16 September 2021

Anna Collyer
Chair
Australian Energy Market Commission (AEMC)
PO Box A2449
SYDNEY SOUTH NSW 1235

Dear Ms Collyer

Integrating energy storage systems into the NEM (ERC0280)

Hydro Tasmania is Australia's largest producer of renewable energy, and is an active participant and significant contributor to the energy market reform agenda. Hydro Tasmania owns Victorian based electricity and gas retailer Momentum Energy and specialist power and water professional services firm Entura. We welcome the opportunity to respond to the AEMC's Draft Determination of Integrating energy storage systems into the National Electricity Market (NEM) rule change.

The use of energy storage is increasing in the NEM. As the energy market continues to evolve, a range of storage technologies and durations will be needed to support the increased deployment of variable renewable energy resources. In this context, AEMO's rule change proposes changes to the regulatory framework and processes to ensure they remain fit for purpose.

Hydro Tasmania supports the overall direction outlined by the AEMC in the Draft Determination. **However, Hydro Tasmania does not support the AEMC's draft determination to apply Transmission Use of System (TUOS) charges for connecting storage assets.** Instead, the Draft Determination proposes that the application of TUOS charges would continue to be left to a potentially arbitrary and uncertain negotiation process between the storage proponent and the Transmission Network Service Provider (TNSP) for the specific grid connection. **The approach outlined in the Draft Determination is problematic for the following reasons**:

- Without clarification in the rules that TUOS charges should not apply to storage, investors will not be able to determine in a timely manner how TUOS charges may or may not apply to their projects, with any disagreement with TNSP's having to be resolved via dispute resolution mechanisms. This risks investment in energy storage systems which are needed to support the energy market transition and decarbonisation of the NEM.
- The ISP notes that by 2040 between 6-19 GW of new dispatchable resources, including utility-scale pumped hydro and large scale battery energy systems, will be needed to firm up distributed and grid connected renewable energy generation. Uncertainty over the

application of TUOS charges for energy storage systems risks undermining storage investment, particularly deep storage, and an orderly market transition outlined in the ISP.

- The potential for TUOS charges to apply to energy storage systems would be a significant cost impost for these projects yet with no direct benefit to consumers. Applying TUOS charges to energy storage would not promote the achievement of the NEO, is inconsistent with AEMO's intent to remove barriers to entry for energy storage systems and is likely to increase costs to customers.

Given the above concerns, Hydro Tasmania urges the AEMC's reconsideration of the application of TUOS charges for energy storage systems. Hydro Tasmania has reviewed the issues raised in this consultation process and provides supporting commentary (Attached) and some suggested alternative approaches for the AEMC's consideration to provide clearer guidance in the rules that will be consistent with supporting the orderly and necessary transition of the NEM.

Hydro Tasmania would welcome the opportunity to discuss these issues with the AEMC. Please contact John Cooper (john.cooper@hydro.com.au) should you have any questions.

Yours sincerely

John Cooper

Manager Market Regulation

Attachment: Consultation insights and the need to provide clarity that TUOS will not be applied to storage

TUOS charging

AEMO's rule change proposed that energy storage systems would not be required to pay TUOS. AEMO recommended that this would be achieved through their proposed definition of energy storage systems in the rules. AEMO noted that exempting storage from TUOS charges would increase investor certainty and eliminate inefficient storage location decisions.

AEMO's rationale for their approach was that TNSPs would not increase the capacity of the shared network to provide unrestricted access for storage. Also exempting TUOS for energy storage systems will not increase charges to others. In reality, storage systems are more likely to alleviate grid congestion and/or negate the need for further transmission investment, by charging at times of surplus supply due to high VRE outputs, thereby providing significant benefits to end-consumers

As noted in the Draft Determination, 'most stakeholders largely agreed with AEMO that storage should be exempt from TUOS'. Hydro Tasmania also supports AEMO's rationale.

In addition to AEMO's rationale, Hydro Tasmania considers that the application of TUOS to storage would be distortionary and inefficient. Applying TUOS charges to storage would mean that storage would face higher costs to access the network than generators. This does not create a level playing field between the two competing participants. As a consequence, this distortion would lead to dispatch inefficiency given that storage would require additional revenue to cover the costs of TUOS.

TUOS is based on the principle that end-use consumers of the energy are charged TUOS. Applying charges to end users is the most efficient way of allocating the costs of the shared network as the network is developed to meet the needs of customers rather than generators. Energy storage systems like pumped hydro, are not end-users. Consistent with the broader approach for network charging, energy storage systems should not be charged TUOS.

Broader reforms

Hydro Tasmania recognises that AEMO's rule change is being reviewed amongst several other reform including the consideration of two-sided markets. The AEMC's Draft Determination notes the difficulties of progressing two-sided markets and defining storage in the rules as AEMO originally proposed. **While Hydro Tasmania appreciates the AEMC's concerns, one of the central aims of AEMO's proposal was to remove barriers to entry for storage through confirming that storage would not pay TUOS.** Not adopting AEMO's proposal therefore creates ambiguity in the way TUOS might be applied to energy storage investments. As AMEO noted, there could be inconsistencies between the way in which TUOS might be charged between different regions across the NEM leading to inefficient investment decisions. There is no guarantee that the approach adopted in one state would apply to investments in other states.

Alternative approaches

In considering the difficulties of adopting AEMO's proposal but seeking to provide more clarity to the market, **Hydro Tasmania provides the following alternatives for the AEMC's further consideration.**

<u>Exempt controllable pumping loads as a part of storage from paying TUOS.</u>

- The AEMC raised the prospect of exempting controllable scheduled loads from paying TUOS in the Consultation Paper. However no further discussion of this approach appears in the Draft Determination.
- Hydro Tasmania encourages the AEMC to further explore the option of exempting controllable pumping loads which are a part of storage. As exemption of these loads would not hinder the development of a two-sided market, be consistent with a services based approach and is technology neutral. This approach would confirm these loads, such as grid scale batteries and pumped hydro, would not pay TUOS and address the core issue of investor uncertainty.

Clearer guidance in the Rules

- If the AEMC considers that exempting pumping loads for storage is inappropriate, then **Hydro Tasmania suggests that clearer guidance should be included in the rules for the negotiation between connecting storage proponents and TNSPs**.
- This guidance should propose that the starting point for negotiations is that storage would not pay TUOS unless the TNSP is able to prove that there is a discernible reason why this would not be the case. The guidance could reference the intent and principles of TUOS charging and the application for energy storage systems. This guidance could also reflect the benefits that storage provides to the system such as congestion management and efficient utilisation of energy resources.
- The guidance would help provide the market with more certainty on the treatment of TUOS for energy storage proponents. Updating Schedule 5.11 in Chapter 5 to include this information may be the most appropriate part of the rules.