
APRIL 2, 2026

GTA West Regional Electricity Planning

Engagement Webinar #2 Needs and Initial Options Screening

Land Acknowledgement

The IESO acknowledges that the GTA West electrical region is the traditional territory of many nations including the Mississaugas of the Credit, the Anishnabeg, the Chippewa, the Haudenosaunee, and the Wendat peoples, including those covered by the Williams Treaties.

The IESO would also like to acknowledge all First Nations, Inuit and Métis peoples and their valuable past and present contributions to this land.

Agenda

1. Ontario's Electricity Sector and IESO's Role
2. Recap: Regional Electricity Planning Process and the Demand Forecasts
3. Regional Electricity Needs
4. Initial Regional Option Screening
5. Linkages with Other Plans, including the South and Central Bulk Plan
6. Next Steps & Discussion



Connecting Today.
Powering Tomorrow.



We work with:



Seeking Input: Regional Planning

Local considerations and feedback are a critical component to the development of an Integrated Regional Resource Plan (IRR). The IESO wants to understand:

- What feedback do you have on the wire and non-wire options that will be considered to meet the region's electricity needs?
- What additional information should be considered in the evaluation of wire and non-wire options?
- Are there other types of information that would be helpful for us to provide in future engagements to enhance understanding of community perspectives and insights?

The IESO welcomes written feedback until **April 23, 2026**. Please submit feedback to engagement@ieso.ca.



Recap: Regional Electricity Planning Process & Demand Forecasts

Electricity Planning in Ontario



Provincial/Bulk System Planning

Addresses provincial electricity system needs and policy directions

Underway: South and Central Bulk Plan



Regional Planning

Addresses local electricity system needs at the transmission system level

Underway: GTA West Integrated Regional Resource Plan



Distribution Planning

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

Led by local distribution companies

Background on Electricity Planning in GTA West

Since 2015, the IESO has undertaken electricity planning work to address capacity needs to the GTA West electrical area. The previous regional plan was completed in 2022 and recommended upsizing of circuits and building new stations to meet growing electricity demand.

These solutions ensured a reliable supply of electricity to the area. However, continued demand growth will require more planning:

- The South and Central Bulk Plan will determine the electricity infrastructure required to enable economic development in the GTA more broadly and confirm transmission reinforcements required to enable the connection of expanded nuclear and other objectives. Learn more [here](#).
- The IESO and the Ministry of Energy and Mines are conducting a joint study to identify land to be protected for a future transmission corridor (adjacent to Highway 413) to support anticipated long-term electricity demand growth in the western and northern GTA regions.

Ontario's Regional Electricity Planning Process

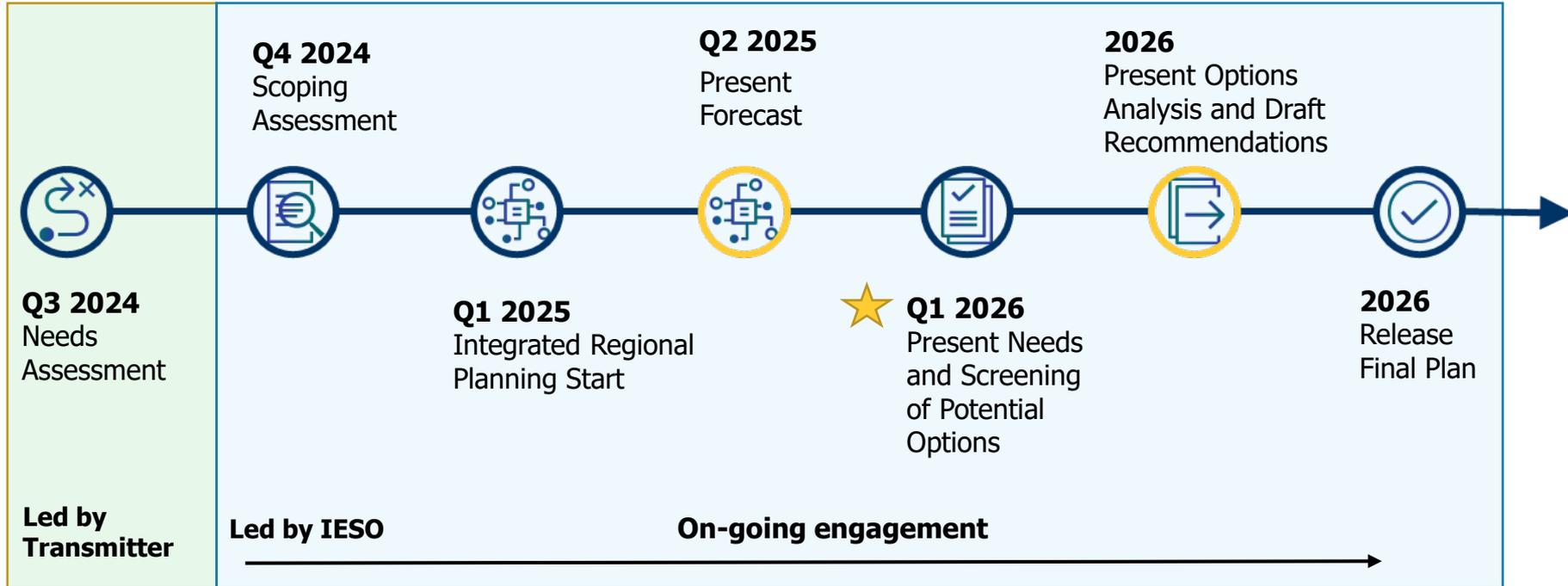
Regional electricity planning aims to ensure affordable and reliable electricity to local regions across Ontario, considering the unique needs of each region, and a range of integrated resource options to keep the lights on. Typically, regional planning is completed on a cycle.

An Integrated Regional Resource Plan is being developed for GTA West. The plan is being developed by a Technical Working Group, led by the IESO, with:

- Alectra Utilities Inc.
- Burlington Hydro Inc.
- Milton Hydro Distribution Inc.
- Oakville Hydro Electricity Distribution Inc.
- Halton Hills Hydro Inc.
- Hydro One Networks Inc.



Regional Planning Milestones for GTA West



Components of a Regional Plan

Demand Forecast

How much power is needed over the planning timeframe?

Needs

What needs are emerging in the region that need to be addressed?

Potential Solutions

What kinds of solutions can meet the future needs for the region?

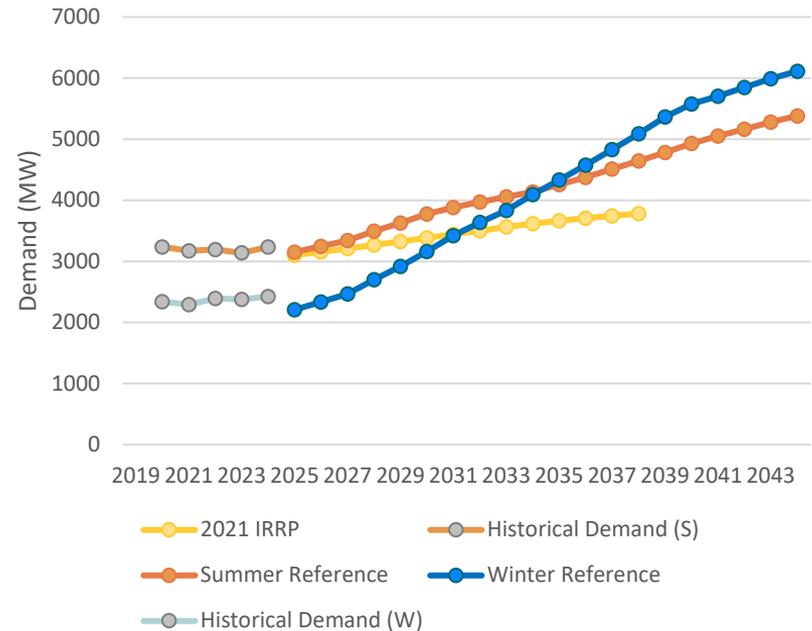
Recommendations

Based on an assessment of potential options, what recommended actions will ensure a reliable and adequate electricity supply for the region over the long-term?

GTA IRRP Demand Forecasts

- The electricity demand forecasts are developed in partnership between local distribution companies and the IESO.
- Forecasts are informed by municipal policies, including decarbonization plans, municipal growth plans, community energy plans, economic development, data centres, etc.
- In the GTA West region, the forecast growth rate is 3.4% (**growth of 89% by 2044**) – by comparison, the current provincial growth rate is 2% (growth of 65% by 2050).
 - Electrification of buildings, vehicles, and numerous expected projects are a significant contributor to increasing electricity demand.

GTA West Forecast Overview*



* The forecasts shown are GTA West coincident, net, extreme weather cases. This forecast does not include potential transmission-connected large-scale customers.

Feedback Received

Key Areas of Feedback	Outcome
Ensure the forecast accounts for growth and addresses capacity constraints	The regional electricity planning process identifies the region's electricity requirements over the next 20 years based on forecasts developed by local distribution companies and local input provided on current, planned and potential developments. The Technical Working Group developed a demand forecast that considers economic growth, residential growth, and electrification. To learn more about the forecast, the IESO has posted the forecasting methodology and data tables . The regional plan will address capacity constraints within the GTA West region and help position the system for future needs.
Explore non-wire solutions	To ensure that Ontario's electricity system remains reliable, affordable and sustainable, an evaluation of different options to meet the needs is a key step. To meet the growing demand identified in the GTA West area, an integrated plan will require a mix of wire and non-wire options. As planning continues to advance, the IESO welcome views and perspectives of communities and stakeholders, which will be considered in the development of the plan.

Please see the [GTA West engagement webpage](#) for the feedback and IESO response.



Regional Electricity Needs

Electricity Needs in GTA West

The Technical Working Group used the final demand forecast to assess if the existing transmission stations and lines can meet the forecasted growth within safe operating standards. If it cannot, the shortfall is categorized into one of five needs:

- **Station capacity:** Ability of a station to deliver power from the grid down to the distribution systems.
- **Supply capacity:** Ability of the system to supply power through the transmission lines to a local area.
- **Asset replacement:** Station or transmission equipment has reached end of life.
- **Load restoration:** Ability of the system to restore power after an interruption or loss of load.
- **Load supply security:** Maximum amount of power that can be lost during select contingencies.

Station Capacity Needs 1/3

Electricity Need	Impacted Asset	Drivers of Growth	Magnitude*	
			2026	2044
Station Capacity: the ability of a station to deliver power from grid to distribution system	1	Bramalea T1/T2	0 MW	74 MW 302 MW
	2	Bramalea T3/T4		13 MW 34 MW 53 MW
	3	Bramalea T5/T6	0 MW	4 MW 6 MW
	4	Cardiff TS	22 MW	63 MW 30 MW
	5	Churchill Meadows TS	0 MW	11 MW
	6	Cooksville T1/T2	0 MW	52 MW 118 MW
	7	Cooksville T3/T4	0 MW	47 MW 122 MW

Station Capacity Needs 2/3

Electricity Need	Impacted Asset	Drivers of Growth	Magnitude*	
			2026	2044
Station Capacity: the ability of a station to deliver power from grid to distribution system	8	Erindale T1/T2	0 MW	41 MW 77 MW
	9	Erindale T3/T4	0 MW	78 MW 37 MW
	10	Erindale T5/T6	0 MW	37 MW
	11	Goreway T5/T6	19 MW	135 MW 243 MW
	12	Halton TS	0 MW	88 MW 19 MW
	13	Jim Yarrow MTS	0 MW	81 MW 125 MW
	14	Kleinburg TS	22 MW 9 MW	220 MW 157 MW
	15	Lorne Park TS	0 MW	10 MW 12 MW

Station Capacity Needs 3/3

Electricity Need	Impacted Asset	Drivers of Growth	Magnitude*	
			2026	2044
Station Capacity: the ability of a station to deliver power from grid to distribution system	16 Meadowvale TS	<ul style="list-style-type: none"> Residential/commercial growth, large scale project, EV usage 	0 MW	23 MW
	17 Oakville TS	<ul style="list-style-type: none"> Residential growth, transit electrification, and EV usage 	0 MW	11 MW 2 MW
	18 Palermo TS	<ul style="list-style-type: none"> Residential growth, large scale projects, electrification, and EV usage 	0 MW	41 MW 4 MW
	19 Pleasant T1/T2	<ul style="list-style-type: none"> Residential/commercial growth Large scale projects 	0 MW	276 MW 243 MW
	20 Pleasant T5/T6	<ul style="list-style-type: none"> New community development EV usage 	11 MW	130 MW 226 MW
	21 Pleasant T7/T8	<ul style="list-style-type: none"> Town of Caledon infill development and industrial growth 	0 MW	24 MW 81 MW
	22 Trafalgar DESN	<ul style="list-style-type: none"> Residential growth, transit electrification, and EV usage 	0 MW	15 MW 6 MW

Supply Capacity Needs

Electricity Need	Impacted Asset	Circumstance of Need	Magnitude*	
			2026	2044
Supply Capacity: the ability of the system to supply power through the transmission lines to a local area	23	Cooksville Tap <ul style="list-style-type: none"> Supplies Cooksville TS, Lorne Park TS, Oakville TS, and a Customer station 	0 MW	238 MW 183 MW
	24	VxH Circuits <ul style="list-style-type: none"> Supplies Bramalea TS, Cardiff TS, and Goreway TS Receives supply from Sithe Goreway GS 	0 MW	174 MW 307 MW
	25	H29/H30 Circuits <ul style="list-style-type: none"> Supplies Pleasant TS 	13 MW	186 MW 279 MW
	26	B7/B8 Circuits <ul style="list-style-type: none"> Supplies Bronte TS 	0 MW	23 MW 16 MW

Load Security Needs

Electricity Need	Impacted Asset	Circumstance of Need	Magnitude*	
			2026	2044
Load Security: Maximum amount of power that can be lost during select contingencies	27	V41H/V42H	0 MW	32 MW 214 MW
	28	Goreway TS (V42H + V43)	0 MW	21 MW
	29	H29/H30	0 MW	303 MW 508 MW
	30	T38B/T39B	0 MW	142 MW 87 MW
	31	R14T/R17T	0 MW	127 MW 169 MW
	32	R19TH/R21TH	0 MW	21 MW 81 MW

Near-Term Needs in GTA West

Based on forecasted growth, the following needs have been identified:

Timing	Impacted Equipment
 Near-term	9 station capacity needs 4 system capacity needs
 Medium-term	5 station capacity needs 1 load security need
 Long-term	8 station capacity need 5 load security need

The numbers correspond to the needs detailed in slides 16 to 20.



Medium-Term Needs in GTA West

Based on forecasted growth, the following needs have been identified:

Timing	Impacted Equipment
 Near-term	9 station capacity needs 4 system capacity needs
 Medium-term	5 station capacity needs 1 load security need
 Long-term	8 station capacity need 5 load security need



The numbers correspond to the needs detailed in slides 16 to 20.

Long-Term Needs in GTA West

Based on forecasted growth, the following needs have been identified:

Timing	Impacted Equipment
 Near-term	9 station capacity needs 4 system capacity needs
 Medium-term	5 station capacity needs 1 load security need
 Long-term	8 station capacity need 5 load security need

The numbers correspond to the needs detailed in slides 16 to 20.



Summary of Electricity Needs in the GTA West Electrical Region

- Electricity demand in the GTA West electrical region is rising significantly due to new housing, industrial growth, and electrification. These needs are immediate, and the current infrastructure cannot keep pace, especially in areas that have little or no transmission infrastructure today.
- To meet this growing demand, large-scale, long-term upgrades such as new transmission lines and transformer stations will be required. These projects are essential, but they take time to plan, design, and construct.
- While that work is underway, short-term and medium-term measures will also be needed. Options such as load transfers, operational adjustments, and non-wires solutions are being explored to help maintain reliability and support growth during the transition.
- Together, these long-term investments and interim actions will form an integrated plan that ensures communities and businesses in GTA West continue to receive reliable, cost-effective electricity as the region expands.
- We are in the early stages of this work. The IESO will further evaluate a range of options and resources to meet the growing demand and determine the right mix to meet both current and future needs.



Initial Regional Option Screening

Determining Options

A combination of wire and non-wire options may be needed to address the needs, and over the course of the planning process, the IESO will:

Screen various options to address the region's near, medium and long-term electricity needs for the forecast, including:



Traditional wires options to supply local area



Non-wires alternatives (NWA), such as transmission-connected generation or energy storage, electricity demand-side management (eDSM), distributed generation or demand response

Complete a detailed analysis of screened-in options to recommend solutions to meet needs. Recommend options that address firm growth and consider potential growth to meet needs and ensure we can act quickly in the future when higher growth materializes.

Seek community feedback at key milestones to enhance development and evaluation of options before making a final recommendation.

Steps for Screening Options

1. Type of Need

Evaluate the compatibility of the need with the various option types, based on technical requirements and permissibility under planning standards and criteria.

2. Need Traits

Further filter compatible options with high-level need traits (such as timing, size, and coincidence with system needs).

3. Additional Considerations

Consider local factors that may require further analysis of non-wire alternatives, even if earlier steps haven't identified non-wires alternatives as suitable.

Screening Results 1/4

Need	Impacts	Screened In	Screened Out
Station capacity	Bramalea T3/T4	<ul style="list-style-type: none"> • Wires options • Incremental eDSM 	<ul style="list-style-type: none"> • Transmission-connected resources, since they are upstream of the station • Distributed generation due to timing or technical infeasibility • Demand Response due to timing
	Bramalea T5/T6		
	Cardiff TS		
	Churchill Meadows TS		
	Erindale T1/T2		
	Erindale T5/T6		
	Goreway T5/T6		
	Kleinburg TS		

Screening Results 2/4

Need	Impacts	Screened In	Screened Out
Station capacity	Lorne Park TS Meadowvale TS Oakville TS Pleasant T5/T6 Pleasant T7/T8 Trafalgar DESN	<ul style="list-style-type: none">• Wires options• Incremental eDSM	<ul style="list-style-type: none">• Transmission-connected resources, since they are upstream of the station• Distributed generation due to timing or technical infeasibility• Demand Response due to timing

Screening Results 3/4

Need	Impacts	Screened In	Screened Out
Station capacity	Bramalea T1/T2	<ul style="list-style-type: none"> • Wires options • Demand Response • Incremental eDSM 	<ul style="list-style-type: none"> • Transmission-connected resources, since they are upstream of the station • Distributed Generation due to timing or technical infeasibility
	Cooksville T1/T2		
	Cooksville T3/T4		
	Jim Yarrow MTS		
	Palermo TS		
	Pleasant T1/T2		
	Erindale T3/T4	<ul style="list-style-type: none"> • Wires options • Demand response • Distributed generation • Additional eDSM 	<ul style="list-style-type: none"> • Transmission-connected resources, since they are upstream of the station
	Halton TS		

Screening Results 4/4

Need	Impacts	Screened In	Screened Out
Supply capacity	Cooksville Tap	<ul style="list-style-type: none"> • Wires options • Demand response • Distributed generation • Transmission-connected Resources • Incremental eDSM 	
	VxH Circuits		
	B7/B8 Circuits		
	H29/H30 Circuits	<ul style="list-style-type: none"> • Wires option 	
Load Security	V41H/V42H	<ul style="list-style-type: none"> • Wires options 	<ul style="list-style-type: none"> • All NWA options screened out as only wires options can address load security needs
	V42H + V43		
	H29/H30		
	T38B/T39B		
	R14T/R17T		
	R19TH/R21TH		

Summary of Initial Option Screening for GTA West

Meeting the pace of growth in GTA West will require significant new electricity infrastructure. This includes both large-scale long-term investments, such as new transmission lines and stations, and interim measures that can help maintain reliability while major projects are built.

As part of the planning process, the IESO has completed an initial technical screening of potential solutions. Both wires and non-wires options will be carried forward for further evaluation.

- Wires solutions have been screened in because they are proven to be scalable, reliable, and cost-effective for meeting the large system and station capacity needs in this region.
- Non-wires options, including energy efficiency, local generation, and storage, have been screened in where there is potential to address the full need. Where they have been screened out, although it may not address the full need, we are exploring non-wire options to be evaluated in combination with wires to help provide flexibility and support local reliability.

The IESO will complete a more detailed evolution of the options, including combinations of wires and non-wires options. This analysis will help identify the most effective, affordable, and reliable plan for the region. Updates will be shared and community and stakeholder feedback will be collected to help shape the development and evaluation of options before making a final recommendation.



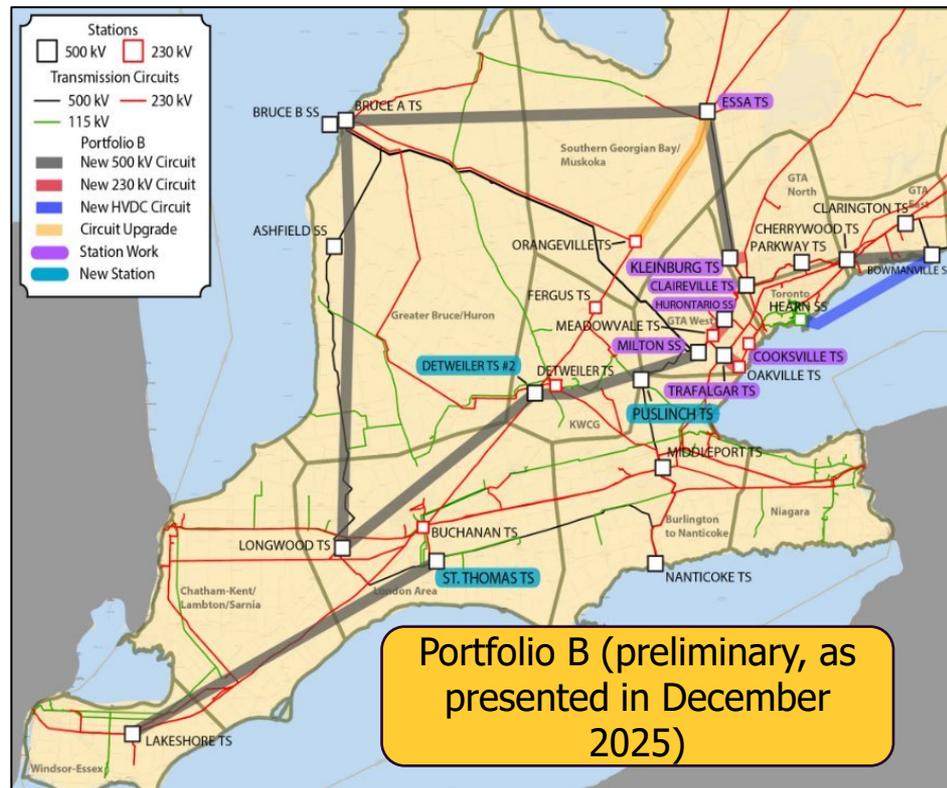
Linkages with Other Plans

Recap: Bulk Plan Objectives and Portfolios

The IESO initiated the South and Central Bulk Plan to identify transmission needed to enable:

- Growth in demand, particularly between Windsor to Hamilton, and within GTA
- Electrification and fuel switching, data centres, and other large load centres
- Future generation connections
- Opportunities to preserve new or expanded corridors

Draft recommendations were presented in Q4 2025. [Final report will be released in Q2 2026](#) and will focus on early, “future-ready” investments, as well as longer term direction to preserve options, if needed in the future.



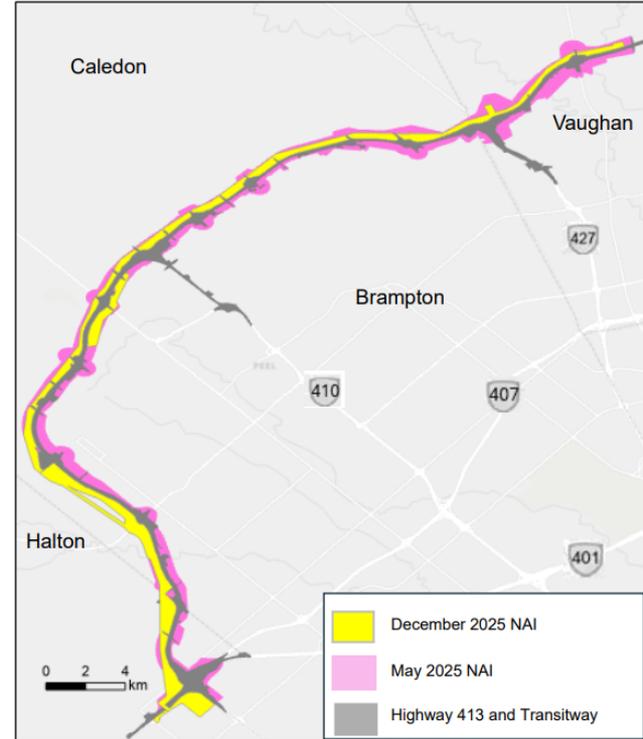
Northwest GTA Transmission Corridor

To ensure we can build transmission infrastructure when needed, early action is being taken to identify and protect strategic corridors, including the Northwest GTA corridor.

In October 2025, the IESO, Ministry of Energy and Mines (MEM), and Ministry of Transportation (MTO) refined the Narrowed Area of Interest (NAI) which included a reduced area to protect only the land that is necessary to support updated electricity system and transportation needs in the region.

The NAI has been designed to accommodate both 500 kV and 230 kV transmission infrastructure, allowing enhancements to the bulk power system, and local supply to the GTA West region.

Sign up for continued updates from MEM [here](#).



Co-ordinating with the GTA West IRRP

- The GTA West IRRP will identify preferred transmission upgrades to enable supply from the new bulk points identified in the South and Central Bulk Plan to be delivered to meet growing customer demand in the area.
- The GTA West IRRP will identify the need date for the Northwest GTA Corridor transmission line. It is expected that this line will be developed in stages, as supply customer needs emerge.
- By aligning regional and bulk efforts, along with protecting strategic corridors, the IESO aims to develop a coordinated and cost-effective approach to meeting electricity demand across the province.



Next Steps for Regional Plan

Ongoing Engagement

Your input plays an important role in developing the electricity plan.



Participate in upcoming public webinars



Subscribe to receive updates on the IESO website → select GTA West



Follow the GTA West regional planning activities online

Next Steps

The IESO will continue to engage and inform at these milestones:

IRRP Timelines

April 2, 2026: Needs and options screening are presented during a public engagement webinar with an opportunity for participants to provide feedback.

April 23, 2026: Written feedback on the needs and options screening is due.

2026: Options analysis and draft recommendations are presented during a public engagement webinar with an opportunity for participants to provide feedback.

2026: IRRP report will be completed and published on the GTA West engagement webpage.

Seeking Input: Regional Planning

Local considerations and feedback are a critical component to the development of an Integrated Regional Resource Plan (IRR). The IESO wants to understand:

- What feedback do you have on the wire and non-wire options that will be considered to meet the region's electricity needs?
- What additional information should be considered in the evaluation of wire and non-wire options?
- Are there any additional information that should be provided in future engagements to help understand community perspectives and insights?

The IESO welcomes written feedback until **April 23, 2026**. Please submit feedback to engagement@ieso.ca.



Appendix

Technical Working Group

The regional planning process is conducted by a Technical Working Group, consisting of:

Team Lead, System Operator

- Independent Electricity System Operator

Lead Transmitter

- Hydro One Networks Inc. (Transmission)

Local Distribution Companies

- Alectra Utilities Inc.
- Burlington Hydro Inc.
- Milton Hydro Distribution Inc.
- Oakville Hydro Electricity Distribution Inc.
- Halton Hills Hydro Inc.
- Hydro One Networks Inc. (Distribution)

Developing the Demand Forecast

Forecast data is provided by the local distribution companies (LDCs) based on established forecasting assumptions and customer connection requests. Forecast includes:

- Both summer and winter electricity demand broken down by transformer station.
- Insights from municipal and community energy plans.

In addition, the IESO, alongside the Technical Working Group:

- Adjusts for impacts of existing demand side management programs, distributed generation, and the effects of extreme weather on electricity demand.
- Works directly with customers and industry stakeholders to account for large electricity consumers that may seek connection on the transmission system.
- Engages to ensure additional insights from municipalities, customers, and other interested parties are incorporated in the demand forecast.

Local Distribution Company (LDC) Demand Forecast Methodologies

LDCs have provided detailed documentation of their load forecast methodologies, which has been published on the IESO's [website](#).

Highlights include:

- Reliance on assumptions from Federal, Provincial, Regional, and Municipal plans and targets for longer term forecasting, with connection applications, building permits, ICI and housing activity informing near term forecasts.
- Forecasting techniques included Econometric, Trending, End Use, and Bottom-up analysis.
- Electrification is driven by fuel switching for heating and transportation, informed by government mandates and initiatives.