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AESO Energy Storage Tariff Background & Options

Transmitted electronically at: <https://www.aesoengage.aeso.ca/energy-storage-tariff-working-group>

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## Stakeholder Feedback Questions

1. *Do you believe the AESO should remove the ISO Tariff as a barrier to energy storage development at this time? Why or why not?*

As identified in the AESO energy storage roadmap and through various stakeholder engagements (notably the February 2023 Tariff Evolution event), regulatory filings and planning documents, the Alberta electricity sector has recognized the unique attributes and capabilities of energy storage resources. While energy storage has capabilities similar to both load and generation, the treatment within the Alberta electricity regulatory framework (i.e., legislation, regulation, market design, codes & standards and tariff design) must be updated to fairly and equally allow the participation of energy storage, as a unique resource, for the benefit of all Alberta rate-payers.

Energy storage increases the efficiency of existing assets and future investments through optimization of energy flows and system stability across various time periods (e.g., seconds under fast frequency response to hours for resource adequacy needs). As a result, energy storage uses the transmission system in a very different, often opportunistic, way from generation and from load customers. Generally, energy storage uses the transmission system where there is under utilized capacity and offers energy when the system is constrained; either locally or globally. Unlike load customers and generation resources, energy storage requires no system upgrades for connection, as no new load or supply is added to the grid, outside the inefficiency of the storage resource. In fact, the expansion of the transmission system reduces the value and opportunity of energy storage since there is less inefficiency to address. In the specific instance of interties, access to the XOS and IOS rates allows them a systemic advantage via lower tariff for an opportunity service, without the need for a business case, as required by DOS. Energy storage has a unique ability to connect low cost and high-cost hours, and arbitrage between the two, to create a less volatile supply of energy for Albertans. However, the unnecessary burden of DTS artificially limit the number of arbitrage opportunities throughout the year. A study, funded by Energy Storage Canada and CanREA found that 300MW of storage, unburdened by DTS, would have been able to reduce energy costs for Albertans by \$600M in 2022. More energy storage participating in the Alberta electricity market reduces both energy costs and transmission costs for customers.

Additionally, energy storage resources stand to provide a significant amount of system reliability via ancillary services. The challenges identified in the Reliability Requirements Roadmap and Market

Pathways documents all stand to be addressed by the participation of energy storage resources. As articulated in FERC 841, it makes little sense to allocate energy storage resources that are themselves providing ancillary services paid by the ratepayer and will inhibit system reliability,

For these reasons, unique treatment under the ISO tariff for energy storage should be established.

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*2. How would you rank the options as presented and why?*

In Energy Storage Canada's (ESC's) view, the options presented by AESO are sub-optimal and do not address the main barriers facing energy storage resources with respect to the ISO Tariff. None of the options offer fair and equal access to the AESO electricity market or treatment under the ISO tariff. During the development of the ESAS, many other stakeholders sought to establish overbearing and unfair requirements on energy storage resources related to project economics and ad-hoc generic analysis. No other existing tariff users face similar requirements that assess on an ongoing basis the economics of specific tariff users and penalize the participant due to market activities. Transmission access and use should not be linked to electricity market activities. The primary component in the ESAS is opposite to the core philosophy of the Alberta energy only market design that expects proponents to connect and compete under fair and equal access.

The AESO's preference for jamming energy storage resources into a demand (i.e., load customer focused) tariff design completely fails to accept the previously identified uniqueness of energy storage resources. Energy storage resources are not simply demand resources and have very different requirements and uses of the transmission system. Further, jamming energy storage resources into the Demand Opportunity Service (DOS) design continues to expose energy storage to the Demand Transmission Service (DTS) cannibalization challenge that was the core reason for rejection of the Bulk and Regional Tariff by the AUC in proceeding 26911. In the Bulk & Regional Tariff design, neither the AESO nor energy storage intervenors appropriately anticipated the concerns of the AUC with respect to DTS cannibalization. As mentioned in response to Question 1, energy storage resources do not require transmission system expansion and only utilize transmission capacity that would be otherwise wasted by other transmission users. This effectively means that a stand-alone storage tariff would result in no DTS cannibalization and should completely satisfy the AUC concerns if properly explained and demonstrated by both the AESO and storage intervenors. Including storage in DOS requires the DOS design to include convoluted and complex requirements to separate energy storage from demand users and attempt to maintain fair and equal treatment while satisfying the avoidance of DTS cannibalization. In ESC's view, this is not accomplishable within an updated DOS. Only a separate and distinct energy storage tariff treatment that focuses only on transmission use and costs. ESC advocates for the AESO to work with motivated stakeholders to design a tariff for storage as a resource class distinct from load and supply, not as a subcategory of either.

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*3. If the AESO decides to proceed with Updated DOS, please indicate how you are impacted by the outcome and advise if you would like to be a part of the limited, focused engagement.*

The business case requirement under DOS is unnecessary and unjust for storage. Updated DOS can only work if energy storage resources if storage is allowed to access the rate effectively without a business case, allowing DOS to be the default rate storage can access. The more inhibitive and riskier

the requirements of a business case for storage projects, the more Updated DOS would fail to achieve the objectives in the Tariff Work Plan for the Energy Storage Tariff Working Group Terms of Reference.

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*4. Do you have any additional comments you wish to share?*

ESC participated in the development of the ESAS in good faith as an attempt to develop a transmission tariff that offers fair and equal treatment for energy storage resources in a collaborative process. ESC advocates for a reset or modification of the working group to refocus on what cost allocation is reasonable for energy storage resources. After assessing the progress made under that premise, thus far, from the Energy Storage Tariff Working group, ESC believes participants in any future work need to be bought in on finding a solution for storage, otherwise progress will be similarly fraught. Forcing energy storage into a transmission tariff treatment meant for demand customers is fundamentally flawed and is unlikely to achieve the objective of removing barriers for energy storage participation in the Alberta electricity market and sector.