



February 22, 2021

Independent Electricity System Operator  
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Via email to [engagement@ieso.ca](mailto:engagement@ieso.ca)

**Re: 2020 Annual Planning Outlook Engagement**

The Power Workers' Union ("PWU") represents a large portion of the employees working in Ontario's electricity industry. Attached please find a list of PWU employers.

The PWU appreciates the opportunity to provide input on the 2020 Annual Planning Outlook Engagement. The PWU is a strong supporter and advocate for the prudent and rational reform of Ontario's electricity sector and recognizes the importance of low-cost, low-carbon energy to the competitiveness of Ontario's economic sectors.

The PWU believes that IESO processes and initiatives should deliver energy at the lowest reasonable cost while stimulating job creation and growing the province's gross domestic product (GDP). We are respectfully submitting our detailed observations and recommendations.

We hope you will find the PWU's comments useful.

Yours very truly,

Jeff Parnell  
President

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## List of PWU Employers

Abraflex (2004) Ltd.  
Alectra Utilities  
Algoma Power  
Aptum  
Atlantic Power Corporation - Calstock Power Plant  
Atlantic Power Corporation - Kapuskasing Power Plant  
Atlantic Power Corporation - Nipigon Power Plant  
Atura - Halton Hills Generating Station  
Atura - Napanee Generating Station  
Atura - Portlands Energy Centre  
Atura – Brighton Beach Generating Station  
Bracebridge Generation  
Brookfield Power Wind Operations  
Brookfield Renewable Power - Mississagi Power Trust  
Bruce Power Inc.  
Canadian Nuclear Laboratories  
Cochrane Telecom Services  
Compass Group (Bruce NPD)  
Comapss Group (Pickering NGS)  
Compass Group (Darlington NGS)  
Corporation of the County of Brant  
Covanta Durham York Renewable Energy Ltd.  
Electrical Safety Authority  
Elexicon Energy Inc.  
Enwave Windsor  
EPCOR Electricity Distribution Ontario Inc.  
Erth Power Corporation  
Erth Holdings Inc  
Ethos Energy Inc.  
Great Lakes Power (Generation)  
Greenfield South Power Corporation  
Grimsby Power Incorporated  
Halton Hills Hydro Inc.  
Hydro One Inc.  
Hydro One CSO  
Hydro One Sault Ste. Marie  
Independent Electricity System Operator  
Inergi LP  
InnPower  
Kinectrics Inc.  
Kitchener-Wilmot Hydro Inc.  
Lakeland Power Distribution  
Laurentis Energy Partners  
London Hydro Corporation  
Milton Hydro Distribution Inc.  
New Horizon System Solutions  
Newmarket -Tay/Midland Hydro Ltd.  
Nuclear Waste Management Organization  
Ontario Power Generation Inc.  
Orangeville Hydro Limited  
PUC Services  
Quality Tree Service  
Rogers Communications (Kincardine Cable TV Ltd.)  
Sioux Lookout Hydro Inc.  
SouthWestern Energy  
Synergy North Corporation  
Tillsonburg Hydro Inc.  
Toronto Hydro  
TransAlta Generation Partnership O.H.S.C.  
Westario Power

## **PWU Submission on the IESO's January 2021 Annual Planning Outlook Engagement**

**February 22, 2021**

The Power Workers' Union (PWU) is pleased to submit comments and make recommendations to the Independent Electricity System Operator (IESO) regarding the January 26, 2021 Annual Planning Outlook (APO) engagement webinar. The PWU remains a strong supporter and advocate for the prudent and rational reform of Ontario's electricity sector and recognizes the importance of planning for low-cost, low-carbon energy solutions to enhance the competitiveness of Ontario's economy.

The PWU appreciates the work undertaken by the IESO over the last year to develop and release the APO in December 2020. The PWU also appreciates that the IESO has addressed some of the PWU's previous concerns e.g., inclusion of zonal interflow data and integrating the bulk system planning process in the APO document.

However, some of the PWU's concerns have not been addressed by the IESO:

- No high and low forecasts or sensitivities to the input assumptions have been provided;
- No distinction between baseload, intermediate, and peak needs;
- No total system cost forecast has been included; and
- The electrification assumptions are understated.

In addition to resolving these shortcomings, the PWU recommends that the role of the APO and its relationship to Resource Adequacy requires clarification. The PWU recommends the following:

1. Clarify how the APO is used in electricity system planning;
2. Align APO messaging with Resource Adequacy needs for new capacity;
3. Include increased demand from electrification in the IESO's forecast;
4. Include a high and low forecast to reflect possible scenarios; and,
5. Provide more information on total system cost and types of demand.

### **Recommendation #1 – Clarify how the APO is used in electricity system planning**

Within the APO document, the IESO states that the document is used as: "input into the target-setting process for capacity auctions; to inform the development of IESO's Resource Adequacy Framework; and, to make procurement decisions".

However, during IESO's January 26<sup>th</sup> APO engagement session, the IESO indicated that the APO is not a document that recommends solutions or specifies how procurement decisions will be made. Instead, the APO provides the IESO's view on the forecast of what system needs may be in the future, given electricity system trends and known policy directions. This is contradictory to the aforementioned uses written within the document itself.

It is important to recognize that the APO is used as guidance by a broad range of stakeholders to make decisions based on the IESO's future forecasts. If the APO is not intended for such purposes, then the IESO needs to clarify the purpose of the APO.

This is critical, particularly, in light of the Ministry of Energy, Northern Development, and Mines' consultation regarding reform of the long-term energy planning process. Specifically, the IESO should make clear the assumptions that are being used in preparing the APO, its intended use and how the document is used for electricity planning and procurement decisions.

### **Recommendation #2 – Align APO messaging with Resource Adequacy needs for new capacity**

The IESO's messaging in the APO and the Resource Adequacy documents presented regarding building new capacity is contradictory. On one hand, previous resource adequacy presentations have suggested a need for a mechanism to procure new mid- and long-term capacity in the province beginning in 2025.

However, the APO says that while there is a capacity gap emerging in 2025 with the closure of Pickering Nuclear Station, there is no need for additional new build capacity. Instead, the APO states, Ontario's energy needs can be met through a combination of the continued use of existing resources, expansion of transmission, imports, the growing use of Distributed Energy Resources (DERs), storage and incremental energy-efficiency savings.

The APO shows that there is a need to procure between 1,000-2,000 MW of capacity above existing resources for 2025, with this gap growing significantly in the following years. The data suggests that it will be difficult to meet the growing shortfall without building new capacity. This requirement is not considered by the procurement processes that have been defined. The APO does not state how these other options could be used to meet the shortfall, however, the Resource Adequacy engagement indicates that a mechanism will be needed to procure capacity. This need for new build capacity should be communicated to stakeholders now so that procurement options can be identified and the least cost option is procured.

The IESO should align the messaging between the two engagements. Even if the APO is not intended to reflect policy decisions, it must still create clarity for stakeholders.

### **Recommendation #3 – Include increased demand from electrification in the IESO's forecast**

Provincial and federal efforts to reduce emissions and transition to a net zero economy will increase electricity demand. Electrification and fuel switching to hydrogen are the primary paths forward to reducing economy-wide emissions. However, their impacts on demand have not been included in the IESO's demand forecasts. Two recent important developments have not been included in the APO: EV growth will accelerate as car manufacturers are increasingly ceasing production of Internal Combustion Engines (ICE) vehicles<sup>1</sup>; and, the Federal and Provincial hydrogen strategies are aggressively promoting hydrogen production. Since the APO is a long-range 20-year forecast, it is important for stakeholders to understand how these policies are expected to impact demand.

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<sup>1</sup> Examples such as Jaguar in 2025 and General Motors in 2035

The IESO has not included such factors in their forecasts because the impact on electricity demand is not known at this time. However, the IESO knows these factors represent new electricity load over the next few years, and better consideration is warranted.

The current underestimation of demand creates a risk of procuring insufficient supply to meet Ontario's future needs by reducing the timeframe allowed for the IESO to make the procurements. This underestimation of future demand is causing the IESO to focus only on procuring supply that can be built quickly e.g., natural gas-fired generation. The commensurate long-term commitments will lock the province into a high gas future (20+ years), increase electricity sector emissions for the province, and work against other decarbonization efforts.

#### **Recommendation #4 – Include a high and low forecast to reflect possible scenarios**

The IESO should create high and low forecast cases to reflect different climate policy scenarios and assumptions around demand growth, not just assumptions based on the relatively short-term COVID-19 recovery. This includes factors such as increased EV adoption, electric heating and hydrogen. The demand forecast in the planning outlook should include a bounded range that reflects demand uncertainty and articulates the assumptions underpinning these risks. It is important that stakeholders understand the range of uncertainty/risks associated with the forecast demand – specifically with respect to Ontario's economic, conservation, and climate change policies. This enables stakeholders to better plan for the needs of the system.

Having these additional forecasts can set more realistic bookends for future electricity demand, and allow the IESO to better plan their electricity system. A “high” scenario should reflect things that may come about as a result of addressing climate change, such as the previously mentioned increase in electrification. A “low” scenario would represent a future where emissions are addressed by non-electricity solutions, such as efficiency improvements and other low-carbon fuel innovations. This would allow for greater flexibility in dealing with other emerging policies, where the costs and benefits remain unknown, e.g., hydrogen.

#### **Recommendation #5 – Provide more information on total system cost and types of demand**

The PWU previously submitted feedback regarding the APO released in January 2020. Some of this feedback has not been addressed nor has any explanation be given for their omission. Major issues remain outstanding and should be included in the APO:

- a) The IESO should categorize demand in its different forms: baseload, intermediate, and peak. Characterizing demand in this way enables matching with the optimal supply mix. Understanding the cost and system implications of matching demand with different supply resources can identify optimal options. The PWU recommends that these forms of demand be matched to different procurement mechanisms and commitment timeframes, as necessary; and,
- b) The IESO has stated that cost is an important planning criterion. Developing a competitive low-cost electricity system for Ontario is important to the province's economic growth. For these

reasons, the IESO should include total electricity system cost in their forecasting and planning decisions. This total system cost forecast should distinguish between regulatory, delivery, committed generation, and new generation cost assumptions. The IESO is best positioned to communicate credible sources for such information for the benefit of all stakeholders. Without such transparency and rigor in the cost and pricing assumptions, it is difficult for stakeholders to offer innovative solutions at a lower cost.

## Closing

The PWU has a successful track record working with others in collaborative partnerships. We look forward to continuing to work with the IESO and other energy stakeholders to strengthen and modernize Ontario’s electricity system. The PWU is committed to the following principles: Create opportunities for sustainable, high-pay, high-skill jobs; ensure reliable, affordable, environmentally responsible electricity; build economic growth for Ontario’s communities; and, promote intelligent reform of Ontario’s energy policy.

We believe these recommendations are consistent with, and supportive of Ontario’s objectives to supply low-cost and reliable electricity for all Ontarians. The PWU looks forward to discussing these comments in greater detail with the IESO and participating in the ongoing stakeholder engagements.

## Appendix

IESO has asked for specific feedback as part of this APO engagement. To help categorize our concerns, we have mapped our recommendations to each of IESO’s requested feedback questions in the table below.

Requested Feedback	Recommendation Mapping
What chapter/section is most helpful? Tell us more: What did you like about it?	No comment
What do you want to read more about?	Role of planning, stakeholders, other information See <b>Recommendation #1</b>
What key factors, uncertainties, and additional considerations should the IESO include in future outlooks?	<b>Recommendations 3 &amp; 4</b> – IESO should address future policy options that may impact demand, and provide high and low scenarios.
Are the assumptions, inputs, and methodology reasonable?	Implications of climate action are noticeably missing and are understated. Lack of clarity around need for capacity and the considerations for acquiring it. See <b>Recommendations 2, 3 &amp; 4</b>
What information do you want to see more of?	<b>Recommendation 5</b> – The IESO should categorize demand into different types. As well, the IESO should include total system cost considerations.