

Feedback Form

2020 Annual Planning Outlook Engagement – January 26, 2021

Feedback Provided by:

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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>All sections were directionally helpful. Please see our General Comments for detailed feedback and requests for additional information in each of the areas listed.</p>
<p>What do you want to read more about?</p>	<p>Future APOs should include additional information listed below.</p> <ul style="list-style-type: none"> • Gross, net, and grid energy demand forecasts • Inputs and variables used to forecast energy demand • Methodologies and models used to forecast energy demand • Methodologies and models used to forecast peak demand • Methodologies and models used to determine reserve margins • Methodologies and models used to determine transmission zones and capacity zones • Total nameplate capacity and effective capacity supply assumptions for the province broken down by (i) individual resource, either existing or planned (ii) capacity zones/transmission zones • Methodology to determine effective capacity, UCAP or ELCC by technology type • Assumptions regarding schedules for the retirement and refurbishment of nuclear generating units, risks to refurbishment schedules, and risks to adequacy resulting from potential delays • Known in-service and retirement/decommissioning schedules • IESO Contracted Generation List and any applicable updates to termination dates

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	<ul style="list-style-type: none"> • Transmission security constraints and limits on transfer capability impacting energy delivery from area resources • Planned transmission upgrades and expansions with detail regarding expected impacts • Transmission and intertie transfer capabilities, plus any planned outages • Any issues identified by NERC relating to adequacy or reliability in Ontario and summary of IESO's responses to NERC where issues have been identified
<p>What key factors, uncertainties, and additional considerations should the IESO include in future outlooks?</p>	<ol style="list-style-type: none"> 1. Risks to fleet availability arising from changes in operating profiles. Future APOs should consider risks to fleet availability arising from changes in the operational profiles of resources being relied upon following nuclear retirements and during nuclear refurbishments. Future APOs should also consider risks affecting assumed nuclear return-to-service dates and identify mitigation options should refurbishment schedules extend beyond currently scheduled return-to-service dates. 2. Effects of future carbon/emissions policies. While Capital Power understands the IESO cannot predict carbon policy with certainty, Capital Power believes it would be very helpful for the IESO to identify risks to forecasts arising from potential changes to gas fleet availability/commercial operations under a range of carbon and emissions policy frameworks. 3. Fuel Security and Deliverability. In its APO, the IESO provided little detail regarding Fuel Security Issues, and Capital Power believes this is an area that deserves more attention going forward. Natural gas resources are going to be relied upon to fill the supply gap left by nuclear units

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	<p>following retirement and during scheduled refurbishments. From the APO, it's not clear what scenarios the IESO considered when assessing whether fuel supply constraints might impact the availability of resources. When considering this question, Capital Power believes it is important to note that (i) there is no stand-alone requirement for gas-fired generators to procure commercially firm gas transport, and (ii) commercially firm gas transport does not in and of itself guarantee deliverability.</p> <p>Where the only revenue mechanism available to gas-fired generators is an annual capacity auction, it is reasonable to assume those resources will not enter multi-year agreements for firm gas transport. This is due to the fact that the revenue mechanism available through the capacity auction does not align with transport liabilities assumed under a multi-year firm gas transport contract. Further, commercially firm transport agreements do not fully address the issue of whether there are risks to fuel security or deliverability. Gas transport agreements assign priority and firmness to transportation rights, but during system demand events the gas transport system is subject to operational constraints just as the electricity grid is.</p> <p>The IESO should prioritize making clear how it has arrived at its assumptions regarding gas availability with special attention to commodity risk, logistics, and system operability constraints during demand events. This analysis is critical to consider in light of conditions requiring gas generators and gas suppliers to respond to developing policy risk related to emissions pricing and environmental policies. We note that NERC</p>

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	has done work in this area and would like to see how the IESO's assessments align or diverge from recommendations set out by NERC.

2020 Annual Planning Outlook Modules, Methodology, and Supplemental Data

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Are the assumptions, inputs, and methodology reasonable?	Based on the detail provided, Capital Power is unable to confidently determine whether the assumptions, inputs and methodologies are reasonable. Additional information and detail described below would assist Capital Power in answering this question.
What information do you want to see more of?	Please see detail provided below under General Comments.

General Comments/Feedback

Capital Power appreciates the IESO's efforts to continuously improve the APO. The IESO's commitment to improving its forecasting and planning documents is evident in its approach stakeholder engagement on this issue. With this in mind, Capital Power is pleased to provide additional feedback here.

The importance of the APO in ensuring competition delivers benefits to ratepayers cannot be overstated. Transparency relating the IESO's assumptions, analysis, data, and methodologies is of critical importance if the IESO is going to be able to leverage competitive processes and competitive tension for the benefit of Ontario ratepayers. Delays in the communication of system needs, or insufficient coordination between regional and system planning processes will undermine the efforts to implement competitive processes for resources because investors (new and existing) must be able to review planning data in advance of preparing competitive bids and making final investment decisions. Without improved transparency in the planning process and additional detail in the planning documents, competitive processes (regardless of their design) may not deliver their potential value to Ontario ratepayers.

Capital Power is also aware that around the same time that the IESO released its APO, the NERC released its 2020 Long Term Reliability Assessment ("LTRA"). The IESO was one of two ISOs identified by the NERC to have Anticipated Reserve Margins ("ARMs") fall below the Reference Margin Level ("RML") during the first five years of NERC's assessment period. In its LTRA, NERC stated that the IESO expects to acquire electricity resources through capacity auctions or other acquisition tools (i.e. Resource Adequacy Engagement mechanisms) and through outage management. The NERC also

identified that neighboring markets will be facing tighter reserve margins. These observations and others in the LTRA raise additional questions and comments, as set out below:

- How has the IESO considered the effect of supply and resource adequacy in neighbouring markets, particularly where adequacy may affect the IESO's assumptions regarding non-firm imports?
- Per comments submitted as part of the IESO's Reliability Standards Review, any changes or anticipated changes to outage management practices needed to manage reserve margin requirements should be clearly articulated. All outage management practices should consider whether historical data present suitable analogous operating conditions to effectively predict whether outage management practices are a sufficient tool for managing tighter reserve margins, particularly if future supply/demand conditions are expected to place greater demands on assets.