13 August 2020

Mr John Pierce
Chairman
Australian Energy Market Commission
PO BOX A2449
SYDNEY SOUTH NSW 1235

Dear Mr Pierce

Consultation Paper on System Services Rule Changes

Hydro Tasmania welcomes the opportunity to respond to the Australian Energy Market Commission's (AEMC) Consultation Paper on *System Services Rule Changes.*

Hydro Tasmania is Australia's largest generator of renewable energy and is committed to contributing to the decarbonisation of the electricity sector and the broader economy. As an active participant and contributor to the energy market reform agenda we support changes to the National Electricity Rules (NER) which assist with setting a pathway for future investment and ensure security and reliability of supply for the long term.

Fit for purpose reform

A modern, efficient, affordable and low-emissions electricity sector is a clear priority for Australia. However, maintaining system security in the National Electricity Market (NEM) has become more challenging in recent years due to the change in generation mix seen through the rapid growth in variable renewable energy (VRE) and the retirement of ageing thermal generation. Given the changing nature of energy supply in the NEM, we strongly support robust and strategic adjustments to the policy and regulatory settings that ensure frameworks remain fit for purpose to support the transition to a low emissions future.

AEMC's approach and concurrent processes

The AEMC is consulting on six related rule changes through this consultation paper. Hydro Tasmania notes the interdependence of the suite of proposed rule changes and other processes including the ESB's Post-2025 Market Design program and the Australian Energy Market Operator's (AEMO) Renewables Integration Study.

In assessing the six proposed rule changes, **Hydro Tasmania suggests that the AEMC draw a distinction between solutions that address emerging physical system security problems and proposals aimed at achieving a more optimal future market design**.

- For example, the observable decrease in system inertia and system strength is a measurable and empirical problem for power system security and one that will need to be addressed, particularly as further coal plants close.

- **On the other hand, choices between rewarding operating reserves, procurement of ramping services, ex-ante capacity commitment mechanisms, or ahead markets (being considered through ESB) represent competing candidate solutions to market design**. Each of these has consequences and benefits for operation of the real time market as well as for 'pulling through' investments to maintain resource adequacy as thermal stations progressively retire.

- Competing market design solutions are far more complex to assess as there is less empirical evidence against which to assess them, and the overseas examples do not instantly translate into an Australian context.

- To help address this distinction between the rule changes seeking to address physical system issues, and those proposing longer-term market reform**, Hydro Tasmania suggests that the operating reserve, fast frequency response (FFR), capacity commitment and ramping rule changes are considered as part of the ESB's post 2025 review process.** In undertaking a review of these rule changes through the ESB, the trade-offs and intended/unintended consequences can be properly considered amongst other reform options. This would also enable these **proposals to be thoroughly stress-tested through the use of modelling and market simulations.**

- **Hydro Tasmania's synchronous services rule change, involves relatively small, incremental changes to existing frameworks, which could be implemented without significant disruption and would provide immediate incremental benefits to consumers.** 'Least regrets' reforms could be implemented in a shorter-timeframe than other market redesign changes (e.g. Operating Reserve Market proposals) which make material judgements on what the ideal future market operation will look like.

Hydro Tasmania acknowledges our *Synchronous Services Markets (ERC0290)* rule change request is being considered within the consultation paper and welcomes continued engagement and discussion with the AEMC and other stakeholders about our proposal.

Our comments in relation to the six rule change requests are discussed in detail in the attachment provided. If you would like further information on any aspect of this submission, please contact John Cooper (john.cooper@hydro.com.au or 6240 2261).

Yours sincerely

Steve Davy
CEO

Attachment A

This attachment outlines our position regarding the six proposed rule changes.

Principles for evaluating rule changes

Hydro Tasmania would like to offer the following 'principles-based' observations for the AEMC's consideration. Any future approach to system services in the NEM should:

- Support the **efficient transition of the electricity market to lower-emissions technologies** by removing barriers to entry for new generation assets;
- Deliver **efficient, least-cost outcomes** across the dispatch, commitment, and investment periods;
- **Favour simplicity** wherever possible, noting that the regulatory and market frameworks are already complex, and incremental changes to existing frameworks may be the most efficient way to resolve certain issues;
- Price signals should be sufficient to **incentivise new investment** where this is necessary;
- **Maximise the utility of existing assets** to deliver system services (including where their continued operation benefits the NEM to transition to a lower-emissions future);
- **Assign risk** to parties best placed to manage that risk; and
- Ensure regulatory frameworks are **technology neutral**.

Hydro Tasmania has used these principles as the basis to assess each of the rule changes.

Hydro Tasmania – Synchronous services

As previously stated, this rule change represents a 'no regrets' option for providing system services in the NEM. It is not, as characterised in the consultation paper, a new 'market', but rather aims to integrate the dispatch of system services, such as inertia, into the existing energy and Frequency Control Ancillary Services (FCAS) spot markets. Small, incremental changes would be made to AEMO's existing dispatch constraint system to incentivise generators to provide synchronous services. It should be noted that the proposal is not limited to synchronous service generators (SSGs). Any technology that improves constraint formulation of the NEM Dispatch Engine (NEMDE) could participate, including batteries. In this sense, the rule change is technology neutral.

We are of the view that this rule change should be considered prior to Infigen Energy's FFR rule change, as it counters decreasing levels of inertia in the system - which in turn, increases the rate of change of frequency (RoCoF), creating the need for FFR. It may limit the need for a FFR mechanism in the first instance, and therefore could be a more efficient option. The rule change will also allow AEMO the ability to prioritise dispatch of assets that will contribute to required system strength, alleviating grid constraints (maximising line capacity) and curtailment of VRE. This will essentially mean fewer directions by AEMO. Therefore the rule change allows for synergies across system services to be found due to its holistic approach.

As a further observation, while the passage of some of the examined rule changes would remove the need for others, Hydro Tasmania does not believe that any of the listed rule changes entirely removes the benefits that the Synchronous services rule change could provide.

Infigen Energy – Operating reserve market

As noted, this rule change is proposed to be a more material reform of the market and therefore requires detailed consideration, with modelling/market simulation undertaken to assess costs and benefits. Hydro Tasmania acknowledges that there are benefits in incorporating operating reserves directly into spot market dispatch, but potential solutions in this respect (for example an ORDC price adder) should be carefully evaluated in the light of other design changes that may be contemplated including ahead markets and resource adequacy mechanisms. It may be useful to consider Infigen's operating reserve proposal in amongst other reform proposals that the ESB is also currently considering including ahead markets as part of a mix of longer term reforms.

Infigen Energy – Fast frequency response market ancillary service

Hydro Tasmania supports ways to address declining levels of inertia within the grid. Infigen proposes that new ancillary service markets for FFR should be developed which would help mitigate the risks of declining inertia. There is clear relationship between inertia and FFR requirements; a sufficient level of inertia can completely remove the need for FFR. Hydro Tasmania's view is that any contribution that can support system stability following a contingency event should be recognised and rewarded. Consideration of a FFR mechanism should therefore investigate ways to reward the provision of (natural and synthetic) inertia.

Transgrid – Efficient management of system strength on the power system

Given the complex challenges with incorporating system strength into a market based service, we are supportive of a TNSP led initiative, like that of Transgrid's rule change, to source minimum levels of system strength. There may be benefits in using a related market-based mechanism, such as proposed in Hydro Tasmania's rule change request, to contribute system strength *above* minimum levels. While involving a change to dispatch, it provides a longer term investment signal to market participants to invest in plant which will provide system security services. If well designed, such an investment signal could provide incentives both for new assets or for the repurposing and modernisation of existing assets. With large volumes of plant expected to retire in coming decades it is appropriate that all options are available where they may be an efficient market choice, such as converting existing assets to synchronous condenser operation or otherwise making use of existing power assets with alternative operation or running schedules. Hydro Tasmania has modernised both hydropower and gas assets in order to allow synchronous condenser operation. A market based approach that could provide these type of initiatives is consistent with pursuit of a least-cost transition of the sector.

Delta Electricity – Capacity commitment mechanism for system security and reliability services

Delta has proposed the introduction of a capacity commitment mechanism and payment to keep non-peaking dispatchable generation online at their minimum safe operating level (MSOL). This rule change does not appear to support or incentive the provision of flexible generation. As AEMO and others have noted, flexibility is a becoming an increasing important attribute given the transition to more variable renewable energy resources. Hydro Tasmania does therefore not support this rule change as currently constructed given the likely benefit that will be provided to inflexible plant. If there is a benefit in an ahead market type approach (as the Delta rule change suggests), then generators already have the option to voluntarily offer such a product to the market.

Delta Electricity – Introduction of ramping services

Delta has proposed this rule change together with their capacity commitment mechanism (as above). While Hydro Tasmania believes that there should be appropriate returns for flexible dispatchable plant, we do not believe such revenue should be tied to slow start generating units. As noted earlier, we support the consideration of this rule change as part of the ESB's post 2025 review process to consider the overlap between a ramping service, and potential operating reserve approaches, and consider what synergies can be found between the two.