



## Minutes

<b>Meeting Title:</b>	Market Advisory Committee ( <b>MAC</b> )
<b>Date:</b>	17 May 2022
<b>Time:</b>	9:30am – 11:42am
<b>Location:</b>	Videoconference (Microsoft Teams)

<b>Attendees</b>	<b>Class</b>	<b>Comment<sup>1</sup></b>
Sally McMahon	Chair	
Dean Sharafi	Australian Energy Market Operator ( <b>AEMO</b> )	
Aditi Varma	Network Operator	Proxy for Zahra Jabiri
Genevieve Teo	Synergy	
Paul Keay	Small-Use Consumer Representative	
Noel Schubert	Small-Use Consumer Representative	
Geoff Gaston	Market Customer	
Timothy Edwards	Market Customer	
Patrick Peake	Market Customer	
Wendy Ng	Market Generator	
Jacinda Papps	Market Generator	
Rebecca White	Market Generator	
Paul Arias	Market Customer	
Peter Huxtable	Contestable Customer	
Noel Ryan	Observer appointed by the Minister	
Rajat Sarawat	Observer appointed by the Economic Regulation Authority ( <b>ERA</b> )	

<b>Also in Attendance</b>	<b>From</b>	<b>Comment</b>
Dora Guzeleva	MAC Secretariat	Observer
Laura Koziol	MAC Secretariat	Observer
Shelley Worthington	MAC Secretariat	Observer

Also in Attendance	From	Comment
Richard Bowmaker	Robinson Bowmaker Paul ( <b>RBP</b> )	Presenter
Ajith Sreenivasan	RBP	Observer
Grant Draper	Marsden Jacob Associates ( <b>MJA</b> )	Presenter
Andrew Campbell	MJA	Observer

Apologies	From	Comment
Martin Maticka	Australian Energy Market Operator ( <b>AEMO</b> )	
Patrick Peake	Market Customer	
Tim Robinson	RBP	
Zahra Jabiri	Western Power	

Item	Subject	Action
<b>1</b>	<b>Welcome</b> <p>The Chair opened the meeting at 9:30am with an Acknowledgement of Country.</p> <p>The Chair reminded all that the role of the MAC is to advise the Coordinator and that any advice must consider the interest of the WEM, and reminded observers to raise any issues they have with official members.</p> <p>The Chair reminded members that she is available to meet members individually offline, noting she would be meeting with Mr Schubert and Mrs Papps.</p> <p>The Chair requested that members have their video enabled during meetings unless there were connection or bandwidth issues.</p> <p>The Chair reminded members the meetings will be recorded to assist with taking minutes.</p> <p>The Chair advised that her position as expert panel member on the WA Electricity Review Board remains current.</p>	
<b>2</b>	<b>Meeting Apologies/Attendance</b> <p>The Chair noted the attendance and apologies as listed above.</p>	
<b>3</b>	<b>Minutes of Meeting 2022_04_05</b> <p>The MAC accepted the minutes of the 5 April meeting as a true record of the meeting.</p> <p><b>Action: The MAC Secretariat to publish the minutes of the 5 April 2022 MAC meeting on the Coordinator’s Website as final.</b></p>	<b>MAC Secretariat</b>
<b>4</b>	<b>Action Items</b> <p>Mr Sharafi noted AEMO was unable to include any new prudential changes into the reform work program.</p>	

Item	Subject	Action
	<p>The Chair requested further information on the context of Mr Sharifi's statement.</p> <p>Mr Gaston noted that he had sent some information to Ms Guzeleva highlighting some concerns that he considered need to be addressed at a later stage, noting Ms Guzeleva had responded. The Chair advised these matters would be discussed offline to determine if they needed to be dealt with by the MAC.</p>	
<b>5</b>	<p><b>Market Development Forward Work Program</b></p> <p>The paper was taken as read and the Chair noted updates in red were to be reviewed and discussed. The following topics were discussed.</p> <ul style="list-style-type: none"> <li>• <b>The Reserve Capacity Mechanism Review Working Group</b> To be discussed in more detail later in the meeting.</li> <li>• <b>The Cost Allocation Review Working Group</b></li> <li>• To be discussed in more detail later in the meeting.</li> <li>• <b>Item 22</b> The Chair noted action item 22, is closed, but if there is any residual issues, the MAC may have to look at a new item on those.</li> </ul>	
<b>6</b>	<p><b>Update on Working Groups</b></p>	
	<p><b>(a) AEMO Procedure Change Working Group (APCWG)</b></p> <p>The paper was taken as read. Mr Sharifi confirmed that there was no AEMO procedure change activity this month [May].</p> <p><b>(b) RCM Review Working Group (RCMRWG)</b></p> <p>The Chair noted that the recommendation in the paper is to note the Minutes of the last meeting and the actions in response to the MAC feedback at the last MAC meeting in April. The Chair to confirm with Ms Guzeleva that the updates to the Minutes have been adopted.</p> <p>The Chair advised the MAC to note the RCMRWG discussion on the initial results of the system stress modelling and noted that the meeting papers provide:</p> <ul style="list-style-type: none"> <li>• an update on the process to date</li> <li>• minutes of the last meeting</li> <li>• a presentation which presents the results, highlighting three main areas on which MAC feedback was being sought: <ul style="list-style-type: none"> <li>○ should curtailed injection be part of a capacity mechanism?</li> <li>○ should ramping capability be part of a capacity mechanism?</li> <li>○ should a two-limbed planning criterion be retained?</li> </ul> </li> </ul> <p>The Chair noted the papers were taken as read.</p> <p>Mr Bowmaker from RBP provided a presentation to facilitate discussion with the MAC, noting the appendix to the presentation circulated includes detailed modelling outputs from the modelling done to date.</p>	

Item	Subject	Action
	<p data-bbox="300 253 392 282">Slide 3</p> <p data-bbox="300 300 1203 403">The Chair requested further elaboration on the response to the RCMRWG feedback to ensure it had been captured in the way it was intended.</p> <p data-bbox="300 421 1197 486">Mr Bowmaker ran through the points on the slide, noting in particular that:</p> <ul data-bbox="300 504 1220 1196" style="list-style-type: none"> <li data-bbox="300 504 1220 645">• Point 2: a question has been raised whether various aspects of each of the system stress events can be solved through the RCM or left to the energy market and that there would be discussion on this moving forward.</li> <li data-bbox="300 663 1220 804">• Point 5: the team is happy to receive input on design directions, noting RBP is familiar with assessing projects for investors and will be incorporating into the design. The team would welcome input on any particular areas that may be difficult for investors.</li> <li data-bbox="300 822 1220 1066">• Point 6: The WOSP that is currently available is fairly old and on a different basis to the Electricity Statement of Opportunities (<b>ESOO</b>) so inconsistency will occur if the two are combined. The purpose of the modelling is to forecast system stress events under different future demand and generation scenarios. RBP will continue using ESOO forecasts and projecting those forward beyond the ESOO horizon.</li> <li data-bbox="300 1084 1220 1149">• Mr Schubert sought to clarify whether the ESOO being used was last years, noting there was a new one coming out in June.</li> <li data-bbox="300 1167 1220 1196">• Mr Bowmaker confirmed that was correct.</li> </ul> <p data-bbox="300 1214 392 1243">Slide 4</p> <ul data-bbox="300 1261 1220 1473" style="list-style-type: none"> <li data-bbox="300 1261 1220 1473">• Mr Bowmaker noted the modelling is still ongoing and will be refined on with a Monte Carlo simulation to improve accuracy. The team is now looking for the MAC to provide guidance on those preliminary design options as indicated on each issue, noting some of those initial decisions may need to be revisited in later stages.</li> </ul> <p data-bbox="300 1491 392 1520">Slide 6</p> <ul data-bbox="300 1538 1220 2024" style="list-style-type: none"> <li data-bbox="300 1538 1220 1751">• Initial system stress modelling has been conducted which is feeding into analysis on the required capacity services going forward. RBP will be moving into the economic modelling to look at the impacts of Certified Reserve Capacity (<b>CRC</b>) allocation and Benchmark Reserve Capacity Price (<b>BRCP</b>) options and how that affects future capacity mix.</li> <li data-bbox="300 1769 1220 1834">• Ms White noted an action from RCMWG was for RBP to do some further modelling that better captured peak events.</li> <li data-bbox="300 1852 1220 2024">• Mr Bowmaker responded that RBP would incorporate more of a Monte Carlo simulation approach to the modelling going forward, avoiding averaging and instead using individual historical load shapes and multiple modelling iterations to better capture peaks and ramping events.</li> </ul>	

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#### Slide 8

- Mr Bowmaker noted the characteristics of capacity that would be needed based on the modelling as per the slide.
- The Chair clarified that 'significant capacity to balance generation' referred to the technologies that are actually able to help with the problem of having high levels of intermittent or non-scheduled generation, noting that this goes to whether or not the market needs to value the different characteristics of different technology.

#### Slide 9

- Mr Bowmaker noted that one of the key issues is whether it should be the role of the new RCM to deal with the issue of minimum demand and, if so, what are the metrics that could be used.
- Mr Schubert referred to discussions in the November 2021 MAC meeting noting there is a lot of flexible load that is not incentivized to turn on during periods of low demand. Market mechanisms should ensure flexible demand turns on in a low demand situation, with curtailment of renewable energy used as a last resort.
- The Chair noted that this will be covered by the review and asked Mr Schubert to check whether the recommendation is consistent with that view or whether another issue needs to be captured as a supporting assumption.

#### Slide 10

- Mr Bowmaker noted the general agreement in the RCMRWG and that Low load is an issue that needs to be addressed and dealt with through real time activity rather than having a separate curtailed injection as a product within the RCM.

#### Slide 11

- Mr Bowmaker noted the preliminary direction was that curtailed injection will not be included in the RCM and asked whether the MAC agreed with that preliminary direction.
- Mr Huxtable noted that building flexibility into demand side assets typically requires long lead times and capital expenditure because they are usually sized to be fit for purpose.
- Mr Bowmaker noted there were two tranches of demand response: what is existing and can be used without a lot of capital expenditure and major projects with longer lead times that can add this flexible demand.
- The Chair noted the preliminary direction is that the RCM does not need to deal with the issue of curtailed injection because there are more effective ways of dealing with it and there are work programs in place that are addressing it.
- Mr Schubert noted that, provided other market mechanisms incentivize flexible loads to consume during low load periods, that position is acceptable but that Mr Huxtable's point on capital expenditures is very valid for large scale projects and that

Item	Subject	Action
	<p>commercial signals were not getting through to customers with existing demand flexibility.</p>	
	<ul style="list-style-type: none"> <li>• The Chair reiterated that the focus of this point in the discussion was to get agreement that having curtailment of injection excluded from the RCM at this stage is not viewed as a problem by the MAC, noting other work may address this.</li> <li>• Mr Sharafi agreed the focus of the RCM review should not be dealing with the low load issues but that if, through this work, there are opportunities identified that also address some of these issues it was beneficial to recognise them.</li> <li>• The Chair requested that RBP captures that these issues are being raised and it is understood that they are addressed elsewhere.</li> <li>• Ms White noted her feedback to the RCMRWG was that it is important to consider low load in some manner and that this preliminary direction should be open to change later in the project if new information justifies this. Ms White noted that while it can be useful to narrow the scope and have decision gates to help focus the work, if it later turns out that issues need reconsideration then change should be considered. Additionally, on out of scope issues, the WEM is interwoven and not looking at the flow on effects as part of the project is a risk and therefore consideration should be given to whether out of scope items will need to be reopened in the interest of ensuring the market design works as a whole.</li> <li>• Ms Guzeleva noted that time was of the essence due to the need to make changes as soon as possible to ensure power system security in the context of the RCM's long lead times. Given this, it would be counterproductive to reopen the scope and miss the opportunity to make changes, and issues would be logged as they arise. She also noted that the participation of flexible loads in the energy market needs a broader review.</li> <li>• The Chair agreed with Ms Guzeleva that an element of pragmatism was required due to the need to keep moving forward, noting that it was not out of the question to revisit something if it was required but that each review will not be able to address every issue.</li> </ul>	
	<p>Slide 12</p>	
	<ul style="list-style-type: none"> <li>• Mr Bowmaker continued with design options to achieve investment in capacity products sufficient to meet ramping needs, including the options to integrate ramping capability in the RCM or to procure it as an Essential Systems Service (<b>ESS</b>) (as per the slide)</li> </ul>	

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Slide 13

- Mr Bowmaker noted that there was mixed feedback from the RCMWG as to whether flexibility should be incorporated in the RCM or not.

Slide 14

- The team has not come to a conclusion on ramping as the economic modelling is to provide insight into what sort of capacity is expected to be introduced into the market as a result of the reformed RCM.
- Ms Varma noted that AEMO is procuring about 100 megawatts of fast ramping or fast frequency response service through the Non-Co-optimised ESS (**NCESS**) framework and sought to clarify if that will feature in the modelling to see whether 100 megawatts will be sufficient to respond to the “duck’s neck”. Ms Varma noted the significance of needing to delineate between capacity that is capable of ramping quickly and the service of providing fast ramping. She suggested that the concept of the RCM procuring capacity for a future service provision should be front and center in the working group's minds to ensure there is the right type of capacity coming in to deal with ESS issues.
- Mr Bowmaker noted the modelling will incorporate all the ESS requirements and that, in assessing the issue going forward, there would be delineation between the planning aspect and the operational aspect of ramping. Mr Bowmaker noted that the purpose of the modelling is to look at that planning time frame to determine whether the RCM market, as currently anticipated, provides sufficient fast ramping capacity or whether the design needs to be altered to ensure there is sufficient ramping capacity entering the market.
- Ms Ng noted that she did not want existing facilities to be required to have fast ramping capability and demonstrate that as part of a CRC allocation process as this could require significant capital expenditure. Ms Ng agreed there was an issue that needed to be looked at but the two should not be linked together.
- The Chair noted that this was another issue of integration between the RCM and ESS markets. The Chair considered what other encouragement methods might be available and asked how distracting would be for this review to actually think about that as an add-on.
- Mr Schubert agreed with Ms Ng’s comment noting that, technically, it was possible for some assets in the existing fleet to provide fast ramping. He added that there are currently only a few units doing load following which would require the dispatch of more units to cope with the fast ramping. Mr Schubert provided an example of markets where all units have to contribute to fast response and ramping, noting that a way this could be achieved would be to allow generators to only run up to 95% of their



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capacity, leaving 5% of headroom for them to respond to the need to ramp quickly, but this would have economic implications.

- Ms Guzeleva noted that the methods for assigning CRC will be assessed as part of the RCM Review and that looking at whether different types of capacity with different characteristics should be remunerated differently in the capacity mechanism was in scope.
- Mrs Papps noted that additional investments may be needed to enable gas fired power plants' fast-ramping capabilities. Mrs Papps considered that the ESS markets may not be sufficient to incentivise this investment.
- Mr Sharafi noted that he considered ramping should be included in the RCM review., AEMO has seen ramping requirements this year almost double (compared to last year), so ramping capability should be the focus of this work.
- The Chair noted that the comments highlight that the issue is what the role of the RCM is and whether planning or operational horizons are the focus of this work and how these two different horizons can be best addressed.
- Ms Varma expanded further on her previous comment to highlight that longer term investment signals that ensure that the right capacity will enter the market and be ready to participate when it is needed in operational horizons are important.
- Mr Bowmaker noted that ramping is becoming quite an issue in the near term. Part of the modelling will provide insight into whether the new RCM will incentivise new capacity that will provide sufficient ramping capability. Modelling may indicate there does need to be additional measures within the RCM to ensure that there is sufficient ramping capability over the modelling horizon.

Slide 16 – Planning criterion

- Mr Bowmaker noted that there are many ways to measure reliability and noted some options for the WEM as per the slide.

Slide 17 – Aspects of the current peak load component

- Mr Bowmaker noted that some aspects are not fit for purpose at the moment, as per the slide, and that these elements will be considered as part of the options analysis.

Slide 18 – Planning criterion – WG feedback

- Mr Bowmaker noted that there was support from the RCMRWG for retaining a two-limbed planning criterion and for further assessment of what the different options are.
- It was generally agreed that unserved energy is clearly important., However, there is distinction between a large number of small outages or one very deep outage that also needs to be captured as part of the criterion.



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#### Slide 19

- Mr Bowmaker noted that, as part of the modelling going forward, the team will be looking at how different planning criteria effect the capacity target and system reliability and was seeking the MAC feedback on that direction.
- Mr Schubert supported retaining a two-limbed planning criterion noting that further modelling will give the MAC more information. Mr Schubert intuitive preference was for retaining peak load in the criterion because it was easy for everyone to understand what that means.
- Ms Varma noted that there was a third arm, which is about having enough capacity to meet contingency events and sought to clarify how that was included in the modelling.
- Mr Bowmaker noted that this will be incorporated into the modelling.
- Ms Varma noted that historically the unserved energy limb of the planning criteria has been the determining factor but carrying enough capacity to meet spinning reserve requirements is becoming increasingly important and the framework needs to ensure that the planning criteria can trigger investments to meet both limbs.
- Mr Bowmaker noted that this is one of the things the team will be looking at as it refines its recommendations in this area.
- Mrs Papps agreed with the preference to retain the two-limbed planning criterion. She noted that if it was just peak demand that would potentially undervalue the assets that contribute during other periods of system stress. Mrs Papps noted that working out how a generator contributes to reducing the expected unserved energy could be quite complex and that we would want to avoid the planning criterion resulting in an overengineered certification criteria. Mrs Papps noted that one of the key concerns around the RCM at the moment is that it is really difficult to explain to boards and financiers and, therefore, what is chosen for the planning criterion should be kept as simple as possible.
- Mr Sharafi noted the importance of the RCM addressing both adequacy and security.
- The Chair noted that the MAC supports the recommendations with further work to assess the planning criterion.

#### Slide 20 – approach to revising the planning criterion

- Mr Bowmaker noted that this slide would be taken as read.

#### Slide 22 – next steps

- Mr Bowmaker talked through the slide.
- Mr Sharafi mentioned the outcome of the 10 May meeting that AEMO had with the team, noting AEMO would like to see:
  - more granularity of the results;
  - ESS requirement over the shorter-term (2025-2030);

Item	Subject	Action
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- further details about the modelling of system strength, inertia and fault current;
- additional scenarios to capture more detail about how the transition will be addressed;
- reassurance that extreme conditions will not be lost through averaging in the modelling.
- Mr Sharafi noted that the discussion regarding ramping and ESS is valid and that, from an AEMO perspective, the RCM review is designed to address not only adequacy but also system security issues and AEMO would like to see system stress situations addressed in the modelling.
- Mr Schubert supported Mr Sharafi's comments.
- Mr Bowmaker thanked the MAC members for their feedback.

**(c) CAR Working Group (CARWG)**

The paper was taken as read.

Chair of the CARWG, Ms Guzeleva, addressed the MAC noting;

- The Cost Allocation Review (**CAR**) focuses on two groups of costs not fully examined through the work of the Taskforce: cost of regulation and the cost of the market fees, and how these should be allocated to market participants.
- The first meeting of the CARWG was held on Monday 9 May.

Slide 3

- Ms Guzeleva outlined the guiding principles of the review noting that, where a causer can be identified, the causer pays principle would be applied subject to also meeting all of the other guiding principles.
- Ms Guzeleva encouraged members to continue to go back to these principles as she is aware that members of the Working Group have some very strong views of what costs should be allocated where from the outset.

Slide 4 - 5

- Mr Draper from Marsden Jacob Associates (**MJA**) provided an overview of what was in scope for this Review as per the slides

Slide 6

- Mr Draper noted that the team will begin working with the Working Group on assessing the extent to which the current allocation methods are consistent with the causer pays principle and whether there are opportunities to improve cost allocation.
- Following this the team will do practicality assessments, which will include analysing the financial implications of different options and assessing the equity and efficiency consequences.
- The review will recommend a preferred approach to cost allocation and implementation and develop a methodology and formal rule changes, if required.

Item	Subject	Action
	<p>Slide 8 – 9</p> <ul style="list-style-type: none"> <li>Mr Draper noted that stakeholder engagement will occur as per the slides.</li> </ul>	
	<p>Slide 11</p> <ul style="list-style-type: none"> <li>Mr Draper noted there are not many examples of cost allocation methodologies using a causer pays principle in the energy sector. MJA has looked at work done by the Independent Pricing and Regulatory Tribunal (IPART) on allocating water, disaster and local land services costs, which provides a framework for cost allocation that is relevant to this review.</li> <li>Mr Draper ran through the elements of the framework on the slide and noted that a key consideration will be whether charging a ‘causer’ prompts an efficient response that reduces costs as this is key to achieving efficiency.</li> <li>Mr Draper noted that allocating costs to taxpayers is out of scope.</li> </ul>	
	<p>Slide 12</p> <ul style="list-style-type: none"> <li>Mr Draper ran through the content on the slide, noting in particular that the State Government is a causer/beneficiary of costs through policy changes or other interventions.</li> <li>Mr Sharafi suggested two principles should be followed: clarity and flexibility. Clarity being important in the identification of causers and beneficiaries, so the cost can be allocated appropriately, noting that a causer or beneficiary must be a market participant to enable costs being allocated to them. Flexibility is important where it’s not clear who the causer or beneficiary is – in this case some practicality will need to be applied and an 80/20 rule could be adopted.</li> <li>Mr Draper agreed sensibility and balance were required when it came to allocating costs – requirements for full activity-based costing to guide cost allocation would not necessarily be efficient.</li> </ul>	
	<p>Slide 14 - 18</p> <ul style="list-style-type: none"> <li>Mr Draper advised that MJA is reviewing cost allocation methods in other jurisdictions and provided some early feedback from this as per the slides, noting reforms implemented in the UK would be more difficult to implement here due to metering arrangements.</li> </ul>	
	<p>Slide 19 -20</p> <ul style="list-style-type: none"> <li>Mr Draper noted CARWG feedback and response as per the slide.</li> <li>The Chair sought to clarify what would be useful for the MAC to provide at this time.</li> <li>Ms Guzeleva noted that there had been discussions on looking outside of this review into things like retail tariffs and whether costs should be allocated to the government. Ms Guzeleva advised that EPWA is seeking for MAC to confirm the original scope of works, which is focusing on the market and market</li> </ul>	

Item	Subject	Action
	<p>participants, and on costs that have not recently been reviewed; namely regulation and market fees, both of which are currently charged at a flat rate per MWh on both sides of the market.</p> <ul style="list-style-type: none"> <li>The Chair noted that Ms Guzeleva was seeking to clarify that MAC was supportive of settling the fees and charges to be included in the review, as well as which parties would be eligible to contribute to these costs.</li> <li>Mrs Papps sought to make sure that the costs associated with some non-business as usual (<b>BAU</b>) policy projects are borne by the correct, limited group of beneficiaries and causers. For example: the implementation of the Distributed Energy Resources roadmap is caused by and benefits rooftop solar customers; and Project Symphony only benefits Synergy at the moment rather than market aggregators because of its exclusive access to franchise customers.</li> <li>Mr Draper noted that point 4 on slide 20 addresses this matter, noting that this was in scope for this review.</li> <li>Mr Arias and Ms White noted they support Ms Papp's comments.</li> <li>The Chair agreed that it would be important to identify discrete services and allocate costs appropriately.</li> <li>Mr Schubert noted that at the CARWG meeting it was requested that MJA assess the causers and beneficiaries with more granularity and noted an example of allocating costs associated with volatility to intermittent generation.</li> <li>Ms Draper noted that MJA would take this into account.</li> <li>Ms Varma noted that it was important to ensure that drivers of fee allocation are understood and explored. Historically, it appears in the WEM that the fees have been allocated based on AEMO effort in administering the market and this was expanded to include the Coordinator as well. Ms Varma noted that she did not consider behaviour modification was ever the objective of the allocation.</li> </ul>	
<b>7</b>	<b>Rule Changes</b>	
	<b>(a) Overview of Rule Change Proposals</b>	
	The paper was taken as read.	
<b>8</b>	<b>General Business</b>	
	<ul style="list-style-type: none"> <li>The Chair noted the letter Ms White had sent to Ms Guzeleva and the Chair regarding the RCM review which will be taken into account as part of that review.</li> <li>Updates to the schedule of MAC meetings were agreed.</li> </ul>	

**The meeting closed at 11:42 am.**