6 December 2019

Matthew Holmes
Principal – Systems Performance and Commercial
Australian Energy Market Operator (AEMO)
GPO Box 2008
Melbourne VIC 3001

By online submission.

Dear Mr Holmes

PRIMARY FREQUENCY RESPONSE UNDER NORMAL OPERATING CONDITIONS Consultation.

Hydro Tasmania appreciates the opportunity to make a submission in response to the AEMO Consultation on proposed changes to the Regulation FCAS Contribution Factor Procedure (Causer Pays Procedure) and the Market Ancillary Service Specification (MASS) to facilitate the provision of primary frequency response (PFR) by Generators under normal operating conditions.

Hydro Tasmania is Australia's largest producer of renewable energy. Our retail business, Momentum Energy, sells energy and energy services to businesses and residential customers on mainland Australia and provides retail services to the Bass Strait islands. We generate electricity from hydropower, wind and gas. Our system has a total capacity of more than 2,600 megawatts and includes 30 power stations. We are also currently examining options to enhance Tasmania's contribution to the NEM through our Battery of the Nation project. The consideration of primary frequency response is a key issue for our business and we have been actively involved in the AEMC's consideration of frequency control issues including the associated mandatory primary frequency response rule change process.

As AEMO, the AEMC, the AER and ESB have noted, maintaining system security has become more challenging in recent years. This is due in part to the growth in variable renewable energy resources, such as solar and wind generation, which have displaced traditional synchronous generation. This transformation of the power system is seeing a reduction in services that synchronous generators were previously providing in abundance. In this context, Hydro Tasmania welcomes AEMO's consideration of ways to better manage the power system including the provision of primary frequency response under normal operating conditions.

AEMO's notice of the first stage of Consultation published a proposed marked-up consultation draft of the Causer Pays Procedure and an Issues Paper on the MASS. In summary, the proposed changes are:

- The Causer Pays Procedure will specify requirements for the provision of PFR that, if met by a Generator, will result in that Generator not receiving a negative 'causer pays' factor.
- The MASS should be altered so that the Contingency FCAS requirements do not incentivise a delay in the delivery of PFR.

Proposed changes in the Causer Pay Procedure

Hydro Tasmania agrees with the proposed changes to the Causer Pays Procedure. This is due to the proposed changes maintaining recognition of net positive contributions of individual units to a portfolio's aggregated factor.

Questions raised in the MASS Issues paper

1. *Why do you support/not support the general concept of recognising PFR within the NOFB as Contingency FCAS?*

   Hydro Tasmania supports the recognition of PFR within the NOFB as part of Contingency FCAS delivery based upon the definition and nature of a *contingency event*. The definition of a contingency event in the NER references the event by which the power system becomes affected. It is Hydro Tasmania's opinion that all response which acts to arrest the fall or rise in System Frequency following a contingency event should be recognised as Contingency FCAS, whether this response is in or outside the NOFB. To this extent, contributions from PFR, but more importantly inertial response, should be recognised. Recognising and incentivising these responses should be considered to enhance the resilience of the power system.

2. *Should the recognition of Contingency FCAS provided inside the NOFB apply to all Contingency FCAS (i.e. Fast, Slow and Delayed), or only to some services? Why?*

   Hydro Tasmania believes the recognition of Contingency FCAS provided inside the NOFB should only be for Fast Contingency FCAS services. If the interpretation of the zero point is adjusted to include responses within the NOFB, the amounts of Fast Contingency FCAS delivery will be the only service directly affected under the current calculation methods of the MASS.
   The Slow and Delayed services earliest reference point for calculating delivery amounts are six and sixty seconds respectively; during a contingency event these points are considered to be well beyond initial responses within the NOFB.

3. *What kind of measurement approach do you believe should be applied to assessing the total volume of Contingency FCAS delivered?*

   If frequency response within the NOFB is to be recognised by one of AEMO's proposed methods as described in the MASS issues paper, Hydro Tasmania's preference is for method 3 in determining the 'ΔP' value to be adopted. However, it is not clearly stated how the 'ΔP' value is calculated and Hydro Tasmania is concerned that the inertial response of its hydro units will not be considered as stated in question 1 above. Hydro Tasmania would welcome the opportunity to discuss this further with AEMO to clarify AEMO's proposed methodology.

4. *Is an increased pre-event recording window easily achieved? Are there thresholds above which this would become problematic?*

Based upon advice received from meter providers it is believed that increasing the pre-event recording may be achievable on most meters. This will involve changing the pre-event settings in compatible existing FCAS meters and installing new meters to replace those that will not be able to achieve the required settings. Determining the pre-event recording thresholds will be difficult without doing proper testing of the FCAS meter fleet.

5. *Is the approach of recognising PFR within the NOFB only for verification of response, rather than for dispatch purposes, appropriate?*

   Hydro Tasmania believes that all responses within the NOFB which act to arrest the fall or rise in System Frequency should be recognised for dispatch purposes. This would allow incentives to units that provide important inertial response as well as PFR within the NOFB towards contingency events. As the NEM continues to evolve with more asynchronous generation such services should not only be recognised, but also incentivised, to ensure that there are adequate means to manage frequency

If you have any queries on this submission or require further information please contact Mathew Creese 0439 995 285 or via email Mathew.Creese@hydro.com.au .

Yours sincerely

John Cooper
Regulatory Manager