

Stakeholder Comment Matrix – April 9, 2020

Overview of Short-term Market Implementation Requirements for Energy Storage Participation



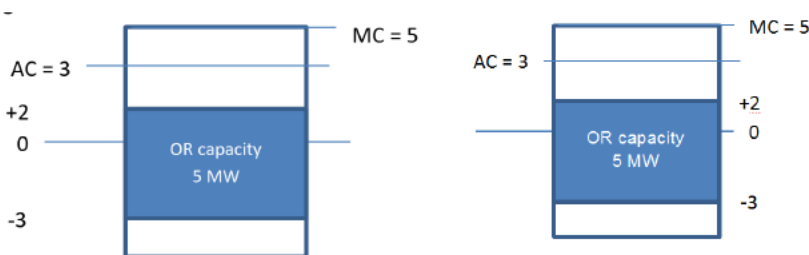
Period of Comment: April 9, 2020 through April 27, 2020 Comments From: ABO Wind Canada Ltd. Date: 2020, 27, 04	Contact: [REDACTED] Phone: [REDACTED] Email: [REDACTED]
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Instructions:

1. Please fill out the section above as indicated.
2. Please respond to the questions below and provide your specific comments.
3. Email your completed comment matrix to energystorage@aeso.ca by April 27, 2020.

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

	Questions	Stakeholder Comments
1.	Are there areas where further clarity on expected participation would be helpful?	<ol style="list-style-type: none"> 1. How do you define “State of Charge”? Based on the maximum power output and the then available capacity? This is asked because the energy capacity is highly dependent on the power requested (a 5MW/5MWh battery could for example deliver 6 MWh at a lower power rating). Additionally, the possible capacity is based on temperature and aging as well. The Management system adapts the SoC calibration over time. Therefore we would like to know what the SoC SCADA signal should be based on. 2. Does a battery or a hybrid system have to deliver a spinning reserve (from section 4.2) continuously? Will there be a re-numeration for this service? 3. Will storage systems in future be allowed to be handle as SUPL as well (section 4.2.1)?

<p>2.</p>	<p>Are there areas of market participation that in your view need special consideration for energy storage that are not identified in the overview document?</p>	<p>4. Have you considered that a stand-alone battery and a battery in a hybrid system (defined as a sink and a source asset) will have a problem of “double-taxation”. This will hinder the later participation of these assets as flexibility provider in the system as it increases their cost although they are just storing the same energy that has already been taxed if taken from the grid.</p> <p>5. Will there be a market valuing for the response time of a storage asset? This varies dramatically between “natural batteries” which include but are not limited to, pumped hydro and CAES (Compressed Air Energy Storage) with slower response times and Redox Flow or Li-Ion batteries with faster response times.</p> <p>6. How and when will the delivery of supplement reserve be requested? Is the battery forced to deliver this service or is there a re-numeration scheme in place?</p> <p>7. Which product will be valid for Transmission constraint Management through storage Rate XOS or Rate DOS? What conditions will have to be fulfilled for this beside ISO 302.1 (e.g. prequalification process)?</p>
<p>3.</p>	<p>Additional comments</p>	<p>8. Could you explain fig 4 and fig 5 more precisely? They appear to be the same but express a different thoughts. (see reference below). Figures 4 and 5 from AESO Feedback Document capacity:</p>  <p>The diagrams illustrate capacity levels for a 5 MW OR capacity asset. Both diagrams have a vertical axis with values -3, 0, +2, and 5. The left diagram shows a blue shaded area from 0 to 5 labeled 'OR capacity 5 MW'. The right diagram shows a blue shaded area from 0 to 5 labeled 'OR capacity 5 MW'. Both diagrams have 'AC = 3' on the left and 'MC = 5' on the right.</p>

		9. When will the stakeholder sessions mentioned under 7.1 take place?
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Thank you for your input. Please email your comments to: energystorage@aeso.ca .