MAY 20, 2026

Quarterly Bulk Update

North of Sudbury Bulk Plan

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Shared Commitment to Respectful Participation

To support a focused and constructive discussion:

- We will take questions one at a time; please use the raise-hand feature to enter the speaking queue
- We encourage concise and focused comments to allow time for multiple perspectives
- Participants are encouraged to raise relevant points during the discussion and provide more detailed feedback through the written submission process
- We ask that all participants maintain a respectful and professional tone throughout the session
- Facilitators will guide the discussion and manage participation to stay aligned with today's focus and agenda
- Where necessary, we may disable a participant's microphone to manage participation

Territory Acknowledgement

The IESO acknowledges the land from where we are delivering today's webinar is the traditional territory of many nations including the Mississaugas of the Credit, the Anishnabeg, the Haudenosaunee and the Wendat peoples, and is now home to many diverse First Nations, Inuit and Métis peoples. We also acknowledge that Toronto is covered by Treaty 13 with the Mississaugas of the Credit First Nation.

As we have attendees from across Ontario, the IESO would also like to acknowledge all the traditional territories across the province, which include those of the Algonquin, Anishnabeg, Ojibwe, Cree, Oji-Cree, Huron-Wendat, Haudenosaunee, Métis, and Inuit peoples.

Meeting Purpose

The North of Sudbury Bulk Plan has advanced, and today we will share the draft recommendations for feedback.

To recap, in previous engagement webinars, we have shared the scope of the plan, the drivers for growth, forecast scenarios and existing generation, identified the needs, the objectives of the options analysis and sought feedback throughout the development of the plan.

This webinar will provide an overview of and seek input on the North of Sudbury Bulk Plan, specifically the evaluation of a broad range of wires transmission options and the draft recommendations to provide reliability, meet future demand growth and enable additional generation.

Agenda

- Overview of the IESO and Meeting Electricity Needs
- Bulk Transmission System Planning
- Overview of the North of Sudbury Bulk Plan Scope and Needs
- Draft Recommendations
- Next Steps and Discussion

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Ontario’s Growing Electricity Needs

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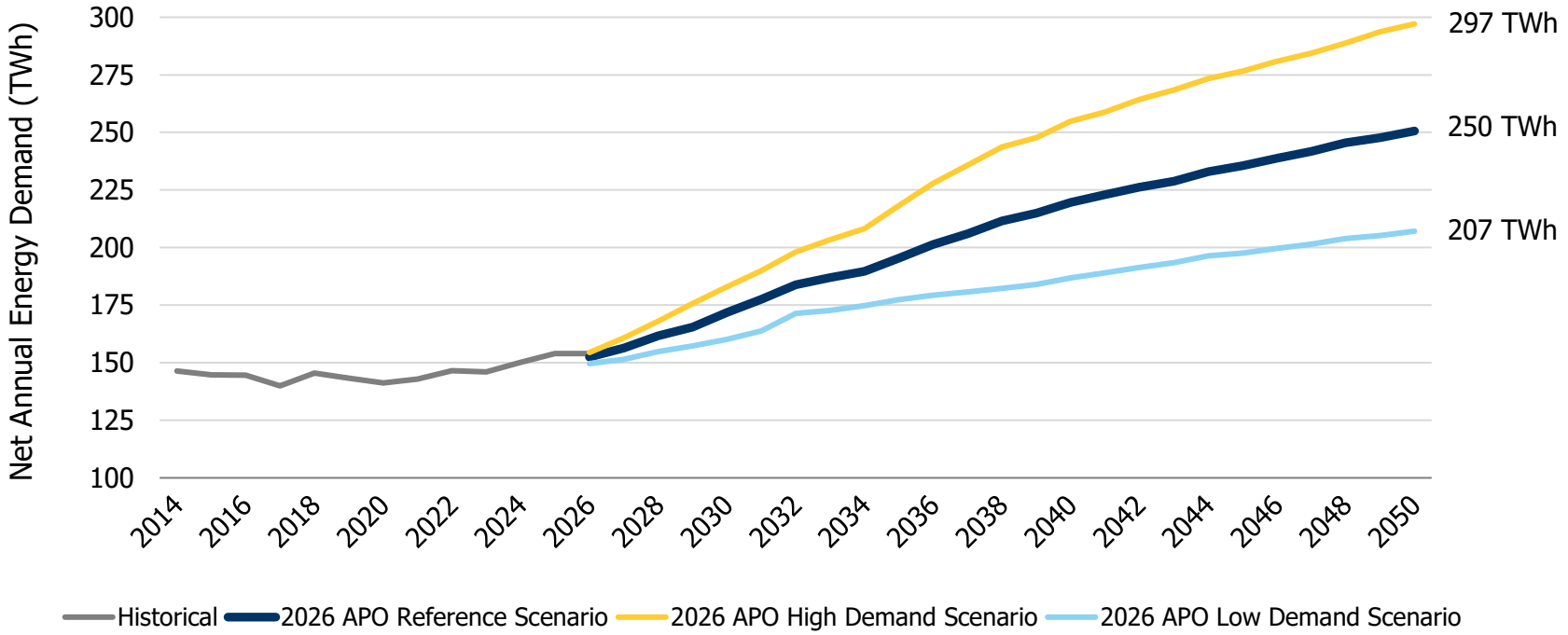
We work with:

Generators >>> **Transmitters** >>> **Local Distribution Companies** >>> **Energy Consumers**

<<< **Communities** >>>

Electricity Demand Long-Term Outlook



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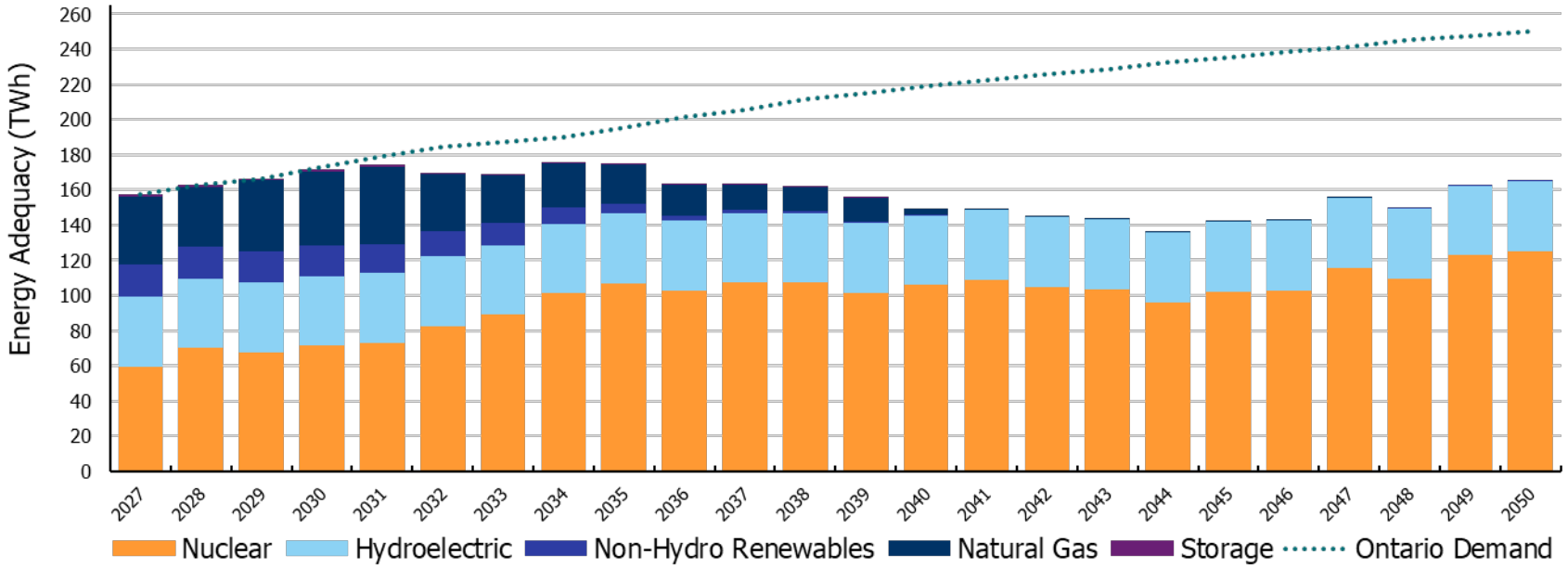
Energy Supply



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Addressing the Evolution of the Electricity System

To ensure reliable and affordable electricity is available where and when it is needed, the IESO continues to drive and guide the sector's future while supporting economic development across Ontario:

- **Largest energy storage procurement in Canada:** More than 2,500 MW of capacity from battery storage secured through the IESO's first long-term procurements
- **New supply procured:** 12 new solar and two new wind projects awarded 20-year contracts, expected to be in service by 2030, secured through the first window of the second Long-Term (LT2) RFP
- **More procurements on the way:** Future needs will be addressed through subsequent windows of the LT2 RFP, Long Lead-Time RFP, and the third Medium-Term RFP
- **Expanding the bulk transmission system:** multiple projects are scheduled to come into service to support mining, agricultural, and industrial development, as well as the connection of new and refurbished generation resources. Transmission planning continues to be essential in unlocking future growth and maintaining reliable electricity service province wide
- **Initiatives planned and underway**: Northern Hydro Program, Small Hydro Program, future medium-term procurements, Local Generation Program, Annual Capacity Auction, and enhanced energy efficiency opportunities will also help secure Ontario's electricity future

Role of Transmission

A robust transmission system is not only about moving power; it plays a key role in enabling the future power system

Transmission is essential to:

- Deliver new and refurbished generation to where electricity is needed
- Unlock future supply and load connections
- Provide flexibility and resilience across a range of future demand and supply outcomes
- Support economic growth and electrification across broad geographic regions

Bulk Transmission System Planning

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Electricity Planning in Ontario

Provincial/Bulk System Planning

Addresses provincial electricity system needs and policy directions

Led by the IESO

Underway: North of Sudbury Bulk Plan, Eastern Ontario, South and Central

Completed: 2022 Northeast Bulk Plan, 2025 North-South Transmission Reinforcement Plan

Regional Planning

Addresses local electricity system needs at the transmission system level

Led by the IESO and transmitter

Underway: East Lake Superior, Sudbury-Algoma

Recently Completed: 2023 North & East Sudbury; 2025 North of Dryden

Distribution Planning

Addresses local electricity system needs and priorities at the distribution system level

Led by local distribution companies

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Overview of Bulk System Planning

With Ontario's electricity demand forecast to grow over the next 25 years, a robust transmission system is essential to ensure power from new resources can be delivered where and when it is needed. This will reliably support economic development and electrification at both the provincial and local levels.

The Annual Planning Outlook (APO) contains a snapshot of bulk transmission needs.

- The IESO's Schedule of Planning Activities summarizes the plans that are underway and upcoming.
- Activities are reviewed and updated every year, considering the most recent demand and supply forecasts, and changes to reliability standards and public policy objectives.
- Based on these changes, the scope of existing plans may be adjusted, planning work may be re-prioritized, or new planning studies may be initiated.

For more details and data, download the Annual Planning Outlook from the IESO's website.

Components of a Bulk Plan

Demand Forecasts	Needs and Opportunities	Evaluation of Options	Recommendations
How much power is needed over the planning timeframe Key inputs: • Annual Planning Outlook • Large loads i.e., mining, data centres • Regional Planning forecasts • System Impact Assessments	Can the electricity system meet customer demand via a combination of committed generation and existing transmission capacity and maintain reliability planning standards? Is the current system compatible with government policies and direction?	What kinds of solutions can meet the future needs for the plan area? • Compatibility of solutions at bulk and local level • Ability to materialize policy driven decisions • Flexibility to pivot based on new information	Based on an assessment of potential options, what recommended actions will ensure a reliable and adequate electricity supply over the long term?

Key Sector Participants for Transmission Implementation

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Delivers key electricity services including operating and planning the grid, enabling energy efficiency programs, procuring new generation and storage, and designing a more efficient electricity marketplace.

Transmitters

Build and maintain Ontario's high-voltage transmission system.

Regulates the energy sector in the public interest and grants approval to construct transmission lines.

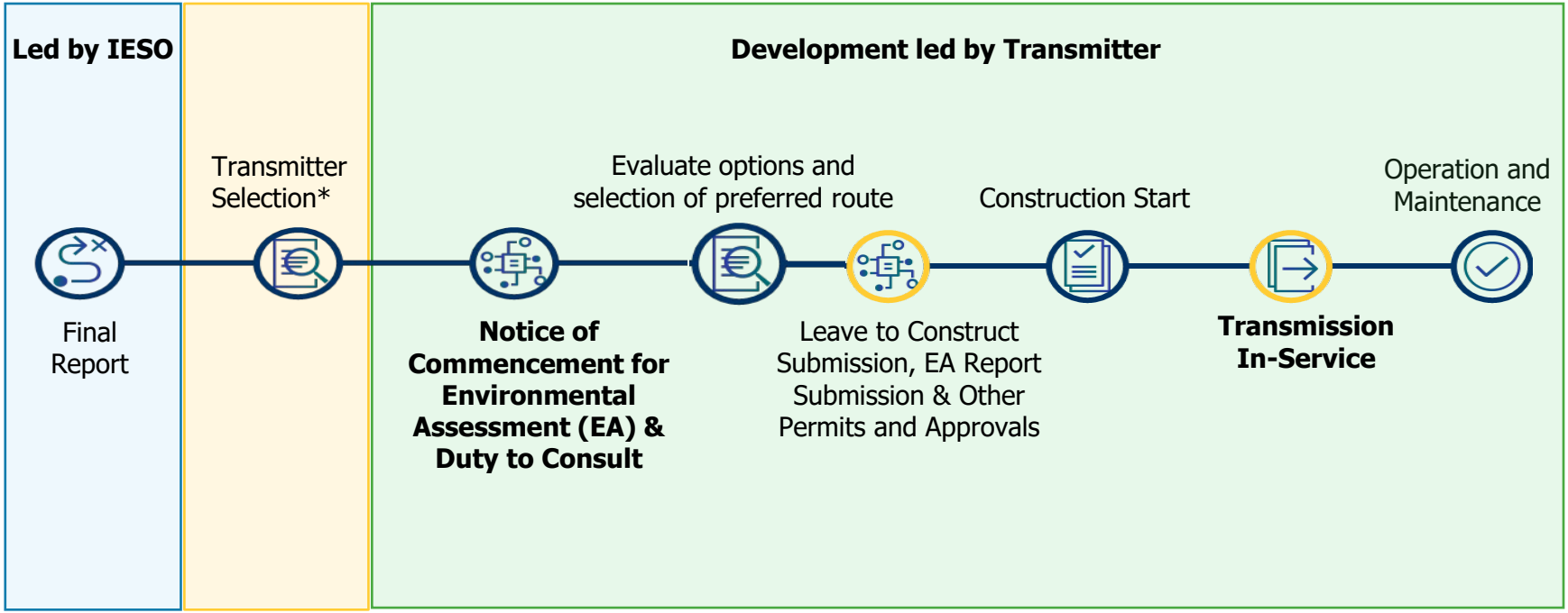
Ministry of Energy and Mines

Sets overall policies for the electricity sector.

Ministry of the Environment, Conservation and Parks

Legislative authority for environmental assessments in Ontario.

Typical Process for Transmission Development



*Transmitter Selection Framework under development

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Overview of the North of Sudbury Bulk Plan Scope and Needs

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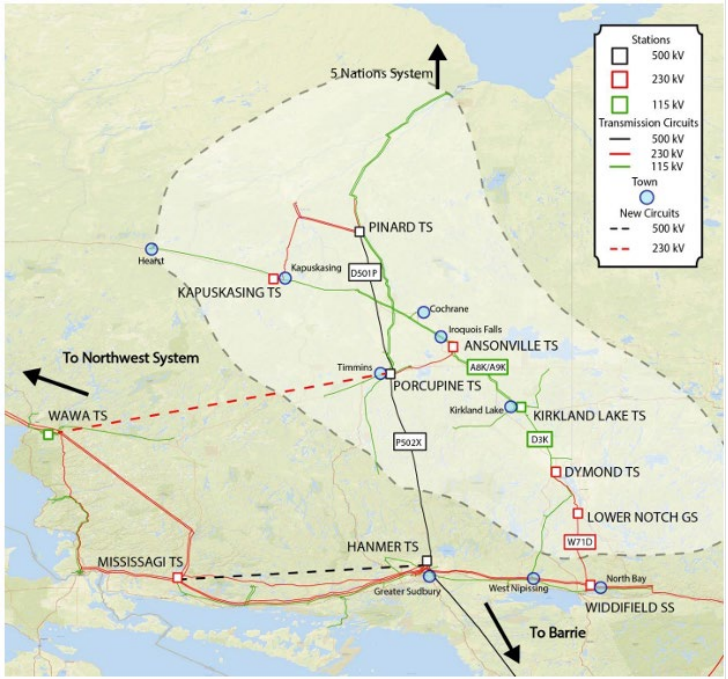
North of Sudbury Bulk Plan

The North of Sudbury Bulk Plan focuses on the following issues:

- Reliability of electricity supply to customers through the transmission system, including performance under contingencies and outages
- Ability to accommodate growing demand, particularly from mining and industrial electrification
- Ability to enable and deliver new supply resources, given existing deliverability constraints and uncertainty from changes in the supply mix, including potential gas-fired retirements
- Addressing constraints in the existing transmission network north of Sudbury



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Initiating the North of Sudbury Bulk Plan

Why the Plan is Needed

- Growing electricity demand driven by mining and industrial activity (Timmins area)
- Increasing load across Timming, Kirkland Lake, and Pinard

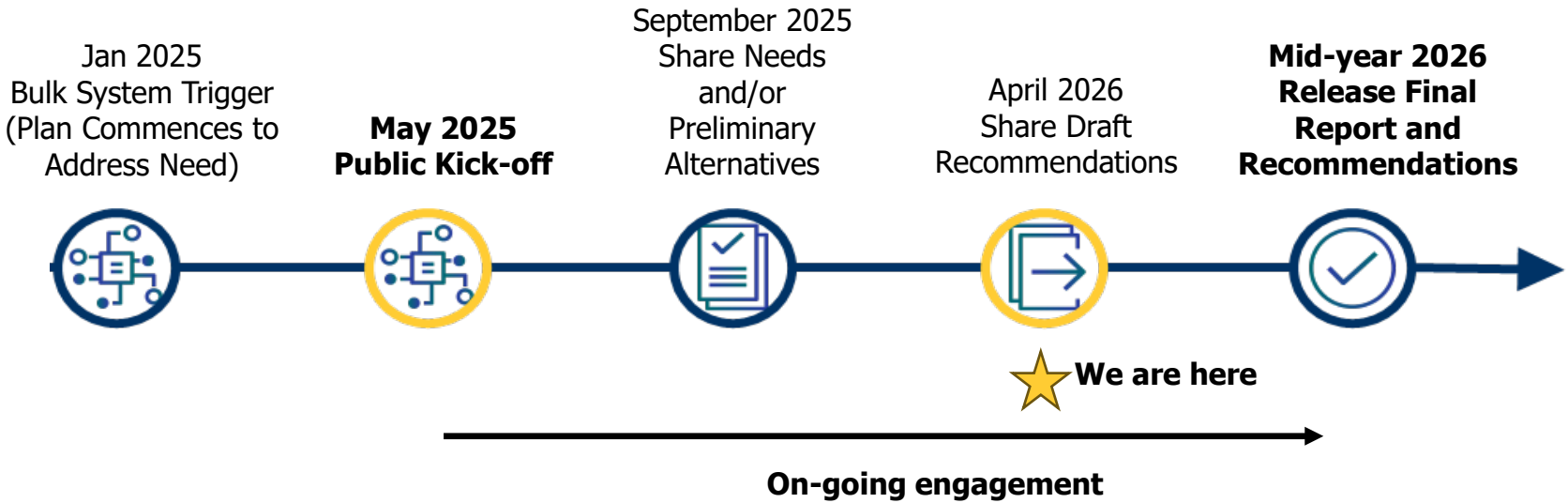
What the Study Assesses

- Ability of the bulk system to reliably serve future demand
- Focus on load restoration, voltage performance, and system security
- Considers future generation, including hydro potential (Moose River Basin)

Planning Foundation

- Based on IESO Annual Planning Outlook (APO)
- Government policy direction (Powering Ontario's Growth, Integrated Energy Plan)
- Stakeholder engagement (municipalities, communities, industry)
- Alignment with IESO procurements & committed transmission projects

North of Sudbury Bulk Plan



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Co-ordinating With Local Needs

Bulk planning, led by the IESO, assess the ability of the provincial transmission system (i.e., 500 kV and 230 kV) to deliver electricity from where it is generated to where it is needed.

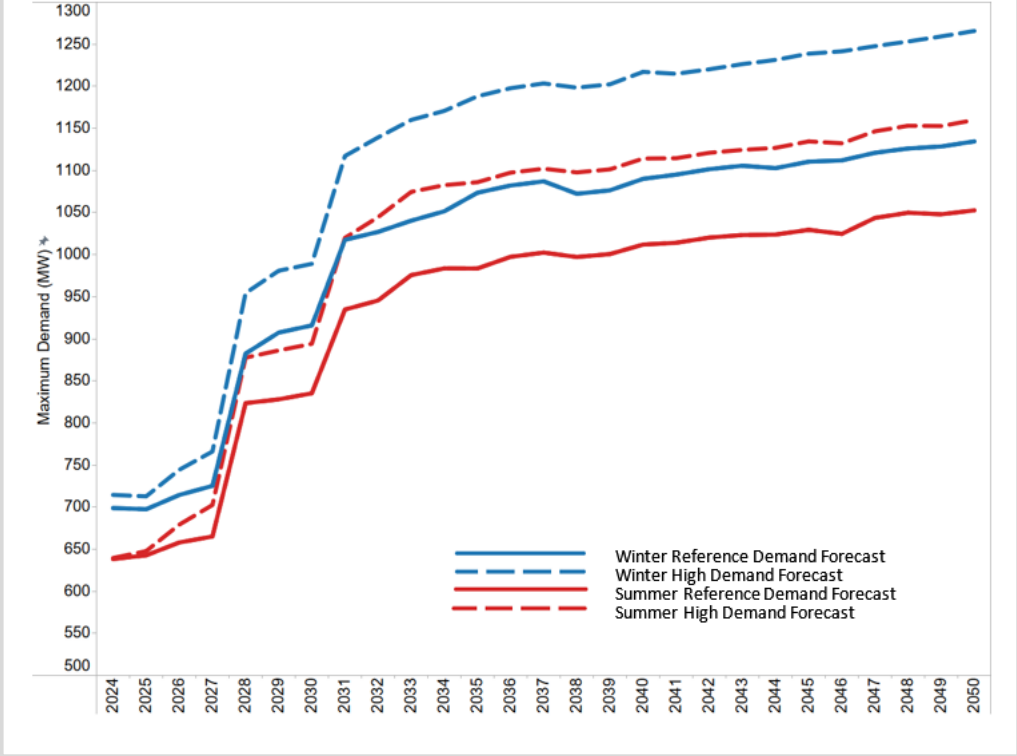
Regional planning focuses on addressing local needs within the IESO's 21 planning regions.

The North of Sudbury Bulk Plan is integrated with Integrated Regional Resource Plans (IRRPs) developed through the regional planning process, including the North and East of Sudbury IRRP. Local needs and constraints identified through this IRRP are inter-related with the bulk system challenges addressed in this Plan, reinforcing the need for coordinated bulk and regional planning.

Regional needs can trigger requirements for bulk system upgrades, and bulk plans can impact needs and options considered in regional plans.

1. Co-ordination in planning scope.
2. Alignment in demand forecast and system assumptions.
3. Co-ordination between bulk and regional solutions.

Recap: Demand Forecast North of Sudbury



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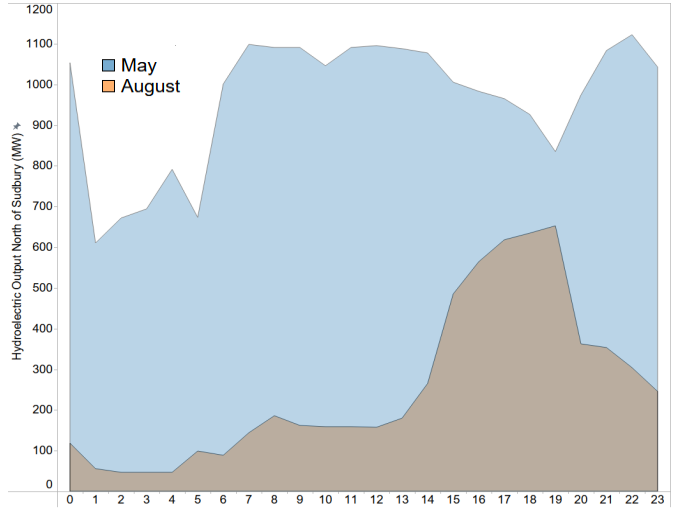
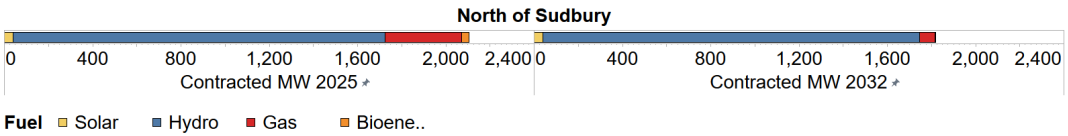
Recap: Forecast of Existing Generation

Electricity supply resources north of Sudbury have characteristics that limit how much dependable support they can provide:

- A large share of supply resources in the area is hydroelectric, which is energy-limited and cannot be relied on at full output in all hours
- Gas-fired supply resources provide dependable capacity today, but many are under time-limited contracts, and once those contracts expire it is uncertain whether operators will continue operating those facilities
- Solar supply resources contribute energy but provide limited support during overnight periods and high-stress system conditions
- As a result, installed supply does not equal dependable, all-hour supply, particularly during outages

Future potential generation is considered in the evaluation of options





*Assumes Hydro Electric is re-contracted

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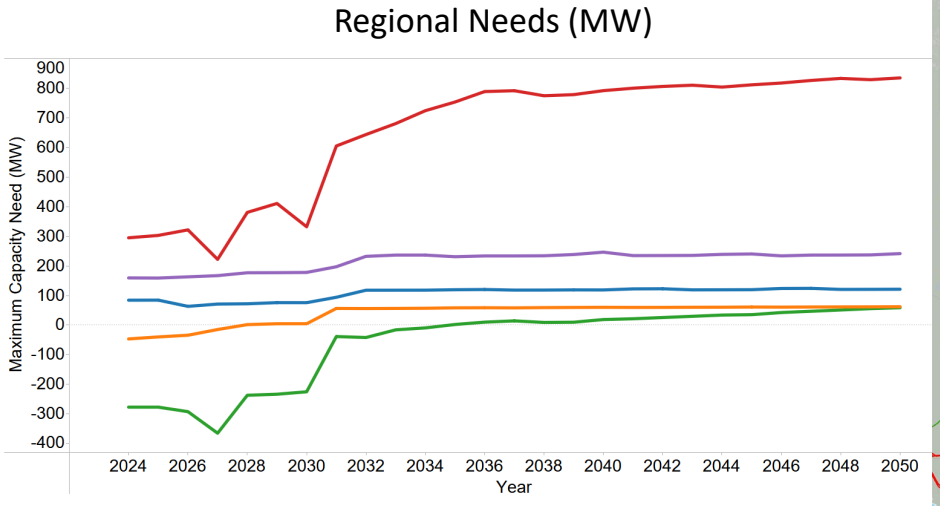
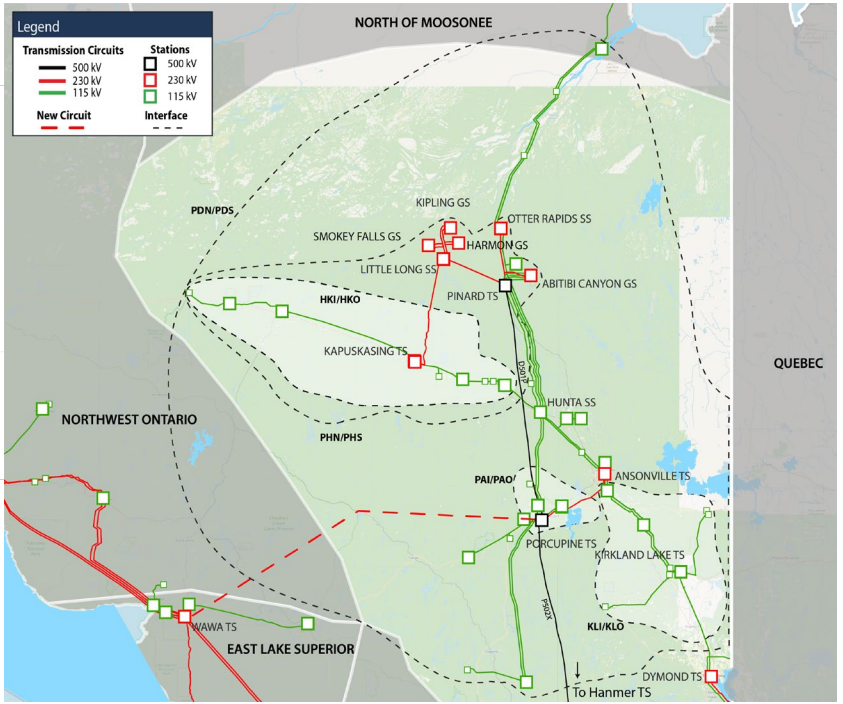
Recap: Needs Study – Findings



- PDN: Porcupine Dymond North (Broader Region)
- KLI: Kirkland Lake In
- HKI: Hunta Kapuskasing In
- PHN: Porcupine Hunta North (area north of Timmins)
- PAI: Porcupine Ansonville In (Timmins–Iroquois Falls area)



Capacity needs emerge across multiple sub-regions throughout the area

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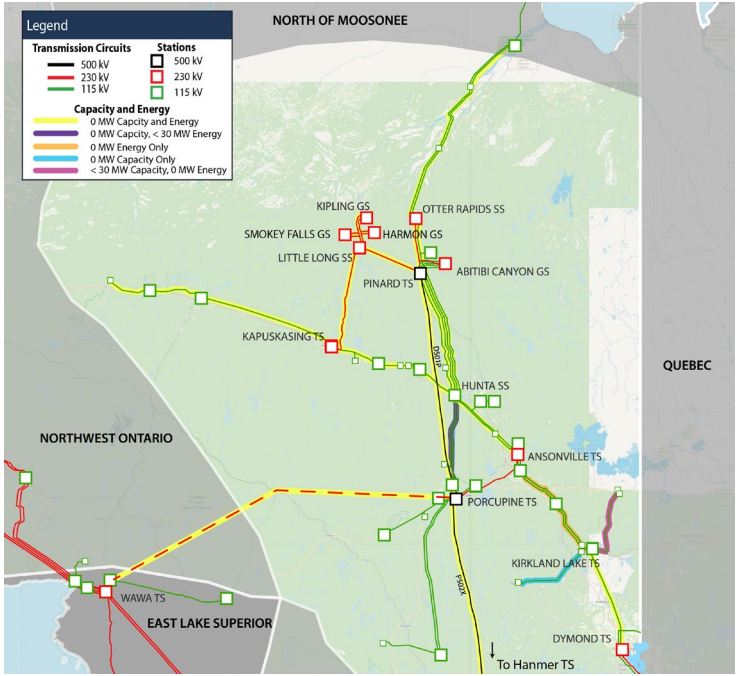
Limits on Locating New Supply Resources

- Transmission constraints already limit where and how new supply resources can connect in this area
- IESO LT2 guidance for both energy and capacity identifies large portions of the region as having little or no available system capacity for new connections
- Adding new supply resources under current conditions would increase congestion and reliance on operational measures, rather than improve reliability



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Evaluating Options: Non-Wires Alternatives (NWA) and Transmission

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Considerations When Evaluating Options

Potential solutions to address bulk system needs are evaluated based on the following key considerations:

Technical feasibility: Can the option be executed i.e. proximity to customers, routing and spacing considerations, operations

Ability to Address Needs: Are the number, magnitude, and diversity of needs adequately addressed?

Integration and Cost-Effectiveness: What is the lowest cost solution considering the possibility that one option may be able to address multiple needs simultaneously? Would a combination of option types be most effective?

Lead Time: How long would the potential options take compared with the timing of needs?

Non-Wires: Development and Assessment

Three-step Process:

Step 1: Screening - A high-level screening process is conducted on the local load and need profiles to determine non-wires alternative resources that are technically feasible options to meet the identified local needs.

Step 2: Development - Detailed modelling and analysis are conducted to develop potential NWA options for the local areas identified in the non-wires alternative screening step, utilizing the resource candidates identified as technically feasible options.

Step 3: Economic Analysis - The total costs and system benefits of the non-wires alternative options developed in Step 2 are calculated for comparison against each other, and against transmission (i.e. "wires only") options to meet local needs.

Non-Wires Screening

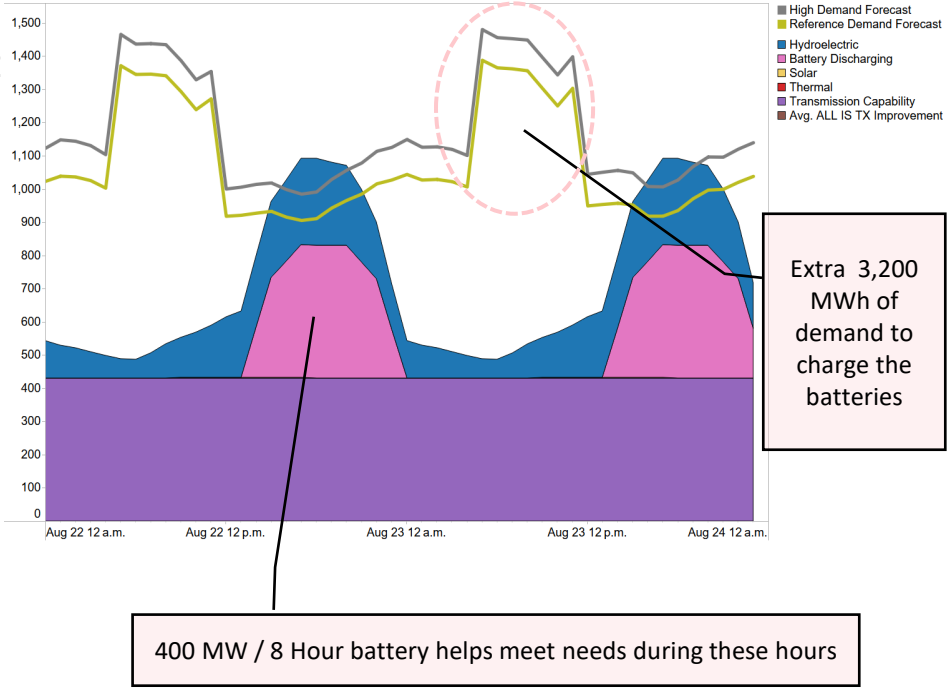
Battery storage can shift energy over short periods but adds load during charging and does not address all-hour reliability needs

Gas-fired supply resources provide dependable capacity but are constrained by deliverability and uncertainty as existing contracts expire

Hydroelectric supply resources are energy-limited and cannot be relied on to meet demand in all hours or conditions

Wind and solar supply resources require transmission access and additional flexibility to be deliverable and reliable

Existing transmission constraints limit where and how new supply resources can locate



Overview of Transmission Options Considered

Multiple transmission options were evaluated to address the identified reliability, and deliverability needs north of Sudbury.

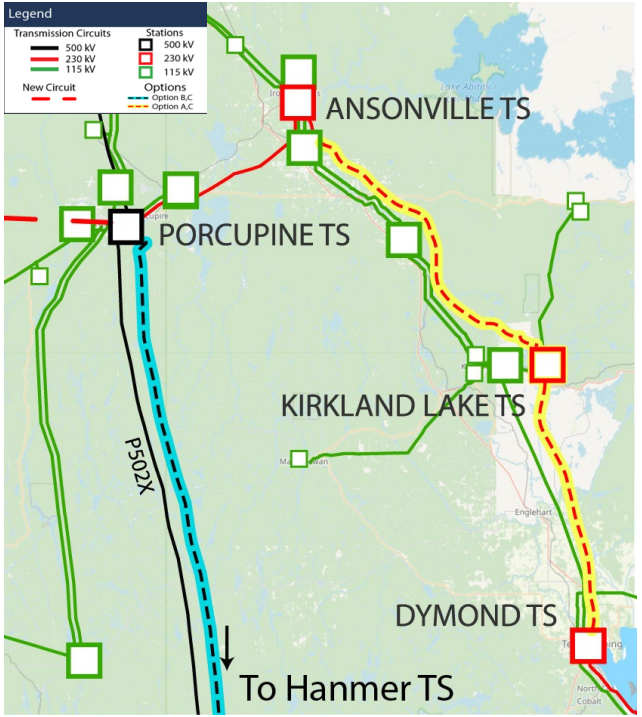
- Options differ in location, scale, and voltage level
- Some options strengthen the bulk supply path into the region
- Others address aging infrastructure and local reliability needs north of Timmins
- Because the system is interconnected, individual projects were not assessed in isolation

Transmission Options South of Timmins

Transmission options south of Timmins focus on strengthening the main supply path into the North of Sudbury area.

- Options range from incremental 230 kV reinforcement to larger 500 kV + 230 kV reinforcement
- Stronger options provide a larger step change in northward transfer capability

These options improve the ability to move power into the region under both normal and outage conditions to different degrees.



Note: Start and end points only; not potential routing of new circuits

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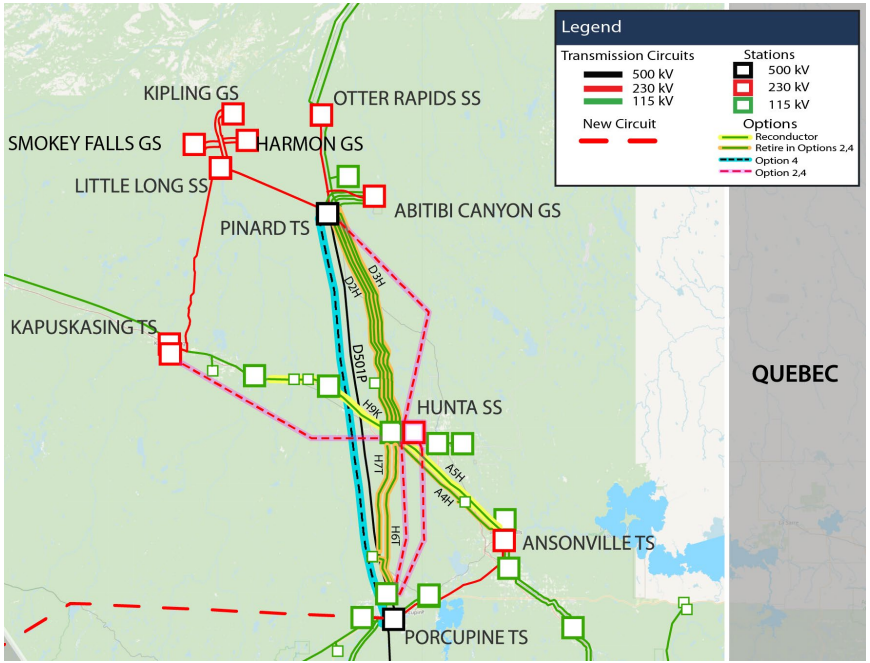
Transmission Options North of Timmins

Transmission options north of Timmins focus on local system strength and aging infrastructure.

- Large portions of the existing 115 kV system are at or near end of life
- Options range from refurbishing existing corridors to rebuilding at higher voltage
- Stronger options materially improve local reliability and operating flexibility

These options address long-standing local constraints while also supporting future demand and supply resource connections.



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Enabling Demand Growth North of Timmins

Reconductoring **the EOL 115 kV** system:

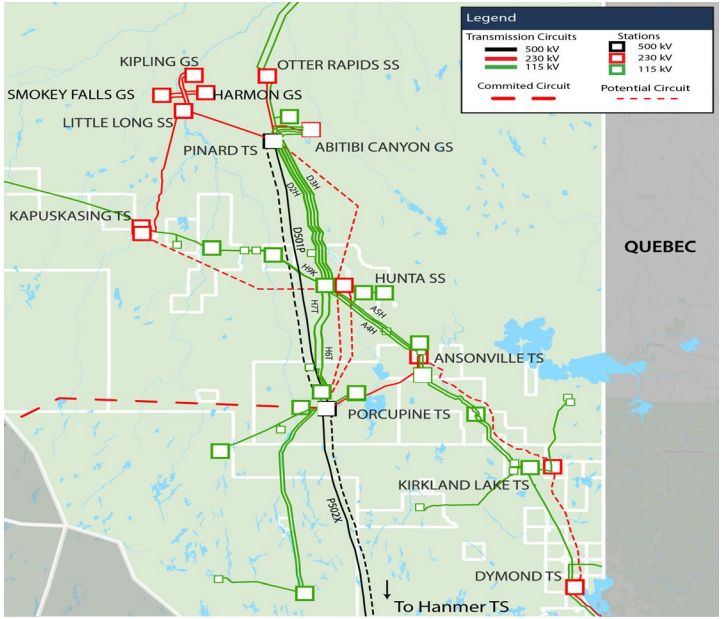
- Maintains the status quo and does not meet reliability standards for existing or future demand

Constructing a 500 kV circuit from **Pinard to Timmins**:

- Does not address local demand growth needs, as there is limited load in the Pinard area to justify a reinforcement of this size
- Does not resolve load security issues at Kapuskasing, where demand and reliability constraints remain
- Does not create new locations for load connections, as most customer loads connect at 230 kV or 115 kV, not directly to the 500 kV system

Rebuilding the **EOL 115 kV system North of Timmins** to 230 kV:

- Meets both reference and high-growth demand forecasts for all areas north of Timmins Provides new connection locations for future facilities



Note: Start and end points only; not potential routing of new circuits

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Enabling Demand Growth North of Sudbury

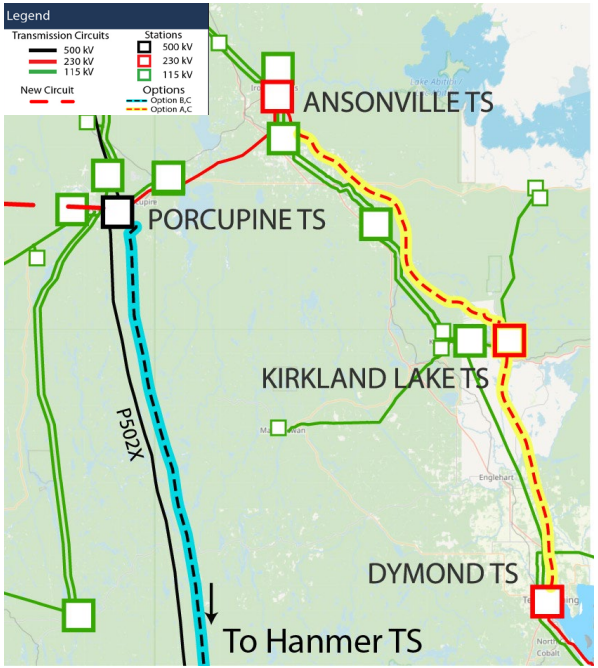
Constructing a 500 kV circuit between Timmins and Sudbury

- Does not enable demand growth near Kirkland Lake or Temiskaming Shores
- Does not provide additional supply to the Timmins 230 kV area
- Functions as a bulk transfer path and does not address local load-serving needs

Constructing 230 kV circuits between Iroquois Falls and Temiskaming Shores

- Enables demand growth along the Iroquois Falls–Temiskaming Shores corridor
- Provides new connection points for load in that area
- Strengthens system in area bordering Quebec
- Adds an additional supply source to the Timmins 230 kV area

On their own, neither approach fully meets the reference or high-growth forecast for the entire area, particularly once large mining loads connect and ramp up, while still meeting load security requirements



Note: Start and end points only; not potential routing of new circuits

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Why a Strong 230 kV Network Matters for Demand Growth

A stronger 230 kV network provides more reliable demand support than relying on a small number of 500 kV circuits.

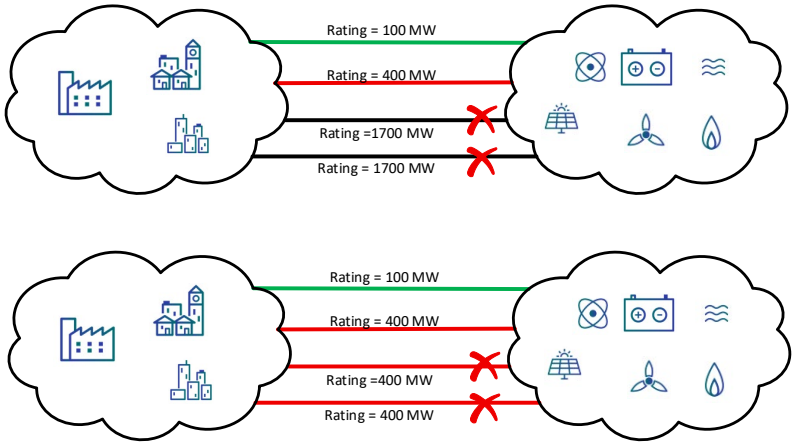
- Adding 500 kV circuits alone has limited effectiveness for meeting demand unless there are more than two 500 kV circuits, or a strong underlying 230 kV system to distribute power locally
- A more developed 230 kV network provides better performance during system events such as outages, improving load security

Examples from elsewhere in Ontario:

- Ottawa: 2 × 500 kV circuits supported by multiple 230 kV and 115 kV circuits, with further reinforcement under consideration
- GTA / Southern Ontario: a large number of 500 kV circuits supported by a very strong underlying 230 kV network

Key observation

- Different transmission configurations can provide similar ability to meet reliability criteria, even if they use different voltage levels
- This shows that network strength and redundancy are as important as transmission voltage when supporting demand growth



The top and bottom system have the exact same transfer capability for N-1-1 scenarios despite one system having two 500 kV circuits and the other does not

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How Transmission Enables Future Supply Resources

As electricity demand grows, the transmission system must do more than serve load, it must also enable new electricity supply to locate and deliver power reliably.

- Future supply opportunities in Northern Ontario are material, particularly hydroelectric and renewable resources
- The ability to connect and deliver these resources is constrained by today's transmission system
- The following slides explain how transmission reinforcements affect where new generation can locate and how much future supply can be delivered reliably over time

Enabling Hydroelectric Generation

Previous government announcements and reports from Ontario Power Generation have identified hydroelectric development potential in the area, particularly around the Moose River Basin. The existing transmission system cannot deliver additional hydroelectric generation from this area.

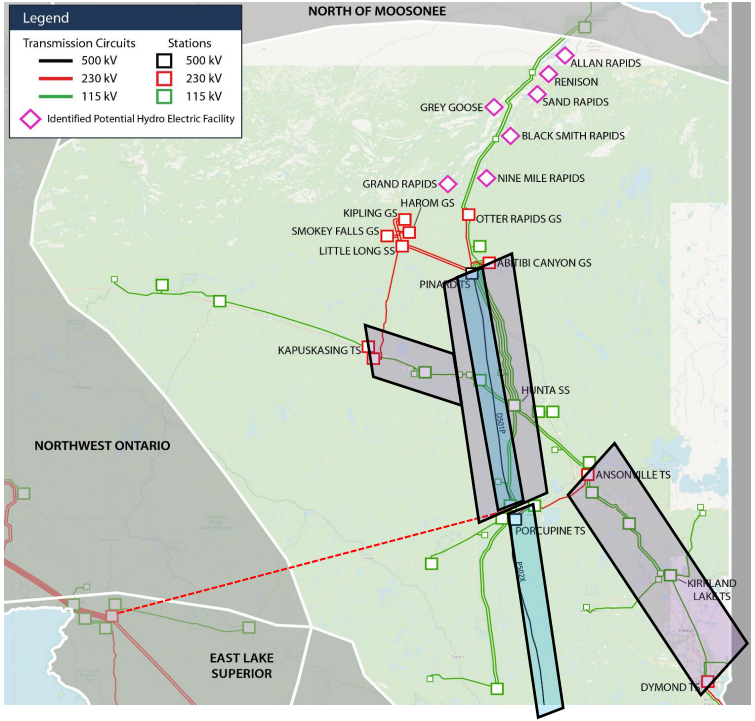
Work is underway to develop the first 430MW. Planning reflects potential development of hydroelectric generation, not indicating project commitment

Transmission **options** that include new ***230 kV*** circuits enable the first ~430 MW*

Transmission **options** that include new ***500 kV*** circuits enable significantly more

Transmission options that include both 230 kV and 500 kV circuits enable the largest amount

*Depending on facility characteristics and outcomes of procurements as well as large load connections



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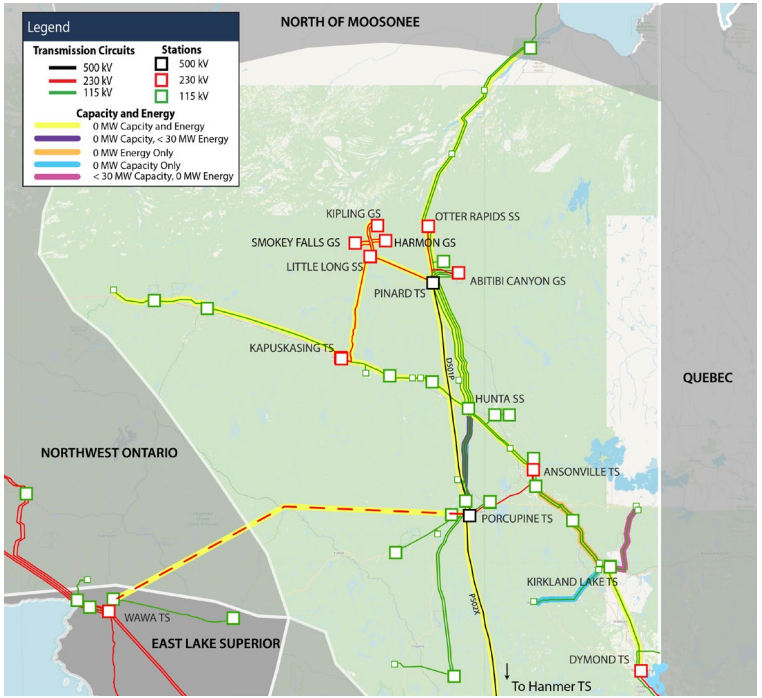
Enabling Energy-Based Renewable Generation (1 of 2)

The IESO's LT2 guidance document for Energy advises that a significant number of circuits cannot accommodate new generation due to the weak transmission system in the area and existing issues.

New 500 kV circuits do not allow for new connection points but do allow for large power transfers out of the region.

New 230 kV circuits allow for both new connections and power transfers.



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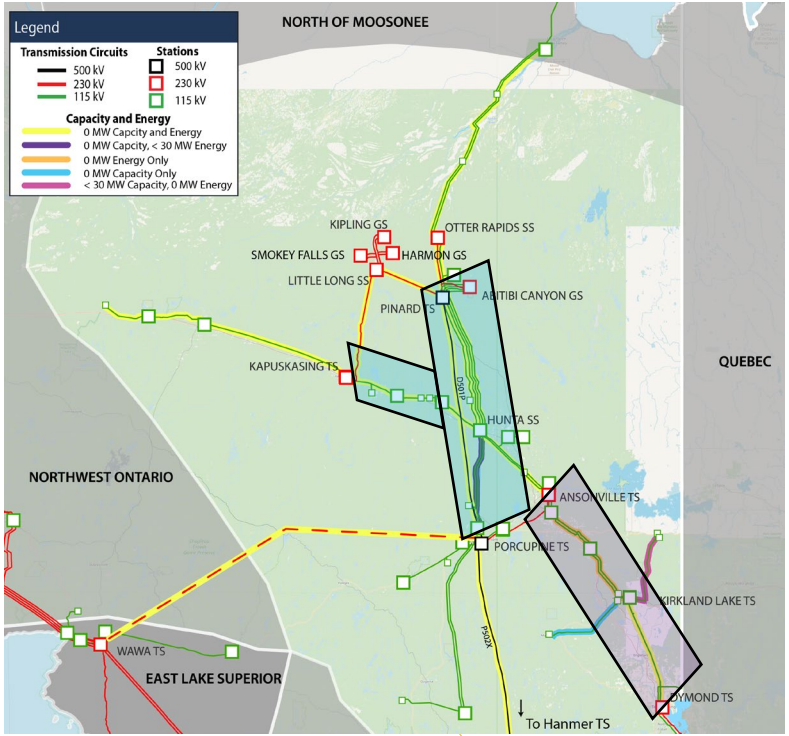
Enabling Energy-Based Renewable Generation (2 of 2)

New 230 kV path from Iroquois Falls to **Temiskaming Shores via Kirkland Lake**, allow for resource connection in the geographic area.

New 230 kV circuits **North of Timmins**, allow for the connection of resources in that geographic area.

Due to interdependencies in the region, the exact amount of resource enablement would depend on several factors including but not limited to, resource type, exact location, other procurement of capacity type generation North of Sudbury, and timing and behavior of demand growth.



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Draft Recommendations

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Staging the Draft Recommendations

Recommendations will be sequenced based on how demand forecasts, procurement outcomes, or policy decisions evolve. Development actions preserve flexibility while enabling near-term actions to proceed.

Implementation-Ready

- Near-term investments to enable growth and reliability
- Reinforcements required across multiple planning scenarios with defined near-term need dates
- Intended to proceed toward immediate implementation by the incumbent transmitter

Future-Ready Development

- Development work should be undertaken to preserve options and help address long transmission lead times
- This enables readiness without committing to full construction before demand, supply, or policy signals are confirmed

Future-Consideration Options

- Potential reinforcements linked to longer term growth, supply decisions, export pathways, or policy direction
- No assumed timing, scope, or commitment at this stage
- Informs future planning and system readiness as conditions evolve

Phase 1 – Implementation-Ready Reinforcement

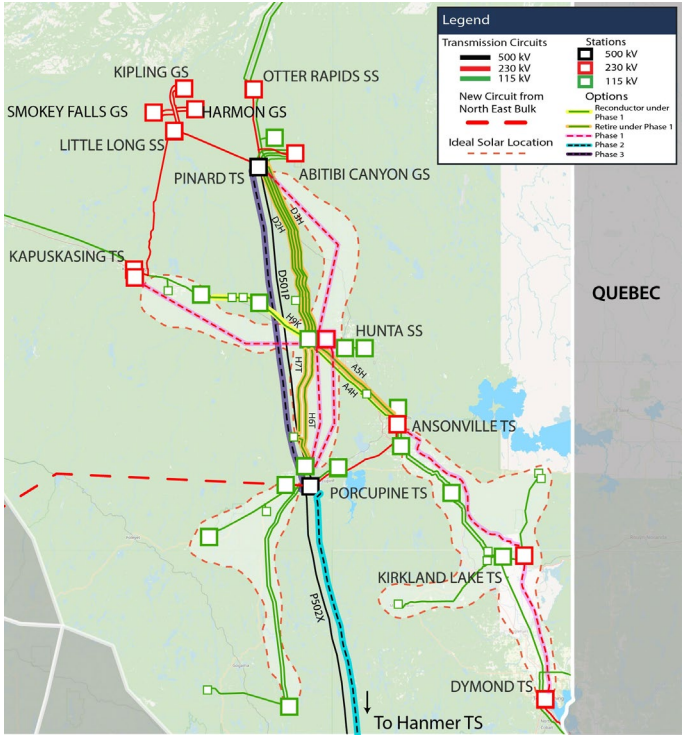
Phase 1 strengthens the 230 kV transmission system north of Sudbury to address existing and emerging reliability needs.

- Complete the 230 kV path between Iroquois Falls and Temiskaming Shores via the Kirkland Lake area
- Rebuild end-of-life 115 kV infrastructure north of Timmins as 230kV
- Reinforce key stations and transformation points to improve operability
- Reduce reliance on remedial action schemes

As a result of these reinforcements, Phase 1 also supports:

- Enabling of the initial stage of Moose River Basin hydroelectric development
- Additional connection points for other forms of generation (400 kms)

Estimated cost: approximately $3.2B (planning-level estimate)



Note: Start and end points only; not potential routing of new circuits

Phase 2 Future-Ready Development: Sudbury to Timmins

Phase 2 advances early development of a new bulk transmission path between Sudbury and Timmins to preserve system flexibility under higher-growth conditions.

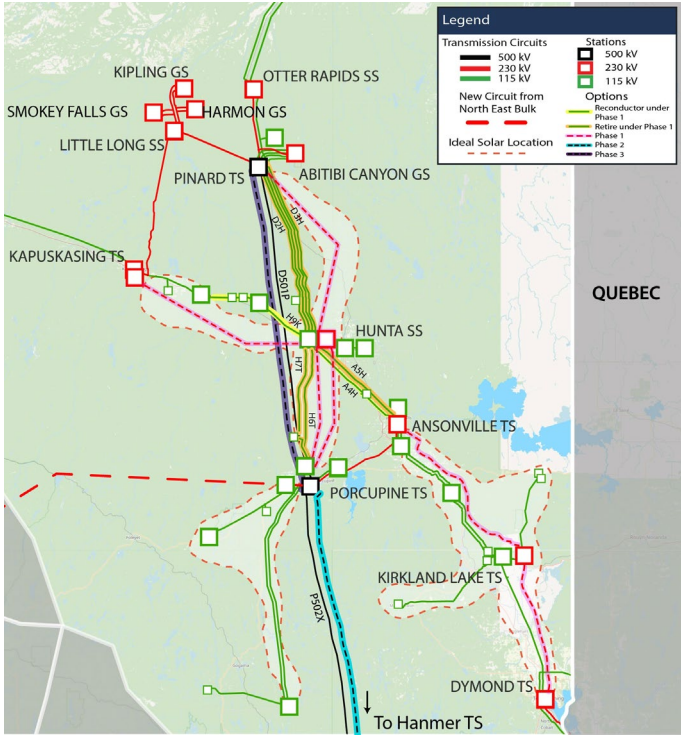
- Strengthen readiness to respond if Phase 1 is no longer sufficient

Phase 2 focuses on reducing lead times so the project can proceed efficiently when defined system triggers are reached. As a result, Phase 2 also supports:

- Connection of very large industrial loads, if they materialize
- Additional southward transfer capability to accommodate further generation

Construction would only proceed if future demand or system conditions meet identified triggers.

Estimated incremental cost (construction): approximately $1.6B (planning-level estimate)



Note: Start and end points only; not potential routing of new circuits

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Phase 3 Future-Ready Development: Timmins to Pinard

Phase 3 advances early development of a new 500 kV transmission line between Timmins and Pinard.

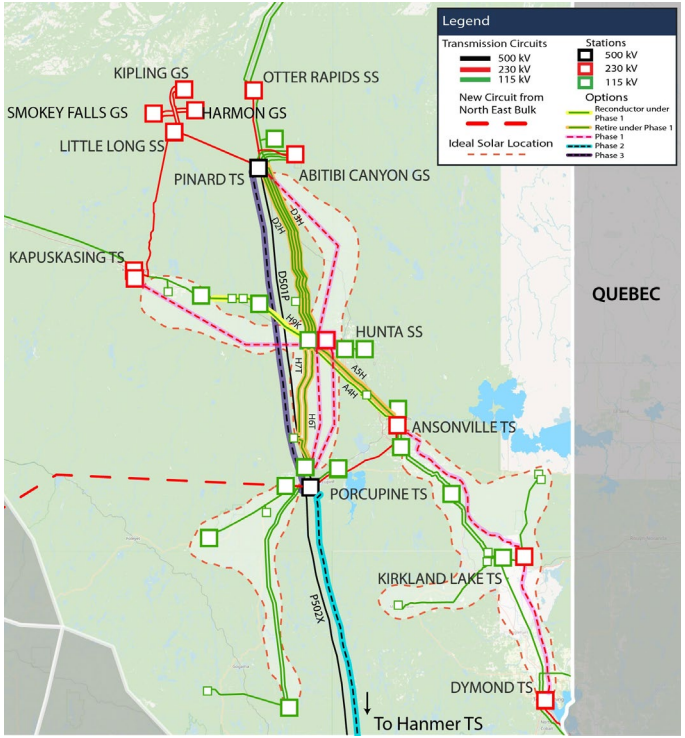
- Initiate early development work for a 500 kV bulk transmission path between Timmins and Pinard TS
- Coordinate development alongside Phase 2 to minimize incremental effort and preserve optionality
- Maintain the ability to respond to long-term system conditions north of Pinard

As a result, Phase 3 also supports:

- Additional southward transfer capability for additional hydroelectric development or renewable development in the area North of Pinard

Construction would proceed only if system triggers are reached.

Estimated incremental cost (construction): approximately $1.4B (planning-level estimate)



Note: Start and end points only; not potential routing of new circuits

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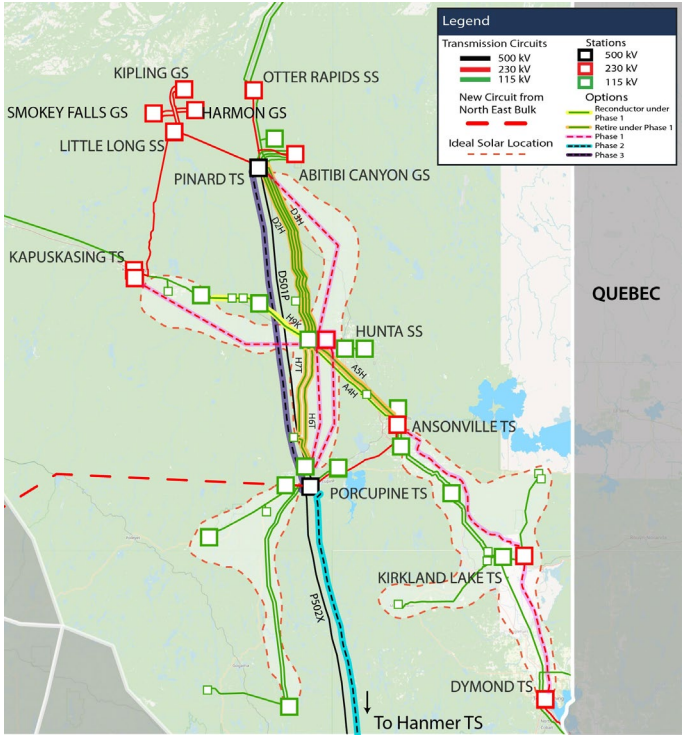
How Transmission and Supply Resources Work Together

Transmission reinforcements are required to address the identified reliability, and operability needs north of Sudbury. Supply resources and transmission resources can work together in supporting system reliability, deliverability and operability across the region.

- Additional and renewed supply resources in the area can support voltage control, operability, and outage performance
- Targeting supply resources in electrically weaker portions of the system, particularly areas served by the 115 kV network, can provide meaningful system benefits
- 115 kV area near Kirkland Lake - Solar resources capable of controlling voltage at all hours, including when not generating, can help manage high-voltage conditions and improve system operability
- Effective contribution of new supply resources depends on alignment with Phase 1 transmission reinforcements, which improve deliverability and reduce operational constraints

The IESO has existing procurement and contracting tools for supply resources. This bulk plan highlights why co-ordinating the timing and location of supply resources with Phase 1 transmission reinforcements, particularly resources that provide voltage support, can materially improve system outcomes

Supply resources are not a substitute for the transmission reinforcements identified in this plan, but they can significantly enhance system performance when developed alongside them.



Note: Start and end points only; not potential routing of new circuits

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Draft Recommendations - Summary

	Trigger	Cost	Key Features
Phase 1	• Near-term need to reinforce existing system capacity and reliability • Confirmed demand growth within the existing corridor • Projects that are technically mature and constructible	~$3.2B	• Completed 230 kV path between Iroquois Falls and Temiskaming Shores • Rebuild EOL 115 kV circuits north of Timmins as 230 kV • Ability to meet 2050 forecast in all sub regions • Ability to locate renewable generation in areas where existing infrastructure cannot accommodate.
Phase 2	• Sustained demand growth exceeding Phase 1 capabilities • Increased utilization of the Sudbury–Timmins corridor • Emerging resource development north of Sudbury	~$1.6B = Full construction cost	• Predevelopment of new 500 kV circuit Sudbury to Timmins • Future ready development to accommodate long-term growth
Phase 3	• Emerging resource development north of Timmins	~$1.4B = Full construction cost	• Predevelopment of new 500 kV circuit Pinard to Timmins • Future ready development to accommodate long-term growth

Next Steps

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Next Steps & Staying Engaged

Upcoming milestones for the North of Sudbury Bulk Plan:

- Feedback on the draft recommendations due June 10, 2026 to engagement@ieso.ca
- Mid-2026 - final report that will:
  - **Implementation-Ready Recommendations** that should proceed now to address near-term reliability needs
  - **Future-Ready Options** for which development work should be initiated
  - **Future-Consideration Options** and the triggers to monitor before initiating them, as well as any further studies required

Learn more about this plan by visiting the engagement webpage and subscribing to receive updates.

Discussion

Today's webinar focused on the draft North of Sudbury recommendations as presented. With the plan objectives and scope established, we are seeking feedback on clarity, understanding, and considerations important to note as the plan moves toward finalization.

1. What additional data or context would help provide more clarity and for consideration in the final report?
2. What questions or concerns do you have about the draft recommendations that the IESO might consider in future planning activities?
3. What additional data or local considerations should the IESO be aware of in finalizing the draft recommendations, or for future planning?

The IESO welcomes written feedback until June 10, 2026.

Please submit feedback to engagement@ieso.ca using the feedback form posted on the North of Sudbury engagement page.

Thank You

STAY INVOLVED

- Learn more at www.ieso.ca/learn
- Subscribe to updates at IESO.ca/subscribe
- Download the IESO's Municipal Toolkit
- Join an engagement

CONTACT

- IndigenousRelations@ieso.ca
- Engagement@ieso.ca

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Definitions

Interface - a collection of circuits and/or transformers which form the boundary of an area. Usually associated with a MW flow limit which if exceeded would result in a criteria violation

Capacity vs Energy Resource - a Capacity Resource is an electricity resource designed to provide reliable power during peak demand, measured in megawatts (MW), ensuring grid stability; Energy Resources focus on total MWh production over time.

Standards - dictates the assumptions, scenarios, and performance requirements to which the power system must be designed and operated.

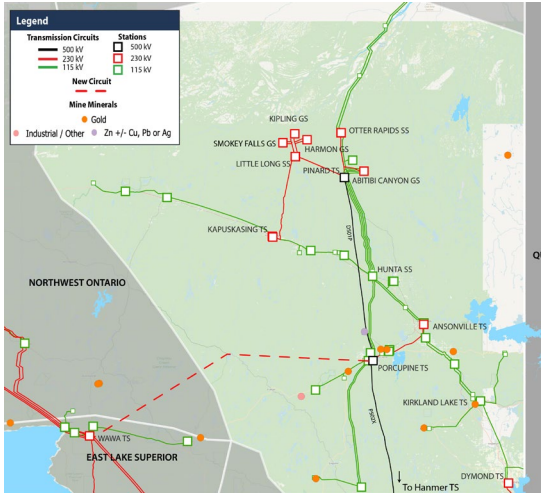
Dependable generation - the maximum amount of power that a resource can be relied upon to provide during specific periods, accounting for realistic operating constraints for which standards dictate said constraints

Recap: Mining Growth North of Sudbury

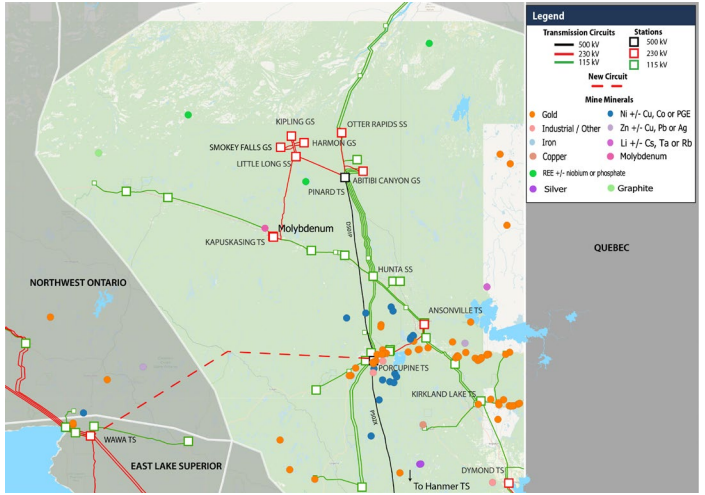
The following taken from Geology Ontario's Mineral Reserves and Resources of Ontario (MiRRO) layer, shows sites with mineral resources/reserves. There are significantly more sites than active mines today in four distinct pockets:

- Iroquois Falls to Temiskaming Shores (Ansonville TS to Dymond TS)
- Near Timmins (Porcupine TS)
- North of Timmins
- South of Timmins

Producing Sites



Non-Producing Sites



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Recap: Finding from the Needs Study

Both summer and winter needs exist where they are largest, due to:

- Flat industrial demand profile
- Low overnight hydro generation (energy-limited resources)
- Decline of thermal generation under contract

The need will continue to grow as more demand is connected in the area and uses up all new capacity provided by the new circuit between Porcupine TS (Timmins) and Wawa TS (Wawa) .

Additional considerations:

- Aging infrastructure consisting of ~650 km of 115 kV circuits north of Timmins built in the 1930s must also be addressed.
- Options to enable generation in the region see: Deliverability Test Process for the Long-Term Request for Proposals (LT1-RFP))

There is a transmission limitation from Hunta towards the Sudbury area, and from Hunta towards the Dymond area, which resulted in proposed resources located in the north of Timmins and Kirkland Lake areas being deemed "Not Deliverable"

Note: Load stations served from Pinard are geographically to the East and not shown

Detailed List of Wires Options

Description	From / To or Station or Circuit	Voltage Level (kV)	Distance (km)	A1	A2	B1	B2	B3	C1	C2	C3	C4
				S2N411	S2N2	S5N411	S5N2	S5N5	S52N411	S52N2	S52N5	S52N52
New Single Circuit Transmission Line	Hanmer TS to Porcupine TS + Inline Reactor	500	209			✓	✓	✓	✓	✓	✓	✓
New Single Circuit Transmission Line	Ansonville TS to Kirkland Lake Area	230	90	✓	✓				✓	✓	✓	✓
New Single Circuit Transmission Line	Dymond TS to Kirkland Lake Area	230	75	✓	✓				✓	✓	✓	✓
Transmission Line Refurbishment	D3K - Dymond TS to Kirkland Lake TS	115	75			✓	✓	✓				
Transmission Line Refurbishment	H6T/H7T/A4H/A5H/D2H/D3H - (North of Timmins / Iroquois Falls)	115	630	✓		✓		✓	✓		✓	
Transmission Line Refurbishment	H9K – Hunta SS to Carmichael Falls Jct.	115	60	✓	✓	✓	✓	✓	✓	✓	✓	✓
New Single Circuit Transmission Line	Hunta SS to Kapuskasing Area	230	90		✓		✓			✓		✓
New Single Circuit Transmission Line	Hunta SS to Pinard TS	230	90		✓		✓			✓		✓
New Double Circuit Transmission Line	Hunta SS to Porcupine TS	230	70		✓		✓			✓		✓
Transmission Line Retirement	H6T/H7T/A4H/D2H/D3H - (North of Timmins / Iroquois Falls))	115	570		✓		✓			✓		✓
Transmission Line Refurbishment	A5H – Hunta SS to Ansonville TS	115	60		✓		✓			✓		✓
New Single Circuit Transmission Line	Pinard TS to Porcupine TS + Inline Reactor	500	155					✓			✓	✓
New 230 kV yard + Autotransformers	Kirkland Lake Area – 2 x 125 MVA	230/115	N/A	✓	✓				✓	✓	✓	✓
New 230 kV yard + Autotransformers	Hunta SS 1 x 125 MVA	230/115	N/A		✓		✓			✓		✓
New Autotransformers	Pinard TS – 2 x 125 MVA	230/115	N/A		✓		✓			✓		✓
Estimated Cost (Billions 2025 CAD)	-50+100%			1.7	3.2	2.3	3.8	3.7	3.3	4.8	4.7	6.2

All 230 kV conductors are 1192 54/19 kcmil or equivalent ampacity Aluminum Conductor Composite Core (ACCC) or Aluminum Conductor Steel Supported (ACSS) conductor.

All 115 kV conductors are 411 15/7 kcmil or equivalent ampacity Aluminum Conductor Composite Core (ACCC) or Aluminum Conductor Steel Supported (ACSS) conductor.

For the options involving retirements of A4H, existing facilities to be shifted to A5H.

All circuit and transformer terminations will require station work at existing stations.

All Distances are estimates and subject to change based on routing.

Shaping Bulk Studies Through Engagement

Input from the various perspectives across the electricity sector is essential to the IESO's decision-making process. Several tools are available to enable public engagement through several channels including:

- The IESO Bulletin provides dates for upcoming webinars and is emailed to subscribers at www.ieso.ca/subscribe. Bulk updates are scheduled every quarter.
- Webinar recordings and materials are available on the North of Sudbury Bulk Plan webpage.
- We welcome feedback on the information we have shared. The IESO will consider all feedback and posts our responses to written submissions.

More information about how the IESO engages can be found on our External Relations Engagement Framework.

Feedback and Responses – by Theme

Summary of Feedback from May 2025 to October 2025

Theme: Growing Electricity Demand and Economic Development

Community and Stakeholder Feedback: Feedback emphasized current and anticipated load growth driven by mining, industrial expansion, and regional economic development, particularly around Timmins and nearby communities. Some participants highlighted additional local developments (e.g., mining expansions) that they felt should be reflected in the demand outlook.

IESO Response: The IESO acknowledged the importance of regional economic growth and confirmed that mining and industrial development are key drivers in demand forecasts. The IESO noted that demand assumptions are informed by ongoing engagement with industry groups and will continue to be refined as more project-specific information becomes available through future planning and regional processes.

Webpage to view all feedback received and the IESO's responses can be found here.

Feedback and Responses – by Theme

Summary of Feedback from May 2025 to October 2025

Theme: Transmission System Scope and Reliability

Community and Stakeholder Feedback: Comments raised concerns about transmission constraints, outage frequency, and system reliability in certain areas. Some feedback suggested expanding the study scope to include additional transmission lines or local reliability issues not directly covered under the bulk plan.

IESO Response: The IESO clarified that the bulk plan focuses on bulk transmission infrastructure and system-wide reliability, while local or regional reliability concerns may be addressed through Integrated Regional Resource Plans (IRRPs).The IESO explained that coordination between bulk planning and regional planning ensures issues are considered in the appropriate forum.

Webpage to view all feedback received and the IESO's responses can be found here.

Feedback and Responses – by Theme

Summary of Feedback from May 2025 to October 2025

Theme: Role of Storage, Non-Wires, and Emerging Technologies

Community and Stakeholder Feedback: Some comments proposed battery storage and other non-wires alternatives to help manage outages, load growth, and system flexibility. There was interest in understanding how storage could be evaluated alongside traditional transmission solutions.

IESO Response: The IESO indicated that non-wires options, including storage, are screened and evaluated as part of regional planning processes once specific needs are identified. The IESO encouraged proponents to participate in future procurement opportunities where such resources could contribute to system reliability.

Webpage to view all feedback received and the IESO's responses can be found here.

Feedback and Responses – by Theme

Summary of Feedback from May 2025 to October 2025

Theme: Generation Mix and Environmental Considerations

Community and Stakeholder Feedback: Environmental organizations raised concerns about reliance on new hydroelectric development, particularly in the Moose River Basin, citing ecological impacts, climate change uncertainty, and long development timelines. Some feedback questioned assumptions about hydropower and suggested greater consideration of wind and solar resources.

IESO Response: The IESO clarified that the bulk plan does not commit to specific generation projects but assesses transmission needs that could enable various future resource options. The IESO emphasized that environmental assessment, regulatory review, and government policy direction would ultimately determine whether and how specific generation projects proceed.

Webpage to view all feedback received and the IESO's responses can be found here.

Feedback and Responses – by Theme

Summary of Feedback from May 2025 to October 2025

Theme: Planning Uncertainty and Timing of Investments

Community and Stakeholder Feedback: Several comments highlighted uncertainty in economic conditions, demand forecasts, and long-term resource needs, cautioning against prematurely advancing large infrastructure projects.

IESO Response: The IESO recognized uncertainty as a core planning challenge and noted that bulk planning uses scenario analysis to test a range of growth outcomes. The IESO underscored that recommendations are staged and adaptive, allowing projects to proceed only as needs become clearer over time.

Webpage to view all feedback received and the IESO's responses can be found here.

Feedback and Responses – by Theme

Summary of Feedback from May 2025 to October 2025

Theme: Engagement, Transparency, and Ongoing Input

Community and Stakeholder Feedback: Feedback stressed the importance of continued engagement, transparency in assumptions, and opportunities for future input as the plan evolves.

IESO Response: The IESO reaffirmed its commitment to ongoing public, Indigenous, and sector engagement throughout the study. Feedback and responses are documented and shared publicly, with future webinars and updates planned as technical work progresses.

Webpage to view all feedback received and the IESO's responses can be found here.