

**Power Workers' Union Submission on Ministry of Energy Critical Transmission Infrastructure
Environmental Registry of Ontario (ERO) 019-7336, Sept 8, 2023**

The Power Workers' Union (PWU) is pleased to submit comments and make recommendations to the Ontario Ministry of Energy (the Ministry) regarding *Supporting Critical Transmission Infrastructure in Northeast and Eastern Ontario*. The ERO relates specifically to three transmission projects: Two complementary projects centered around Sudbury and to supply the Northeast; and, the third to expand the capability between the GTA East and Peterborough as part of the Gatineau corridor.

The PWU is 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 represents the majority of the skilled workers that operate and maintain Ontario's electricity production and delivery systems.

The PWU supports the Ministry's prioritization of these three transmission projects and the designation of Hydro One as the developer in order to accelerate the time critical development and with the government's proviso that no regulatory and environmental consultative approval processes will be undermined. The PWU supports this course of action for several reasons:

- 1) The PWU agrees that an urgent need exists to develop the transmission system capacity to meet Ontario's growing electricity needs and the electrification of the economy. Previous PWU advice to the Ministry of Energy has stressed this urgency.¹ Analyses show that the pace of electricity demand growth will exceed existing capacities well before 2030 when these new transmission projects will be needed.² The higher-than-expected rapid acceleration is being broadly recognized.³
- 2) The PWU agrees that the Independent Electricity System Operator (IESO) has correctly assessed the Non-Wires Alternative (NWA) options as not being feasible and/or are uneconomic for several reasons:
 - a. The IESO considered possible alternatives to the proposed transmission projects in the Northeast, including: Natural gas-fired generation; storage, wind and solar; hydro; biomass; small modular reactors; fuel cells; and, demand response and energy efficiency.⁴
 - b. The PWU's previous submissions included analyses that showed using natural gas-fired generation for the needs of the Northwest was uneconomic.⁵
 - c. The PWU has consistently maintained in several submissions to the IESO, the Ministry and the OEB that the benefits and costs of NWAs options have not been robustly and transparently established.⁶

¹ PWU Feedback on IESO's Pathways to Decarbonization Study Submission to the Ministry of Energy, ERO 019-6647, May 2023.

² Strategic Policy Economics, *Electrification Pathways for Ontario*, 2021.

³ IEA, [Rapid progress of key clean energy technologies shows the new energy economy is emerging faster than many think](#), July 12, 2023; Financial Post, [Canada among new countries to pass crucial tipping point that triggers mass EV adoption](#), Aug 2023.

⁴ IESO, *Need for Northeast Bulk System Reinforcement*, 2022, pages 25/26.

⁵ Strategic Policy Economics, *Extending Atikokan Biomass Generating Station (AGS) Operations - A Need and Benefits Impact Assessment*, Jan 2022.

⁶ PWU submissions to the IESO: DER Roadmap, Oct. 2022; DER Potential Study, Oct 2022; York Region NWA Scenarios and Modelling Study, 2023. PWU Feedback on IESO's Pathways to Decarbonization Study - Submission to the Ministry of Energy, ERO 019-6647, May 2023.

- d. The PWU notes that the benefit cost assessments conducted to date by the IESO as part of its Integrated Regional Planning Process (IRRP) similarly concluded that NWAs are not cost effective for addressing system needs, including its bulk system assessments referred to by this ERO file.⁷
- e. As a participant in the OEB's Framework for Energy Innovation Working Group (FEIWG), the PWU responded in detail to the FEIWG's final report. The PWU highlighted the consideration relevant to conducting a transparent and objective Benefit Cost Analysis (BCA) for Distributed Energy Resources (DERs) and other NWAs to properly reflect the interest of ratepayers and taxpayers.⁸

However, the PWU recommends the consideration of several additional factors when advancing the details of the proposed transmission projects:

1. New transmission assets should be designed to accommodate higher electricity demands as noted in the Powering Ontario's Growth report⁹;
2. The operations of the Atikokan Generating Station (AGS) should be extended to mitigate the identified emerging risks to forecast transmission capacity levels;
3. The GTA East regional planning process should be advanced to address the new, emerging demand in the area; and,
4. The IESO should be directed to ensure its regional plans include the higher electricity demand forecast in the Powering Ontario's Growth report and the results of the pending *Cost-effective Energy Pathways Study* for the Electrification and Energy Transition Panel (EETP).

Recommendation #1 - New transmission assets should be designed to accommodate higher electricity demands as noted in the Powering Ontario's Growth report.

The PWU believes that the IESO has not adequately considered the emerging electricity demand forecasts when identifying the required transmission capacity capabilities for the Northeast and the GTA East.

The PWU's previous submissions to the IESO noted the demand risks in the Northeast and specifically recommended that the IESO's planning include the implications of the IESO's Pathways to Decarbonization (P2D) study and be coordinated with the Northwest Region IRRP.¹⁰ The PWU recognizes that the IESO has substantially adjusted its demand forecasts for the Northeast for defining the associated transmission needs. Arguably, the IESO has prudently sized the capacity of the new transmission system to consider almost a doubling of demand in the Northeast with a 10% margin. This approaches the "doubling" of electricity needs mentioned in the Powering Ontario Growth report.

⁷ IESO, Gatineau Corridor End-of-Life Study, 2022, page 37 which states the transmission recommendation was made: *To minimize cost, minimize land-use impacts, mitigate forecast risk, preserve options to increase system capability in the future and due to lack of cost-effective stand-alone resource or energy efficiency alternatives*

⁸ PWU, Considerations for Developing a DER BCA Framework – A Submission by the PWU to the OEB, Jan 2023.

⁹ Ministry of Energy, Powering Ontario's Growth: Ontario's Plan for a Clean Energy Future, July 2023.

¹⁰ PWU submissions to the IESO on: the IESO's Northeast Ontario Bulk System Plan, May 17, 2022; the IESO's Northwest Region IRRP, May 16, 2022.

However, the Northeast bulk system needs analysis presumes a Northwest demand on the East-West tie line of 450 MW in 2029.¹¹ Analysis has shown that this could be understated by over 550 MW by 2030 given anticipated loads from the Ring of Fire and other critical minerals-related developments. This is equivalent to more than a factor of two higher than the allocated capacity.¹² The PWU previously recommended that the Northeast needs assessment consider the outcomes of the Northwest IRRP.

The Gatineau corridor end of life assessment has defined capacity needs for the proposed GTA East transmission projects. However, the assessment used the reference case 2021 APO demand forecast for Ottawa and an even more outdated 2019 APO demand forecast for Peterborough. Both of these demand forecasts are woefully out of date, reflecting only 20% to 40% growth over the next 20+ years for these areas. This contrasts starkly with the doubling of electricity demand forecast in the P2D study and Powering Ontario's Growth report. Furthermore, the Ministry has directed the IESO to simultaneously assess impacts of additional new nuclear and related transmission capacity requirements. Adding new nuclear capacity at Darlington and or refurbishing the Pickering Nuclear Station can be expected to impact transmission requirements in the GTA East.

Finally, the required capacity of the proposed transmission enhancements should be refined pending the completion of the EETP's study and used to confirm appropriate demand expectations for the Northwest, Northeast and GTA East. The demand impacts of Ontario's energy transition, electrification of the economy, population growth, the critical minerals strategy and the province's hydrogen strategy, are yet to be clearly identified. At this juncture, these factors suggest higher demand forecasts may emerge than even anticipated by the 2022 IESO P2D study.

Recommendation #2 - The operations of the Atikokan Generating Station (AGS) should be extended to mitigate the identified emerging risks to forecast transmission capacity levels.

The PWU's feedback to the IESO's NW IRRP and Northeast bulk system needs recommended that the contract for the AGS be extended to provide additional risk mitigation to manage: faster demand growth; reactive supply needs [*page 33 of NE bulk study*], delays in required infrastructure development. The IESO's response indicates that their plan reflects the ongoing operation of the AGS.¹³ However, there is no evidence in any of IESOs other planning documents that this is the case. Not securing extended operations of the AGS exposes NW and NE regional plans to unnecessary and unwarranted risks.¹⁴

The PWU's feedback to the province's draft Forest Biomass Action Plan (FBAP) advised the Ministry of Natural Resources and Forestry (MNRF) of the economic benefits from the sustained operations of the AGS to northern Ontario.¹⁵ The PWU continues to believe that Ontario Power Generation's biomass-fueled Atikokan GS represents a significant opportunity to advance the objectives of Ontario's Forestry Strategy.

¹¹ IESO, Need for Northeast Bulk System Reinforcement, 2022, page 24.

¹² PWU submissions to the IESO the IESO's Northwest Region IRRP, May 16, 2022.

¹³ Northeast Ontario Electricity Planning public webinar – April 26, 2022 IESO Responses to Feedback. Pages 4 / 5.

¹⁴ PWU Submission on the IESO's 2023 Annual Acquisition Report Approach, March 9, 2023.

¹⁵ PWU Submission to MNRF on ERO 019-3514, Ontario's Draft Forest Biomass Action Plan, 2021.

Recommendation #3 - The GTA East regional planning process should be advanced to address the new, emerging demand in the area.

In light of the demand and other planning risks associated with the decisions related to the GTA East transmission projects, it is notable that the IESO states in the Gatineau report that *“Although growth rates and preferred alternatives for meeting any ensuing needs have not been established through the regional planning process, The IESO will continue discussions with the GTA East regional working group members to determine if there is need to trigger the next cycle of regional planning early.”*¹⁶

The PWU recommends that given the pending completion of the EETP’s *Cost-effective Energy Pathways Study*, the IESO initiate a refresh of the GTA East IRRP to inform the requirements of the prioritized transmission projects.

Recommendation #4 - The IESO should be directed to ensure its regional plans include the higher electricity demand forecast in the Powering Ontario’s Growth report and the results of the pending *Cost-effective Energy Pathways Study* for the Electrification and Energy Transition Panel (EETP).

The PWU recently submitted feedback to the IESO that it was inappropriate for the Central-West Bulk System study to rely on the APO 2022 demand forecasts and not consider the higher demand scenarios in the Powering Ontario’s Growth report.¹⁷ The PWU also has recommended that the IESO should include the results of the pending EETP report, expected this year. This is relevant as the Central-West Bulk System study, a 16-month long project, is to be complete in December 2024. Furthermore, the study outcomes are intended to provide preliminary recommendations early in 2024.

Future IESO recommendations will not address the government’s directions if the IESO’s planning activities continue to be based on the 2022 APO reference case demand and with no consideration of the results of its P2D study. Over the last several years, the PWU has consistently advised the IESO to consider the implications of the higher demand cases in its regional and bulk system plans.¹⁸ The IESO Stakeholder Advisory Committee (SAC) raised the risks of this Urgency and Timing of New Resources in March 2022.¹⁹ This resulted in a dramatic change to the IESO’s procurement approach, which was subsequently implemented. However, the IESO planning processes continue to rely on the prior outdated low demand forecasts. Prudent planning requires including the identified higher demand forecasts and cost-effective mitigation and management of the risks for Ontario’s ratepayers and taxpayers.

Closing

¹⁶ IESO, Gatineau Corridor End-of-Life Study, 2022, page 33.

¹⁷ PWU, Submission to the IESO on its Central West Bulk System planning, August 2023.

¹⁸ PWU submissions to the IESO on its 2021 APO, 2022 APO, Northwest Bulk System Study, 2021 AAR, 2022 AAR

¹⁹ Stakeholder Advisory Committee – Challenge Statement: Urgency and Timing of New Resources, March 2022.

There is evident urgency to cost-effectively develop the required critical electricity system infrastructure to meet Ontario's growing electricity needs. This is particularly relevant for the long lead development of new nuclear, transmission and the risk mitigation that extended operations of the AGS may offer.

The PWU has a successful track record of working with others in collaborative partnerships. We look forward to continuing to work with the Ministry of Energy 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 Ministry and participating in the ongoing stakeholder engagements.