Meeting Agenda

Meeting Title:	Market Advisory Committee (MAC)
Date:	Thursday 4 September 2025
Time:	1:30 PM – 3:00 PM
Location:	Online

Item	Item	Responsibility	Type	Duration
1	Welcome and Agenda • Conflicts of interest • Competition Law	Chair	Noting	2 min
2	Meeting Apologies/Attendance	Chair	Noting	1 min
3	Minutes of Meeting 2025_07_24 Approved out of session. Published 21 August 2025	Chair	Noting	1 min
4	Action Items	Chair	Noting	2 min
5	WEM Procedure Content Assessment • Updated SoW and ToR	EPWA	Decision	30 min
6	Update on Working Groups			
	(a) AEMO Procedure Change Working Group	AEMO	Noting	2 min
	(b) AEMO Major Projects Working Group (MPWG)	MPWG Chair	Verbal update	2 min
	(c) Essential System Services (ESS) Framework Review Working Group	ESSFRWG Chair	Discussion	30 min
	(d) WEM Investment Certainty Review Working Group (WICRWG)	WICRWG Chair	Update	10 min
	(e) Power System Security and Reliability (PSSR) Standards Review	PSSRSWG Chair	Verbal update	2 min
	(f) Capability Class 2 Technologies Review	C2TRWG Chair	Verbal update	2 min
7	Market Development Forward Work Program	Chair/Secretariat	Noting	2 min
8	Overview of Rule Change Proposals	Chair/Secretariat	Noting	2 min
9	General Business	Chair	Discussion	1 min

Item	Item	Responsibility	Type	Duration
	Next meeting (in person and on-line): 1:30pm, Thursday 16 October 2025, 66 St George's Terrace Perth WA 6000			

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.

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Agenda Item 4: MAC Action Items

Market Advisory Committee (MAC) Meeting 2025_09_04

Shaded	Shaded action items are actions that have been completed since the last MAC meeting. Updates from last MAC meeting provided for information in RED.
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
11/2024	EPWA to include the Terms of Reference (TOR) for the Procedure Content Assessment Working Group (PCAWG) as an agenda item	EPWA	2024_03_21	**Closed** Provided at Agenda Item 5

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Agenda Item 5: WEM Procedure Content Review Scope of Work and Terms of Reference

Market Advisory Committee (**MAC**) Meeting 2025_09_04

1. Purpose

The MAC Secretariat to:

- provide the updated Scope of Work (SoW) for the WEM Procedure Content Review to the MAC; and
- request the MAC to approve the revised Terms of Reference (ToR) for the Procedure Content Review Working Group (PCRWG).

2. Recommendation

That the MAC:

1. Notes the updated SoW for the WEM Procedure Content Review (**Attachment 1**);
2. Approves the updated ToR for the PCRWG (**Attachment 2**)

3. Procedure Content Review Overview

3.1. Background

The Procedure Content Review (previously Procedure Content Assessment) SoW was provided to MAC members at the 21 March 2024 MAC Meeting. The scope of this project was to determine whether any matters should be elevated from the WEM Procedures to the Electricity System and Market (ESM) Rules.

The ToR for the PCRWG (formerly Procedure Content Assessment Working Group) were provided to MAC members on 2 May 2024 and were approved, subject to the changes below:

- Review the timeframes to account for the Procedure Change Process Review and the State Electricity Objective (SEO); and
- Reference is made to cost benefit analysis of how material any changes are and what the trade-offs might be in terms of progressing other work underway.

This work was originally intended to follow the outcomes of the Procedure Change Process Review, which would develop clear criteria for determining appropriate content for Procedures versus Rules.

A draft Procedure Change Process Review consultation paper was presented at the MAC meeting on 5 September 2024, and EPWA is continuing to progress the Procedure Change Process Review in parallel.

3.2. Change in focus

Since then, the SEO has been implemented into the *Electricity Industry Act 2004*, and the Coordinator has published its WEM Operation Effectiveness Review, which has further highlighted the need for a review of the WEM Procedures.

EPWA considers that the Procedure Content Review should not be dependent on the outcomes from the Procedure Change Process Review. This represents a redirection of the Procedure Content Review's focus from primarily assessing whether specific matters should be elevated to the ESM Rules, to a broader review of the WEM Procedures and the relevant heads of power in the ESM Rules.

Consequently, EPWA is commencing this review of both the existing heads of power for the WEM Procedures and the WEM Procedures themselves.

This shift aims to directly address transparency issues identified in the Coordinator's WEM Operation Effectiveness Report.

3.3. Scope of Work

The objective is to assess the content of selected existing WEM Procedures to determine, using the guiding principles outlined in the Scope of Works (**Attachment 1**), whether:

- the heads of power for the WEM Procedure are appropriate;
- there are any matters that should be elevated to the ESM Rules;
- there is incomplete information in the WEM Procedure;
- the WEM Procedure delegates matters to subordinate instruments not foreshadowed by the ESM Rules; and
- any content within the WEM Procedure is no longer consistent with the ESM Rules.

3.4. The Procedure Content Review Working Group

- Energy Policy WA recommends that the MAC approves the use of the PCRWG for this project.
- Energy Policy WA has developed a draft Terms of Reference for the PCRWG (**Attachment 2**) for consideration and approval by the MAC.

4. Next Steps

Following approval of the ToR by the MAC:

- a PCRWG webpage will be created on the Coordinator's website; and
- the MAC Secretariat will publish a call for nominations for the PCRWG.

5. Attachments

(1) Agenda Item 5 – Attachment 1 – Scope of Work for the WEM Procedure Content Review

(2) Agenda Item 5 – Attachment 2 – Terms of Reference for the WEM Procedure Content Review Working Group

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Scope of Work - WEM Procedure Content Review

1. Introduction

Clause 2.2D.1(h) of the Electricity System and Market (ESM) Rules confers the function on the Coordinator of Energy (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 ESM Rules.

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

This project aims to assess the content of selected existing WEM Procedures and their heads of power to determine, using the guiding principles outlined in section 3.2, whether any matters identified require changes to improve the effectiveness of WEM Procedures, including, but not limited to:

- the potential elevation of certain content to the ESM Rules; and/or
- changes to a WEM Procedure heads of power.

2. Background

2.1 Purpose and use of WEM Procedures

At the commencement of the WEM in 2006, the ESM Rules (formerly WEM Rules) were designed to cover governance matters and any matter that had a material policy, strategic or financial impact on consumers or Rule Participants. Procedural or administrative details were delegated to Procedures to reduce the length and complexity of the ESM Rules and to enable a faster and more flexible change process for such matters.

Recently, the Energy Transformation Strategy work has driven significant changes to the WEM and requirements for several new WEM Procedures have been established by various sets of ESM Amending Rules. Consequently, Procedure Administrators have been required to develop or update several WEM Procedures to include matters that go beyond a procedural or administrative nature.

2.2 WEM Procedures responsibilities

The ESM Rules assign responsibility for the development and maintenance of WEM Procedures to different market bodies. Those market bodies are:

- the Coordinator;
- the Australian Energy Market Operator (AEMO);
- Network Operators (Western Power); and
- the Economic Regulation Authority (ERA).

The number and nature of the WEM Procedures differs significantly across the market bodies.

2.3 Related projects

On 8 July 2025, the Coordinator published the first WEM Operation Effectiveness Report that covered matters outlined in clauses 2.16.13A, 2.16.13B and 2.16.13E of the ESM Rules[1].

A key theme that emerged from this report is the need for greater transparency, including from the market bodies in performing their functions under the ESM Rules. Greater transparency will provide current and prospective participants with the complete information they require to make operational and investment decisions.

One of the proposals to address this theme was for WEM Procedures to be completed and published in a timely manner, and prompt updates made when required.

3. Project Scope

3.1 Objective

The Coordinator is aware that market bodies are already working to improve the WEM Procedures. To support this, the Coordinator is commencing this Review to provide guiding principles and address any deficiencies.

The objective is to assess the content of selected existing WEM Procedures to determine, using the guiding principles outlined in section 3.2, whether:

- the heads of power for the WEM Procedure are appropriate;
- there are any matters that should be elevated to the ESM Rules;
- there is incomplete information in the WEM Procedure;
- the WEM Procedure delegates matters to subordinate instruments not foreshadowed by the ESM Rules; and
- any content within the WEM Procedure is no longer consistent with the ESM Rules.

3.2 Guiding Principles

The guiding principles for the WEM Procedure Content Review are that WEM Procedures must:

- must be consistent with the State Electricity Objective;
- contain content that is procedural or administrative in nature (such as content enabling rule participants to follow the market processes and clarifications regarding technical requirements);

[1] WEM Operation Effectiveness Report

- provide clear, practical explanations of processes and obligations set out in the ESM Rules;
- not unnecessarily delegate responsibility to instruments that are not identified within the ESM Rules; and
- ensure that information is presented in ways that are accessible and can be interpreted reliably by a wide variety of industry stakeholders.

3.3 Stakeholder engagement

The WEM Procedure Content Review will include stakeholder consultation through:

- one-to-one meetings with market bodies and interested parties;
- meetings with Working Group established under the MAC; and
- MAC meetings.

4. Project Schedule

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

Tasks/Milestones	Timing
Preparation	
Consult with the MAC on the scope of work for the WEM Procedure Content Review and Terms of reference for the WEM Procedure Content Review Working Group (PCRWG)	4 Sept 2025
WEM Procedures' content assessment	
Assess content of selected WEM Procedures against their heads of power and the guidelines, in consultation with Procedure Administrators and PCRWG members	1 Nov 2025 to 31 March 2026
Report proposals for changes to the WEM Procedures or their Heads of Power to the MAC	Apr 2026
Consultation Paper on WEM Procedure Content Review	May 2026 – June 2026
Amending Rules and Procedure Changes, if required	
Develop Exposure Draft of Amending WEM Rules and c proposed WEM Procedure changes	June 2026
Publish Exposure Draft and proposed changes to WEM Procedures for consultation	July 2026
Consultation closes	Aug 2026
Final Amending ESM Rules to Minister and finalise proposals for WEM Procedure changes	Aug 2026

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Terms of Reference
WEM Procedures Content Review Working Group

1. Background

The Energy Transformation Strategy work has driven significant changes to the Wholesale Electricity Market (WEM) and requirements for several new WEM Procedures have been established by various sets of Electricity System and Market (ESM) Amending Rules. Consequently, Procedure Administrators have been required to develop or update several WEM Procedures to include matters that go beyond a procedural or administrative nature.

On 8 July 2025, the Coordinator of Energy (Coordinator) published the first WEM Operation Effectiveness Report that covered matters outlined in clauses 2.16.13A, 2.16.13B and 2.16.13E of the ESM Rules[1].

A key theme that emerged during the preparation of this report is the need for greater transparency, including from the market bodies in performing their functions under the ESM Rules, to provide current and prospective participants with the complete information they require to make operational and investment decisions.

One of the proposals to address this theme was for WEM Procedures to be completed and published in a timely manner, and prompt updates made when required.

The Coordinator is commencing the WEM Procedure Content Review to address deficiencies that may exist within the current WEM Procedures or their Heads of Power.

The Coordinator is reviewing the content of existing WEM Procedures as part of its functions under clause 2.2D.1(h) of the ESM Rules.

The scope of the Procedure Content Review is to assess the content of selected existing WEM Procedures to determine whether:

- the heads of power for the WEM Procedure are appropriate;
- there are any matters that should be elevated to the ESM Rules;
- there is incomplete information in the WEM Procedure;
- the WEM Procedure delegates matters to subordinate instruments not foreshadowed by the ESM Rules; and
- any content within the WEM Procedure is no longer consistent with the ESM Rules.

The MAC has established the Procedure Content Review Working Group (PCRWG) under clause 2.3.17(a) of the ESM Rules to assist the Coordinator with the WEM Procedures Content Review.

1.1 Scope of the PCRWG

The PCRWG has been established to provide expert advice, consistent with the State Electricity Objective (SEO).

Key areas of focus for the PCRWG include providing advice on:

- whether the head of power for a WEM procedure is appropriate;
- whether a WEM Procedures, or parts of WEM Procedures, should be elevated into the ESM Rules;

[1] WEM Operation Effectiveness Report

- whether the content of the examined WEM Procedures is consistent with the guiding principles outlined in the PCR scope of work; and
- whether the content of the examined WEM Procedures is consistent with the ESM Rules.

2. Membership

Energy Policy WA will Chair the PCRWG.

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

All members of the PCRWG 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 PCRWG members. The Chair of the PCRWG may only approve one member from each organisation.

The Chair of the PCRWG will have discretion to allow additional members from an organisation if they represent distinct areas of operation.

The Chair of the PCRWG 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.

Energy Policy WA will provide administrative support to the PCRWG.

3. Documentation

Energy Policy WA will establish a PCRWG 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 to receive email communications regarding the PCRWG, including notices of publication of papers on the PCRWG webpage.

4. Responsibilities of Meeting Attendees

A person attending a PCRWG 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 PCRWG.
- 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 PCRWG.

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

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

Energy Policy WA will prepare and distribute all meeting correspondence to the PCRWG via email. Energy Policy WA will endeavour to provide the following documentation by email to the PCRWG 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 PCRWG 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 PCRWG Chair must provide a report to the MAC on the PCRWG's activities at each MAC meeting. The reports must include, at a minimum:

- details of all PCRWG 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 PCRWG to the MAC.

7. Project Schedule

The following is the high-level project schedule for the PCRWG:

Tasks/Milestones	Timing
WEM Procedures' content assessment	
EPWA, in consultation with Procedure Administrators, to assess content of selected current WEM Procedures and their heads of power.	Nov 2025 - Jan 2026
PCRWG Meeting to assess the analysis of the current WEM Procedures	Feb 2026
Consider if changes are required to the Heads of Power in the ESM Rules, in consultation with the PCRWG	Feb 206 - March 2026
Consider whether WEM Procedures should be elevated into the ESM Rules, in consultation with the PCRWG	March 2026
Report proposed changes to the MAC	April 2026
Consultation Paper on WEM Procedure content assessment	May 2026 - June 2026
Amending Rules and Procedure Changes, if required	

8. Contact Details

Rule Participants and other stakeholders may contact the PCRWG Secretariat at energymarkets@deed.wa.gov.au. Documentation and information related to the PCRWG will be published on Energy Policy WA's website.

MARKET ADVISORY COMMITTEE MEETING, 4 September 2025

FOR DISCUSSION

SUBJECT: UPDATE ON AEMO'S WEM PROCEDURES

AGENDA ITEM: 6(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	17 July 2025	TBC
WEM Procedures for discussion at APCWG	• LRC • ST PASA • Declaration of Bilateral Trades	

3. AEMO PROCEDURE CHANGE PROPOSALS

The status of AEMO Procedure Change Proposals is described below, current as of 20 August 2025. 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_2025_07 Identification of Affected Dispatch Intervals	The purpose of this Procedure Change Proposal is to align the WEM Procedure: Identification of Affected Dispatch Intervals to changes made to the ESM Rules, as a result of the Wholesale Electricity Market Amendment (Miscellaneous Amendments No 3). The WEM Procedure has been amended to include: • the conditions or circumstances that would require AEMO to determine a replacement Market Schedule under clause 7.11B.1B(bA) [clause 7.11C.1(b)]; and • the process AEMO must follow to determine a replacement Market Schedule under clause 7.11B.1B(bA) [clause 7.11C.1(c)]. In addition to the above changes, AEMO has also taken the opportunity to: • make amendments to the WEM Procedure to more accurately reflect the conditions or circumstances which may identify and result in an Affected Dispatch Interval; and • replace all references to the WEM Rules and WEM Regulations to ESM Rules and ESM Regulations (as applicable) to be consistent with naming conventions as of February 2025.	Consultation closure	Commencement	29 August 2025

ID	Summary of changes	Status	Next steps	Indicative Date
Procedure Change Proposal AEPC_2025_08 WEM Procedure: IMS Interface for Network Operators Procedure Change Proposal AEPC_2025_09 WEM Procedure: Network Modelling Data Procedure Change Proposal AEPC_2025_10 WEM Procedure: Communications and Control Systems	The IMS Interface for Network Operators WEM Procedure will be replaced with the amended Network Modelling Data WEM Procedure and Communications and Control Systems WEM Procedure. The amendments to the Network Modelling Data will: • incorporate relevant content from the WEM Procedure: IMS Interface for Network Operators; • update what technical information and data the Network Operator is to provide to AEMO to support power system modelling, power system studies and related matters; • update processes associated with information or data provision (and updates to this information or data) by the Network Operator; • inserts a process by which AEMO may request update or further information or data, and related processes to enable AEMO and the Network Operator to agree on an alternative timeframe or manner of information or data provision; • clarifies the process for (the Network Operator's) access to a shared location, as one means of providing the required information or data; and • inserts a summary table on the information and data requirements to assist the Network Operator's understanding of its obligations. The amendments to the WEM Procedure: Communications and Control Systems will: • incorporate relevant requirements from the WEM Procedure: IMS Interface for Network Operators in relation to: ○ Real-time SCADA data;	Consultation closure	Commencement	29 August 2025

ID	Summary of changes	Status	Next steps	Indicative Date
	○ Historical SCADA data; ○ SCADA control; and ○ Operational telephones, • remove redundant requirements in regard to 'Balancing Facilities' and insert requirements for Facilities providing Rate of Change of Frequency (RoCoF) Control Service; • clearly articulate obligations of AEMO and Network Operators under revised communications arrangements, including timings for information exchange to support dispatch and monitoring; • update the technical requirements for the on-going viable operation of data communication arrangements (i.e. configuration, maintenance, testing, data management and coordination).			

ID	Summary of changes	Status	Next steps	Indicative Date
Procedure Change Proposal AEPC_2025_11 Declaration of Bilateral Trades	AEMO has commenced this Procedure Change Proposal to propose the following amendments: • Several changes to align the Procedure with recent amendments to section 4.14 of the ESM Rules (introduced under Schedule 1 of the Wholesale Electricity Market Amendment (RCM Reviews Sequencing) Rules 2025 on 15 January 2025). • Minor updates throughout the Procedure to provide clarification around existing processes for Market Participants. • Clarifications to the Committed Status application process under Appendix B. • Updates throughout the Procedure to replace references to the WEM Rules and WEM Regulations with the ESM Rules and ESM Regulations.	Consultation closure	Commencement	22 Aug 2025

ID	Summary of changes	Status	Next steps	Indicative Date
Procedure Change Proposal AEPC_2025_12 Short Term PASA	AEMO has commenced the Procedure Change Process to propose the following new WEM Procedure: Short Term PASA. The Procedure outlines the processes AEMO follows in preparing and conducting the Short Term PASA, including: • the information to be included when publishing the Short Term PASA; • the information that AEMO requires from Rule Participants; • the process by which AEMO will use any information developed by AEMO in performing its functions to prepare the Short Term PASA; • the timing and frequency for which AEMO will conduct and publish the Short Term PASA; • the granularity of information to be included, and any additional demand forecast information to be published.	Consultation closure	Commencement	26 Aug 2025

ID	Summary of changes	Status	Next steps	Indicative Date

Procedure Change Proposal
AEPC_2025_13
Low Reserve Conditions
	AEMO has commenced the Procedure Change Process to propose a new WEM Procedure: Low Reserve Conditions, required to be developed in accordance with the requirements of clause 3.17.11 of the ESM Rules. AEMO's proposed WEM Procedure documents:
	• the processes AEMO will follow to identify a potential Low Reserve Condition and make a Low Reserve Condition Declaration under the:
	  ○ Medium Term (MT) PASA horizon
	  ○ Short Term (ST) PASA horizon; or
	  ○ Real Time Operations Horizon.
	• the levels at which AEMO would make a Low Reserve Condition Declaration, being:
	  ○ LOR 1;
	  ○ LOR 2; and
	  ○ LOR 3.
	• the notification processes and timeframes AEMO will observe when making a Low Reserve Condition Declaration.
	• the process AEMO will follow to reassess a Low Reserve Condition associated with a Low Reserve Condition Declaration, made under the MT PASA or ST PASA, acknowledging increased uncertainty associated with longer-term forecasts.
	• the principles and processes associated with implementing an AEMO Intervention Event or actions required under clause 7.7.4 of the ESM Rules, to resolve a Low Reserve Condition.
		Consultation closure	Commencement	29 Aug 2025

4. INDICATIVE SCHEDULE OF AEMO PROCEDURE CHANGE PROPOSALS

AEMO has prepared an indicative schedule of its Procedure Change Proposals expected to commence shortly. Changes since the previous MAC meeting are in red text. Procedure Change Proposals that have commenced since the previous MAC meeting have been moved from Table 4 into Table 3 above. While every effort has been made to ensure the quality of the information contained in the indicative schedule, the content (including timeframes) may be subject to change (e.g. due to availability of staffing resources, unforeseen competing priorities etc).

WEM Procedure	Summary of changes	Status	Next steps	Indicative date of next step
WEM Procedure: Facility Registration Processes and NDL Association Processes	AEMO will be initiating this Procedure Change Proposal to accommodate changes resulting from WEM Reform and the Wholesale Electricity Market Amendment (Miscellaneous Amendments No. 3) Rules 2024.	Drafting in progress	Consultation	September 2025
WEM Procedure: MT PASA	AEMO will be initiating this Procedure Change Proposal to update the WEM Procedure arising from WEM Reform. This WEM Procedure outlines the information AEMO requires and the process it will follow in conducting the Medium-Term Projected Assessment of System Adequacy.	Drafting in progress	Consultation	TBD
WEM Procedure: Demand Side Programmes	AEMO will be initiating this Procedure Change Proposal to accommodate the amendments to the ESM Rules resulting from WEM Reform. This WEM Procedure describes how AEMO determines the dispatch of Demand Side Programmes may be required.	Drafting in progress	Consultation	September 2025
WEM Procedure: Reserve Capacity Security	AEMO will be initiating this Procedure Change Proposal to make changes to align with the Certification of Reserve Capacity Procedure and reflect Rule changes related to Market Participants submitting a new RCS.	Drafting in progress	Consultation	September 2025
WEM Procedure: Dispatch Algorithm Formulation	AEMO will be initiating this Procedure Change Proposal to make changes as a result of the Cost Allocation Rules. This WEM Procedure documents the Dispatch Algorithm used by AEMO for the Central Dispatch Process and setting Market	Drafting in progress	Consultation	September 2025

	Clearing Prices and the mathematical formulation of the Dispatch Algorithm.			
WEM Procedure: Forecast Unscheduled Operational Demand	AEMO will be initiating this Procedure Change Proposal to accommodate the amendments to the ESM Rules from WEM Reform. This WEM Procedure documents how AEMO will prepare the Forecast Unscheduled Operational Demand.	Drafting in progress	Consultation	September/ October 2025

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Agenda Item 6(c): Update on the ESS Framework Review Working Group

Market Advisory Committee (**MAC**) Meeting 2025_09_04

1. Purpose

The Chair of the Essential System Services (ESS) Framework Review Working Group (ESSFRWG) to provide an update on the ESS Framework Review (the Review)

2. Recommendation

That the MAC:

1. notes that a Consultation Paper on the proposed outcomes of the Review is in the process of being drafted; and
2. notes the outcomes of the case studies and provides any additional views on the draft proposals that will be included Consultation Paper.

3. Background

In accordance with Section 3.15 of the Electricity System and Market (ESM) Rules, the Review is assessing whether the existing ESS framework is effective to ensure power system security and reliability can be maintained at the lowest cost to consumers as the energy transition continues.

The MAC established the ESSFRWG to support the Review.

As noted at the 19 June 2025 MAC meeting, the outcomes of the technical assessment indicated six key findings and of those, three warranted further investigations.

- Three case studies were undertaken to quantify the economic impact of making changes to the technical parameters and assess the impacts of increasing or decreasing the requirements.
- Analysis was undertaken on a small set of Dispatch Intervals with days chosen to allow for comparison of changed conditions.
- The analysis was not intended to quantify the entire cost or benefits but provide an indication of how material the changes could be to determine if there was value in further investigation.

At the ESSFRWG meeting on 24 July 2025 discussion focussed on the outcomes of the case studies as outlined below:

(1) Increasing the Rate of Change of Frequnecy (RoCoF) Safe Limit to reduce the need for AEMO interventions

- the case study indicates that increasing the RoCoF Safe Limit from 0.25 Hz per 0.5 seconds to 0.75 Hz per second could reduce the need for AEMO interventions and associated Energy Uplift Payments by allowing higher RoCoF events to occur without compromising system security.

- Real-Time Frequency Stability (RFTS) tool simulations showed little change in the required Contingency Reserves under current dispatch conditions and indicate potential for greater operational flexibility and cost savings, by allowing generators with low Facility Performance Factors to participate in RoCoF Control Services at lower system inertia levels.
- RoCoF costs have decreased since market start. The proposed increase in the RoCoF Safe Limit will continue to reduce these costs as the need for manual interventions lessen and Energy Uplift Payments avoided as a result. The overall costs that are distributed to Market Participants will be lower.
- Proposal: increase the RoCoF Safe Limit from 0.25 Hz per 0.5 seconds to 0.75 Hz per second to reduce the need for AEMO interventions.

The ESSFRWG requested:

  - further consideration from AEMO of the potential risk to individual facilities with a higher RoCoF Safe Limit;
  - an extended consultation period to consult internally and with Original Equipment Manufacturers due to technical risks, particularly for some gas and steam generating units; and
  - further modelling by AEMO to provide an indication of the incidence of reducing the largest contingency to quantify the level of curtailment with a higher RoCoF Safe Limit and any market impact.

AEMO committed to:

  - consult internally with its engineering team and advise the ESSFRWG of any potential concern with increasing the RoCoF Safe Limit for individual facilities; and
  - model the incidence of reducing the largest contingency to quantify the level of curtailment with a higher RoCoF Safe Limit and any market impact.

(2) Determine whether there are any efficiency gains, without comprising security and reliability of supply, for AEMO accounting for what is already provided by all online Facilities when calculating the Regulation requirement

- the aim of the case study was to determine the likely size of the contribution from mandatory primary frequency response ((MPFR) and whether it was worth AEMO undertaking further investigation into the impact of adjusting their processes to account for what is provided through the mandatory droop, when setting the requirements for Regulation.
- the findings indicate that MPFR from synchronous generators and battery energy storage systems (BESS) not currently accredited for Frequency Co-Optimised ESS (FCESS) could provide significant headroom (between 82 MW to over 500 MW), potentially reducing the amount of Contingency Reserve Raise (CRR) procured, thereby reducing the associated costs.
- Proposal: AEMO to implement a monitoring program over a twelve-month period to track the amount of headroom available from unaccredited or non-dispatched FCESS facilities to better quantify MPFR availability to assess the level of CRR that could be provided from the inclusion of MPFR.
  - there was in principle agreement from the ESSFRWG, that there may be benefit for AEMO to account for what is available through the MPFR requirements in the ESM Rules when AEMO sets the requirement for FCESS.

(3) Investigate the benefits of synthetic inertia provided by BESS

- the aim of the case study was to establish a process for AEMO to be able to procure synthetic inertia, and to come up with a competitive process that actually demonstrates that synthetic inertia is a cheaper addition to the system than, for example, synchronous condensers.

- the findings indicate that synthetic inertia mimics synchronous inertia and could potentially reduce RoCoF shortfalls and AEMO directions. A study using hypothetical synthetic inertia contributions from two large BESS installations suggests their online presence could have avoided over 60% of the historic directions during the six-month period between November 2024 and April 2025.
- while presenting a good opportunity to further enhance the new market framework and consumer benefits, technical verification and identification of appropriate incentivisation mechanisms are necessary before considering any implementation.
- Proposal: a review into the provision of synthetic inertia from inverter-based resources, to determine what would need to change in the systems, rules and processes to enable that. Further consultation with industry is required to better understand the incentives required to support the implementation.

The Terms of Refence, papers and minutes for the ESSFRWG meetings are available on the ESSFRWG webpage. Further information on the ESS Review, including the Scope of Works are available on the ESS Review webpage.

4. Next Steps

- The table below shows the proposed next steps:

Activity	Timing
Asses the ESS standards and the basis for setting the ESS requirements	Complete
Jurisdictional comparison	Complete
Consultation with the ESSFRWG and the MAC on the economic/cost-benefit analysis as required by 3.15.1C of the ESM Rules	Ongoing
Develop proposed metrics to be used for the ongoing monitoring of ESS	Complete
Consultation with the MAC on a draft Consultation Paper	TBC - September 2025
Consultation with the MAC on a draft Information Paper	TBC
Exposure draft of Draft Amending ESM Rules	TBC
Amending ESM Rules submitted to Minister for Energy	TBC

5. Attachments

MAC 2025_09_04 - Agenda Item 6(c) - Attachment 1 – ESSFRWG Presentation

MAC 2025_09_04 - Agenda Item 6(c) - Attachment 2 - Summary Table - Draft Proposals and Rationale

Department of Energy and Economic Diversification

GOVERNMENT OF WESTERN AUSTRALIA

Energy Policy WA

Essential System Services (ESS) Framework Review

MAC Update

4 September 2025

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

Purpose of the ESS Framework Review

Section 3.15 of the Electricity System and Market (ESM) Rules requires a statutory review of the ESS Standards and the basis for setting ESS requirements*

Frequency Co-Optimised Essential System Services (FCESS) serve the primary purpose of maintaining frequency in accordance with the Frequency Operating Standards (FOS).

Procurement of these services must be in the long-term interest of consumers in relation to security, cost, and the environment.

Setting the ESS requirements at the right level is important for both security and efficiency. Excessive procurement maintains security, but at higher cost to consumers, while insufficient quantities may reduce costs to consumers, but risks security of supply.

A combination of technical and economic analysis, to assess the operation of the current ESS process and a series of case studies were undertaken to meet the requirements of the review.

The MAC is asked to note and provide comment on the draft outcomes of the Review

*There are three types of ESS in the WEM, however only the FCESS are being considered as part of this Review

Issues identified with the existing ESS Framework

To determine whether the framework for FCESS provision is operating efficiently, the Review included:

- a technical review of frequency performance;
- a comparison of Frequency management in the WEM against other jurisdictions; and
- an assessment of WEM FCESS economic performance.

Six issues were identified with the existing framework and presented to the MAC on the 19 June 2025 where the MAC was asked to provide feedback on the approach to the cost benefit analysis.

Three issues were considered further using a set of case studies to understand the economic impact of making changes to the technical parameters of the WEM FCESS arrangements.

All six issues will be included in the Consultation Paper.

Issues arising from the analysis to be consulted on as part of the ESS Framework Review

Issue	Finding/significance	Proposed action/s
Conservatism in technical parameters for RoCoF This may result in over procurement, artificial shortfalls, and unnecessary market interventions.	Common level of RoCoF set in other jurisdictions 1 Hz/sec. Levels were set conservatively in the WEM with the intent to increase these pending future investigation.	**Case Study 1** Reassess the appropriate value for the RoCoF safe limit. • AEMO has undertaken a review of the RoCoF Safe Limit and the settings for the Minimum RoCoF requirements. • Findings from these reviews will be included in Consultation Paper.
A lack of transparency around processes and methodology for setting ESS requirements This includes: • insufficient documentation; and • incomplete WEM procedures	Assessing whether ESS quantities are set at efficient levels requires transparent and complete methodology documentation Incomplete documentation hinders this assessment, partially in the presence of circular dependencies .	AEMO to update WEM Procedures and other methodology/process documentation.

Issues arising from the analysis to be consulted on as part of the ESS Framework Review - continued

Issue	Finding/significance	Proposed action/s
A conservative approach to the application of Performance Factors (PFs).	The PFs of facilities providing Contingency Raise services is determined for different ESS configurations using the DFCM. The speed of response of a facility to changes in frequency is determined from staged tests of the physical plant. When scenarios result in a very high RoCoF, facilities with low speed factors may receive a PF of zero, meaning that they are assumed to not contribute materially to arrest the frequency decline. Facilities with a zero PF will not be enabled, even if they submit bids for Contingency Reserve Raise (CRR) services. Dismissing contributions from slower machines – setting PF of zero ignores potential positive contributions from machines that could respond within 6 seconds, but not to the full amount required.	AEMO to reassess the determination of PFs
There is a need to better understand the process for defining the inputs of the Dynamic Frequency Control Model (DFCM).	There is a lack of documentation for some elements, and assumptions and inputs are based on potentially outdated information. This creates difficulty in assessing whether the amount of ESS scheduled is set at an efficient level.	AEMO to review DFCM inputs and assumptions.

Issues arising from the analysis to be consulted on as part of the ESS Framework Review - continued

Issue	Finding/significance	Proposed action
A lack of clarity regarding the contribution of mandatory primary frequency response (MPFR) to frequency management	All generating systems must be equipped with (droop based) primary frequency control and must adjust active power output in response to frequency deviations. The response from non-accredited facilities and facilities not enabled in the FCESS market is not considered in ESS quantity calculations. This may lead to procurement of more frequency regulation services than required, as well as ignoring the additionally available support to manage contingencies.	**Case Study 2** Analysis to establish general MPFR headroom from unaccredited ESS facilities and impact on system frequency if they were considered. Inclusion of this additional MPFR would have to account for its dynamically changing quantities.
Consideration of new technologies in the provision of FCESS	Virtual inertia from BESS is not considered increasing risk of shortfalls and need for direction.	**Case Study 3** Analysis to assess the potential contribution of BESS and other technologies as inertia providers. Considering how synthetic inertia can participate in ESS.

Approach to the economic and cost/benefit analysis

Quantitative analysis was undertaken, in consultation with AEMO, to investigate three of the technical issues to be consulted on as part of this review.

Case Study 1 - RoCoF Safe Limit

Aim: assess the impact of higher RoCoF Safe Limit

Case Study 2 - Accounting for MPFR

Aim: determine reasonably available MPFR headroom of all available unaccredited or not ESS dispatched facilities headroom. Assess the reduction in CRR requirement if a MPFR offset is applied

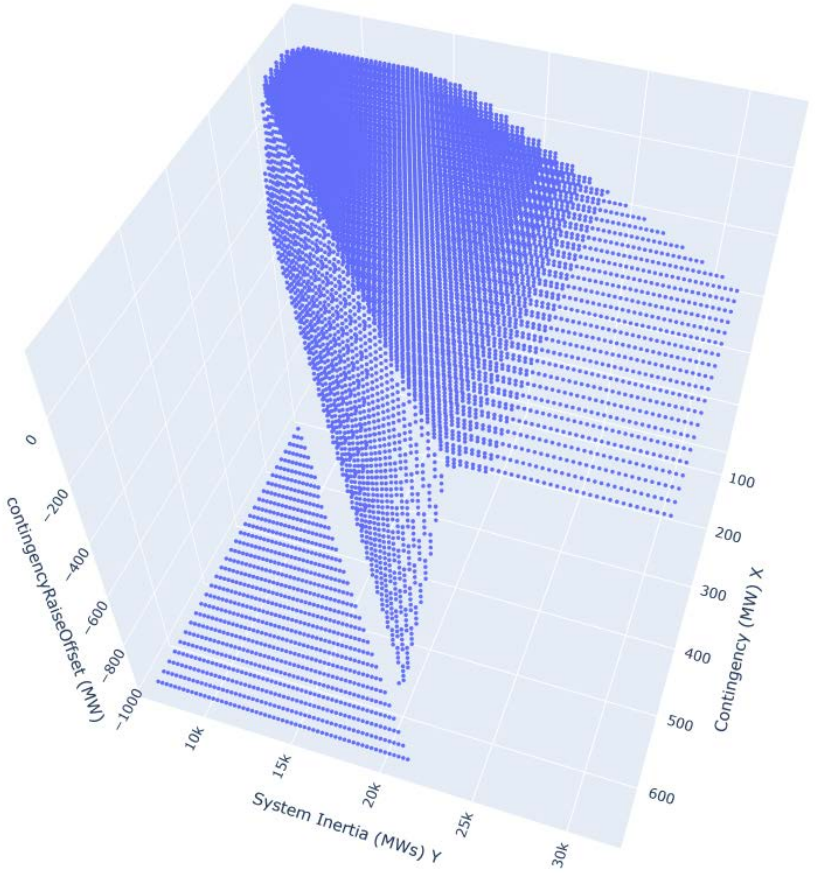
Case Study 3 - Synthetic Inertia

Aim: assess the displacement of inertia and RoCoF directions to synchronous generators by BESS, on days with directions and/or shortfalls

The analysis was not intended to be comprehensive or definitive or, to quantify the entire cost or benefits, *but* to provide a comparison to the counterfactual and provide an indication of the materiality, to guide further work.

The RoCoF Safe Limit

- The current RoCoF Safe Limit is conservatively set at 0.25 Hz per 0.5 seconds, based on known generating system capability and historical contingency events.
- DFCM output can generate a zero Facility PFs for slow generator when system inertia is low and/or the Largest Credible Supply Contingency (LCSC) is large due to potential breaches of the RoCoF Safe Limit or the frequency nadir breaching the lower emergency frequency band.
- When dispatch results in a non-secure state due to shortfalls in RCS, AEMO must intervene.
- RoCoF Control Service shortfalls and ensuring the RoCoF Safe Limit is maintained are the main reasons for AEMO interventions, and a major contributor to FCESS costs (90 directions in past 6 months).



Case Study 1 - Changing the RoCoF Safe Limit

Economic impact of RoCoF Safe Limit relaxation

Increasing the RoCoF Safe Limit to 0.75 Hz per second and conducting a week-long (8-12 December 2024) Real Time Frequency Stability (RTFS) tool study shows:

- The counterfactual showed 308 Dispatch Intervals (DI) where directions for RoCoF Control Service occurred. The alternate scenario resulted in 37 intervals for which RoCoF was > 0.75 Hz per second.
- Value of Energy Uplifts incurred during the counterfactual was $199,110.30. The alternate was $103,678.48 (-48%).

Based on the technical feasibility and economic benefit assessment carried out, AEMO recommends to:

- Set the RoCoF Safe Limit at 0.75 Hz per second measured over 500 ms.
- Review the limit periodically and adjust it to suit the power system at the time.
- Consult on the appropriate mechanism to manage facilities that fall below the Cost Recovery Limit following an increase to the RoCoF Safe Limit.
- Investigate the new stability limits with higher RoCoF and uplift operational and market dispatch tools.

Working Group Feedback

Working group members noted:

- the need for caution as simulated tests would not replicate actual stress events and the impact on Facilities therefore hard to validate;
- concern with potential damage to equipment, particularly for older facilities and the need to undertake internal analysis to confirm the likelihood of damage to equipment;
- the need to consult with Original Equipment Manufacturers (OEM) to seek feedback on their facilities ability to withstand a higher Safe Limit; and
- accessing the documentation required to confirm their ride through capability may be difficult for older Facilities.

Working group members requested:

- an extended consultation period to allow opportunity to consult with OEMs;
- whether it was possible to bypass the OEM reviews, noting that at market start it was assumed that all generators were capable of riding through 0.5 Hz per second and could the same assumption be made for 0.75 Hz per second; and
- that AEMO model the incidence of reducing the largest contingency to quantify the level of curtailment with a higher RoCoF Safe Limit and any market impact**.**

MAC members are asked to note ESSFRWG feedback

Addressing Working Group Feedback

- In response to the feedback received, ESSFRWG members were asked to advise what length of consultation was required to consult internally and with OEMs on the proposed increase.
- AEMO, EPWA and Synergy met on the 25 August 2025 to discuss:
  - the potential damage to Synergy's older plant and the potential failure of units due to stress associated with rapid rates of change; and
  - the likely difficulty associated with obtaining documentation from OEMs
- AEMO has committed to:
  - to consult internally with its engineering team and advise of any potential concern with increasing the RoCoF Safe Limit for individual Facilities
  - model the incidence of reducing the largest contingency to quantify the level of curtailment with a higher RoCoF Safe Limit and any market impact.

Impact of a higher RoCoF Safe Limit

Conclusions of AEMO's technical assessment and the economic analysis

In allowing the RoCoF Safe Limit to be higher there will be Facilities which can respond at lower inertia levels.

- This would allow AEMO to find safe dispatch outcomes at lower inertia levels.
- This means that AEMO does not have to intervene as frequently because the fleet configuration means that system secure outcomes can still be achieved.
- A reduction in RoCoF Safe Limit breaches, translates into a reduction in Energy Uplift Payments.

Outcome: more options for secure economic dispatch, means that AEMO is less likely to need to intervene manually. This reduces the operational burden on AEMO, lowering system costs (by avoided Energy Uplift Payments) and improving transparency.

Subject to the AEMO confirming that there will be no risk to facilities, is the MAC supportive of increasing the RoCoF Safe Limit to reduce the need for AEMO interventions?

Case Study 2 - Accounting for MPFR

To determine the need for further investigation into the impact of AEMO adjusting their processes to account for what is provided through the mandatory droop, when setting the requirements for Regulation and therefore reducing the quantity of CRR that needs to be procured.

If there was a frequency disturbance all online generators with headroom or footroom must respond, not only those contracted for Contingency Reserve Raise or Lower:

- this is not considered in the DFCM when AEMO calculates the offset required for the LCSC;
- the impact that MPRF is having is evidenced by the quality of normal system operation.

The outcomes as presented in the following slide indicate that consideration of MPFR flows through a number of different areas and that there is benefit of further investigation on a more granular timescale.

There was in principle agreement from the ESSFRWG, that there may be benefit for AEMO to account for what is available through the MPFR requirements in the ESM Rules when AEMO sets the requirement for FCESS.

Mandatory Primary Frequency Response

Potential impact on market outcomes

Key observations from the overall results of the MPFR assessment for the selected days include:

- The observed performance adjusted MPFR is between 82 MW to 515 MW indicating that MPFR contributions can be significant.
- Excluding BESS entirely from MPFR contributions could significantly reduce headroom. However, for the days examined the units are dispatched for CRR during peak demand and generally not dispatched for the remainder. These peak demand periods set the minimum MPFR levels and with these quantities provided solely from synchronous generation.
- At times of minimum demand in the middle of the day or at nighttime, CRR prices are often zero. In such instances the addition of MPFR has no impact.
- Consideration of MPFR during evening peaks generally shows a reduction in costs to both CRR as well as Regulation Raise (RR)
- One instance of increasing Regulation Lower prices was observed for an early morning Dispatch Interval. However, the same Dispatch Interval saw significant reductions in CRR, RR, and energy prices for an overall positive impact.

Dispatch interval	CRR (AUD)		RR (AUD)		RL (AUD)		Energy (AUD)	
	No MPFR	MPFR = 82	No MPFR	MPFR = 82	No MPFR	MPFR = 82	No MPFR	MPFR = 82
23/11/24 - 13:00	0.00	0.00	0.00	0.00	154.7	154.7	-61.74	-61.74
11/12/24 – 14:25	60.06	60.06	16.01	16.01	0.00	0.00	149.75	149.75
11/12/24 – 18:25	473.9	60.06	473.9	278.46	0.00	0.00	738.00	728.28
27/12/24 – 01:00	0.00	0.00	0.00	0.00	0.53	0.53	92.09	92.09
18/01/25 – 11:15	60.79	0.00	0.00	0.00	60.00	60.00	-61.19	-61.19
20/01/25 – 18:30	735.18	100.2	733.71	727.74	0.00	0.00	883.00	883.00
12/02/25 – 03:00	60.06	0.00	23.3	0.00	1.75	1.95	121.65	93.41
17/02/25 – 18:15	0.00	0.00	0.00	0.00	0.00	0.00	119.2	119.2

Mandatory Primary Frequency Response

Conclusions

- MPFR from synchronous generators (and BESS) fluctuates throughout the day, varying from 82 MW to over 450 MW (adjusted for PF).
- MPFR could significantly impact the required CRR quantities that have to be dispatched by WEMDE.
- Reduced CRR FCESS can reduce costs.
- More information of MPFR availability throughout the day and the year is required.

It is recommended that AEMO commence a twelve-month MPFR headroom monitoring program to track the performance factor adjusted MPFR available from online and non-CRR dispatched facilities.

On conclusion of the monitoring program, AEMO and Energy Policy WA to review outcomes and, if warranted, recommend appropriate changes to CRR procurement.

Does the MAC support this approach?

Case Study 3 – Synthetic inertia

Reducing the need for AEMO directions

- Synthetic inertia refers to the rapid injection of energy from grid-forming BESS when a frequency imbalance is detected
- Synthetic inertia can be very fast, but it is not instantaneous in response, unlike that provided by a synchronous generator
- No energy markets currently use virtual inertia as a substitute for synchronous inertia:
  - The UK is one of the few which has considered technical requirements for synthetic inertia although no contract was awarded to a BESS under National Grid's Pathfinder 3 program
  - ARENA has supported trials in the National Electricity Market (NEM) to test BESS performance in providing virtual inertia
  - AEMO has published several documents on the treatment of synthetic inertia in the NEM
- Lack of inertia in the WEM has been the key driver of AEMO having to direct, which has a significant cost to the market
- The projected installation of grid forming BESS in the WEM is set to at least double within the next two years

Synthetic inertia - Breaking down the WEM's lack of inertia

The findings indicate that there would have been reductions to the number of dispatch instructions if that inertia had been considered in the system.

Item	Observation	Quantity
#1	Total number of directions	90
#2	Number of days on which directions were issued	56
#3	Minimum inertia dispatched on a single day of direction (MW.s)	988
#4	Maximum inertia dispatched on a single day of direction	4,908
#5	Number of days on which more than 2,400 MW.s of inertia was directed	30
#6	Number of directions that could have been avoided by adding 2,400 MW.s of virtual inertia	55
#7	Number of days on which no directions would have occurred if 2,400 MW.s of inertia was included	21

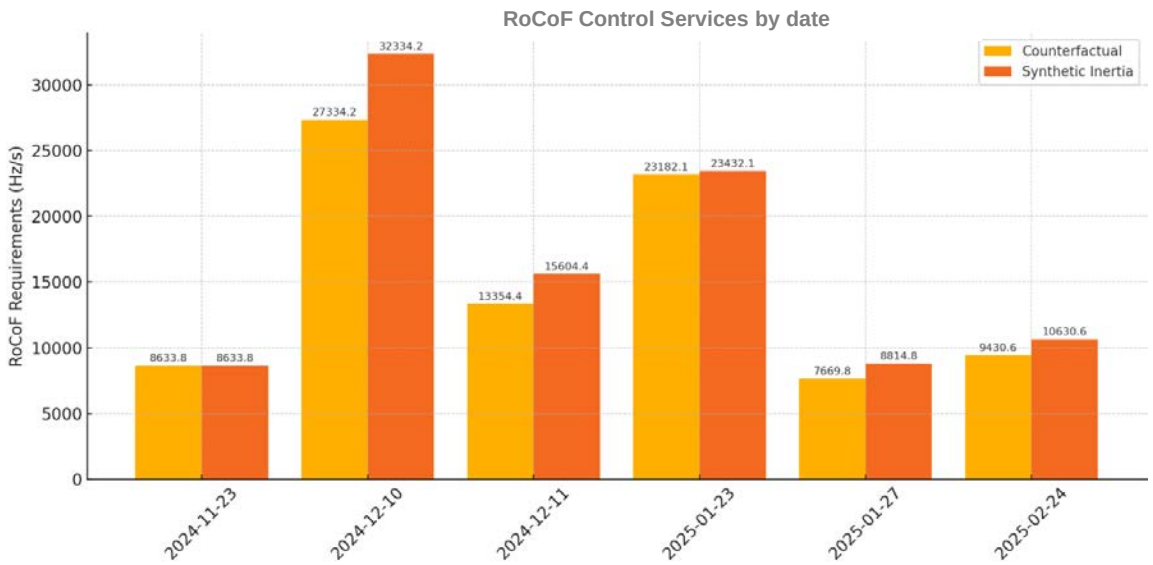
Dispatch Intervals considered for WEMDE alternative scenarios:

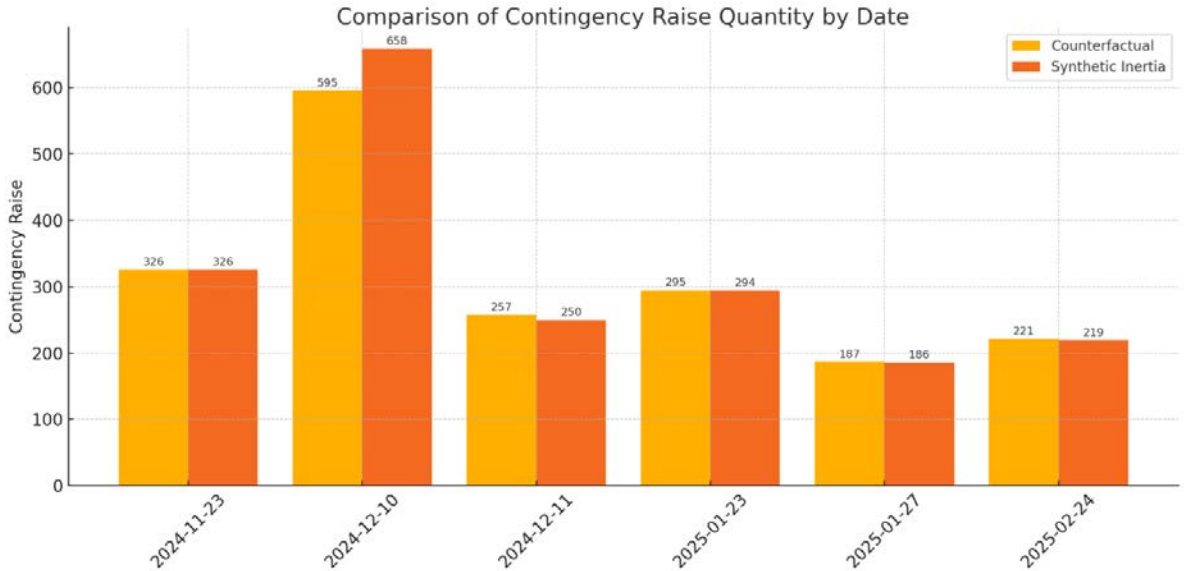
1. 18:15 on 17 February 2025
2. 03:00 on 12 February 2025
3. 18:30 on 20 January 2025 (peak demand, no solar)
4. 11:15 on 18 January 2025
5. 01:00 on 27 December 2024
6. 18:25 on 11 December 2024
7. 4:25 on 11 December 2024
8. 13:00 on 23 November 2024 (min demand, with solar)

The time period considered was from the 20 November 2024 to 19 April 2025. In this period there were roughly 60 directions from AEMO that would have been avoided if synthetic inertia was an option.

Synthetic inertia

Changes affected by adding 2,400 MWs of inertia to the WEMDE assessment





RoCoF Control Requirements and CRR extracted from WEMDE outputs for counterfactual and alternative scenarios

Based on ARENA funded trials of the Hornsdale Power Reserve and AEMO advice of synthetic inertia assessment have applied a 1,200 MW.s inertial response for a 200 MW BESS (operating at below 40% rated output).

Considering CBESS and KBESS as case studies provides 2,400 MW.s of inertia to the WEM that does not require direction

Consideration of new technologies

System security is becoming more challenging to manage as the WEM transitions to accommodate increasing renewable energy integration.

Procurement and compensation for inertia requires consideration, particularly for resources that may not be energy producing.

- If AEMO foresee an FCESS shortfall it needs to run the Supplementary Essential System Services Mechanism (SESSM) procurement process;
- The SESSM required testing to determine whether it was fit for purpose, or whether the NCESS process was preferred or if another separate process was required; and
- AEMO needs a fit for purpose mechanism to procure inertia as synchronous plant retires.

ESSFRWG feedback

Current challenges for BESS in providing synthetic inertia in the WEM:

The WEM currently assigns $0/MW.s value to inertia, treating it as a by-product of synchronous generation.

For BESS, providing synthetic inertia incurs real costs, including:

- Capital upgrades to convert grid-following to grid-forming BESS.
- Higher upfront costs for new grid-forming systems.
- Complex and costly commissioning and testing requirements.
- Lost market revenue due to reserving active power headroom, limiting participation in energy, FCESS, and Reserve Capacity Mechanism.
- Shorter operational life (5–10 years) from intensive cycling to deliver inertia.

Ways to incentivize proponents to provide synthetic inertia in the WEM:

- Recognising synthetic inertia as equivalent to synchronous inertia for RoCoF Control Service.
- Consideration of compensation mechanisms for maintaining state of charge and lost market revenue from power headroom reservation.
- Improving market signals through the publication of AEMO's indicative future inertia shortfalls and long-term contracts to provide investment certainty.
- Updated performance standards to allow effective tuning of grid-forming BESS.

MAC members are asked to note ESSFRWG feedback

Consideration of new technologies in the provision of FCESS

ESSFRWG feedback was sought on the economic incentives required, and the costs involved with the provision of synthetic inertia by battery energy storage systems. Feedback included the following:

- Capital investment costs, i.e. firmware and component upgrades to enable an existing grid-following BESSs to become grid-forming BESS.
- Higher upfront investment costs of installing a new grid-forming BESS.
- Commissioning and testing costs of a BESS intending to provide synthetic inertia

Further consultation is required to establish a process for AEMO to be able to procure synthetic inertia, and to produce a competitive process that demonstrates that synthetic inertia is a cheaper addition to the system than, for example, synchronous condensers and further consideration of what changes would be required to enable this.

Is the MAC supportive of AEMO's review into the provision of synthetic inertia from inverter-based resources and if this can be considered, that further investigation be undertaken into what would need to change in the systems, rules and processes to enable this?

Agenda Item 6(c) - Attachment 2 – Summary Table of Draft Proposals and Rationale

Proposal	Rationale
Conservatism in technical parameters for Rate of Change of Frequency	
Proposal 1 Increase the Rate of Change of Frequency (RoCoF) Safe Limit from 0.5 Hz per second to 0.75 Hz per second to reduce the need for manual interventions by AEMO.	Normal operating frequency performance has been well above minimum requirements for the past year. Compliance with the Frequency Operating Standard (FOS) was not possible through AEMO's procurement of Frequency Co-Optimised Essential System Services (FCESS) alone, rather it was achieved through manual intervention by AEMO to manage the RoCoF Safe Limit. Conservatism in the FOS technical parameters for RoCoF may result in over procurement, artificial shortfalls, and unnecessary market interventions. Leading to additional costs to the market through Energy Uplift Payments. The analysis shows the benefits to reducing the number of directions is twofold - avoided manual directions by the AEMO control room and avoided cost. The case study analysis demonstrated that: • in a one-week period there were 308 Dispatch Intervals in which AEMO issued directions; • the $103,000 saving was over a **one-week** period. While this was a week in which directions were probably higher than average, those savings were indicative of overall cost saving.

	AEMO has conducted preliminary analysis that suggests that an increase to 0.75 Hz per second over the first 500 milliseconds may be feasible. AEMO is confident that running the system with a RoCoF Safe Limit of 0.75 Hz per second would be secure and would not lead to system wide failure. In allowing the RoCoF Safe Limit to be higher there will be facilities which can respond at lower inertia levels: • this would allow AEMO to find safe dispatch outcomes at lower inertia levels; • AEMO would not have to intervene as frequently because the fleet configuration means that system secure outcomes can still be achieved. Manual interventions should be avoided wherever possible because they can impede market effectiveness and efficiency. The reduction in manual interventions will see corresponding reduction to Energy Uplift Payments resulting in lower costs to the market.
A lack of transparency around processes and methodology for setting Essential System Services requirements	
Proposal 2 AEMO to accelerate the completion of AEMO technical and operational guidelines relating to FCESS quantification and dispatch processes for publication and provide timelines for yet-to-be published documentation.	There are several AEMO processes and documents that are required in the Electricity System and Market Rules but are not yet published or have been published but with only limited insight to the processes they are meant to describe. In many cases documentation is either inadequate or non-existent. This makes it: • difficult for Market Participants to understand the processes; • challenging for the Coordinator to review the effectiveness of the market;

	• challenging for AEMO to communicate why certain actions are needed. The review has found that there is insufficient documentation publicly available on: • how AEMO determines Essential Systems Services (ESS) quantities and Dynamic Frequency Control Model (DFCM) methodologies; • Real-Time Frequency Stability (RTFS) tool influence on dispatch; • the process for increasing Regulation Raise and Regulation Lower. Without such information available to Energy Policy WA and Market Participants, there is limited transparency of the way that FCESS are procured and dispatched, whether the procured quantities are sufficient or excessive, or whether the processes applied are efficient. Establishing a register of the required documentation and content specification, as well as visibility about timelines for yet-to-be published documentation, will be of benefit.
A conservative approach to the application of Performance Factors	
Proposal 3 AEMO to reassess the application of Performance Factors to Contingency Reserve Raise (CRR) to identify where facilities are assigned a Performance Factor of zero, but are actually capable of providing FCESS.	If a Facility with a particular speed factor could not respond fast enough to keep the system within the RoCoF Safe Limit, even if theoretically it might be maintained above the frequency nadir, that Facility is assigned a Performance Factor of zero because it cannot contribute to keeping the system secure. The review has found that there is conservatism in the Facility Performance Factor definition as the contributions from slower facilities are not considered. This may result in the calculation for generating facilities been overly conservative and may result in CRR service shortfalls for low inertia system configurations.

	Excluding generators based on their Performance Factor may create shortfalls or require the dispatch of more expensive facilities. If AEMO accounted for these contributions when calculating the requirement could be provide material benefits to frequency management, allowing more options for secure economic dispatch and a reduction in the number of Dispatch Intervals requiring AEMO intervention.
There is a need to better understand the process for defining the inputs of the Dynamic Frequency Control Model	
Proposal 4 Reviewing the input assumptions for AEMO's DFCM and Regulation Baseline Model, and testing whether input assumptions currently used should be updated to reflect current system conditions.	The DFCM is used to define the CRR offset that goes into WEM Dispatch Engine (WEMDE) for the purpose of dispatch, whereas the RTFS Tool is used by the control room to verify system security and is the basis for decisions by the AEMO control room to intervene and direct when more CRR is required - both processes look to achieve the same thing but appear to have different inputs. The review has found that the assumptions and inputs to DFCM are not clear, the DFCM is a key input to the WEMDE solution for dispatch of FCESS, yet many of the DFCM input assumptions and variables, such as load relief, governor droop response and deadband, and distributed inverter disconnection thresholds are based on empirical data, or possibly outdated information. The review has also found that current process documentation as well as changes to the DFCM versions published by AEMO are also limited in detail as to how the changes will affect the DFCM outcomes.
Clarity regarding the contribution of mandatory Primary Frequency Response to frequency management	
Proposal 5 AEMO to establish a twelve-month monitoring program to assess the levels of Mandatory Primary Frequency Response available in the	Mandatory Primary Frequency Response is excluded when AEMO determines FCESS requirements, potentially leading to the over-procurement of CRR, Contingency Reserve Lower, Regulation Raise and Regulation Lower.

system that could support system security and Contingency Reserve procurement.	The review has found that here may be efficiency gains, without comprising security and reliability of supply, for AEMO to include what is provided by all online Facilities as primary frequency response when calculating the Regulation requirement at any point in time. The case study looked to quantify what headroom would actually have available in some Dispatch Intervals and the findings demonstrates that even adjusted for performance factors there was still substantial headroom available. This demonstrated that it is worth AEMO undertaking further investigation into the impact of adjusting their processes to account for what is provided through the mandatory droop, when setting the requirements for Regulation. AEMO should establish a twelve-month monitoring program to examine in the simulation models that it uses to set the requirements, whether there is benefit in terms of the State Electricity Objectives for AEMO to take into account what is already available.
Consideration of new technologies in the provision of Frequency Co-Optimised Essential System Services	
Proposal 6 Assessment of suitability of synthetic inertia from Electric Storage Resources (ESR) in replacing synchronous inertia from rotating machines, and consultation with industry of potential barriers and suitable incentivisation for grid-forming ESR to provide such services.	1.3 gigawatts of very fast responding ESR are currently assigned Capacity Credits and more very fast responding ESR will enter through the Capacity Investment Scheme (pending certification) from 1 October 2027. The least cost provision of Contingency Reserve services needs to be considered, as the new State Electricity Objective requires security to be balanced with cost and emissions. Currently there here is limited consideration of opportunities provided by new technologies e.g., synthetic inertia from grid-forming ESR, restricting the ESS resource pool and increases risk of future shortfalls and need for manual intervention.

	The review has found that procurement and compensation for inertia brought on to address shortfalls requires consideration, particularly for resources that may not be energy producing, which cannot be accommodated within the current market design. Further consultation with industry is required to identify potential barriers and suitable incentivisation for grid-forming ESR to provide such services and to establish a process for AEMO to be able to procure synthetic inertia: • if AEMO foresee an FCESS shortfall it needs to run the Supplementary Essential System Services Mechanism (SESSM) procurement process; • the SESSM required testing to determine whether it was fit for purpose, or whether the Non-Cooptimised ESS process was preferred or if another separate process was required; and • AEMO needs a fit for purpose mechanism to procure inertia as synchronous plant retires.

Department of Energy and Economic Diversification
GOVERNMENT OF WESTERN AUSTRALIA

Energy Policy WA

Agenda Item 6(d): Update on the WEM Investment Certainty Review Working Group

Market Advisory Committee (**MAC**) Meeting 2025_09_04

1. Purpose

Energy Policy WA to provide an update on the process for completing the Benchmark Capacity Providers Review (the Review).

2. Recommendation

That the MAC notes:

1. the update on the Review, including remaining steps for completing the Review; and
2. the draft minutes from the WICRWG meeting on 14 August 2025.

3. Background

Under clause 4.16.11 of the Electricity System and Market Rules (ESM Rules), the Coordinator is conducting a review of the Benchmark Capacity Providers (BCPs), which are used to determine the Benchmark Reserve Capacity Prices (BRCPs).

The Coordinator must determine the BCPs within six months of the Electricity Storage Resource Duration Requirement (ESRDR) being published in AEMO's Electricity Statement of Opportunities (ESOO), if the ESRDR is different from the ESRDR for the previous Reserve Capacity Cycle.

AEMO's 2025 ESOO was published on 24 June 2025 and included an ESRDR of 6 hours, an increase from the previous ESRDR of 4 hours.

The Coordinator must complete its review by the end of September to allow sufficient time for the Economic Regulation Authority to amend and consult on its BRCP methodology and the BRCPs for the 2028/29 Capacity Year by 15 March 2026.

The Review consists of two key items:

- Benchmark Peak Capacity Provider; and
- Benchmark Flexible Capacity Provider.

The following has been assessed for both:

- determining which technology represents the most efficient new entrant; and
- whether gross costs of new entry (CONE) or net CONE should apply.

More information on the Review can be found on the Coordinator's website.

Due to the Review's compressed timeline, at its 24 July 2025 meeting, the MAC supported that Energy Policy WA (EPWA) consults the WICRWG on the Review, instead of forming a special MAC Working Group.

3. Consultation

At its 14 August 2025 meeting, the WICRWG discussed EPWA's:

- cost and energy market analysis; and
- initial proposals for the Peak and Flex Benchmark Capacity Providers and the application of Gross or Net CONE.

Terms of Reference, papers and minutes for the WICRWG meetings are available on the WICRWG webpage.

The main points of this discussion were the emissions intensity threshold, economic life assumptions, treatment of build times, unit degradation, assumed network locations and whether current BESS revenues should impact the gross vs net CONE proposal.

Considering the feedback of the WICRWG, EPWA developed a draft Consultation Paper that was circulated out-of-session to the MAC on 19 August for comments by 25 August.

EPWA received comments from four MAC members, they were substantively similar to the WICRWG's points. On 28 August 2025 EPWA published a consultation paper on the proposed Benchmark Capacity Providers, taking into account the feedback received from the WICRWG and the MAC.

The Consultation Paper makes the following proposals:

- The proposed reference technologies for the Peak and Flexible BCPs are 200 MW / 1200 MWh Lithium BESS connected at 330 kV.
- Retain a gross Cost of New Entry approach to the BRCP determination.

The consultation period for the Consultation Paper closes at 5:00pm 18 September.

4. Next Steps

The table below shows the proposed next steps:

Tasks/Milestones	Timing
(1) Preliminary Steps	
(a) Appointment of consultants	Completed
(b) Kick off meeting with consultant	Completed
(2) Initial Assessment	
(a) Initial assessment based on ESM Rules	Completed
(b) Hold WICRWG meeting on proposals	Completed
(3) Consultation Paper	
(a) Publish Consultation Paper on proposals	Completed
(b) Submissions on the Consultation Paper close	18 September 2025
(4) Further Assessment	
(a) Further assessment based on submissions received	September 2025
(5) Coordinator Determination	
(a) Publish the Coordinator's Determination based on the Review outcomes	Late September 2025

Department of Energy and Economic Diversification
GOVERNMENT OF WESTERN AUSTRALIA

Energy Policy WA

Agenda Item 7: Market Development Forward Work Program

Market Advisory Committee (MAC) Meeting 2025_09_04

1. Purpose

- To provide an update on the Market Development Forward Work Program and an overview of the status of MAC working groups.
- Changes to the Market Development Forward Work Program since the previous MAC meeting are shown in red in the Tables below.

2. Recommendation

The MAC Secretariat recommends that the MAC notes the updates in the paper.

3. Process

Stakeholders may raise issues for consideration by the MAC at any time by sending an email to the MAC Secretariat at energymarkets@deed.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 – Current MAC Working Groups			
Working Group	**Established**	**Status**	**Next steps**
WEM Procedures Content Review	2 May 2024 MAC Meeting	Starting	Subject to MAC approval of Terms of Reference (Agenda Item 5 - Attachment 2)
Capability Class 2 Technologies Review	24 July 2025 MAC Meeting	Open	Organising Working Group meetings
Essential Systems Services Framework Review	2 May 2024 MAC Meeting	Open	Publish a consultation paper
AEMO Procedure Change	1 May 2017 MAC Meeting	Open	Ongoing process
AEMO Major Projects	1 May 2025 MAC Meeting	Open	The next meeting is scheduled for November 2025
Power System Security and Reliability Standards	23 November 2023 MAC Meeting	Open	Develop an Information and Exposure Draft
Wholesale Electricity Market Investment Certainty Review	20 July 2023 MAC Meeting	Open	The ESM Rules implementing the Review Outcomes for Initiatives 1 and 2 of the WIC Review were in Electricity System and Market Amendment (RCM Reviews Sequencing) Rules 2025. The Rules were approved by the Minister for Energy and published in the Government Gazette on 14 January 2025
Cost Allocation Review	14 December 2021 MAC Meeting	Finishing	Review submissions on the Exposure Draft about changes to Contingency Reserve Lower

Table 2 – Market Development Forward Work Program		
Review	**Issues**	**Status and Next Steps**

Cost Allocation Review (CAR)	A review of:
	• the allocation of Market Fees, including behind the meter (BTM) and Distributed Energy Resources (DER) issues;
	• cost allocation for Essential System Services; and
	Issues 2, 16, 23 and 35 from the MAC Issues List.
		• The MAC established the Cost Allocation Review Working Group (CARWG). Information on the CARWG is available at Cost Allocation Review Working Group, including:
		  • the Scope of Work for the review, as approved by the Coordinator;
		  • the Terms of Reference for the CARWG, as approved by the MAC;
		  • the list of CARWG members;
		  • 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.
		• The following papers have been released and are available on the CAR webpage at Cost Allocation Review:
		  • the Consultation Paper;
		  • the International Review;
		  • submissions on the Consultation Paper;
		  • the CAR Information Paper;
		  • the Exposure Draft of the ESM Amending Rules implementing the outcomes of the CAR;
		  • submissions on the CAR ESM Amending Rules Exposure Draft; and
		  • response to submissions on the CAR ESM Amending Rules Exposure Draft.

Table 2 – Market Development Forward Work Program		
Review	**Issues**	**Status and Next Steps**
		• the Wholesale Electricity Market Amendment (Cost Allocation Reform) Rules 2024 available at Wholesale Electricity Market Amendment (Cost Allocation Reform) Rules 2024. • Further changes to refine the cost allocation method for the Contingency Reserve Raise Service were presented at the 18 June 2024 TDOWG and consulted on within the Miscellaneous Amendments No. 3 Exposure Draft. • The last set of changes (to Contingency Reserve Raise cost allocation) implementing the outcomes of this Review were included in the Amending Rules made by the Minister on 2 October 2024. • AEMO to confirm implementation dates. • An Exposure Draft was released on 19 August on changes to Contingency Reserve Lower that affects Schedule 4 of the *Wholesale Electricity Market Amendment (Cost Allocation Reform) Rules 2024*. • Consultation closed 2 September 2025.

Table 2 – Market Development Forward Work Program		
Review	**Issues**	**Status and Next Steps**

Review of the Power System Security and Reliability (PSSR) Standards	The scope of this review is to:
	• review the various PSSR related provisions in the instruments governing power system security and reliability in the SWIS;
	• assess whether the combination of existing standards is effective to ensure power system security and reliability can be maintained;
	• develop proposals for a single end-to-end PSSR standard and a centralised governance framework; and
	draft amending Rules and other regulatory changes, as necessary.
		• The MAC established the PSSR Standards Working Group (PSSRSWG). Information on the PSSRWG is available at Power System Security and Reliability (PSSR) Standards Working Group including:
		  • the Terms of Reference for the PSSRSWG, as approved by the MAC;
		  • the Scope of Work
		  • the list of PSSRSWG members; and
		  • meeting papers and minutes for the 14 December 2023, 1 February 2024, 29 February 2024, 18 April 2024, 25 July 2024, 10 October 2024 and 31 October 2024 PSSRSWG meetings.
		• The PSSR Consultation Paper was published on 19 June 2025 on the Power System Security and Reliability Standards Review webpage.
		  • The consultation period for the Power System Security and Reliability Standards Review (PSSR) Consultation Paper closed on 7 August 2025.
		  • Stakeholder submissions were published on 13 August 2025.
		  • Developing Information Paper and Exposure Draft.

Table 2 – Market Development Forward Work Program		
Review	**Issues**	**Status and Next Steps**
WEM Procedure Content Review	The scope of this review is to assess the content of selected existing WEM Procedures and their heads of power to determine, using the guiding principles, whether any matters identified require changes to improve the effectiveness of WEM Procedures, including, but not limited to: • the potential elevation of certain content to the ESM Rules; and/or • changes to a WEM Procedure heads of power.	• A revised Scope of Work and Terms of Reference was presented to the MAC at the 4 September 2025 Meeting to reflect the proposals from the 2025 WEM Operation Effectiveness Report.

Review of the Market Advisory Committee (MAC)	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.	• The MAC supported a Scope of Works for this review at its meeting on 8 June 2023.
		• ACIL Allen was engaged by the Coordinator to undertake Stage 1 of the MAC Review, and recommend any changes necessary.
		• The following papers have been released and are available on the MAC Review webpage at Market Advisory Committee Review:
		  • the Scope of Work for the review, as approved by the Coordinator;
		  • Market Advisory Committee Review: Stage 1 - ACIL Allen's Consultation Paper;
		  • Submissions received on the Market Advisory Committee Review: Stage 1 - ACIL Allen's Consultation Paper;
		  • Market Advisory Committee Review - Coordinator of Energy's Consultation Paper;

Table 2 – Market Development Forward Work Program		
Review	**Issues**	**Status and Next Steps**
		• Submissions received on the Market Advisory Committee Review - Coordinator of Energy's Consultation Paper.

Table 2 – Market Development Forward Work Program		
Review	**Issues**	**Status and Next Steps**
Procedure Change Process (PCP) Review	A review of the PCP to address issues identified through Energy Policy WA's consultation on governance changes.	• 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. • The Scope of Work for the review, as approved by the Coordinator is available here Wholesale Electricity Market Procedure Change Process Review (www.wa.gov.au) • ACIL Allen has been appointed to assist with the PCP review. • ACIL Allen 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 PCP survey, out of 19 requests. • On 6 May 2024, the Consultation Paper was released for public consultation. Submissions closed 31 May 2024 with stakeholder submissions published on the Coordinator's website. • On 9 August 2024, the Coordinator finished stage 1 by publishing the ACIL Allen report and his response on the Coordinator's website. • EPWA is progressing stages 2 and 3 of the review and is revising a draft consultation paper to reflect the MAC's feedback from the 5 September 2024 MAC meeting.

Table 2 – Market Development Forward Work Program		
Review	**Issues**	**Status and Next Steps**

Review of the Essential Systems Services (ESS) Framework	The Coordinator of Energy (Coordinator) is conducting a review of the ESS Framework (the Review), incorporating:
	• a review of the ESS Process and Standards under Section 3.15 of the ESM Rules; and
	• a review of the Supplementary Essential Systems Services Procurement Mechanism (SESSM) under clause 2.2D.1(h).
	The purpose of this Review is to assess whether the FCESS framework in the ESM Rules is operating efficiently to ensure power system security and reliability can be maintained at the lowest cost to consumer.
		• The MAC approved the establishment of the ESS Framework Working Group (ESSFRWG) to support the ESS Framework Review. Information on the ESSFRWG is available at Essential System Services Framework Review Working Group including:
		  • The Terms of Reference for the ESSFRWG, as approved by the MAC;
		  • The list of ESSFRWG members;
		  • Meeting papers and minutes for 6 November 2024, 26 February, 26 March and 24 July 2025 meetings.
		The following papers have been released and are available on the ESS Framework Review webpage:
		  • The Scope of Work for the Review.
		Next steps:
		  • Finalising a draft public Consultation Paper for publication.

WEM Investment Certainty (WIC) Review	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:
	(1) changing the Reserve Capacity Price (RCP) curve so it sends sharper signals for investment when demand for new capacity is stronger;
	(2) a 10-year RCP guarantee for new technologies, such as long-duration storage;
	(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;
	(4) emission thresholds for existing and new high emission technologies in the WEM; and
	(5) a 10-year exemption from the emissions thresholds for existing flexible gas plants that qualify to provide the new flexibility service.
		• The MAC established the WIC Review Working Group (WICRWG). Information on the WICRWG is available at Wholesale Electricity Market Investment Certainty (WIC) Review Working Group including:
		  • the Terms of Reference for the WICRWG, as approved by the MAC;
		  • the list of WICRWG members;
		  • meeting papers and minutes from the 31 August 2023, 11 October, 8 November, the 6 December 2023, 24 January, the 24 April and 29 May 2024 WICRWG meeting.
		• The following papers have been released and are available on the WIC Review webpage, including:
		  • the Scope of Work for the review, as approved by the Coordinator;
		  • the WIC Review (Initiatives 1 and 2) Consultation Paper;
		  • the submissions received on the WIC Review (Initiatives 1 and 2) Consultation Paper;
		  • the WIC Review (Initiatives 1 and 2) Information Paper;
		  • The Exposure Draft of ESM Amending Rules to implement Initiatives 1 and 2;
		  • Submissions for the Exposure Draft of WEM Investment Certainty and RCM Review Amending Rules; and
		  • Response to Submissions for the Exposure Draft of WEM Investment Certainty and RCM Review Amending Rules.
		• The ESM Rules implementing the Review Outcomes for Initiatives 1 and 2 of the WIC Review are in Wholesale Electricity Market Amendment (RCM Reviews Sequencing)

Table 2 – Market Development Forward Work Program		
Review	**Issues**	**Status and Next Steps**
		Rules 2025. The Rules were approved by the Minister for Energy and published in the Government Gazette on 14 January 2025. • The WICRWG convened on 14 August 2025 to discuss the Coordinator's review of the Reference Technology Providers. • meeting papers for the 14 August 2025 meeting are available at Wholesale Electricity Market Investment Certainty (WIC) Review Working Group page.

Capability Class 2 Technologies Review (CC2TR)	The Review will consider:
	• whether market design changes are required to maintain Power System Security and Reliability (PSSR) with the growing share of Electric Storage Resource (ESR) in the South West Interconnected System (SWIS);
	• whether the methodology for rating the capacity of ESR for the purposes of setting Certified Reserve Capacity remains consistent with the State Electricity Objective (SEO);
	• whether the Demand Side Programme (DSP) Obligation Duration remains consistent with the SEO; and
	• whether the ESR obligation intervals (ESROI), including the effectiveness of the method used by AEMO to determine the ESROI, is consistent with the SEO.
		• The MAC established the Capability Class 2 Technologies Review Working Group (CC2TRWG). Information on the CC2TRWG is available at Capability Class 2 Technologies Review Working Group, including:
		  • the Terms of Reference for the CC2TRWG, as approved by the MAC;
		  • the list of CC2TRWG members.
		• The following papers have been released and are available on the CC2TR webpage:
		  • the Scope of Works.

Table 2 – Market Development Forward Work Program		
Review	**Issues**	**Status and Next Steps**
Forecast quality	Review of Issue 9 from the MAC Issues List.	• This review has been incorporated in the Operational Forecasting Review.
Network Access Quantity (NAQ) 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).	• The timing for this review is to be determined.
Short Term Energy Market (STEM) Review	Review the performance of the STEM to address issues identified during implementation of the ETS.	• This review has been deferred.

Table 3 – Other Issues			
Id	**Submitter/Date**	**Issue**	**Status**
9	Community Electricity November 2017	Improvement of AEMO forecasts of System Load; real-time and day-ahead.	EPWA has commenced work to improve AEMO's operational forecasting that will consider this issue. The following papers have been released and are available on the Operational Forecasting Review webpage: • The Scope of Works • The Operation Forecasting Review Consultation Paper The Operational Forecasting Review Consultation Paper was published on 17 June 2025 on the Operational Forecasting Review webpage. • The consultation period for the Operational Forecasting Review - Consultation Paper closed on 28 August 2025.

Department of Energy and Economic Diversification
GOVERNMENT OF WESTERN AUSTRALIA

Energy Policy WA

Agenda Item 8: Overview of Rule Change Proposals (as of 28 August 2025)

Market Advisory Committee (**MAC**) Meeting 2025_09_04

- Changes to the report since the previous MAC meeting are shown in red font.
- The next steps and the timing for the next steps are provided for Rule Change Proposals that are currently being actively progressed by the Coordinator of Energy (**Coordinator**) or the Minister.

Rule Change Proposals Commenced since the Report presented at the last MAC Meeting

None

Rule Change Proposals Awaiting Commencement

None

Rule Change Proposals Rejected since Report presented at the last MAC Meeting

None

Rule Change Proposals Awaiting Approval by the Minister

None

Formally Submitted Rule Change Proposal

None

Pre-Rule Change Proposals

None

Rule Changes Made by the Minister since Report presented at the 24 July 2025 MAC Meeting

None

Rule Change Made by the Minister and Awaiting Commencement

Gazette	Date	Title	Commencement
2024/66	7/06/2024	Wholesale Electricity Market Amendment (Cost Allocation Reform) Rules 2024	• Schedules 2, 3 and 4 will commence at a time specified by the Minister in a notice published in the Gazette.
2024/89	26/07/2024	Wholesale Electricity Market Amendment (Supplementary Capacity No. 3) Rules 2024	• Schedule 2 will commence at a time specified by the Minister in a notice published in the Gazette.
2024/120	4/10/2024	Wholesale Electricity Market Amendment (Miscellaneous Amendments No 3) Rules 2024	• Schedule 4 will commence at a time specified by the Minister in a notice published in the Gazette.
2025/3	14/01/2025	Wholesale Electricity Market Amendment (RCM Reviews Sequencing) Rules 2025	• Schedule 2 will commence 1 January 2026. • Schedule 3 will commence 1 October 2026. • Schedule 4 will commence 1 October 2027. • Schedules 5, 6 and 7 will commence at a time specified by the Minister in a notice published in the Gazette.
2025/64	3/06/2025	Electricity System and Market Amendment (Tranche 8) Rules 2025	• Schedule 3 will commence 1 January 2026. • Schedule 4 will commence 1 October 2026.

			• Schedule 5 will commence 1 October 2027. • Schedule 6 will commence immediately after the commencement of the amending rules in Schedule 5 of the Wholesale Electricity Market Amendment (RCM Reviews Sequencing) Rules 2025. • Schedules 7 and 9 will commence at a time specified by the Minister in a notice published in the Gazette. • Schedule 8 will commence immediately after the commencement of the amending rules in Schedule 2 of the Wholesale Electricity Market Amendment (Supplementary Capacity No. 3) Rules 2024.