



## Minutes

<b>Meeting Title:</b>	Market Advisory Committee ( <b>MAC</b> )
<b>Date:</b>	23 August 2022
<b>Time:</b>	9:30am –11:57am
<b>Location:</b>	Videoconference (Microsoft Teams)

<b>Attendees</b>	<b>Class</b>	<b>Comment</b>
Sally McMahon	Chair	
Dean Sharafi	Australian Energy Market Operator ( <b>AEMO</b> )	
Martin Maticka	AEMO	
Zahra Jabiri	Network Operator	
Genevieve Teo	Synergy	
Christopher Alexander	Small-Use Consumer Representative	
Noel Schubert	Small-Use Consumer Representative	
Geoff Gaston	Market Customer	
Patrick Peake	Market Customer	
Wendy Ng	Market Generator	
Jacinda Papps	Market Generator	
Rebecca White	Market Generator	
Paul Arias	Market Generator	
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
Tim Robinson	Robinson Bowmaker Paul ( <b>RBP</b> )	Presenter

<b>Apologies</b>	<b>From</b>	<b>Comment</b>
Timothy Edwards	Market Customer	

Item	Subject	Action
1	<p><b>Welcome</b></p> <p>The Chair opened the meeting at 9:30am with an Acknowledgement of Country.</p> <p>The Chair advised that her position as expert panel member on the WA Electricity Review Board remains current.</p>	
2	<p><b>Meeting Apologies/Attendance</b></p> <p>The Chair noted the attendance and apologies as listed above. The Chair welcomed Christopher Alexander as the new small-use consumer representative, and noted that Paul Keay would no longer be a small-use consumer representative and thanked Mr Keay for his contribution.</p>	
3	<p><b>Minutes of Meeting 2022_06_28</b></p> <p>The MAC accepted the minutes of the 28 June 2022 meeting as a true and accurate record of the meeting.</p> <p>The Minutes referred to in the combined meeting papers had the incorrect date of publication. The correct date of publication of the minutes of the 17 May 2022 meeting was 29 June 2022.</p> <p><b>Action: The MAC Secretariat to publish the minutes of the 28 June 2022 MAC meeting on the Coordinator’s Website as final.</b></p>	<p><b>MAC Secretariat</b></p>
4	<p><b>Action Items</b></p> <p>The Chair noted there were no open action items.</p>	
5	<p><b>Market Development Forward Work Program</b></p> <p>The paper was taken as read and the Chair noted that the 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 (RCM) Review</b> The update was taken as read.</li> <li>• <b>The Cost Allocation Review (CAR)</b> The update was taken as read</li> </ul>	
6	<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.</p> <p>Mr Maticka noted a typo in that the paper – it refers to the prudential arrangement procedure, but it was meant to be the prudential requirements procedure. Mr Maticka confirmed that there was no AEMO procedure change activity and noted that the APCWG would only be scheduled on an as needed basis while the WEM reform process was underway.</p> <p><b>(b) RCM Review Working Group (RCMRWG)</b></p> <p>The papers for agenda item 6(b) were taken as read.</p>	

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	<p>Members noted the minutes of the RCMRWG meetings held on 14 and 21 July 2022. A substantive discussion on RCM Review was to be discussed under agenda item 8.</p>	
	<p><b>(c) CAR Working Group (CARWG)</b></p> <p>The paper was taken as read.</p> <p>The MAC was given an update on the progress of the CARWG. The MAC noted that the CARWG’s findings are to be presented to the MAC in October 2022 and a draft Consultation Paper at a subsequent meeting.</p>	
<p><b>7</b></p>	<p><b>Rule Changes</b></p> <p><b>(a) Overview of Rule Change Proposals</b></p> <p>The paper was taken as read. There were no updates.</p>	
<p><b>8</b></p>	<p><b>RCM Review Draft Consultation Paper</b></p> <p>The Chair asked the MAC to review the working draft of the Consultation Paper for the RCM Review and to provide guidance to the Coordinator on the proposals and questions on the paper, noting that it was still being refined by EPWA. The intent was to determine:</p> <ul style="list-style-type: none"> <li>• does the MAC agrees that the design proposals have been clearly articulated and captured in the Consultation Paper; and</li> <li>• are the questions going to be helpful for the consideration of stakeholders.</li> </ul> <p>Ms Guzeleva noted the majority of stage one of the review had been covered in the Consultation Paper, but that some items had been deferred to stage two, such as the Relevant Demand Methodology and some of the economic modelling, and that some parts of stage one may be impacted by stage two, such as the review of the Individual Reserve Capacity Requirements (<b>IRCR</b>).</p> <p>Ms Guzeleva encouraged everyone to make a submissions on the Consultation Paper once it is published, noting that certification of intermittent generators is an open issue on which detailed feedback would be appreciated.</p> <ul style="list-style-type: none"> <li>• Mrs Papps indicated that the MAC had not endorsed all of the points made in the Consultation Paper, and that some issues are still to be determined, such as the 14 hour fuel requirement. Mrs Papps noted that it is a significant Consultation Paper and that Alinta has not yet had time to go into the detail or to do the necessary analysis.</li> <li>• The Chair noted that the paper did not intend to give the impression that the MAC had endorsed everything, rather that there were a lot of outstanding issues being worked through with the RCMRWG that were canvassed and explained in the Consultation Paper. The Chair noted that the intent was for the MAC to comment and recommend whether the Consultation Paper should be published in its current form.</li> </ul>	

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- Mr Sharafi made a comment in relation to the Draft Statement of Policy Principles: Penalties for High Emission Technologies in the Wholesale Electricity Market (**Principles**), which may affect the timeline for RCM Review, and questioned if the MAC would need to consider delaying issuing the Consultation Paper.
  - The Chair noted that the Consultation Paper acknowledged the Principles but that the Principles should not hold up the RCM Review, adding that it was not clear when the Minister would issue the final Principles.
  - Ms Guzeleva noted that the Principles would need to be amended as a result of the consultation with the MAC, and did not want to delay the RCM Review because finalizing the Principles could take months. Ms Guzeleva noted that there did not appear to be anything in the Consultation Paper that required any significant change, apart from the economic modelling, which could be done in stage two.
  - The Chair noted the minutes to the MAC meeting on 9 August 2022 have been released, which capture the MAC's discussion of the Principles.
- Ms White agreed with Mrs Papps that the MAC had not endorsed all of the statements in the Consultation Paper because the MAC had provided differing views and feedback on several issues, and suggested checking that the paper correctly states when the MAC has endorsed an issue.
  - Ms Guzeleva noted that EPWA had been careful to check the minutes and that the paper used the term 'support' rather than 'endorse' when issues had been taken to the MAC and had general support, such as the Planning Criteria and flexibility capacity product. Ms Guzeleva asked the MAC to advise if there are any instances where the Consultation Paper indicates MAC support and the MAC disagrees.

Ms Guzeleva advised that the Consultation Paper would be published on Monday 29 August 2022 and noted that it was the Coordinator's paper, not a MAC paper – if MAC members had significant comment, they would need to be provided within the next 24 hours and any other comments would need to be by submission following publication.

The Chair asked the MAC to discuss each proposal, indicated that the MAC's feedback would be considered before the Consultation Paper is released, and suggested that each organisation will have an opportunity to provide feedback on the paper after publication. The Chair noted that MAC members have had the paper for a week and that any significant comments could be provided within 24 hours.

Ms Guzeleva provided an overview of the design proposals with the MAC and asked the MAC to comment.

**Proposal One – retain the 'Peak Capacity' product**

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	<p>Ms Guzeleva noted that this proposal had been to the MAC on several occasions and the minutes from those meetings clearly indicate that the MAC was comfortable with retaining the existing capacity product to provide an explicit price signal, several years in ahead of the actual capacity year.</p> <p>Mrs Papps agreed on this point and that the peak capacity product provides an important price signal, but noted we need to be careful to not make the signal too difficult, or it will not provide investment at the right time.</p> <p><b>Proposal Two – the RCM will not include a specific product to deal with minimum demand</b></p> <p>Ms Guzeleva indicated that the MAC supported that the RCM Mechanism will not deal with minimum demand, whilst being careful not to provide perverse incentives to exacerbate the minimum demand issue.</p> <ul style="list-style-type: none"> <li>• Mr Schubert supported this, providing that the minimum load project effectively addresses minimum demand.</li> </ul> <p><b>Proposal Three – introduce a new capacity product to incentivise flexible capacity</b></p> <p>Ms Guzeleva noted the proposal to add a second capacity product to incentivise flexible capacity that can start, ramp and stop quickly.</p> <ul style="list-style-type: none"> <li>• Mr Schubert noted that ability to start, ramp and stop quickly may not be sufficient because some generators have a minimum runtime or minimum restart time, and we do not want those restrictions on the flexible plant.</li> </ul> <p><b>Proposal Four – the Planning Criterion will not include a reference to volatility in operational load or output of intermittent generation</b></p> <p>Ms Guzeleva noted that volatility in real time operational load and intermittent generation over short time frames will be managed through the Essential Systems Service (<b>ESS</b>) market and that the Planning Criteria will not include any reference to volatility with respect to either load or output.</p> <ul style="list-style-type: none"> <li>• Mr Maticka sought to clarify whether we could be sure that we can manage the increasing amount of rooftop Photovoltaics (<b>PV</b>) through the ESS market and not controlling the ramp up of PV. <ul style="list-style-type: none"> <li>○ Ms Guzeleva noted that the volatility from PV in the middle of the day would be dealt with by the low load project and be handled through ESS.</li> <li>○ Mr Maticka clarified that his question related more to the statement that we believe we can continue to manage the volatility through an ESS market, as he was not sure that this would be true or cost effective in the long term, and sought to understand the overall benefit.</li> </ul> </li> </ul>	

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	<ul style="list-style-type: none"> <li>○ Ms Guzeleva noted there was no proposal to procure a product to deal specifically with generation or load volatility, rather the ability to transition the system from the middle of the day to the evening peak through the afternoon ramp. Ms Guzeleva noted that load or generation volatility during any interval would be dealt with either by ESS or through the projects that are dealing with minimum load, effective management of PV and aggregation.</li> <li>○ Mr Maticka noted that he misinterpreted that the term short timeframe is actually that transition over six hours rather than five minutes.</li> <li>○ Ms Guzeleva noted the flexibility product is designed to address the ramping need from the minimum to the evening peak in the most extreme scenario, whether under 10% or 50% probability of exceedance (<b>POE</b>), and the idea is that a longer term signal is needed to bring about the capacity that can ramp up to the 2 GW/hour that AEMO is concerned about. The flexibility product is not dealing with volatility per se, which will be left to operation of the ESS market.</li> <li>○ Mr Robinson noted that the analysis determined the amount of flexible capacity needed to cover the worst case ramp scenario, and if we have enough flexible capacity to meet this requirement, then it can also meet our needs for shorter term volatility.</li> <li>○ Mr Maticka asked how far out the analysis projected for the worst case volatility scenario. Mr Robinson indicated that the analysis was conducted to 2050.</li> <li>○ The Chair asked Mr Maticka whether proposal four needed to be clearer, or if some supporting information would be helpful to include in the Consultation Paper. Mr Maticka noted that it would be sufficient to reword this explanation in the Consultation Paper.</li> </ul>	
	<ul style="list-style-type: none"> <li>● Mr Sharafi noted that, by 2050, AEMO may not be able to manage volatility of Distributed Energy Resource (<b>DER</b>) and that AEMO has seen about 20 MW/minute volatility.</li> <li>● Ms Guzeleva noted there was an expectation the major deliverables through the DER Roadmap will all go ahead and be fully implemented, and that the modelling takes into account some of these deliverables, including how electric vehicles will behave, and noted that not everything can be solved through the RCM.</li> <li>● Mr Schubert asked Mr Sharafi why there were not more generators on Automatic Generation Control when demand is volatile, noting that having only one or two generators manage frequency seems to be a key problem. Mr Sharafi noted there were a lot of generators on Load Following Ancillary Service (<b>LFAS</b>) to manage volatility.</li> </ul>	

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	<p><b>Proposal five – retaining the two current limbs of the Planning Criterion</b></p> <p>Ms Guzeleva noted that the MAC supported retaining the two current limbs of the Planning Criterion: the requirement to meet the 10% POE, and the Expected Unserved Energy (<b>EUE</b>) target, whichever is the greatest.</p> <p><b>Proposal Six – amending the reserve margin</b></p> <p>Ms Guzeleva noted that this was a substantive proposal to the current Planning Criteria, to move away from prescribing a fixed 7.6% to tackle unforced outage expectations and to not prescribe the size of the largest unit as setting the reserve margin, but to let AEMO annually determine the largest contingency at peak. Ms Guzeleva recalled that the MAC was comfortable with this.</p> <ul style="list-style-type: none"> <li>• Mr Sharafi noted AEMO was very supportive because it allows consideration of the largest system contingency.</li> <li>• Ms White sought to clarify whether MAC members were comfortable with the adjustment for forced outages and asked if the three-year outlook later in the Consultation Paper refers to something else. <ul style="list-style-type: none"> <li>○ Ms Guzeleva noted the 7.6% is the forced outage rate that is currently embedded in the criteria and asked Ms White if she would prefer to retain it.</li> <li>○ Ms White noted that it was her recollection that others questioned this, but that her recollection may be incorrect if no one else recalls this.</li> <li>○ Ms Guzeleva noted that Ms White may be referring to the section on Installed Capacity (<b>ICAP</b>) and Unforced Capacity (<b>UCAP</b>) that comes later in the Consultation Paper.</li> </ul> </li> <li>• Ms Teo sought to clarify which was the next reserve capacity cycle referred to on page 60 of the paper. Ms Guzeleva noted it was 2023 cycle, which has not yet commenced. The Chair asked EPWA to make sure this was clear.</li> <li>• Mr Gaston asked about the magnitude of the largest contingency at peak and whether there would be some kind of de-rating for the likelihood of those two things happening at the same time, noting this could be a huge number and that customers could pay huge amounts for this contingency. <ul style="list-style-type: none"> <li>○ Mr Sharafi noted that AEMO had not seen the system contingency bigger than generating contingency during peak times, but that this did not mean it could not happen in the future. Mr Sharafi could not quantify what this contingency will be and noted that this contingency is needed because, while it was not expected to be much larger, it could be.</li> </ul> </li> </ul>	

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	<ul style="list-style-type: none"> <li>○ Mr Gaston noted that he had heard that some of the lines up north potentially have 700 W contingency, which will push the cost through the roof.</li> <li>○ Mr Sharafi noted that 700 MW was in condition of outages, and that AEMO will not allow that to happen, and that we have not seen the windfarms generating to that level during peak times.</li> <li>○ Mr Gaston expressed concern in terms of what that is going to cost and whether we are talking about capacity here, not network contingencies.</li> <li>○ The Chair noted there was a recognition that a network contingency could be bigger, which is why it needs to be captured, and asked Ms Guzeleva whether information about the magnitude or impact of this change could be included in the Consultation Paper.</li> <li>○ Ms Guzeleva indicated that that it will be very difficult to include a number if AEMO does not know the magnitude and that it will change from year to year. Ms Guzeleva noted the Consultation Paper could be clarified that we are talking about the largest contingency at peak, even if that is driven by network.</li> <li>○ Mr Gaston contended that this does not make sense because you can have all the generation you want and you are not going to meet your peak demands if you have a network contingency.</li> <li>○ The Chair noted that she believed the concept was understood but that it could be beneficial to provide information on the impact of the change.</li> <li>○ Ms Guzeleva suggested looking at the most recent hot season to see what would set the contingency – Collie or a potential network outage at peak.</li> <li>○ Mr Gaston noted that the last hot season was probably the only one in 10 year peak in the last 20 years.</li> <li>○ Mr Sharafi noted that the size of system contingency has not yet been larger than the size of generator contingency, and that this is something that AEMO and Western Power will not allow to happen because we need to work for the benefit of the customers, and need to be financially aware of the impact.</li> <li>○ The Chair noted the proposal seemed to require further explanation and that it would be beneficial to provide a historical example in the Consultation Paper for context.</li> <li>○ Mr Schubert noted that if it were to become very expensive, it would justify network augmentation to reduce the size of the</li> </ul>	



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	<p>network-caused contingency, and that this can hopefully be optimised.</p> <ul style="list-style-type: none"> <li>○ Ms Guzeleva agreed and noted that Western Power now has the requirement under the new transmission planning in the rules to look at market impacts when they plan the network.</li> <li>○ Ms Jabiri noted that Western Power can assist to ensure the wording from the network point of view reflects the optimum outcome to the customer.</li> </ul>	
	<p><b>Proposal 7 – the target EUE percentage in the second limb of the RCM Planning Criterion to remain at 0.002%</b></p>	
	<p>Ms Guzeleva noted the second limb of the Planning Criterion is currently set at 0.002% of the EUE, and will remain unchanged. The Chair noted that this proposal seems to be uncontroversial.</p>	
	<p><b>Proposal 8 – the Planning Criterion will include a third limb requiring AEMO to procure flexible capacity</b></p>	
	<p>Ms Guzeleva noted the Planning Criterion will include the third limb requiring AEMO to procure flexible capacity to meet the size of the steepest operational ramp expected on any day in the capacity year for either 10% to 50% POE. Ms Guzeleva indicated that the MAC had supported this proposal.</p>	
	<p><b>Proposal 9 – the ERA will remain responsible for determining the method to calculate the Benchmark Reserve Capacity Price (BRCP)</b></p>	
	<p>Ms Guzeleva noted this proposal was discussed by the RCMRWG but not by the MAC. RBP presented some CSIRO analysis to the RCMRWG that suggests that an Open Cycle Gas Turbine (<b>OCGT</b>) is likely the least cost marginal entry in the WEM, but that OCGTs may be overtaken by storage as we move out of the current energy crisis. Therefore, it is proposed for the ERA to continue to be responsible for setting the BRCP, but to give some guidance to the ERA in the rules.</p>	
	<p>Ms Guzeleva noted that, if network conditions in any particular year suggest that there is not an ability to connect a 160 MW OCGT, then the ERA would have to select a different size or another technology that may be more expensive but can be accommodated by the Network Access Quantity (<b>NAQ</b>) and capacity de-rating.</p>	
	<p><b>Proposal 10 – the WEM Rules will define the BRCP as the per MW capital cost of the new entrant technology with the lowest expected capital cost amortized over the expected life of that facility</b></p>	
	<p>Ms Guzeleva noted that a BRCP would be calculated for both the peak capacity and flexibility products, and will differentiate between the two because we expect that even an OCGT may need some additional capital to be able to ramp, start or shut down in accordance with the requirements for the flexibility product. The two components of the BRCP would always have to account for oversupply of capacity</p>	

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	<p>in either product, but the Reserve Capacity Price for the flexibility product would never be lower than the peak product because we expect a facility that can provide both products will receive an uplift when the BRCP for the flexibility product is higher.</p> <ul style="list-style-type: none"> <li>• Mr Sharafi noted that he does not suggest changing the reference technology at this stage but that barriers to entry of OCGTs need to be considered because it will be hard to bank an OCGT project.</li> <li>• Ms Guzeleva noted that we do not want to spell out in the rules that OGCT is the reference technology – rather that it should be the least cost, most efficient technology that can enter the market in the capacity cycle, taking into account potential network constraints.</li> <li>• Mr Peake noted that a lot of time was spent discussing whether we should have a BRCP for both gas turbines and battery storage and asked whether this should be discussed a little more. Mr Peake noted question (10)(b) about whether we support calculating separate BRPCP's for the peak and flexible products, but thought there was also a question of whether we should have a separate capacity price for storage given that we are trying to encourage storage onto the system. <ul style="list-style-type: none"> <li>○ Ms Guzeleva indicated that she did not recall a discussion of having two capacity prices for the peaking product, but that there was discussion about when storage will become the most efficient marginal entry, at which point the BRCP would need to be based on storage. There was also a discussion about whether the ERA should not consider moving to a net cost of new entry (<b>CONE</b>) because the short run marginal cost of storage may be much lower than an OCGT.</li> <li>○ Ms White asked what would happen if the cheapest technology for the peak product was not able to provide the service that we need for the flexible product. Ms White was unclear why you would use the same reference technology for the two products.</li> <li>○ Ms Guzeleva noted that in the rules are not going to set the reference technology and that the Consultation Paper stated that if OGCT cannot be built, then the reference technology will have to change. There was extensive discussion at the MAC meeting on 28 August 2022 regarding the Principles, and that plant utilization would need to be considered in the penalties, which makes sense because we are looking at the totality of emissions.</li> <li>○ Ms Guzeleva indicated that she does not think that the rules should prevent a different reference technology for the flexibility product and the flexibility price may be higher in most circumstances, unless we end up with an enormous oversupply. Ms Guzeleva noted she would clarify the wording</li> </ul> </li> </ul>	

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	<p>in the Consultation Paper that different reference technologies can be set for the peak and flexibility products.</p> <ul style="list-style-type: none"> <li>○ Mr Robinson agreed that the intention is for the reference technology to be flexible and for it to be possible to have two separate technologies, although this will not be the case in the foreseeable future.</li> <li>● Mrs Papps raised a question about proposals, 9, 10 and 11, noting that it seems that the reference technology may be reviewed annually, as it feeds into the BRCP calculation, and she was uncertain about how the five yearly review versus an annual review process might work. Mrs Papps also sought clarity on the ERA decisions to use net vs gross CONE on a yearly basis and whether this would provide enough signaling, and was keen to understand the differences between the reviews and what this might mean in practice on a year-to-year basis <ul style="list-style-type: none"> <li>○ Ms Guzeleva noted she would make sure that the rules are drafted to provide for a review as soon as there is a crossover of technologies, and it would be a good idea to give the ERA the ability to closely watch the reference technology.</li> <li>○ Mrs Papps noted that the reviews need to happen with enough notice to not cause issues for investment and it needed to be determined whether the ERA: <ul style="list-style-type: none"> <li>▪ is to work out the cost of every new entrant technology; and</li> <li>▪ will be doing detailed modelling every year or if there should be triggers to indicate that the ERA should conduct a review.</li> </ul> </li> <li>○ Ms Guzeleva noted that the rules would be flexible and acknowledged Mrs Papps' point about certainty and when new technology becomes the reference technology.</li> </ul> </li> </ul>	
	<p><b>Proposal 11 – the BRCP methodology can use the gross CONE approach if the reference technology has the highest short-run costs in the fleet</b></p> <p>Ms Guzeleva noted this proposal related to use of net vs gross CONE and the NAQ, and noted that the Consultation Paper would need to be adjusted, as it talks about giving the ERA guiding principles in the rules for setting the BRCP, but it is a consideration whether to move to the net CONE or retain the gross CONE. The second point in the proposal means, if there is a situation where the least cost new entry cannot be accommodated at any part of the network, then the ERA would need to consider using whatever the next lowest technology can be accommodated.</p> <ul style="list-style-type: none"> <li>● Ms White asked whether using net CONE breaks down the concept of receiving capital or fixed costs from that RCM and variable costs from the energy market, as it sounds like a</li> </ul>	

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	<p>participant will not receive their full capital costs from the RCM in some circumstances.</p> <ul style="list-style-type: none"> <li data-bbox="357 331 1219 479">○ Ms Guzeleva noted that this was discussed by the RCMRWG and that net CONE only needs to be considered if the reference technology is not the least short run marginal cost technology in the energy market.</li> <li data-bbox="357 488 1219 784">○ Mr Robinson added that the concept of recovering capital costs from the RCM and variable costs from the energy market applies for that reference technology at the moment, which is an OCGT. Other facilities that have higher fixed costs than an OCGT already recover part of their fixed costs in the energy market. There are many facilities in the WEM that recover fixed costs partially from the RCM and partially from the energy market.</li> <li data-bbox="357 792 1219 1048">○ Mr Robinson indicated that the paradigm will be blurred once storage becomes the reference technology. Mr Robinson indicated that, if we keep BRCP based on the gross CONE of a storage facility, it will recover its full fixed costs from the RCM and then also get a contribution from the energy market, but then consumers are paying more for capacity than they need to.</li> <li data-bbox="300 1057 1219 1312">● Ms White asked whether we are comfortable there will not be revenue adequacy issues, noting that some generators were bidding below their marginal cost to run – not to get paid, because they get paid through their contract which does change the market dynamics. Ms White noted that the ERA analysis indicated there will be a downward trend in energy prices and that they would not be sufficient to encourage investment. <ul style="list-style-type: none"> <li data-bbox="357 1321 1219 1697">○ Ms Guzeleva noted that this is a controversial issue and the Consultation Paper says that the ERA must consider whether the use of gross CONE remains adequate if it swaps to a reference technology that is not the highest short run marginal cost in the energy market. Ms Guzeleva reminded MAC members that EPWA was looking for submissions on this issue, but noted that, while some RCMRWG members expressed this concern, others had the view that rents should not be transferred to generators by design, rather than in competitive behaviour in the market.</li> <li data-bbox="357 1706 1219 1921">○ The Chair noted that, if the RCM is a signal for future investment in capacity, we have to assume that that capacity may never run, then what assumptions do you make to come up with a net CONE. The Chair noted that the proposal is for the ERA to deal with these issues rather than specify a net CONE outcome.</li> <li data-bbox="357 1930 1219 2011">○ Ms Guzeleva noted that the rules will need to contain principles for this determination, and that sufficient investment</li> </ul> </li> </ul>	

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incentives need to be balanced against the consumer interest of not transferring unnecessary rent to providers.

- The Chair noted the need to think about the impact on incentives if someone wants to build capacity but they know that they will have to operate in another market before they make any money from that capacity.
- Ms Teo suggested that the BRCP must cover all costs for the marginal unit, given the intention of the RCM is to cover the just in case capacity. Ms Teo noted that large costs associated with the 14 hour fuel requirements are not covered by the BRCP and asked if that could be made clearer in the Consultation Paper.
  - Ms Guzeleva indicated that fuel is in principle not covered by the BRCP, which only considers fixed costs.
  - Mr Robinson noted that if part of the facility's fixed cost include a diesel tank, then this should be included the assessment of the BRCP.

**Proposal 12 – the administrated RCM price curve for the flexible capacity product will be the same as is used for the peak product**

Ms Guzeleva noted this the price curve for the flexible product needs to have a signal about over- and under-supply of capacity. There will potentially be two price curves, but if the flexible capacity product is oversupplied, that price will collapse back to, but will never be lower than the price for the peak product. A facility will be able to ask for a five-year fixed price period for the flexible capacity product, as it can for the peak product.

- Mr Peake noted that some facilities, such as pump storage, may need longer than a five-year period. If the reserve capacity price drops away quickly after five years, which it would do if there is any excess, there will not be the ability to get a return on that investment.
  - Ms Guzeleva noted that the RCM has an administrated price arrangement and that RCM prices in an auction would collapse if there was oversupply, which is the point. Policymakers need to strike the balance between certainty and making sure consumers are not paying for something that they do not need. Ms Guzeleva noted that the five-year guarantee is currently in the rules and not part of this particular reform. We may need to look at whether five years is sufficient when we move to de-rating of storage, but this will need to be linked to evidence.
  - Mr Peake indicated that he understood this, but that capacity has only left the market due to government decree, not due to the drop in price. Mr Peake suggested that we need to question how to make sure we do not get a surplus or shortage and to make sure that there is enough money on the table to replace what plant is been removed from the system,

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	<p>noting that the ERA has said there is not enough money for batteries or gas turbines. Mr Peake suggested that one curve has the danger of crippling the whole process.</p>	
	<ul style="list-style-type: none"> <li>○ Ms Guzeleva noted the ERA study was clearly talking about carbon not being priced in the market, which is a serious concern, but is not addressed by the current RCM design. Ms Guzeleva noted that the ERA has given a presentation where they made the point that the flexibility product would help, but may be not covered the entire gap. Prices in the market would collapse if we were to opt for an auction and there was an oversupply.</li> </ul>	
	<ul style="list-style-type: none"> <li>● Ms Guzeleva indicated that EPWA would take on board comments about the pricing reform that was implemented in 2020. The modelling suggests that the price curve in WA is shallower than elsewhere and there may be a need to send a sharper signal at the upper end of the curve if we face a shortage.</li> </ul>	
	<ul style="list-style-type: none"> <li>○ The Chair suggested that the Consultation Paper should note the need to review the price curve and the five year guarantee, and that stakeholders can then comment.</li> </ul>	
	<ul style="list-style-type: none"> <li>○ Ms Guzeleva reminded MAC members that the price curve is reviewed by the ERA.</li> </ul>	
	<ul style="list-style-type: none"> <li>○ Mr Alexander asked Mr Peake how many years' guarantee he thought would be adequate. Mr Peake replied something closer to 10 years, but that this would depend on the technology and life cycle. Mr Peake noted that he believed that the consultants have said that there are other mechanisms with 10-year price guarantees and that prices drop quickly after that. Mr Peake agreed with the Chair that the Consultation Paper should indicate that this requires review.</li> </ul>	
	<ul style="list-style-type: none"> <li>○ Ms Guzeleva noted that the ERA is required to review the factors in the price curve, with public consultation, and noted that stakeholders raised the issue of the five years, which will be logged and considered outside of the RCM Review.</li> </ul>	
	<ul style="list-style-type: none"> <li>● The Chair suggested adding some context to the Consultation Paper to indicate that these matters need to be reviewed, that the mechanism needs to provide signals for the appropriate technologies and must ensure that consumers are not paying more than necessary for the capacity.</li> </ul>	
	<p><b>Proposal 13 – the current Availability Classes will be removed from the WEM Rules</b></p>	
	<ul style="list-style-type: none"> <li>● Mrs Papps raised concern that there was not enough analysis about why 14 hours of fuel is needed for Class One, and noted that, whilst this may be valid for some base load facilities, this is not the case for all facilities. Mrs Papps noted that the RCMRWG had not landed on a position on this matter.</li> </ul>	

Item	Subject	Action
	<ul style="list-style-type: none"> <li>○ Mr Robinson indicated three points that support the 14-hour fuel requirement: <ul style="list-style-type: none"> <li>▪ this fuel requirement would allow a diesel facility to run for 4-5 hours over a 3-day period, without resupply;</li> <li>▪ the availability duration gap in later years is moving to a 14-hour period over night; and</li> <li>▪ the policy is not to reduce the current amount of system reliability.</li> </ul> </li> <li>○ The Chair noted the Consultation Paper does not step through the need for a 14-hours fuel requirement and that this issue has been raised at the MAC on numerous occasions as an unnecessary/costly requirement. Stakeholders can directly address the rationale if it is articulated in the paper.</li> <li>○ Mrs Papps noted that the requirement is to have enough fuel for the peak trading intervals on business days, but if we are now considering overnight fuel requirements, then this might change how generators contract going forward. Ms Papps sought to clarify what timeframe that 14 hour requirement was over.</li> <li>○ Mr Peake noted that a generator would need a contract which gives them 14 hours/day of gas, day in, day out, and that this would need to be signed up three years in advance, and that this is discriminatory against small operators.</li> <li>● Mr Huxtable noted that it is not clear in the Consultation Paper that loads and behind the meter (<b>BTM</b>) storage will be treated similarly to wind or solar generation, and that this should be highlighted so that customers can comment on this fact if they are going to have a BTM battery and their load and battery will be treated as one.</li> </ul>	
	<p><b>Proposal 14 – AEMO will determine an availability duration requirement for Capability Class 2 facilities</b></p> <p>Ms Guzeleva noted the modelling has uncovered a duration gap that will get longer over time and will blend with overnight load, and that AEMO would have to start changing the availability in the Electricity Statement of Opportunities (<b>ESOO</b>) for Capacity Classes 1 and 2 to cover the duration gap. The Consultation Paper proposed that facilities will keep their certified capacity for five years after commissioning (i.e. a 4 hour battery will receive 100% of its certification for five years, and if the duration gap becomes 8 hours, then the 4 hour facility will be certified for 50% after five years). The RCMRWG has mixed views on this proposal and it has not been discussed in detail with the MAC.</p> <p>Ms Guzeleva noted that the five-year period may need to be extended if it becomes desirable to incentivize new technology in the market, such as longer term storage.</p>	

Item	Subject	Action
	<ul style="list-style-type: none"> <li>Mr Peake noted that changing the duration gap would change the value of the storage, so AEMO and the ERA will need to have the same time schedule for when they undertake their review.</li> <li>Ms Guzeleva noted that it is AEMO's role to determine the duration gap in the ESOO and if the reference technology goes to six hour storage, then the ERA would need to factor this into the BRCP. Ms Guzeleva indicated that this would be made explicit in the Consultation Paper.</li> </ul>	
	<p><b>Proposal 15 – Certified Reserve Capacity (CRC) allocation will remain on an ICAP basis with refunds payable for forced outages</b></p> <p>Ms Guzeleva noted that the RCRWG had considered analysis of the pros and cons around ICAP and UCAP, and whilst UCAP has some strong incentives, it is proposed to stick with ICAP, which does not take into account forced outages in certification.</p>	
	<ul style="list-style-type: none"> <li>Mrs Papps noted the proposal that, if a facility has a forced outage rate higher than 10%, then AEMO would be required to reduce its CRC by the entire forced outage rate, and that is big penalty (Ms White agreed). Mrs Papps also noted that different participants log forced outages in different ways – a facility must log a forced outage to its max capacity if it deviates from a dispatch instruction, but this is not a real forced outage, which could skew this data, and Synergy does not have dispatch instructions. Mrs Papps noted that, if we are looking at a forced outage rate for the three years prior, we might have to take into consideration that forced outages at the moment have two different types – true forced outage when you are completely forced off and deviations around dispatch instructions. <ul style="list-style-type: none"> <li>Ms Guzeleva noted Mrs Papps' points were valid and would be noted for the rules drafting if these proposals, if approved.</li> <li>Mr Robinson agreed with Mrs Papps' point about Synergy not having dispatch instructions but took issue with the characterization that failing to meet dispatch is not a real forced outage.</li> <li>Mrs Papps noted that you have to log a forced outage if you are out of tolerance and one of Alinta's units is traditionally slow to ramp, and it will have to log forced outages for that.</li> <li>Mr Robinson queried whether the plant is incapable of meeting its capacity obligation. Mrs Papps indicated that was not the case and that bidding over a 30 minute period is different to a 5 minute interval.</li> </ul> </li> </ul>	
	<p><b>Proposal 16 – AEMO will procure expert reports to ensure independence of estimates of intermittent generator output</b></p> <p>Ms Guzeleva noted that the proposal is for AEMO to procure the expert reports on behalf of participants, to avoid the potential for overestimation, to ensure independence and to avoid potential bias.</p>	



Item	Subject	Action
	<ul style="list-style-type: none"> <li>• Ms White noted concern with regard to:               <ul style="list-style-type: none"> <li>○ Managing conflict of interest in selecting experts that do not work for competitors; and</li> <li>○ intellectual property – would the market participant have the rights to the report?</li> </ul> </li> <li>• Mrs Papps noted that:               <ul style="list-style-type: none"> <li>○ expert reports are expensive and consideration would need to be given to how AEMO would manage costs; and</li> <li>○ it would be beneficial to have a procedure or methodology so that market participants are aware of the basis for AEMO to procure reports.</li> </ul> </li> </ul>	
	<p><b>Proposal 17 – the methodology to assign CRC to facilities in each of the different Capability Classes will differ by class</b></p>	
	<p>Ms Guzeleva noted that the RCMRWG given some consideration to the methodology to assign CRC to the different capability classes but that it needs to be considered further, including during the IRCR discussions. Ms Guzeleva noted that a recommendation has not been made on CRC allocation for Capability Class 3.</p>	
	<p>Ms Guzeleva flagged three alternatives: Effective Load Carrying Capacity (<b>ELCC</b>), Alinta’s proposal and Collgar’s proposal; and indicated that comments would be appreciated before determining which option best meets the objectives of the review. Ms Guzeleva indicated that the methodology must be a realistic, accurate representation of the capacity that would be available during peak intervals. Ms Guzeleva noted that it is difficult to design a method that represents of what will be achieved in a 10% POE event.</p>	
	<ul style="list-style-type: none"> <li>• Ms White suggested that the table comparing the options should give the Delta Method a cross because of its volatility. Ms White asked what the extra modelling will seek to achieve and how participants will be able contribute.</li> <li>• Ms Guzeleva indicated that EPWA will advise when the RCMRWG will resume discussing these issues.</li> <li>• Mr Robinson noted that, to be comparable, the options must be modeled on the same basis, using the same data. RBP will replicate all of the modelling and to publish the inputs, method and results.</li> <li>• Ms White noted it would be useful for this modelling to account for the Principles.</li> </ul>	
	<p>The Chair noted that any further specific feedback on the Consultation Paper would be helpful, but it will need to be provided by noon on 24 August 2022.</p>	

Item	Subject	Action
<b>9</b>	<b>General Business</b>	
	<ul style="list-style-type: none"><li data-bbox="300 293 1286 376">• Draft Statement of Policy Principles: Penalties for high emission technologies in the Wholesale Electricity Market<ul style="list-style-type: none"><li data-bbox="357 376 1286 568">○ The Chair suggested circulating the a draft MAC response to the Principles, accounting for the edits proposed by Mrs Papps on 17 August 2022, for final comment, and then sending it to the Coordinator along with the minutes from the MAC meeting on the 9 August 2022.</li></ul></li><li data-bbox="300 568 1286 613">• The next MAC meeting is scheduled for 11 October 2022.</li></ul>	

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**The meeting closed at 12:00am.**