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Frank D'Andrea
Vice President, Reliability Standards and Chief Regulatory Officer

BY EMAIL

May 12, 2021

Independent Electricity System Operator
120 Adelaide St. W. #1600
Toronto, ON M5H 1T1

Re: IESO Hybrid Integration Project – April 21, 2021 Webinar

The Independent Electricity System Operator (IESO) hosted a webinar on April 21, 2021 on their Hybrid Integration Project stakeholder engagement. The IESO has indicated that they are seeking feedback from participants on the proposed definitions, stakeholder information needs, the timelines and deliverables, and the engagement plan objectives and approach.

Hydro One recommends that the IESO engage with transmitters and distributors, including Hydro One, to fully understand and plan for factors that would impact participants in the Hybrid Integration project, including grid constraints, connection assessments and agreements for modified facilities, and consideration of the types of charges and rates that participants would be charged. Please find our detailed comments below.

Hydro One appreciates the opportunity to provide feedback and the IESO's consideration of its comments.

Sincerely,

A handwritten signature in cursive script that reads "Frank D'Andrea".

Frank D'Andrea

Feedback Form

Hybrid Integration Project – April 21, 2021

Feedback Provided by:

Name: Frank D'Andrea

Title: Vice President, Reliability Standards and Chief Regulatory Officer

Organization: Hydro One Inc.

Email: [REDACTED]

Date: May 12, 2021

Proposed definitions

Topic	Feedback
<p>Does the proposed definition of 'Co-located Facility' make sense? Is there anything further that should be considered?</p> <p><i>"A combined facility consisting of electricity storage and generation facilities located behind a single connection point, that participates in the IESO markets as separate resources."</i></p>	<p>Hydro One has no concerns with the proposed definition.</p>
<p>Does the proposed definition of 'Hybrid Facility' make sense? Is there anything further that should be considered?</p> <p><i>"A combined facility consisting of electricity storage and generation facilities located behind a single connection point, that participates in the IESO markets as a single bi-directional resource."</i></p>	<p>Hydro One has no concerns with the proposed definition.</p>

Information required to evaluate investment potential

Topic	Feedback
<p>What information do stakeholders need to evaluate the potential of Hybrid Resource investments as we evolve our resource adequacy needs?</p>	<p>If existing facilities are materially changed, including by adding battery energy storage, distributors may need to re-assess the facility through a new connection assessment to ensure the stability and safety of the grid. Hydro One recommends that the IESO work with distributors to understand this issue and incorporate into the program design in order to avoid customer dissatisfaction.</p> <p>The IESO should also provide proponents with clarity on the type of connection agreement that would need to be established for each facility based on its operation and type (i.e. Hybrid or Co-located), as well as the demand charges and rates these facilities will need to pay. Hydro One recommends that the IESO work with OEB staff, transmitters and distributors to ensure that transmitters and distributes are clear on the types of agreements that will need to be entered into and that the IESO understands the types rates customers will be charged. This will make the customer experience smoother and avoid customer dissatisfaction.</p>

Timelines and deliverables

Topic	Feedback
<p>Do the timelines and deliverables for the Hybrid Integration Project make sense?</p>	<p>Hydro One has no comments at this time.</p>

Engagement Plan

Topic	Feedback
<p>Are stakeholders supportive of the objectives and approach detailed in the draft Hybrid Integration Project Engagement Plan?</p>	<p>Hydro One recommends that the IESO engage directly with transmitters and distributors on this project to ensure that the IESO's design is reflective of real-world constraints and informed by technical requirements to ensure operational integrity of the grid. The proposed workplan should include collaborative engagement with utilities to develop the standards and operating guidelines necessary to ensure the grid can accommodate these resources without degrading reliability. This could be achieved through the formation of an IESO-utility (i.e.</p>

Topic	Feedback
	distributors and transmitters) working group or dedicated utility-focused meetings.

General Comments/Feedback

Hydro One appreciates the opportunity to provide comments. Enabling a wider variety of resources to participate in the IESO markets or provide market services can affect both distribution and transmission infrastructure.

Due to the success of the Feed-in-Tariff program (FIT) and micro-FIT programs many areas of the transmission and distribution systems across the province have limited DER hosting capacity available. It is common that feeders with existing large DERs are at their maximum capacity to accommodate DERs and would not be able to support the addition of battery storage.

As a result, there are operational realities that the IESO will need to consider when designing the Hybrid Integration Project and that should be communicated to customers in advance as part of the project design to reduce customer dissatisfaction, including:

- When batteries are added to existing generation resources it will be important to be clear on how those batteries can be charged (i.e. from both the onsite generation and from the grid or just from the onsite generation), as this could impact loading on the distribution system.
- Adding storage to existing generation facilities may not be technically feasible if they aim to increase the total DER capacity on a feeder that is already at its maximum limit.
- Proposals designed to increase energy output with co-located generation and storage facilities discharging simultaneously to the grid may require the LDCs to restrict the use of the assets to protect the system to a degree that the project is no longer viable for the customers.

Hydro One recommends that the IESO work closely with distributors and transmitters to understand the current grid constraints in order to design a program that works with the grid and minimizes customer confusion and frustration. This work should be explicitly included in the IESO's work plan for this initiative.