

Feedback Form

2020 Annual Planning Outlook Engagement – January 26, 2021

Feedback Provided by:

Name: Justin W. Rangooni

Title: Executive Director

Organization: Energy Storage Canada

Email: [REDACTED]

Date: February 17, 2021

Following the January 26, 2021 engagement webinar on 2020 Annual Planning Outlook (APO), the Independent Electricity System Operator (IESO) is seeking feedback from participants on the APO report, module, methodology and supplemental data. The engagement presentation, the 2020 APO, and additional information on the outlook can be found on the [Annual Planning Outlook webpage](#). The IESO will work to consider feedback and incorporate comments in future outlooks as appropriate.

Please provide feedback by February 17, 2021 to engagement@ieso.ca. Please use subject: *Feedback: 2020 Annual Planning Outlook Engagement*. To promote transparency, this feedback will be posted on the [Annual Planning Outlook webpage](#) unless otherwise requested by the sender.

Thank you for your time.

2020 Annual Planning Outlook Report

Topic	Feedback
<p>What chapter/section is most helpful?</p> <p>Choose all that apply: Demand forecast, supply outlook, transmission outlook, capacity adequacy, energy adequacy, surplus baseload generation, transmission security, integrating needs, meeting needs, marginal costs, greenhouse gas emissions, other</p> <p>Tell us more: What did you like about it?</p>	<p>The APO published by the IESO is a helpful guide for stakeholders to understand the status of the Ontario electricity system and where future opportunities and risks exists. Energy Storage Canada (ESC) fully supports the APO process along with other IESO planning framework changes that are expected soon (e.g., bulk planning process). We support robust and transparent planning, which enables greater investor confidence in the Ontario electricity sector.</p>
	<p>The most helpful sections of the APO were the capacity adequacy and transmission security.</p> <p>The capacity adequacy section detailed the gross need for the Ontario electricity system and identified investment opportunities for energy storage resources. Further, the capacity adequacy section described zonal constraints and needs which can assist energy storage resource development to identify appropriate locations to site within the province.</p> <p>The transmission security section described bulk network constraints. This information will help identify locations within the Ontario power grid where energy storage may be able to offer non-wires solutions to meet bulk system needs.</p> <p>The meeting needs section was helpful; however, ESC believes it would have been helpful to integrate the results with the gross system needs identified in the capacity adequacy section. For example, the capacity adequacy shows a summer capacity need of ~10,000 MW by 2030, while the inclusion of all existing resources with contracts in the meeting needs section shows ~2,500 MW to ~3,500 MW by 2030. Clearly indicating that Ontario's power system need is a range in a single section would have been helpful.</p>

Topic	Feedback
What do you want to read more about?	<p>The information presented in the storage sub-section of the meeting needs section does not describe the many forms (e.g., bulk connected, behind-the-meter) and options that energy storage resources could offer the Ontario electricity system. For example, energy storage located behind the meter can offer capacity to Ontario through the Capacity Auction will also offering non-wires solutions to Local Distribution Companies and savings directly to customers. ESC was expecting further analysis of the capability of energy storage to meet Ontario's system needs in the APO.</p> <p>The APO did not explore adaptation of existing supply resources to align with Ontario's future system need. Energy storage integrated with existing resources can add flexibility and capacity with minimal siting requirements. For example, an energy storage solution at a non-quick start gas-fired generator can offer fast response capabilities without replacing the key generating equipment. Further, an energy storage solution at a wind or solar site can provide firm capacity to the system and enhanced operability by offering a greater spectrum of dispatchability (i.e., currently wind and solar generation can be dispatched down in oversupply situations, energy storage would allow for a spike in energy production during undersupply or reliability events).</p> <p>While the IESO oversees the provincial resource adequacy needs, there are many other entities that are interested in acquiring resources for their own energy needs. For example, municipal governments, either on their own or through municipally-owned utilities, are interested in executing net-zero emission targets. Another example is the interest in renewable generation from commercial & industrial customers seeking environmental, social and corporate governance (ESG) credentials for their business. The IESO has</p>

Topic	Feedback
	<p>not yet explored the potential for these entities to secure their own resources which will in turn reduce the provincial system need. In other words, while the IESO is procuring resources to meet resource adequacy planning standards they have failed to recognize that external entities may be interested in procuring resources for other reasons that should be considered in system planning process. To be clear, the IESO planning standards are robust and reflect common expectations of a modern electricity system. That being said, the planning standards are based on a homogenous view of customer expectations and do not reflect shifting sentiment and objectives of individual customers. This is the key blind spot to the IESO's current planning approach, the lack of direct input from customers seeking to meet their electricity needs that may differ from the priorities of a long-term technical system planner. ESC strongly recommends that the IESO should encourage and support participation of the customers they are trying to plan for their electricity needs to ensure those customer's views are understood and reflected in planning outcomes.</p>
<p>What key factors, uncertainties, and additional considerations should the IESO include in future outlooks?</p>	<p>The APO 2020 was completed prior to the announcement by the federal government on raising the carbon price to \$170/tonne of carbon dioxide equivalent ("tonne") by 2030. This is significant increase from the current pricing framework that has carbon pricing rising to \$50/tonne by 2022 but no further increases identified. The higher carbon price is reasonably expected to result in higher electricity demand from fuel switching in transportation and space heating as well as industrial production.</p> <p>Energy storage costs are falling rapidly. The IESO should consider how energy storage can be used within the system to meet future needs and support customer choice.</p>

2020 Annual Planning Outlook Modules, Methodology, and Supplemental Data

Topic	Feedback
Are the assumptions, inputs, and methodology reasonable?	Yes, ESC encourages the IESO to maintain and grow the amount of information shared about the planning process. Better transparency and clarity helps stakeholders with investment decisions in the province as it relates to the electricity sector.
What information do you want to see more of?	The IESO has published forecasts for marginal costs and emissions for Ontario over the planning horizon. To produce this information, some form of a dispatch model of the system must be used. ESC recommends the IESO release the dispatch model along with assumptions and inputs into the model so that stakeholders can understand how the IESO is reaching its conclusions. For example, ESC expects that energy storage will offer the ability to moderate pricing spikes; it would be beneficial to understand how the IESO model accounts for energy storage. Further, costs of energy storage resources are falling rapidly; it is important to understand how the IESO assumptions align with broader estimates of energy storage costs.

General Comments/Feedback

ESC is pleased to provide this feedback to the IESO. As emphasized in our previous submissions and illustrated in our 2020 Energy Storage Valuation Study, given the current inability to fully integrate energy storage within Ontario's electricity market, ESC recommends that IESO contract for the full suite of services energy storage can deliver in order to immediately unlock the system-wide value of energy storage.