

Meeting Agenda

Meeting Title:	Market Advisory Committee (MAC)
Date:	Thursday 19 June 2025
Time:	1:30 PM – 3:00 PM
Location:	Online

Item	Item	Responsibility	Type	Duration
1	Welcome and Agenda <ul style="list-style-type: none"> Conflicts of interest Competition Law 	Chair	Noting	2 min
2	Meeting Apologies/Attendance	Chair	Noting	1 min
3	Minutes of Meeting 2025_05_01	Chair	Noting	2 min
4	Action Items	Chair	Noting	5 min
5	Update on Working Groups			
	(a) AEMO Procedure Change Working Group	AEMO	Noting	5 min
	(b) Essential System Services (ESS) Framework Review Working Group	ESSFRWG Chair	Presentation	30 min
	(c) AEMO Major Projects Working Group Update	AEMO	Discussion	10 min
6	WEM Operation Effectiveness Review	EPWA	Discussion	15 min
7	Market Development Forward Work Program	Chair/Secretariat	Decision	5 min
8	Overview of Rule Change Proposals	Chair/Secretariat	Noting	1 min
9	General Business	Chair	Discussion	10 min
	Next meeting: 2:00pm Thursday 24 July 2025			

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.



Market Advisory Committee (MAC) - Minutes

Date:	01 May 2025
Time:	1:30pm – 2:40pm
Location:	Microsoft Teams online

Attendees	Representing in MAC	Comment
Sally McMahon	Chair	
Amy Tait	AEMO	
Katie McKenzie	AEMO	Left at 2:23pm
Genevieve Teo	Synergy	
Zahra Jabiri	Network Operator	Left at 2:32pm
Luke Skinner	Small-Use Consumer Representative	First Meeting
Noel Schubert	Small-Use Consumer Representative	
Jacinda Papps	Energy Producer	
Adam Stephen	Energy Producer	
Paul Arias	Energy Producer	Left at 2:30pm
Patrick Peake	Energy Retailer	
Geoff Gaston	Energy Retailer	
Rajat Sarawat	Economic Regulation Authority (observer)	
Noel Ryan	EPWA (observer)	
Peter Huxtable	Contestable Customer	
Graeme Ross	Contestable Customer	

Other attendees	From	Comment
Dora Guzeleva	EPWA	MAC Secretariat
Laura Koziol	EPWA	MAC Secretariat
Sean McAvoy	EPWA	MAC Secretariat
Luke Commins	EPWA	MAC Secretariat
Kevin O'Brien	Western Power	Presenter for Item 5 (Left at 14:06pm)
Nicola Falcon	AEMO	Presenter for Item 7
Apologies	From	Comment
Tim Edwards	Energy Retailer	Apology

1. WELCOME

The Chair opened the meeting with an Acknowledgement of Country.

The Chair noted that she had no conflicts to declare.

The Chair noted her role as Commissioner at the Australian Energy Market Commission and that the views or advice provided by the MAC to the Coordinator do not necessarily represent the views of the Chair.

The Chair noted the Competition and Consumer Law obligations of the MAC members, inviting members to bring to her attention any issues should they arise.

The Chair noted that the MAC operates for the good of the Wholesale Market (WEM) Objectives and that members are to participate in the interests of the stakeholder group they represent. Any specific views pertaining to an organisation can be provided through the applicable consultation processes.

2. MEETING APOLOGIES AND ATTENDANCE

The Chair noted the attendance as listed above.

The Chair welcomed Graeme Ross and Luke Skinner as new members of the MAC.

3. MINUTES OF MEETING 2024_10_17

The 17 October 2024 meeting minutes were approved out of session and published on the Coordinator's website on 19 November 2024.

4. ACTION ITEMS

The Chair noted the Action Items and the paper was taken as read.

- Ms Tait said that Action Item 22/2024 would be addressed under Agenda Item 6(a).

5. MAJOR CUSTOMER CONNECTION PROCESS

Mr O'Brien presented an update on Western Power's Major Customer Connection Process Improvement Program.

Mr O'Brien noted that:

- Western Power commenced the review of its Major Customer Connection Process in November 2022, triggered by a substantial increase of connection requests in 2022 due to the state's decarbonisation goals and the upcoming constrained access in 2023.
- under the new process Western Power is releasing some control to customers by allowing them to facilitate their own technical studies.
- Since February 2024, customers can do their own studies for steady state using a consultant with Western Power just validating the results.
- the new Critical Projects Framework went live in June 2024 replacing the previous first in, first served approach to project progression. The first in first served approach led to projects that were progressing slowly delaying the connection of projects that are important to network stability and the State's decarbonisation goals. The new framework gives "right of way" to priority projects that are identified based on strategic importance and the probability of the project to proceed.
- around 10 GW of projects are currently on the priority list that Western Power considers are connection ready and that will support the State's decarbonisation goals.



- Mrs Papps noted that, in her capacity as Market Generator representative on the MAC, she had received the following feedback about the Critical Projects Framework from developers:
 - Overall they commended Western Power's effort to move the connection process forward as fast as possible;
 - regarding the Critical Projects Framework, there has been uncertainty about the collateral needed and developers are concerned that, as they move along in the process, additional collateral requirements might be too onerous or not align with the timing of activities planned by the developers.
- Mrs Papps asked whether Western Power would provide advanced notifications about the collateral requirements, as projects move through the stages, to support the process.

Mr O'Brien responded that Western Power had published a guideline that shows the criteria and requirements for each stage of the process. The guideline is currently under review as part of a six-monthly review cycle.

Mr O'Brien asked Mrs Papps to provide any specific feedback to Western Power so it can be incorporated into the review of the process.

- Mrs Papps agreed to share some of the feedback with Western Power offline.
- Mr Peake commented that it would be good if customers had a better understanding of how much capacity is available in specific places, such as the Clean Energy Link North, so that customers can identify appropriate places to inquire about connection.
- Mr Peake expressed concerns that not much transmission capacity is being planned and asked whether private industry can do anything to help Western Power to push that process forward.

Mr O'Brien noted that:

- some information about available capacity was provided in Western Power's Transmission System Plan. He noted that providing more detail of available network capacity to attract connections in specific areas was challenging to put ~~in~~into practice. However, he would discuss the feedback with Western Power's system planning team.
- Western Power had recently held a registration of interest process for the Clean Energy Link North to inform the first round of customers. As more customers come through for connection to the Clean Energy Links, Western Power is discussing with Government and Industry how to progress these on an ongoing basis.
- Ms Tait informed members that AEMO is assisting-working with Western Power to uplift that whole end to end connection process across the two organisations.
- Mr Ross commended the work that has been done to see several projects get to the connection stage. However, Mr Ross considered that the cost of connection was one of the hindrances for entering into off-take agreements that a lot of the projects still required.

The Chair asked Mr O'Brien, and Ms Jabiri to come back to the MAC on:

- how to better identify locations with available capacity; and
- how Industry can support the build of new network capacity.



Action: Western Power to report to the MAC if and how:

- a) Western Power can provide information to better identify locations with available network capacity; and**
- b) industry can help support the build of new network capacity.**

6. UPDATE ON WORKING GROUPS

a) AEMO Procedure Change Working Group

The Chair acknowledged the volume of work reflected in the paper done by AEMO since the last meeting.

Ms Tait informed the MAC members that the paper covered the period to the end of April 2025. She also addressed Action Item 22/2024 by informing members of the work planned for May 2025.

Ms Tait noted that, in addition to the upcoming consultations outlined in the paper, AEMO was planning to publish the following WEM Procedures for consultation in May:

- Low Reserve Conditions (Action Item 22/2024);
- ST PASA;
- Identification of Affected Dispatch Intervals;
- Mid Peak Electric Storage Resource Obligations; and
- RCM Limit Advice Requirements.

b) Essential System Services (ESS) Framework Review Working Group

Ms Guzeleva provided the following update:

- the technical analysis has identified several areas of improvement, and AEMO has commenced work to address some of these; and
- the economic assessment has been challenging due to the volatility in market outcomes since the new WEM commencement. This has truncated the economic analysis and delayed the date that the Consultation Paper will come to the MAC.
- Mrs Papps expressed concern that the mandatory primary frequency response work discussed as part of this review could cross over to the work already undertaken during the Cost Allocation Review (CAR) on Regulation cost recovery. She noted that it was undesirable to punish generators who helped the system with the mandatory frequency response they provided, and suggested looking at the financial incentives and penalties in the frequency performance payments framework in the NEM.

Ms Guzeleva noted that:

- there was no proposal to increase any of the mandatory requirements on generators, but rather for AEMO to account for the current mandatory 4% droop response when setting ESS requirements;
- while there is a link to the allocation of Regulation costs (developed under the CAR), there is no commencement date for the implementation of this; and



- during the CAR discussions there was agreement to review the outcome of the frequency performance payments framework in the NEM once it was implemented, to see if that (more complex) method would be suitable for the WEM.
- Mr Schubert noted that as a Working Group member he was trying to encourage the best use possible of the automatic mandatory frequency response that generators can do. He noted that AEMO had advised there was one generator in the WEM currently providing mandatory frequency response at 2% droop. He stated that:
 - ~~any way to optimise~~ optimising the use of mandatory frequency response to get the most out of the available resources would be beneficial; and
 - any opportunity to improve automatic response (from the current 4%) and compensate people appropriately would result in less ESS that AEMO must procure and dispatch.

c) Power System Security and Reliability (PSSR) Standards Review Working Group

The paper was taken as read.

7. PROPOSAL TO ESTABLISH AEMO MAJOR PROJECT WORKING GROUP AND APPROVAL OF TERMS OF REFERENCE

The Chair reminded members that the MAC supported the establishment of the Working Group at its 25 July 2024 meeting.

Ms Tait presented the draft terms of reference for the Working Group.

- Mr Schubert noted that the Expert Consumer Panel considered that it was important for the Working Group to consider costs, including if a change could be implemented at a lower cost, because they ultimately flow through to the consumers.
- Mr Schubert suggested to change the name of the working group to AEMO Major Projects Working Group to distinguish it from other major projects work and possibly even refer to the WEM to distinguish it from AEMO's work in the NEM.
- Mrs Papps, Mr Stephen and Mr Arias considered that Participants should have some input in determining what constitutes a major project.

Ms Tait stated that AEMO will ultimately make the determination but will be seeking feedback from stakeholders.

- Mrs Papps asked at what stage of the Rule Change process a project would be discussed by the Working Group.

Ms Tait answered that the Working Group would consider projects after the Draft Rule Changes have been published for consultation, as earlier consideration would interfere with EPWA's consultations on the policy.

- Mr Arias noted that the terms of reference for this Working Group make it very clear that this isn't a consultation group for rule changes or AEMO's own initiated projects. It should be really clear that, when these are carried through to things like budget submissions, they haven't been consulted through the Major Projects Working Group, as this is an accountability and transparency group and not a consultation group.



- Mr Stephen suggested extending membership of the Working Group to other stakeholders beyond Market Participants such as consultants or interested investors.

Ms Tait noted that there was a need to balance membership numbers to ensure the forum was useful and productive.

- Ms Falcon noted that Market Participants are the ones paying for the projects.
- Mr Peake suggested that the terms of reference could allow AEMO to add extra people to the Working Group, subject to the approval by the MAC or if deemed appropriate to strengthen the Working Group.
- Mr ~~Stephens-Adams~~ agreed that this would address his concern.

Ms Tait agreed to add the suggested amendment to the terms of reference.

The MAC approved the terms of reference, subject to that agreed amendment.

8. REVIEW OF AEMO'S ALLOWABLE REVENUE FRAMEWORK

The paper was taken as read.

9. MARKET DEVELOPMENT FORWARD WORK PROGRAM

The paper was taken as read.

10. OVERVIEW OF RULE CHANGE PROPOSALS

The paper was taken as read.

11. GENERAL BUSINESS

The Chair noted that any issues or comments about Agenda Items 6c, 8, 9 and 10 that were not discussed at the meeting should be sent to the Chair or EPWA.

The meeting closed at 02:40pm.

Agenda Item 4: MAC Action Items

Market Advisory Committee (MAC) Meeting 2025_06_19

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	Open EPWA is updating the TOR to reflect the MAC's and other stakeholder feedback and will provide it at a future MAC meeting
22/2024	Provide an update on the WEM Procedure for Low Reserve Condition Declaration before the next MAC Meeting	AEMO	2024_10_17	Closed AEMO provided the update at the 1 May 2025 MAC Meeting under Agenda Item 6(a).

Item	Action	Responsibility	Meeting Arising	Status
01/2025	Western Power to report to the MAC if and how: a) Western Power can provide information to better identify locations with available network capacity; and b) industry can help support the build of new network capacity.	Western Power	2025_05_01	Open

MARKET ADVISORY COMMITTEE MEETING, 19 June 2025

FOR DISCUSSION

SUBJECT: UPDATE ON AEMO'S WEM PROCEDURES

AGENDA ITEM: 5(A)

1. PURPOSE

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

2. AEMO PROCEDURE CHANGE WORKING GROUP (APCWG)

	Most recent meetings	Next meeting
Date	26 May 2025	As required (likely June).
WEM Procedures for discussion at APCWG	<ul style="list-style-type: none"> Commissioning Tests RCM Limits Advice Mid Peak and Flexible Electric Storage Resource Obligation Intervals Undertaking the LT PASA Identification of Affected Dispatch Intervals IMS Interface for Network Operators Network Modelling Data Communications and Control Systems 	

3. AEMO PROCEDURE CHANGE PROPOSALS

The status of AEMO Procedure Change Proposals is described below, current as at ~~11 April 2025~~ 3 June 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_02 WEM Procedure: Certification of Reserve Capacity	<p>AEMO has commenced the Procedure Change Process to propose amendments to the Certification of Reserve Capacity Procedure, as a result of the Wholesale Electricity Market Amendment (RCM Reviews Sequencing) Rules 2025 (Amending Rules).</p> <p>Schedule 1 of the Amending Rules introduced a new Flexible Capacity product in time for the 2025 Reserve Capacity Cycle, to incentivise capacity that can start, stop and ramp quickly.</p> <p>AEMO has proposed the following amendments to the Procedure to ensure consistency with the Amending Rules:</p> <ul style="list-style-type: none"> • Amendments to outline the processes Market Participants must follow when applying for Flexible Certified Reserve Capacity. • Amendments to outline the processes AEMO must follow when assessing applications and assigning Flexible Certified Reserve Capacity. • Changing “Certified Reserve Capacity” to “Peak Certified Reserve Capacity” where relevant, as the definition for Certified Reserve Capacity now includes both Flexible Certified Reserve Capacity and Peak Certified Reserve Capacity. <p>AEMO has also proposed the following minor amendments to the Procedure:</p> <ul style="list-style-type: none"> • Minor updates to Table 1, including introducing a definition for Significant Maintenance. • Amendment to clarify the specific application requirements where major modifications are completed or intended to be completed to an existing Separately Certified Component. 	Commenced	N/A	14 April 2025

ID	Summary of changes	Status	Next steps	Indicative Date
	<ul style="list-style-type: none"> Amendment to clarify how AEMO will calculate Forced Outage rates when a Facility is not assigned Capacity Credits during the relevant period. <p>Amendment to clarify how a Component or Facility Upgrade will be assessed in relation to the fuel nominated in the Certified Reserve Capacity application.</p>			
<p>Procedure Change Proposal AEPC_2025_03 RCM Limit Advice Requirements</p>	<p>AEMO has commenced the Procedure Change Process to propose amendments to the RCM Limit Advice Requirements WEM Procedure to:</p> <ul style="list-style-type: none"> Clarify the content, form and format of RCM Limit Advice. Improve alignment with the Wholesale Electricity Market Amendment (Reserve Capacity Reform) Rules 2023, which were updated to include: <ul style="list-style-type: none"> Clause 4.4B.2(e) which requires AEMO to provide forecasts of peak demand for the third Capacity Year of the Long Term PASA Study Horizon. Clause 4.4B.7 which requires AEMO to provide updated information under 4.4B.2, following the outcome of the application process for Certified Reserve Capacity. Clause 4.4B.9 which requires each Network Operator to provide updated information under 4.4B.5. Improve alignment with the Wholesale Electricity Market Amendment (RCM Reviews Sequencing) Rules 2025, which were updated to include clause 4.4B.9(f), requiring Network Operators to provide a list of substation names and associated Transmission Node Identifiers that are expected to be in service on 1 October of Year 3 of the Reserve Capacity Cycle. Undertake minor editorial improvements, including conversion to AEMO's most recent Procedure template, amendments to improve readability, correcting minor typographical errors, and updating clause referencing 	Out for consultation	Consultation closure	9 June 2025

ID	Summary of changes	Status	Next steps	Indicative Date
Procedure Change Proposal AEPC_2025_04 Commissioning Tests	<p>AEMO has commenced the Procedure Change Process to propose amendments to the WEM Procedure: Commissioning Tests to:</p> <ul style="list-style-type: none"> align with system and process changes following upgrades to the Commissioning Test Portal delivered under the Outages and Commissioning Test Plans project. improve clarity around processes and timing for revisions and adjustments. provide for AEMO to request and receive advice, analysis and supporting information for the assessment of Commissioning Test Plans for new Facilities. 	Out for consultation	Consultation closure	6 June 2025
Procedure Change Proposal AEPC_2025_05 Mid Peak and Electric Storage Resource Obligation Intervals	<p>AEMO has commenced the Procedure Change Process to propose amendments to the Mid Peak and Flexible Electric Storage Resource Obligation Intervals. On 15 January 2025 Amending Rules made via the Wholesale Electricity Market Amendment (Reserve Capacity Reviews Sequencing) Rules 2025, Schedule 1, amended clause 4.11.3A(c)(i) and (ii), inserted new causes 4.11.3A(aA) and (aB), and amended existing clause 4.11.3A(b). Together these changes extended the scope of the Procedure to include Flexible ESROI.</p> <p>AEMO proposes the following amendments to the Procedure to ensure consistency with the Amending Rules:</p> <ul style="list-style-type: none"> extending the scope of the Procedure to include Flexible Electric Storage Resource Obligation Intervals (Flexible ESROI); requiring AEMO to determine and record Mid Peak Electric Resource Obligation Interval (Mid Peak ESROI) data; aligning the existing wording of the Procedure with amendments made to the ESM Rules; and correcting minor grammatical and typological errors to improve descriptive accuracy. 	Out for consultation	Consultation closure	12 June 2025

ID	Summary of changes	Status	Next steps	Indicative Date
<p>Procedure Change Proposal AEPC_2025_06</p> <p>Undertaking the LT PASA</p>	<p>AEMO has commenced the Procedure Change Process to propose amendments to the Undertaking the Long Term PASA Procedure, as a result of the Wholesale Electricity Market Amendment (RCM Reviews Sequencing) Rules 2025 (Amending Rules).</p> <p>Schedule 1 of the Amending Rules introduced a new Flexible Capacity product in time for the 2025 Reserve Capacity Cycle, to incentivise capacity that can start, stop and ramp quickly. Among the changes, clause 4.5.10(aA) was amended to include Flexible Capacity and clause 4.5.10(bA) was inserted to facilitate the determination of the Flexible Reserve Capacity Target for each Capacity Year during the Long Term PASA Study Horizon.</p> <p>AEMO has therefore proposed the following amendments to the Procedure to ensure consistency with the Amending Rules and that it outlines the processes AEMO follows in relation to Flexible Capacity when conducting the Long Term PASA.</p> <p>AEMO has also proposed minor changes throughout the Procedure, including:</p> <ul style="list-style-type: none"> • Minor amendments to improve clarity, correct typographical errors and include missing information. • Updates to the Table 1 definitions. • Updates throughout the Procedure to change WEM Rules to ESM Rules, and Wholesale Market Objectives to State Electricity Objective (SEO). 	Out for consultation	Consultation closure	12 June 2025
<p>Procedure Change Proposal AEPC_2025_07</p> <p>Identification of Affected Dispatch Intervals</p>	<p>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).</p> <p>The WEM Procedure has been amended to include:</p>	Out for consultation	Consultation closure	16 June 2025

ID	Summary of changes	Status	Next steps	Indicative Date
	<ul style="list-style-type: none"> 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)]. <p>In addition to the above changes, AEMO has also taken the opportunity to:</p> <ul style="list-style-type: none"> 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. 			

ID	Summary of changes	Status	Next steps	Indicative Date
<p>Procedure Change Proposal AEPC_2025_08 WEM Procedure: IMS Interface for Network Operators</p> <p>Procedure Change Proposal AEPC_2025_09 WEM Procedure: Network Modelling Data</p> <p>Procedure Change Proposal AEPC_2025_10 WEM Procedure: Communications and Control Systems</p>	<p>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.</p> <p>The amendments to the Network Modelling Data will:</p> <ul style="list-style-type: none"> 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. <p>The amendments to the WEM Procedure: Communications and Control Systems will:</p> <ul style="list-style-type: none"> incorporate relevant requirements from the WEM Procedure: IMS Interface for Network Operators in relation to: <ul style="list-style-type: none"> Real-time SCADA data; Historical SCADA data; SCADA control; and Operational telephones, 	Out for consultation	Consultation closure	30 June 2025

ID	Summary of changes	Status	Next steps	Indicative Date
	<ul style="list-style-type: none"> • 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). 			

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	July 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	June 2025
WEM Procedure: Low Reserve Conditions	AEMO will be initiating this Procedure Change Proposal to accommodate the amendments to the ESM Rules resulting from WEM Reform. This WEM Procedure sets out how AEMO will assess a Low Reserve Condition and make a Low Reserve Condition Declaration.	Drafting in progress	Consultation	June 2025
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	July 2025
WEM Procedure: ST PASA	AEMO will be initiating this Procedure Change Proposal to accommodate the amendments to the ESM Rules resulting from WEM Reform. This WEM Procedure documents how	Drafting in progress	Consultation	July 2025

	AEMO will prepare and conduct each Short-Term Projected Assessment of System Adequacy.			
WEM Procedure: Bilateral Trade Declarations	AEMO will be initiating this Procedure Change Proposal to accommodate amendments to the ESM Rules to incorporate changes to fixed price arrangements and eligibility requirements.	Drafting in progress	Consultation	July 2025

Agenda Item 5(b): Update on the ESS Framework Review Working Group

Market Advisory Committee (MAC) Meeting 2025_06_19

1. Purpose

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

2. Recommendation

That the MAC note and provide feedback on:

- The technical analysis carried out;
- The approach to the economic and cost/benefit analysis as part of the Review; and
- The issues identified and the approach to further investigation.

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. To date the ESSFRWG has met three times, and a summary of the discussion at each meeting was presented at the last MAC meeting in May 2025.

The attached slide deck provides MAC with an overview of the technical analysis to date, the approach to the economic/cost-benefit analysis as required by 3.15.1C of the ESM Rules, and the issues identified and the approach to further investigation.

In summary, the technical assessment has found that frequency has been maintained within the prescribed limits. The investigation into the setting of ESS requirements has identified the following issues with the existing FCESS framework:

1. conservatism in technical parameters for RoCoF;
2. a lack of transparency around processes and methodology for setting ESS requirements;
3. conservative approach to the application of Performance Factors;
4. a need to better understand the process for defining the inputs of the DFCM;
5. a lack of clarity regarding the contribution mandatory primary frequency response to frequency management; and
6. a lack of consideration of new technologies in the provision of FCESS.

EPWA, with the support of GHD and AEMO, and in consultation with the ESSFRWG, is currently carrying out further quantitative analysis to investigate the:

- impact of a higher RoCoF Safe Limit (Issue 1);
- potential value of mandatory primary frequency response from unaccredited facilities (Issue 5); and
- potential value that could be gained if synthetic inertia could be accredited (Issue 6).

Issues 2, 3 and 4 will be the subject of proposals in the upcoming Consultation Paper, but do not lend themselves to quantitative analysis.

There are challenges to quantifying the costs and benefits of adjustments to the ESS requirements using statistical techniques such as regression analysis. This is due to the limited time period for analysis since new WEM commencement, seasonal variations and significant rule changes midway through the period of interest. As such, a scenario analysis approach (as outlined in the attached slide pack) is being taken to meet the requirements of 3.15.1C of the Rules to further investigate Issues 1, 5 and 6.

The scenario analysis uses a limited number of intervals to assess the materiality of the impact of changing a single variable (e.g. the ROCOF safe limit) to provide justification of the potential cost and benefit and evidence of whether the ESS requirements are set at the most cost-efficient level or whether changing that variable demonstrates that improvements can be made.

Section 3.15 of the ESM Rules also requires a review of the processes and effectiveness of the SESSM if it has been triggered during the Review period. As it has not been triggered, while not required by the ESM Rules the intent was to develop a case study to ensure it would work as intended. However, given the WEM Procedures regarding the SESSM have not yet been developed, and the additional complexity associated with carrying out the technical and economic analysis on the ESS requirements, the SESSM will no longer be reviewed as part of this project.

The next ESSFRWG meeting (yet to be scheduled) will focus on the sensitivity/scenario analysis and the provision of synthetic inertia in the WEM

The Terms of Reference, 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	ongoing

Consultation with the MAC on a draft Consultation Paper	July 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

Agenda Item 6(b) - Attachment 1 – MAC update on the ESS Framework Review



Department of Energy, Mines,
Industry Regulation and Safety
Energy Policy WA

Essential System Services (ESS) Framework Review

MAC update

19 June 2025

Working together for a
brighter energy future.

Purpose of this Review

The Coordinator of Energy, as required by section 3.15 of the ESM Rules, is carrying out a review of the ESS Standards and the basis for setting ESS requirements.

MAC is asked to note and provide feedback on:

- The outcomes of the technical analysis required by 3.15.1C(a);
- The approach to the economic and cost/benefit analysis (clauses 3.15.1C(b) – (d));
- The issues identified and the approach to further investigation; and
- The change in scope regarding the Supplementary ESS Mechanism (SESSM)

3.15.1C. A review conducted pursuant to clause 3.15.1A or clause 3.15.1B must include:

- (a) technical analyses determining the relationship between the quantity of Essential System Service scheduled and dispatched against the technical parameters in the Frequency Operating Standards;
- (b) economic analyses determining the relationship between technical parameters (including, without limitation, frequency operating bands and Oscillation Control Constraint Equation parameters) and overall cost of supply of energy and Essential System Services;
- (c) a cost-benefit study on the effects on the Network and Market Participants of providing and using higher or lower levels of each Essential System Service;
- (d) identification of the costs and benefits of changing technical parameters, including the potential for increasing or decreasing the overall cost to supply energy and Essential System Services;
- (e) a review of the processes and effectiveness of the SESSM if it was triggered during the review period; and
- (f) a public consultation process.

Approach to the analysis

To meet the requirements of clause 3.15.1C, EPWA, with the support of GHD and in consultation with the MAC's ESS Framework Review Working Group, has completed two key tasks:

- **Assessment of frequency performance:** Evaluating how the system's frequency response meets the Frequency Operating Standards (FOS)
- **Review of ESS quantity calculation and scheduling:** Analysing the methodology used to determine ESS requirements, and assessing its suitability. This includes examining whether higher than reasonably required ESS is being procured to meet the FOS.

Assessment of Frequency Performance

Since new market commencement on 1 October 2023

- **Regulation**

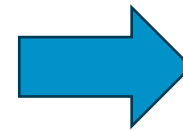
The Frequency has been maintained within Normal Operating Band (>99.8%) and Normal Operating Frequency Excursion Band during normal operation

- **Contingency Reserve**

The Frequency has been stabilised within the Credible Contingency Event Frequency Band after Credible Contingency Events, with the largest excursion recorded to date presenting a frequency nadir of 49.42 Hz.

- **Rate of Change of Frequency (RoCoF)**

The RoCoF has not exceeded the RoCoF safe limit, with the largest value recorded of -0.24 Hz/sec.



FOS has been met

The FOS has been maintained since new market start

Review of ESS Quantity Calculation and Scheduling

Key findings

Regulation quantities were determined prior to new market commencement using a statistical model – the Regulation Baseline Model (RBM). The RBM lacks comprehensive documentation on its methodology and handling of historical data. AEMO can apply real time adjustments ahead of dispatch, but the process for this is not clearly documented.

Quantities of Contingency Reserve Raise (CRR) are derived by use of AEMO's single-frequency model, Dynamic Frequency Control Model (DFCM), using combination of real-time inputs (e.g. demand and inertia) and some generic empirically derived parameters (e.g. load relief). Documentation on DFCM methodologies is not always clear and there is limited transparency and potentially outdated information on executions and revisions.

The RoCoF Safe Limit is more conservative in the WEM than in other comparable jurisdictions, resulting in higher levels of RoCoF services being required.

WEM	NEM	New Zealand	Ireland (EI/NI)
0.5 Hz/sec	1 Hz/sec	<1.2 Hz/sec	1 Hz/sec

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.	Reassess the appropriate value for the RoCoF safe limit. <ul style="list-style-type: none"> AEMO is currently reviewing 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: <ul style="list-style-type: none"> 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).	<p>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.</p> <p>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.</p> <p>Facilities with a zero PF will not be enabled, even if they submit bids for 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.</p>	<p>AEMO to reassess the determination of PFs</p>
There is a need to better understand the process for defining the inputs of the DFCM.	<p>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.</p>	<p>AEMO to review DFCM inputs and assumptions.</p>

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

Issue	Finding/significance	Proposed action
Clarity regarding the contribution of mandatory PFR to frequency management	<p>All generating systems must be equipped with (droop based) primary frequency control and must adjust active power output in response to frequency deviations.</p> <p>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.</p>	<p>Analysis to establish general PFR headroom from unaccredited ESS facilities and impact on system frequency if they were considered.</p> <p>Inclusion of this additional PFR would have to account for its dynamically changing quantities.</p>
Consideration of new technologies in the provision of FCESS	<p>Virtual inertia from BESS is not considered increasing risk of shortfalls and need for direction.</p>	<p>Analysis to assess the potential contribution of BESS and other technologies as inertia providers.</p> <p>Considering how synthetic inertia can participate in ESS.</p>

Relationship between the technical parameters and the overall cost ESS

Economic analysis

There are challenges with determining relationships in a changing market. Ability to do regression analysis to meet the requirements of 3.15.1C(b) in this review has been impacted by:

- The limited time period
- Seasonal variations; and
- Rule/market changes within the period of interest.

Additionally:

- quantifying sensitivities would require access to the full DFCM; and
- regression analysis relies on interdependence of the input variables to determine the true sensitivity of the dependent variable to each input individually. This means the accuracy of individual sensitivities could be influenced to some extent by their interdependence.

Approach to the economic and cost/benefit analysis

Further quantitative analysis is underway to investigate 3 of the issues to be consulted on as part of this review.

Task A - RoCoF Safe Limit

Aim: assess the impact of higher RoCoF safe limit

Task B- Accounting for mandatory primary frequency response (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.

Task C - Synthetic Inertia

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

A small number of intervals (up to 10 have been chosen) for each Task, and analysis will change one variable, to determine whether any improvements/efficiencies can be gained, everything else being constant. All days selected are post 20 November 2024.

While the veracity and accuracy of outcomes based on only 10 market intervals may not be comprehensive or definitive, it will allow a comparison to the counterfactual. This work will not produce precise, quantitative cost or benefit associated with the change but will provide an indication of the materiality to guide further work.

Supplementary Essential System Service Mechanism (SESSM)

An output of a review of the ESS Process and Standards required under Section 3.15 is a review of the processes and effectiveness of the SESSM. It is therefore appropriate to undertake a review of SESSM in conjunction to ensure that in case of inadequate supply of FCESS in the Real-Time Market that the mechanism would work as intended.

Noting that the SESSM has not been triggered, there have been challenges in determining the adequacy of the core processes and design elements of the SESSM.

As the WEM Procedures regarding the SESSM have not yet been developed and the additional complexity associated with carrying out the technical and economic analysis on the ESS requirements, the SESSM will no longer be reviewed as part of this project.

Appendix

Jurisdictional comparison

Insights and observations

1. **Single Contingency and Regulation market** – more complex setting of ESS quantities (WEM)
2. **Mandatory PFR** – improves normal operating frequency (IE/Ni, NEM, NZ)
3. **Minimum synchronous generation** – guaranteed presence of synchronous machines
4. **System Inertia** – setting minimum levels outside of markets (IE, NEM, NZ)
5. **RoCoF limits** – less conservative in other jurisdictions
6. **LCSC** – large relative to size of network and peak demand (WEM)
7. **Load relief** – similar across most jurisdictions, lowest in NEM
8. **Frequency Regulation** – higher in jurisdictions without PFR contributions (WEM)
9. **Future frequency services** – Increase in VRE penetration may drive additional FCESS requirements
10. **Contracts and markets** – FCESS markets to generate competitive tension common across most jurisdictions

ESS	WEM	NEM	New Zealand	Ireland (EI/Ni)
Normal frequency band	±0.2 Hz	±0.15 Hz	±0.2 Hz	±0.1 Hz
LCSC	510 MW	750 MW	520 MW ¹	500 MW
Contingency frequency band	-1.25 / +1 Hz	±1 Hz	±0.75 Hz	±1 Hz
CRR	<460 MW	<750 MW	<400/125 MW	<378 MW
CRL	>-165 MW ²	>-400 MW ²	TBC	>-158 MW ²
RoCoF (H)	0.5 Hz/sec	1 Hz/sec	<1.2 Hz/sec	1 Hz/sec
RR	110 MW	220 MW	30 MW ⁴	125 MW
RL	110 MW	210 MW	30 MW ⁴	125 MW

Jurisdictional comparison - further insight

- 1: **Single Contingency and Regulation market in the WEM:** other jurisdictions have multiple markets and services, for example the NEM has a very fast frequency response market for a one second response and a fast frequency response market for six seconds, meaning that it's relatively simpler to procure the right service. The shallow market in the WEM means there is not enough competition for multiple markets, but the single market for each type of service creates more complexity in dispatch;
- 2: **Mandatory PFR** :in New Zealand (NZ), the provision of MPFR is the reason very little Regulation services are procured, other than for the correction of the area control error;
- 3: **Minimum synchronous generation:** in the NEM and Ireland minimum synchronous generation requirements are mandated for system strength purposes, and facilities are often dispatched at minimum generation levels leaving significant headroom;
- 4: **System Inertia:** system inertia is set at minimum levels in both the NEM and Ireland. NZ has not done so because 90% of the fleet is synchronous, but will likely do so once instantaneous nonsynchronous generation penetration levels reach 50%, which is likely five to ten years away;
- 6: **LCSC:** in other systems it is the single largest generator rather than a single line contingency (that considers multiple generators) that sets the LCSC;
- 9: **Future frequency services:** in Ireland most of the renewable generation is wind, which is susceptible to voltage drops arising from power reduction. The small geographic area means weather fronts affect a large portion of the fleet. Ireland has a frequency ramping service driven by voltage fluctuations;
- 10: **Contracts and markets** Ireland is moving away from a contract-based to a market-based structure



Agenda Item 5(c): Major Projects Working Group update and request for nomination endorsement

Market Advisory Committee (MAC) Meeting 2025_06_19

1. Purpose

This report to the Market Advisory Committee (MAC) sets out the latest activities of the Major Projects Working Group (MPWG) as required by 6.2 of the Terms of Reference for the AEMO Major Projects Working Group. It also requests that, as set out under the MPWG Terms of Reference, the MAC endorse a nomination from a representative which is not a Rule Participant, EPWA or Expert Consumer Panel representative.

2. Recommendations

1. That the MAC endorses a MPWG member nomination:
 - Under the [MPWG terms of reference](#) nominations from organisations which are not Rule Participants, EPWA or part of the Expert Consumer Panel are required to be endorsed by the MAC before being approved by the MPWG Chair. The MPWG Chair is seeking MAC's endorsement of Adam Stephen from Entego's nomination. Adam's details, including his suitability based on his ability to advance the objectives of the MPWG, without eroding the effectiveness of MPWG meetings, are set out below.

Applicant: Adam Stephen

Organisation: Entego

Position: General Manager, Energy Markets

Suitability assessment: Adam has contributed to implementation of major market reform initiatives and has an understanding and appreciation of how major projects can impact a range of market participants. Adam provides a range of market services on behalf of WEM participants and is therefore familiar with and regularly interacts with AEMO and its systems.

2. That the MAC notes the latest activities of the MPWG:
 - Call and acceptance of nominations
AEMO published a call for nominations for members to the MPWG on 28 May 2025. Nominations closed at 5:00pm on 10 June 2025. In accordance with the [MPWG terms of reference](#), the MPWG Chair has approved 11 Rule Participants as members, and one nominee from EPWA. The MPWG Chair has also approved a representative from the ERA on an ongoing basis.
 - Scheduled the first MPWG
AEMO has scheduled and issued invites to the first MPWG meeting on 25 June 2025.

1. Background

- AEMO tabled the proposal to establish the MPWG under clause 2.3.17 of the Wholesale Electricity Market (WEM) Rules and section 9 of the MAC Constitution at the 25 July 2024 MAC meeting.
- The MPWG was proposed to be established to provide input and strategic advice to support the planning and implementation of major AEMO projects.
- The MAC provided support for the proposal and requested that AEMO develop a draft Terms of Reference for consideration by the MAC.
- AEMO initially developed a draft Terms of Reference and submitted the relevant materials for tabling at the November 2024 MAC meeting. As AEMO has progressed further details around the proposed processes since this date, the materials have been updated accordingly.
- The final MPWG Terms of Reference was accepted by the MAC on 1 May 2025.

2. Next Steps

- The MPWG will report on the activities of the MPWG at the next and subsequent MAC meetings.

Agenda Item 6: WEM Operation Effectiveness Report – Proposals

Market Advisory Committee (MAC) Meeting 2025_06_19

1. Purpose

Energy Policy WA (EPWA) to update the MAC on the Coordinator of Energy's (Coordinator's) inaugural WEM Operation Effectiveness Report.

2. Recommendation

That the MAC notes the proposals in the WEM Operation Effectiveness Report.

3. WEM Operation Effectiveness Report

3.1. Background

- Under clause 2.16.13D of the Electricity System and Market (ESM) Rules, the Coordinator must provide the Minister with a report dealing with the matters identified through its market monitoring activities at least once every three years, with the first such report due by 1 July 2025 (the WEM Operation Effectiveness Report).
- Clauses 2.16.13A and 2.16.13B provide that the Coordinator must monitor:
 - market design problems and inefficiencies;
 - the effectiveness of the compliance monitoring and enforcement measures in the ESM Rules and Regulations, including but not limited to:
 - the effectiveness of the Economic Regulation Authority's (ERA's) surveillance activities under sections 2.16A to 2.16D; and
 - appropriateness of the parameters for determining a Material Portfolio and Material Constrained Portfolio under clauses 2.16C.1 and 2.16C.2; and
 - the effectiveness of the Australian Energy Market Operator (AEMO) in carrying out its functions under the Regulations, the ESM Rules and WEM Procedures;
 - the effectiveness of the Network Operators in carrying out their functions under the ESM Rules and WEM Procedures; and
 - the efficiency and effectiveness of the methodologies for determining: the Market Price Limits and the Benchmark Reserve Capacity Price.
- The WEM Operation Effectiveness Report will include identified market design inefficiencies, an assessment of the effectiveness of the market bodies in undertaking their respective responsibilities under the ESM Rules and market trend analysis. It will also provide any recommended measures to increase the market effectiveness in meeting the new State Electricity Objective.

- Given the immaturity of the new Real-Time Market, and the further changes that have been, and continue to be, made following its commencement, it is EPWA's view that there has not been sufficient time since market start to perform a detailed assessment of the effectiveness and efficiency of the new and evolving market mechanisms.
- The Scope of Work for the WEM Operation Effectiveness Report was presented to the MAC at the 17 October 2024 Meeting.

3.2. Emerging themes

- A key theme that has 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.
- Transparency ensures that current and potential Market Participants can effectively make investment decisions and operate within the WEM with full knowledge of what is required from them. This also gives greater clarity to potential investors about the operation of the WEM and investment opportunities, while providing comfort that the market is operating effectively and efficiently.
- Additionally, it is the Coordinator's view that more direct linkages may be required in the ESM Rules to increase the effectiveness of the market, especially in relation to the third environmental limb of the SEO.

3.3. Draft Proposals

Proposal	Rationale
<p>Transparency</p> <p>The Coordinator and the relevant market bodies, where applicable, should develop appropriate measures to make improvements to transparency in the WEM and its associated processes, including the following:</p> <p>2.1 Provision of further detail on the cause of any direction/intervention by AEMO.</p> <p>2.2 Improvements in relation to operational forecasting.</p> <p>2.3 Completion and publication of WEM Procedures in a timely manner, including prompt updates when required.</p> <p>2.4 Making complete and verified market data available through the publicly accessible web portal in easily accessed data formats.</p> <p>2.5 Proactive reporting of Market bodies on WEM design flaws and areas for improvement to the Coordinator and, where appropriate, the ERA.</p>	<p>Greater transparency will provide current and prospective participants with adequate information they require to make operational and investment decisions.</p> <p>The need for increased transparency has, in the opinion of the Coordinator, several contributing factors in the new Real-Time Market. For example, some of the issues detailed are a direct result of the volume of work that has been required by the market bodies to establish the new Real-Time Market, while others are a result of an adjustment period. Others still result from the pace of change of the energy market.</p> <p>Nevertheless, these are all issues that directly impact the effective operation of the market and have the potential to influence investment decisions by both current and prospective Market Participants.</p>

Proposal	Rationale
<p>2.6 Provision of clearer information to Market Participants regarding the current priorities and focus of the ERA's surveillance and compliance activities, noting that confidential information must be protected.</p> <p>2.7 Transformation of the Transmission System Plan, in the medium term, into a broader Networks Plan that includes a complete transmission and distribution development roadmap, to provide an informed view of investment opportunities. Supporting information should include constraint data, cost-benefit analyses and improved distribution level heat maps.</p> <p>2.8 Improvement of accessibility across all market bodies' websites and published materials.</p>	
<p>State Electricity Objective</p> <p>The Coordinator will work with the market bodies and other stakeholders on how to integrate the SEO more broadly within the ESM Rules, and will monitor this in the next WEM Operation Effectiveness Report.</p>	<p>Such direct linkages with the SEO in the Rules can focus the efforts of the market bodies in performing their functions under the ESM Rules, especially in relation to the environmental limb of the SEO.</p>

3.4. Next steps

- Provide the WEM Operation Effectiveness Report to the Minister by 1 July 2025.
- Under clause 2.16.15A of the ESM Rules, the Coordinator, after consultation with the Minister, must publish a version of the report which has confidential or sensitive data aggregated or removed.
- The aim of the WEM Operation Effectiveness Report is to provide an evidence base and reference for potential future Rule Changes to improve market effectiveness, such as improving transparency.

Agenda Item 7: Market Development Forward Work Program

Market Advisory Committee (MAC) Meeting 2025_06_19

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 closes the Reserve Capacity Mechanism Review Working Group and the Demand Side Response Review Working Group; and
 - that the MAC notes the updates to the Market Development Forward Work Program provided in Tables 1-3.

3. Process

Stakeholders may raise issues for consideration by the MAC at any time by sending an email to the MAC Secretariat at energymarkets@demirs.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 Assessment	2 May 2024 MAC Meeting	Delayed	The project has been rescheduled for 2025 because of resource constraints and to better align with other projects
Essential Systems Services Framework Review	2 May 2024 MAC Meeting	Open	Review the ESS Standards and the basis for setting ESS requirements, and develop metrics to be used for ongoing monitoring of ESS
AEMO Procedure Change	1 May 2017 MAC Meeting	Open	Ongoing process
Power System Security and Reliability Standards	23 November 2023 MAC Meeting	Open	Publication of the Consultation Paper
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
Reserve Capacity Mechanism Review	21 September 2021 MAC Meeting	Finishing Pending the MAC's decision	Closing the Reserve Capacity Mechanism Review Working Group (RCMRWG) at 19 June 2025 MAC meeting
Cost Allocation Review	14 December 2021 MAC Meeting	Finishing	Outstanding Amending Rules will come into operation at a time determined by the Minister and published in a Gazette
Demand Side Response Review	16 March 2023 MAC Meeting	Finishing Pending the MAC's decision	Close the Demand Side Response Review Working Group (DSRRWG) at 19 June 2025 MAC meeting

Table 2 – Market Development Forward Work Program

Review	Issues	Status and Next Steps
Reserve Capacity Mechanism (RCM) Review	A review of the RCM, including a review of the Planning Criterion.	<ul style="list-style-type: none"> The MAC established the RCM Review Working Group (RCMRWG). Information on the Working Group is available at Reserve Capacity Mechanism Review Working Group, including: <ul style="list-style-type: none"> the Terms of RCMRWG, as approved by the MAC; the list of RCMRWG members; meeting papers and minutes from the RCMRWG meeting on 20 January 2022, 17 February 2022, 17 March 2022, 5 May 2022, 2 June 2022, 16 June 2022, 14 July 2022, 2 July 2022, 13 October 2022, 24 November 2022; 15 December 2022, 1 February 2023, 16 February 2023, 2 March 2023, 22 March 2023, 6 July 2023, 13 July, 30 August 2023. The following papers have been released and are available on the RCM Review webpage at Reserve Capacity Mechanism Review: <ul style="list-style-type: none"> the Scope of Works for the review, as approved by the Coordinator; the Stage 1 Consultation Paper; the Paper on the Review of International Capacity Mechanisms; submissions on the Stage 1 Consultation Paper; the RCM Review Information Paper (Stage 1) and Consultation Paper (Stage 2); submissions on the RCM Review Consultation Paper (Stage 2);

Table 2 – Market Development Forward Work Program

Review	Issues	Status and Next Steps
		<ul style="list-style-type: none"> • the RCM Review Information Paper (Stage 2); • the RCM – ESM Amending Rules Exposure Draft; • submissions on the RCM – ESM Amending Rules Exposure Draft; • responses to stakeholder submissions on the Exposure Draft if the RCM Review ESM Amending Rules; • the Wholesale Electricity Market Amendment (Reserve Capacity Reform) Rules 2023 available at Wholesale Electricity Market Amendment (Reserve Capacity Reform) Rules 2023 (www.wa.gov.au); • the Exposure Draft on re-sequencing RCM Review ESM Amending Rules; • submissions on the Exposure Draft on re-sequencing RCM Review ESM Amending Rules; and • response to stakeholder submissions on the Exposure Draft on re-sequencing RCM Review ESM Amending Rules • The Wholesale Electricity Market Amendment (RCM Review Sequencing) Rules were approved by the Minister for Energy and published in a government gazette 14 January 2025. • Close the RCMRWG and remove the RCM Review from the Market development Forward Work Program pending the MAC's approval at the 19 June 2025 meeting.

Table 2 – Market Development Forward Work Program

Review	Issues	Status and Next Steps
Cost Allocation Review (CAR)	<p>A review of:</p> <ul style="list-style-type: none"> the allocation of Market Fees, including behind the meter (BTM) and Distributed Energy Resources (DER) issues; cost allocation for Essential System Services; and <ul style="list-style-type: none"> Issues 2, 16, 23 and 35 from the MAC Issues List. 	<ul style="list-style-type: none"> The MAC established the Cost Allocation Review Working Group (CARWG). Information on the CARWG is available at Cost Allocation Review Working Group, including: <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 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
		<ul style="list-style-type: none"> 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.
Review of the Participation of Demand Side in the Wholesale Electricity Market	<p>The scope of this review is to:</p> <ul style="list-style-type: none"> identify the different ways that Loads/Demand Side Response can participate across the different WEM components; identify and remove any disincentives or barriers for Loads/Demand Side Response participating across the different WEM components; and identify any potential for over- or under-compensation of Loads/Demand Side Response (including as part of 'hybrid' facilities") as a result of their participation in the various market mechanisms. 	<ul style="list-style-type: none"> The MAC established the Demand Side Response Review Working Group (DSRRWG). Information on the DSRRWG is available at Demand Side Response Review Working Group, including: <ul style="list-style-type: none"> the Terms of Reference for the DSRRWG, as approved by the MAC; the list of DSRRWG members; meeting papers and minutes from the DSRRWG meeting on 10 May 2023, 7 June 2023, 5 July 2023, 2 August 2023 and 29 November 2023, 7 February 2024 and 15 February 2024. The following papers have been released and are available on the DSR Review webpage at Demand Side Response Review

Table 2 – Market Development Forward Work Program

Review	Issues	Status and Next Steps
		<ul style="list-style-type: none"> the Scope of Work for the review, as approved by the Coordinator; the Demand Side Response Review Consultation paper; the submissions received on the Demand Side Response Review Consultation paper; the Demand Side Response Review Information Paper; the Demand Side Response Review – ESM Amending Rules Exposure Draft; the submissions received on the Demand Side Response Review – ESM Amending Rules Exposure Draft; response to submissions on the DSR ESM Amending Rules Exposure Draft; and response to stakeholder submissions Demand Side Response Review – ESM Amending Rules Exposure Draft. Review outcomes 1, 2 and 12 were included in the Amending Rules made by the Minister on 2 October 2024. Review outcome 3 was superseded by changes to registration of separate facilities where the connection point and measuring point are not electrically equivalent that was included in the Amending Rules made by the Minister on 2 October 2024. Review outcome 4 about the dynamic baseline method will remain open until rule changes to facilitate AEMO's timeline for implementing the outstanding elements of the Reserve Capacity Mechanism Review Rules are made. Amending Rules for the outstanding elements of the Reserve Capacity Mechanism Review Rules were approved by the

Table 2 – Market Development Forward Work Program

Review	Issues	Status and Next Steps
		<p>Minister for Energy and published in a Government Gazette 14 January 2025.</p> <ul style="list-style-type: none"> Close the DSRRWG and remove the Review of the Participation of Demand Side in the Wholesale Electricity Market from the Market development Forward Work Program pending the MAC's approval at the 19 June 2025 meeting.
WEM Procedure Content Assessment project	<p>The scope of this project is to:</p> <p>Review current WEM Procedures against a criterion developed by the Procedure Change Process Review and determine if a matter should be addressed in the ESM Rules or WEM Procedures.</p>	<ul style="list-style-type: none"> At the 2 May 2024 MAC meeting, the MAC established the WEM Procedure Content Assessment Working Group and: <ul style="list-style-type: none"> supported the Scope of Work; and requested that the project schedule be revised. Following feedback at the 2 May 2024 MAC meeting and other discussions, the Terms of Reference is being revised.
Review of the Market Advisory Committee (MAC)	<p>The scope of this review is to ensure that the purpose, representation, process and operations of the MAC are fit for purpose, and in particular, that it operates efficiently and provides balanced, timely and useful advice to the Coordinator.</p>	<ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 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;

Table 2 – Market Development Forward Work Program

Review	Issues	Status and Next Steps
		<ul style="list-style-type: none"> Market Advisory Committee Review - Coordinator of Energy's Consultation Paper.
Procedure Change Process (PCP) Review	A review of the PCP to address issues identified through Energy Policy WA's consultation on governance changes.	<ul style="list-style-type: none"> 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.
Review of the Power System Security and	The scope of this review is to:	<ul style="list-style-type: none"> The MAC established the PSSR Standards Working Group (PSSRSWG). Information on the PSSRWG is available at Power

Table 2 – Market Development Forward Work Program

Review	Issues	Status and Next Steps
Reliability (PSSR) Standards	<ul style="list-style-type: none"> 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 <p>draft amending Rules and other regulatory changes, as necessary.</p>	<p>System Security and Reliability (PSSR) Standards Working Group including:</p> <ul style="list-style-type: none"> 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.
Review of the Essential Systems Services (ESS) Framework	<p>The Coordinator of Energy (Coordinator) is conducting a review of the ESS Framework (the Review), incorporating:</p> <ul style="list-style-type: none"> 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). <p>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.</p>	<ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 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 and 26 February and 26 March 2025 meetings. <p>The following papers have been released and are available on the ESS Framework Review webpage:</p> <ul style="list-style-type: none"> The Scope of Work for the Review.

<p>WEM Investment Certainty (WIC) Review</p>	<p>The WIC Review will consider, design and implement the following five reforms that have been announced by the Minister for Energy, which are aimed at providing further investment certainty to assist the decarbonisation of the WEM:</p> <ol style="list-style-type: none"> (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. 	<ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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) Rules 2025. The Rules were approved by the Minister for
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Table 2 – Market Development Forward Work Program

Review	Issues	Status and Next Steps
		Energy and published in the Government Gazette on 14 January 2025.
Forecast quality	Review of Issue 9 from the MAC Issues List.	<ul style="list-style-type: none"> This review has been deferred.
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).	<ul style="list-style-type: none"> 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.	<ul style="list-style-type: none"> 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.

Agenda Item 8: Overview of Rule Change Proposals (as of 12 June 2025)

Market Advisory Committee (**MAC**) Meeting 2025_06_19

- 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 01 May 2025 MAC Meeting

Gazette	Date	Title	Commencement
2025/64	3/06/2025	Electricity System and Market Amendment (Tranche 8) Rules 2025	<ul style="list-style-type: none"> • Schedule 1 commenced 3 June 2025. • Schedule 2 commenced 3 June 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.

Rule Change Made by the Minister and Awaiting Commencement

Gazette	Date	Title	Commencement
2023/165	12/12/2023	Wholesale Electricity Market Amendment (Reserve Capacity Reform) Rules 2023	<ul style="list-style-type: none"> Schedules 2, 3 and 4 will commence at a time specified by the Minister in a notice published in the Gazette.
2024/66	7/06/2024	Wholesale Electricity Market Amendment (Cost Allocation Reform) Rules 2024	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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.