POWER WORKERS' UNION

May 13, 2021

Independent Electricity System Operator
1600-120 Adelaide Street West
Toronto, ON
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Via email to engagement@ieso.ca

April 2021 Resource Adequacy Engagement

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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 Arpil 2021 Resource Adequacy 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

List of PWU Employers

Alectra Utilities (formerly PowerStream)
Algoma Power
AMEC Nuclear Safety Solutions
Aptum (formerly Cogeco Peer 1)
Atlantic Power Corporation - Calstock Power Plant
Atlantic Power Corporation - Kapuskasing Power Plant
Atlantic Power Corporation - Nipigon Power Plant
Bracebridge Generation
Brighton Beach Power Limited
Brookfield Power Wind Operations
Brookfield Renewable Power - Mississagi Power Trust
Bruce Power Inc.
Canadian Nuclear Laboratories (AECL Chalk River)
Collus Powerstream
Compass Group
Corporation of the County of Brant
Covanta Durham York Renewable Energy Ltd.
Elexicon (formerly Whitby Hydro)
Enwave Windsor
Erth Power Corporation (formerly Erie Thames Powerlines)
Erth Corporation
Ethos Energy Inc.
Great Lakes Power (Generation)
Greenfield South Power Corporation
Grimsby Power Incorporated
Halton Hills Hydro Inc.
Hydro One Inc.
Hydro One CSO (formerly Vertex)
Hydro One Sault Ste. Marie (formerly Great Lakes Power Transmission)
Independent Electricity System Operator
Inergi LP
InnPower (Innisfil Hydro Distribution Systems Limited)
J-MAR Line Maintenance Inc.
Kenora Hydro Electric Corporation Ltd.
Kinectrics Inc.
Kitchener-Wilmot Hydro Inc.
Lakeland Power Distribution
London Hydro Corporation
Milton Hydro Distribution Inc.
New Horizon System Solutions
Newmarket Tey/Midland Hydro Ltd.
Nuclear Waste Management Organization
Ontario Power Generation Inc.
Orangeville Hydro Limited
Portlands Energy Centre
PUC Services
Quality Tree Service
Rogers Communications (Kincardine Cable TV Ltd.)
Sioux Lookout Hydro Inc.
SouthWestern Energy
Tillsonburg Hydro Inc.
The Electrical Safety Authority
Toronto Hydro
TransAlta Generation Partnership O.H.S.C.
Westario Power

Power Workers' Union Submission on the IESO's April 2021 Resource Adequacy Engagement

May 13, 2021

The Power Workers' Union (PWU) is pleased to submit comments and make recommendations to the Independent Electricity System Operator (IESO) regarding its April 22nd Resource Adequacy 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.

During the IESO's previous webinar, two main topics were discussed: the status and progress on mid-term Resource Adequacy needs and mechanism, including a look ahead to the Annual Acquisition Report (AAR); and, an update on enhancements for Capacity Auctions (CA).

The PWU has been, and is, a supporter of increased transparency in the procurement process. We support the IESO's recognition of the importance of transparency and its efforts to publish Ontario's first AAR in June. Hopefully, this document will provide a forward look at Ontario's long term resource needs and the actions being proposed by the IESO to address them. The PWU also recognizes the need to enhance the benefits of the CA to facilitate short term capacity adjustments. Additionally, the PWU supports using RFPs in the mid-term to help procure resources with expiring contracts where these assets can provide additional cost-effective, low-carbon supply.

However, this approach to existing assets is focused on three-year contract terms. This narrow timeframe does not consider the longer-term supply gap that will emerge in 2026 after the closure of the Pickering Nuclear Generating Station (PNGS) in 2025.

The PWU restates recommendations it has made on this matter in previous submissions:

1. Specify the requirements of Ontario's demand needs in the AAR: baseload, intermediate, and peak;
2. Accelerate the procurement timeline for acquiring low-emitting resources that have already been deemed as required to meet Ontario's, long-term, low-carbon electricity demand; and,
3. Focus competitive procurement mechanisms on identifying solutions to meet Ontario's broader system needs beyond just capacity.

While the PWU makes no further recommendations on the proposed CA enhancements, we recommend the following to optimizing planning outcomes for mid- and long-term competitive procurement mechanisms:

Advance the long-term competitive mechanisms to better leverage existing resources while seeking new resources and meet both the urgent mid-term capacity shortfall and long-term needs.

The IESO's mid-term mechanism is being developed to re-contract existing resources to meet the urgent capacity shortfalls emerging in 2026 with the closure of the PNGS and the expiration of existing asset contracts. The IESO's current approach is to issue RFPs to renew existing assets for 3-year terms. Presumably, these will be followed by subsequent RFPs for additional 3-year term extensions.

However, closing the PNGS not only impacts capacity in 2026, now less than 5 years away, but also in the long term as it removes 3,000 MW of baseload, carbon-free electricity from Ontario's grid. No

current forecasts suggest a drop in demand below the capacity of existing assets. More importantly, electrification of Ontario's economy is expected to dramatically increase demand.

Re-contracting existing gas plants to provide baseload supply will have consequential impacts on Ontario's emission profile, which is a significant public concern.[1] Going forward, there will be a sustained need to replace capacity to cover the peak contribution of every single asset whose contract will be expiring, whether or not demand grows with electrification of the economy. The IESO projects it must renew or replace 50% of Ontario's needed capacity by 2040.

Procuring new long-life, low-carbon energy resources to meet long-term needs presents another challenge – the time required to build a new resource. Experience indicates about 10 years could be required to plan, approve, construct and commission new low-carbon resources. Securing public acceptance will be one of the most significant barriers to success—whether it be new gas-fired generation, new nuclear generation, or a wind farm.

The proposed 3-year mid-term RFP cycle will lock Ontario in this approach until procurements for new assets begins. This will require the IESO to manage the risks of a 3-year cycle for decades or until new assets are procured. The use of the mid-term mechanism in the absence of a long-term mechanism overly weights near term urgency at the expense of exacerbating long-term risk.

These challenges can be mitigated by: advancing the development of competitive, long-term mechanisms; procuring for the demand that the capacity is required to supply (e.g. baseload); and, doing so in a technology agnostic way. For example, the known need for 2000 MW of low-carbon, baseload electricity could be procured today thereby securing a reliable supply to 2050. Bidders would be encouraged to propose a mix of existing and new resources, notionally using existing assets to meet near-term needs and then transition as new assets go into service.

Adopting this approach would enable the IESO to achieve its mid-term objectives while advancing the long-term solutions that are needed. As previously recommended, Ontario's long-term procurement mechanism should be integrated with other key provincial environmental, social and economic strategies and policies, including: emissions; jobs; GDP contributions; and, energy security, etc. New energy assets to be considered should include new nuclear and SMRs, carbon capture for gas plants, hybrid renewables, storage and direct air capture solution.

These kinds of investments would shift management of many risks to the private sector providing additional clarity with respect to their accountability. These signals will incent developers to provide the right mix and timing according to robust project schedules and maintain their focus on cost optimization. This would also facilitate the achievement of the desired long-term societal benefits sooner.

The IESO's current approach would not commence procuring long-term low carbon assets until 2026. This could leave Ontario with a sustained capacity shortfall, especially if electrification results in an additional 6 GW of needed supply over what the IESO has forecast in 2030.[2] The IESO should develop

[1] City of Toronto, Special Meeting City Council, March 10, 2021

[2] Strategic Policy Economics, Advancing Ontario's Energy Transition: Electrification Pathways, 2021

more creative mechanisms, such as the aforenoted example, to advance long term procurement, mitigate risks, accelerate benefits, and strategically leverage existing assets during the transition.

The PWU believes that the long-term contracting/RFP process for new resources should begin now. More specifically, the PWU has recommended that consultations and requests for expressions of interest should commence in 2021, with RFPs targeted for issuance in 2022. This could be done by implementing a series of staged procurements to secure the low-carbon supplies for Ontario's long-term capacity needs.

Closing

There is an evident urgency and multiple risks associated with resolving Ontario's go-forward procurement strategy. The PWU believes a true paradigm shift is required in how Ontario secures its energy infrastructure to ensure and sustain a low carbon electricity system for the future.

The PWU has a successful track record of 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.