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Dear Economic Regulation Authority

RESPONSE TO ISSUES PAPER – MARGIN VALUES, LOAD REJECTION RESERVE AND SYSTEM RESTART COST FOR THE 2019/20 FINANCIAL YEAR

Bluewaters welcomes the opportunity to provide comments on the paper "Issues Paper – Ancillary service parameters: spinning reserve margin peak and margin off-peak (for 209/20) and load rejection reserve and system restart Cost_LR (for 2019/20 to 2021/22)" (Issues Paper). This paper was published by the Economic Regulation Authority (Authority) on 24 January 2018.

Bluewaters notes that the Authority is, through this Issues Paper, conducting a consultation under MR 3.13.3A(b), based on a proposal of Spinning Reserve Margin Values submitted by AEMO under MR 3.13.3A(a). Bluewaters further notes that AEMO has engaged Ernst and Young (EY) to provide an independent assessment of the Margin Values for the 2019/20 financial year.

Bluewaters also notes that MR 3.13.3A requires the Authority to determine the Margin Values taking into account the Wholesale Market Objectives.

Summary of recommendations

In summary, Bluewaters' recommendations are as follows:

- Analysis of the off-peak spinning reserve capacity requirement using an accurate representation of observed off-peak behaviour.
- Evaluation of Western Power's operational energy forecast versus the ESOO figure used in EY's simulation and the effect that that would have on outcomes of the modelling.
- Evaluation of the effect that new market entrants are having on marginal prices, particularly during off-peak periods as well as spinning reserve capacity requirements.

The above recommendations are discussed in further detail below.

Observed Off-peak Market Behaviour in Contrast to EY Modelling

AEMO's proposed value of average annual off-peak spinning reserve capacity has significantly increased. Bluewaters notes that EY's modelling for the calculation of this value assumes behaviour of larger units, such as Collie Power Station (Collie) and NewGen Power Kwinana (NPK), which is inconsistent with the observed market behaviour of these units. This may lead to inflated spinning reserve requirements.

EY modelling indicates that NPK or Collie sets the spinning reserve requirement approximately 92% of all trading intervals[1] with NPK alone setting the requirement between 70% to 90% of the time based on the 25 iterations[2]. This is followed by the comment that the "outcome of the initial conditions often sees NGK at its maximum output of 335MW"[3]. As a result, average off-peak spinning reserve capacity values are proposed to increase to 236.4MW, which is higher than peak values. This value would then suggest that on average one WEM generator will be generating at 337.7MW in order to set that spinning reserve requirement[4].

In theory, the market requirement for spinning reserve should have ceiling amount of 70% of the nameplate capacity of the largest generator in the WEM. This means that the absolute maximum requirement that spinning reserve capacity can reach is when NewGen Neerabup is online and running at full capacity, therefore making the ceiling of spinning reserve capacity 239.4MW (342MW nameplate capacity). NewGen Neerabup dispatch profile rarely results in such an outcome however, in which case Collie is the next largest nameplate capacity resulting in 238MW (340MW nameplate capacity) maximum spinning reserve capacity.

In reality, historical data suggests that NPK and Collie do not operate at full capacity during off-peak intervals and will often sit below the 200MW spinning reserve block pricing threshold. Although the market is likely to be adopting the runway method of calculation from September 2019[5], it wouldn't be expected that these plants run at full capacity. Non-scheduled generation and the requirement of some plants to maintain minimum generation levels in order to stay online and avoid start-up costs is likely to force larger plants to a lower level of output during low demand intervals.

Bluewaters suggests that analysis of actual historic run levels be considered to compare the off-peak spinning reserve capacity requirement.

ESOO Operational Energy Predictions

Bluewaters notes that the values used by EY in their modelling for electricity demand and energy projection were those that were stated on the 2018 AEMO WEM ESOO[6]. It is understood that the figures stated in the 2018 ESOO of 18,307GWh are higher than the demand forecast contained in Western Power's Access Arrangement 4 Revenue Model of 17,628GWh[7]. Given that historical data on solar uptake has consistently exceeded even the high case assumptions, Bluewaters proposes that Western Power's figures should be considered as a sensitivity scenario to determine the outcome that would have on the modelling results.

Non Scheduled Generation and Marginal Prices

It is noted that EY's modelling suggests that marginal off-peak prices are set to heavily increase in 2019/20. This prediction appears to contradict the recently observed effect that the new entrant, Badgingarra Wind Farm, has had on the market. The increase in wind generation has seen prices lower particularly during off-peak periods where demand is low.

[1] EY Margin Values Review – pg 34
[2] EY Margin Values Review – pg 35 figure 10
[3] EY Margin Values Review – pg 36 para 3
[4] Based on the 70% requirement
[5] Draft Rule Change Report: Full Runway Allocation of Spinning Reserve Costs (RC_2018_06) - https://www.erawa.com.au/cproot/20182/2/RC_2018_06%20--%20Draft%20Rule%20Change%20Report.pdf
[6] EY Margin Values Review – pg 17 table 8
[7] https://www.erawa.com.au/cproot/20205/2/Appendix%203%20-%20Revenue%20Model%20Target%20Revenue%20Calculation.PDF - line 62.1 Energy Transport

While Badgingarra Wind Farm has been included in the new entrants list[8], Bluewaters suggests that a review of the drivers for the off-peak price be conducted to validate the outcomes. An additional downward pressure on wholesale market prices is also expected as a result of the full runway model of cost allocation for spinning reserve which has indicated a reduction of 4.5%[9] in the Rule Change Panel report based on the modelling of Bluewaters additional generation capability.

Questions asked by ERA:

"Did Market participants receive sufficient information about the calculation method underpinning assumptions and data used? If not, what processes could improve the transparency of the process for the calculation of margin values?"

Bluewaters believes that market participants received sufficient information detailing the calculation method and the data used. There have been a number of opportunities to provide feedback and input for the assumptions and calculation methods. Bluewaters also believes that this information was clearly detailed between the ERA and EY's workings.

There is a natural limitation in the ability to check the workings of the "2-4-C" dispatch engine that is proprietary to EY, however the ability to challenge the assumptions and outcomes through the submission process provides sufficient transparency. As a result, Bluewaters does not feel that there are any further processes that can improve the transparency of the process for the calculation of marginal values.

"Excluding some of the load following raise capacity from the calculation of margin values can increase the total cost of spinning reserve service in the system.

Should a load following raise capacity be excluded from the calculation of spinning reserve margin values if it does not have contract with AEMO for the provision of spinning reserve? Excluding a load following raise capacity from the calculation of margin values increases the amount of spinning reserve procured though Synergy facilities."

It is Bluewaters opinion that load following raise should be included in the calculation of spinning reserve margin values to the extent of the Load Following providers response capability within 6 seconds[10]. Bluewaters agree with ERA's comments that failure to include this contribution to a low frequency event will over estimate the quantity provided by Synergy in actual events.

The ERA seeks feedback from market participants on the modelling approach, in particular on:

- *How the load rejection reserve availability cost was estimated*
- *The potential for misalignment between the modelled cost and the actual practice*
- *The costs included in calculating the load rejection reserve.*

Bluewaters understands from the review of the load rejection reserve estimation that the EY dispatch engine used for the spinning reserve dispatch was also used for the load rejection reserve requirement. The availability cost for this requirement is estimated by summing all of the plant commitment costs where the spinning reserve optimisation had scheduled load rejection reserve quantities less than the maximum requirement[11]. While Bluewaters does not have any suggested alternative, the resulting increase in the proposed value by over three times needs to be considered as a justifiable increase.

The fact that there is a misalignment between the modelled costs and actual practice should be reconciled. Where possible, modelling real world outcomes should be applied. To the extent scenario testing is possible, this should be carried out to understand the materiality of the variance between the modelled costs and actual practices.

[8] EY Margin Values Review – pg 17 table 9

[9] Draft Rule Change Report: Full Runway Allocation of Spinning Reserve Costs (RC_2018_06) - https://www.erawa.com.au/cproot/20182/2/RC_2018_06%20--%20Draft%20Rule%20Change%20Report.pdf – pg 16

[10] Noting this may be a different MW value to the contracted LFAS MW

[11] Issues Paper - pg17

EY have included costs in relation to:

- Recommitment cost for the facilities rescheduled out of merit to provide load rejection reserve services
- Foregone profits resulting from a load rejection event

Bluewaters has no further suggestion on cost inclusion.

The ERA invites submissions exploring the system restart procurement process considering the gap between what the ERA determined to be a reasonable cost and what was subsequently contracted.

It also seeks views on the effect the shortfall charge has on AEMO's obligation to minimise the cost of procuring restart services under the market rules In particular, it is interested in the views of market participants in alternative procurement mechanisms, including the consideration of an administered system restart price.

Bluewaters encourages the ERA and AEMO to continually improve the transparency of the system restart consultation process. Bluewaters notes that there is a lack of supporting data or modelling by AEMO to supplement the proposed figures. Considering the substantial difference between what has been proposed by AEMO and what has been approved by the ERA previously, these costs should be thoroughly reviewed.

Given the physical requirements on a facility to be able to provide system restart services and the limited number of facilities which currently have those capabilities, Bluewaters believes that an increase in transparency may lead to an appropriate price signal to generators to develop this capability. This may be able to address the market power issue for the current pricing.

The application of the shortfall charge in relation to the contracted values for system restart service minimises the benefit of ERA's review and approval of these costs. While it is theoretically inefficient to introduce administered pricing in competitive markets, the lack of competition and the pricing model in this situation warrants further investigation into this alternative to provide better value for money for the consumer to the extent that contracts do not represent cost of the service.

Should you have any questions regarding this submission please contact Daniel Kurz on [redacted] or [redacted].

Yours sincerely,

Daniel Kurz
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