Friday, 5 February 2021

Katalin Foran
Australian Energy Market Operator
GPO Box 2008
Melbourne VIC 3001

Dear Ms Foran

RE: Wholesale Demand Response Mechanism – Baselines Eligibility Compliance and Metrics Policy

ERM Power Retail Pty Ltd (ERM Power) welcomes the opportunity to respond to the Australian Energy Market Operator's (AEMO) Baselines Eligibility Compliance and Metrics Policy Issues Paper.

About ERM Power

ERM Power (ERM) is a subsidiary of Shell Energy Australia Pty Ltd (Shell Energy). ERM is one of Australia's leading commercial and industrial electricity retailers, providing large businesses with end to end energy management, from electricity retailing to integrated solutions that improve energy productivity. Market-leading customer satisfaction has fuelled ERM Power's growth, and today the Company is the second largest electricity provider to commercial businesses and industrials in Australia by load[1]. ERM also operates 662 megawatts of low emission, gas-fired peaking power stations in Western Australia and Queensland, supporting the industry's transition to renewables.

http://www.ermpower.com.au
https://www.shell.com.au/business-customers/shell-energy-australia.html

General comments

ERM Power strongly disagrees with AEMO's proposed accuracy metric of 20 per cent for baselines under the Wholesale Demand Response Mechanism (WDRM). The Australian Energy Market Commission's (AEMC) Final Determination on the WDRM rule change stated that AEMO "should require baselines to exceed the levels of accuracy considered 'good' in the AEMO-ARENA demand response RERT trials".[2] The level of good was set at 10 per cent Relative Root Mean Square Error (RRMSE). The AEMC goes on to say that "The standard for baselines used for wholesale demand response, which is required to be reliable and predictable, should be higher than that experienced with emergency demand response such as the RERT."[3]

Further, the Final WDRM Rule 3.10.3 requires that:

> *"(f) In determining the baseline methodology metrics and the frequency of baseline compliance testing, AEMO must have regard to: …*
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>> *(3) the level of accuracy achieved by the demand forecasts used by AEMO for pre-dispatch and the forecasts referred to in rule 3.7B(c)(4).*

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[1] Based on ERM Power analysis of latest published information.
[2] AEMC, Wholesale Demand Response Mechanism Rule Change – Final Determination, June 2020, p 176.
[3] Ibid.

Clause 3.7B(c)(4) refers to "the forecasts of the energy available for input into the electrical power conversion process for each semi-scheduled generating unit". We understand that AEMO currently updates its load forecasts if error rates exceed a threshold far lower than 10 per cent of average demand – generally around 2-5 per cent of average demand. As such, we consider that the proposed 20 per cent accuracy threshold is far too high, and that 10 per cent would provide sufficient flexibility to participate without risking distorting AEMO's demand forecasts or the spot market.

Yet, in the Issues Paper AEMO suggests applying a threshold of 20 per cent RRMSE. That is, loads could vary by plus or minus 20 per cent from the expected baseline and still be compliant. AEMO justifies this by arguing that the RERT scheme has an accuracy threshold of 20 per cent. This position ignores the AEMC's argument in the final determination that the accuracy metric for wholesale demand response should be better than the RERT and that the Rules require that the accuracy level be consistent with that used by AEMO for demand and intermittent generation forecasts. ERM Power can understand a less stringent accuracy threshold for demand response in the RERT because it is rarely used and pricing and settlement for RERT dispatch occurs outside the market dispatch and pricing framework. However, under the WDRM, demand response may be a price setter, and as such it is entirely appropriate for it to face a tougher set of accuracy metrics.

AEMO argues that a 20 per cent accuracy threshold is also justified to "allow levels of participation which ensure the effectiveness of the WDRM".[4] This misses the point that the WDRM is not a mechanism on its own. Rather, it forms part of the wider spot market. Allowing less accurate demand response to participate in the spot market (not the WDRM alone) distorts the spot market and has the potential to create far bigger risks to the entire market. Clause 3.10.3 (f)(2) of the National Electricity Rules sets out that in determining baseline methodology metrics, AEMO must have regard to "the need to maximise the effectiveness of wholesale demand response at the least cost to end use consumers of electricity". To focus on "the effectiveness of the WDRM" as AEMO suggests is a mistake.

As AEMO notes a more generous accuracy measure "would likely lead to inefficient dispatch and increased uncertainty as to the amount of demand response available."[5] As noted earlier in this submission, the Rules also state that AEMO must have regard to "the level of accuracy achieved by the demand forecasts used by AEMO for pre-dispatch…". ERM Power notes that this aligns with the AEMC's view in the Final Determination which "sets out a baseline compliance process that means only loads that can have accurate and unbiased baselines will be able to participate. This should minimise the impact of baseline inaccuracy on the rest of the market and provide greater confidence that the demand response provided under the mechanism is real and additional."[6]

As discussed in the AEMC's final determination, if a baseline is wrong in a single instance, then demand response will either be over or undervalued. What is more important is that over time baseline are correct on average. If correct on average, the over- and under-valuation of demand response will net out over time. ERM Power considers that the greater the level of error allowed (higher accuracy threshold), the less likely it is that baselines will be correct on average over time. Further, as WDR is only expected to be dispatched at times of very high prices, there is a significant risk that DR will be overvalued if the baseline accuracy level is high.

ERM Power understands that it is impossible to create entirely accurate baselines – that is not what we are arguing for – but what is crucial is that baselines do not undermine the spot market. AEMO's proposed accuracy metric is far too generous and imposes too many risks on electricity consumers to be justified. It also fails in our view to meet the requirements as set out in the Rules as well as that detailed by the AEMC in the WDRM rule change Final Determination. A maximum 10 per cent accuracy threshold, in line with what was originally suggested by the AEMC is a far more appropriate level to apply.

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[4] AEMO, Baselines Eligibility and Compliance Metrics Issues Paper, December 2020, p 8.

[5] AEMO, Baselines Eligibility and Compliance Metrics Issues Paper, December 2020, p 7

[6] AEMC, Wholesale Demand Response Mechanism Rule Change – Final Determination, June 2020, p 172

We are also concerned that AEMO may be reluctant to lower the accuracy threshold in the future because a move to reduce the threshold would likely make a number of wholesale demand response units (WDRU) non-compliant. We accept that making changes to the bias and accuracy thresholds is within AEMO's powers and the Issues Paper states that AEMO will review the metrics after the first summer of operation. However, we expect that any move to reduce the threshold in future years would be met with strong resistance, even if it were an appropriate decision to manage system security, reliability and economic efficiency of dispatch.

Instead, we recommend that AEMO focus its attention on developing additional baseline methodologies to allow for additional demand response to participate in the market. We consider that well-designed baselines with suitable accuracy and bias thresholds will enable new wholesale demand response units to participate in the market without increasing the risks to the broader market. If designed appropriately these baselines should allow other types of load, such as temperature sensitive loads like chillers – to become WDRUs without also allowing existing WDRUs to cherry-pick baselines to gain a more favourable outcome. Temperature-sensitive loads in particular may be best suited to providing demand response at times when temperature, electricity demand and prices are high – an optimum time for demand response to activate. Future baselines could also factor in different operating hours, such as extended hours in shopping centres on certain nights.

We believe that this is the best way to grow the market and enable greater participation from demand response in the spot market. We would welcome the opportunity to work with AEMO to develop future baseline methodologies to support loads that would not meet a 10 per cent accuracy threshold for this initial baseline methodology.

Please contact me if you would like to discuss this submission further.

Yours sincerely,

[signed]

Ben Pryor
Regulatory Affairs Policy Adviser
03 9214 9316 - bpryor@ermpower.com.au