



**POWER
WORKERS'
UNION**

May 17, 2022

Independent Electricity System Operator
1600-120 Adelaide Street West
Toronto, ON
M5H 1T1

Via email to engagement@ieso.ca

Re: Northeast Bult System Plan

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 Northeast Ontario bulk system planning update. 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

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Power Workers' Union Submission on the IESO's Northeast Ontario Bulk System Plan

May 17, 2022

The Power Workers' Union (PWU) is pleased to submit comments and recommendations to the Independent Electricity System Operator (IESO) regarding its April 26 Webinar on the Bulk System Plan for Northeast (NE) Ontario. 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.

The IESO provided an update on the NE Bulk Plan, emphasized the significant trends impacting Ontario's electricity system and described the insufficient capabilities of the existing transmission (Tx) system to meet regional demand in the latter part of the decade. The IESO identified four candidate transmission system development options including the potential for a new Tx line from Timmins to Wawa at the base of the East-West tie line that connects the Northwest Region. The IESO requested feedback on the bulk system planning scope, regional needs, and the potential solutions.

The PWU supports the IESO's efforts to respond to the growing electricity demand in the NE and the need to develop wire and "non-wire" options for the required foundational infrastructure. The PWU supports investments that enhance the connection between the Northeast and the Northwest that remove constraints on existing hydro generation while reducing northern Ontario's dependency on gas-fired generation located the southern part of the province.

The PWU has previously expressed its concern that the IESO has excluded the Atikokan Generating Station (AGS) from its planning assumptions.¹ Given the forecast regional demand growth over the next 5 years and the limited options identified for meeting this need, the AGS remains a critical element capable of ensuring the reliability of the system while maximizing the region's economic benefits as it transitions to a low-carbon energy future.²

The PWU makes the following recommendations:

- 1) The IESO's NE Bulk System Plan should consider the implications of the forecast demand growth in its 2021 Annual Planning Outlook (APO) high case and IESO's Decarbonization Pathways Study to ensure that the required foundational investments are adequately sized;
- 2) The Bulk System Plan should consider the role that the AGS can play securing reliability in the area north of Sault Ste. Marie concurrently with the "non-wire" options it is considering;
- 3) The IESO should consider the low-carbon energy security of Northern Ontario in its evaluation of the Tx solutions; and,
- 4) The IESO should not finalize the Northeast Bulk System Plan until the IESO's decarbonization and gas moratorium studies are completed and implications established.

¹ PWU submissions to the IESO's NW IRRP consultations (October 2021, May 2022); APO 2021; AAR 2022;

² Strategic Policy Economics, "Extending Atikokan Biomass Generating Station (AGS) Operations", 2022.

Recommendation #1 - The IESO's NE Bulk System Plan should consider the implications of the forecast demand growth in its 2021 Annual Planning Outlook (APO) high case and IESO's Decarbonization Pathways Study to ensure that the required foundational investments are adequately sized.

The IESO's stated objective for its Northeast Plan is to establish the requirements of a foundational plan that can be enhanced as future demand emerges. This refers specifically to the Northeast's foundational Tx infrastructure. The IESO is using the forecast demand from its 2021 APO to help inform its planning.³ This demand forecast does not reflect the 2021 APO's high demand case or the anticipated broader electrification resulting from the IESO's Decarbonization Pathways Study, which is scheduled for completion by November of this year. Analyses show that the demand for electricity will increase at a greater pace than even the IESO's 2021 APO high case indicates.⁴

Furthermore, the 2021 APO assumes that the Algoma Steel electric arc furnace conversion project will be completed in 2029, while Algoma has stated it will be completed in 2024.⁵ This would shift the need for 160 MW of capacity forward by 5 years.

The IESO has stated that constructing and operationalizing the required foundational infrastructure investments could require between 4 and 10 years. These timelines suggest that the IESO should focus on the realistic needs in the near term and into the 2030s to avoid exposing the NE Region's reliability of supply to unnecessary risk. It is critical that the IESO consider and understand these significant and material medium term needs and the implications of the decarbonization of the economy via electrification.

Recommendation #2 - The Bulk System Plan should consider the role that the AGS can play securing reliability in the area north of Sault Ste. Marie concurrently with the "non-wire" options it is considering.

The IESO stated that it will be assessing non-wires alternatives to meeting the bulk system needs in the north and that such considerations may include a wide range of resource types: Generation (Solar and Wind, Hydroelectric, Small Modular Reactor); Storage; and Fuel Cells. The absence of the AGS and biomass in the IESO's considerations remains a risk that has been continually highlighted by the PWU as noted above.

The IESO also noted a risk of inadequate reactive power on the north's bulk system. The Atikokan GS is strategically located at the heart of the transmission network that will be feeding the demand north of Dryden, providing resiliency to the region's electricity supply, alleviating demand on the E-W tie line from the Northeast, and providing a source of reactive power.

Furthermore, analyses show that the AGS is an economic alternative to the supply and transmission constraints.⁶ The same analyses demonstrate that the AGS provides additional GHG emission

³ IESO demand tables from the April 2022 NW IRRP webinar.

⁴ Strategic Policy Economics, "Electrification Pathways for Ontario", 2021.

⁵ CTV News, Algoma Steel moving ahead with electric steel furnace transition, Nov. 12, 2021. Retrieved from <https://northernontario.ctvnews.ca/algoma-steel-moving-ahead-with-electric-steel-furnace-transition-1.5664544>.

⁶ Strategic Policy Economics, "Extending Atikokan Biomass Generating Station (AGS) Operations", 2022.

advantages and economic benefits in the form of jobs and GDP contributions to existing wood pellet producers and forestry sector for local and Indigenous communities.

Recommendation #3 - The IESO should consider the low-carbon energy security of Northern Ontario in its evaluation of the Tx solutions.

The E-W tie line from Wawa to Thunder Bay is a critical element of Northern Ontario's system reliability. However, IESO and independent analyses show that current supply resources in the Northeast are unable to provide the energy required to support the E-W tie line. To the extent that resources are available, these would be from gas-fired generation in the south.⁷ The Northeast Bulk System Plan indicates that additional loads (e.g., Algoma Steel arc furnace conversion) will challenge supply both to the Sault Ste. Marie area and the E-W tie line's capability for serving growing demand in the Northwest. The IESO has presented options to address these risks via new transmission to connect hydroelectric generation in the Northeast to Wawa at the base of the East-West tie line. This line would support the connection to the Northwest and supply Algoma from the north instead of the south.⁸

The PWU supports this new Tx option from the Porcupine Transmission Station near Timmins to Wawa as it would provide Northern Ontario with additional low-carbon energy security that would complement that of the AGS. The AGS can play a critical role in helping to reduce GHG emissions and displace import-dependent natural gas-fired generation from southern Ontario – an important consideration when the low-carbon Pickering Nuclear Station is retired in 2024 and results in supply challenges for the Greater Toronto Area.

The proposed Tx line would leave the challenge of securing new low-carbon energy supply in southern Ontario to those bulk system plans where greater flexibility may be available.

Recommendation #4 – The IESO should not finalize the Northeast Bulk System Plan until the IESO's decarbonization and gas moratorium studies are completed and implications established.

The IESO has stated that it will finalize the Northeast Bulk System Plan in Q3 2022 and did not express any urgency regarding the new demand forecasts expected to emerge in the short-term. The IESO stated that its planning will rely on the current requirements identified in its 2021 APO and will address emerging issues in future planning cycles. However, the IESO's formal planning cycle has a five-year cadence while demand is now being recognized to be increasing rapidly.

Ontario's Minister of Energy has directed the IESO to study the implications of decarbonization pathways on Ontario's electricity system and the phase-out of the province's natural gas-fired generation.⁹ Analyses show that the consequential impact on Ontario's demand forecast and supply mix

⁷ Strategic Policy Economics, "Extending Atikokan Biomass Generating Station (AGS) Operations", 2022.

⁸ IESO, Northeast Bulk System Plan webinar materials, April 26, 2022.

⁹ Minister of Energy, Re: Gas Phaseout Study, Oct 7, 2021.

challenges will be significant.¹⁰ As previously discussed, this will impact reliability in the Northeast and the Northwest.

The IESO has indicated that these risks and the additional supply challenges represented by Ontario's critical minerals, forestry and hydrogen strategies, including the Ring of Fire, will be addressed in its next five-year planning cycle. This "just in time" approach is inappropriate given the IESO's identified 4-to-10-year development cycle. It imposes significant risks to ensuring the timely supply of required reliable, low-carbon electricity for Northern Ontario. The importance of these critical elements is accelerating and a five-year delay will put the reliability of supply in the North at risk and diminish the region's economic outlook for the long run. Similar risks led to LG Chem cancelling a \$2.5 B investment in the Windsor area due to lack of planned electricity infrastructure.¹¹

The completion of the Northeast Bulk Electricity System Plan should be informed by and aligned with the pending conclusions from the IESO's Decarbonization Pathways and Gas Phase Out studies, the 2022 APO and the implications for its 2023 Annual Acquisition Report (AAR)-- all of which are expected to be known by the end of this year.

Closing

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 and specifically in Northwest Ontario. The PWU looks forward to discussing these comments in greater detail with the IESO, seeing the promised analyses that underpin the IESO's assumptions, and participating in future stakeholder engagements.

¹⁰ Strategic Policy Economics, "Electrification Pathways for Ontario", 2021.

¹¹ CBC News, "Windsor loses out on \$2.5-billion plant from LG Chem due to lack of energy supply", May 10, 2022