



Minutes

Meeting Title:	Reserve Capacity Mechanism Review Working Group (RCMRWG)
Date:	15 December 2022
Time:	9:00 AM to 11:00 AM
Location:	Microsoft TEAMS

Attendees	Company	Comment
Dora Guzeleva	Chair	
Rhiannon Bedola	Synergy	
Toby Price	AEMO	Subject matter expert
Jacinda Papps	Alinta Energy	
Peter Huxtable	Water Corporation	
Paul Arias	Shell Energy	
Patrick Peake	Perth Energy	
Matt Shahnazari	Economic Regulation Authority	
Noel Schubert	Small-Use Consumer representative	
Andrew Stevens	Consultant	
Rebecca White	Collgar Wind Farm	
Tessa Liddelow	Shell Energy	
Andrew Walker	South32 (Worsley Alumina)	
Daniel Kurz	SSCP Power	
Tim Robinson	Robinson Bowmaker Paul (RBP)	
Oscar Carlberg	Alinta Energy	
Jake Flynn	Collgar Wind Farm	
Mark McKinnon	Western Power	
Shelley Worthington	EPWA (EPWA)	
Isadora Salviano	EPWA	

Apologies	From	Comment
Manus Higgins	AEMO	
Dev Tayal	Tesla Energy	
Kiran Ranbir	ATCO Australia	
Dale Waterson	Merredin Energy	
Stephen Eliot	EPWA	
Laura Koziol	EPWA	

Item	Subject	Action
1	<p>Welcome</p> <p>The Chair opened the meeting at 9:00am.</p>	
2	<p>Meeting Apologies/Attendance</p> <p>The Chair noted the attendance as listed above.</p>	
3	<p>Minute of RCMRWG meeting 2022_10_13</p> <p>The Chair sought comments on the draft minutes of the RCMRWG meeting held on 24 November 2022. Dr Shahnazari noted that his last name has been misspelt and Mr Arias noted that his organisation has not been updated from Bluewaters Power to Shell Energy.</p> <p>The Chair noted the comments on the minutes and advised that EPWA will rectify the issues.</p> <p>The RCMRWG accepted the minutes as a true and accurate record of the meeting.</p>	
	<p>Action: RCMRWG Secretariat to rectify and publish the minutes of the 24 November 2022 RCMRWG meeting on the RCMRWG web page as final.</p>	<p>RCMRWG Secretariat</p>
4	<p>Action Items</p> <p>The paper was taken as read.</p>	
5	<p>Purpose of this session</p> <p>Mr Robinson noted the purpose of the session is to:</p> <ul style="list-style-type: none"> • present the analysis of: <ul style="list-style-type: none"> ○ the three proposed methods to allocate Certified Reserve Capacity (CRC) to intermittent generators; and ○ options to mitigate volatility of method outputs; and ○ seek RCMRWG views on a preferred option to allocate CRC to intermittent generators. 	
6	<p>Determining the Fleet ELCC</p> <p>Mr Robinson presented the approach used to determine the Fleet Effective Load Carrying Capability (ELCC) (slides 7 to 13). The following was discussed:</p> <ul style="list-style-type: none"> • Dr Shahnazari noted that currently the first limb of the Planning Criterion is the dominant one and expressed his concern that by measuring capacity value of renewable generators based on Expected Unserved Energy (EUE), the effects might not be consistent with the dominant limb of the Planning Criterion. He considered that there is a risk of undervaluing or overvaluing the intermittent generators. Dr Shahnazari also noted that 50 iterations might not be enough. <ul style="list-style-type: none"> ○ Mr Robinson acknowledged Dr Shahnazari's concern and noted that, as indicated on the slide, the approach to calibrate the target used to set the fleet ELCC will be further investigated. 	

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	<ul style="list-style-type: none"> ○ The Chair noted that RBP will also model a scenario with an EUE target of 0.0015% to assess the effect. ● In response to a question from Mr Carlberg, Mr Robinson clarified that the reference period for the individual years of Fleet ELCC is the 12 months of the relevant Capacity Year and not a historical five year period. ● Dr Shahnazari referred to an email he circulated to the RCMRWG before the meeting and noted that the ERA had previously proposed a similar approach to determine the fleet ELCC in the Rule Change Proposal RC_2019_03 (Method used for the assignment of Certified Reserve Capacity to Intermittent Generators). <ul style="list-style-type: none"> ○ The Chair noted that system reliability must not be compromised. Therefore, it is appropriate to use the lower of the average of the annual ELCC and the whole period ELCC to set the fleet ELCC as this will determine the total Capacity Credits received by the fleet of intermittent generators and is the most important value in terms of system reliability. 	

7 Determining Facility ELCCs

Mr Robinson presented the three Methods assessed for distributing the fleet ELCC to the individual Facilities (slides 14 to 27). The following was discussed:

- Dr Shahnazari expressed concerns about the application of the Delta Method at individual Facility level and suggested considering applying delta method at facility class level (as being pursued in the PJM).
 - The Chair noted that Dr Shahnazari had submitted those concerns via email to the RCMRWG before the meeting.
 - Mr Carlberg agreed with Dr Shahnazari's comment.
- Mr Schubert commented that using Load for Scheduled Generation (**LSG**), as suggested under EPWA's hybrid method, eliminates high demand intervals in which intermittent facilities perform well, which is a disadvantage for the intermittent generators.
 - Mr Robinson agreed that using LSG creates disadvantages for the intermittent facilities. He explained the rationale for assessing LSG is to account for the correlation between the Facilities' outputs.
- Mrs Bedola asked why, under the hybrid methods, the share allocated to solar facilities increases if less intervals are chosen (slide 21).
 - Mr Robinson explained that this related to the distribution of system stress intervals: if more intervals are chosen,

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	<p>there are more intervals in the evening when there is no sun.</p> <ul style="list-style-type: none"> • Mr Peake commented that in all Methods, new wind facilities affect the certification level for existing Facilities. He asked if it is possible for the first machines built to retain their certification with new plant receiving what is left over. <ul style="list-style-type: none"> ○ The Chair noted the complexity of the Network Access Quantity (NAQ) model for which the treatment of existing against new facilities has been analysed extensively with the result that a new facility becomes an existing facility upon connection. ○ Mr Robinson added that the analysis indicate that the effect of new entrants is relatively small and does not warrant the complexity of differential treatment. • Mr Schubert commented that the weather patterns that cause the stress events are very well known and predictable and noted that looking more at the typical weather patterns and synoptic charts for particular days might help with the analysis but would add complexity. • Mr Robinson noted that the analysis of the methods for individual years indicates that the allocation of the fleet ELCC to individual facilities under the delta method is closest to the facilities' performance during the 12 intervals with the highest demand in a year (slide 24). • Mr Robinson noted that the challenge is to assess contribution to reliability during only a few intervals, while selecting a method that tries to keep volatility low. • In response to a question from Ms White, Mr Robinson clarified that the main reason that the results for Collgar Wind Farm are highlighted in red more than other facilities on slide 24 is that it is the biggest facility. This is because only facilities for which actual meter data, instead of expert reports, exists are assessed in the table. He added that there are two aspects driving the outcomes in the table, one is the size of the facility, and the other is that the use of least squares analysis amplifies the differences. • In response to a question from Ms White, Mr Robinson confirmed that the concern about the averaging proposed in the 	

Collgar method is that the results differ too much from actual facility performance.

- Mr Schubert questioned if determining a weighted average could be an alternative, for example weight the years based on how high the demand is.
 - The Chair noted that this approach could be assessed but would likely add complexity.
 - Mr Robinson considered that weighing the years by peak demand may not create a better outcome. He noted that the concern about reliability is addressed by the approach determining the Fleet ELCC.
 - Mr Price asked how firming of intermittent generators is incentivised, given CRC is applied at a technology level.
 - Mr Robinson referred to the consultation paper where applying CRC at a facility level rather than the technology level was discussed.
 - Mr Schubert questioned if the allocation of CRC to intermittent generators could be up to a set level; and reserve the remaining CRC for firm and flexible capacity.
 - The Chair acknowledged the comment and explained that this is addressed by the proposed introduction of three Capacity Classes and a flexibility product.
 - In response to a question from Mrs Bedola, Mr Robinson confirmed that for the calculation of the annual ELCC for 2018 the demand of a 35°C day was scaled to a hypothetical 42°C day and the intermittent generation was assumed to be as recorded.
 - Mr Schubert noted that the reason a 42°C day has high demand is the wind pattern and added that, as a result, there is no wind in the North Country. He added that weighting the individual years by peak demand would be more representative but also more complex.
 - Mrs Bedola agreed that the scaling is a concern. She asked if it is possible to look at high temperature days with lower demand (e.g. weekends).
 - The Chair noted that such an approach had been considered but not pursued due to the high complexity.
 - Mr Robinson added that the issue with creating synthetic high demand days is that the amount of analysis that will be required from AEMO is too high.
 - Mr Stevens suggested that AEMO should provide downloadable tools for the calculation of CRC for intermittent generators. Mr Robinson, Ms White, Mr Peake, Dr Shahnazari, Mrs Bedola and Mr Walker agreed.
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- Ms White commented that an analytical tool from AEMO would be really useful, as long as it is cost effective to produce.
 - Mr Peake, Mr Andrew Dr Shahnazari and Mrs Bedola agreed.
 - Mr Robinson agreed that that should be considered.
 - Mr Stevens commented that the method should be designed so it can be understood, and analysed by investors and asset owners and provide them with reasonable certainty of their future capacity allocations. He expressed concerns that the methods are complex and difficult to explain to investors.
 - Ms White, Dr Shahnazari and Mr Carlberg agreed with Mr Stevens comment.
 - The Chair agreed with Mr Stevens and noted that one of the key principles is that the Method should be simple. However, a simple method does not address volatility, which will also impact reliability and investment, and that the feedback to date was that it is important to avoid volatility.
 - Mr Carlberg agreed with the Chair consideration and that the Fleet ELCC is essential for reliability. He considered that, when allocating the Fleet ELCC to individual facilities it would be best to keep it simple as it will be important to send a clear investment signal to the industry. He added that the analysis indicated that the averaging applied to the delta method still produces a similar output as the pure delta method and therefore may not be worthwhile.
 - The Chair noted that it would be difficult to simplify the determination of the Fleet ELCC because this would be a risk to system reliability. However, EPWA will investigate simplifying the allocation of the Fleet ELCC to individual facilities.
 - Mr Schubert noted that that perhaps the message for investors is to include firming capacity for the facility.
 - The Chair agreed.
 - Mr Carlberg noted his preference for the allocation approach proposed in the hybrid method using a combination of peak LSG and peak demand. He considered that the Delta Method does not provide a clear investment signal about when capacity is needed in future.
 - Dr Shahnazari suggested that applying the delta method to facility classes, creating a facility class ratings, would give investors more certainty.
 - The Chair noted that the simplest way to allocate the Fleet ELCC to individual Facilities is to base the allocation on performance over the Individual Reserve Capacity Requirement (**IRCR**)
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	<p>intervals in the past five years for each facility. However, that may lead to the volatility issue.</p> <ul style="list-style-type: none"> • Mr Robinson explained that the aim is to incentivise investors to firm up their intermittent capacity. He also explained that facilities are needed most when the margin between available capacity and demand is lowest. <ul style="list-style-type: none"> ○ Mr Carlberg agreed and noted that the issue is that the reserve margin is only small so often and the times of low margin will be different in future. Therefore, a broader range should be applied to provide investors with more certainty. • The Chair noted that the IRCR intervals are readily accessible for investors. • Mrs Bedola commented that, when using the IRCR intervals, it is important to consider adjustment for Distributed Energy Resources (DER) as well. <ul style="list-style-type: none"> ○ The Chair agreed. • Mr Stevens noted that investments in generation in WA are already complicated for investors and stressed that the method for assigning CRC to intermittent generators must enable investors to understand the range of CRC they can expect. • The Chair asked members to provide suggestions how to simplify the method for allocating the Fleet ELCC to individual Facilities. • Mr Carlberg reiterated his preference for the Hybrid and the ERA's Methods. He commented that peak demand and peak LSG are well understood, and that the ERA provided strong rationale for using its proposed method in its 2018 review of the Relevant Level Methodology. • Ms White requested to provide comments after the meeting. The Chair agreed and requested comments as soon as possible but by the following Friday at the latest. 	
	<p>Action: Members are to provide suggestions by 23 December 2022 on how to simplify the Method for allocating the Fleet ELCC to individual facilities.</p>	<p>RCMRWG members</p>
<p>8</p>	<p>Impact of New Entry</p> <p>Mr Robinson presented the impact of new entry (slides 28 to 32). Mr Peake acknowledge the analysis on adding new plant as reassuring. There was no further discussions.</p>	
<p>10</p>	<p>Next Steps</p> <p>The Chair noted the next steps.</p>	

Item	Subject	Action
11	General Business	
	The Chair acknowledged that this was Ms White's last meeting and expressed gratitude for her contributions.	

The meeting closed at 10:30am