Canadian Renewable Energy Association | Association canadienne de l'énergie renouvelable

August 13, 2020

Jessica Savage
Director

Independent Electricity System Operator
1600-120 Adelaide Street West
Toronto ON M5H 1T1

via email: engagement@ieso.ca

RE: Storage Design Project Feedback – Long-term Design

Dear Ms. Savage,

The Canadian Renewable Energy Association (CanREA) is the voice for wind energy, solar energy and energy storage solutions in Canada. CanREA officially launched on July 1, 2020, following the amalgamation of the Canadian Solar Industries Association and the Canadian Wind Energy Association. Our diverse members are uniquely positioned to deliver clean, low-cost, reliable, flexible and scalable solutions for Canada's energy needs. Our vision is to ensure wind energy, solar energy and energy storage play a central role in transforming Canada's energy mix.

We welcome the opportunity to provide comments on the IESO's request for feedback following the webinar held on July 23, 2020. We thank you for the opportunity to provide feedback and advice on the IESO's Storage Design Project which builds on submissions filed previously by CanWEA and CanSIA.

During the webinar on July 23, 2020, the IESO provided its response to feedback received from stakeholders, particularly with respect to the proposed "SOC-lite" approach as a key feature of the long-term design (i.e., post implementation of the reforms to the energy market per the Market Renewal Program (MRP)). Although the IESO has not provided the business case or risk assessment, we appreciate the additional details on the SOC-lite approach that were provided during the last webinar.

We note that there will be a requirement to work through details and nuances during the implementation phase. For example, the SOC-lite approach in the day-ahead market (DAM) could restrict storage scheduling at a time when there may be greater forecast error and thereby limiting the ability of storage to respond in real-time. The IESO forecasts 85% of demand (i.e., non-dispatchable load) and has acknowledged that DAM forecasts have greater error compared to pre-dispatch and real-time forecasts). The issue can be resolved by either loosening the SOC-lite scheduling restrictions in the DAM or allowing storage to adjust schedules that are not feasible in DAM.

CanREA continues to be concerned that the IESO's proposed long-term vision does not contemplate the role of hybrid energy systems or energy storage co-located with variable renewable energy generators. We therefore consider the IESO's proposed long-term vision to be incomplete. Excluding hybrid energy systems or co-located projects at this stage means that analysis has not been performed on the suitability of the SOC-lite approach for such resources.

On July 23, 2020, the U.S. Federal Energy Regulatory Commission (FERC) held a technical conference focusing on Hybrid Resources[1] and received significant input from industry representatives, including system operators. For example, PJM noted that they have no concerns with respect to the dispatch of hybrid resources as a single resource as the resource owner can update economic limits to match actual capability in light of state-of-charge or other consideration. With respect to technical considerations related to state-of-charge for hybrid resources, PJM stated:

> *PJM views any such technical considerations as the responsibility of the resource owner and not the grid operator. As with fuel inventory considerations for any other technology type, PJM believes the resource owner is in a far better position to manage their asset*.[2]
>
> *Given the complexity of interaction between VRE resources and energy storage that may be unique to the project and within the control of the resource operator, PJM states that "[these] significant interactions are best managed by the operator of the hybrid resource".*[3]

The IESO has indicated that it will be preparing a final report with the long-term design proposal for energy storage later this fall. CanREA urges the IESO to leave room for additional analysis to shape the long-term design. As demonstrated by FERC's recent technical conference, there is significant ongoing discussion with respect to the integration of hybrid resources. Given that the IESO is not planning on implementing the long-term storage design until following the implementation of MRP, the IESO would be remiss in omitting consideration of hybrids in the long-term storage design.

Thank you for your consideration of this submission, we look forward to additional dialogue on this important file and we remain availbe to meet at any time to discuss further.

Sincerely,

Brandy Giannetta
Senior Director Ontario & Atlantic Canada
Canadian Renewable Energy Association

[1] FERC Technical Conference regarding Hybrid Resources (Docket No. AD20-9-000), information available online: https://www.ferc.gov/news-events/events/technical-conference-regarding-hybrid-resources-docket-no-ad20-9-000-07232020
[2] Comments of Andrew Levitt, Senior Market Design Specialist, on behalf of PJM Interconnection, FERC Technical Conference on Hybrid Resources – Panel III. Hybrid Resources Docket No. AD20-9-000. https://www.ferc.gov/sites/default/files/2020-07/Panel-3-Levitt-AD20-9-000.pdf
[3] Ibid.