

23 March 2021

Ms Sara O'Connor

Economic Regulation Authority
PO Box 8469
Perth BC WA 6849

Sent to: publicsubmissions@erawa.com.au

Dear Ms O'Connor

DETERMINATION OF MARGIN VALUES AND COST_LR PARAMETERS FOR 2021/22

Perth Energy makes this submission in response to the Economic Regulation Authority's (ERA) *Ancillary Service Costs – Spinning Reserve, Load Rejection Reserve and System Restart – Issues Paper* published on 9 February 2021.

Perth Energy welcomes the opportunity to provide input into the determination of the cost of Ancillary Services in the Wholesale Electricity Market (WEM). As a gentailer we pay for Spinning Reserve Ancillary Services (SRAS) and Load Rejection Reserve (LRR) services. We also provide System Restart Services under contract with the Australian Energy Market Operator (AEMO).

Summary

- Perth Energy appreciates the ERA's intent to model the costs of spinning reserve ancillary service, load rejection and system restart more accurately.
- We look forward to the commencement of competitive ancillary services markets, which should offer great opportunity for participation, lower overall costs for consumers, and will result in a market-derived price.
- We accept that changing market dynamics are likely to have an impact on ancillary service costs, and it would be useful to capture this when conducting the extremely challenging exercise of estimating margin values and Cost_LR parameters.
- However, we are concerned that the ERA's new modelling approach is untested and appears to have been developed in isolation, and with limited documentation of input assumptions and detailed methodology that would allow market participants to understand or validate outcomes.
- The ERA's provisional outputs are materially different to those produced via the more robust ERA-approved modelling conducted for 2020/21, and have since been corrected to account for omissions in the ERA's standalone modelling exercise.



- The ERA's modelling assumes an extraordinarily low balancing price, which if adopted, would result in windfall gain to Synergy if the actual balancing price ends up being closer to AEMO's forecast or average prices over recent years.
- This leads us to question the veracity of the ERA's modelling and suggests we should place greater confidence in AEMO's outputs, which were based on a more transparent, exhaustive and well-justified modelling exercise, founded on AEMO's expertise of energy market operations.
- We recommend two options to determine reasonable margin values and Cost_LR parameters for 2021/22 in the time remaining (noting margin values take effect from 1 July 2021):
 1. To meet the 31 March deadline, roll over the 2020/21 values, which we consider are reasonable and are an adequate substitute until a true market-derived price can be ascertained; or
 2. To determine accurate parameters and to address the ERA's concerns regarding changing market dynamics, use AEMO's 2020/21 modelling as the basis for re-estimating the 2021/22 parameters, and work more closely with AEMO to update that well-established model.

To promote transparency in the future, and to ease time constraints, we strongly recommend the ERA, AEMO and Energy Policy WA (EPWA) consider developing a single model to be used by all three parties for market modelling exercises such as these. This would also help facilitate a more efficient and effective propose/respond approach to economic regulation, which seems to have been forsaken in this instance.

Perth Energy considers market outcomes and estimates would be considerably improved if a more collaborative and transparent approach was adopted when determining ancillary services costs (and other costs), rather than parties conducting modelling in isolation. This approach would also provide market participants with a more reasonable opportunity to understand, digest and make meaningful submissions on this and similar public consultation processes.

Appendix A to this paper expands these above points further and seeks to address the questions raised by the ERA in its February 2021 Issues Paper.

Should you have any questions in relation to this submission please contact me on 0437 209 972 or at p.peake@perthenergy.com.au.

Regards,

A solid black rectangular box used to redact the signature of Patrick Peake.

Patrick Peake
Senior Manager, WA EMR



APPENDIX A – FURTHER COMMENTS AND RESPONSES TO THE ERA’S QUESTIONS

ERA questions:

What are stakeholders’ perspectives on market dynamics changing the quantity and cost of ancillary services?

Do AEMO’s proposed spinning reserve and load rejection reserve costs represent the cost of these services, given changing market dynamics? If so, why and if not, why not?

Perth Energy appreciates that the energy market dynamic is changing and will continue to do so even more significantly over the coming years. The development of the competitive Essential System Services (ESS) markets, as proposed in EPWA’s Energy Transformation Strategy, should result in SRAS and LRR costs that are market-derived and therefore more accurate (and efficient) than those determined via an administrative, complex and extremely difficult modelling process.

In recent years, AEMO has very clearly explained the issues associated with low daytime demand and the potential impacts on the power system (and the associated need for ancillary services) caused by distributed photovoltaic (PV) systems. In its response to the ERA’s Issues Paper, AEMO highlights the consequential impact of distributed PV disconnections and identifies that this results in a need for greater SRAS than assumed by the ERA in its provisional modelling.

As the market and power system operator, we consider AEMO to be the most credible authority on market dynamics and therefore have confidence in its ability to estimate the margin values and Cost_LR parameters. We stress that any attempt to administratively determine the forecast cost of ancillary services is fraught with imprecision due to the many wide and varied input assumptions, models and modelling approaches, and cost allocation applications. This is exacerbated by the lack of transparency of costs within Synergy’s balancing portfolio. This will be eliminated once the new ESS markets commence assuming they are sufficiently competitive and liquid.

We consider the exhaustive modelling conducted by AEMO’s consultants (Ernst and Young (EY)) to determine the 2020/21 parameters was a welcome improvement on prior modelling exercises, and reasonably reflected the changing market dynamic at the time. We note that AEMO’s 2020/21 modelling took into account feedback and recommendations provided by the ERA and was subsequently approved by the regulator. While over the past 12 months the market has no doubt continued to change, we see no evidence that the market has changed to the extent that merited an entirely new modelling exercise to be conducted.

Moreover, we do not consider there has been sufficient change within the past 12 months to suggest that the cost of SRAS will fall by more than \$8 million (as suggested by the ERA’s initial modelling) or that the costs of LRR will significantly increase. We highlight that despite the energy transformation rhetoric of recent years, the market dynamic has been changing for much of the past decade. AEMO is at the



forefront of this change, and has taken steps to factor market dynamics into previous modelling exercises (including those overlooked by the ERA such as the impact of the generator interim access (GIA) solution). We therefore consider that the modelling put forward by AEMO for 2020/21 is adequate and is more likely to reflect the theoretical SRAS and LRR costs than the ERA's new modelling approach.

We also highlight it is unclear why the ERA felt compelled to purchase a PLEXOS licence and conduct its own modelling from scratch at this time. We understand that the regulator's role is to challenge AEMO's proposal and ask pertinent questions – and we commend the ERA for consistently doing so. However, given the forthcoming ESS market commencement, the time and resourcing constraints at AEMO and the ERA, and in light of the comprehensive modelling already performed for 2020/21, we question the driver for reconducting the modelling exercise.

Perth Energy has seen no evidence that the market has changed sufficiently within the past year to justify discarding the 2020/21 modelling completely. At the very least, we consider the 2020/21 modelling provides a sound basis to review and update for 2021/22.

Though Appendix 2 of the ERA's issues paper gives a high-level summary of the ERA's concerns with AEMO's proposal, the ERA is not explicit in why it believes the AEMO modelling is inadequate. Moreover, given the huge difference in modelling outcomes, and the subsequent corrections to those outcomes, it is not clear how the new modelling better addresses the concerns of the 2020/21 parameters raised by the ERA.

We are also concerned that it has taken almost nine months to get the current point, with the modelling still under interrogation and the ERA *"yet to decide how to determine margin values that are consistent with the spinning reserve availability cost forecast"*.¹ We suggest the 2021/22 margin values exercise would have been a more efficient and expedient process had the ERA raised its concerns about AEMO's June 2020 proposal at the outset with AEMO, and asked AEMO to update the modelling to reflect those concerns, or alternatively directly requested EY to update the modelling.

We strongly believe that greater collaboration and constructive conversations between the regulator and regulated entities would significantly improve all regulatory review processes, and that this can be achieved without forsaking transparency or impartiality.

We therefore recommend that the ERA requests EY updates the modelling undertaken for AEMO to determine the 2020/21 margin values and Cost LR parameters to reflect the ERA's issues and AEMO's response to the Issues Paper to the extent they were not already included.

We note this would result in the ERA not meeting the 31 March deadline prescribed in the WEM Rules. While we do not like the thought of a delay in publishing this information, because of the need to roll this into our customer price offers, we consider that a delay may be in the best interests of the market in order to determine more accurate costs and their allocation for 2021/22.

¹ ERA Addendum to the Margin Values and Cost_LR 2021/22 Issues Paper, page 6



Should the ERA consider compliance with the 31 March deadline paramount, we recommend AEMO's 2020/21 parameters be rolled over for 2021/22. Based on the information contained in AEMO's proposal, we consider the margin values are likely to reflect "the margin Synergy could reasonably have been expected to earn on energy sales forgone due to the supply [of SRAS]", and Cost_LR "cover[s] the costs for providing [LRR and System Restart Services]". In its submission, AEMO has addressed the deficiencies in the ERA's modelling, and highlighted the operational need to increase the quantity of SRAS. While it has not explicitly stated it considers the parameters continue to meet the rule requirements, the changes ERA has subsequently made to account for the impact of the GIA and distributed PV have returned SRAS quantities to similar levels² to AEMO's proposal.

We do not expect the updated generator inputs to have a material impact on the outcomes. However, we are concerned the low forecast Balancing Price will result in over-recovery of SRAS costs when trued-up for actual outcomes.

Moreover, it is unclear what has driven the significant increase in LRR costs forecast by the ERA when compared to AEMO's proposal. This material increase would suggest there are significant movements in the operation of the system and/or market. However, the ERA has not provided sufficient information on the driver of this ~\$6 million increase. Given AEMO's feedback on SRAS costs, we would have expected to see in the ERA's modelling a corresponding decrease in LRR (the opposite service). However, this is not the case.

As the market and system operation experts, AEMO has not indicated that such a huge change in total SRAS and LRR quantity as being put forward by the ERA is required. We can only assume the disparity is due to an error in the ERA's new modelling, or there has been a fundamental change in approach between AEMO and the ERA. Either way, the ERA has provided insufficient information to explain or justify the significant increase.

These issues are discussed further in the following sections. Given the issues that remain with the ERA's modelling and resulting margin values and Cost_LR parameters, we cannot support the use of the outcomes resulting from the ERA's modelling. We therefore consider the use of the 2020/21 parameters which were determined using a well-established model, and which AEMO submits result in outcomes consistent with the rule requirements should be used.

ERA questions:

The modelling indicates substantial changes to the cost of spinning reserve and load rejection reserve, and the derived ancillary service parameters may not provide adequate compensation for spinning reserve. With a comparable magnitude in total of spinning reserve and load rejection reserve, is there a case to roll over the 2020/21 values?

What alternatives could ensure correct compensation is paid in 2021/22?

² In the Addendum to the Issues Paper, the ERA's revised SRAS requirement is for 240 MW at peak times and 241 MW at off-peak times. This compares to AEMO's proposed SRAS requirement of 252 MW at peak times and 240 MW at off-peak times.



As discussed in response to the previous question, we consider the 2020/21 parameters should be rolled over, as proposed by AEMO.

If the ERA considers the recent changes in market dynamics related to the impact of distributed PV need to be accounted for, we suggest AEMO's model should be re-run. This will ensure differences in modelling approach and model accuracy do not result in an inconsistent or erroneous outcome.

We believe the use of AEMO's model is currently the best way to calculate reasonable costs for SRAS and LRR without resulting in a windfall gain or loss for Synergy.

While we appreciate the ERA's intent and accept that in some ways the ERA's model may well prove superior in the long run once it has been challenged and refined, we do not consider the ERA's modelling has been sufficiently scrutinised to produce accurate outcomes. There remains insufficient transparency of the changes to input assumptions, model, modelling approach or quality assurance process and impact of each on the resulting SRAS and LRR costs for us to be able to support the use of the ERA's parameters.

Moreover, we are concerned about a number of matters presented in the Issues Paper. Some of these have been addressed in the Addendum to the Issues Paper in response to AEMO's early submission, such as zero margin values. We applaud AEMO for making a submission early in the consultation period to assist the ERA to provide more accurate modelling for stakeholders to comment on, however, there remain a number of outstanding concerns:

- **Forecast Balancing Prices** – The ERA's Issues Paper and Addendum have both used extremely low Balancing Prices. It is unclear what has caused the ERA to make such a drastic change in forecast price assumptions. In its proposal, AEMO states³ it has factored in the impact of the Yandin and Warradarge wind farms in the 2020/21 modelling. It is therefore unclear as to the cause of the ~\$20/MWh difference in price expectation between historical average prices and those forecast by AEMO, and those forecast by the ERA.

The ERA appears to consider the impact of these facilities to be greater than AEMO does. We expect the price to be closer to AEMO's 2020/21 estimate. We acknowledge there has, and will continue to be more instances of low and negative prices due to the increasing amount of renewable generation in the SWIS. However, with those low prices, we expect to also see a greater number of instances of high prices with the need for fast ramping, primarily gas generation. The ERA's modelling does not appear to have appropriately factored in the price volatility (negative and positive) associated with its expected change in energy mix.

This difference in the forecast Balancing Price is important as the margin values are applied to actual (rather than forecast Balancing Prices) when determining SRAS payments. We expect the low forecast Balancing Prices used in the ERA's modelling have artificially suppressed the overall

³ AEMO Proposed Margin Values and Cost_LR Parameters for the 2021/22 Financial Year, page 8



cost of SRAS. Should the Balancing Price be closer to historical prices and AEMO's forecast, Synergy will receive a windfall gain.

Should the ERA's modelling outputs be used to determine margin values, we recommend the forecast Balancing Price be amended to a value more akin to historical prices and AEMO's forecast.

- **Allocation of costs between SRAS and LRR** – The ERA's issues paper allocated the majority of costs to LRR, resulting in a minimal cost of SRAS and zero margin values. The ERA appears to have taken AEMO's recommendations on board and has made updates to the cost allocation method. However, the basis on which the costs have been allocated have not been adequately explained in the Issues Paper or subsequent Addendum. While we appreciate the cost allocation is based merely on an assumption, it has significant implications on the financial burden of ancillary services costs in the WEM. Generators pay for SRAS and retailers pay for LRR. While we appreciate there may be a genuine reason for this change, the ERA has not adequately justified the change in approach.

In its Addendum, the ERA has considered AEMO's recommendation to change the allocation method. This has resulted in more reasonable margin values, however, we would have expected a similar decrease in LRR in response to the increase SRAS, as these costs are merely being reallocated. Instead, we have seen a ~\$5.2 million increase in overall SRAS and LRR costs between the ERA's Issues Paper and its Addendum with limited explanation as to the drivers of this increase.

Should the ERA's modelling outputs be used, we recommend the ERA provides a detailed explanation of each of the drivers of the increase in ancillary services costs together with analysis on the sensitivities of each parameter to those drivers. This is consistent with stakeholders' expectations of AEMO's modelling in previous years.

- **No margin values have been provided for comment** – In its Addendum, the ERA states it "*is yet to decide how to determine margin values that are consistent with the spinning reserve availability cost forecast.*"⁴ We therefore cannot comment on the appropriateness of the margin values that necessarily need to be updated from those published by the ERA in its Issues Paper.

It is unclear as to why the ERA has not calculated margin values, as they are determined using the SRAS availability cost, Balancing Price and SRAS quantity, each of which have been updated and published in the Addendum. We expect this may be because the ERA is unsure of one or more of its outputs, such as the low Balancing Price.

Should the ERA's modelling outputs be used, we recommend the ERA applies the same approach to that of AEMO, and adopts consistent assumptions to those used in the modelling to calculate the margin values (ensuring for example, the same Balancing Price is used in both exercises, subject to our recommendation to increase it).

⁴ ERA Addendum to the Margin Values and Cost_LR 2021/22 Issues Paper, page 10



ERA questions:

How can the procurement of system restart services be made more attractive or less onerous for participants?

How is the shortfall charge viewed in the market?

What alternative structures might improve governance of the system restart service? For example, would identifying the contract values be beneficial to the market and future procurement exercises?

While there is expected to be competitive markets for ancillary services such as SRAS and LRR commencing in October 2022, System Restart Services will remain under contract with AEMO. We therefore appreciate the ERA's keen interest in the governance of system restart costs as a part of its determination of the ancillary services parameter Cost_LR.

The provision of System Restart Services is limited by the nature of the service: starting up a significant area of the SWIS with no reliance on energy or other services supplied through the electricity network. There are therefore only a small number of facility types capable of providing System Restart Services, and few of those in the SWIS – Perth Energy's Kwinana Swift unit is one.

With the capacity price low, market and system operational design in flux, network access difficult to negotiate, and intermittent generation more commercial than traditional synchronous generation, new generators are heavily discouraged from entering the market (and therefore offering System Restart Services). Similarly, existing generators are unlikely to make significant modifications to allow them to start providing System Restart Services.

We do not consider changes to the procurement process or publication of contract values would encourage further participation in the provision of System Restart Services.

In making the decision as to whether to enter a new contract for the provision of System Restart Services Perth Energy had to take into account that this is a discretionary service, from our perspective, that imposes significant additional operating costs. Further, any failure to deliver the service, if called, could lead to a reputational damage, potentially damaging other areas of our business, as well as legal liability to pay compensation. An return sufficient to compensate for these costs and risks would be required to justify recontracting for this service.

System Restart Services are contracted through a competitive tender process by AEMO. As AEMO noted in its revised submission, it received tender submissions which informed the costs included, and expected to again revise its System Restart Services costs for actual outcomes. We support the use of actual contracted costs in the determination of the Cost_LR parameter as they reflect the competitively tendered offers.



The ERA has raised the question of our view of the recovery of a shortfall. We consider there are two fundamental problems inherent in the calculation of the Cost_LR parameter, highlighted by a shortfall in Cost_LR:

- **The conflation of LRR and System Restart Services** – Our understanding is that, where the ERA determines an amount for Cost_LR that is below the actual cost, the contracted costs are (in most circumstances) wholly recovered from the market as a priority. Any uncontracted amounts are paid subsequently with any remaining amount. There is no ability to pay for any uncontracted amount of LRR or System Restart Services if there are insufficient funds, meaning that the actual cost of providing that service (be it LRR or System Restart Services) is not recovered by Synergy. The reverse could also happen when the ERA determines an amount higher than the actual cost of providing the service, Synergy would receive a windfall gain.

Not only is there potential for windfall gains or losses for uncontracted amounts, there is also the potential for cross-subsidies between LRR and System Restart Services, despite these being two discrete services. This would occur when the ERA determines an amount for System Restart Services lower than the actual cost and there is uncontracted LRR being provided. The System Restart Services contracted costs are paid in full, leaving any uncontracted LRR with a shortfall. The reverse would also happen.

The new market arrangements will introduce a competitive market for LRR and will decouple LRR and System Restart Service. As a result, we do not consider the ERA should seek to change the arrangements at this point, but instead should seek to determine System Restart Services costs in line with actual costs to avoid such perverse outcomes.

- **The inability for the ERA to affect the cost of System Restart Services** – As previously mentioned, the ERA's determination of System Restart Services costs does not change the amount paid by the market (as it is recovered in most circumstances through a shortfall charge, or gets passed onto Synergy as uncontracted ancillary services revenue). The impact of the ERA's decision appears largely to result in inequitable outcomes for those uncontracted quantities of System Restart Services or LRR. We therefore question the use of economic regulation to determine an efficient cost of System Restart Services.

We expect the Energy Transformation Strategy will consider what oversight is required to ensure efficient contracted System Restart Service costs under the new market arrangements. As a result, we do not consider the ERA should seek to change the arrangements at this point, but instead should seek to determine System Restart Services costs in line with actual costs to avoid such perverse outcomes.