



Minutes

Meeting Title:	Reserve Capacity Mechanism Review Working Group (RCMRWG)
Date:	16 June 2022
Time:	9:30am – 11:30am
Location:	Microsoft TEAMS

Attendees	Company	Comment
Dora Guzeleva	Chair	
Rhiannon Bedola	Synergy	
Oscar Carlberg	Alinta Energy	Proxy for Jacinda Papps
Peter Huxtable	Water Corporation	
Dimitri Lorenzo	Bluewaters Power	Proxy for Paul Arias
Mark McKinnon	Western Power	
Patrick Peake	Perth Energy	
Toby Price	AEMO	Proxy for Manus Higgins
Richard Cheng	Economic Regulation Authority	Proxy for Matt Shahnazari
Noel Schubert	Small-Use Consumer representative	
Andrew Stevens	Clear Energy	
Dev Tayal	Tesla Energy	
Andrew Walker	South32 (Worsley Alumina)	
Rebecca White	Collgar Wind Farm	
Richard Bowmaker	Robinson Bowmaker Paul (RBP)	
Ajith Sreenivasan	RBP	
Tim Robinson	RBP	
Stephen Eliot	Energy Policy WA (EPWA)	
Laura Koziol	EPWA	
Shelley Worthington	EPWA	

Apologies	From	Comment
Paul Arias	Bluewaters Power	
Manus Higgins	AEMO	

Apologies	From	Comment
Jacinda Papps	Alinta Energy	
Matt Shahnazari	Economic Regulation Authority	
Dale Waterson	Merredin Energy	
Wendy Ng	Shell Energy	

Item	Subject	Action
1	Welcome The Chair opened the meeting at 9:30am.	
2	Meeting Apologies/Attendance The Chair noted the attendance as listed above.	
3	Minutes of RCMRWG meeting 2022_06_02 Draft minutes of the RCMRWG meeting held on 2 June 2022 were distributed on 13 June 2022. Mr McKinnon asked to include his comment that 41°C may no longer be appropriate as a basis for the Reserve Capacity Mechanism (RCM). Mr McKinnon noted that 41°C is not only the basis for assessing generation capacity but also for setting the RCM Limit Advice. Ms Koziol requested that any further comments on the 2 June 2022 minutes should be provided by close of business 16 June 2022. The RCMRWG accepted the minutes as a true and accurate record of the meeting, pending the amendment to reflect Mr McKinnon's comment and any further comments provided on 16 June 2022.	RCMRWG Secretariat
4	Action Items The paper was taken as read. The slides for agenda items 5 to 8 are available on the webpage for the RCM Review (https://www.wa.gov.au/government/document-collections/reserve-capacity-mechanism-review-working-group).	
5	Project Timeline Mr Robinson presented the timeline.	
6	Updated System Stress Modelling Outputs Mr Bowmaker presented the options for assessing resource adequacy (slides 8 to 28). The following issues were discussed: Government announcement about plant retirement	

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	<ul style="list-style-type: none"> • Mr Bowmaker noted that, on 14 June 2022 the WA Government announced its plans to: <ul style="list-style-type: none"> ○ retire Synergy’s coal fired power plants by 2030; ○ assess network augmentation; and ○ invest in wind energy and storage capacity including long-term storage. • Mr Bowmaker noted that the R1 scenario of the system stress modelling is now obsolete but the R2 scenario is still relevant as it incorporates the announced retirements. • Mrs Bedola suggested to revise the R1 scenario to reflect the announced retirements. • Mr Bowmaker noted that because the R2 scenario reflects the announced retirements, R1 will only be adjusted for the economic modelling in step 5 of stage 1 of the review. • In response to a question from Mr Carlberg, Mr Bowmaker clarified that, under the R2 scenario, all baseload thermal generators including coal and gas fired baseload plants will be retired by 2030 but other gas plant will still operate. • In response to a question from Mr Schubert, Mr Bowmaker confirmed that the Government’s announcements about investments in renewable generation and storage will be taken into account in the next round of modelling. • Mr Schubert noted the 2022 WEM Electricity Statement of Opportunities (ESOO) is about to be published and asked whether the modelling assumptions for the RCM Review will be updated to reflect the ESOO. Mr Robinson indicated that the 2022 ESOO will be reviewed to assess whether it is consistent with the RCM Review assumptions or whether there are any significant differences. 	
	<p>Updated system stress modelling</p> <ul style="list-style-type: none"> • Mr Robinson clarified that the capacity needs identified by the system stress modelling are based on the specified expected unserved energy (EUE) and that additional capacity may be needed to satisfy the peak demand limb of the Planning Criterion. • Mr McKinnon clarified that, in reality, the operational load will never become negative and suggested to use different terminology. Mr McKinnon asked whether the projected demand will be affected by the measures taken to address the negative load. • In response to a question from Ms White, Mr Sreenivasan clarified that the assumptions include optimisation for charging of electric vehicles (EV) at times of system peak for the 2030 and 2050 scenarios and that the effect of EVs on system load is small in the 2030 scenarios because of the small number of expected EVs. • In response to a question from Mr Price, Mr Sreenivasan clarified that the charging scenario from the 2021 ESOO was used for the 	

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	<p>base case and that additional charging optimisation had been applied. Western Power's assumptions on EV charging are reflected to the extent that they align with the assumptions in the 2021 ESOO.</p> <ul style="list-style-type: none"> • In response to a question from Mrs Bedola, Mr Bowmaker clarified that the demand response in the scenarios does not refer to the effect of Demand Side Programs referred to in the current WEM Rules. • Mr Carlberg considered that the 2021 ESOO's peak demand forecast is too low because the 10% probability of exceedance (POE) of peak demand had been exceeded several times. Mr Carlberg considered that peak demand may increase quicker than forecast in the 2021 ESOO due to climate changes. <p>Mr Robinson noted that it will be assessed whether the RCM Review assumptions are consistent with the 2022 ESOO.</p> <p>Ms White asked whether the Planning Criterion should be moved to cover 5% POE to address the increasing peak demand.</p> <p>The Chair noted that a 5% POE peak demand target would be too expensive and that the focus should be for an appropriate forecast of the 10% POE peak demand.</p> <ul style="list-style-type: none"> • In response to a question from Mr Tayal, Mr Robinson confirmed that the modelling assumptions included that the generators would meet their availability obligations. The Chair noted that generators are subject to Reserve Capacity Refunds if they don't meet their availability obligation. • In response to a question from Mr McKinnon, Mr Bowmaker clarified that: <ul style="list-style-type: none"> ○ the ramping needs assessed are based on the modelled operational demand, which includes assumptions about generation from distributed energy resources (DER); and ○ only ramping from Trading Interval to Trading Interval is considered, not intra-interval ramping caused by the fluctuation of intermittent generation, which is assumed to be met by the Essential System Services (ESS) market. • Mr Robinson noted that the current proposal is to include a flexibility product. Mr Robinson considered that if sufficient ramping capacity is available to address demand ramping, it will also be sufficient to address intra-interval variability of intermittent generation. Mr Robinson noted that this will be further assessed to confirm the assumption. • In response to a question from Mr Price, Mr Robinson noted that the numbers for the needed capacity in the table on slide 20 refer to absolute capacity and not additional capacity needed. • In regards to the charts on slide 21, Mr Carlberg asked whether the high number of loss of load hours (LOLH) at 9:00pm are caused by 	

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	<p>the assumption that electricity storage resources (ESR) will not be required to be available at that time because this is outside of the Electric Storage Resource Obligation Intervals (ESROI).</p> <p>Mr Schubert considered that the assumptions on EV charging will drive at what time the modelling identifies LOLH.</p> <p>In response to a question from Mr Cheng, Mr Robinson confirmed that the results indicate a need for long duration storage.</p> <ul style="list-style-type: none"> Mr Schubert considered that EV charging during the evening peak will be an indicator that the incentives to move charging from the evening peak are insufficient. <p>The Chair agreed that introducing automated staggered EV charging will be important.</p> <p>Mr Robinson noted that some EV charging decisions will be made by consumers and some by aggregators and that some of the charging can be shifted by demand response incentives.</p> <p>Mr Robinson noted that the modelling assumptions were between assuming no measures and perfect measures to shift EV charging after the peak hours.</p> <p>The Chair considered that the modelling should include an assessment of what will happen if there are no measures to shift EV charging to after the peak.</p> <p>Mr Robinson agreed to model this as an additional scenario and noted that there are already incentives for retailers to shift the EV charging to after the peak, such as the Individual Reserve Capacity Requirement (IRCR).</p> <p>Several RCMRWG members considered that tariff changes to shift EV charging is unlikely. The Chair considered that the introduction of standards and automation will be important to address timing for EV charging.</p> <ul style="list-style-type: none"> Mr Schubert considered that the current IRCR may not incentivise Synergy to reduce consumption during peak. Mrs Bedola noted that customers with distributed PV (DPV) are reducing system peak demand while shifting system peak to later in the day but they get no benefits in terms of a reduced IRCR. Ms White asked if changes in the ESROI would materially affect the modelling results. <p>Mr Sreenivasan noted that, for 2050, the modelling was assuming different ESROIs based on the observed operational demand.</p> <p>The Chair noted that the length of the ESROI can be increased following the relevant review prescribed under the WEM Rules.</p> <p>Mr Schubert considered that long-term storage should be available by 2050.</p>	

7 Planning Criterion

Mr Robinson presented the proposal for amending the Planning Criterion (slides 30 to 32). The following issues were discussed:

Reserve margin

- Mr Carlberg considered that the forced outage rate may become less relevant for the reserve margin with a higher share of intermittent generation and Synergy's coal fired power plants retiring. Mr Carlberg considered that the errors of demand forecast and intermittent generation forecast may become the main driver for the reserve margin.
- Mr Robinson suggested that a principles based approach could be used to set the reserve margin instead of a fixed percentage. The Chair considered that the reserve margin must strike the right balance between system adequacy and cost to consumers. If the reserve margin is not fixed in the rules, then guidance for AEMO and strict scrutiny rules will be important to ensure the right balance.
- The Chair clarified that, at a minimum, the reserve margin should be set by the largest contingency, including network outages, and not by the largest generation unit.
- Mr Schubert considered that, when assessing the north country as the largest network contingency, it should be recognised that the north country generators may not have the highest output at times of system peak.
- The Chair agreed that the largest contingencies may not happen during system peak demand and suggested that the reserve margin should be set probabilistically based on the largest contingency expected at times of system peak demand.

Introduction of a flexibility capacity product

- Ms White noted that the target for the flexibility product should consider the time difference between daily minimum and maximum demand and not only the MW difference of the two.
 - In response to a comment from Mr Schubert, Mr Robinson noted that setting the target for the flexibility product may need to be refined to reflect the duration and steepness of the ramp because the difference between daily minimum demand and peak demand may overstate the need for flexibility.
 - In response to a question from Mr Price, Mr Robinson clarified that the suggestion is to have one requirement for the peak demand and EUE and another requirement for the flexibility product.
 - Mr Schubert considered that the RCM needs to ensure that enough flexible capacity and enough capacity for peak is procured, but must avoid doubling up on capacity at unnecessarily higher cost.
 - In response to a question from Ms White, Mr Robinson clarified that the suggestion is to have two capacity products with two distinct
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	<p>prices and that a Facility that can provide both products will receive the uplift payment for the flexibility product.</p> <ul style="list-style-type: none"> • In response to a question from Ms White, Mr Robinson summarised that the following capabilities are expected to be part of the defined flexibility product: <ul style="list-style-type: none"> ○ fast start capability; ○ low availability restrictions, such as minimum generation; and ○ fast ramping capability. • Mr Robinson clarified that inertia is not planned to be included in the flexibility product, as this is expected to be provided through the ESS market. The Chair noted that it is important to ensure that sufficient inertia is available and that the RCM should not de-incentivise the provision of inertia. • The Chair considered that the flexibility product should be remunerated for facilities that provide both the peak product and flexibility to avoid perverse incentives to withhold capacity. • Mr Schubert considered that procurement of the peak product should not be prioritised over procurement of the flexibility product or vice versa to satisfy both requirements at the lowest cost. • Mr Peake considered that it would be ideal to price every required element needed from facilities and optimise procurement of the lowest cost combination but that this will likely be too complex. • In response to a question of Mr McKinnon, Mr Robinson clarified that the modelling does not consider any DPV that is part of a virtual power plant (VPP) as part of the operational load. Mr Price clarified that this concept can only apply for VPPs that are a Small Aggregation under the WEM Rules. Mr Robinson agreed. • The Chair considered that reducing the output of DPV should be avoided where possible by charging ESR instead of DPV curtailment. • Mr Carlberg asked whether the flexibility product is envisioned to be based on the needed ramp rate over a certain time. Mr Robinson agreed that this is the current proposal. • Mr Schubert considered that the needed flexibility product may differ depending on how many facilities can provide it. • The Chair noted that the obligations for the flexibility product will need to be carefully designed to ensure that the flexibility is available when needed. • Mr Robinson noted that the economic modelling will assess whether the peak capacity product may be sufficient to incentivise the needed flexibility without adding a flexibility capacity product. • In response to a question from Ms White, Mr Robinson clarified that he considered that the obligation for providers of the flexibility product will likely include obligations to offer the flexibility at certain times and seek outage approval. 	

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	<ul style="list-style-type: none"> The Chair noted that sculpted refunds would be preferable for the flexibility capacity product, similar to the current refund regime for the peak capacity product. 	
8	<p>Next Steps</p> <p>The RCMRWG noted the outstanding items to be resolved on slide 34.</p> <p>The RCMRWG agreed that, based on the discussion, the MAC should be advised that the RCMRWG suggested the following:</p> <ul style="list-style-type: none"> retaining the two existing limbs of the Planning Criterion: peak load and EUE; change the current reserve margin to the largest contingency on the system and make this change ahead of the rest of the changes to the RCM; compare the continuation of the current single-product RCM with a two-product RCM with separate targets for peak capacity and flexible capacity; and only procure a flexible capacity product if the need for flexibility is not met by the capacity needed to fulfill the peak capacity requirement. 	
9	<p>General Business</p> <p>No general business was discussed.</p>	

The meeting closed at 11:30am.