

August 15, 2025

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Ministry of Energy and Mines
77 Grenville Street
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Via online submission

Re: Power Workers' Union Submission on the Proposal for Electricity Transmission Capacity in Northern Ontario – The Greenstone Transmission Line (ERO) 025-0660

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 **Electricity Transmission Capacity in Northern Ontario – The Greenstone Transmission Line (ERO) 025-0660**. The ERO relates specifically to a new single-circuit 230 kV transmission line “designed to support a possible second circuit, that will run from existing 230 kV infrastructure (the East-West Tie) near Nipigon Bay and terminating at a new or existing station in the municipality of Greenstone, and associated station facilities.”¹ The project is expected to be in-service in 2032.

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

¹ Government of Ontario, Environmental Registry of Ontario, Electricity Transmission Capacity in Northern Ontario – The Greenstone Transmission Line (ERO) 025-0660, June 16, 2025.
<https://ero.ontario.ca/notice/025-0660>



Power Workers' Union Specific Feedback on the Proposal for **Electricity Transmission Capacity in Northern Ontario – The Greenstone Transmission Line (ERO) 025-0660**

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

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

1. Prioritize the Greenstone Transmission Line

In this submission, the PWU supports the prioritization of **the Greenstone Transmission Line (ERO) 025-0660**. The PWU offers the following reasons for its strong support of this proposal:

- a) According to the Ministry's proposal, the IEP (p. 73) and the IESO, this project will improve the reliability of the transmission system for communities in the Greenstone region (which are already grid-connected) and thereby support economic growth in the North and electrification.²
- b) The IEP (p. 74) also indicates that Greenstone Transmission Line "is a critical first step toward enabling future transmission expansion into Ontario's Far North." It will serve as a "foundational infrastructure" to support potential grid connections to diesel-reliant First Nations communities.³ In addition to supporting economic growth in these communities, electrification will also result in significant emissions reductions/decarbonization in these communities, enhanced well-being due to better air quality, while improving energy affordability and security.
- c) The project will also support electrification in existing mines, and enable new mining development (IEP, p. 73), particularly critical mineral mining development, which has been identified as a key driver for the Ontario (and Canadian) economy. According to the IEP (p.74), the Greenstone Transmission Line could also serve as a potential grid connection to Ring of Fire, a possibly important source of critical minerals.
- d) Another possible benefit of the project is that it could be serve as a foundational connection to new hydroelectric generation in Northern Ontario (IEP, p. 73).

² Ibid; IEP, p. 73; IESO, Northwest Ontario – Northern Ontario Connection Study (NOCS) webpage. A preliminary NOCS report was released to the Ministry in December 2024 with the date of release for the final report to be determined. <https://www.ieso.ca/Get-Involved/Regional-Planning/Northwest-Ontario/Connection-Study>

³ Ibid.

- e) Together with the Barrie to Sudbury Transmission Lines and the Orangeville to Barrie Reconductoring Project, the Greenstone Transmission Line will also improve transmission interconnections in Ontario. The first two projects enhance the north-south backbone, and the Greenstone Transmission Line could leverage both the east-west and north-south interconnections.⁴ A stronger east-west interconnection, will also enable potential expanded interconnections with Manitoba. This would contribute to a pan-Canadian east-west electricity interconnection project, a major nation-building project, which will enhance Canada's energy independence, security, electrification, clean energy transition, and affordability and reliability.

The PWU notes, however, that the Greenstone Transmission Line is not as well-defined as the other four priority transmission projects on which the Ministry has sought comment (ERO 025-0656, ERO 025-0657, ERO 025-0658, ERO 025-0659).⁵ Nonetheless, the PWU applauds the IEP for introducing a shift away from traditional energy planning in the face of accelerating demand. Although we recognize that Greenstone is likely less appropriate for prioritization than the other four projects, we acknowledge that the prioritization of transmission projects is very much needed. Furthermore, Greenstone is potentially a very beneficial project that is synergistic with Ontario transmission system. Fast-tracking may be therefore needed in the case of a foundational (but early-stage project) such as this. Therefore, the PWU supports the prioritization of the project for the above reasons.

While the PWU supports this project, we emphasize that in this high-growth period, transmission capacity should be developed quickly but with optimal scoping including consideration of regional reliability needs. Moreover, the justification of future transmission projects should be both rigorous and transparent.

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 development of more transmission capacity as soon as possible to address capacity constraints under a higher growth forecast.

Therefore, we support the Greenstone Transmission Line and also recommend that the Ministry also prioritize additional transmission capacity (possibly including the projects already underway in Northern Ontario⁶) as soon as possible (and ahead of the schedule outlined in the IEP) to address transmission capacity requirements to meet future demand.

⁴ More specifically, Greenstone provides transmission capacity to move power north from the east-west interconnection to supply diesel-dependent remote communities and power mines. But Greenstone could also move electricity south from new hydroelectric generation in the North.

⁵ Each of these four priority projects is well-defined and involves adding more transmission capacity within the context of the existing transmission network. Greenstone is fundamentally different than the other four projects. The southern end of the project is not at a fixed location, such as an existing transmission station. The northern end of the project is even less well-defined and even less proximate to major existing transmission.

⁶ The key projects already underway in Northern Ontario are the Wawa to Porcupine Transmission Line, North Shore Link Project, Northeast Power Line. (IEP, p. 73). To be clear, the PWU is not advocating blindly adding more transmission assets. Instead, we want a rapid but risk-informed expansion of transmission capacity, which is technically and economically sound and efficient.

As discussed 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. Designate Hydro One as the Transmitter

The PWU supports the IESO's determination that these transmission lines "are not suitable for a competitive procurement process given their urgent need." (IEP, p. 68). 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. Hydro One has a proven history of delivering quality transmission projects.

3. Consultation with Indigenous Communities on this Proposal

The PWU supports advancement of the shared goal of reconciliation with Indigenous communities by providing economic and partnership opportunities in the construction of these transmission lines. We also support 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 Greenstone Transmission Line (ERO) 025-0660**, 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.

4. Timing

The PWU supports building this transmission line 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. See our recommendations above for a longer discussion on why building more transmission assets sooner is crucial to avert an electricity crisis and support Ontario's economic growth.

The PWU fully advocates "bringing this proposal forward for a possible decision in later in 2025," such that the transmission line can be in-service in 2032.⁷

5. Environmental Impact

The PWU supports building this transmission line 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 the transmitter to obtain all required government permits and approvals. We note that transmission projects generally have a smaller

⁷ Government of Ontario, Environmental Registry of Ontario, Electricity Transmission Capacity in Northern Ontario – The Greenstone Transmission Line (ERO) 025-0660, June 16, 2025. <https://ero.ontario.ca/notice/025-0660>; IEP, p. 73.

potential environmental impact than most generation projects and are therefore generally well-suited for prioritization.

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 Planning⁸). 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.
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 papers⁹ 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,¹⁰ 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

⁸ Government of Ontario, Energy for Generations: Ontario's Integrated Plan to Power the Strongest Economy in the G7, June 2025, p. 119.

⁹ 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/>

¹⁰ Ibid, Illustrative Demand and Supply Growth Chart – Ontario, p. 4.

by Marc Brouillette of Strategic Policy Economics (Strapolec) in the paper *“Energy Outlook Implications for Ontario,”* delivered at the CCRE Energy Roundtable in June 2025.¹¹

Unfortunately, the June 2025 Integrated Energy Plan (IEP)¹² 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:

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

¹¹ 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>

¹² Government of Ontario, Energy for Generations: Ontario’s Integrated Plan to Power the Strongest Economy in the G7, June 2025.

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,¹³ and, in the short term, the COVID-19 pandemic. However, as the IEP itself 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.

¹³ 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>

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 project¹⁴ 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 above, the PWU strongly supports each of the proposed priority transmission projects, including the prioritization of the **Greenstone Transmission Line (ERO) 025-0660**. 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.

¹⁴ See Sections 4 and 7 of Schedule - Order in Council 803/2025, June 11, 2025, <https://www.ontario.ca/page/schedule-order-council-8032025>

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