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Submitted by email to: wholesaleperformance@aer.gov.au

Dear Ms Jolly

Wholesale Electricity Market Performance Monitoring – 2022 Focus Paper

The Australian Energy Council (the “AEC”) welcomes the opportunity to make a submission in response to the 2022 Focus Paper on Wholesale Market Performance Monitoring.

The AEC is the industry body representing 20 electricity and downstream natural gas businesses operating in the competitive wholesale and retail energy markets. These businesses collectively generate the overwhelming majority of electricity in Australia, sell gas and electricity to over ten million homes and businesses, and are major investors in renewable energy generation.

Question 1: Are there any additional issues or areas of focus we should consider for the 2022 performance report?

Use of AEMO Directions

A matter which has not been mentioned in the Focus Paper, but in AEC’s view is a serious and immediate concern of Wholesale Electricity Market Performance is the on-going excessive use of AEMO’s Intervention Powers under Section 116 of the National Electricity Law to maintain a secure system.

Prior to 2017, the use of this power was a rare event and consistent with its intent as a last-resort action in exceptional circumstances where, for whatever reason, market or contracting mechanisms failed to obtain the services required to maintain a secure or reliable system. The associated reporting mechanism under Rule 3.13.6A also worked well to ensure that when directions were unfortunately necessary, an investigation would reveal how the circumstance arose. The intent of this reporting was to avoid repetition. Action would then occur such as negotiating contracts with directed parties to provide the services commercially in similar future circumstances.

However, since 2017 AEMO directions have run into the hundreds per year. Particularly concerning is the repeated circumstances of the directions and cursory reporting of them. Current practice suggests some parties now consider direction a legitimate long-term alternative to commercial arrangements to procure essential power system services. The AEC considers this practice entirely inconsistent with the intent of the power, and if allowed to continue, will undermine the market.

Therefore the AEC suggests the use of intervention powers be a specific area of focus in the 2022 monitoring. It should consider:

- What is the extent of the directions and what was their cost?
- For those directions that repeated, what was the circumstances and why were actions not taken to avert their repetition? This should contemplate the roles of both Network Service Providers and AEMO.
- Were the directions adequately reported on by AEMO under Rule 3.13.6A?

- Is there evidence of any party not treating the Intervention Power consistent with its “last resort” intent?

Non-Scheduled Price Responsive Activity

The AEC recently unsuccessfully sought a rule change to reduce the mandatory generator scheduling threshold. Previously there was also an unsuccessful request to require price responsive loads to become scheduled.

The concern behind these proposals was that non-scheduled price responsive assets create material errors in the market’s forecasting and dispatch systems. The proposals were rejected on the view that the errors were not yet sufficiently material to justify the cost of extending scheduling.

It would be valuable if the AER could monitor and estimate the extent of error caused by non-scheduled activity, in particular at times of large positive or negative prices. This would be useful to guide future market reform.

Network constraint performance

A very large part of the NEM’s performance depends on the representation of the network within the dispatch engine’s constraint equations. However network constraints are not mentioned in the focus paper. AEMO provides information on its constraint formulation policies, yet circumstances frequently arise where it is unclear how the policy should be interpreted, or whether it has been interpreted correctly.

There is anecdotal evidence that despite the current level of capital expenditure on transmission networks, the impact of constraints on efficient dispatch is growing. Interconnector performance, as measured by the size of the interconnector term in binding constraint equations, seems to be declining over time and frequently becoming negative.

During 2021, despite AEMO’s attempts to clamp counter-price flows, negative residues frequently accrued. In the third quarter, they reached over a quarter of the positive residues¹.

Connecting generators and altered network topography can impact constraint equations in unexpected and detrimental ways. The AER could assist the industry’s understanding of these matters, and potentially improve the constraint development process, by investigating and discussing this performance. This is potentially a very complex area, but simply monitoring binding interconnector capacity over time would be a straightforward first step.

Question 2: Have there been changes in the main drivers of outcomes in the wholesale electricity markets since 2020 that we should consider?

Market Power

The focus paper anticipates the AER dedicating resources to “explore new methods to consider whether there is evidence of economic withholding that may suggest the sustained exercise of market power”. The AEC considers this concern is drawn from the historical make up of electricity markets dominated by large fossil-fuelled power stations with long build-times, natural barriers to entry and scale efficiencies. It is much less relevant to today’s circumstances which have none of these characteristics.

In particular wind, solar, battery-storage and small-scale pumped hydro are all classic examples of the opposite: very short build-times, low scale-efficiencies and low barriers to entry. As a result the NEM’s generation stock’s ownership is dramatically more diversified than it has ever been and

¹ See <https://www.aemo.com.au/-/media/files/major-publications/qed/2021/q3-report.pdf?la=en> page 28-29.

growing ever more so. In December 2018, the AEC published deep research into this fundamental change to electricity market structures².

For these reasons, the AEC considers resources can be directed away from this area into those more relevant to today's NEM, such as the three listed above.

Underlying Costs

The paper discusses approaches to investigate underlying costs. Like the Market Power issue, this relates to a legacy interest rather than a contemporary one.

Costs deriving from standard plant and fuel costs are becoming irrelevant. Going forward, the majority of energy will be generated by plants with zero fuel costs and capital costs that are extremely bespoke.

It will be also important to understand the characteristics of storage. Once charged, the *cost* of the energy used to charge a storage becomes irrelevant. Instead, only the *value* of the stored energy to the market is relevant from that point on. For example, it would be illogical for a storage to simply bid its energy into the market at the price at which it charged if this would lead to it depleting ahead of the time of highest value. Such operation could even lead to a reliability shortfall.

Like other energy-limited resources, the market is designed to allow storage to bid and rebid at prices that ration limited stored energy most efficiently over time. This in turn relies on real-time judgements made by the storage's traders about forecasts and risks. The AER will find this value is effectively impossible to externally determine.

Meanwhile fossil-fuelled plants are moving up the merit order into ever shorter and more responsive modes of operation. In this mode, short-run fuel costs become ever-less relevant and operational costs, such as cycling, begin to dominate. And, in a peaking role, the market design anticipates assets progressively repricing towards their *value* rather than *cost*. In the extreme, this will approach the Market Price Cap. All these matters are extremely difficult to determine externally.

For these reasons, the AEC suggests resources can be redirected away from estimating underlying costs.

Any questions about this submission should be addressed to the writer, by e-mail to Ben.Skinner@energycouncil.com.au or by telephone on (03) 9205 3116.

Yours sincerely,



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² <https://www.energycouncil.com.au/media/ar0legfx/20181213-final-report-advice-on-nem-structure-in-light-of-technology-change-stc.pdf>