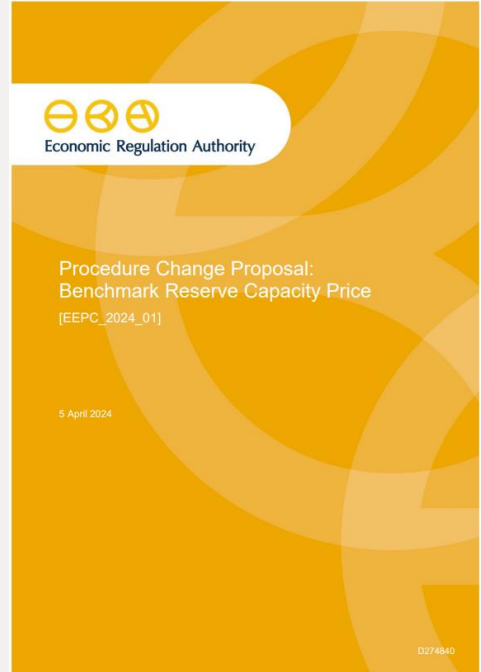
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WESTERN AUSTRALIA

**Dr Matt Shahnazari | Assistant Director, Strategy and Innovation**

2 May 2024 | Market Advisory Committee | Item 6(b)

# The ERA is seeking feedback on its proposal<sup>2</sup>

- Published a procedure change proposal and draft WEM Procedure for consultation ([online](#))
- **Submissions due by 6 May ([online](#))**
- Next steps
  - Consider feedback and prepare procedure change report in June 2024.
  - Aim for *WEM Procedure: BRCP* to take effect July 2024.
  - The ERA's 2025 BRCP determination (for 2027/28 Capacity Year) follows new WEM Procedure.



# Background

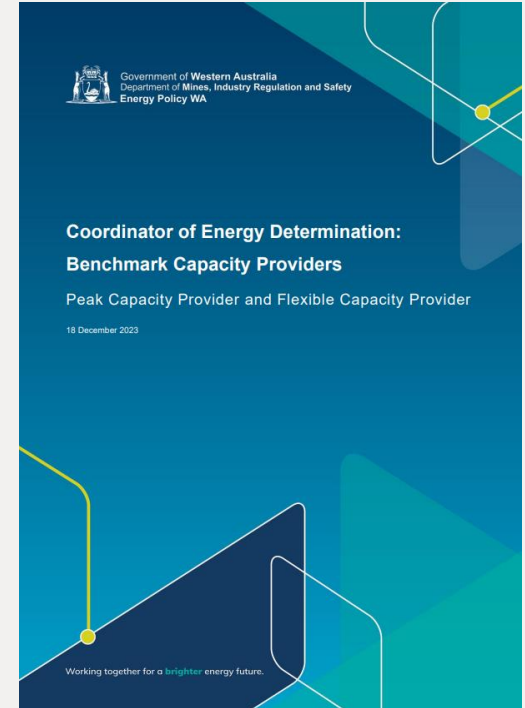
- The benchmark reserve capacity price (BRCP) is an input to the calculation of the price of capacity credits.
- The ERA determines the BRCP annually using a WEM Procedure.
- The WEM Rules were amended in 2023 as part of RCM review:
  - Introduction of Flexible Capacity and Flexible BRCP.
  - Coordinator to determine Benchmark Capacity Providers (Flexible and Peak).
  - Following the Coordinator's determination, the ERA to review the WEM Procedure used to determine the BRCPs.
- MAC established a Working Group to advise the ERA on its review of the WEM Procedure.



# The Coordinator's determination

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- Both Flexible and Peak Benchmark Capacity Providers are:
  - Lithium-ion BESS with 200 MW injection and 800 MWh energy storage.
  - In an uncongested location near Kwinana or Pinjar.
  - Connected at 330 kV line.
- Assume gross cost of new entry.



[Coordinator's determination](#)

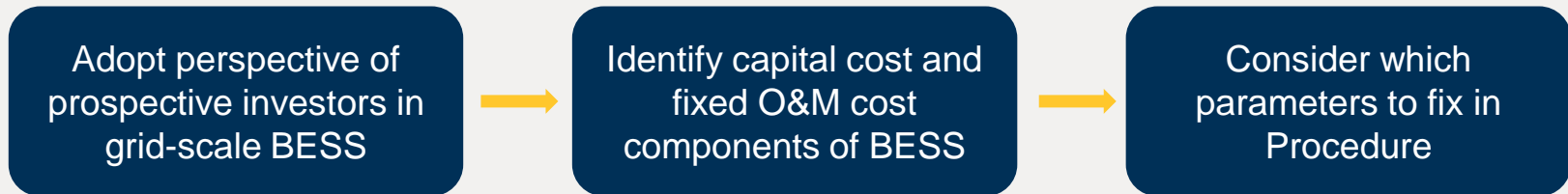


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# The ERA's review framework

## Objectives of Procedure review

1. Reflect Coordinator's determination of Benchmark Capacity Providers.
2. Includes all reasonable and material capital costs and fixed O&M costs expected to be incurred in developing and operating a BESS in the WEM.
3. Allows the ERA to annually undertake a technical bottom-up cost evaluation of the BESS to determine a Flexible BRCP and Peak BRCP.
4. Is clear and unambiguous; provides certainty on how BRCP will be determined; complements energy market reforms; and consistent with WEM Rules.



Sought advice from technical consultant (GHD), financial institutions that finance BESS projects, Western Power, Landgate and MAC Working Group.

# Draft WEM Procedure for consultation

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## BESS technical specs

- Sub-chemistry
- Operational assumptions

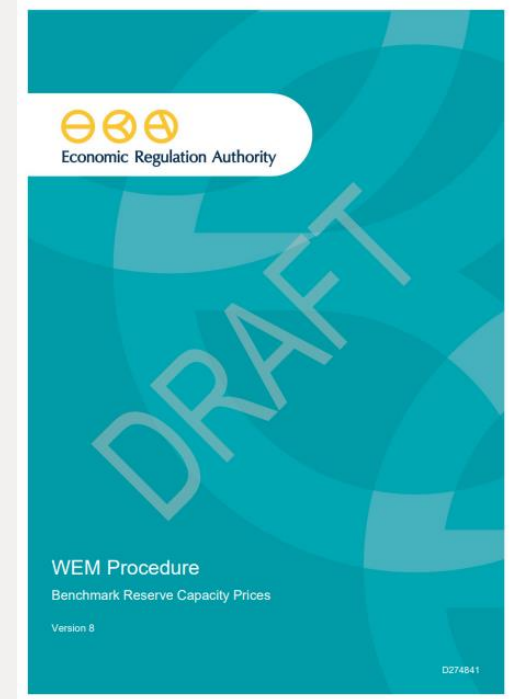
## Cost estimation method

## Cost components

- Capital cost
- Fixed O&M cost

## Annualisation

- Cost recovery period
- WACC
- Annuity tilt



[Draft WEM Procedure](#)



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# BESS technical specifications

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## BESS sub-chemistry

- Propose to specify lithium iron phosphate BESS in Procedure
- Considered benefits of specifying sub-chemistry in the Procedure → provide certainty to industry

## Design/operation assumptions

- Propose BESS be sized to achieve 200 MW injection / 800 MWh storage capacity on 1 October of Year 3 of RCC
- Account for energy and power capacity degradation
- Procedure to specify factors to consider for BESS sizing as part of annual BRCP determinations



# Cost components

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## Capital cost components

- BESS supply and installation costs
- Land costs
- Transmission connection costs
- Other costs (previously 'Margin M')

**~95% of total BRCP**

## Fixed O&M cost components

- Fixed costs of service, inspection & maintenance of BESS
- Fixed corporate overhead costs
- Local govt rates
- Transmission connection asset maintenance costs
- Transmission storage service charges

**~5% of total BRCP**



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# Cost estimation method

- For a reserve capacity cycle, the ERA must determine the BRCPs by 15 January of Year 1 while the BRCP applies from 1 October of Year 3.
- BRCP determination must account for cost changes between the date of the BRCP determination and when the BRCPs apply.
- Considered:
  - Nature of the cost estimation approach.
  - Whether the costs are reasonably expected to change over time.
  - When costs are likely to be incurred.



## Capital cost components

- Assume capital works are completed by **1 April** of a Reserve Capacity Year.
- ERA to use a reasonable adjustment method to estimate capital costs as at **1 April**.

## Fixed O&M cost components

- Assume costs are incurred after BESS commences operation and start receiving revenue from capacity credits on **1 October** of a Reserve Capacity Year.
- ERA to use a reasonable adjustment method to estimate fixed O&M costs as at **1 October**.



# Annualisation – Cost recovery period

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- BRCP is based on annualised costs → requires an estimate of period to annualise costs over (cost recovery period).
- Propose to specify a **15-year annuity** period in the Procedure.
- Considered
  - factors affecting an investor's expected cost recovery period, such as the technical and economic life of BESS (e.g. warranties & degradation profiles).
  - advice from GHD, MAC WG, and financial institutions that typically finance BESS projects (e.g. terms of finance and contracted periods).



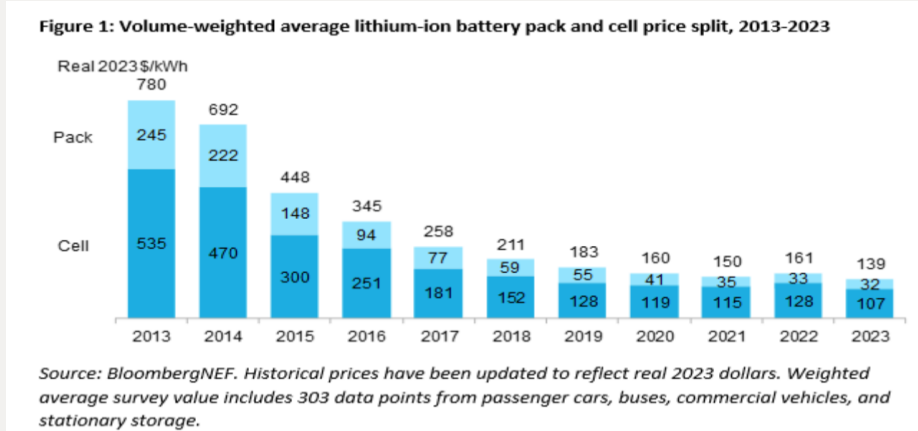
# Annualisation – Rate of return (WACC)

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- BESS investors must be confident they can recover equity and debt funding costs → rate of return compensates investors for risk.
- Weighted average cost of capital (WACC) historically used.
- Propose the Procedure specify use of **nominal pre-tax WACC**:
  - Nominal: compensate for inflation effect.
  - Pre-tax: various corporate structures that impact tax paid.
- Propose WACC components unchanged from existing Procedure, but values updated to account for risk of investing in BESS.
- WACC's 'Annual Components' reviewed in annual BRCP determinations and 'Fixed Components' fixed in Procedure.

# Annualisation – Annuity tilt

- Investors expect to receive the return of (depreciation) and return on (rate of return) capital invested in a project over its life.
- Capital cost of BESS have been declining significantly – which may result in lower BRCPs in the future → investors may not recover invested capital
- How to address this?



**Compound Annual Growth Rate**  
2013-2023

Pack	-24.5%
Cell	-8.0%
Total	-15.8%

# Annualisation – Annuity tilt

- Propose a tilted annuity approach that provides more cashflow upfront in an NPV-neutral manner.
- Propose a **tilt factor of 1.24** in the Procedure.
  - Based on assumption of ~4.4% annual decline in BESS capex
  - Increases BRCP by 24%
- Targets keeping investors ‘whole’ and improves opportunity to recover capital and earn ROI early.

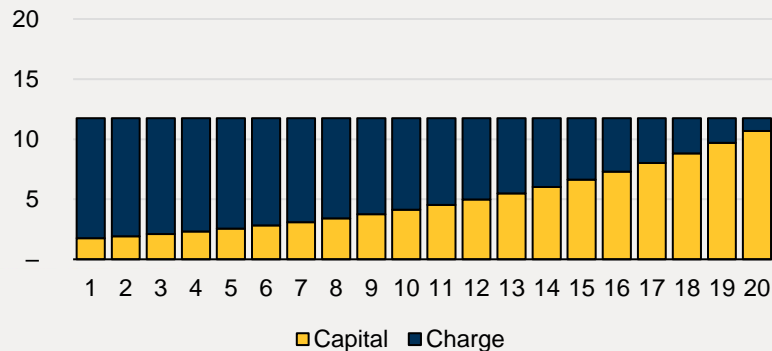




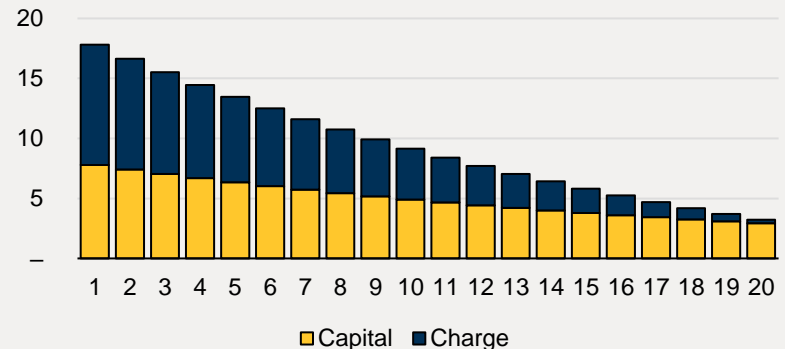
# Annualisation – Annuity tilt

- Different methods result in different profiles which are illustrated below:
- The Straight-Line Annuity is consistent with the current BRCP approach and is the simplest.
- Tilted Annuity allows flexibility of bringing forward cashflows, and has been used in environments of technology innovation – **proposed approach**.

Straight-Line Annuity



Tilting/Accelerated Depreciation



# MAC WG involvement

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Meeting date	WG provided feedback on:
18 Dec 23	<ul style="list-style-type: none"><li>• Background and scope of review.</li></ul>
6 Feb 24	<ul style="list-style-type: none"><li>• Choice of BESS sub-chemistry.</li><li>• Working approach to estimate cost recovery period, WACC and annuity tilt.</li></ul>
22 Feb 24	<ul style="list-style-type: none"><li>• GHD's preliminary advice on cost components and BESS specs.</li><li>• Working approach to estimate transmission connection costs &amp; land costs.</li></ul>
(out of session)	<ul style="list-style-type: none"><li>• Early draft of WEM Procedure via email.</li></ul>
19 Apr 24	<ul style="list-style-type: none"><li>• Procedure change proposal and draft WEM Procedure as published.</li></ul>

WG papers published [online](#)



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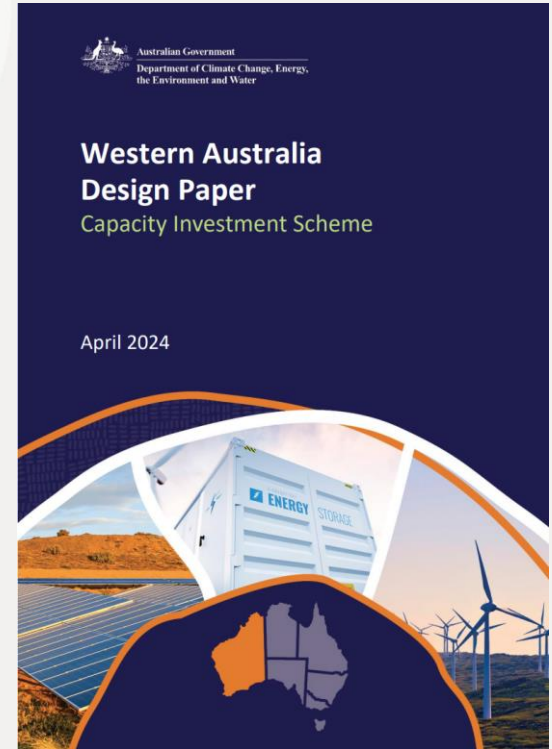
# New developments – April 2024

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- Commonwealth Govt is expanding CIS to target 6.5 TWh of VRE and 1.1 GW of 4-hour equivalent capacity in WEM by 2030
- BESS expected to participate in 2025 RCC will be eligible.
- De-risks investment in BESS and helps in banking BESS projects.



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[Consultation Paper](#)

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# thank you

Ask any questions



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# MARKET ADVISORY COMMITTEE MEETING, 2 May 2024

FOR DISCUSSION

SUBJECT: UPDATE ON ERA'S BENCHMARK RESERVE CAPACITY  
PRICE WEM PROCEDURE REVIEW

AGENDA ITEM: 5(B)

## 1. PURPOSE

Provide a status update on the activities of the ERA's Benchmark Reserve Capacity Price WEM Procedure Review Working Group.

## 2. ERA'S BENCHMARK RESERVE CAPACITY PRICE WEM PROCEDURE REVIEW WORKING GROUP (BRCPWG)

	Most recent meetings	Next meeting
Date	19 April 2024	TBA

## 3. ERA PROCEDURE CHANGE PROPOSALS

The status of ERA Procedure Change Proposals is described below, current as at 12 April 2024. Changes since the previous MAC meeting are in **red text**.

ID	Summary of changes	Status	Next steps	Indicative date
Procedure Change Proposal EEPC_2024_01  WEM Procedure: Benchmark Reserve Capacity Prices	<p>The ERA published its procedure change proposal and draft <i>WEM Procedure: BRCP</i> for consultation on 5 April 2024 (<a href="#">online</a>).</p> <p>The ERA proposes a complete re-write of the existing WEM Procedure as extensive changes are required to implement changes to the WEM Rules following RCM reforms.</p> <p>Prior to publishing its proposal, the ERA Secretariat provided the MAC Working Group with an early draft of the WEM Procedure for</p>	Open for consultation	<p>Consultation closes on 6 May 2024.</p> <p>The ERA expects to publish its procedure change report and <i>WEM Procedure: BRCP</i> in June 2024.</p>	July 2024

ID	Summary of changes	Status	Next steps	Indicative date
	<p>feedback. The ERA Secretariat received comments from four Working Group Members.</p> <p>On 19 April 2024, the MAC's BRCP WEM Procedure Review Working Group provided feedback on the procedure change proposal. The Working Group's Chair will verbally summarise the Group's feedback from its meeting and present the outcomes of the procedure change proposal. Slides from the presentation are provided overleaf.</p> <p>Meeting papers from all historical Working Group meetings are available <a href="#">online</a>.</p>			

## Agenda Item 5(c): Update on the PSSR Standards Working Group

Market Advisory Committee (MAC) Meeting 2024\_05\_02

### 1. Purpose

- The Chair of the Power System Security and Reliability (PSSR) Standards Working Group (PSSRSWG) to provide an update on the activities of the PSSRSWG since the last MAC meeting.

### 2. Recommendation

That the MAC notes:

- (1) the minutes of the 29 February 2024 PSSRSWG meeting, [Power System Security and Reliability \(PSSR\) Standards Working Group \(www.wa.gov.au\)](http://www.wa.gov.au); and
- (2) the update from the PSSRSWG meeting on 18 April 2024.

### 3. Background

- The MAC established the PSSRWG to support the Coordinator of Energy's review of the PSSR standards in the South West Interconnected System (SWIS).
- The purpose of this review is to implement the Energy Transformation Taskforce's recommendation to develop a consistent, single end-to-end PSSR standard for the SWIS governed by centralised governance framework that will be implemented in the Electricity System and Market Rules (ESMR).
- The project is being conducted in four stages, as follows:
  1. Assess the existing PSSR framework (inclusive of governance arrangements and compliance frameworks) and standards;
  2. Identify any gaps, duplications, and inconsistencies in the existing framework (including the governance arrangements);
  3. Develop proposals for a single end-to-end PSSR standard and framework governed by the Coordinator under the Electricity System and Market Rules; and
  4. Draft rules to implement the recommended framework.
- Given that the roles and responsibilities for managing PSSR standards are largely managed by AEMO and Western Power through their planning and operation processes, a Technical Working Group consisting of EPWA, AEMO and Western Power has also been established to provide input at each stage of this review.
- The Technical Working Group meets frequently to discuss the framework for analysis and other material and provide input on proposals prior to these being circulated to the PSSRSWG.

- The fourth PSSRSWG meeting was held on 18 April 2024. The working group finalised the discussion on identified gaps, duplications, and inconsistencies in the existing framework for stage 2 (these issues were discussed with the MAC on the 21 March meeting).
- Stage 2 of the review will be completed in May. Outputs from this stage include:
  - draft chapter detailing the findings of this stage, which will be incorporated into the Consultation Paper under stage 3.
  - an updated version of the PSSR Analysis Excel Workbook, detailing the identified gaps, duplications, and inconsistencies.
- Papers and minutes for the PSSRSWG meetings are available on the PSSRSWG webpage at [Power System Security and Reliability \(PSSR\) Standards Working Group \(www.wa.gov.au\)](http://www.wa.gov.au)
- Further information on the PSSR Standards Review, including all Papers are available on the PSSR Standards Review webpage at [Power System Security and Reliability Standards Review \(www.wa.gov.au\)](http://www.wa.gov.au)

## 4. Next Steps

<u>Stage</u>	<u>Activity</u>	<u>Timing</u>
2 - Gap analysis	Consultant to provide EPWA with draft chapter detailing the findings for stage 2 (to be incorporated into the Consultation Paper under stage 3)	May 2024
	Chair to provide the MAC an update of the activities of the PSSRSWG	2 May 2024
	Chair to provide the MAC an update of the activities of the PSSRSWG	13 June 2024
3 - Develop design proposals	Consult with the MAC on draft Consultation Paper	5 September 2024
	Consult with the MAC on draft Information Paper	28 November 2024
4 - Develop amending rules	Exposure draft of Draft Amending WEM Rules	April 2025
	Amending WEM Rules submitted to Minister for Energy	August 2025

- The fifth PSSRSWG meeting is yet to be scheduled.





## Agenda Item 5(d): Update on the WIC Review Working Group

Market Advisory Committee (MAC) Meeting 2024\_03\_21

### 1. Purpose

The Chair of the Wholesale Energy Market (WEM) Investment Certainty (WIC) Review Working Group (WICRWG) to provide an update on the activities of the WICRWG since the last MAC meeting.

### 2. Recommendation

That the MAC notes:

- the update from the WICRWG meeting on 24 April 2024; and
- the WIC Review update presentation will be emailed to MAC members on Friday 26 April 2024 (**Attachment 1**).

### 3. Process

- The MAC established the WICRWG to support the Coordinator's WIC Review under clause 2.2D.1 of the WEM Rules.
- The WIC Review is addressing issues that were recognised in the Reserve Capacity Mechanism (RCM) Review and will consider the five specific reforms that were announced by the Minister for Energy on 9 May 2023.
- A draft WIC Review Consultation Paper (Consultation Paper) was presented to the MAC at the 21 March 2024 MAC meeting, no additional views on the draft proposals were received. The Consultation Paper is now finalised and the detailed modelling is complete.
- The Consultation Paper sets out the findings and recommendations arising from analysis on Initiatives 1, 2, 4 and 5. Initiative 3 is not included in the Consultation Paper as the interaction with the Commonwealth Capacity Investment Scheme (CIS) is still to be determined.
- Initial discussions commenced on Initiative 3 at the WICRWG meeting on the 24 January 2024 with the objective to consider the need for a "top-up" of WEM revenues for renewable generators to address the risk that they may not recover enough revenue to justify investment. WICRWG discussions focussed on the overall approach to the scheme and calculation of the "top-up".
- The WICRWG supported further consideration of all options until it was clear how the CIS would operate in the WEM.
- Four options for Initiative 3 remained on the table following the WICRWG meeting held on the 24 January 2024:
  - Option A: An energy purchaser obligation (like the Renewable Energy Target [RET])
  - Option B: A capacity-based revenue top up, linked to CIS outcomes
  - Option C: A price guarantee linked to pricing in a trigger year (with a cap and floor)

- Option D: Setting the BRCP based on renewable capital costs (accounting for expected capacity derating)
- Options B and D had the most support, but no option could be ruled out until approach to the application of how the Commonwealth CIS would apply in the WEM became clear.
- At the 24 April WICRWG meeting discussion will be held on the options to support renewable generators and the interaction with the Commonwealth CIS, the WA design for which was published on the 12 April 2024 and available [here](#).
- An overview of the Commonwealth CIS and the approach to how it will work in the WEM will be provided and the following will be discussed:
  - whether to eliminate options A and C with future work focusing on options B and D; and
  - potential approach for Option B to use the CIS outcomes to set a revenue top up for non-CIS facilities.
- It was noted that implementation of Initiative 3 would need to lag Commonwealth CIS implementation (commissioning in 2026 and 2027 capacity years).
- Slides presenting an update on the outcomes of the 24 April 2024 will be provided to the MAC on 26 April 2024.
- The Terms of Reference, papers and minutes for the WICRWG meetings are available on the WICRWG webpage at [Wholesale Electricity Market Investment Certainty \(WIC\) Review Working Group \(www.wa.gov.au\)](http://www.wa.gov.au)
- Further information on the WIC Review, including the Scope of Works are available on the WIC Review webpage at [Wholesale Electricity Market Investment Certainty Review \(www.wa.gov.au\)](http://www.wa.gov.au)

#### 4. Next Steps

The table below shows the proposed next steps.

Step	Timing
Publish WIC Review Consultation Paper	Late April 2024
Submissions on WIC Review Consultation Paper close	Late May 2024
WICRWG meeting <ul style="list-style-type: none"> <li>• Renewable support analysis</li> <li>• Renewable support initial proposal</li> </ul>	May
WICRWG meeting <ul style="list-style-type: none"> <li>• Renewable support final proposal</li> <li>• Updates to design proposals based on Consultation Paper submissions</li> </ul>	June
Publication of Information Paper on Initiatives 1, 2, 4 and 5 (Part 1) and Consultation Paper on Initiative 3 / renewable support (Part 2)	July 2024
Draft Amending WEM Rules (Part 1)	August 2024
Updates to design proposals on Initiative 3 / renewable support based on submissions	August 2024

Information Paper on Initiative 3 / renewable support	September 2024
Draft Amending WEM Rules on Initiative 3 / renewable support (Part 2)	October 2024

## 5. Attachments

- Agenda Item 5(d) – Attachment 1 – WIC Review update – slide presentation



Government of Western Australia  
Energy Policy WA

# Market Advisory Committee

## WICRWG Update – Support for Renewable Generation

2 May 2024

Working together for a  
**brighter** energy future.

# Initiative 3 - Rationale

The objective of Initiative 3 is to consider the need for a “top-up” of Wholesale Electricity Market (WEM) revenues for renewable generators to address the risk that the renewables may not recover enough revenue to justify investment.

The Reserve Capacity Mechanism (RCM) review forecast declining revenues for renewable generators after 2030 when conventional baseload retires:

- Meeting the Reserve Capacity Target means building significant volumes of renewable capacity. That means being oversupplied with renewables and storage much of the time.
- Renewable projects need to recover some fixed costs in the energy market as their fixed costs per MW are higher than the technology used to set the Benchmark Reserve Capacity Price (BRCP), and they only get Capacity Credits for 15-30% of their nameplate capacity.
- As conventional generation retires, renewable generators with low variable costs will more frequently set the Real-Time Market energy price, driving prices to zero or below most of the time. As a result, renewable projects will no longer recover their long run marginal cost through the RCM, energy and Frequency Co-optimised Essential System Service.

# National context

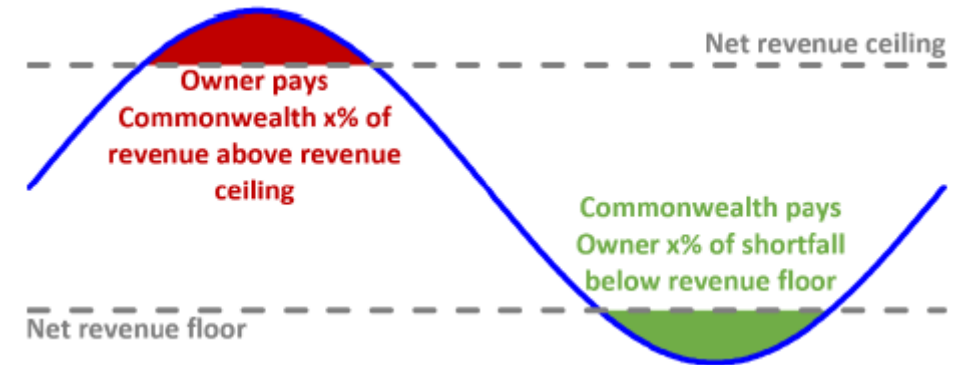
At the same time, Commonwealth programmes are changing:

- The mandatory large-scale generation certificates (LGC) programme will end in 2030, and is being replaced with a Capacity Investment Scheme (CIS).
- Subject to the availability of eligible projects, in the WEM the CIS will target an indicative 6.5 Terawatt Hour (TWh) of Variable Renewable Energy and 1.1 Gigawatt (GW) of four-hour equivalent, clean dispatchable capacity in the WEM over the period to 2030.
- In the first auction, the CIS will fund new storage capacity for the 2026-27 Capacity Year, as well as renewable generation capacity and storage for the 2027-28 Capacity Year.
- Not all capacity will be successful, so the market may end up with similar projects with and without CIS support.

# CIS in the WEM (1)

The Commonwealth CIS will guarantee *net* revenue for selected facilities through a series of competitive tenders for clean renewable generation and/or storage.

- Successful projects will have a revenue floor and ceiling for up to 15 years.
- Eligible projects must have zero scope 1 emissions (renewable fuels, storage charging from the grid or collocated with renewables, potentially demand response in the future).
- Recipients must participate in the RCM and be eligible for Capacity Credits to receive CIS payments, and changes to the RCM would apply to CIS projects.
- Underwriting calculations include bilateral contract revenues but exclude effects of any RCM refunds and negative prices.
- CIS tenders are run in advance of RCM certification (apart from the 2024 Reserve Capacity Cycle), and applications can be pre-financial close.
- Non-Co-optimised Essential System Service facilities not eligible.



# CIS in the WEM (2)

CIS parameters:

- Clean Dispatchable Capacity Scheme Investment Agreements: floor and ceiling revenue in \$/MW of Capacity Credits held
- Generation Capacity Scheme Investment Agreements: two components for each of floor and ceiling:
  - Energy component: \$/MWh of generation in the relevant support year
  - Capacity component: \$/MW of Capacity Credits held in the relevant support year

Two assessment stages:

- Project bid stage: Strongest performers based on technical, commercial, social license and reliability contribution invited to second stage.
- Financial bid stage: Select projects based on contribution to reliability and lower prices for consumers

First WEM CIS tender: June 2024 – Feb 2025. Indicative target: 500 MW / 2,000 MWh clean dispatchable capacity. Projects receiving Capacity Credits in the 2024 Reserve Capacity Cycle eligible to participate.

Future WEM CIS tenders would be conducted annually in advance of RCM certification.



# Initiative 3 – Key Topics

1. **The overall approach to the scheme**
2. Trigger for scheme commencement and retirement including timing
3. Eligibility criteria for technologies to be considered and the firming requirement
4. **Calculation of the “top-up”**
5. Method of recovery of the “top-up” from the WEM
6. Administration of the scheme
7. Design of the WEM Rules to amend the changes.

We are still focusing on topics 1 and 4.

# Initial Options Identified

In its January meeting, the working group discussed four options:

- Approach A: An energy purchaser obligation (like the Renewable Energy Target [RET])
- Approach B: A capacity-based revenue top up, linked to CIS outcomes
- Approach C: A price guarantee linked to pricing in a trigger year (with a cap and floor)
- Approach D: Setting the BRCP based on renewable capital costs (accounting for expected capacity derating)

Options B and D had most support, but none could be ruled out until the CIS approach became clear.

Options B and D are mutually exclusive.

An up-front capital contribution from government is not an option

# Working Group Discussion (1)

In its April meeting, the working group discussed the application of the CIS to WA (see appendix).

Key discussion points included:

- The CIS is a reliability scheme and does not protect developers against loss of Capacity Credits or generation volume from weather, network issues.
- CIS revenue support calculations use post-curtailment energy output, to retain the incentive to produce as much energy as they can.
- Developers have significant uncertainty from network risks – curtailment in dispatch, the availability of new Network Access Quantity (NAQ), co-location affecting Relevant Level Method (RLM) calculations. These risks are assumed to be managed outside the CIS.
- The WIC review should consider which risks are borne by developers and which by consumers.

*Does the MAC have any other comments on the application of the CIS in the WEM?*

# Working Group Discussion (2)

The group agreed:

- WA specific support for renewable generation should:
  - maintain incentives to produce energy, by maintaining exposure to Real-Time Market outcomes
  - maintain incentive to participate in the CIS, and be compatible with CIS outcomes. This could be achieved by providing less support than is provided to Clean Dispatchable Capacity Scheme Investment Agreements holders.
  - avoid free riders – paying for something that would have happened anyway
- Option A is not suitable, as it would require replicating the Clean Energy Regulator just for WA.
- Merge options B and C. Option B is preferable, but using CIS outcomes as a benchmark will only be possible in years where the CIS operates. If there is no CIS auction, then another benchmark will be required.
- Option D is valid insofar as it develops organically. The Benchmark Capacity Provider should not be set to a renewable facility ahead of it becoming the marginal new entrant capacity provider. The WIC review should assess the potential for BRCP changes to mitigate revenue shortfalls for renewable generators.

*Does the MAC agree that the review should develop an approach based on options B and C?*

# WIC Working Group Schedule

*April – Consultation paper released*

May:

- Renewable support analysis
- Renewable support initial proposal

June:

- Renewable support final proposal
- Updates to other proposals based on submissions

*July – Information paper / consultation paper on renewable support released*

August:

- Draft Amending WEM Rules (part 1)
- Updates to renewable support proposal based on submissions

*September – Information paper on renewable support released*

October:

- Draft Amending WEM Rules (renewable support)

Questions or feedback can be emailed to [energymarkets@dmirs.wa.gov.au](mailto:energymarkets@dmirs.wa.gov.au)

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Western Australia.*

# Appendix A – Renewable Support Design Options

# Approach A: Energy Purchaser Obligation

The RCM requires consuming participants to procure Capacity Credits to meet their Individual Reserve Capacity Requirement (IRCR).

The RET requires purchasers to procure renewable energy certificates to meet their calculated obligation.

A renewable energy retailer obligation would work like an extension to the RET, but with certificates issued only for *firmed* renewable energy output. A central body would need to:

- Certify facilities as eligible
- Issue certificates for energy output
- Calculate obligations for purchasers
- Log certificate transactions

This approach would increase bankability for renewable projects without explicitly guaranteeing revenues for eligible facilities. It may be possible to adopt or adapt aspects of the existing RCM or the RET scheme rather than creating all new functions.



# Approach B: Capacity Based Revenue Top-Up

Under the CIS, a central body needs to determine:

- A revenue requirement for each eligible facility, through a competitive auction process.
- Actual revenue for each eligible facility.
- The top-up payment, which could be simply the requirement less actual revenue, or could relate to a range with a cap and a floor.
- Whether a facility had met energy and availability requirements and if not, the adjustment required to the payment (like RCM refunds)

This requires relatively complex administrative activities. An additional WA-specific scheme could avoid this complexity by:

- using CIS results to determine the average \$/MW top-up amount paid to CIS facilities
- treating this value as an additional payment to eligible facilities (through the RCM or separately)

# Approach C: Price Guarantee

A price guarantee would require the WEM Rules or a central body to determine:

- A reference price or price range
- The prevailing Real-Time Market price
- The top-up payment for eligible facilities, based on their output and capture price.

The relevant price could be:

- regularly recalculated (like the price caps or the BRCP)
- set once (though with ongoing CPI adjustment) based on prevailing prices in a trigger year:
  - The trigger would likely be linked to cumulative conventional generation retirement
  - The selected year would be from before the price collapse

# Approach D: BRCP Based On Renewables

The WEM Rules require the BRCP to be determined based on the fixed costs of a marginal new entrant capacity provider (the Benchmark Capacity Provider). Historically, that provider has been a 160 MW OCGT, and from 2025 it will be a 200 MW / 800 MWh Lithium-ion battery electric storage system.

If the Benchmark Capacity Provider was determined to be, for example, a wind or solar generator (with or without storage), then capacity payments alone should be sufficient revenue for renewable generation.

This value would need to reflect that the contribution of an intermittent renewable facility to meeting the capacity target is less than its nameplate capacity.

Such a BRCP would be significantly higher than the fixed costs of standalone firm generation or storage, so careful consideration would be needed to avoid incentivising non-renewables and storage without sufficient generation to charge it.

## Agenda Item 6: Update on the MAC and Procedure Change Process Review

Market Advisory Committee (MAC) Meeting 2024\_05\_02

### Purpose

To provide an update on the MAC and Procedure Change Process Reviews.

### Recommendation

That the MAC notes:

- the status of the Reviews; and
- considers whether the MAC would like to review and provide advice to the Coordinator of Energy (Coordinator) on the independent report at an out of session MAC meeting.

### Background

#### Procedure Change Process Review

- Clause 2.16.13F of the WEM Rules sets out that the Coordinator must ensure that an independent person carries out an audit of the effectiveness of the Procedure Change Process no less than every three years, with the first such review due by 1 July 2024.
- ACIL Allen has been appointed as an independent consultant to undertake this.
- While this element of the Review is being carried out independently, EPWA considers that the ACIL Allen must, at a minimum, assess whether the Procedure Change Process:
  - meets the new State Electricity Objective that is expected to become operational in the first half of 2024;
  - is cost-effective, timely, simple, predictable, consistent, flexible, and transparent;
  - ensures stakeholders have an appropriate opportunity to initiate Procedure changes and provide input into Procedure Change Proposals;
  - provides clear and appropriate timeframes and criteria for the decision-makers in the Procedure Change Process;
  - provides for independent review of decisions; and
  - provides clear and appropriate criteria for when a matter should be addressed in the WEM Rules or the WEM Procedures.

#### Market Advisory Committee Review

- There are two key drivers for the review of the operation of the MAC:

- The MAC has been operating under its current governance arrangements since July 2021, so it is now appropriate to review the MAC operations to ensure that it remains fit for purpose; and
- The passage of the Electricity Industry Amendment (Distributed Energy Resources) Bill through Parliament will mean that the WEM Rules will be renamed to the Electricity System and Market Rules (ESMR) and their scope will be expanded to address matters contained in the Electricity Networks Access Code 2004, Western Power's Technical Rules, the Electricity Industry (Metering) Code 2012 and the Electricity Industry (Network Quality and Reliability of Supply) Code 2005.
- Therefore, the content that the MAC will be required to provide advice on will expand significantly and become more technically complex. The role, functions and composition of the MAC will need to evolve with the development of the WEM Rules and the energy market.
- ACIL Allen is also assisting with this Review and will be assessing the effectiveness of the MAC, including considering whether its purpose, representation, the roles and responsibilities of members, and its process and operations are fit-for-purpose.

### Review progress to date

- ACIL Allen has distributed a questionnaire to 19 stakeholders comprising current and past MAC members, as well as several other key stakeholders. ACIL Allen received 12 responses to the MAC survey and 11 responses to the Procedure Change Process survey.
- ACIL Allen has commenced one on one consultations with stakeholders and has scheduled 12 meetings in total.
- The information derived from the survey responses and the one-on-one consultations will be used by ACIL Allen to inform the MAC and Procedure Change Process Reviews Consultation paper.

### Next Steps

- The table below shows the next steps for both Reviews.

Step	Timing
Publish MAC and Procedure Change Process Consultation paper	Early May 2024
Submissions on MAC and Procedure Change Process Consultation paper close	End May 2024
Independent report submitted to the Coordinator	By 1 Jul 2024
Provide final report to MAC for information	25 July 2024
Publication of independent report and Coordinator response to the recommendations of the independent report	By 31 July 2024
Publish Consultation Paper with design proposals for the Procedure Change Process and revised MAC arrangements	September 2024
Submissions on design proposals close	October 2024
Public consultation on proposed changes to WEM Rules and Procedure Administration Procedure and MAC Constitution	November 2024



## Agenda Item 7: WEM Procedure Content Assessment

Market Advisory Committee (MAC) Meeting 2024\_05\_02

### 1. Purpose

To request that the MAC approves the Terms of Reference (TOR) for the WEM Procedure Content Assessment Group (PCAWG).

### 2. Recommendation

That the MAC considers and approves the TOR for the PCAWG (Attachment 1).

### 3. The WEM Procedure Content Assessment Working Group's TOR

- At its 21 March 2024 meeting, the MAC supported the Scope of Work for the Procedure Content Assessment and agreed the establishment of the WEM Procedures Content Assessment Working Group (PCAWG) to assist the WEM Procedures Content Assessment project.
- At the meeting, the MAC members provided feedback on the terms of reference for the Working Group and requested that EPWA considers several amendments.
- Members were also asked to provide any further feedback via email to Energy Policy WA (EPWA).
- EPWA has amended the draft Terms of Reference for the PCAWG (Attachment 1) to reflect the MAC suggestions.

#### 3.1 Feedback provided by MAC members

- EPWA received two suggestions on the Terms of Reference, which are reflected in the minutes for the 21 March 2024 MAC meeting.
- EPWA received no feedback from MAC via email.
- To address the comments, EPWA has:
  - clarified the timing for commencing the Review;
  - signalled that PCAWG members must consider the costs and benefits of any changes to the Procedures and/or WEM Rules; and
  - clarified that the Working Group must assist with prioritising which WEM Procedures, or parts of WEM Procedures, are assessed through this process.

## 4. Background

### 4.1 The WEM Procedure Content Assessment

- The Scope of Work for the WEM Procedures Content Assessment (Attachment 1) aims to assess the content of the existing WEM Procedures to determine, using the criteria developed as part of the Procedure Change Review), whether there are any matters that should be elevated to the WEM Rules or vice versa.

### 4.2 Related projects

- The Coordinator is currently undertaking a review of Procedure Change Process. An output of this Review will be a set of clear and appropriate criteria for when a matter should be addressed in the WEM Rules or the WEM Procedures. These criteria will be used in the WEM Procedure Content Assessment.

## 5. Next Steps

Following approval by the MAC of the Terms of Reference:

- the MAC Secretariat will establish the PCAWG;
- an PCAWG webpage will be created on the Coordinator's Website; and
- the MAC Secretariat will advise stakeholders that they may nominate representatives.

## 6. Attachments

(1) Agenda Item 7 - Attachment 1 - Terms of Reference for the PCAWG



# Terms of Reference

## WEM Procedure Content Assessment Working Group

### 1. Background

Clause 2.2D.1(h) of the Wholesale Electricity Market (WEM) Rules confers the function on the Coordinator to consider and, in consultation with the Market Advisory Committee (MAC), progress the evolution and development of the Wholesale Electricity Market (WEM) and the WEM Rules.

The Coordinator is reviewing the content of existing WEM Procedures as part of its functions under clause 2.2D.1(h) of the WEM Rules. This review will be supported by a Working Group established under the Market Advisory Committee.

This project aims to assess the content of the existing WEM Procedures to determine, using a set of criteria established through the Procedure Change Process Review (see below), whether there are any matters included in them to that should be elevated to the WEM Rules.

A Scope of Work has been developed for the WEM Procedure Content Assessment and is available on the Coordinator of Energy's website. The scope of works for the WEM Procedures Content Assessment includes:

- project purpose and guiding principles;
- stakeholder engagement; and
- the project schedule.

The MAC has established the Procedure Content Assessment Working Group (PCAWG) under clause 2.3.17(a) of the WEM Rules and section 9 of the MAC Constitution to assist the Coordinator with the WEM Procedures Content Assessment.

#### 1.1 Related projects

The Coordinator is currently undertaking a review of Procedure Change Process. An output of this Review will be a set of clear and appropriate criteria for when a matter should be addressed in the WEM Rules or the WEM Procedures. These criteria will be used to guide the WEM Procedure Content Assessment.

#### 1.2 Scope of the PCAWG

The PCAWG has been established to provide expert technical, regulatory and consumer advice on all aspects of the WEM Procedures Content Assessment outlined in the Scope of Work, including:

- determining the specific WEM Procedures, or parts of WEM Procedures, that should be assessed;
- assessing the content of current WEM Procedures against the criteria developed as part of the review of Procedure Change Process;
- providing evidence regarding the likely costs and benefits associated with the implementation of any proposed change; and
- drafting of WEM Amending Rules and Procedure Change Proposals, as necessary.

## 2. Membership

Energy Policy WA will Chair the PCAWG.

Market Participants and other interested stakeholders may nominate a person for membership on the PCAWG for approval by the Chair.

All members of the PCAWG are required to contribute their time and resources to complete specific analysis and other tasks as requested by the Chair.

There are no restrictions on the number of PCAWG members. The Chair of the PCAWG may only approve one member from each organisation.

The Chair of the PCAWG will have discretion to allow additional subject matter experts or consultants to attend specific meetings or workshops, either generally or on a case-by-case basis. It is likely that this will be necessary due to the technical and varied nature of the WEM Procedures that will be discussed.

Energy Policy WA will provide administrative support to the PCAWG.

## 3. Documentation

Energy Policy WA will establish a PCAWG webpage on its website. Any discussion papers, meeting papers and meeting minutes will be posted to this page.

Market Participants and other stakeholders may register with Energy Policy WA by subscribing to RulesWatch Newsletter [here](#) to receive email communications regarding the PCAWG, including notices of publication of papers on the PCAWG webpage.

## 4. Responsibilities of Meeting Attendees

A person attending a PCAWG meeting is expected to:

- have suitable knowledge and experience to engage in and contribute to discussions relevant to the specific meeting, or to;
- prepare for the meeting, including by reading any meeting papers distributed before the meeting;
- participate as a general industry representative rather than representing their company's interests; and
- complete actions requested by the Chair, which may include undertaking of analysis or preparation of papers for discussion by the PCAWG.
- if relevant, to update the member of the Market Advisory Committee within their organisation on the meeting discussions and outcomes.

## 5. Administration

Energy Policy WA will provide secretariat support for the PCAWG.

Energy Policy WA will ensure contact details for the PCAWG are maintained on the PCAWG webpage.

The Chair will convene meetings of the PCAWG in accordance with the timelines in the Scope of Work for the Procedure Content Assessment Project as outlined in Section 8 of these Terms of Reference.

Energy Policy WA will prepare and distribute all meeting correspondence to the PCAWG via email. Energy Policy WA will endeavour to provide the following documentation by email to the PCAWG members:

- notices of meetings, agendas, and relevant meeting papers at least 5 Business Days prior to the meeting; and
- key outcomes and actions emerging from each meeting within 10 Business Days following the meeting.

All meeting documentation will be published on Energy Policy WA's website as soon as practicable after it has been sent to the PCAWG members.

Meetings will generally be held online via Microsoft Teams but may sometimes be held in person. Meeting minutes are to record meeting attendance, main outcomes of discussion, agreed recommendations to the MAC and action items. Meetings will be recorded to assist with writing minutes.

## 6. Reporting Arrangements

The PCAWG Chair must provide a report to the MAC on the PCAWG's activities at each MAC meeting. The reports must include, at a minimum:

- details of all PCAWG meetings since the last report to the MAC, including the date of the meeting and the key outcomes of each meeting;
- the date of the next meeting and the issues to be considered (if known); and
- any recommendations from the PCAWG to the MAC.

## 7. Project Schedule

The PCAWG will commence its work after the criteria for determining if a matter should be addressed in the WEM Rules or the WEM Procedures is finalised as part of the Procedure Change Review (expected to be July 2024). The following is the high-level project schedule for the PCAWG:

Tasks/Milestones	Timing
<b>Preparation</b>	
Consult with the MAC on the scope of work for the WEM Procedure Content Assessment and Terms of reference for the WEM Procedure Content Assessment Working Group (PCAWG)	21 Mar 2024
<b>WEM Procedures' content assessment</b>	
Assess content of current WEM Procedures against the defined criteria, in consultation with PCAWG members and Procedure Administrators	1 Jun 2024 to 31 Oct 2024
Report proposed recommendations to the MAC	28 Nov 2024
Information Paper on WEM Procedure content assessment	5 Dec 2024
<b>Amending Rules and Procedure Changes, if required</b>	
Develop Exposure Draft of Amending WEM Rules and consequential WEM Procedure changes	Dec 2024
Publish Exposure Draft and proposed changes to WEM Procedures for consultation	Dec 2024

Tasks/Milestones	Timing
Consultation closes	Feb 2025
Publish Consultation Summary	Feb 2025
Final Amending WEM Rules to Minister and finalise consequential WEM Procedure changes	Feb 2025

## 8. Contact Details

Rule Participants and other stakeholders may contact the PCAWG Secretariat at [energymarkets@dmirs.wa.gov.au](mailto:energymarkets@dmirs.wa.gov.au). Documentation and information related to the PCAWG will be published on Energy Policy WA's website.

## Agenda Item 8: Review of the Essential Systems Services Framework

Market Advisory Committee (MAC) Meeting 2024\_05\_02

### 1. Purpose

- Energy Policy WA (EPWA) to update the MAC on the Scope of Work for the review of the Essential Systems Services (ESS) Framework (the Review)
- To request that the MAC approves:
  - the establishment of the ESS Framework Review Working Group (ESSFWG); and
  - the Terms of Reference (TOR) for the ESSFWG.

### 2. Recommendation

That the MAC:

1. notes the SoW for the ESSF Review (Attachment 1);
2. approves the establishment of the ESSFWG; and
3. considers and approves the TOR for the ESSFWG (Attachment 2).

### 3. Background

- The Coordinator of Energy (Coordinator) is conducting a review of the Essential System Services (ESS) Framework (the Review), incorporating:
  - a review of the ESS Process and Standards as required by Section 3.15 of the WEM Rules; and
  - a review of the Supplementary Essential Systems Services Procurement Mechanism (SESSM).<sup>1</sup>
- A Scope of Work has been developed for this Review (Attachment 1).
- ESS support the operation of the energy market and are required to maintain Power System Security and Power System Reliability. As transition to a lower emissions energy system characterised by increasing levels of intermittent and distributed generation continues, ESS become increasingly important to maintain power system security and reliability.
- There are three types of ESS in the Wholesale Electricity Market (WEM). However, only the Frequency Co-optimised Essential System Services (FCESS) are being considered as part of this Review.
  - The other two ESS are Non-Co-optimised Essential System Services (NCESS), which are contracted by AEMO or the Network Operator through a competitive procurement process prescribed under the WEM Rules, and System Restart Services, which are competitively procured and contracted by AEMO.

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<sup>1</sup> The SESSM review is being carried out under Clause 2.2D.1(h), which confers the function on the Coordinator to consider and, in consultation with the Market Advisory Committee (MAC), progress the evolution and development of the Wholesale Electricity Market (WEM) and the WEM Rules

- Section 3.15 of the WEM Rules requires the Coordinator (Coordinator) to complete the first review of the ESS Process and Standards within two and half years of new WEM commencement, however, it does not prevent the review being carried out earlier if necessary. In this instance the Coordinator is conducting the Review early, due to:
  - the transitional arrangements requiring all registered Facilities accredited for FCESS to offer their full accredited capability ending on the 1 April 2024;
  - AEMO has not yet finalised several key procedures that support the ESS Framework, including the WEM Procedure relating the Low Reserve Conditions (describing how AEMO assesses the probability of accredited ESS providers being insufficient to meet the ESS Standards) and two WEM Procedures relating to the SESSM Trigger;
  - there have been persistent shortfalls in available FCESS since the start of the new WEM which have led to high FCESS costs; and
  - the total costs of ESS and Energy Uplift have increased substantially, driven by significant increases in costs in all FCESS Market Services.<sup>2</sup>
- An output of a review of the ESS process and standards required under Section 3.15 is a review of the processes and effectiveness of the Supplementary Essential System Service Procurement Mechanism (SESSM) if it was triggered during the ESS Standards review period.
- While the SESSM has not been triggered, Energy Policy WA considers it appropriate to undertake a review of SESSM in conjunction with the review on the ESS Process and Standards to ensure that the core processes and design elements of the SESSM and the consequent rule obligations are fit for purpose and work as intended.
- EPWA has developed a Terms of Reference for a ESSFWG (Attachment 2)

## 4. Next Steps

Following approval by the MAC of the Terms of Reference:

- EPWA will commence work to procure a consultant to assist with the review;
- the MAC Secretariat will establish the ESSFWG;
- an ESSFWG webpage will be created on the Coordinator's Website; and
- the MAC Secretariat will advise stakeholders that they may nominate representatives.
- Market Participants and other interested stakeholders may nominate a person for membership on the ESSRFWG for approval by the Chair; and
- the ESSRFWG will commence operation in early July 2024

## 5. Attachments

- (1) Agenda Item 8 - Attachment 1 – Draft Scope of Work for the Review of the ESS Framework.
- (2) Agenda Item 8 - Attachment 2 - Draft Terms of Reference for the ESSFWG

<sup>2</sup> [quarterly-energy-dynamics-q4-2023.pdf \(aemo.com.au\)](#)



# Scope of Works for the Coordinator's Review of the Essential System Services Framework

## 1. Introduction

The Coordinator of Energy (Coordinator) is conducting a review of the Essential System Services (ESS) Framework (the Review), incorporating:

- a review of the ESS Process and Standards as required by Section 3.15 of the WEM Rules; and
- a review of the Supplementary Essential Systems Services Procurement Mechanism (SESSM).<sup>1</sup>

Essential System Services (ESS) support the operation of the energy market and are required to maintain power system security and reliability. There are three types of ESS in the WEM, however only the Frequency Co-optimised Essential System Services (FCESS) are being considered as part of this Review.<sup>2</sup>

The SESSM is a mechanism for procuring ESS capability over a longer timeframe than provided for in the Real-Time Market and triggered in two circumstances:

- if the Australian Energy Market Operator (AEMO) predicts that there will be a shortfall of FCESS in the Real-Time Market; or
- if the Economic Regulation Authority (ERA) considers that the FCESS market outcomes are inconsistent with the efficient operation of the Real-Time Market.

The purpose of this Review is to ensure the framework for FCESS provision is operating efficiently to ensure power system security and reliability can be maintained at the lowest cost to consumers. This will be increasingly important as the transition to a low emissions energy system characterised by increasing levels of intermittent and distributed generation continues.

The Review will be supported by a Working Group established under the MAC.

<sup>1</sup> The SESSM review is being carried out under Clause 2.2D.1(h), which confers the function on the Coordinator to consider and, in consultation with the Market Advisory Committee (MAC), progress the evolution and development of the Wholesale Electricity Market (WEM) and the WEM Rules

<sup>2</sup> The other two are Non-Co-optimised Essential System Services (NCESS), which are procured by AEMO or the Network Operator to support other system and network needs, and System Restart Services, which are used to restart the system following a widespread blackout.

## 2. Background

### 2.1 The FCESS framework

#### 2.1.1 Frequency Co-optimised Essential System Service Process and Standards

There are five FCESS in the WEM:

- **Regulation** functions keep the frequency in the South West Interconnected System (SWIS) close to 50 Hz by offsetting minor mismatches between electricity supply and demand. It is provided by Facilities capable of receiving Automatic Generator Control (AGC) signals from AEMO.
  - **Regulation Raise** requires a Facility to increase output (or reduce consumption) to raise system frequency; and
  - **Regulation Lower** requires a Facility to reduce output (or increase consumption) to lower the system frequency.
- **Contingency Reserve** functions to arrest, stabilise, and restore the SWIS Frequency after a Contingency Event occurs. It is provided by Facilities which hold capability in reserve to rapidly adjust output or consumption in response to significant changes in their local frequency.
  - **Contingency Reserve Raise** service operates when there is a significant loss of generation; and
  - **Contingency Reserve Lower** service operates when there is a significant loss of load.
- **Rate of Change of Frequency (RoCoF) Control Service** functions to maintaining the RoCoF within the RoCoF Safe Limit. It is provided by Facilities which contribute inertia when synchronised to the power system.

Section 3.10 of the WEM Rules sets out the ESS Standards, requiring AEMO to:

- schedule and dispatch sufficient Regulation to ensure that the frequency in the SWIS is maintained within the Normal Operating Frequency Band and the Normal Operating Frequency Excursion Band;
- take into account the historic and expected variability of the frequency in the SWIS, when determining the quantity of Regulation to schedule and dispatch in accordance with clause 3.10.1; and
- schedule and dispatch sufficient Contingency Reserve and RoCoF Control Service to ensure that, in combination, following a Credible Contingency Event the frequency in the SWIS is maintained within the relevant Frequency Band and the RoCoF Safe Limit.

Section 3.11 sets out how AEMO must determine and procure FCESS to meet the requirements. Clause 3.11.7 sets out that AEMO must document in a WEM Procedure the methodologies and processes to be followed by AEMO in determining, for each pre-dispatch interval and dispatch interval:

- the quantity of Regulation to schedule and dispatch, including:
  - the identification and measurement of sources of variability; and
  - the method by which the quantity of Regulation required is calculated;
- the combination of Contingency Reserve and RoCoF Control Service required to maintain frequency in the SWIS within the Credible Contingency Event Frequency Band, including the use of Facility Speed Factors for a Facility; and
- the expected quantities of any other FCESS required in each Dispatch Interval or Pre-Dispatch Interval to meet the ESS Standards.



## 2.1.2 Supplementary Essential System Service Mechanism

The SESSM was introduced as a mechanism for procuring FCESS to provide a means for longer-term contractual arrangements in case of inadequate supply of FCESS in the Real-Time Market. The objectives of the SESSM are to

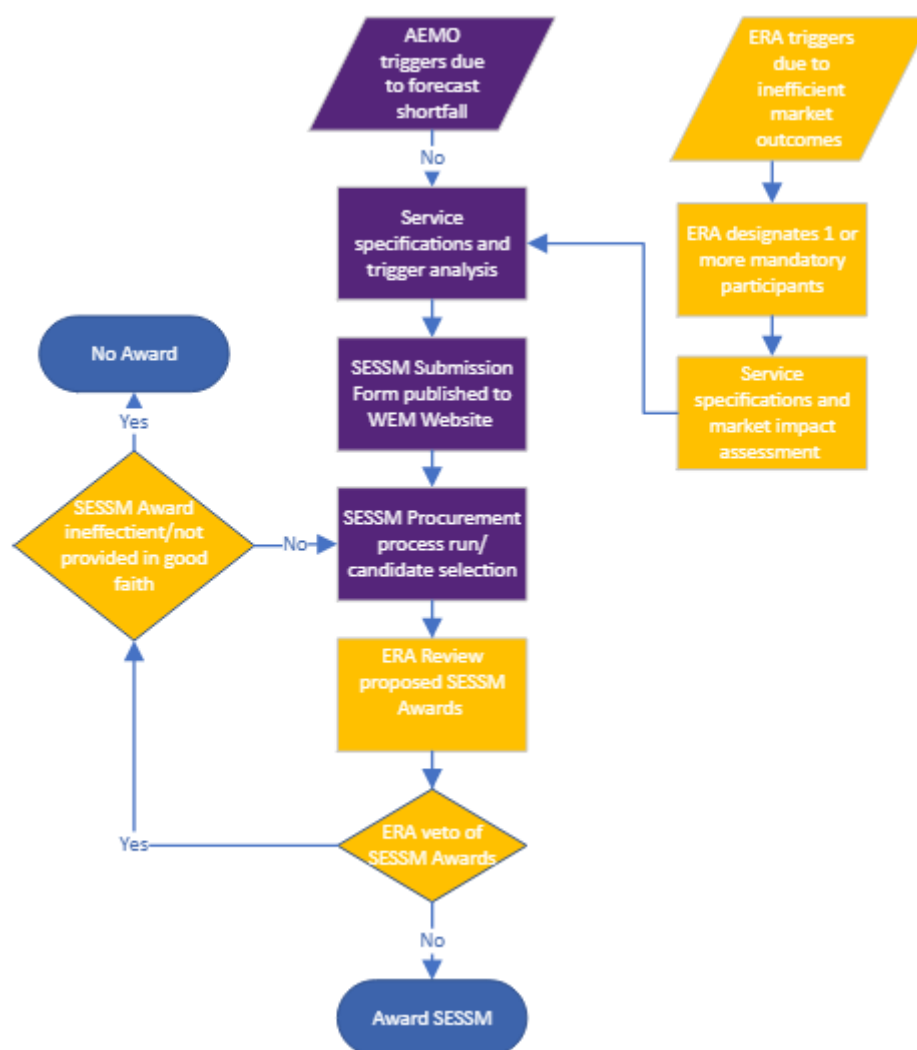
- incentivise new FCESS providers to enter the market;
- mitigate scarcity in FCESS markets, which may manifest as either as a shortfall of accredited facilities, or shortfall of participation; and
- mitigate the use of market power by:
  - providing a mechanism for competitive entry of new providers; and
  - allowing a mechanism of ex-ante review of the operating costs of ESS providers by the ERA.

The SESSM is triggered if:

- AEMO identifies a shortfall of FCESS capable Facilities and the shortfall cannot be met by Market Participants or the number of Dispatch Intervals in any 90 Trading Day period identified in clause 3.11.2(b) is greater than or equal to the threshold specified in the WEM Procedure referred to in clause 3.11.4; or if
- the ERA identifies through its monitoring activities that market outcomes are not consistent with efficient operation, or if the overall market prices are significantly above a level.

Figure 1 demonstrates the SESSM process.

Figure 1: SESSM process



AEMO is required to develop WEM Procedures relating to the SESSM. To date, these have not been developed.

A participant in the SESSM may receive a SESSM Award that contributes towards its fixed costs, which should provide additional incentive for investment in ESS-capable Facilities.

## 2.2 The need for review

Secure and reliable operation of the SWIS underpins the effectiveness and efficiency of the WEM. As transition to a lower emissions energy system characterised by increasing levels of intermittent and distributed generation continues, ESS become increasingly important to maintain power system security and reliability.

Participation in the FCESS markets in the new WEM which commenced on 1 October 2023 was essential for the new market to perform effectively at its inception. To ensure sufficient participation in the FCESS markets, all registered Facilities accredited for FCESS were required to offer their full accredited capability in the first six months following the New WEM Commencement Day. These transitional provisions ended on the 1 April 2024. As such, it is currently not mandatory for any facility to accredit for FCESS or participate in the FCESS markets.

Without the obligation for Facilities to accredit for FCESS, or to offer any accredited capacity into the market, there are risks that the Real-Time FCESS market may not be deliver the necessary service due to:

- insufficient participation (scarcity) resulting in shortfalls in FCESS provision;

- insufficient accredited FCESS providers entering the market, resulting in highly concentrated markets; and
- exercise of market power in highly concentrated markets, resulting in inefficient market outcomes.

Section 3.15 requires the Coordinator to complete the first review of the ESS Process and Standards within two and half years of new WEM commencement. However, the review can be carried out earlier if necessary. In this instance the Coordinator is conducting the Review early, due to:

- the transitional arrangements requiring all registered Facilities accredited for FCESS to offer their full accredited capability ended on the 1 April 2024;
- AEMO has not yet finalised several key procedures that support the ESS Framework, including the WEM Procedures relating the Low Reserve Conditions (including how AEMO assesses the probability of accredited ESS providers being insufficient to meet the ESS Standards, and two WEM Procedures relating to the SESSM Trigger);
- there have been persistent shortfalls in available FCESS since the start of the new WEM which have led to high FCESS costs; and
- the total costs of FCESS and FCESS Uplifts have been substantial, driven by significant increases in costs in all FCESS Market Services compared to their equivalents in the previous market<sup>3</sup>.

An output of a review of the ESS Process and Standards required under Section 3.15 is a review of the processes and effectiveness of the SESSM. It is therefore appropriate to undertake a review of SESSM in conjunction with the review on the ESS Process and Standards to ensure that the core processes and design elements of the SESSM and the relevant obligations are fit for purpose and work as intended.

## 3. Project Scope

### 3.1 Objective

#### 3.1.1 Review of Essential System Service Process and Standards

The review of the ESS Process and Standards and the basis for setting the ESS requirements will aim to ensure that the existing standards are effective to ensure power system security and reliability can be maintained as the energy transition continues.

Clause 3.15 requires the Coordinator to carry out a review on the ESS Process and Standards and the basis for setting ESS requirements. In accordance with clause 3.15.1C., this review must include:

- technical analyses determining the relationship between the quantity of ESS scheduled and dispatched against the technical parameters in the Frequency Operating Standards;
- economic analyses determining the relationship between technical parameters (including, without limitation, frequency operating bands and Oscillation Control Constraint Equation parameters) and overall cost of supply of energy and ESS;
- a cost-benefit study on the effects on the Network and Market Participants of providing and using higher or lower levels of each ESS;

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<sup>3</sup> [quarterly-energy-dynamics-q4-2023.pdf \(aemo.com.au\)](https://aemo.com.au/quarterly-energy-dynamics-q4-2023.pdf)

- identification of the costs and benefits of changing technical parameters, including the potential for increasing or decreasing the overall cost to supply energy and ESS;
- a review of the processes and effectiveness of the SESSM if it was triggered during the review period; and
- a public consultation process.

Clause 3.15.2 sets out that as part of this Review, the Coordinator, with the support of AEMO, must determine and publish a set of metrics to be used for ongoing monitoring of ESS, which must include:

- technical outcomes, such as dispatched ESS quantities, number of accredited Facilities, number of capable Facilities and the historical performance of those Facilities;
- financial outcomes, such as Market Clearing Prices and ESS costs; and
- economic outcomes, such as the overall electricity costs faced by consumers.

As this is the first review of the ESS Standards the development of these metrics is one of the objectives of this review.

As required by clause 3.15.3, the Coordinator will determine and publish the following as a part of this Review:

- whether any new ESS are required;
- whether there should be any changes to the ESS Process and Standards and the basis for setting ESS requirements; and
- the metrics and targets for to be used for the ongoing monitoring of ESS.

### **3.1.2 Review of the Supplementary Essential System Service Mechanism**

The purpose for the review of the SESSM is to review the current SESSM process, including the process set out in section 3.15A of the WEM Rules and recommend any changes necessary to ensure that:

- the triggers for AEMO and the ERA are clear, fit for purpose and aligned to any failure of the market to achieve the future State Electricity Objective;<sup>4</sup>
- it incentivises new FCESS providers to enter the market and address any shortfalls in accreditation or participation in a timely manner;
- it is implemented through a timely, effective, efficient and transparent tender process;
- there is a prescribed timeframe and clear criteria for decisions on the trigger and the SESSM Award; and
- it mitigates the potential for the use of market power.

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<sup>4</sup> The State Electricity Objective, once implemented, will be to; promote efficient investment in, and efficient operation and use of, electricity services for the long-term interests of consumers of electricity in relation to:

- the quality, safety, security and reliability of supply of electricity; and
- the price of electricity; and
- the environment, including the reduction in greenhouse gas emissions.

Further information on the process to enact the new State Electricity Objective is available at [Project Eagle Energy and Governance Legislation Reform \(www.wa.gov.au\)](http://www.wa.gov.au).

## 3.2 Project stages

### 3.2.1 Policy analysis and proposals - ESS

This stage will include reviewing:

- the ESS Process and Standards and the basis for setting the ESS requirement; and
- the performance and efficiency of the FCESS markets over the period from 1 October 2023, to identify whether the processes, design and rule obligations are fit for purpose and meet the WEM Objectives.

It will also include jurisdictional comparison of standards and governance frameworks.

This will incorporate:

- addressing the requirements of clause 3.15.1C of the WEM Rules as discussed in section 3.1.1; and
- developing the metrics to be used for the ongoing monitoring of ESS (as required by Clause 3.15.2);
- developing and consulting on policy positions and design solutions to address issue arising from the Review.

### 3.2.2 Policy analysis and proposals – SESSM

This stage will include reviewing the operation of the SESSM to identify whether the core processes and design elements and the consequent rule obligations are fit for purpose and work as intended given the proposed changes arising from the proposals developed for the ESS Framework.

### 3.2.3 Consultation

EPWA intends to consult with the MAC and a Working Group established under the MAC throughout the policy analysis and proposal stages, however will carry out consultation on both the proposals for the ESS Process and Standards and SESSM in one consultation paper in May 2025.

### 3.2.4 Rule drafting

The final step will be to draft and consult on the rules to give effect to the policy positions and detailed design. Changes will also be required to the relevant WEM Procedures.

## 3.3 Guiding Principles

The guiding principles for the Review is that any of the outcomes should:

- be consistent with the future State Electricity Objective, which is expected to be operational by the time this Review is finalised;
- be cost-effective, simple, flexible and sustainable,
- enable the orderly transition to a low emissions energy system characterised by higher levels of intermittent and distributed generation;
- allocate risks and responsibility to those who can manage them best;

- provide investment signals and technical capability requirements that support the reliable and secure operation of the power system; and
- ensure the FCESS providers are not over or under compensated for their participation in ESS markets or the SESSM.

### **3.4 Stakeholder engagement**

The Review will be undertaken in close consultation with the MAC, directly through MAC meetings and through the establishment of a MAC Working Group, the ESS Framework Review Working Group (ESSFRWG). Participation in the ESSFRWG will not be limited to MAC members.

Energy Policy WA will develop consultation papers based on the outcomes from the ESSRFWG and MAC meetings and invite feedback from all stakeholders.

### **3.5 Out of Scope**

The following is out of scope for the Review:

- a review of the fundamentals of the WEM established by the Energy Reform Taskforce; and
- matters already covered by other market development reviews.

## 4. Project Schedule

The following is a preliminary high-level project schedule for the Review.

Tasks/Milestones	Timing
<b>Project inception</b>	
Consult with the MAC on the Scope of Work and Terms of Reference for a MAC Working Group for the ESS Framework Review	2 May 2024
Commence the Review	July 2024
Engage a consultant to assist with the Review	July 2024
Nominations open for MAC ESSFRWG Working Group	July 2024
Inaugural meeting of MAC ESSFRWG Working Group	July 2024
<b>Assess operation of the current ESS Process and Standards</b>	
Undertake analysis of current ESS Process and Standards to identify any market design issues and/or deficiencies, including the: <ul style="list-style-type: none"> <li>• basis for setting the ESS requirement; and</li> <li>• the performance and efficiency of the FCESS markets over the period from 1 October 2024</li> </ul>	Aug - Sep 2024
Jurisdictional comparison of standards and governance frameworks	Oct - Nov 2024
Develop high level design proposals for revised ESS Process and Standards	Oct - Nov 2024
MAC update	28 Nov 2024
<b>Development of ESS metrics and proposals</b>	
Development of the metrics to be used for the ongoing monitoring of ESS (as required by Clause 3.15.2)	Dec-Jan 2025
Formulation of recommendations for further actions in consultation with the MAC/MAC Working Group	Dec-Jan 2025
<b>Assess existing SESSM provisions</b>	
Undertake analysis of the existing SESSM WEM Rules to identify whether the core processes and design elements and the consequent rule obligations are fit for purpose and work as intended.	Jan – Feb 2025
Jurisdictional comparison of standards and governance frameworks	Jan – Feb 2025
Develop high level design proposals for revised SESSM	Feb - March 2024
MAC update	March - April 2025
<b>Consultation on ESS and SESSM analysis</b>	
Publish Consultation Paper with design proposals for the for revised FCESS Process and Standards and SESSM	April 2025
Review and consolidate submissions received on the consultation paper and undertaken any further assessment required	May 2025
Develop and publish an Information Paper on the changes to the FCESS Process and Standards and SESSM	May 2025

Tasks/Milestones	Timing
<b>Formulations of recommendations for further action</b>	
Develop Exposure Draft of WEM Amending Rules for stakeholder consultation	June 2025
Consolidate and review any submissions received and finalise any WEM Amending Rules	July 2025
Submit WEM Amending Rules for consideration and approval by the Coordinator and the Minister	August 2025
Commencement of rule changes	Oct 2025
Develop subsequent WEM Procedure Changes (AEMO)	Nov-Dec 2025



# Terms of Reference

## Essential System Services Framework Working Group

24 April 2024

### 1. Background

The Coordinator of Energy (Coordinator) is conducting a review of the Essential System Services (ESS) Framework (the Review), incorporating:

- a review of the ESS Process and Standards as required by Section 3.15 of the WEM Rules; and
- a review of the Supplementary Essential Systems Services Procurement Mechanism (SESSM).

The purpose of this Review is to ensure the ESS and SESSM framework is operating efficiently to ensure Power System Security and Power System Reliability can be maintained at the lowest cost to consumers as the energy transition continues.

Energy Policy WA developed a Scope of Work for the Review in consultation with the MAC. The Scope of Work is available on the Coordinator's Website at: [link to be provided once published]. The Scope of Work for the Review includes:

- objectives and guiding principles for the review;
- issues to be considered;
- stakeholder engagement; and
- the project schedule.

The MAC has established the ESS Framework Review Working Group (ESSFRWG) under clause 2.3.17(a) of the WEM Rules to assist the Coordinator with the Review.

### 2. Scope of the ESSFRWG

The ESSFRWG has been established to provide expert advice and analysis on all aspects of the ESS and SESSM identified in the Scope of Work, including:

- assessment of the ESS Process and Standards and ESS requirements and the SESSM;
- identification of issues with the performance and suitability of the existing ESS Process, Standards and requirements and the SESSM (gap analysis);
- to identify and formulate recommendations regarding any changes to the ESS Process and Standards and ESS requirements and the SESSM;
- to develop targets and metrics for the ongoing monitoring of the ESS; and
- development of a suitable Rule Change proposals, if required.

### 3. Membership

Energy Policy WA will chair the ESSFRWG.

Interested stakeholders may nominate a person for membership on the ESSFRWG for approval by the Chair.

All members of the ESSFRSWG are required to contribute their time and resources to complete specific analysis and other tasks as requested by the Chair.

There are no restrictions on the number of ESSFRWG members. However, the Chair of the ESSFRWG may only approve one member from each organisation.

The Chair of the ESSFRWG Working Group will have discretion to allow additional subject matter experts to attend specific meetings or workshops, either generally or on a case-by-case basis.

Energy Policy WA may use consultants to support the delivery of the Review and to support the work of the ESSFRWG.

## 4. Documentation

Energy Policy WA will establish an ESSFRWG webpage on its website. Any discussion papers, meeting papers and meeting minutes will be posted to this page.

Interested stakeholders may register with Energy Policy WA to receive weekly RulesWatch email communications that will contain links to content relevant to the ESSFRWG, including notices of publication of papers on the ESSFRWG webpage.

## 5. Responsibilities of Meeting Attendees

A person attending an ESSFRWG meeting is expected to:

- have suitable knowledge and experience to engage in and contribute to discussions relevant to the specific meeting;
- prepare for the meeting, including by reading any meeting papers distributed before the meeting;
- participate as a general industry representative rather than representing their company's interests;
- where relevant, provide appropriate analysis and evidence to support an assessment of views against the State Electricity Objective;
- complete actions requested by the Chair, which may include undertaking of analysis or preparation of papers for discussion by the ESSFRWG; and
- if relevant, update the member of the MAC within their organisation on the meeting discussions and outcomes.

## 6. Administration

Energy Policy WA will Chair and provide secretariat support for the ESSFRWG.

Energy Policy WA will ensure contact details for the ESSFRWG members are maintained on the ESSFRWG webpage.

The Chair will convene meetings of the ESSFRWG, as required, to support the Review timelines in Section 9 of these Terms of Reference.

Energy Policy WA will provide the following meeting documentation and correspondence by email to the ESSFRWG members:

- notices of meetings, agendas and relevant meeting papers (at least 5 Business Days prior to the meeting); and

- key outcomes and actions emerging from each meeting (where practical, no more than 10 business days following the meeting).

All meeting documentation will be published on Energy Policy WA's website as soon as practicable after it has been sent to ESSFRWG members.

Meetings will generally be held online via Microsoft Teams. Meeting minutes are to record meeting attendance, main outcomes of discussion, agreed recommendations to the MAC and action items. Meetings will be recorded to assist with the preparation of minutes.

## 7. Reporting Arrangements

The Chair of the ESSFRWG will report back to the MAC on the ESSFRWG progress at each MAC meeting. The reports must include, at a minimum:

- details of all ESSFRWG meetings since the last report to the MAC, including the date of the meeting and the key outcomes of each meeting;
- the date of the next meeting and the issues to be considered (if known); and
- any recommendations from the ESSFRWG to the MAC.

The MAC will provide advice to the Coordinator based upon the work, analysis and recommendations of the ESSFRWG.

## 8. Projected Timeline

The following is a preliminary high-level project schedule for the Review.

Tasks/Milestones	Timing
<b>Project inception</b>	
Consult with the MAC on the Scope of Work and Terms of Reference for a MAC Working Group for the ESS Framework Review	2 May 2024
Commence the Review	July 2024
Engage a consultant to assist with the Review	July 2024
Nominations open for MAC ESSFRWG Working Group	July 2024
Inaugural meeting of MAC ESSFRWG Working Group	July 2024
<b>Assess operation of the current ESS Process and Standards</b>	
Undertake analysis of current ESS Process and Standards to identify any market design issues and/or deficiencies, including the: <ul style="list-style-type: none"> <li>• basis for setting the ESS requirement; and</li> <li>• the performance and efficiency of the FCESS markets over the period from 1 October 2024</li> </ul>	Aug - Sep 2024
Jurisdictional comparison of standards and governance frameworks	Oct - Nov 2024
Develop high level design proposals for revised ESS Process and Standards	Oct - Nov 2024
MAC update	28 Nov 2024

Tasks/Milestones	Timing
<b>Development of ESS metrics and proposals</b>	
Development of the metrics to be used for the ongoing monitoring of ESS (as required by Clause 3.15.2)	Dec-Jan 2025
Formulation of recommendations for further actions in consultation with the MAC/MAC Working Group	Dec-Jan 2025
<b>Assess existing SESSM provisions</b>	
Undertake analysis of the existing SESSM WEM Rules to identify whether the core processes and design elements and the consequent rule obligations are fit for purpose and work as intended.	Jan – Feb 2025
Jurisdictional comparison of standards and governance frameworks	Jan – Feb 2025
Develop high level design proposals for revised SESSM	Feb - March 2024
MAC update	March - April 2025
<b>Consultation on ESS and SESSM analysis</b>	
Publish Consultation Paper with design proposals for the revised FCESS Process and Standards and SESSM	April 2025
Review and consolidate submissions received on the Consultation Paper and undertake any further assessment required	May 2025
Develop and publish an Information Paper on the changes to the FCESS Process and Standards and SESSM	May 2025
<b>Formulations of recommendations for further action</b>	
Develop Exposure Draft of WEM Amending Rules for stakeholder consultation	June 2025
Consolidate and review any submissions received and finalise any WEM Amending Rules	July 2025
Submit WEM Amending Rules for consideration and approval by the Coordinator and the Minister	August 2025
Commencement of rule changes	Oct 2025
Develop subsequent WEM Procedure Changes (AEMO)	Nov-Dec 2025

## 9. Contact Details

Rule Participants and other stakeholders may contact the ESSFRWG Secretariat at [energymarkets@dmirs.wa.gov.au](mailto:energymarkets@dmirs.wa.gov.au). Documentation and information related to the ESSFRWG will be published on Energy Policy WA's website.

## Agenda Item 9: Market Development Forward Work Program

Market Advisory Committee (MAC) Meeting 2024\_05\_02

### 1. Purpose

- To provide an update on the Market Development Forward Work Program.
- Changes to the Market Development Forward Work Program since the previous MAC meeting are shown in red font in the Tables below.

### 2. Recommendation

- The MAC Secretariat recommends that the MAC notes the updates to the Market Development Forward Work Program provided in Tables 1-4, including that:
  - the Chair of the Power System Security and Reliability (PSSR) Standards Review Working Group (PSSRSWG) will provide an update to the MAC on the progress of the PSSR Review - see Agenda Item 5(c);
  - the Chair of the WEM Investment Certainty Review Working Group (WICRWG) will provide an update to the MAC on the progress of the WEM Investment Certainty (WIC) Review - see Agenda Item 5(d)

### 3. Process

Stakeholders may raise issues for consideration by the MAC at any time by sending an email to the MAC Secretariat at [energymarkets@dmirs.wa.gov.au](mailto:energymarkets@dmirs.wa.gov.au).

Stakeholders should submit issues for consideration by the MAC two weeks before a MAC meeting so that the MAC Secretariat can include the issue in the papers for the MAC meeting, which are circulated one week before the meeting.

Table 1 – Market Development Forward Work Program

Review	Issues	Status and Next Steps
RCM Review	A review of the RCM, including a review of the Planning Criterion.	<ul style="list-style-type: none"> <li>• The MAC has established the RCM Review Working Group (RCMRWG). Information on the Working Group is available at <a href="https://www.wa.gov.au/government/document-collections/reserve-capacity-mechanism-review-working-group">https://www.wa.gov.au/government/document-collections/reserve-capacity-mechanism-review-working-group</a>, including: <ul style="list-style-type: none"> <li>• the Terms of RCMRWG, as approved by the MAC;</li> <li>• the list of RCMRWG members;</li> <li>• meeting papers and minutes from the RCMRWG meeting on 20 January 2022, 17 February 2022, 17 March 2022, 5 May 2022, 2 June 2022, 16 June 2022, 14 July 2022, 2 July 2022, 13 October 2022, 24 November 2022; 15 December 2022, 1 February 2023, 16 February 2023, 2 March 2023, 22 March 2023, 6 July 2023, 13 July, 30 August 2023.</li> </ul> </li> <li>• The following papers have been released and are available on the RCM Review webpage at <a href="https://www.wa.gov.au/government/document-collections/reserve-capacity-mechanism-review">https://www.wa.gov.au/government/document-collections/reserve-capacity-mechanism-review</a>: <ul style="list-style-type: none"> <li>• the Scope of Works for the review, as approved by the Coordinator;</li> <li>• the Stage 1 Consultation Paper;</li> <li>• the Paper on the Review of International Capacity Mechanisms;</li> <li>• submissions on the Stage 1 Consultation Paper;</li> <li>• the RCM Review Information Paper (Stage 1) and Consultation Paper (Stage 2);</li> <li>• submissions on the RCM Review Consultation Paper (Stage 2);</li> <li>• the RCM Review Information Paper (Stage 2);</li> <li>• the RCM – WEM Amending Rules Exposure Draft;</li> <li>• submissions on the RCM – WEM Amending Rules Exposure Draft;</li> </ul> </li> </ul>

**Table 1 – Market Development Forward Work Program**

Review	Issues	Status and Next Steps
		<ul style="list-style-type: none"> <li>• responses to stakeholder submissions on the Exposure Draft of the RCM Review WEM Amending Rules; and</li> <li>• the Wholesale Electricity Market Amendment (Reserve Capacity Reform) Rules 2023 available at <a href="http://www.wa.gov.au">Wholesale Electricity Market Amendment (Reserve Capacity Reform) Rules 2023 (www.wa.gov.au)</a></li> <li>• The RCMRWG will remain open until AEMO determines the sequencing of the implementation of the RCM Reform Rules, which were made by the then Minister for Energy in early December 2023.</li> </ul>

Table 1 – Market Development Forward Work Program

Review	Issues	Status and Next Steps
Cost Allocation Review	<p>A review of:</p> <ul style="list-style-type: none"> <li>the allocation of Market Fees, including behind the meter (BTM) and Distributed Energy Resources (DER) issues;</li> <li>cost allocation for Essential System Services; and               <ul style="list-style-type: none"> <li>Issues 2, 16, 23 and 35 from the MAC Issues List (see Table 3).</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>The MAC has established the Cost Allocation Review Working Group (CARWG). Information on the CARWG is available at <a href="https://www.wa.gov.au/government/document-collections/cost-allocation-review-working-group">https://www.wa.gov.au/government/document-collections/cost-allocation-review-working-group</a>, including:           <ul style="list-style-type: none"> <li>the Scope of Work for the review, as approved by the Coordinator;</li> <li>the Terms of Reference for the CARWG, as approved by the MAC;</li> <li>the list of CARWG members;</li> <li>meeting papers and minutes from the CARWG meetings on 9 May 2022, 7 June 2022, 30 August 2022, 27 September 2022, 25 October 2022, 29 November 2022, 21 March 2023, 2 May 2023 and 29 August 2023.</li> </ul> </li> </ul> <p>The following papers have been released and are available on the CAR webpage at <a href="http://www.wa.gov.au">Cost Allocation Review (www.wa.gov.au)</a></p> <ul style="list-style-type: none"> <li>the Consultation Paper;</li> <li>the International Review;</li> <li>submissions on the Consultation Paper;</li> <li>the Cost Allocation Review Information Paper;</li> <li>the Exposure Draft of the WEM Amending Rules implementing the outcomes of the CAR; and</li> <li>submissions on the CAR WEM Amending Rules Exposure Draft</li> </ul> <ul style="list-style-type: none"> <li><b>The CARWG will remain open until the CAR WEM Amending Rules are made by the Minister and their implementation timeframe is agreed with AEMO.</b></li> </ul>



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Review	Issues	Status and Next Steps
Procedure Change Process Review	A review of the Procedure Change Process to address issues identified through Energy Policy WA’s consultation on governance changes.	<ul style="list-style-type: none"> <li>• The MAC discussed a draft Scope of Work for this review at its meeting on 11 October 2022. EPWA has updated the Scope of Works to reflect the MAC discussions.</li> <li>• The Scope of Work for the review, as approved by the Coordinator is available here <a href="http://www.wa.gov.au">Wholesale Electricity Market Procedure Change Process Review (www.wa.gov.au)</a></li> <li>• ACIL Allen has been appointed to assist with the Procedure Change Process Review.</li> <li>• ACIL Allen has engaged with MAC members through a survey and one-on-one consultations between 12 March and 18 April 2024. There were 11 respondents to the Procedure Change Process survey, out of 19 requests.</li> <li>• ACIL Allen will use the information from the initial engagement with the MAC to compile a consultation paper and conduct a broad consultation on the effectiveness of the Procedure Change Process.</li> </ul>
Review of the Participation of Demand Side in the Wholesale Electricity Market (WEM)	<p>The scope of this review is to:</p> <ul style="list-style-type: none"> <li>• identify the different ways that Loads/Demand Side Response can participate across the different WEM components;</li> <li>• identify and remove any disincentives or barriers for Loads/Demand Side Response participating across the different WEM components; and</li> <li>• identify any potential for over- or under-compensation of Loads/Demand</li> </ul>	<ul style="list-style-type: none"> <li>• The MAC has established the Demand Side Response Review Working Group (DSRRWG). Information on the DSRRWG is available at <a href="http://www.wa.gov.au">Demand Side Response Review Working Group (www.wa.gov.au)</a>, including: <ul style="list-style-type: none"> <li>• the Terms of Reference for the DSRRWG, as approved by the MAC;</li> <li>• the list of DSRRWG members;</li> <li>• meeting papers and minutes from the DSRRWG meeting on 10 May 2023, 7 June 2023, 5 July 2023, 2 August 2023 and 29 November 2023 and 7 February 2024.</li> </ul> </li> <li>• Meeting papers from the DSRRWG meeting on 15 February 2024.</li> </ul>

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Review	Issues	Status and Next Steps
	<p>Side Response (including as part of ‘hybrid’ facilities”) as a result of their participation in the various market mechanisms.</p>	<ul style="list-style-type: none"> <li>• The following papers have been released and are available on the DSR Review webpage at <a href="http://www.wa.gov.au">Demand Side Response Review (www.wa.gov.au)</a> <ul style="list-style-type: none"> <li>• the Scope of Work for the review, as approved by the Coordinator;</li> <li>• the Demand Side Response Review Consultation paper;</li> <li>• the submissions received on the Demand Side Response Review Consultation paper; and</li> <li>• the Demand Side Response Review Information Paper.</li> <li>• <a href="#">the Demand Side Response Review – WEM Amending Rules Exposure Draft</a></li> </ul> </li> <li>• The DSRRWG will remain open until the DSR WEM Amending Rules are made by the Minister and their implementation timeframe is agreed with AEMO.</li> </ul>

Table 1 – Market Development Forward Work Program

Review	Issues	Status and Next Steps
<p>WEM Investment Certainty (<b>WIC</b>) Review</p>	<p>The WIC Review will consider, design and implement the following five reforms that have been announced by the Minister for Energy, which are aimed at providing further investment certainty to assist the decarbonisation of the WEM:</p> <ol style="list-style-type: none"> <li>(1) changing the Reserve Capacity Price (RCP) curve so it sends sharper signals for investment when demand for new capacity is stronger;</li> <li>(2) a 10-year RCP guarantee for new technologies, such as long-duration storage;</li> <li>(3) a wholesale energy price guarantee for renewable generators, to top up their energy revenues as WEM prices start to decline, in return for them firming up their capacity;</li> <li>(4) emission thresholds for existing and new high emission technologies in the WEM; and</li> <li>(5) a 10-year exemption from the emissions thresholds for existing flexible gas plants that qualify to provide the new flexibility service.</li> </ol>	<ul style="list-style-type: none"> <li>• The MAC has established the WIC Review Working Group (WICRWG). Information on the WICRWG is available at <a href="http://www.wa.gov.au">Wholesale Electricity Market Investment Certainty (WIC) Review Working Group (www.wa.gov.au)</a> including: <ul style="list-style-type: none"> <li>• the Terms of Reference for the WICRWG, as approved by the MAC;</li> <li>• the list of WICRWG members;</li> <li>• meeting papers and minutes from the 31 August 2023, 11 October, 8 November, the 6 December 2023, meeting papers and minutes from the 24 January 2024 WICRWG meeting.</li> <li>• <b>meeting papers from the 24 April WICRWG meeting.</b></li> </ul> </li> <li>• The following papers have been released and are available on the WIC Review webpage at <a href="https://www.wa.gov.au/government/document-collections/wholesale-electricity-market-investment-certainty-review">https://www.wa.gov.au/government/document-collections/wholesale-electricity-market-investment-certainty-review</a>, including: <ul style="list-style-type: none"> <li>• the Scope of Work for the review, as approved by the Coordinator.</li> </ul> </li> </ul>

**Table 1 – Market Development Forward Work Program**

Review	Issues	Status and Next Steps
<p>Review of the Market Advisory Committee (<b>MAC</b>)</p>	<p>The scope of this review is to ensure that the purpose, representation, process and operations of the MAC are fit for purpose, and in particular, that it operates efficiently and provides balanced, timely and useful advice to the Coordinator.</p>	<ul style="list-style-type: none"> <li>• The MAC supported a Scope of Works for this review at its meeting on 8 June 2023, and advised EPWA to further consider the timing of the review. EPWA has updated the Scope of Works to reflect the MAC discussions.</li> <li>• The Scope of Work for the review, as approved by the Coordinator is available here <a href="http://www.wa.gov.au">Market Advisory Committee Review (www.wa.gov.au)</a></li> <li>• ACIL Allen has been appointed to assist with the MAC Review.</li> <li>• ACIL Allen has engaged with MAC members through a survey and one-on-one consultations between 12 March and 18 April 2024. There were 12 respondents to the MAC survey, out of 19 requests.</li> <li>• ACIL Allen will use the information from the initial engagement with the MAC to compile a consultation paper and conduct a broad consultation on the review of the MAC.</li> </ul>

Table 1 – Market Development Forward Work Program

Review	Issues	Status and Next Steps
Review of the Power System Security and Reliability ( <b>PSSR</b> ) Standards	<p>The scope of this review is to:</p> <ul style="list-style-type: none"> <li>review the various PSSR related provisions in the instruments governing power system security and reliability in the SWIS;</li> <li>assess whether the combination of existing standards is effective to ensure power system security and reliability can be maintained;</li> <li>develop proposals for a single end-to-end PSSR standard and a centralised governance framework; and</li> <li>draft amending Rules and other regulatory changes, as necessary.</li> </ul>	<ul style="list-style-type: none"> <li>The MAC has established the PSSR Standards Working Group (PSSRSWG). Information on the PSSRWG is available at <a href="http://www.wa.gov.au">Power System Security and Reliability (PSSR) Standards Working Group (www.wa.gov.au)</a> including: <ul style="list-style-type: none"> <li>the Terms of Reference for the PSSRSWG, as approved by the MAC;</li> <li>the Scope of Work</li> <li>the list of PSSRSWG members;</li> <li>meeting papers and minutes from the 14 December 2023 PSSRSWG meeting;</li> <li>meeting papers <b>and minutes</b> for the 1 February 2024 and 29 February 2024 PSSRSWG meeting; and</li> <li><b>meeting papers for the 18 April 2024 PSSRSWG meeting.</b></li> </ul> </li> </ul>
Forecast quality	Review of Issue 9 from the MAC Issues List (see Table 2).	<ul style="list-style-type: none"> <li>This review has been deferred.</li> </ul>
Network Access Quantity ( <b>NAQ</b> ) Review	Assess the performance of the NAQ regime, including policy related to replacement capacity, and address issues identified during implementation of the Energy Transformation Strategy (ETS).	<ul style="list-style-type: none"> <li>The timing for this review is to be determined.</li> </ul>
Short Term Energy Market ( <b>STEM</b> ) Review	Review the performance of the STEM to address issues identified during implementation of the ETS.	<ul style="list-style-type: none"> <li>This review has been deferred.</li> </ul>

**Table 2 – Other Issues**

Id	Submitter/Date	Issue	Status
9	Community Electricity November 2017	Improvement of AEMO forecasts of System Load; real-time and day-ahead.	Consideration of this issue has been deferred.