



## Minutes

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| <b>Meeting Title:</b> | Reserve Capacity Mechanism Review Working Group ( <b>RCMRWG</b> ) |
| <b>Date:</b>          | 1 February 2023   |
| <b>Time:</b>          | 9:30 AM to 11:30 AM   |
| <b>Location:</b>      | Microsoft TEAMS   |

| Attendees           | Company                               | Comment               |
|---------------------|---------------------------------------|-----------------------|
| Dora Guzeleva       | Chair                                 |                       |
| Manus Higgins       | AEMO                                  |                       |
| Toby Price          | AEMO                                  | Subject matter expert |
| Oscar Carlberg      | Alinta Energy                         |                       |
| Kiran Ranbir        | ATCO Australia                        |                       |
| Dimitri Lorenzo     | SSCP Power                            | Proxy for Daniel Kurz |
| Geoff Gaston        | Change Energy                         | Subject matter expert |
| Jake Flynn          | Collgar Wind Farm                     |                       |
| Matt Shahnazari     | Economic Regulation Authority         |                       |
| Owen Cameron        | Enel X                                | Subject matter expert |
| Scott Cornish       | Enel X                                | Subject matter expert |
| Patrick Peake       | Perth Energy                          |                       |
| Tessa Liddelow      | Shell Energy                          |                       |
| Paul Arias          | Shell Energy                          |                       |
| Noel Schubert       | Small-Use Consumer representative     |                       |
| Andrew Walker       | South32 (Worsley Alumina)             |                       |
| Rhiannon Bedola     | Synergy                               |                       |
| Peter Huxtable      | Water Corporation                     |                       |
| Mark McKinnon       | Western Power                         |                       |
| Tim Robinson        | Robinson Bowmaker Paul ( <b>RBP</b> ) |                       |
| Ajith Sreenivasan   | RBP                                   |                       |
| Shelley Worthington | EPWA ( <b>EPWA</b> )                  |                       |
| Isadora Salviano    | EPWA                                  |                       |
| Laura Koziol        | EPWA                                  |                       |
| Stephen Eliot       | EPWA                                  |                       |

| Apologies      | From                 | Comment |
|----------------|----------------------|---------|
| Andrew Stevens | Clear Energy Pty Ltd |         |
| Daniel Kurz    |                      |         |
| Dev Tayal      | Tesla Energy         |         |
| Dale Waterson  | Merredin Energy      |         |

| Item     | Subject   | Action                    |
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| <b>1</b> | <b>Welcome</b><br>The Chair opened the meeting at 9:30am.   |                           |
| <b>2</b> | <b>Meeting Apologies/Attendance</b><br>The Chair noted the attendance as listed above.  |                           |
| <b>3</b> | <b>Minute of RCMRWG meeting 2022_12_15</b><br><br>The draft minutes of the RCMRWG meeting held on 15 December 2022 were distributed in the meeting papers on 27 January 2023.<br><br>The RCMRWG accepted the minutes as a true and accurate record of the meeting.<br><br>The Chair noted that the minutes will be provided to the members of the Market Advisory Committee ( <b>MAC</b> ) before their next meeting schedule for 02 February 2023 to inform the discussion.  |                           |
|          | <b>Action: RCMRWG Secretariat to publish the minutes of the 15 December 2022 RCMRWG meeting on the RCMRWG web page as final.</b>  | <b>RCMRWG Secretariat</b> |
|          | <b>Action: RCMRWG Secretariat to circulate the minutes to the MAC members prior to the next MAC meeting.</b>  | <b>RCMRWG Secretariat</b> |
| <b>4</b> | <b>Action Items</b><br>The paper was taken as read.   |                           |
| <b>5</b> | <b>Peak IRCR</b><br>Mr Robinson presented four identified options for determining the Individual Reserve Capacity Requirement ( <b>IRCR</b> ), a comparison of the options, the outcome of the analysis of historical high system demand intervals and suggestions for the detail of the proposed preferred Option 4.<br><br>The four options identified are: <ul style="list-style-type: none"> <li>• Option 1: Equivalent firm capacity;</li> <li>• Option 2: Ex-ante notification by AEMO;</li> <li>• Option 3: Ex-post intervals by reserve margin<sup>1</sup>; and</li> <li>• Option 4: Ex-post intervals by demand.</li> </ul> The following was discussed: |                           |

<sup>1</sup> In the context of this meeting, reserve margin describes the quantity of available capacity that is not dispatched in a Trading Interval.

| Item | Subject  | Action |
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|      | <ul style="list-style-type: none"> <li data-bbox="316 253 1220 394">• Mrs Bedola considered that there should be an IRCR component for the consumption share outside of peak periods. Because the RCM requires facilities to be available all year and not only during peak.<br/>The Chair considered that the IRCR should provide a signal to reduce the Reserve Capacity Requirement (<b>RCR</b>).<br/>Mr Robinson acknowledged that capacity provides reliability outside of peak. He considered that the overall costs for customers are driven by the RCR that is set based on system peak demand.<br/>Mr Price considered that the method for setting IRCR aligns well with the first limb of the Planning Criterion (defining a peak demand scenario) but does not reflect the second limb of the Planning Criterion (setting a threshold for expected unserved energy).<br/>Mr Cameron considered that reducing consumption during system peak load would reduce the need for additional capacity. He considered that 99% of the year system demand is far below the available capacity. Based on supply and demand dynamics it appears appropriate that consumers get the reliability provided by the RCM for free outside of system peak demand.<br/>The Chair agreed to further assess Mrs Bedola's concern.</li> <li data-bbox="316 1048 1220 1151">• Mr Schubert questioned the benefit of setting the IRCR intervals taking three intervals from each of four days instead of taking the 12 intervals with the highest system demand.</li> <li data-bbox="316 1167 1220 1429">• The Chair noted that Option 1 could result in the IRCR being based on consumption during less Trading Intervals than under the current method. The Chair considered that Option 1 does not send a clear signal to customers to reduce consumption when needed.<br/>Mr Robinson noted that Option 1 would still reward customers for reducing consumption during high system demand. However, it would be less transparent which intervals drive the IRCR.</li> <li data-bbox="316 1444 1220 1749">• The Chair questioned whether smaller loads would be able to react to the ex-ante declaration of an IRCR interval with only two hours notice.<br/>Mr Gaston noted that he was able to notify all types of customers but that a two hour notice would not provide enough time for loads to react.<br/>Mrs Bedola agreed that two hours reaction time would not be sufficient for most loads.</li> <li data-bbox="316 1765 1220 1868">• Mr Arias questioned whether Option 2 would dilute the loads' response to the IRCR mechanism compared with the current IRCR regime.</li> <li data-bbox="316 1883 1220 2031">• Mr Peake considered that Option 3 implies that the transition to renewable generation reduces system reliability. He considered that this is undesirable.<br/>Mr Gaston agreed with Mr Peake.</li> </ul> |        |

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|      | <ul style="list-style-type: none"> <li>Dr Shahnazari considered that Option 3 could be amended to exclude the effect of Forced Outages to focus on the volatility of intermittent generators. This would remove uncertainty for consumers when predicting IRCR intervals.<br/>Mr Carlberg, Mr Price and Mr Peake agreed with Dr Shahnazari that certainty is important.</li> <li>Dr Shahnazari suggested to also explore a hybrid option where a part of the IRCR is based on intervals that are set with a long prior notice and another part of the IRCR is based on intervals that are set with very little notice.</li> <li>Mr Schubert considered that a shorter notice would be better for AEMO but would likely result in less response to the signal.</li> <li>Mr Price suggested that, under Option 3, the IRCR intervals could also be based on the forecast reserve margin.<br/>Dr Shahnazari supported the suggestion.</li> <li>Mr Cameron questioned how Option 3 would align with allocation of Certified Reserve Capacity (<b>CRC</b>).<br/>Mr Robinson explained that CRC is allocated to facilities based on the expectation of the capacity that can be provided during extreme peak demand. IRCR is the means to distribute the cost of Capacity Credits procured to customers even if none of the IRCR intervals represents an extreme peak.</li> <li>Mr Cameron suggested that Option 3 could take the dispatch of Frequency Co-optimised Essential System Services (<b>FCESS</b>) into account by AEMO in declaring IRCR intervals to commence after the completion of FCESS dispatch.<br/>Mr Price noted that the obligation for FCESS (Contingency Reserve) is to sustain response for 15 minutes.<br/>Mr Robinson noted that the mechanisms providing special contracts are NCESS and supplementary reserve capacity. Mr Robinson considered that these mechanisms are a measure of last resort and the need for them should not be built into the RCM.</li> <li>Mr Higgins expressed his support for Option 3 because it reflects AEMO's reality. Mr Higgins referred to a recent day with very low wind generation resulting in system stress at only 3700 MW system peak demand.</li> <li>Mr Gaston noted that he is against basing IRCR on the reserve margin in an interval. Mr Gaston considered that the IRCR should be aligned with the method for setting the RCR and assigning CRC. Both are based on peak demand.<br/>Mr Carlberg agreed with Mr Gaston.<br/>Mr Gaston noted that as a retailer he must forecast the IRCR cost two years in advance when signing contracts with customers. Basing the IRCR on the spare capacity would make the forecasting more difficult. For most loads, consumption during last year's peak</li> </ul> |        |

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|      | <p>demand is usually a good predictor for consumption during this year's peak demand.</p> <p>Because of the need for retailers to forecast a load's IRCR, Mr Gaston considered that Option 1 and Option 3 are not acceptable, and Option 2 and Option 4 are preferable.</p> <ul style="list-style-type: none"> <li>• Mr Peake considered that volatility must be addressed on the supply side.</li> <li>• Mr Schubert considered that the analysis of peak demand (slide 17) should focus on intervals with demand close to the forecast 10% probability of exceedance.</li> </ul> <p>The Chair agreed that years with low demand should not be used to determine the method for setting the IRCR intervals.</p> <p>Mr Robinson clarified that the purpose of the analysis is only to inform the understanding of the characteristics of high demand in different years.</p> <ul style="list-style-type: none"> <li>• Mr Schubert suggested to show the relation of peak demand to sunset not to time of day (slide 18).</li> <li>• Mrs Bedola considered that the IRCR should not be set by intervals that all fall on the same day.</li> </ul> <p>The Chair agreed with Mrs Bedola and noted that it is not intended to determine IRCR intervals during one day only.</p> <ul style="list-style-type: none"> <li>• Mr Schubert considered that the reserve margin can be low in November because this is the time where most Planned Outages are scheduled. Scheduling of Planned Outages is in the control of AEMO.</li> <li>• Mr Cameron considered that the increased penetration of distributed energy resources has made peaks shorter and sharper and not longer and flatter (slide 19).</li> </ul> <p>Mr Price agreed with Mr Cameron.</p> <p>Mr Robinson clarified that the system stress analysis forecasts peaks to become flatter and longer from around 2030 because of the expected increase in distributed storage capacity and uptake of electric vehicles.</p> <ul style="list-style-type: none"> <li>• Mr Schubert questioned why the characteristics of future high load intervals showed forecast data for August and September which lay outside of the Hot Season (slide 19).</li> </ul> <p>Mr Robinson noted that the chart will be updated with examples from the Hot Season.</p> <ul style="list-style-type: none"> <li>• Mr Robinson suggested that the proposed approach (slide 21) could be amended to allow increasing the amount of IRCR intervals to ensure a number of days is selected.</li> </ul> <p>Mrs Bedola supported this suggestion.</p> <ul style="list-style-type: none"> <li>• In response to a question from Mrs Bedola, Mr Robinson clarified that the selected intervals under the proposed option don't need to</li> </ul> |        |

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|      | <p>be restricted to the Hot Season. However, not restricting them to the Hot Season would allow the IRCR intervals to fall into winter during years with low summer system load, which does not align with the setting of the RCR.</p> <ul style="list-style-type: none"> <li>• Mr Price suggested to limit the number of IRCR intervals that can be selected.<br/>Mr Cameron supported the suggestion.</li> <li>• In response to a question from Mr Arias, Mr Robinson clarified that: <ul style="list-style-type: none"> <li>○ The proposed new metrics for setting IRCR for new loads can only apply from the time that information is available; and</li> <li>○ He considered that the current method for assigning IRCR to new loads does not provide a clear incentive for these loads to adjust consumption because their IRCR will be based on relative consumption during the 12 peak trading intervals in the next year.</li> </ul> </li> <li>• Mr Gaston supported the removal of Non Temperature Dependent Load (<b>NTDL</b>) status.<br/>Mr Carlberg considered that the NTDL concept allows to reward flat loads which don't contribute to the need for capacity.<br/>Mr Robinson noted that a flat load would not incur any costs from the flexibility product which may remove the need for the NTDL concept altogether.<br/>Mrs Bedola commented that the NTDL and temperature dependent load (<b>TDL</b>) multipliers are used to uplift the IRCR from observed system peak demand to the Reserve Capacity Requirement (<b>RCR</b>).<br/>Mr Robinson noted that the questions to be explored are whether: <ul style="list-style-type: none"> <li>○ to apply different multipliers to TDLs than to NTDLs in general; and</li> <li>○ different multipliers should be applied only to the Capacity Credits acquired in excess of the RCR.</li> </ul> The Chair noted that the impact of removing the NTDL status will be further assessed. </li> <li>• Mr Gaston considered that, apart from removing the NTDL status, the current method does not need to be amended. Mr Gaston considered that using the maximum allowed network offtake capacity is inappropriate because it may be unrelated to the actual consumption.</li> <li>• Mr Huxtable supported the general principles of the proposed option.</li> </ul> |        |
| 6    | <p><b>Flex IRCR</b></p> <p>Mr Robinson presented the two options identified for determining IRCR for the new flexible capacity product (slides 26 and 27).</p>  |        |

| Item | Subject | Action |
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The two options identified were:

- Option 1: Use the peak IRCR
- Option 2: Base the flex IRCR on a load's expected contribution to the steepest ramp

The following was discussed:

- In response to a question from Mr Huxtable, Mr Robinson clarified that a load with a flat consumption profile does not contribute to the steepness of the system load ramp. Therefore, it does not contribute to the need for flexibility and the method should reflect that.
- Mrs Bedola expressed concerns with allocating the cost of the flexible capacity to the loads who cause the ramp under Option 2. She noted that:
  - the least flexible loads will pick up the costs; and
  - distributed photovoltaics (**DPVs**) have shifted the system peak demand without getting capacity under the RCM and the flex IRCR under Option 2 will penalise them for it.
- Mr Robinson clarified that there is currently no signal to DPV to reduce the contribution to the steepness of the system demand ramp.

Mr Arias considered that Option 2 aligns with the causer pays principle.

- Mrs Bedola considered that the evening ramp is an issue most days of the year. She suggested to use more days to set the IRCR. Mr Robinson noted that the analysis indicates that the ramping need will be set by more than one but less than 10 days which should be the basis for the flex IRCR. The Chair noted that the requirement for the flex product will be set by a defined scenario.
- Mr Robinson invited RCMRWG members to provide feedback after the meeting.

## 7 DSP CRC

Mr Robinson presented the three options identified for determining CRC for Demand Side Programmes (**DSPs**):

- Option 1: Using an ELCC approach;
- Option 2: Based on load in historical IRCR intervals; and
- Option 3: Nomination of the CRC by the DSP proponent with provision of evidence.

The following was discussed:

- Mr Robinson explained that the current method for determining CRC for DSPs favors loads with a flat load profile. Variable loads with a strong correlation between consumption and system load will receive less CRC than a load with a flat load profile, even if its

| Item | Subject  | Action |
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|      | <p>consumption during system stress is higher than that of the load with the flat profile.</p> <ul style="list-style-type: none"> <li>The Chair noted that, in the future, loads responding to market signals will have a bigger role to play. Therefore, signals must be strong and sustainable.</li> <li>The Chair suggested that the option of a minimum demand service for DSPs should be considered. Mr Robinson noted that this could be possible, given that DSPs are managed under contract.</li> <li>Mrs Bedola considered that DSP dispatch should be preferred over loads responding to the IRCR mechanism because AEMO has more control over the dispatch than over a load's voluntary reaction to the IRCR mechanism.</li> </ul> <p>Mr Price agreed with Mrs Bedola's comment.</p> <p>Mr Gaston considered that for a customer it can be more lucrative to reduce IRCR than register as a DSP. He expressed his preference for assigning CRC to DSPs based on consumption during the IRCR intervals to prevent double dipping. Mrs Bedola agreed.</p> <p>The Chair noted that the preference for reduction of IRCR over registering as a DSP may change based on cost and scenarios of oversupply or undersupply of capacity.</p> <p>Mrs Bedola considered that in any situation IRCR reduction would be more beneficial for the customer than registering as a DSP.</p> <p>Mr Robinson considered that a removal of the NTDL status (considered under agenda item 5) may also affect the customers' preference between IRCR reduction and registering as a DSP.</p> <ul style="list-style-type: none"> <li>Mr Schubert suggested to test whether the IRCR incentivises Synergy to manage consumption considering <a href="#">all of the market interactions and signals Synergy receives</a>.</li> </ul> <p>Mrs Bedola noted that dealing with the Notional Wholesale Meter includes more complexities than only IRCR.</p> <ul style="list-style-type: none"> <li>Mr Gaston supported the idea of determining CRC for DSPs based on consumption during reserve margin stress event instead of the IRCR intervals. He commented that this can provide an opportunity for loads to react to both peak demand, and reserve stress scenarios.</li> <li>Mr Huxtable considered that a DSP should not have to operate at its Relevant Demand outside of the IRCR intervals which are the basis for the DSP's payment for Capacity Credits. This is because when it is operating below its Relevant Demand it is de facto delivering a load reduction even if it is by accident.</li> </ul> <p>Mr Robinson considered that it is important for AEMO to know the quantity by which a DSP can be dispatched. However, the dynamic baseline would allow AEMO to dispatch a set quantity throughout</p> |        |



| Item     | Subject  | Action                |
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|          | <p>the year while allowing for variable overall consumption if not dispatched.</p> <ul style="list-style-type: none"> <li>Mr Higgins expressed his preference for the dynamic baseline. It would help AEMO to assess the available value of DSP for dispatch.</li> </ul> <p>Mr Carlberg asked if AEMO could obtain that same transparency without changing the mechanism for assigning CRC to DSPs (i.e. through telemetry or offers like those provided by generators).</p> <ul style="list-style-type: none"> <li>Mr Schubert considered that for measuring performance, the dynamic baseline works better and for allocating CRC, the static baseline works better.</li> </ul> <p>Mr Carlberg agreed with Mr Schubert.</p> <ul style="list-style-type: none"> <li>Mrs Bedola's considered that, regarding the incentives for the provision of capacity, it is important to ensure that facilities are paid fairly.</li> </ul> |                       |
| <b>8</b> | <b>Next Steps</b>  |                       |
|          | <p>The RCMRWG agreed that the discussion about assigning CRC to DSPs should be continued at the next RCMRWG meeting (scheduled for 16 February 2023).</p> <p>The Chair invited RCMRWG members to provide comments on the presented slides via email.</p>   |                       |
|          | <b>ACTION: RCMRWG members are to provide any further feedback and comments on the Peak IRCR, Flex IRCR and DSP CRC.</b>  | <b>RCMRWG members</b> |
| <b>9</b> | <b>General Business</b>  |                       |
|          | No general business.   |                       |

**The meeting closed at 11:40am**