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Australian Energy Market Commission
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Reserve Services in the National Electricity Market, Directions Paper

Snowy Hydro Limited welcomes the opportunity to comment on matters raised in the Directions Paper from the Australian Energy Market Commission (the Commission) on the Reserve Services in the National Electricity Market.

There is a broad consensus on the causes of declining resource adequacy in the NEM; system security has been harmed by a lack of investment in dispatchable capacity to replace retiring coal-fired generators. There is, however, a lack of understanding as to why the market has not adequately responded to this development.

A market failure has arisen in the NEM, such that market customers do not have an incentive to adequately hedge their exposure to future prices. It is this risk, or rather the expected risk, of exposure to future market outcomes which drives contracting decisions. Reducing this exposure through market settings incentivises market customers to under-contract. Generators, in turn, do not receive the contract revenues which provide an adequate incentive to invest. In short, there is a missing money problem. The result is underinvestment in firm capacity.

The solution is to address the problem at its source, by adjusting market settings which are currently deterring investment. Adjusting these settings will improve the efficiency of market prices, creating a signal for investment in new plant. It will also significantly reduce the need for costly market interventions by AEMO.

The importance of market settings should be considered in the context of the market design. The NEM was structured as an energy-only market. Price signals support the free entry of generation capacity. In particular, scarcity rents - when prices temporarily exceed short run marginal cost - underpin new investment. Investment risk is borne by owners of generation plant.

Investment signals in the NEM are currently constrained by market settings, in particular the Market Price Cap (MPC) and Cumulative Price Threshold (CPT). These settings limit demand for hedging contracts and socialise the cost of volatility among peaking generators. The effect of market settings can be observed in the traded price of Q1 caps in Victoria, which are being limited by the implied protection offered by the CPT. Furthermore, AEMO regularly supplies energy from off-market suppliers through its reserve trader (RERT) function at prices well above the MPC. This demonstrates that improved market price incentives would encourage greater availability of, and investment in, dispatchable plant. This will, in turn obviate the need for an operating reserve.

A number of stakeholders benefit materially from the status quo and are likely to resist any changes. However, this opposition reflects the fact that current market settings allow participants to free-ride on the existing stock of capital investment in peaking assets. On the other hand, adjusting market settings will improve efficiency of investment by supporting long run price expectations, ensuring that the right mix of generation is built and that investment risk continues to be borne by generators.

Therefore the Commission should strongly consider the scheduled review of the reliability settings as part of the Reserve Services consultation. This will allow for a proper assessment of these issues, in coordination with the Energy Security Board (ESB) Post 2025 Market Design process. The existing information provision and market settings, including the MPC, the projected assessment of system adequacy along with AEMO's declaration of lack or reserve (LOR) notifications, includes flexibility for forecasting uncertainty. An operating reserve would not provide long-term signals for peak capacity investment.

As mentioned, adjusting market settings is the most efficient and the least-cost approach to improving system security. providing a market price signal for Operating Reserves would be preferable to AEMO interventions. It should reduce the quantity of out-of-market RERT otherwise required to achieve the same reserve levels. In addition, it would improve transparency, through a visible procurement process in the market, by clearly pricing the trade-offs between different options for managing system security. Transparency of strategic reserves is important in providing more certainty for participants on the costs.

Of the options presented in the Directions Paper, Snowy Hydro's preference would be a co-optimised operating reserve market which co-optimises the procurement of reserve capacity with the procurement of energy and FCAS. It would also procure only the quantity required to respond to changes in net demand in the next dispatch interval. The proposed options that would simply pay generators for what they would be required to undertake anyway will simply result in a wealth transfer from consumers to generators and is not preferred. The operating reserve should not manifest into a selective payment for some generators, or demand response providers, who are not bid as available or to become available.

Current Arrangements and assessing the need for Operating Reserves

An Operating Reserve would draw resources into the market, however more work needs to be done to assess how it would operate in the market. The proposal would require the handling of new dispatch bids, constraint equations and other software changes within AEMO, and these implications would need to be addressed. The cost implications of the Operating reserve need to be thoroughly considered in addition to the current arrangements in place which may address the issues the reserves directions paper is seeking to solve.

The Commission also needs to give careful consideration as to how this proposal would impact the contracts market. This is particularly important given the importance of financial contracts in underpinning new investment. Under current arrangements, financial contracts can be settled against a single reference price in the NEM. This enhances commercial flexibility, ease of contracting and market liquidity. Creating an

additional reserves market is likely to complicate the contracting process, with a potential splintering of the market reducing liquidity. This difficulty highlights the advantages of adjusting market settings (which would not create these issues) as an alternative means of improving resource adequacy.

The Commission correctly notes that *"It would appear logical that the increased complexity of the system through the transition could give rise to new and unknown risks. While there may be benefits in additional reserves being available to deal with such risks, there will be costs involved in providing additional reserves."*¹ In addition to the costs there could be unintended consequences associated with operating reserves in the market.

The signals for long term investment signals for example could be impacted as operating reserves could be seen as another revenue stream for existing dispatchable resources that would otherwise retire or be mothballed. The callable operating reserve market and the ramping commitment market options both would hold capacity out of the market, only dispatching when or if needed, impacting the allocation of resources to meet the system needs of reliability and security.

These options would not directly facilitate new investment. In addition, with AEMO being responsible for determining target quantities to be procured through the operating reserve, the market could be left with a scenario where AEMO continues to use RERT and directions along with the operating reserve costing consumers more than what previously was intended.

While there may be benefits in additional operating reserves being available to deal with such risks the Commission will need to assess these costs involved in providing additional reserves against the current measures in place to improve reliability and security. The current arrangements already in place or being put in place to improve reliability and security include:

- Improvements in demand forecasting certainty through scheduling and forecasting. These include:
 - Wholesale Demand response mechanism
 - AEMO Medium-Term Projected assessment of system adequacy (MTPASA) changes
 - Two-sided Market scheduling changes
- Essential System Services markets to reduce interventions.
- The current RRO which informs long term investment by market participants in technologies that will fill forecasted shortfalls in capacity.

This is all in addition to AEMO already having significant backstops it can deploy in times of emergency. This includes the ability to contract for emergency reserves including 'Short-Notice' or 'Medium-Notice' forms. To the extent such reserves are necessary at all, these are appropriate tools which allow AEMO to purchase reserves 7 days and 10 weeks respectively from the anticipated shortfall, providing an appropriate trade-off for maintaining sufficient levels of unserved energy in the NEM.

Should there continue to be out-of-market resources used by AEMO, it is more efficient for these resources to be drawn into the market. This would benefit retailers and

¹ AEMC, Reserve Services in the National Electricity Market, Directions Paper, 5 January 2021, pp33

customers by increasing availability of hedging products, making additional lower-cost contracting available to consumers. The benefit from greater flexibility and certainty AEMO will obtain from Operating Reserves should allow the removal of the:

- Interim Reliability Reserve Rules - multi-year out of market capacity reserve; and
- Long-notice RERT.

The Commission notes that they are *“conscious that there will be interactions between each of these options and outcomes in the energy and FCAS markets. The costs to participants of providing in-market reserves are currently recovered in the energy and FCAS markets, and so procuring reserves separately will likely reduce price outcomes in those markets.”*²

Snowy Hydro is therefore concerned that operating reserves could essentially be substituting the essential system services markets along with distorting investment in these markets overall worsen the efficient outcomes for a market. There needs to be a proper assessment on the impact this will have in the energy and FCAS markets.

Reserve Services Design Options

If the Commission decides to address the risk of insufficient reserves by explicitly valuing the provision of reserves separately from energy and FCAS markets then we would support further assessment into a co-optimised operating reserve market or a co-optimised availability market.

The options that would simply pay generators for what they would be required to undertake anyway would simply result in a wealth transfer from consumers to generators. It is for this reason the Energy Security Board (ESB) FTI Consulting noted that operating reserves could increase revenue potential for existing resources, which may actually weaken incentives for new investment.

This would create new risks of participants gaming, through withdrawing capacity in order to offer into the reserves market. It would conflict with the market price cap, by paying generators for withholding headroom for the credible ramping requirements with the MPC already providing real-time signals for ensuring sufficient supply.

The proposal notes that reserves would be paid the marginal ‘availability’ price when called, being the MPC. It is unclear whether the current MPC will be sufficient to incentivise enough participants to participate in the operating reserve. The operating reserve option could on the other hand also enable the energy price to reach the MPC sooner at some predefined reserve margin which would be similar to increasing the MPC.

If the aim of procuring services is to avoid the need for AEMO to intervene by using out-of-market reserves then the Commission would need to be aware that the key parameters would need to be regularly updated by AEMO. This would require the market to be aware of the key parameters, including reserve targets and the value of reserve capacity and not be left in a scenario where operating reserves are being used in

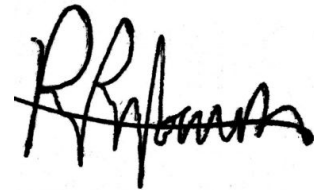
² AEMC, Reserve Services in the National Electricity Market, Directions Paper, 5 January 2021, pp39

addition to RERT being triggered outside the market to the same level it has been using under the current arrangements.

Significant forecast uncertainty has been a contributing factor to the activation of the RERT which misallocate capital and increase costs for generators, retailers and consumers. It is for this reason that Snowy Hydro is concerned that the Operating Reserve could be used due to inaccurate demand forecasts unnecessarily requiring the need for more reserves. The market does not need to face significant usage payments that are made to Service Providers and thereby driving up costs to consumers

Snowy Hydro appreciates the opportunity to respond to the Commission on the Directions Paper on Reserve Services in the National Electricity Market and any questions about this submission should be addressed to panos.priftakis@snowyhydro.com.au.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'P. Priftakis', written over a light blue circular stamp.

Panos Priftakis
Head of Wholesale Regulation
Snowy Hydro

