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Dear Commissioners

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AEMC 2016, Non-scheduled generation and load in central dispatch, Consultation paper, 21 April 2016

We are one of Australia's largest energy companies with over 2.5 million electricity and gas accounts in NSW, Victoria, Queensland, South Australia, and the Australian Capital Territory. We also own and operate a multi-billion dollar energy generation portfolio across Australia, including coal, gas, and wind assets with control of over 4,500MW of generation in the National Electricity Market.

The National Electricity Market (NEM) is in a period of transition due to the increasing impact on the generation mix from renewable generation and advances in technology. From this, a number of interrelated power system security and market issues are arising. The Australian Energy Market Operator (AEMO) is undergoing work to understand these issues and what additional tools they require to efficiently operate the network.

We support the lowering of the threshold at which generators are required to register as a *scheduled generator* including a review of the principles on which AEMO grants an exemption. AEMO's discretion to allow a generator to register as a *non-scheduled generator* should be based on an assessment of market impact rather than sent-out generation at its connection point. Such a test that accounts for a generator's impact on the market would be more reflective of the purpose of including that generator in central dispatch.

The Commission has correctly outlined potential inefficiencies due to inaccuracies in the dispatch and pre-dispatch forecast, which include:

- The spot price is set at a level that does not reflect the underlying supply and demand conditions
- The cost of scheduled generation to meet actual demand may not be minimised
- Increased regulation frequency control ancillary services (FCAS) payments

Inefficiency can also arise from non-scheduled generation and demand response taking precedence in dispatch over scheduled generation and supply from interconnectors. Non-scheduled generation can guarantee dispatch regardless of merit order. Where non-scheduled sources are only reacting to high prices, they will not be accounted for in dispatch at critical times and will not contribute to lower prices in those periods. However, they will capture the revenue from these high price periods by replacing scheduled supply in the current dispatch interval and 30-minute settlement period.

Where scheduled generation is able to capture a reduced percentage of high price periods, their ability to offer financial products will decrease, reducing liquidity and increasing prices in the futures market. As less capacity is hedged, scheduled generation will have an increased exposure to the pool, applying further upwards pressure on prices.

This could also result in sustained spot prices above the long-run marginal cost of new entrant generation or interconnector augmentation. Scheduled generation and interconnectors – where potential to supply is included in the price – will require much higher overall prices before an investment can be justified, or may retire earlier than is efficient.

We understand that the Commission intends to quantify these costs and to assess the sources of inaccuracies in the dispatch and pre-dispatch demand forecasts. If these costs are found to be material, and non-scheduled generators with capacity between 5-30MW are significant contributors, then obtaining additional information from these generators is warranted. In terms of this assessment:

- The increased importance of accurate forecasts during high prices should be accounted for.

- The sources of inaccuracies should be disaggregated where possible to provide granular information to enable insights into different options for the best information to be provided to AEMO. For generation and demand response this would include a breakdown by region, capacity, and type.

- Assessment under both cases of the *5-minute settlement* rule change where a rule is made and where the status quo remains.

- Costs to consumers should include any reduced revenue from Inter-Regional Settlement Residues.

The AEMO has identified future challenges to the operational design of the power system which include the reducing visibility and control of energy resources, and an insufficient amount of available FCAS.[1] A historical analysis of market conditions and prices may therefore not give a true indication of the future benefits provided by the rule change.

As these challenges become more prominent, further changes to the operation of the NEM will be required. This could be, as the Commission suggests, a market-based solution to encourage the provision of information to AEMO and would involve cost-reflective recovery of regulation FCAS.

A market-based solution would allow generators to opt out where they consider that costs to provide information to AEMO is greater than the negative impacts on the market; but would otherwise be equivalent to requiring their inclusion in central dispatch. There would be significant costs to all participants to move to such a system and we suspect that currently the costs would outweigh the benefits. However this may meet the NEO in the future.

At this stage it is only appropriate to lower the threshold at which generation is required to register as a scheduled generator with discretion by AEMO to grant exemptions to generators that have a minimal impact on the market. The Commission should make an assessment of

[1] Future power system security: program update May 2016, AEMO

when a market-based solution should be revisited and ensure any rules made at this stage provide for this eventual transition.

If you would like to discuss this submission, please contact me on (03) 8628 4518.

Regards

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