
APRIL 30, 2026

Quarterly Bulk Update

South and Central Bulk Plan

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 South and Central Bulk Plan has advanced, and today we will share the draft recommendations for feedback, before releasing our Final Report.

To recap, in previous engagement webinars, we have shared data, diagrams and maps of the study area, generation and load assumptions, and transmission system interface limits.

We have also shared and sought input on the Portfolio of Options (A, B and C) that include several proposed transmission recommendations designed to support future demand growth and the delivery of new generation resources across southern and central Ontario, while providing opportunities for feedback to help shape the plan.

Agenda

- Overview of the IESO and Meeting Electricity Needs
- Bulk Transmission System Planning
- Overview of the South and Central Bulk Plan
- Approach to Identifying Draft Recommendations
- Draft Recommendations
- Next Steps and Discussion



Ontario's Growing Electricity Needs



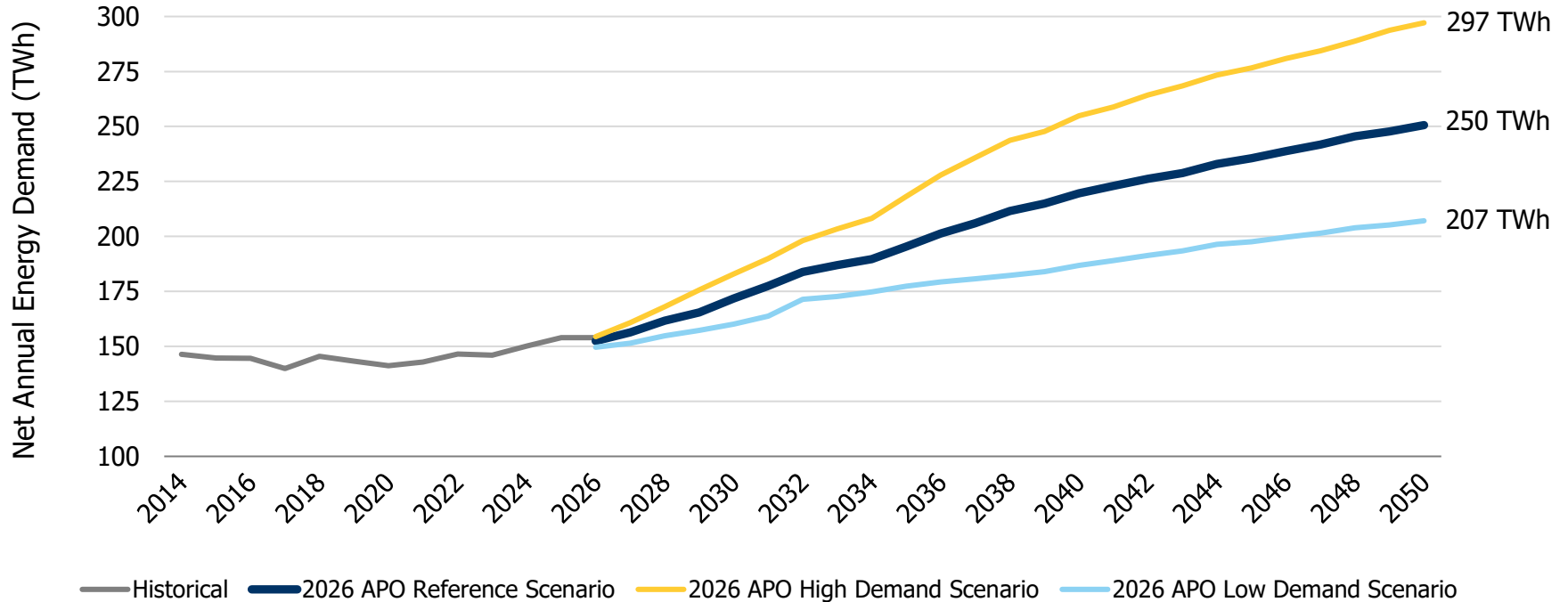
Connecting Today.
Powering Tomorrow.



We work with:



Electricity Demand Long-Term Outlook



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 renewable 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) Request for Proposals (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

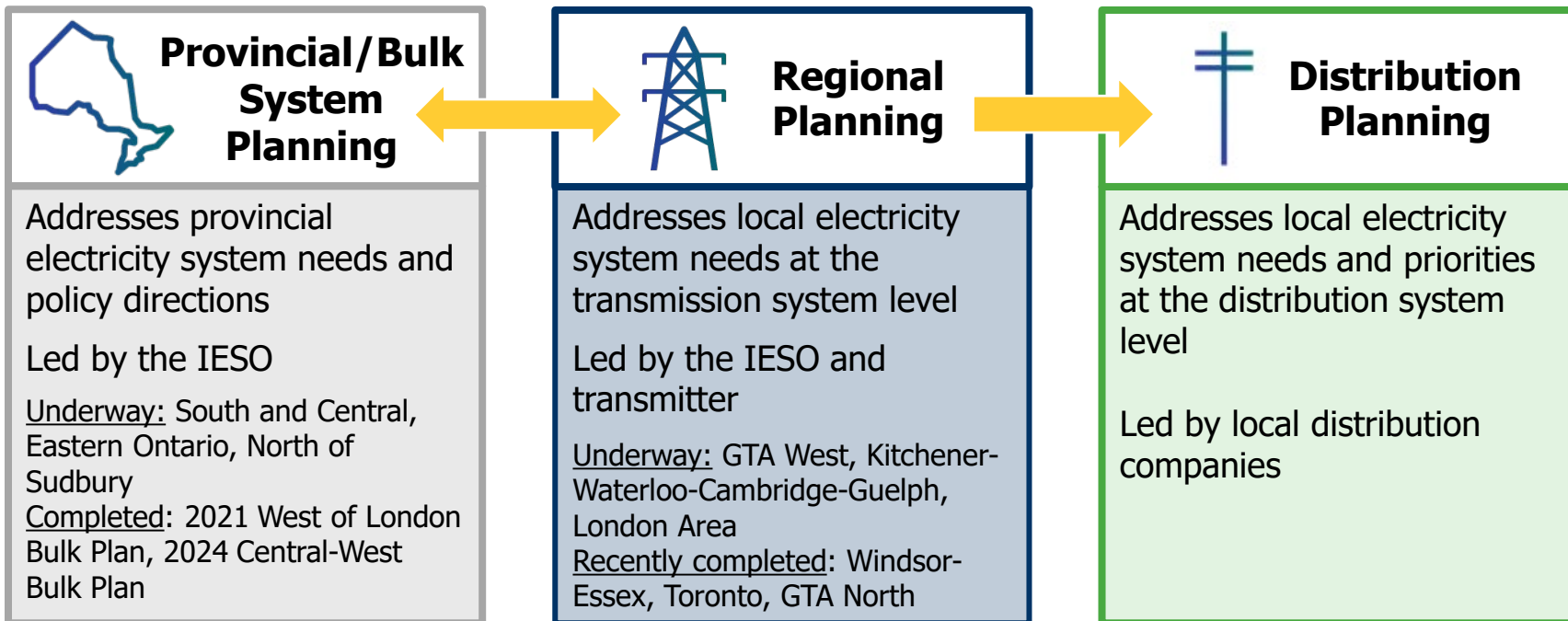
Role of Transmission in the Energy Transition

- 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 without over-reliance on local emitting generation
 - Provide flexibility and resilience across a range of future demand and supply outcomes
 - Enable economic growth and electrification across broad geographic regions



Bulk Transmission System Planning

Electricity Planning in Ontario



Overview of Bulk System Planning

The [Annual Planning Outlook](#) (APO) contains a snapshot of Ontario's bulk resources and transmission needs.

- A Schedule of Planning Activities summarizes the plans and studies that are underway and upcoming.
- Activities are reviewed and updated every year, considering updated 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](#).

Key Sector Participants for Transmission Implementation



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.



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.



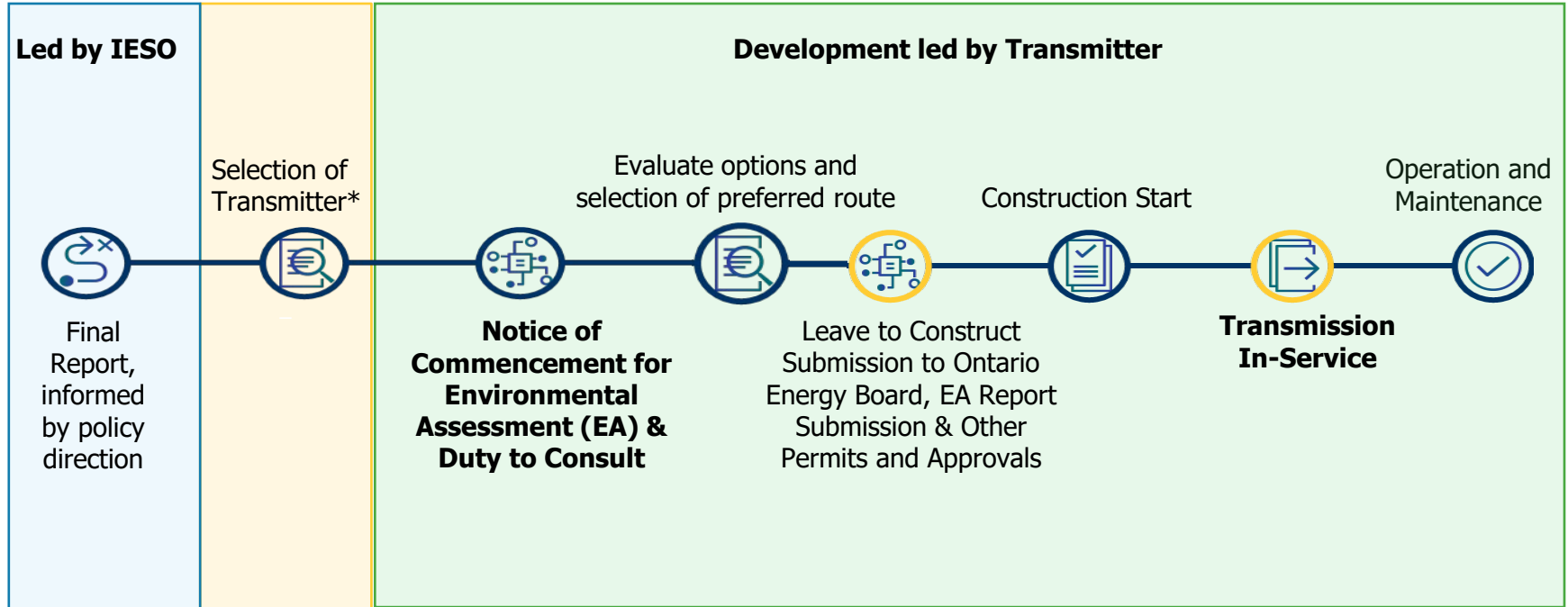
Ministry of the Environment, Conservation and Parks

Legislative authority for environmental assessments in Ontario.



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

Typical Process for Transmission Development



* Transmitter Selection Framework under development

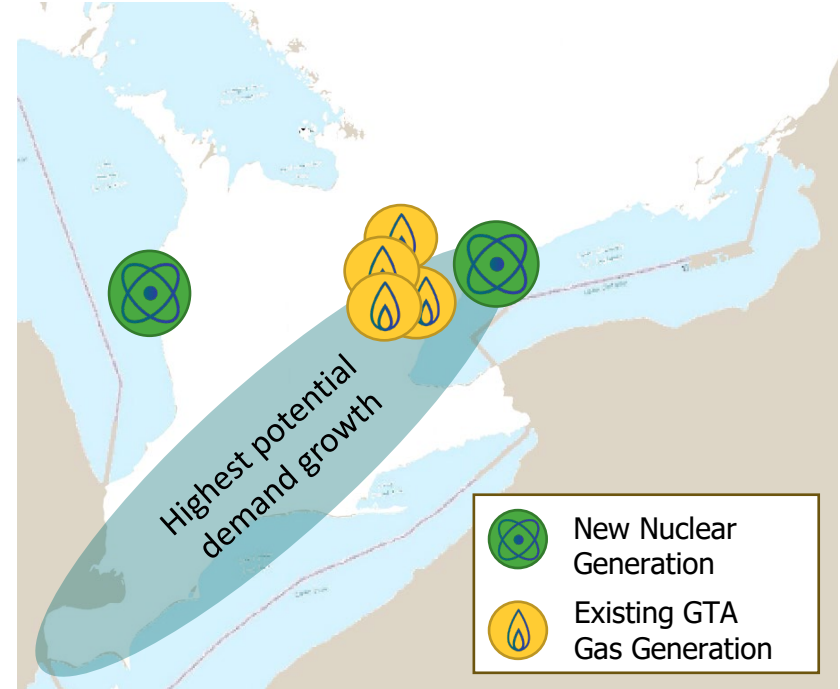


Overview of the South and Central Bulk Plan

South and Central Bulk Plan

This comprehensive bulk system plan will enable:

- **Reliable electricity supply** to fast-growing regions, particularly between Windsor and Hamilton and in the Greater Toronto Area (GTA)
- **Delivery of future generation resources**, including new nuclear resources at Bruce and Darlington sites.
- **Early planning for decreased reliance on emitting resources**, specifically in the GTA
- **Electrification and fuel switching**, and connection of data centres, and other large load centres
- **Opportunities to preserve new or expanded corridors** for future electricity infrastructure
- **Co-ordination with other bulk electricity planning** in the north and east, as well as regional plans

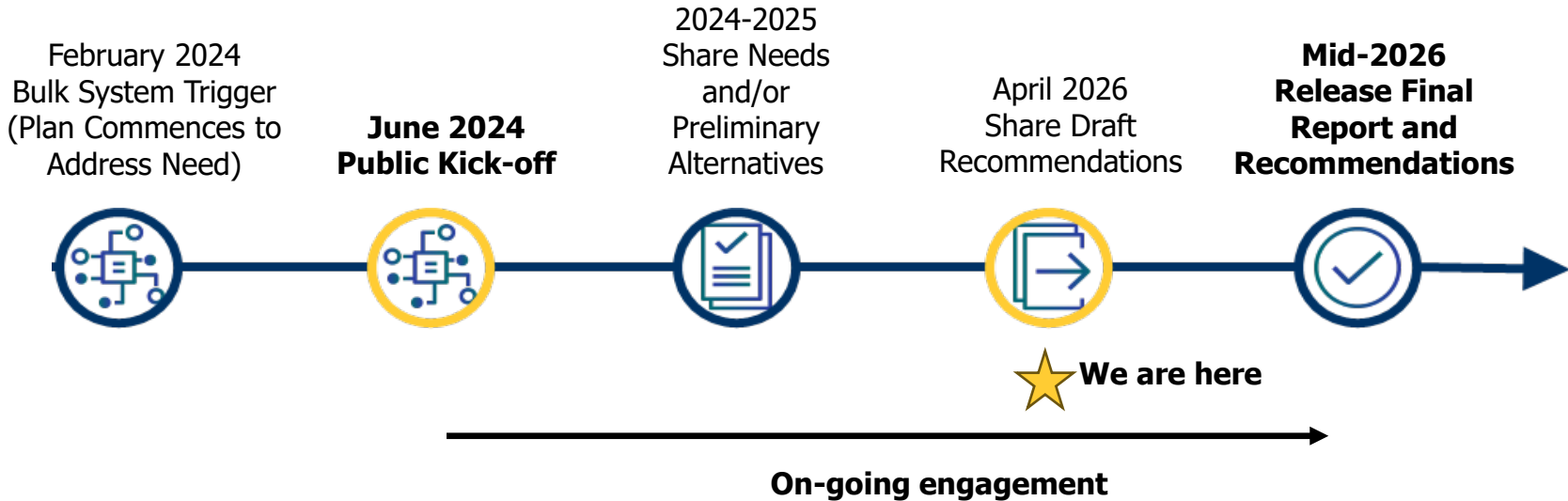


Initiating the South and Central Bulk Plan

The South and Central Bulk Plan was initiated to identify a series of near-term actions and longer-term options to ensure the transmission system is equipped to meet challenges and opportunities associated with the energy transition. It considered multiple inputs including provincial policy drivers as part of its assumptions in the development of the portfolios and recommendations:

1. The South and Central Bulk Plan builds on assumptions used in the IESO's **Annual Planning Outlooks** and *Pathways to Decarbonization* report.
2. Assumptions were also supplemented by **government policies and direction** through specific planning documents such as *Powering Ontario's Growth* plan and the more recent *Energy for Generations: Ontario's Integrated Energy Plan* that have underscored the importance of early planning activities to maintain a reliable and affordable supply of electricity.
3. The bulk plan also leverages data and needs identified from the **regional planning process**, including local economic development, housing growth, community climate plans as well as committed transmission projects to co-ordinate bulk and local transmission system solutions.

South and Central Bulk Plan: Timeline



Recap: Early Actions

Over the course of the development of this plan, the IESO shared a set of Early Actions to accelerate the pace of future upgrades by moving ahead with new projects when there is sufficient confidence in their necessity and/or risk related to delayed implementation. Based on the South and Central Bulk Plan, two early actions were identified:

1. **A new double-circuit 500 kilovolt (kV) transmission line from Bowmanville towards Toronto**, now recommended to terminate into the two circuits currently supplying Parkway Transformer Station (TS) from Cherrywood TS, while bypassing Cherrywood TS
2. **Corridor preservation studies within the GTA** to identify potential locations for future transmission infrastructure and preserve land to ensure long term viability of options

Since the identification of these early actions, further detailed studies have been completed for the South and Central Bulk Plan.

Recap: Development of Preliminary Portfolios

The IESO developed three distinct preliminary portfolio of options, representing different approaches to meeting the study objectives. Each portfolio addressed the identified needs emerging between 2035 and the early-2040s (later dates tied to the timing of Bruce C). Study of 2050 needs and options will be studied in Phase 2 in 2027.

Portfolios of options were used due to the volume of system changes being contemplated. Assessing the costs and benefits of a portfolio of options that meet the plan's objectives allows the evaluation of alternatives to better consider the impact of the uncertainties in how the power system will evolve (e.g., the impact of different load and generation futures on overall system costs for the different transmission build out options).

Each portfolio shares a common backbone (i.e., strategic, future-ready investments), critical for achieving key plan objectives under several futures. In each portfolio, these "future-ready" investments are paired with additional reinforcements to meet the overall objectives of the South and Central Bulk Plan. Variations between portfolios are focused on different options for supporting growth (e.g., economic development) in the load centres.

Co-ordinating With Local Needs

Bulk system planning is led by the IESO to assess the ability of the provincial transmission system to deliver electricity from where it is generated to where it is needed.

Regional planning focuses on delivering that capacity within 21 local planning areas across the province.

The South and Central Bulk Plan is integrated with **Integrated Regional Resource Plans (IRRP_s)**, which includes current or recently completed IRRPs: Toronto, Windsor-Essex, Kitchener-Waterloo-Cambridge-Guelph, GTA North, GTA West, and the London Area

Regional needs can trigger requirements for bulk system upgrades, and bulk plans can impact needs and options considered locally:

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

Recap: Key Recommendations

In 2025, the IESO also shared a set of draft recommendations to accelerate the implementation of upgrades due to their urgency for addressing local area needs. Following the feedback received since the previous update, three recommendations were finalized:

- 1. A new/expanded bulk supply point in northern GTA (Kleinburg 500 kV TS)** to provide additional supply capacity to northern York and Peel regions
- 2. A new bulk supply point in western GTA (Milton 500 kV TS)** to provide additional supply capacity to Peel and Halton regions
- 3. A new bulk supply point in Southwestern Ontario (Wellington 500 kV TS)** to provide additional supply capacity to Kitchner-Waterloo-Cambridge-Guelph region

Details of these recommendations will be shared in the final report in Q2 2026.



Approach to Identifying Draft Recommendations

Evaluation of Portfolios

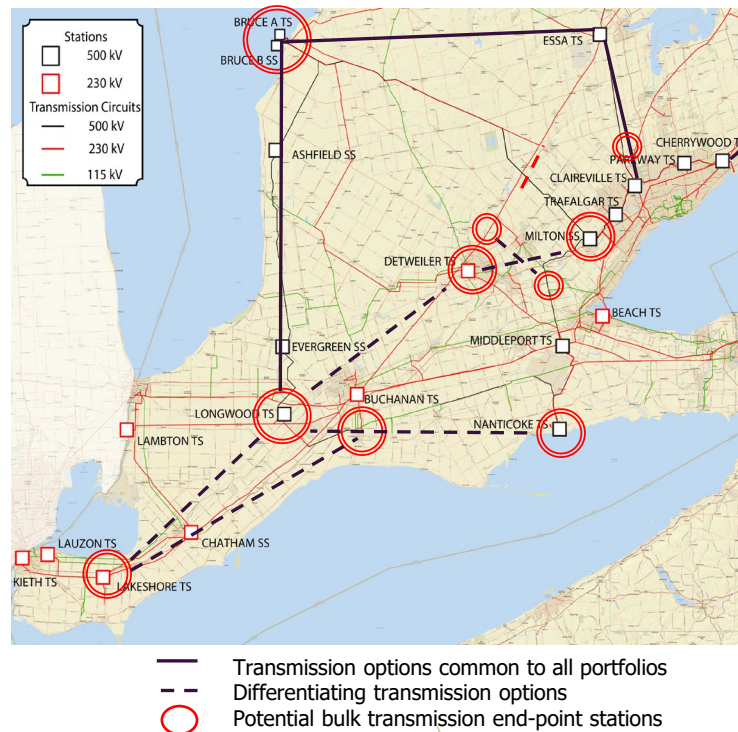
The IESO developed **three distinct portfolios of options**, representing three different holistic approaches to meeting the same plan objectives.

Each portfolio includes **a set of common transmission investments that are critical for achieving the plan objectives under all future scenarios assessed**. These investments are paired with additional reinforcements to meet the overall objectives of the bulk plan.

The portfolios vary based on options to support growth (e.g., economic development) in the load centres:

- 500 kV or 230 kV supply to the London Area region
- 500 kV supply into Windsor-Essex region
- 500 kV or 230 kV supply to the Kitchener-Waterloo-Cambridge-Guelph region

Illustrative Map of the Potential Bulk Transmission Reinforcements Across Three Portfolios



Option Evaluation Approach

The IESO considered each portfolio's ability to support provincial policies and demand growth while considering the ability to enhance supply diversity and system resilience, and factors such as costs and development lead time:

Reliability performance – Ability to supply future demand according to established reliability criteria for electric power systems.

System operability and resilience – Impact on the power system's operational intricacies and ability to withstand or recover from major events.

Broader system impacts – Benefits to the overall bulk transmission network and the flexibility to support a range of possible futures.

Community and Stakeholder feedback and implementation – input from communities/stakeholders, land-use impact, and pacing of reinforcement build-out.

Cost-effectiveness for ratepayers – Cost effectiveness of the option in providing power reliably and safely to consumers; includes co-ordinating bulk system level and regional level solutions.

Role of Energy Modelling

A production cost model was used to simulate hourly dispatch of resources to meet electricity demand in Ontario, for both the existing system and with each of the transmission portfolios.

Three resource scenarios were developed using generation assumptions that are consistent with the [2025 Annual Planning Outlook](#). Each scenario includes existing and committed resources, and future resources identified through the [Capacity Expansion model](#). These [data sets](#) were shared in November 2025.

Transmission portfolios for the South and Central Bulk Plan were assessed based on their ability to meet the forecast demand growth under each resource scenario. Specifically, energy flows across key bulk transmission interfaces over the study period informed the portfolios' **broader system impact – an input into the portfolio evaluation.**

Summary of Portfolio Evaluation

	Portfolio A	Portfolio B	Portfolio C
Reliability performance	Least improvements in electricity supply, and regional coordination	Most improvements in electricity supply and regional coordination	Moderate improvements in electricity supply and regional coordination
System Operability	Least improved operability through key system interfaces	Most improved operability through key system interfaces	Moderate improved operability through key system interfaces
Resilience	Highest impact of total corridor and station loss in major events	Lowest impact of total corridor and station loss in major events	Lowest impact of total corridor and station loss in major events
Broader System Impacts	Lowest system benefits under different generation scenarios	Highest system benefits under different generation scenarios	Moderate system benefits under different generation scenarios
Feedback	Some expressed concerns	No expressed concerns	No expressed concerns
Implementation	Similar build-out rate	Similar build-out rate	Similar build-out rate
Upfront Capital Cost (2026\$)¹	\$9.2B	\$9.8B	\$9.3B

Legend

Worst-Performing

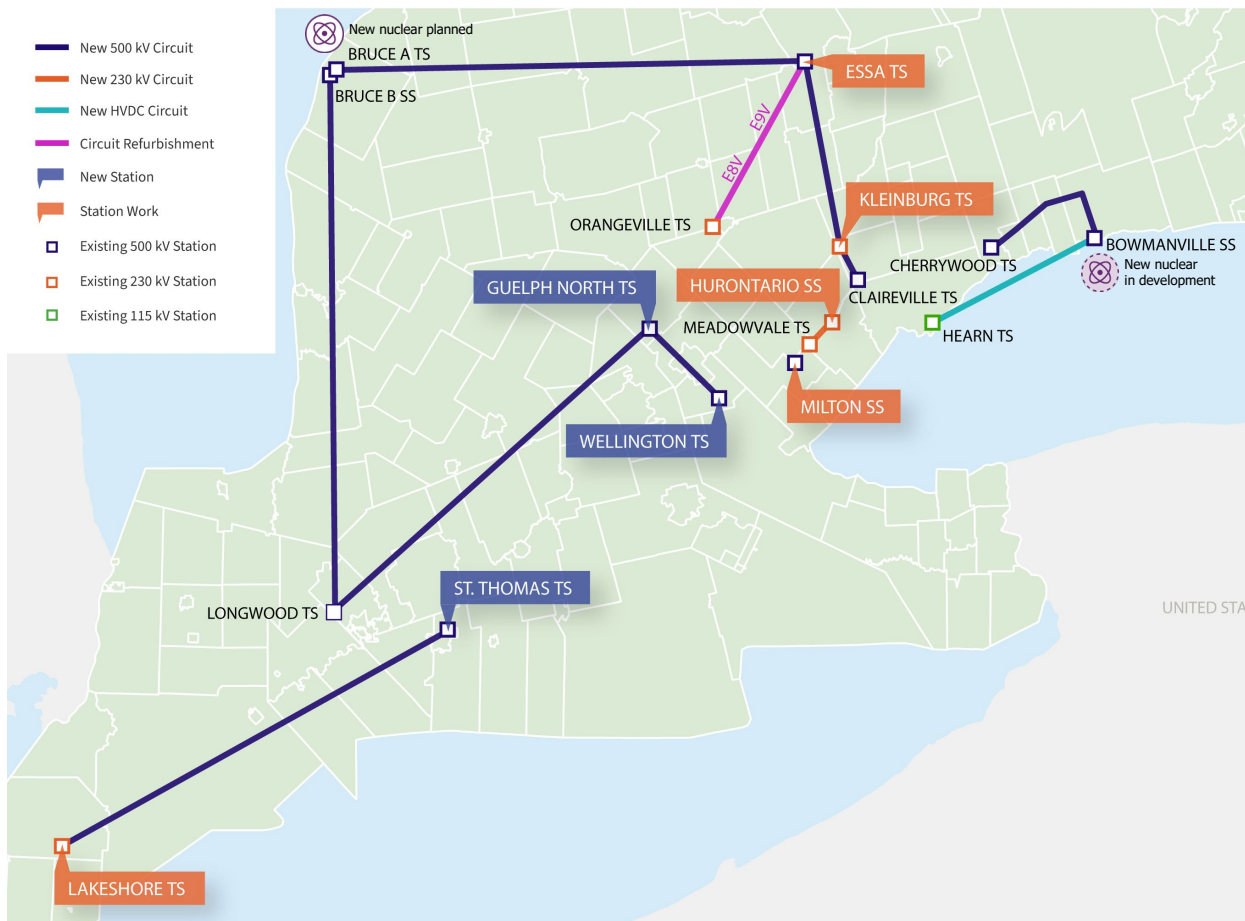
Best-Performing

Moderate-Performing

Draft Recommendation

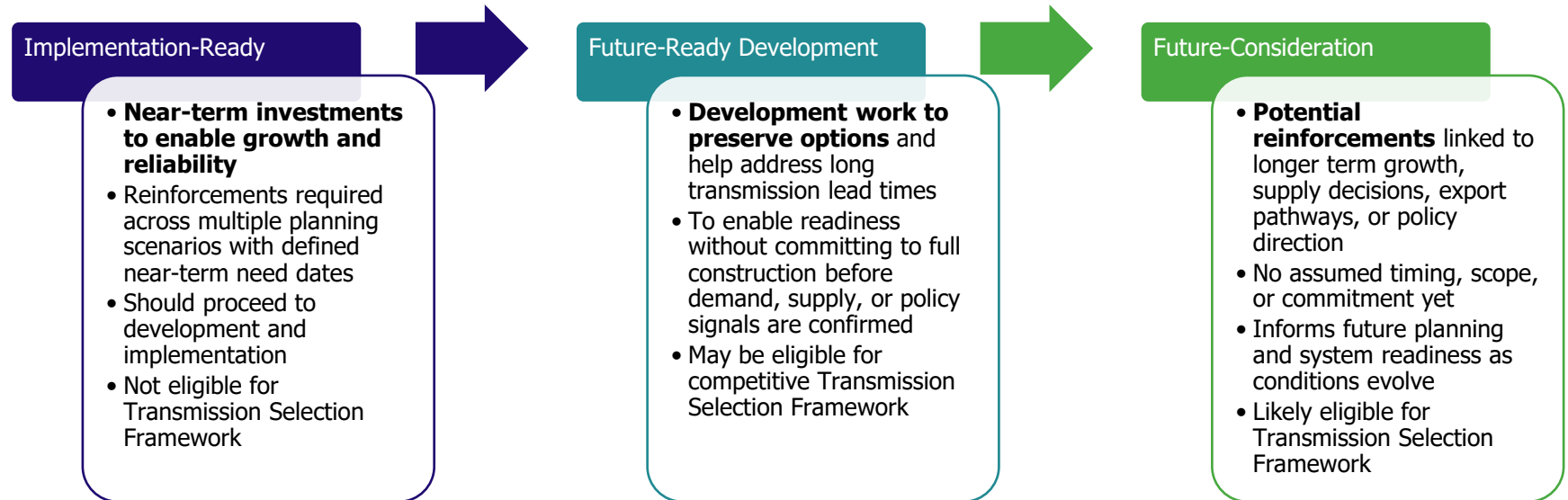
Based on the IESO's analysis, **Portfolio B** is the draft recommendation to best meet South and Central Bulk Plan objectives. Within this portfolio, only some reinforcements are implementation-ready.

- ✓ Highest reliability performance
- ✓ Highest system operability
- ✓ Highest resilience
- ✓ Highest system benefits
- ✓ Generally positive support



Staging the Draft Recommendations

South and Central Bulk Plan recommendations will be sequenced based on how demand forecasts, procurement outcomes, or policy decisions evolve. Development actions now can preserve flexibility while enabling other near-term actions to proceed.

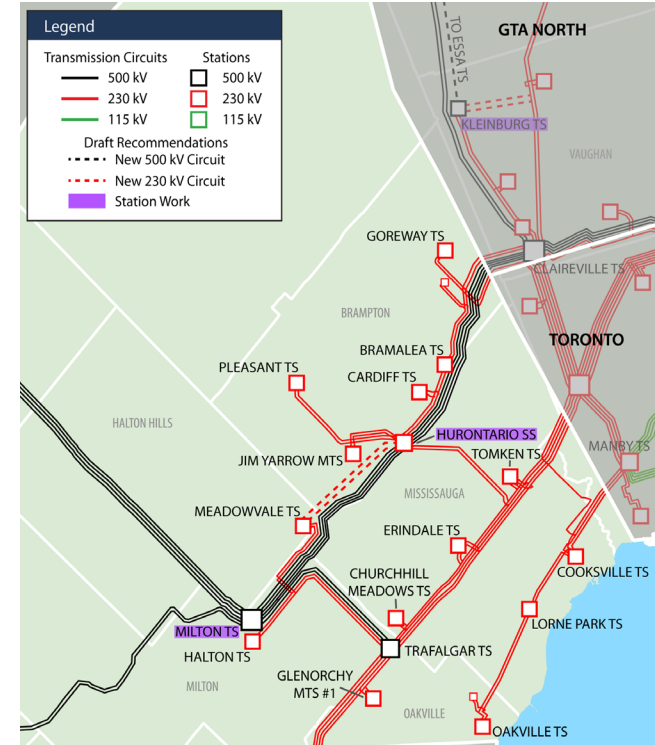




Draft Bulk Transmission Recommendations Relevant to GTA/Central Ontario

Draft Recommendations – GTA West

Project	Regional Benefit	Timing
Milton TS Development	<ul style="list-style-type: none"> Provides additional supply to GTA West/Halton and Peel Regions 	2033
Meadowvale to Hurontario Transmission Line	<ul style="list-style-type: none"> Required to enable the development of Milton TS Provides additional supply to GTA West/Halton and Peel Regions 	2033
Hurontario SS Reconfiguration	<ul style="list-style-type: none"> Required to enable the development of Milton TS Provides additional supply to GTA West/Halton and Peel Regions 	2033



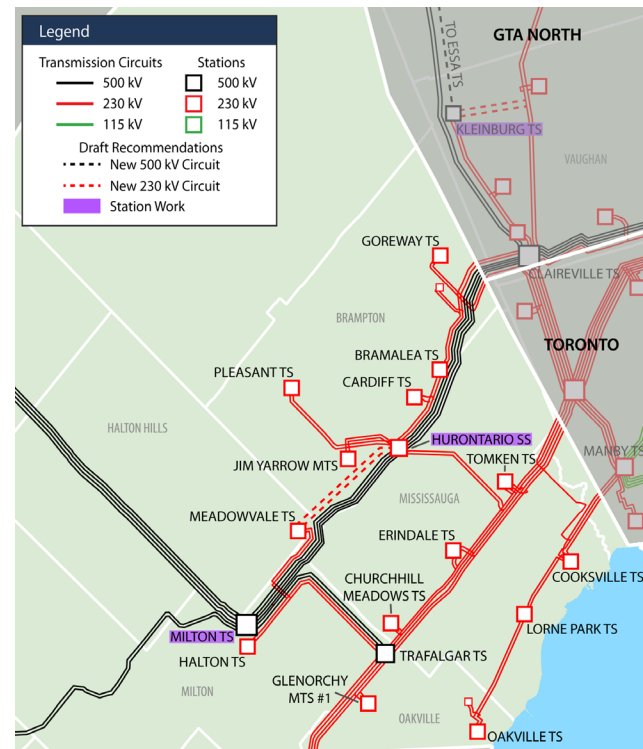
GTA West Regional Planning Alignment

The build-out of Milton TS as a new bulk supply point will enable preferred transmission upgrades identified in the GTA West IRRP to meet growing customer demand in the area, including:

- New transmission required to enable supply to customers in the Heritage Heights area (located in Brampton), including a new transmission line and station.
- Additional 230 kV reconfiguration that may be required to accommodate Milton TS and other solutions to be evaluated in the IRRP.

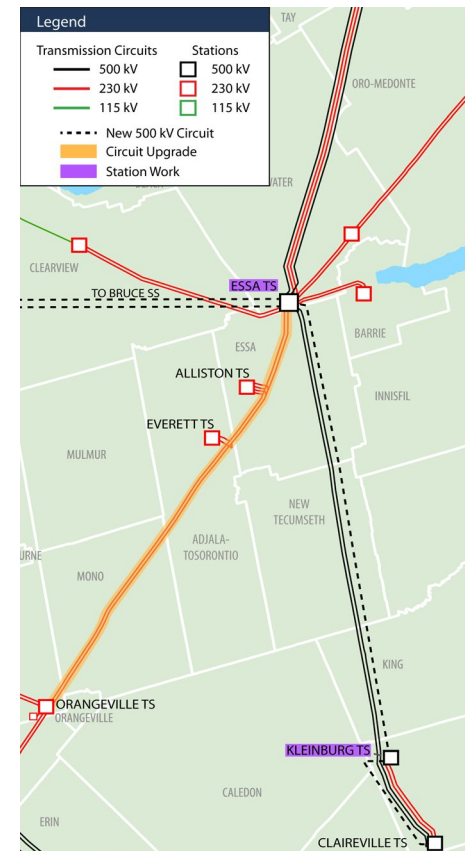
The GTA West IRRP also will identify the need date for transmission in the Northwest GTA Corridor. It is expected that this line will be developed in stages, as supply needs emerge.

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.



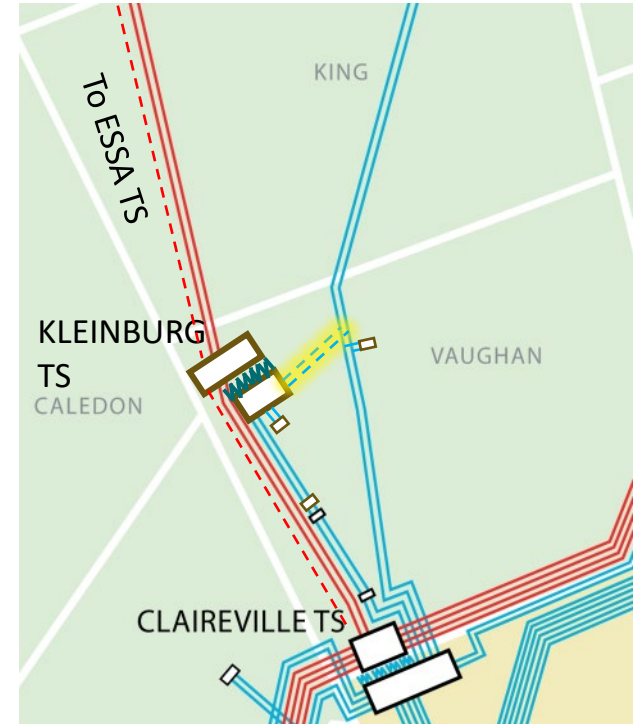
Draft Recommendations – GTA North

Project	Regional Benefits	Timing
Kleinburg 500/230 kV autotransformer station development	<ul style="list-style-type: none"> Provides a new supply capacity point to serve growth throughout northern York and Peel Recommended in Q4 2025 	2031-2032
Kleinburg to Claireville Transmission Line	<ul style="list-style-type: none"> Required to enable Kleinburg TS, by providing more reliable supply 	2031-2032
Essa (Barrie) to Kleinburg Transmission Line	<ul style="list-style-type: none"> Required when Bruce C comes into service to improve load transfers throughout the area Date may need to be advanced based on new generation/loads in northern Ontario. Will be reviewed later in 2026 when procurement results are known 	2040
Essa (Barrie) Autotransformer Transmission Line	<ul style="list-style-type: none"> To enable new load connections throughout the area, and driven by South Georgian Bay/Muskoka IRRP Forecast and Needs 	2031
Essa to Orangeville Upgrade	<ul style="list-style-type: none"> To enable new load connections along the Essa to Orangeville corridor Committed project listed in <i>Energy for Generations</i> 	2029



GTA North Regional Planning Alignment

- Build-out Kleinburg 500/230 kV autotransformer station will provide additional supply capacity to serve northern York and Peel region
- This additional capacity could also be leveraged to reduce reliance on local gas fired generation in the longer term, if paired with additional transmission
- This new station will enable the Kleinburg TS to Kirby TS 230 kV transmission link, recommended through the GTA North IRRP (highlighted)
- Timeline of the Kleinburg TS need is linked to demand growth in the area, with a target in-service date of 2031-2032



Kleinburg Area – Next Steps

Additional studies are being initiated separately from the South and Central Bulk Plan to explore potential needs that require additional studies and updated assumptions, when available. Those include:

1. The need date for the third 500 kV transmission line between Essa TS and Kleinburg TS requires additional review once outcomes of the current resource procurement process (LT2 RFP) are known.
 - At the latest, it must align with the in-service date of Bruce C (2040); date may need to be advanced depending on balance of future generation and demand, particularly in northern Ontario.
2. Several bulk stations within the GTA are approaching their short circuit limits; a separate planning study will be initiated to investigate potential long-term solutions to address short circuit issues throughout the GTA.
 - Investigation of solutions will require detailed review and consideration of station layouts and operational characteristics throughout the GTA, including the future Kleinburg TS 500 kV.

Draft Recommendations – Bruce Area

Project	Benefits	Timing
Bruce to Essa Transmission Line	<ul style="list-style-type: none"> • Unlocks potential for up to 1,000 MW of storage for the Ontario Pumped Storage Project, if it proceeds • Improves key bulk transmission interface limits for more supply capacity to/from northern Ontario 	2040
Bruce to Longwood Transmission Line	<ul style="list-style-type: none"> • Improves a key bulk transmission interface (“Buchanan Longwood Input”) limit for more supply capacity to southwest Ontario 	2040

Both new 500 kV lines are required to enable up to 4,800 MW of new generation at Bruce NGS.





Draft Bulk Transmission Recommendations Relevant to Southwest Ontario

Draft Recommendations – Windsor to Hamilton

Project	Regional Benefits	Timing
Wellington TS* Development	Provides additional supply to the Kitchener-Waterloo-Cambridge-Guelph region to enable urgent economic growth, electrification, and municipal development	2031
Guelph North TS Development		2031-2032
St. Thomas TS Development	Provide supply capacity to enable significant industrial and residential growth in the London Area	2031-2032
New 500 kV line from Longwood TS to Guelph North TS, to Wellington TS	Required to enable electricity supply to the Kitchener-Waterloo-Cambridge-Guelph region and support bulk transmission interfaces from southwest Ontario to the rest of the province	2034
Lakeshore TS to St. Thomas TS Transmission Line	Provide supply capacity to enable continued long-term economic growth, municipal development, electrification, and greenhouse expansion in Windsor-Essex	2045+

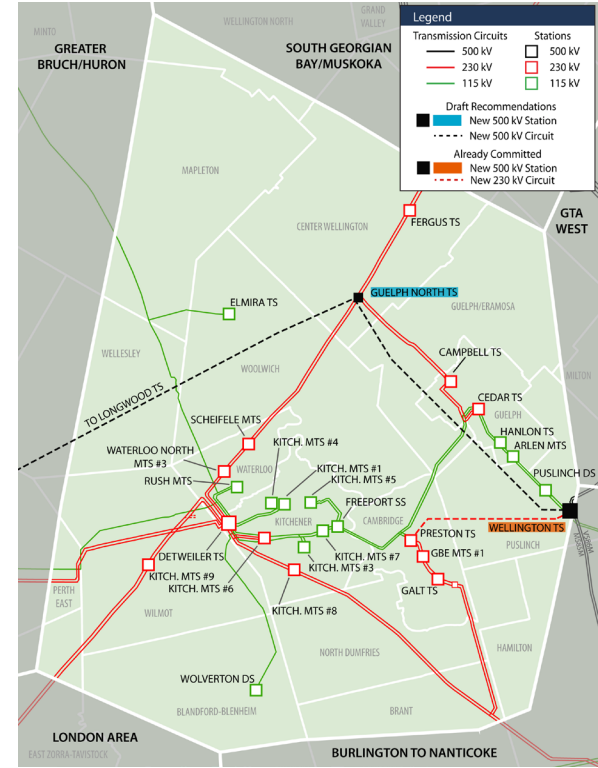
KWCG Regional Planning Alignment

Kitchener-Waterloo-Cambridge-Guelph regional electricity demand is growing rapidly with an average annual increase of 4% over the long term, compared to the IESO's 2026 Annual Planning Outlook's average annual increase of 2.1% between 2027-2050.

Regional electricity planning is underway, with some more local recommendations made recently for urgent needs.

The bulk draft transmission recommendations (including Guelph North TS and new 500 kV lines) complement and support regional planning and investments by:

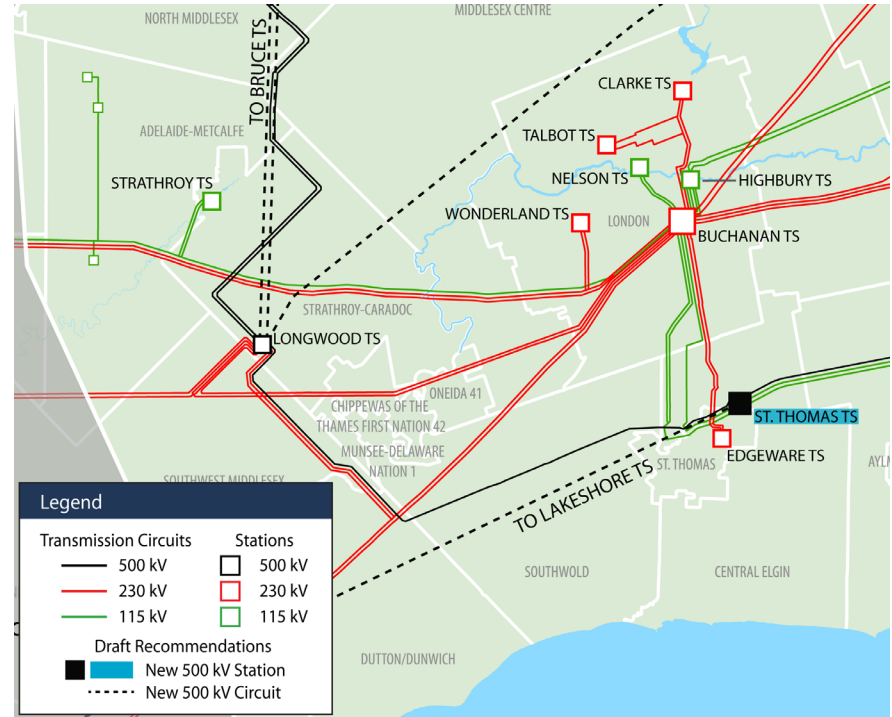
- Ensuring sufficient bulk electricity supply to the region
- Unlocking new options that can be considered in regional planning by introducing 500 kV supply points to the area



London Area Regional Planning Alignment

Electricity demand in the London Area is projected to grow by 130% over the next 20 years. This rapid increase is primarily driven by industrial and residential growth.

- The 2024 Hydro One Needs Assessment identified 15+ regional needs that are currently being evaluated alongside emerging IRRP requirements.
- New bulk supply is essential to enable regional planning reinforcements and sustain this forecasted regional growth.
- The proposed St. Thomas TS would provide the critical bulk supply required to enable local transmission solutions.



Windsor-Essex Regional Planning Alignment

Electricity demand in the Windsor-Essex region is expected to more than double by 2043.

The proposed long-term option for future expansion at Lakeshore TS and a potential second 500 kV circuit between Lakeshore and St. Thomas complement the first 500 kV circuit to Lakeshore TS (recommended in the 2021 West of London Bulk Plan).

These long-term bulk transmission options support regional planning and investments already underway:

- A transmission corridor study for supply to West Essex and Windsor begins in 2026
- Regional planning for Chatham-Kent/Lambton/Sarnia will begin in 2026





Next Steps

Next Steps & Staying Engaged

Upcoming milestones for the South and Central Bulk Plan:

- Feedback on the draft recommendations due May 21, 2026, to engagement@ieso.ca
- Mid-2026 (updated) – final report that will identify:
 - **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 (demand, supply, and policy signals) 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 South and Central Bulk Plan 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 May 21, 2026.

Please submit feedback to engagement@ieso.ca using the feedback form posted on the [South and Central engagement page](#).

Thank You

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Data Sharing and Portfolio Refinements

In November, the IESO shared the following data sets:

- Finalized portfolio details
- Revised zonal diagram demarking the sub-zones created for the energy model
- Sub-zonal level load forecast, aligned with the set-up of the energy model
- Generation assumptions for each scenario, aligned with the set-up of the energy model

Note that as this is still an active planning process, changes to these scenarios are still possible before a final recommendation is made.

The data sets and the feedback form can be found on the [South and Central engagement page](#). Feedback due by **December 19, 2025** to engagement@ieso.ca

Portfolios Overview – Common Reinforcements

Project Name	Circuit Type	Voltage	Length (km)	500/230 Autotransformers	Regional Planning Coordination
Milton 500/230 kV TS	N/A	N/A	N/A	2	GTA West IRRP Driven
Meadowvale to Hurontario	Double	230	10 km	2	GTA West IRRP Driven
Hurontario SS Reconfiguration	N/A	230	N/A	N/A	GTA West IRRP Driven
Kleinburg 500/230 kV TS	N/A	500	N/A	3	York IRRP GTA West IRRP Driven
Kleinburg to Claireville	Single	500	11 km	N/A	York IRRP GTA West IRRP Driven
Essa to Kleinburg	Single	500	60 km	N/A	
Essa Autotransformer	N/A	500	N/A	1	
Reconductoring Essa to Orangeville	Double-circuit	230	60 km	N/A	
Bruce to Essa 500 kV	Double	500	140 km	N/A	
Bruce to Longwood 500 kV	Double	500	190 km	N/A	
Wellington 500/230 kV TS	N/A	500	N/A	2	KWCG IRRP Recommendation
Bowmanville to Cherrywood	Double	500	50 km	N/A	
Bowmanville to Hearn	High-voltage DC	TBD	70 km	2 at Bowmanville SS	Toronto IRRP Recommendation

Portfolios Overview - Variations

	Project Name	Circuit Type	Voltage	Length (km)	500/230 Autos	Regional Planning Coordination
Portfolio A	Lakeshore to Longwood	Single	500	130	N/A	
	Longwood to Nanticoke	Single	500	160	N/A	
	Orangeville to Fergus Upgrade	Double	230	30	N/A	
Portfolio B	Lakeshore to St Thomas	Single	500	150	N/A	
	Longwood to Guelph North	Single	500	140	N/A	KWCG IRRP Driven
	Guelph North to Wellington TS	Single	500	40	N/A	KWCG IRRP Driven
	Guelph North TS	N/A	500	N/A	2	KWCG IRRP Driven
	St. Thomas TS	N/A	500	N/A	2	London Area IRRP Driven
Portfolio C	Lakeshore to St Thomas	Single	500	150	N/A	
	St Thomas to Nanticoke	Single	500	120	N/A	
	Orangeville to Fergus Upgrade	Double	230	30	N/A	
	St. Thomas TS	N/A	500	N/A	2	London Area IRRP Driven

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 [South and Central 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 June 2024 to January 2026

Theme: Demand Forecasting, Growth Scenarios, and Uncertainty

Community and Stakeholder Feedback: Concerns that reference and high-growth demand forecasts may underestimate future load, particularly: Industrial electrification, data centres, Electric Vehicle adoption, nuclear refurbishment and Small Modular Reactors. Requests were made for clearer sub-regional demand forecasts, sensitivity testing against higher-than-forecast growth, visibility into assumptions for conservation, fuel switching, and technology uptake

IESO Response: The IESO emphasized that the bulk plan uses multiple Annual Planning Outlook (APO) scenarios as stress tests, not predictions and considers both 2035 and 2050 horizons. IESO acknowledged uncertainty and stated that forecasts and portfolios will be updated iteratively as projects materialize; timing and scale of investments will be re-examined as confidence increases; additional clarity on assumptions and demand drivers were progressively added in later bulk plan updates (late 2024–2025).

Feedback and Responses – by Theme

Summary of Feedback from June 2024 to January 2026

Theme: Transmission Options, Portfolios, and System Configuration

Community and Stakeholder Feedback: Mixed support across preliminary portfolio options (labeled A, B, and C), reflecting regional priorities, for example support for strengthening supply into Kitchener-Waterloo, London, GTA, and southwest Ontario; interest was expressed in ensuring optionality for future nuclear, renewables, and storage.

IESO Response: IESO clarified that portfolios are illustrative and evolving, they were not final decisions; all options are subject to detailed technical analysis, cost-benefit and risk assessment and further engagement. As planning evolved, the IESO also placed stronger emphasis on 500 kV reinforcements as common elements across portfolios and the interdependencies between South & Central, Bruce, GTA, and adjacent bulk plans.

Feedback and Responses – by Theme

Summary of Feedback from June 2024 to January 2026

Theme: Timing, Early Actions, and Development Risk

Community and Stakeholder Feedback: Feedback included a strong message that planning and development timelines may be misaligned with customer connection timelines and that delays in corridor identification could jeopardize economic development. Feedback included advancing “no-regrets” or early actions and compressing approval timelines where confidence is high.

IESO Response: The IESO introduced and expanded on Early Action recommendations, including advancing corridor studies and initiating development work on major 500 kV expansions before final needs are locked in. IESO committed to early actions and transparency around confidence levels.

Feedback and Responses – by Theme

Summary of Feedback from June 2024 to January 2026

Theme: Non-Wires Alternatives (NWA) and Resource Mix

Community and Stakeholder Feedback: Feedback included concerns that non-wires alternatives (storage, DERs, demand response) were not visible; NWAs were positioned as a way to defer or sequence major transmission investments; requests were made for clarity on how NWAs are screened and whether they are transitional or long-term solutions.

IESO Response: IESO communicated that NWAs are considered as part of the planning framework however, bulk-level demand and nuclear-scale generation require high-capacity transmission; NWA are complementary and transitional, not substitutes for major bulk reinforcements, with more detail on the screening methodology promised for final reports.

Feedback and Responses – by Theme

Summary of Feedback from June 2024 to January 2026

Theme: Data Transparency and Modelling Assumptions

Community and Stakeholder Feedback: Requests for access to modelling inputs and assumptions, greater transparency on generation portfolios, and more consolidated, user-friendly data releases.

IESO Response: IESO pointed to the Annual Planning Outlook, Data Directory, and published engagement materials for more information related to these requests. While protecting system-sensitive information, the IESO committed to clearer documentation of assumptions, earlier disclosure of study logic and constraints.

Feedback and Responses – by Theme

Summary of Feedback from June 2024 to January 2026

Theme: Engagement, Indigenous Participation, and Process Clarity

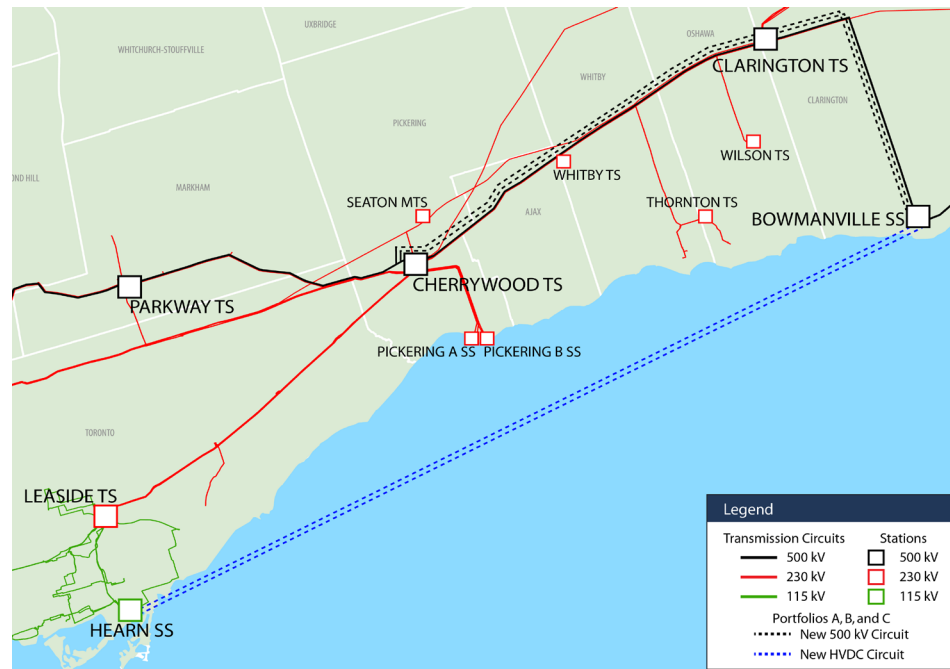
Community and Stakeholder Feedback: General support for the volume of engagement, but requests for earlier engagement on corridor-level issues and clearer explanation of how feedback influences outcomes.

IESO Response: IESO reiterated that bulk planning is deliberately high-level at early stages and that corridor-specific engagement will follow once needs are confirmed. The IESO confirmed that engagement for bulk planning is iterative, with multiple opportunities for input before decisions crystalize.

Bowmanville SS Towards Parkway TS Upgrade

Draft Recommendation:

- Terminate the new 500 kV lines into the two circuits currently supplying Parkway TS from Cherrywood TS, while still bypassing Cherrywood TS
- Submarine HVDC transmission line from Bowmanville SS to Hearn SS, recommended through Toronto Regional Plan



Bowmanville SS Towards Parkway TS Upgrade

Key Considerations	500 kV Bus + Auto at Parkway TS	Cherrywood to Parkway Circuit Reconfiguration + No Bus at Parkway TS + HVDC
Estimated In-Service Date	2033	2032 (2034-2037 for HVDC)
Incremental Supply Enabled (including SMRs)	~1400	~2800
Short Circuit Limitations	Introduces new short circuit limitation issues at Parkway TS station that would require major downstream 230kV circuit and surrounding stations such as at Cherrywood TS reconfiguration to resolve	No major changes to current Parkway TS and Cherrywood TS short circuit levels
Estimated Cost (excluding HVDC)	~ \$700-800M	~ \$400-\$500M
Surrounding Bulk System Effects	Termination of new double circuit at Parkway TS and the addition of one new autotransformer through a 500kV bus would also increase the capacity through the station and offload Claireville and Cherrywood TS.	The HVDC Third Supply to Toronto eliminates the need for a bus at Parkway TS to support the forecasted load and reduces congestion at Cherrywood TS and Claireville TS, enabling growth in the surrounding regions including Durham, York, Kawartha Lakes and Peterborough.

Bowmanville SS Towards Parkway TS Upgrade

Key Considerations	500 kV Bus + Auto at Parkway TS	Cherrywood to Parkway Circuit Reconfiguration + No Bus at Parkway TS + HVDC
Operability	Potential reconfiguration of the downstream system to alleviate short circuit issues may introduce new operational difficulties.	Operability concerns arise around voltage stability around Bowmanville Switching Station in low load conditions with the circuit reconfiguration. The implementation of the voltage converter stations as part of the submarine HVDC line can provide support with voltage stability in the area
Flexibility	The double circuit to Parkway TS and Parkway TS bus buildout commits available corridor space and area to this solution regardless of growth rate and future grid requirements.	This option sufficiently supplies 2035 scenario and beyond while preserving available corridor space and station space to build 500kV Bus + Auto at Parkway if higher growth materializes and for future grid developments.
Land Use	The double circuit to Parkway TS extends from Bowmanville to Parkway TS, following the existing right of way. The 500 kV bus build out would occur within the available land within Parkway TS and any new upgrades may require the expansion of Parkway TS.	The new double circuits extends from Bowmanville to Cherrywood TS, following the existing right of way, while the HVDC will extend underwater, avoiding disruptions in built up urban areas in Durham and Toronto regions. The land within Parkway TS remains open for optionality for a future 500 kV bus or other new infrastructure to support the 230 kV system.

Northwest GTA Corridor Study

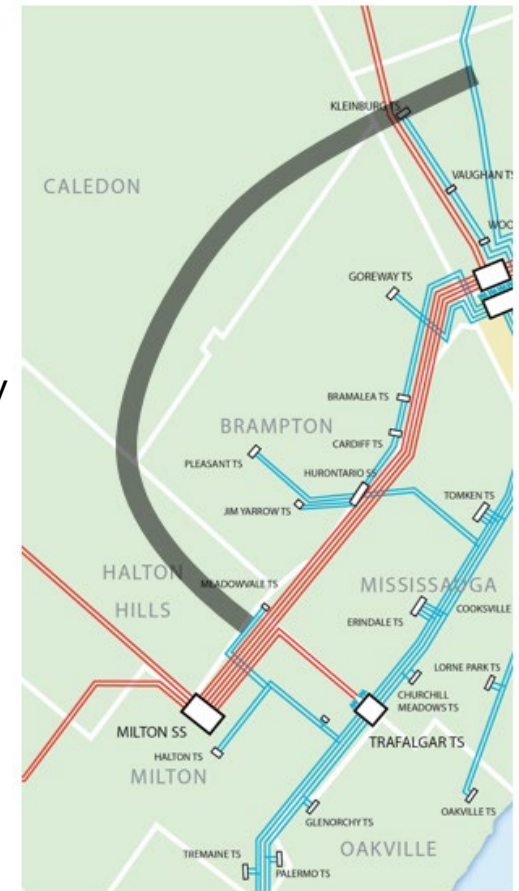
The IESO and the Ministry of Energy and Mines are engaged in a joint study to assess lands to be protected for future high-voltage electricity transmission.

Objective is to co-locate future transmission next to the proposed Highway 413, consistent with the Provincial Planning Statement, 2024.

Protecting land for the future:

- Maintains ability to accommodate future growth through proactive planning, and
- Mitigates risk of needing to site transmission infrastructure through built-up areas

The IESO will identify a linear corridor to be protected for transmission use, ensuring long-term electricity needs can be met. An update will be posted to the Environmental Registry of Ontario.



Northwest GTA Corridor