POWER WORKERS' UNION

August 15, 2025

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Ministry of Energy and Mines
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Via online submission

Re: Power Workers' Union Submission on the Proposal for Enhancing Transmission Capacity Between Northern and Southern Ontario – The Orangeville to Barrie Reconductoring Project (ERO) 025-0657

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The Power Workers' Union (PWU) is pleased to submit comments and make recommendations to the Ontario Ministry of Energy and Mines (the Ministry) regarding the Proposal for **Enhancing Transmission Capacity Between Northern and Southern Ontario - The Orangeville to Barrie Reconductoring Project (ERO) 025-0657**. The ERO relates specifically the reconductoring (i.e. replacing current power lines with advanced conductors) of a portion of an existing 230 kV transmission line between Orangeville and Barrie, expected to be in-service in 2027.

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 generation, transmission, and distribution systems. As a union deeply invested in Ontario's safe, reliable, and sustainable energy infrastructure, we recognize the critical importance of new and enhanced transmission capacity and infrastructure.

The PWU applauds the Ministry's proposals for building more electricity transmission (as outlined in Chapter 3 of *Energy for Generations: Ontario's Integrated Plan to Power the Strongest Economy in the G7* (the Integrated Energy Plan or IEP)). The IEP has identified several priority projects, which represent critical transmission projects to alleviate bottlenecks and system constraints. The priority projects on which the Ministry is currently seeking feedback include:

1. **The Barrie to Sudbury Transmission Lines**, to enhance the transmission capacity between northern and southern Ontario; (ERO) 025-0656.

2. **The Orangeville to Barrie Reconductoring Project**, to enhance the transmission capacity between northern and southern Ontario; (ERO) 025-0657.

3. **The Bowmanville to GTA Transmission Line**, to enhance the transmission capacity east of Toronto; (ERO) 025-0658.

4. **The Windsor to Lakeshore Transmission Line**, to support critical transmission infrastructure in southwestern Ontario; (ERO) 025-0659.

5. **The Greenstone Transmission Line**, to enhance the transmission capacity in northern Ontario; (ERO) 025-0660.

As discussed in the IEP (p.78), the government “will need to maintain the ability to designate projects directly to existing transmitters – such as Hydro One – due to their urgency and complexity.” For each of the above five transmission proposals, the Ministry has designated Hydro One as the transmitter for these justifiable reasons.

The PWU supports each of the above priority projects proposed by the Ministry, as well as the designation of Hydro One as the developer. Hydro One has a proven history of delivering quality transmission projects.

Sincerely,

Andrew Clunis
President
Power Workers’ Union

Power Workers' Union Specific Feedback on the Proposal for **Enhancing Transmission Capacity Between Northern and Southern Ontario - The Orangeville to Barrie Reconductoring Project (ERO) 025-0657**

The Ministry of Energy and Mines has requested public feedback on the following proposed actions:

1. Prioritize the Project
2. Designate Hydro One as Transmitter
3. Consultation with Indigenous Communities on this Proposal
4. Timing
5. Environmental Impact

1. Prioritizing the Orangeville to Barrie Reconductoring Project

In this submission, the PWU strongly supports the prioritization of **the Orangeville to Barrie Reconductoring Project (ERO) 025-0657**. The PWU offers the following reasons for its strong support of this proposal:

a) According to the Ministry, this project "will enhance the electricity system's north-south transfer capacity while meeting increased electricity demand south of Barrie,"[1] specifically between the GTA and Barrie. The PWU agrees with the IEP that "Ontario's electricity must be able to move power efficiently between regions – especially from areas where electricity is generated […] to fast-growing demand centres," (IEP, p. 68), including the GTA. The IEP specifically refers to electricity being generated in the North and being moved to supply demand in the South. But the challenges for Ontario are even more widespread and complex. Electricity demand will be growing rapidly throughout the province, including in the North. And generation also needs to be added at multiple locations in both the North and South. Therefore, Ontario needs to rapidly expand transmission capacity throughout the province, so that the entire grid can operate efficiently without bottlenecks, and generation can be sited throughout the province to supply demand throughout the province. We agree that the Orangeville to Barrie Reconductoring Project will enhance the electricity system's north-south electricity backbone while meeting increased demand south of Barrie.

b) Together with the Barrie to Sudbury Transmission Lines, this project is a "foundational upgrade that will strengthen north-south transmission capacity" (IEP, p. 69). The strengthening of the north-south backbone will "alleviate bottlenecks in the electricity system and support economic growth and electrification in Northern Ontario and the GTA."[2] The north-south flow is currently "constrained by transmission bottlenecks that limit system flexibility and risk driving up costs." (IEP, p. 68) The PWU has warned about the electricity system reliability and affordability risks in its 2024 discussion papers. The enhancement of the north-south backbone would mitigate these

[1] Government of Ontario, Environmental Registry of Ontario, Proposal for Enhancing Transmission Capacity Between Northern and Southern Ontario - The Orangeville to Barrie to Sudbury Reconductoring Project, https://ero.ontario.ca/notice/025-0657

[2] Government of Ontario, Environmental Registry of Ontario, Proposal for Enhancing Transmission Capacity Between Northern and Southern Ontario - The Barrie to Sudbury Transmission Lines, https://ero.ontario.ca/notice/025-0656

risks, enhancing reliability and affordability for Ontario.

c) The Barrie to Sudbury Transmission Lines and the Orangeville to Barrie Reconductoring Project are "critical enablers for future electricity generation projects - such as the proposed Nine Mile Rapids and Grand Rapid stations, for which co-planning is currently being led by Taykwa Tagamou Nation and Moose Cree First Nation." (IEP, p. 69). The PWU is highly supportive of increasing Ontario's generation capacity considering the scale and urgency of Ontario's electrification requirements from now to 2050. Therefore, we are highly supportive of these transmission lines that enable increased generation capacity, while mitigating reliability risks.

d) Reconductoring allows for more efficient use of the existing infrastructure by replacing existing power lines with advanced conductors that can transmit more power (and increase grid capacity). Moreover, the planned in-service date for this priority proposal is 2027. The PWU supports more efficient use of existing infrastructure for reasons of cost-effectiveness and affordability. We also champion building more transmission capacity sooner to enhance system reliability and support economic growth. As such, the PWU advocates for the prioritization of the Orangeville to Barrie Reconductoring Project "so that it may be built on time and cost-effectively to meet rapidly growing electricity needs that would enable economic development and clean generation initiatives in Northern Ontario."[3]

For the reasons to be discussed in Recommendation 2 (in the Recommendations section below following the PWU feedback on the proposal), the PWU believes that in the current high-growth environment, the Ministry should consider prioritizing the building of more transmission assets (and capacity) as soon as possible to address capacity constraints under a higher growth forecast. **Therefore, we strongly recommend that the Ministry consider further enhancements to transmission capacity between Northern and Southern Ontario (including both 500 kV lines between Sudbury and Barrie) as soon as possible (and, if feasible, in parallel with the first line) to benefit from economies of scale while addressing transmission capacity requirements under a higher growth forecast.[4]**

As discussed below in Recommendation 3 (in the Recommendations section below), the PWU supports efforts to improve regulatory efficiency and expedite the development of priority projects, under the condition that (a) constitutional rights are not compromised, and (b) the objectives of regulatory or environmental processes are not undermined, consistent with the government's existing provisions. Coordination among government agencies should be pursued in a way that enhances clarity and timeliness, while fully respecting legal and constitutional obligations.

2. Consultation with Indigenous Communities on this Proposal

The PWU supports the government's commitment to fulfilling its duty to consult with Indigenous communities, as described in the project proposal. As indicated above, the PWU supports the prioritization of the Orangeville to Barrie Reconductoring Project, under the condition that (a)

[3] Government of Ontario, Environmental Registry of Ontario, Proposal for Enhancing Transmission Capacity Between Northern and Southern Ontario - The Orangeville to Barrie to Sudbury Reconductoring Project, https://ero.ontario.ca/notice/025-0657

[4] See Power Workers' Union Submission on **Enhancing Transmission Capacity Between Northern and Southern Ontario - The Barrie to Sudbury Transmission Lines (ERO) 025-0656)**, August 15, 2025.

constitutional rights are not compromised, and (b) the objectives of regulatory or environmental processes are not undermined, consistent with the government's existing provisions.

3. Timing

The PWU supports building this project as soon as possible, to be ready for the projected in-service date of 2027 (or sooner). This prioritization should not compromise constitutional rights or undermine the objectives of the province's regulatory or environmental consultative approval process. See our recommendations below for a longer discussion on why building more transmission assets sooner is crucial to avert an electricity crisis and support Ontario's economic growth.

4. Environmental Impact

The PWU supports building this project as soon as possible. This prioritization should not compromise constitutional rights or undermine the objectives of the province's regulatory or environmental consultative approval process. We would expect Hydro One to obtain all required government permits and approvals. We note that transmission projects generally have a smaller potential environmental impact than most generation projects and are therefore generally well-suited for prioritization. We agree with the Ministry that reconductoring transmission projects have an even smaller environmental impact that new transmissions projects. As indicated above, reconductoring makes use of existing infrastructure by replacing existing power lines on an existing corridor. Therefore, the PWU believes that this project is extremely well-suited for prioritization.

Finally, the PWU notes that the Ministry has not requested specific feedback on the designation of Hydro One as the developer of the Orangeville to Barrie Reconductoring Project. Hydro One owns the transmission line to be reconductored. Therefore, according to the IEP (p. 69), "this project is not suitable for competitive procurement and the government does not need to designate them to kickstart the work." As discussed above, the PWU supports Hydro One, Ontario's largest existing transmitter, as the developer of the priority transmission projects due to their urgency and complexity.

Recommendations

While the PWU strongly supports the proposed projects as a significant step in the development of transmission capacity required to meet Ontario's needs, we offer the following recommendations:

1. New transmission assets should be designed to accommodate high growth (as per the priorities for Ontario's Integrated Energy Planning[5]). However, the PWU believes that the demand forecast should be substantially higher than the high-growth demand forecast referenced in Integrated Energy Plan (IEP).
2. In Ontario's current high demand growth environment, the costs/risks of underbuilding transmission assets are much higher than the costs/risks of right-sizing (or upsizing). Therefore, the Ministry should prioritize the development of greater transmission assets capacity as soon as possible to alleviate potential future constraints under a higher demand growth forecast.

[5] Government of Ontario, Energy for Generations: Ontario's Integrated Plan to Power the Strongest Economy in the G7, June 2025, p. 119.

3. The PWU supports efforts to improve regulatory efficiency and expedite the development of priority projects, under the condition that (a) constitutional rights are not compromised, and (b) the objectives of regulatory or environmental processes are not undermined, consistent with the government's existing provisions. Coordination among government agencies should be pursued in a way that enhances clarity and timeliness, while fully respecting legal and constitutional obligations.

Recommendation 1

New transmission assets should be designed to accommodate a high electricity growth forecast (as per the IEP's planning priorities). The PWU believes that the Ministry should adopt an evidence-based demand outlook that is considerably higher than the conservative scenarios presented in the IEP. In our view, the current forecasts significantly underestimate the scale and urgency of Ontario's electrification required to avert an electricity crisis and support economic growth.

The PWU has elaborated on this position in a series of discussion papers published in 2024 on the emerging risks facing Ontario's electricity system and better ways to meet Ontario's growing electricity demand. Each of the discussion papers highlighted reliability, affordability and deliverability risks respectively. PWU's January 2025 summary of these discussion papers[6] emphasized that the reliance on IESO's conservatively low demand forecasts is exacerbating these risks at a time when Ontario is facing an electricity crisis driven by rapidly growing demand. As illustrated in the January 2025 summary,[7] there is a significant planning gap between the PWU's current Consensus electricity growth forecast of 200% by 2050 and IESO's APO 2025 forecast of 75%. This position aligns with the analysis presented by Marc Brouillette of Strategic Policy Economics (Strapolec) in the paper *"Energy Outlook Implications for Ontario,"* delivered at the CCRE Energy Roundtable in June 2025.[8]

Unfortunately, the June 2025 Integrated Energy Plan (IEP)[9] is still "focused on ensuring Ontario can meet forecasted demand under the APO" (with the APO 2025 forecast of a 75% increase in demand by 2050) (p. 23). The IEP does allow for the possibility of higher demand if Ontario consumers "decide to pursue more rapid electrification." However, even under the high-growth demand scenario referenced in the IEP, which is based on the Pathways to Decarbonization (P2D) model, electricity demand increases just over 100% by 2050. This forecast falls well short of PWU's forecast of 200% primarily because the P2D does not consider the economic development and industrial growth recognized by the latest APOs.

Despite the IEP's reference to conservatively low electricity demand forecasts, the PWU supports the following IEP planning priority:

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[6] Power Workers' Union (PWU), Ontario's Electricity System's Risks and Mitigation – A Recap and Taking Stock, January 2025. https://www.pwu.ca/ontarios-electricity-systems-risks-and-mitigation-a-recap-and-taking-stock/

[7] Ibid, Illustrative Demand and Supply Growth Chart – Ontario, p. 4.

[8] Brouillette, M., Energy Outlook Implications for Ontario CCRE Energy Roundtable, June 2025. https://thinkingenergy.ca/wp-content/uploads/2025/06/Energy-Outlook-Implications-for-Ontario-Marc-Brouillette-June-19-2025.pdf

[9] Government of Ontario, Energy for Generations: Ontario's Integrated Plan to Power the Strongest Economy in the G7, June 2025.

> **Plan for High Growth:** To ensure planning processes are better able to match the pace of growth, the IESO will be expected to coordinate frequent load growth forecasting with utilities and other stakeholders, and to identify transmission projects that would be needed to address capacity constraints that would arise under high growth forecasts. (p. 119)

The PWU fully agrees that Ontario should plan for high demand growth and design transmission projects to accommodate this high growth. To achieve this, Ontario should adopt a risk-informed, evidence-based high-growth demand outlook, which PWU analyses indicate will be significantly higher than the conservative scenarios outlined in the IEP.

Recommendation 2 will explore the risks of higher costs due to underbuilding transmission infrastructure.

Recommendation 2

In a high-growth environment, the costs/risks of underbuilding transmission assets are much higher than the costs/risks of right-sizing (or upsizing) to meet the needs of the province. The IEP lays out the objective to "avoid risks of higher costs" due to over/underbuilding energy infrastructure (p. 120).

The PWU recommends that the Ministry prioritize the development of greater transmission asset capacity as soon as possible to alleviate the potential future constraints under a higher demand growth forecast.

The development of greater transmission asset capacity sooner may be mischaracterized as "overbuilding." However, in the current environment, even the IEP's high-growth demand forecast is significantly understated. Therefore, developing greater transmission asset capacity sooner is necessary to (1) meet growing transmission and generation capacity demand and avert an electricity demand crisis while supporting Ontario's economic growth; (2) reduce existing bottlenecks; (3) improve regulatory efficiency and reduce delays in regulatory approval.

The IEP recognizes what the PWU has long emphasized: to meet accelerating electricity demand between now and 2050, Ontario must rapidly build enough transmission and generation capacity for vitally needed electricity infrastructure and supply. Even under the IEP's more conservative high-growth scenario, there is very high risk (and high resulting costs) of delays and bottlenecks. Moreover, building enough transmission and generation fast enough in the coming decades will require a massive shift from Ontario's historical approach to energy planning.

In recent decades, energy planning has been shaped by a prolonged period of flat or declining electricity demand. This reflected a relatively low-growth, low-risk environment driven by factors such as the Great Recession, structural shifts toward a service-based economy, sustained conservation and energy-efficiency gains,[10] and, in the short term, the COVID-19 pandemic. However, as the IEP itself

[10] Canada Energy Regulator, "Market Snapshot: Why is Ontario's Electricity Demand Declining," March 21, 2018. https://www.cer-rec.gc.ca/en/data-analysis/energy-markets/market-snapshots/2018/market-snapshot-why-is-ontarios-electricity-demand-declining.html

acknowledges, the context has shifted dramatically. Electricity demand is now accelerating at a pace widely recognized across the sector, driven by electrification, population growth and industrial expansion.

Despite this shift, the IESO's demand forecasting and planning has retained a conservative approach rooted in this previous low-growth era. In the current context, this approach is inappropriate and underestimates capacity requirements. As a result, there have been growing forecasted resource adequacy gaps since 2023. This trend continued with the 2025 APO and is likely to persist when the next round of higher demand forecasts is released.

This new context (characterized by accelerating electricity demand) strongly preferences right-sizing (or upsizing) transmission to reduce the costs/increase efficiencies for all of the required inputs/steps, including planning, approvals, obtaining right of way/land for lines and substations, etc.

Building more transmission assets sooner makes economic sense in the current high-growth environment even when such assets are ahead of immediate needs. There are typically strong economies of scale associated with upsizing transmission assets (especially in the same corridor or on the same circuit). Economies of scale results in lower per unit costs, as well as efficiencies related to regulatory processes, even if these processes are streamlined and fast-tracked.

In recent years (and perhaps ongoing), there has been a significant inflation/cost escalation affecting energy infrastructure in Canada and other countries. Therefore, building more transmission assets sooner in an inflationary environment can be much less costly than building later.

Recommendation 3

The PWU supports efforts to improve regulatory efficiency and expedite the development of priority projects, under the condition that (a) constitutional rights are not compromised, and (b) the objectives of regulatory or environmental processes are not undermined, consistent with the government's existing provisions. Coordination among government agencies should be pursued in a way that enhances clarity and timeliness, while fully respecting legal and constitutional obligations.

In particular, when the Major Project Identification Committee (MPIC) has identified a priority transmission project[11] that is in the public interest, the PWU recommends that the appropriate government agencies and stakeholders receive clear direction from the Ministry of Energy and Mines about their roles and responsibilities in expediting the different stages of project approval.

Conclusion

There is evident urgency to creating an effective energy planning framework for Ontario. The PWU applauds the efforts to introduce integrated energy planning in the IEP, including plans to build more transmission assets to address capacity constraints under a higher-growth forecast. As emphasized

[11] See Sections 4 and 7 of Schedule - Order in Council 803/2025, June 11, 2025, https://www.ontario.ca/page/schedule-order-council-8032025

above, the PWU strongly supports each of the proposed priority transmission projects, including the prioritization of the **Orangeville to Barrie Reconductoring Project (ERO) 025-0657**. However, the PWU reiterates that:

1. New transmission assets should be designed to accommodate high growth, and the high-growth demand forecast should be substantially higher than the high-growth forecast in the IEP.
2. In a high-growth environment, the costs/risks of underbuilding transmission assets are much higher than the costs/risks of right-sizing (or upsizing). Therefore, the Ministry should consider prioritizing the building of more transmission assets as soon as possible to address capacity constraints.
3. The PWU supports efforts to improve regulatory efficiency and expedite the development of priority projects.

The PWU has a successful track record of working with others in collaborative partnerships. We look forward to continuing to work with the Ministry 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 objective "to build-out of an affordable, reliable and clean energy system to meet the exceptional growth needs of Ontario." The PWU looks forward to discussing these comments in greater detail with the Ministry and participating in the ongoing stakeholder engagements.

List of PWU Employers

Abraflex
Alectra Utilities (formerly PowerStream)
Algoma Power
Aptum (formerly Cogeco Peer 1)
Atlantic Power Corporation - Calstock Power Plant
Atlantic Power Corporation - Kapuskasing Power Plant
Atlantic Power Corporation - Nipigon Power Plant
Atura - Brighton Beach Power
Atura – Halton Hills Generating Station
Atura – Napanee Generating Station
Atura - Portlands Energy
Bracebridge Generation
Brant County Municipality
Brookfield Power Wind Operations
Bruce Power Inc.
Canadian Nuclear Laboratories (AECL Chalk River)
Capital Power East Windsor
Capital Power Goreway
CC Nuclear
Centre Wellington Hydro
Compass Group (Bruce, Darlington, Pickering, PLC/Brock Rd.)
Cornwall Electric
Elexicon (formerly Whitby Hydro)
Enova (formerly Kitchener-Wilmot & Waterloo North)
Enwave Windsor
EPCOR Darlington Demineralized Water Plant
EPCOR Electricity Distribution Inc.
ERTH Power Corporation (formerly Erie Thames Powerlines)
ERTH Holdings Inc.
Electrical Safety Authority
eStructure
Ethos Energy Ltd.
Great Lakes Power (Generation)
Greater Sudbury Hydro
Greenfield South Power Corporation
Grimsby Power Incorporated
Halton Hills Hydro Inc.
Hydro One Inc.
Hydro One CSO (formerly Inergi)
Independent Electricity System Operator
InnPower (Innisfil Hydro Distribution Systems Limited)
Kinectrics Inc.
Lakeland Power Distribution
Laurentis Energy Partners
London Hydro Corporation
Milton Hydro Distribution Inc.
Mississagi Power Trust
NAES
Newmarket Tay Power Distribution
North Bay Hydro
Northern Ontario Wires
Nuclear Waste Management Organization
Ontario Power Generation Inc.
Orangeville Hydro
PUC Services
Quality Tree Service

Reworld Durham York Limited Partnership (Formerly Covanta Durham York Renewable Energy)
Rogers Communications (Kincardine Cable TV Ltd.)
Sioux Lookout Hydro Inc.
SouthWestern Energy
Synergy North (formerly Kenora Hydro Electric Corporation Ltd.)
The Town of Tillsonburg
Toronto Hydro
TransAlta Generation Partnership O.H.S.C.
Westario Power