



**POWER
WORKERS'
UNION**

July 12, 2022

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

Re: IESO Small Hydro Program Design

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 IESO's Small Hydro Program Design. 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 the IESO's proposed Small Hydro Program is not in the best interests of Ontario and 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

cc: Ministry of Energy;
David Donovan; Chief of Staff, david.donovan@ontario.ca
Electrification and Energy Transition Panel, Wittenbrinck, Joerg,
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List of PWU Employers

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Aptum (formerly Cogeco Peer 1)
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Atlantic Power Corporation - Kapuskasing Power Plant
Atlantic Power Corporation - Nipigon Power Plant
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The Electrical Safety Authority
Toronto Hydro
TransAlta Generation Partnership O.H.S.C.
Westario Power

PWU submission on the IESO's proposed Small Hydro Program Design

July 12, 2022

On June 22, 2022, the IESO presented the outcomes of its early spring stakeholder engagements and small hydro program design proposal as a follow up to its April 20, 2022, Hydroelectric Program Development & Assessment webinar. Many of the stakeholders had not yet been provided with this information. The small hydro program design is intended to create a common framework for re-contracting hydro assets that have existing IESO and/or OEFC contracts expiring in or before 2030. The affected assets include approximately 30 companies, 70 facilities and over 1000 MW, mostly in the northwest.¹

The IESO stated that their proposal would be tabled with Ontario's Ministry of Energy by July 1, 2022, after which they anticipate a directive from the Minister to proceed. While the IESO would always welcome feedback from stakeholders, they were clear they would not impact its proposal to government at this time. The PWU is providing this unsolicited feedback to the IESO and the Ministry as the PWU believes that this proposal does not serve the best interests of Ontario. Since the IESO did not offer a public consultation opportunity on the latest details of its proposals, which remain scant, the Ministry should not be issuing a directive to the IESO to proceed with them.

The PWU is concerned about several elements of the IESO's proposal:

- 1) Widespread stakeholder dissatisfaction based on the recognized risks is evident;
- 2) The IESO's dogmatic pursuit of capacity plus energy market solutions for non-emitting supplies is not viable for small hydro or for all the non-emitting supplies Ontario needs in the future;
- 3) Including hydroelectric facilities within Ontario's energy market structure has failed in the past;
- 4) Hydroelectric generation facilities in the north are subject to significant constraints unrelated to energy market pricing dynamics, e.g., water management;
- 5) Shoe-horning hydroelectric assets into the capacity and energy market structures faces difficulties similar to those confronting the IESO's Long-Term RFP framework—e.g., a non-viable revenue model that increases costs for ratepayers.

1) Widespread stakeholder dissatisfaction based on the recognized risks is evident.

At the June 22 webinar, the PWU observed that many stakeholders continue to express unresolved concerns about the details being presented by the IESO. More specifically the lack of details about some of its concepts, which were also being presented for the first time. Stakeholder questions related to risks regarding: financial certainty; parity with the existing Hydroelectric Contract Initiative (HCI); participation of smaller self-dispatching distribution connected assets in the IESO markets and the associated complexity; accommodation of some example contracted facilities; development of the proposed revenue model concepts; and, risk mitigation.

The IESO responses clearly indicate that substantial work remains to address these concerns.

¹ IESO, Hydroelectric Program Development & Assessment webinar presentation, April 20, 2022

2) The IESO's dogmatic pursuit of capacity plus energy market solutions for non-emitting supplies is not viable for small hydro or for all non-emitting supplies Ontario needs in the future.

Over the last five years, the PWU has consistently advised the IESO of the risks to Ontario's future supply mix cost and reliability that will result from the IESO's market structures for accommodating non-emitting supplies.² PWU submissions have included supporting analyses and clearly noted the need for new models based on North American best practices.³ The aforementioned concerns expressed by stakeholders are consistent with the risks previously submitted by the PWU.

3) Including hydroelectric facilities within Ontario's energy markets structures has failed in the past.

Ontario has had experience with including hydroelectric facilities within its energy market structures. Energy markets are driven by the variable cost of natural gas and will remain so in Ontario given the planned closure of the Pickering Nuclear Generating Station starting in two years. These energy markets are subject to natural gas price volatility. Hydroelectric asset participation in Ontario's energy market failed in the past on two occasions.⁴ First, when the price went high, the province instituted the global adjustment to rebate excess profits to ratepayers. And second, when the price of natural gas dropped, OPG's hydroelectric assets were converted to a regulated model.

According to the US Energy Information Administration, natural gas prices are rising due to the war in the Ukraine and could be triple the 2020 prices by 2050.⁵ This will expose ratepayers to higher costs than the IESO will be able to mitigate with a revenue model. This undermines the viability of potential contract models. Ontario has learned this lesson and should ensure that hydroelectric facilities are governed by a regulated cost-based rate model similar to that for OPG's facilities and be independent of the price of natural gas. It would be unfair to not have all hydro facilities in the province governed by the same economic incentive as some operators would be able to benefit from higher margins due to volatile natural gas prices while others could not (e.g. OPG).

4) Hydroelectric generation facilities in the north are subject to significant constraints unrelated to energy market pricing dynamics, e.g., water management.

The potential output from Ontario's hydroelectric facilities is independent of the province's supply of natural gas that drives electricity pricing for ratepayers. Hydro operations, particularly for run-of-river facilities in the North, are determined by precipitation levels, multi-stakeholder watershed management plans, public safety and navigation, among others.⁶ The IESO's proposed revenue model incentivizes hydroelectric facility operators to hedge their revenues against the volatility of Ontario's natural gas-

² PWU submissions to IESO Resource Adequacy consultations in October 2020, November 2020, February 2021, April 2021, May 2021, June 2021, and November 2021.

³ Strategic Policy Economics, "Electricity Markets in Ontario", 2020.

⁴ Strategic Policy Economics, "Electricity Markets in Ontario", 2020.

⁵ <https://knoema.com/infographics/ncszerf/natural-gas-price-forecast-2021-2022-and-long-term-to-2050>

⁶ <https://www.owa.ca/policy-regulation/provincial/>

driven electricity prices. This does not support the environmental, social and safety interests of Ontarians. In the past, profit driven hydroelectric facility operations have led to fatalities e.g., Madawaska River system.⁷

5) Shoe-horning hydroelectric assets into the capacity and energy market structures faces difficulties similar to those confronting the IESO's Long-Term RFP framework—e.g., a non-viable revenue model that increases costs for ratepayers.

In developing a markets-based small hydro program, the IESO has learned it must offer longer term contracts of approximately 20 years, much of the facility costs must be included within the capacity payments, and incentives must be entertained to ensure dispatchability. All of these mechanisms are required due to the IESO's desire to use capacity-style contracts with its administered market construct as the primary contract instrument. The PWU has consistently advised the IESO to abandon its markets approach for non-emitting supplies and adopt a procurement approach that reflects the demand type that must be supplied.⁸ The types of supply include baseload supply which most small hydro operators feel their facilities ideally supply. Baseload supply generates electricity 24x7, much like water flows in rivers 24x7. The IESO is slowly beginning to acknowledge that its approach to LT RFPs must consider procurement options that are not capacity-style only.⁹

Regardless, the IESO has proposed a revenue model that is structured with complex, high and low electricity price bands based on natural gas driven market pricing actuals that will have to be reconciled with contracted values. The initial IESO proposals presented at the webinar were met with significant skepticism by participants. The PWU believes this approach is not viable and will lead to high ratepayer costs for the many aforementioned reasons.

As previously noted, the operation of hydroelectric facilities involves many other considerations e.g., economic, environmental and social, including indigenous partnerships that are unrelated to the price volatility of natural-gas generation. The PWU has advised the IESO that its procurement structures should include these societal considerations.¹⁰ Analyses show that the optimal economic approach to new procurements includes these considerations.¹¹

Hydro facilities are more ideally suited to a power purchase agreement (PPA) or regulated return type structure, e.g., for OPG. The IESO has identified "simplicity" as a design criterion. Given that three companies are responsible for the vast majority of the capacity under consideration, entertaining a regulatory model would not be complex, would allow for better risk management for developers and ratepayers, and reduce costs for the latter.

Furthermore, many of the smaller hydroelectric assets are distribution system connected and therefore unable to participate economically in the IESO markets. Given that these will be self-dispatchable

⁷ <https://www.cbc.ca/news/canada/ottawa/liberal-blames-calabogie-wave-tragedy-on-hydro-market-1.314581>

⁸ PWU submissions to IESO Resource Adequacy consultations in October 2020, November 2020, February 2021, April 2021, May 2021, June 2021, and November 2021.

⁹ IESO, "LT1 RFP and Additional Mechanisms Engagement", June 9, 2022.

¹⁰ PWU submission on the IESO's 2021 Annual Planning Outlook, February 2022

¹¹ Strategic Policy Economics, "Electrification Pathways for Ontario to Reduce Emissions", 2021.

systems under any scenario, a more direct contracting vehicle that is not complicated by IESO administered market participation considerations would be more cost-effective.

Recommendation: The Ministry should provide a directive to the IESO to not proceed with this program design concept until prudent consideration is given to the implications, including an independent evaluation of how well Ontario will be served going forward by the IESO's Administered Market approach.

Closing

The PWU believes that the IESO can better secure Ontario's access to non-emitting, small hydro output by abandoning a capacity-style contracting approach and instead focus on the nature of demand that these facilities could supply, including the relevant socio-economic considerations. 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.