Energy Storage Design Project – Feedback Form – May 20, 2020

Date Submitted: 2020/10/06	**Feedback Provided By:** Company Name: EDF Renewables Development Inc. Contact Name: David Thornton, Manager of Regulatory and Public Affairs Contact Email: [redacted]

Following the May 20, 2020 Energy Storage Advisory Group (ESAG) meeting to discuss the Energy Storage Design Project, the IESO is seeking feedback from participants on whether the design proposals captured within the presentation offer pragmatic solutions for the participation of energy storage in the IESO Administered Markets in the long-term. The IESO will work to consider feedback and incorporate comments as appropriate and post responses on the engagement webpage.

The referenced presentation and design document can be found under the May 20, 2020 entry on the ESAG webpage.

Please provide feedback by June 10, 2020 to engagement@ieso.ca. Please use subject: *Feedback: Energy Storage Design Project*. To promote transparency, this feedback will be posted on the ESAG webpage unless otherwise requested by the sender.

Thank you for your time.

Topic	Feedback
State-of-Charge (SOC) Management: The IESO has proposed an SoC Management Lite approach that will provide the the same market access as a generator and account for the practical operating realities of a storage facility	• The IESO has outlined a number of benefits of SOC-Management Lite; however, the IESO has not described potential drawbacks, including the cost of SOC-Management Lite compared to alternative options. In short, EDF is requesting further analysis before EDF is able to offer an opinion • Feedback from stakeholders on SoC did not recommend SOC-Management Lite, but instead covered a wide range of options including the potential for different treatment for different participation types (e.g., large capacity versus small capacity ESRs). The IESO should consider and comment on the nuances of recommendations that different stakeholders have raised with the goal of proving comparable net benefit analysis for the different potential solutions • The cost of SOC-Management Lite was not presented compared to alternatives. The IESO has stated that storage inclusion in MRP is limited or will not occur partially due to funding restraints; therefore, the cost of design decisions is an important consideration for integrating energy storage into the IESO markets. Even a calculation based on orders of magnitude would be helpful for stakeholders to consider when providing feedback on design recommendations. • The SOC-Management Lite suggested by the IESO appears to provide an option for participants to select self-management. EDF requests further information from the IESO on the process and restrictions. • EDF does not support SOC-Management Lite until further information and analysis is provided

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Market and Facility Registration: Storage facilities may either register as a dispatchable facility or, if less than 10 MW, a self-scheduling facility Storage facilities will be modelled as a single resource with the capability to inject, store and withdraw energy	• EDF believes that energy storage has the potential to profoundly impact the operation and efficiency of the IESO-administered market. Greater visibility and requirements for energy storage to participant in the market is required to extract the full value and ensure energy storage is properly compensated for the fast and flexible attributes offered. EDF has previously recommended that all storage resources be required to register as dispatchable resource. However, the IESO has indicated this is out-of-scope due to impact on other resource requirements. This does not make sense to EDF as different resource types have different restrictions and limitations in the IESO market rules. A specific storage-only requirement to be a dispatchable resource should not be a barrier to implementation, especially when considering long-term design decisions. • The IESO should revisit their decision and provide to stakeholder's specific benefits and costs of a unique energy storage participation treatment for dispatchability.
Offer Curve: Energy storage offer curves will be continuous over the charging and discharging range	• EDF supports the Offer Curve design recommendation
Price Setting: Dispatchable electricity storage resources should be able to set the market clearing prices for energy and operating reserve	• EDF supports the Price Setting design recommendation
Regulation Service: Similar to generators, storage resources will be enabled to provide multiple services including regulation, energy and operating reserve	• EDF requests further information on the costs, benefits, and timelines to implement changes to the AGC tool, as well as adjustments to the market rules. • EDF believes opening the regulation service market is likely the best step forward for integration of storage in the near-term in Ontario.

General Comments/Feedback:

- EDF continues to be concerned with the lack of coordination between the MRP design process and ESDP. There are activities and recommendations in the near-term through the SDP that have not been reflected in the MRP detailed design documents; therefore, EDF is unclear whether the SDP design decisions will continue to be applicable when the IESO markets evolve through MRP. EDF recommends each ESAG meeting should include commentary and discussion on coordination with MRP and SDP, even if only at a high-level.

- EDF recommends that the IESO revisit the overall engagement process and seek to ensure priorities, problems and objectives are aligned. To that end, EDF recommends that the IESO approach stakeholders to present their views on solutions to key issues before providing a design recommendation decision from the IESO. This approach would ensure priorities better align between the IESO and stakeholders as well as incorporate more diverse viewpoints on potential solutions and issues.