

# Stakeholder Comment Matrix – Oct. 1, 2020

## Request for Feedback on Long-term Energy Storage Market Participation Options Paper



<b>Period of Comment:</b> Oct. 1, 2020 through Oct. 30, 2020 <b>Comments From:</b> Energy Storage Canada <b>Date:</b> 2020/10/30	<b>Contact:</b> Justin Wahid Rangooni, Executive Director <b>Phone:</b> 647.627.1815 <b>Email:</b> jrangooni@energystoragecanada.org
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Instructions:

1. Please fill out the section above as indicated.
2. Please respond to the questions below and provide your specific comments.
3. **Please submit one completed matrix per organization.**
4. Email your completed comment matrix to [energystorage@aeso.ca](mailto:energystorage@aeso.ca) by **Oct. 30, 2020**.

**The AESO is seeking comments from Stakeholders with regard to the following matters:**

	Questions	Stakeholder Comments
1.	Are there additional issues to energy storage market participation within the current ISO rules that AESO did not identify?	<p>Energy storage resources are expected in the future to participate in the energy market and to offer services to grid operators of transmission &amp; distribution networks. The roles and responsibilities in managing multiple service offerings between market participation and grid operators have not been discussed. In particular, third party owned energy storage resources with service agreements for regulated activities with grid operators that are also participating in the energy market has not been discussed. At a high-level, the AESO should explore how energy storage resources would operate under normal operating conditions and under abnormal/contingency events. For example, a generator participating in the energy market is not responsible for energy delivery if a transmission outage occurs that physically restricts the generator from delivering the energy. Would the same exemption apply for energy storage resources that are used to help maintain grid stability during outage events?</p> <p>As part of the Capacity Market development, the AESO explored co-optimization between energy and ancillary service markets (<a href="https://www.aeso.ca/assets/Uploads/1.2-Further-analysis-Cooptimized-markets.pdf">https://www.aeso.ca/assets/Uploads/1.2-Further-analysis-Cooptimized-markets.pdf</a>). Energy storage resources can quickly adjust operation to provide services most valued at a given moment. Co-optimization may be an option to explore to support value stacking for energy storage resources.</p>

2.	<p>Are there additional options to energy storage market participation within the current market structure that AESO did not identify?</p>	<p>ESC believes the AESO has identified the primary options available for energy storage market participation. ESC believes there may be sub-categories for the options presented by the AESO and may be worth exploring further when more details and analysis is presented.</p>
3.	<p>Do you agree with the evaluation of options?</p>	<p>At this time, ESC requires further information on the options and evaluation method to provide an opinion.</p>
4.	<p>Is full range market participation an important priority for energy storage right now; or is half-range providing required market access? Should full range market participation be deferred for investigation and implementation at a future date?</p>	<p>Alberta, as with other markets, is expected to increase the share of variable renewable energy resources in the supply mix over the next decade. As the name implies, variable renewable energy resources output is more sporadic and will require more balancing resources. This is a role that energy storage resources are well suited for. ESC notes that the benefits of full range participation primarily focus on the AESO as market operator allowing it to maximize the ability of energy storage to offer services to support volatility in energy market supply-demand balance, a service the AESO does not fund directly.</p>
5.	<p>Should Variable Energy Resources and Storage hybrids be permitted to participate?</p> <p>a. If no please explain why not</p> <p>b. If yes please provide a rationale as to why and how the dispatch variability issue should be addressed?</p>	<p>There are benefits and drawbacks to hybrid model participation including consideration for metering design and storage operation plans. When considering hybrids, the AESO should focus on flexibility and potentially applying ad-hoc solutions as storage technologies and applications evolve.</p> <p>ESC notes that ISO tariff design influences decisions on hybrids and must be considered concurrently. For example, a main consideration for hybrids is the ability to avoid DTS charges. Exploring hybrid participation models should be included in the AESO's bulk and regional tariff design consultations.</p>
6.	<p>How should storage and potentially other demand side resources be required to participate in the energy market?</p> <p>a. Must submit full range</p> <p>b. May submit full range</p> <p>c. Only submit discharge capability</p>	<p>ESC supports a may submit full range with adjustments allowed for acceptable reasons</p> <p>The AESO recently concluded a consultation on sub-hourly settlement and determined that no major market changes were needed at this time. As part of the consultation, the AESO explored Payments for Load on the Margin (PLM) and concluded that the true-up to bid option may warrant further investigation as there are benefits to the market. The benefits of PLM would be similar for energy storage</p>

	Please provide a rationale for your choice.	resources and ESC recommends exploring these benefits as part of a full range participation model.
7.	In regard to the full range market participation options, how do you feel the chosen option should land when trading off technology agnostic treatment and complexity against participation flexibility?	Participation in the Alberta electricity market requires participants to adhere to responsibilities and obligations as established in the ISO rules and associated regulation. Complexity should not be a major barrier since it is expected market participants should be sophisticated enough to manage the participation requirements.
8.	Do you have any comments on defining the state of charge? Is there anything the AESO has not considered? Please explain.	<p>State of charge definition and monitoring may be different for different energy storage technologies. How state of charge is defined and used will influence ESC's decision making and implementation.</p> <p>ESC does recognize the need to monitor state of charge in some way to ensure fair competition and avoid potential market power manipulation through ill-conceived scheduling of outages. In short, ESC believes that state of charge definition and application should be viewed through market participation obligations and not as a real-time operation priority.</p>
9.	Do you have any comments on the commissioning requirements for storage? Is there anything the AESO has not considered? Please explain.	ESC believes the AESO has adequately covered the commissioning requirements for storage
10.	Do you have any concerns or suggestions on the energy storage market participation engagement process and timeline?	ESC commends the AESO on the energy storage market participation engagement process and believes the timelines are prudent.
11.	Do you have any other suggestions or comments you would like to share with the AESO related to the Long-term Energy Storage Market Participation Options Paper or the engagement activities?	No further comments or suggestions

Thank you for your input. Please email your comments to: [energystorage@aeso.ca](mailto:energystorage@aeso.ca).