

24 April 2018

John Pierce
Chairman
Australian Energy Market Commission (AEMC)
PO Box A2449
SYDNEY SOUTH NSW 1235

Dear Mr Pierce

Frequency Control Frameworks Review (EPR0059)

Hydro Tasmania appreciates the opportunity to provide further comment on AEMC's Frequency Control Review Draft Report.

As per Hydro Tasmania's previous submission to the Issues Paper, the business recognises that the energy sector is undergoing a significant period of transformation which is bringing a number of challenges for the National Electricity Market (NEM). Key among these challenges is the need to successfully integrate variable renewable energy resources into the market. This review provides a timely opportunity to address the challenges associated with frequency control. In summary Hydro Tasmania's positions on the draft recommendations outlined by AEMC are:

- **Draft Recommendation 1:** Hydro Tasmania opposes any recommendation to average the period used for calculations of causer pays contribution factors to a shorter timeframe. Hydro Tasmania believes that reducing the calculation period would not be appropriate due to the perverse incentives it would create in the energy market. These perverse incentives could result in units withdrawing capacity from the energy market to manage exposure to high regulation Frequency Control Ancillary Service (FCAS) prices, thus affecting system security and cost of supply.

The Australian Energy Market Operator (AEMO) suggest¹ that significant system changes would be required to accommodate a real-time provision of contribution factors as well as rule changes, their view also suggests this type of approach would result in volatile and unpredictable causer pay factors (due to a reduced sample size) and perverse outcomes resulting in an increase in overall costs to supply energy to consumers and negatively impact

¹https://www.aemo.com.au/-/media/Files/Stakeholder_Consultation/Consultations/Electricity_Consultations/2016/Causer-Pays-Procedures-Issues-Paper-Dec-16.pdf (Page 13, Option 2 – Real time factors).

the stable operation of the power grid. Additional complexity in recovering costs would also be introduced for cases when the quality of SCADA² inputs is questionable.

At present the causer pays calculation provides an incentive to follow targets, due to the uncertainty of future FCAS prices, resulting in a risk of exposure existing for the following month if targets are not accurately met in the first instance. A real-time approach will reduce this incentive.

Hydro Tasmania supports draft recommendation (b) for AEMO to provide clarity around the causer payer procedure.

- **Draft Recommendation 2:** Hydro Tasmania supports the draft recommendation that providers of a primary regulating response should be remunerated for the cost of providing the service.

Hydro Tasmania believes that adoption of a combination of both options presented as recommendations will be beneficial to the market.

- The first recommended option to provide primary frequency response (PFR) through existing regulating FCAS markets (or, the development of new markets if existing markets cannot support this provision³) would result in an increased supply of these services, leading to better frequency control and an overall reduction in FCAS regulation prices; and
- Recognising positive causer pays contributions rather than setting their effect to zero (second recommended option) would incentivise participants to follow AEMO targets more accurately and most likely reduce the demand for regulating services. This will also enable participants who cannot provide PFR and regulating FCAS (in the normal operating frequency band) but who contribute positively to managing frequency to receive some payments.

Hydro Tasmania would also like to raise the following points for AEMC's consideration:

- Generator droop settings are not considered in the draft report. Hydro Tasmania believes the currently observed frequency deterioration may continue if consideration of changes to droop settings is not given importance in conjunction with any changes proposed to dead bands;
- Hydro Tasmania also has concern for the narrowing of the contingency frequency bands, as the amount of Fast Raise FCAS recognised by AEMO through the current Market Ancillary Services Specification (MASS) assessment would reduce. This would lead to an overall reduction in the amount of Fast Raise FCAS available in the NEM as a result and particularly in Tasmania⁴, potentially increasing costs to customers;
- The approach to valuing inertial contribution should be incorporated with minimum inertia provision and the proposed inertia markets noting the provision of kinetic inertia in the first 200ms cannot be replaced by any other service;
- The MW volume of PFR required needs to be understood; and

² Supervisory Control and Data Acquisition

³ Hydro Tasmania's position as per the previous submission

<https://www.aemc.gov.au/sites/default/files/content/dbd82b34-4aa0-45a3-8b85-fe327d3008d3/Hydro-Tasmania.PDF>

⁴ Refer to numbered page 70 in the draft report

- There are circumstances where signals provided by primary frequency control and secondary frequency control can send mixed (and sometimes opposing) signals to generators; the result of which can lead to oscillations of frequency. This review needs to establish a clearer framework to enable better coordination between these signals. A more coordinated response will send the right signals to avoid unintended generator responses which exacerbate the problem.
- **Draft Recommendation 3:** Hydro Tasmania is supportive of the draft recommendation. Hydro Tasmania understands that many stakeholders broadly support having mandatory reporting requirements with regard to frequency performance and performance of FCAS markets.
- **Draft Recommendations 4 to 7:** Hydro Tasmania is supportive of these draft recommendations, subject to a market approach which provides transparency and measurability is adopted.
- **Issue 8:** Hydro Tasmania is supportive of the draft recommendation; however, we are not yet convinced that a specific Fast Frequency Response (FFR) service has greater value on its own, rather than being incorporated into the existing Fast Raise FCAS framework. Hydro Tasmania considers that a new inertia service should be added recognising the requirements of minimum system inertia. Considering the trend of reducing synchronous generation, the market should incentivise retention of inertia providing sources.

Please feel free to contact Prajit Parameswar (Prajit.parameswar@hydro.com.au or 03 6230 5612) for further information.

Yours sincerely



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