Period of Comment:	February 17, 2021 through March 17, 2021	**Contact:**	Akira Yamamoto
Comments From:	TransAlta Corporation	**Phone:**	403-267-7304
Date:	2021/03/17	**Email**:	akira_yamamoto@transalta.com

Instructions:

1. Please fill out the section above as indicated.
2. Please respond to the questions below and provide your specific comments, if any. Blank boxes will be interpreted as favourable comments.

The AESO is seeking Stakeholder comments regarding the following questions related to the development of proposed amendments to ISO rules to enable energy storage ("Energy Storage ISO Rule Amendments"):

	Development of a Proposed ISO Rule	Stakeholder Comments
1.	Do you agree or disagree that the issue identified in the letter of notice requires the proposed Energy Storage ISO Rule Amendments? Why or why not? Please comment.	***Yes, Energy Storage ISO Rule Amendments should follow a stakeholder engagement process including a letter of notice.*** TransAlta expects that the changes proposed in the AESO's recommendation paper will require ISO Rule changes that should be consulted on like any other ISO Rule amendment. The AESO's stakeholder engagement process should include a letter of notice that outlines the issues that it is attempting to address with its proposed amendments.
2.	Do you agree or disagree with the potential purpose of the proposed Energy Storage ISO Rule Amendments? Why or why not? Please comment.	TransAlta agrees that the ISO Rule should be amended to allow for energy storage participation. We cannot comment on the purpose of or the proposed Energy Storage ISO Rule Amendments because those have not been provided yet.
3.	Do you agree or disagree with the proposed consultation activities? Why or why not? Please comment.	TransAlta agrees that further stakeholder consultation is required on any proposed Energy Storage ISO Rule Amendments.

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4.	Do you have any comments in relation to the prioritization of the development of the proposed Energy Storage ISO Rule Amendments or the related timeline? Please comment.	***Hybrid asset participation should be prioritized.*** TransAlta's view is that providing certainty to hybrid participation, as has already implicitly been done by the AESO, is critical and should be prioritized. While we struggled with the AESO's choice to include this in the scope of this engagement, we ask the AESO to remove the regulatory uncertainty about already permitted hybrid asset participation.
5.	Do you agree or disagree with the AESO's recommendation regarding hybrid asset participation? Why or why not? Please comment.	***Hybrid assets that have metering to permit separate facility offers should be permitted to offer energy storage separately from the co-located generating facility offers.*** TransAlta requests that the AESO confirm that hybrid assets that have elected to be metered such that the behind the fence storage asset is separated for the purposes of Energy Trading System submissions from the co-located generating facility will continue to be allowed to make offers separately (without combining into hybrid asset offers). Market participants that have made this choice have invested capital to accommodate separate metering and should not be required to offer their units as a hybridized single asset. ***The assumption that the co-located generating facility will always offer at zero may not hold in the future.*** TransAlta agrees that the AESO's recommendation works with the way an energy storage asset and renewable generating facility that are treated as one hybrid facility operate today. More specifically, renewable assets are likely to offer all of their generation at zero dollars and all of their generation to a hybrid asset could be assumed to be in the lowest offer block. We note that this assumption may not hold in future. Renewables can be offered at a non-zero price and could utilize that offer discretion in the future. Furthermore, there appear to be other hybrid assets that could co-locate energy storage and a dispatchable (thermal) resource and will have priced offers. For this reason, we recommend that the AESO consider how it may modify its proposed approach to contemplate priced offers for a hybrid asset in the future.

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6.	Do you agree or disagree with the AESO's recommendation regarding full-range participation? Why or why not? Please comment.	***The linked-asset approach is the best of the AESO's proposed alternatives.*** TransAlta agrees that a linked-asset approach provides the flexibility to allow a market participant to bid/offer the full-range of an energy storage asset. We strongly prefer this voluntary approach to the other mandatory bidding approaches the AESO considered. Additionally, we believe that this approach captures the spirit of reducing administrative burden and eases participation for energy storage providers.
7.	Do you agree or disagree with the AESO's recommendation regarding energy storage state of charge requirements? Why or why not? Please comment.	***The requirements for state of charge appear onerous.*** We understand the AESO's concept of "state of charge" but have concerns that the framework may create situations where many Available Capability (AC) restatements are required to follow system controller dispatches. For example, a 10 MW battery with a few kWh of stored charge could provide 10 MW of capacity for a few seconds/minutes and then have no further energy to provide the 10 MW on a sustained basis. While the asset would likely be offer high in the merit order to avoid dispatch, if the battery was called upon it would be fully discharged in seconds/minutes and would have to restate its AC to 0 MW with an accompanying AOR of 0% state of charge. Subsequently, after a small recharge the battery would have to restate its AC back to 10 MW and could encounter a situation where it is restating its AC from full to 0 in very short timespans. From our experience with the wind generating facility pilot project, we found that we were forced to make many AC restatements which was not only a significant burden on our wind control center staff but also overwhelmed the system controllers with a large volume of AC restatements. We are concerned that in developing recommendation the AESO has had small regard for the practical challenges/issues with complying with these requirements. We ask the AESO to consider developing a framework where these types of AC restatements can be avoided. ***The AESO should not impose new SCADA requirements on in-service energy storage assets*** TransAlta is concerned that the AESO is describing a new SCADA requirement by suggesting that it requires state of charge as a SCADA data point. We note that our energy storage project was brought online in compliance with the requirements that the AESO had prescribed at that time. We do not support new requirements being imposed on energy storage projects that are already online.

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8.	Do you agree or disagree with the AESO's recommendation regarding energy storage commissioning requirements? Why or why not? Please comment.	***The commissioning requirements should be rationalized to ensure consistency with other source and sink assets' requirements.*** We question why the AESO is proposing a requirement f for energy storage to make offers for the energy storage asset when it is testing its ability to charge. We are mindful that there is no such requirement on load facilities when they are being commissioned nor is there a requirement when a generator takes station service load when they are commissioning their generating facility. We ask the AESO to reconsider whether this is a necessary requirement for energy storage assets and if it has any consistency with the requirements for other sink or source assets.
9.	Do you have any additional comments?	*No additional comments at this time.*