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Economic Regulation Authority  
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Dear Mr Fairhall

## **SPINNING RESERVE AND LOAD REJECTION RESERVE (MARGIN VALUES AND COST\_LR PARAMETERS) SETTLEMENT VALUES 2023/24**

Synergy welcomes the opportunity to comment on the Economic Regulation Authority's (**ERA's**) proposed margin values and Cost\_LR ancillary services parameters for 2023/24 (**Issues Paper**).

Financial year 2023/24 sees continued and unprecedented changes to the Wholesale Electricity Market (**WEM**) largely brought about by the impacts from the COVID-19 pandemic, increasing penetration of rooftop distributed solar photovoltaic (**DPV**) systems and ongoing regulatory reforms (**WEM Reform**) led by the Energy Transformation Strategy (**ETS**).

The market rules require the ERA to set the margin values and cost\_LR parameters to compensate Synergy for the difference between the financial position Synergy would have been in but for providing ancillary services and Synergy's actual financial position after providing the ancillary services. This year's determination will apply for the three-month period from 1 July 2023 until 1 October 2023 when the new Essential System Services (**ESS**) market will replace the current cost recovery mechanism.

Synergy continues to hold concerns regarding the accuracy of the ERA modelling and its ability to appropriately reflect the cost of, and payment for, Spinning Reserve (**SR**) and Load Rejection Reserve (**LRR**). These concerns are addressed below, with additional queries contained in the table at Annexure 1.

### **Comparison to previously approved values**

Synergy believes it is helpful to compare the proposed settlement values for 2022/23 and 2023/24 to past determinations. The values for 2018/19 to 2023/24 are summarised in the table below.



<b>Summary of proposed and approved values 2018/19 to 2023/24</b>						
<b>Essential System Service</b>	<b>2018/19 Approved</b>	<b>2019/20 Approved</b>	<b>2020/21 Approved</b>	<b>2021/22 Approved</b>	<b>2022/23 Approved</b>	<b>2023/24 Proposed</b>
Margin Peak %	25%	17.32%	25.46%	12.6%	11.44%	10.93%
Margin Off Peak %	50%	12.92%	21.42%	23.4%	6.57%	6.85%
SR Availability Cost Total (\$m)	13.06	10.34	8.40	6.53	14.75	11.98
SR Availability Cost Peak (\$m)	7.97	6.91	5.04	3.04	11.84	9.72
SR Availability Cost Off Peak (\$m)	5.09	3.43	3.35	3.49	2.91	2.26
SR MW Peak	224.1	235.40	252	240	284	284
SR MW Off Peak	189.0	236.40	240	241	235	198
Peak \$/MWh	54.44	56.48	40.47	25.07	23.12	-
Off Peak \$/MWh	39.52	46.08	37.36	20.51	34.23	-
LRR Availability Cost Total (\$m)	1.4	1.4	1.167	7.386	4.81	4.91
LRR Availability Cost Peak (\$m)	-	-	0.274	4.331	2.73	2.11
LRR Availability Cost Off Peak (\$m)	-	-	0.893	3.054	2.08	2.80
<b>Total (\$m)</b>	<b>14.46</b>	<b>11.74</b>	<b>9.56</b>	<b>13.916</b>	<b>19.57</b>	<b>16.89</b>

Availability payments for SR are recovered via multipliers (the margin values for peak and off-peak) that are applied to the balancing market price and the quantity of SR modelled for the period. The proposed margin values for 2023/24 are relatively low in comparison to previous approved values from 2018/19 to 2021/22, and despite the high SR availability cost.

The Issues Paper highlights the new and continued AEMO practice of allocating ~10% of DPV solar generation to the SR contingency on the basis that this volume will likely disconnect from the network following a contingency event. Synergy notes that the peak SR quantity has remained at 284MW, as per the 2022/23 determination. However, the peak availability cost has reduced from \$11.84m to \$9.72m, despite the projected increase in solar penetration in the SWIS.<sup>1</sup>

There is a modest 4% increase to the margin off-peak between the 6.57% approved in 2022/23 and 6.85% proposed for 2023/24. Nonetheless, the proposed 2023/24 margin off-peak is more than 50% lower compared to the \$23.4m approved for 2021/22. Given the significant reduction in the margin off peak, Synergy is deeply concerned that it will be under remunerated relative to its actual costs.

Similarly, there is a modest 2% increase in LRR costs for 2023/24, as compared to 2022/23. Despite this, LRR costs have fallen by 33% from \$7.386m approved in 2021/22 to \$4.91m proposed in 2023/24.

### **Cost Recovery in the Ancillary Services market**

The Issues Paper notes that:

*“...if all generators providing spinning reserve were also providing some load following ancillary services, the minimum generation quantity that comprises the greatest element of out of merit availability costs would be recovered through the LFAS market.”*

In a co-optimised model, unit commitment is optimised as to provide the least cost dispatch solution that satisfies energy as well as all ancillary service requirements. It may therefore not

<sup>1</sup> Issues Paper, p 11 and p 26.

be true in all instances that costs associated with minimum generation quantities can be attributed to a specific service or assume that they will be recovered through a market mechanism linked to a specific service. The requirement for a particular ancillary service could lead to additional units being committed but these units, once committed, could provide multiple services. Determining which service prompted the need for a specific unit to be committed, and therefore to which service the cost should be attributed to, is only possible by comparing the unit commitment decisions between two models, one which has a requirement for a specific service and one that does not.

The divergent impact of this modelling approach relative to actual SWIS market outcomes is evident in the model's allocation of LFAS UP and LFAS DOWN to non-Synergy facilities. In Calendar year 2022, Alinta, NewGen Kwinana and NewGen Neerabup provided 40% of LFAS and LFAS down by volume and received 59% of revenue by value. The LFAS UP / DOWN Provision by Time of Day charts in the Issues Paper<sup>2</sup> indicates almost non-existent LFAS UP provision by non-Synergy facilities and what appears to be materially less than 20% of LFAS DOWN provision by non-Synergy facilities.

The clear impact of modelling under-provision of LFAS by non-Synergy facilities relative to real world outcomes is that out of merit mingen costs and dispatch quantity costs relating to spinning reserve and load following markets are assumed to be recovered in LFAS markets, but in practice are not.

Synergy requests ERA that the ERA revisits the allocation of LFAS UP and LFAS DOWN to non-Synergy facilities such that they align with recent market evidence and notes that failure to do so is likely to result in material under-remuneration of Synergy for Spinning Reserve and Load Rejection services.

The Issues Paper notes that:

*"In the model, generators and batteries were limited to provide no more than 30 per cent of the spinning reserve and load rejection contingency quantity."*<sup>3</sup>

Whilst the Issues Paper acknowledges that the above limitation is not a fixed amount in AEMO operational practice, it does not consider the impact of this simplification on model outputs. Synergy believes that this modelling limitation is an oversimplification of the WEM and is not reflective of real-world scenarios in the ancillary services market.

Synergy would like clarity as to what costs the ERA has included in the formation of battery bids and offers. In addition to direct opportunity costs, has the ERA allowed for the recovery of VOM, degradation costs, Contingency Reserve costs, Market fees and charges and discharge losses as part of the battery bid and offer prices.

Synergy notes the comments regarding the anticipated operation and modelling of the battery in the 2023 Issues Paper. Synergy has included several queries for clarification at Annexure 1 of this document. Regarding Synergy's expected operation of the battery facility in the ancillary services market, Synergy refers to the comments made in its 2022 submission.<sup>4</sup>

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<sup>2</sup> Issues Paper, p 62 and p 63.

<sup>3</sup> Issues Paper, p 25.

<sup>4</sup> Synergy, *Margin Peak and Margin Off-Peak parameters and Load Rejection (Cost\_LR) for 2022/23*, ([online](#)).

## Single bid cost curves

The Issues Paper states:

*“The model uses a single bidding behaviour for each unit and does not account for daily or seasonal bidding changes. This is required to achieve a balance between accuracy and calculation times and to prevent over-fitting of the model for future (unknown) bidding behaviour.”<sup>5</sup>*

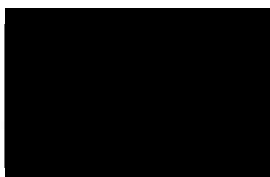
The above is noted in the Issues Paper as a difference between the ERA’s model and the WEM, yet the ERA nonetheless relies on the model’s results. Synergy is concerned that reliance on a single bid curve grossly misrepresents bidding behaviour in the WEM, which has material impact on the determination of appropriate ancillary services parameters.

## Conclusion

Synergy thanks the ERA for the opportunity to provide feedback in the final consultation for the proposed margin values and Cost\_LR ancillary services parameters, and looks forward to engaging with the ERA in the transition to the new ESS market.

Should you require any further information regarding this submission, please contact Genevieve Teo at [genevieve.teo@synergy.net.au](mailto:genevieve.teo@synergy.net.au).

Yours sincerely



**RUDOLF VORSTER**  
**WHOLESALE STRATEGY & PLANNING MANAGER**

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<sup>5</sup> Issues Paper, p 31.

## Annexure 1

### Further comments and request for clarity on the Issues Paper

Spinning reserve and load rejection reserve (margin values and Cost_LR parameters) settlement values 2023/24 (Issues Paper)				
#	Section Ref	Page ref	Classification	Issue
1.	5.3, Modelling interactions and ancillary service costs	15	Major	<p>The Issues Paper states “Quantities associated with upwards ancillary service reserves (spinning reserve and LFAS up) and the minimum generation quantities must be bid at the market floor price to ensure they are in-merit and dispatched.”</p> <p>Synergy understands minimum generation quantities associated with provision of upwards ancillary service must be bid at the market floor so they are in-merit and dispatched, however the required upwards ancillary reserve must be bid at the <b>market cap</b> to ensure they are out of merit and available to be dispatched upward if required.</p>
2.	5.3, Modelling interactions and ancillary service costs	15	Major	<p>The Issues Paper states “Downward reserves (load rejection reserve and LFAS down) must be bid at the market cap to ensure the quantities are out of merit and available for dispatch if required”.</p> <p>Synergy understands downward reserves (load rejection reserve and LFAS down) and the minimum generation quantities must be bid at the <b>market floor</b> to ensure the quantities are in merit and available to be dispatched down if required.</p>
3.	Appendix 4, Generator operational constraints	29	Clarification	<p>“For example, without a constraint the model could schedule 120MW from a coal fired power station to spinning reserve, which might take a full half hour to deliver – substantially slower than the six second to five-minute response time needed for this service.”</p> <p>This example suggests the ERA has not limited the response of individual facilities consistent with their Standing Data maximum Spinning Reserve response (being the response they can provide in requires six second to five-minute response window), which is typically 10-30% of nameplate for a coal fired generator.</p> <p>Synergy would like the ERA to confirm that in-service coal units were modelled based on their physical maximum Spinning Reserve capability.</p>
4.	Appendix 4, Battery	29-30	Clarification	<p>The Issues Paper states that the battery is assumed to be a price taker in all markets in which it operates. Is this assuming that there are no out of merit costs for the battery? What avoidable fixed costs are assumed? What is the \$/MWh cost?</p>

**Spinning reserve and load rejection reserve (margin values and Cost\_LR parameters) settlement values 2023/24 (Issues Paper)**

#	Section Ref	Page ref	Classification	Issue
5.	Appendix 4, Battery	30	Moderate	<p><i>“If the battery is providing load following ancillary services equal to the contingency reserves, it arguably is not incurring any additional cost to provide the contingency reserve above that which it would receive revenue through the balancing and load following markets.”</i></p> <p>Synergy disagrees with this statement. Whilst the battery may not incur any additional direct costs, it may incur lost revenue or opportunity costs. These can arise because the battery needs to reserve an additional portion of its storage capacity for contingency reserve enablement and may forego current or future opportunities to transact that stored energy in the balancing market.</p>
6.	Appendix 4, Differences between the model and the WEM	30	Clarification	The ERA Offer Construction Guidelines require facility bidding at average operating costs. Can the ERA explain why marginal operating cost and not average operating cost is used?