

Feedback Form

Regional Electricity Planning in the Northwest Region – June 11, 2026

Feedback Provided by:

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To promote transparency, feedback submitted will be posted on the Northwest region [engagement webpage](#) unless otherwise requested by the sender.

Following the Northwest regional planning webinar held on June 11, 2026, the Independent Electricity System Operator (IESO) is seeking feedback on the draft electricity demand forecast scenarios and Engagement Plan. A copy of the presentation as well as recording of the session can be accessed from the [engagement webpage](#).

Please submit feedback to engagement@ieso.ca by July 2, 2026.

Topic	Feedback
What additional information, if any, should be incorporated in the proposed scenarios? How can the proposed scenarios best capture the range and uncertainty of growth potential while informing near-term infrastructure investments?	See General Comments/Feedback
What areas of concern or interest about electricity should be considered as part of the planning process?	See General Comments/Feedback
What information is important to provide to participants throughout this engagement?	See General Comments/Feedback
Does the proposed Engagement Plan provide sufficient scope and opportunities for input?	See General Comments/Feedback

General Comments/Feedback

The feedback in this section is responsive to the above four specific topics and questions. These issues are interrelated and broadly relevant, and are therefore presented together.

As elaborated below, the PWU continues to be very concerned that IESO Planning Processes (including both Bulk Planning (notably for Northern Ontario) and related Regional Electricity Planning (notably for the Northwest Ontario Region)) are not based on sufficiently high-growth demand scenarios, and therefore may not result in the level of planning and infrastructure needed to ensure reliability under higher-demand scenarios.

Current IESO demand forecasts significantly underestimate the scale and urgency of Ontario's electrification required to avert an electricity crisis and support economic growth. This systematic underestimation of Ontario's electricity demand has material implications for system planning, resulting in a grid that is less robust and less prepared for emerging demand pressures.

In Ontario's current high demand growth environment, the costs/risks of underbuilding electricity infrastructure are much higher than the costs/risks of right-sizing (or upsizing) infrastructure. Planning should therefore prioritize sufficient and timely capacity to accommodate high-growth scenarios, rather than optimizing narrowly around central forecasts.

The Presentation¹ describes the demand forecasts and scenarios, including graphics of the Draft Winter and Summer Northwest Area Forecast and Scenarios. These Forecasts and Scenarios are central inputs and drivers for the entire Regional Planning process.

There are three forecasts and scenarios:

- Reference
- High
- Low.

The Reference Scenario for the Northwest Area is aligned with the 2026 Annual Planning Outlook (APO) Reference Scenario (for the entire Province).

The PWU is very supportive that Regional Planning for Northwest Ontario has now, to some extent, begun to incorporate consideration of a High Scenario. This positive evolution in electricity planning for Northwest Ontario is long overdue and further highlights the PWU's ongoing concerns that IESO Planning Processes continue to be largely (and sometimes solely) based on a Reference Scenario.

As documented in the Presentation (especially pp. 18-20), Northwest Ontario Regional Planning vividly demonstrates that the scale and urgency of infrastructure growth required in Northwest Ontario is particularly intense (greater than provincial averages):

- electricity demand is projected to grow very rapidly
 - with winter demand growing over the next 20 years by
 - 73% in the Reference scenario
 - 137% in the High scenario
- demand growth is primarily driven by industrial and specifically mining sector projects, together with ongoing residential growth
 - new mining loads are forecasted to drive very rapid near-term growth, with total demand by 2030
 - higher by about 50% in the Reference Scenario
 - doubling (about 100% higher) in the High scenario
 - new load is mainly industrial and specifically mining, which has a flat demand profile (stays relatively constant throughout the day, week, and year)
 - Northwest Ontario has been (and is forecast to remain) winter peaking due to residential heating load

¹ Northwestern Ontario Regional Planning; Webinar #1: Draft Demand Forecast and Scenarios, June 11, 2026, especially pp. 16-20. <https://www.ieso.ca/-/media/Files/IESO/Document-Library/regional-planning/Northwest-Ontario/nw-ontario-20260611-presentation.pdf>

- in Northwest Ontario (and throughout the province), electricity demand is growing rapidly throughout the day, week, and year.

To meet this accelerating high load factor demand in Northwest Ontario (and throughout the province), electricity infrastructure must be expanded rapidly and at scale, in Northwest Ontario (and throughout the province).

Nuclear generation is central for supplying Ontario's accelerating high load factor electricity demand:

- for more than half of century, Ontario's large reactors have been a key source of reliable base load power, with one of the highest capacity factors of any energy source — over 90 per cent
- the CANDU technology that powers these reactors today is Canadian-designed, Canadian-built and globally respected for its safety, reliability and long operating life
- nuclear generation has the smallest land footprint per unit of energy produced, with Ontario's existing and planned nuclear generation clustered into a few locations (Bruce, Pickering, Darlington, and Wesleyville)
- Ontario's existing and planned nuclear generation is strategically located in southern Ontario on Lake Huron and Lake Ontario, proximate to provincial load centres.

While nuclear generation is central for supplying growing provincial electricity demand, Northwest Ontario also requires generation that is more proximate, as well as transmission upgrades (within Northwest Ontario and connecting Northwest Ontario to southern Ontario). Ontario's existing and planned nuclear generation is all located in southern Ontario, distant (over 1000 km) from Northwest Ontario. Transmission upgrades/expansion are essential, urgently needed, and strongly supported by PWU (both within Northwest Ontario and connecting Northwest Ontario to southern Ontario). These transmission projects will enable generation throughout the province to better supply demand throughout the province.

As extensively documented in various IESO planning studies, high-capacity transmission (and other electricity) infrastructure are typically the best (and most realistic) options to address various needs and goals, throughout Ontario and especially in the distinctive context of Northwest Ontario:

- Electricity demand growth in Northwest Ontario is driven by the industrial/mining sector, which:
 - has a flat demand profile, requiring consistent supply across all hours and seasons
 - tends to add large incremental blocks of load, often with short lead times
 - is now forecast with major new mining loads driving very rapid Northwest demand growth, especially in the near term and in High (and extreme) growth scenarios

- this rapid but uncertain demand growth presents major challenges for transmission and other system planning, especially because major infrastructure upgrades/expansions often have long lead times.²
- Two recent IESO Northwest Ontario planning studies (Northern Ontario Connection Study, and Northwest Region IRRP Addendum: North of Dryden Sub-Region) extensively considered various transmission and non-wires options and both concluded that the best option for meeting multiple needs and goals was extensive new high-capacity transmission infrastructure (new double circuit 230 kV transmission lines, connecting to existing high capacity 230 kV transmission lines):
 - Northern Ontario Connection Study:³

was requested by the government to improve electricity reliability and build opportunities for First Nation economic self-determination and prosperity, improve reliability for grid-connected First Nation communities, support mining development, and enable new supply resources including but not limited to hydro-electric generation and renewable generation. [...] Preliminary **study results indicate that the most effective way to achieve these goals is via a North-South option consisting of a double circuit 230 kV transmission line, connecting to the existing East-West Tie Line near Nipigon Bay. [This] option has an advantage from a cost perspective and its ability to accommodate forecast demand and enable the connection of hydro-electric and renewable resources perspective in the future.**

² Sources include:

- Presentation, especially pp. 16-20 (see footnote 1).
- Northwest Region Integrated Regional Resource Plan Addendum: North of Dryden Sub-Region, August 2025, p. 15, see also p. 39. <https://www.ieso.ca/-/media/Files/IESO/Document-Library/regional-planning/Northwest-Ontario/NW-IRRP-North-of-Dryden.pdf>

Electricity demand in the sub-region is expected to increase significantly, primarily driven by mining and industrial activity. These developments can result in large, step-changes in demand with relatively short lead times, presenting challenges for long-term transmission planning. To address this, the IRRP considered high-growth demand scenarios to test the robustness and adaptability of the plan under more aggressive assumptions.

- Integrated Regional Resource Plan: Northwest Region, January 2023. <https://www.ieso.ca/-/media/Files/IESO/Document-Library/regional-planning/Northwest-Ontario/nw-ontario-20230113-report-final.pdf>

Especially pp. 13, 18-19 documenting that Northwest electricity demand growth is driven by the industrial/mining sector which tends to add large incremental blocks of load, often with short lead times

- ³ Northern Ontario Connection Study, Webinar #1: Technical and Economic Option Analysis, May 7, 2025, p. 5 (emphasis added), <https://www.ieso.ca/-/media/Files/IESO/Document-Library/engage/nocs/NOCS-20250507-presentation.pdf>

See also p. 19 regarding North-South Option benefits, including connections to potential mining (Ring of Fire) and hydro-electric resources (Little Jack Fish and Upper Albany-Attawapiskat River area).

- Northwest Region IRRP Addendum: North of Dryden Sub-Region:⁴

Constructing a double-circuit transmission line upfront is generally more cost-effective than staging and building two separate single-circuit lines over time. In addition to the economic advantages, this approach also reduces the overall footprint of transmission infrastructure, minimizing environmental impact and land use. This principle informed the evaluation of Option 3 (Double-Circuit) as a more efficient and sustainable solution.

[...]

This option:

- **Meets regional electricity needs through 2050 and beyond, under reference, high, and extreme demand scenarios**
 - **Improves reliability and reduces load interruptions in the North of Dryden sub-region**
 - **Supports connection of new resources, including hydroelectric, biomass, and other generation, by reducing connection costs and enabling power transfer to the broader grid**
 - **Enhances system robustness and resilience, while remaining compliant with planning criteria**
 - **Reduces long-term costs, as the incremental cost of building a double-circuit line is significantly lower than constructing a parallel single-circuit line later**
 - **Leverages existing rights-of-way, where feasible, to minimize environmental and land-use impacts.**
- The Northwest Region IRRP Addendum: North of Dryden Sub-Region⁵ also provides important guidance regarding the urgency of infrastructure growth required in Northwest Ontario, and specifically that time-sensitive transmission projects should not be subject to the Transmitter Section Framework (TSF) and a competitive procurement process:

The proposed 230 kV transmission line does not align well with the Transmitter Selection Framework (TSF) due to the urgent need to increase supply capacity in the Red Lake area. The TSF best suits projects with longer lead times (≥ 6 years) to accommodate a competitive

⁴ Northwest Region Integrated Regional Resource Plan Addendum: North of Dryden Sub-Region, August 2025, p. 46, 52 (emphasis added). <https://www.ieso.ca/-/media/Files/IESO/Document-Library/regional-planning/Northwest-Ontario/NW-IRRP-North-of-Dryden.pdf>

⁵ Id, p. 52 (emphasis added).

procurement process. **Given the time-sensitive nature of this project, proceeding outside the TSF would better support timely delivery, system reliability and support economic development.**

- Non-wires alternatives (NWA) are considered as part of IESO planning. However, bulk-level demand and large-scale generation typically require high-capacity transmission; NWA are complementary and transitional, not substitutes for major bulk reinforcements. Moreover, NWA typically have limited (if any) potential that is realistic and cost-effective in the distinctive context of Northwest Ontario.⁶

As noted earlier in this feedback and elaborated upon below, Northwest Ontario requires generation that is proximate, as well as transmission upgrades (within Northwest Ontario and connecting Northwest Ontario to southern Ontario) enabling nuclear and other generation throughout the province to supply demand throughout the province. Recent Northwest Ontario Bulk Planning⁷ has included substantial analysis of the complex and evolving context for Northwest Ontario supply and demand.

Existing Northwest generation is limited, highly constrained, and not sufficient in supplying Northwest demand:

- Existing Northwest generation is mainly hydroelectric, which is energy-limited (cannot run continuously). Hydro generation is dispatched to supply Ontario system peaks, with output reduced overnight to conserve water so it is available for the following day.
- Northwest hydro generation is typically run of river (commonly referred to as peaking facilities), with limited storage capability. Combined with variations in water conditions, this limited water storage results in large variations in energy production across the day and year.
- Northwest electricity generation is highly variable, but Northwest electricity demand is much less variable (relatively constant across the day and year). This divergence has typically resulted in the following transmission flow patterns (across the North-South

⁶ Previous IESO planning studies for Northwest Ontario have extensively considered various non-wires alternatives (including eDSM and new generation) and typically concluded that these non-wire alternatives have limited (if any) potential that is realistic and cost effective, especially for meeting large increases in mining load. See:

- Integrated Regional Resource Plan: Northwest Region, January 2023, especially pp. 14-16, 58-64: <https://www.ieso.ca/-/media/Files/IESO/Document-Library/regional-planning/Northwest-Ontario/nw-ontario-20230113-report-final.pdf>
- Northwest Region Integrated Regional Resource Plan Addendum: North of Dryden Sub-Region, August 2025, especially pp. 10, 48-52. <https://www.ieso.ca/-/media/Files/IESO/Document-Library/regional-planning/Northwest-Ontario/NW-IRRP-North-of-Dryden.pdf>
- Northern Ontario Connection Study, Webinar #1: Technical and Economic Option Analysis, May 7, 2025, especially pp. 17-20, 31. <https://www.ieso.ca/-/media/Files/IESO/Document-Library/engage/nocs/NOCS-20250507-presentation.pdf>

⁷ Northern Ontario Bulk Study: North-South Transmission Reinforcement Plan, September 25, 2025.

<https://www.ieso.ca/-/media/Files/IESO/Document-Library/engage/bulk-planning/nobp-north-south-transmission-reinforcement-plan.pdf>

Quarterly Bulk Planning Update: Northern Ontario Bulk Study, November 20, 2024.

<https://www.ieso.ca/-/media/Files/IESO/Document-Library/engage/bulk-planning/nobp-20241120-presentation.pdf>

Quarterly Bulk Studies Update: Northern Ontario Bulk Study, September 24, 2024.

<https://www.ieso.ca/-/media/Files/IESO/Document-Library/engage/bulk-planning/nobp-20240924-presentation.pdf>

Interface between Northwest and southern Ontario):

- during Ontario system peaks when Northwest hydro output is high, flows are southward, from Northwest to southern Ontario
- at most other times (and especially when system demand and Northwest hydro output are low), transmission flows are northward, from southern to Northwest Ontario.

Existing Northwest generation is already not sufficient in supplying Northwest demand. Northwest Ontario must often rely on less proximate supply transmitted over long distances from Southern Ontario and possibly imports from Manitoba and Minnesota.

But the evolving context for Northwest Ontario supply and demand is now becoming much more challenging. Northwest demand is projected to grow very rapidly, especially in the near term, driven by new mining loads. A fuller discussion of these very complex system planning issues is beyond the scope of this feedback. Suffice it to say here that:

- Supplying Northwest Ontario's rapidly growing demand (both near and longer term) will certainly require upgraded/expanded infrastructure within Northwest Ontario: existing and new generation and transmission proximate to this growing demand.
- Transmission upgrades/expansion connecting Northwest Ontario to southern Ontario will also be important. But the PWU is also concerned that IESO Planning Processes:
 - **tend to unduly focus on transmission options, such that Northwest Ontario would become increasingly reliant on less proximate supply transmitted over long distances**
 - **do not sufficiently recognize the importance and benefits of generation proximate to Northwest Ontario's rapidly growing demand, notably the Atikokan Generating Station.**

The Atikokan Generating Station (AGS) is a unique and especially important 205 MW supply resource within Northwest Ontario.⁸ AGS was converted from coal to biomass in 2014 as part of Ontario's coal closure initiative. AGS is fueled with sustainably-sourced wood pellets, a key differentiator to other forms of renewable generation.

⁸ Sources regarding AGS include:

Extending Atikokan Biomass Generating Station (AGS) Operations: A Need and Benefits Impact Assessment, January 2022, Marc Brouillette, Strategic Policy Economics, on behalf of the Power Workers Union (PWU).

<https://www.pwu.ca/wp-content/uploads/2022/03/extending-atikokan-operations-report-jan-2022.pdf>

IESO Directed to Extend Contracts for Two Biomass Facilities and Open Eligibility for the Small Hydro Program to Aggregated Facilities, May 16, 2024

<https://www.ieso.ca/en/Sector-Participants/IESO-News/2024/05/IESO-Directed-to-Extend-Contracts-for-Two-Biomass-Facilities-and-Open-Eligibility>

Government of Ontario, News Release: Ontario Protecting Energy Jobs in the North: Atikokan Generating Station will keep 400 well-paying jobs, September 13, 2024

<https://news.ontario.ca/en/release/1005039/ontario-protecting-energy-jobs-in-the-north>

OPG, Press Release, OPG's Atikokan station set to keep delivering biomass-fuelled power for Ontario, September 13, 2024

<https://www.opg.com/news-resources/newsroom/our-stories/story/opgs-atikokan-station-set-to-keep-delivering-biomass-fueled-power-for-ontario/>

AGS is a flexible dispatchable low carbon resource, directly connected to (and centrally located along) Northwest Ontario's major East-West 230 kV transmission lines. AGS has typically been used as a peaking plant which can quickly ramp up. But AGS could also potentially be operated at higher capacity factors, to provide a more intermediate resource and enhanced supply and reliability for Northwest Ontario.

AGS is owned and operated by Ontario Power Generation (OPG), as a non-regulated asset contracted with IESO:

- initially under a 10-year contract ending in 2024
- then renewed under a 5-year contract ending 2029.

With AGS now contracted only to 2029, IESO Planning Studies do not include AGS as a committed available resource after 2029. So, this unique and especially important 205 MW resource is not assumed to be available to meet Northwest Ontario's rapidly growing demand after 2029.

The PWU strongly recommends that Northwest regional planning should continue to recognize the contribution that AGS can provide as a strategic, dispatchable, low-carbon resource. AGS should not be excluded from planning assumptions given its strategic location within the Northwest transmission network, its ability to improve regional reliability and resiliency, reduce dependence on imports over the East-West Tie, and support anticipated mining and critical minerals development.

In addition to these other major benefits, AGS supports forestry and wood pellet supply chains, Indigenous economic participation, and good jobs in Northwest Ontario, while contributing to Ontario's decarbonization objectives.

In short, the PWU's position is that Northwest Ontario requires both transmission upgrades/expansion and proximate generation resources, and that AGS should be considered part of the regional solution rather than viewed solely as an alternative to new transmission infrastructure.

Based on all of the above, it is very clear that:

- Electricity infrastructure serving Northwest Ontario must be expanded rapidly and at scale to meet accelerating demand.
- This area (and all of Ontario) is already in a catch-up position, reflecting earlier planning that systematically underestimated rapidly growing electricity demand.

The PWU is very supportive that Bulk Planning for Northern Ontario and Regional Planning for Northwest Ontario has now begun to facilitate faster development of transmission infrastructure. This positive evolution in electricity planning is long overdue, and major additional changes are still required, including to be effectively responsive to government policies and direction.