



JULY 15, 2026

Niagara Bulk Plan

Engagement Webinar #1

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.

Agenda

- Electricity Planning in Ontario
- Niagara Bulk Plan
- Study Approach, Demand Forecast and Preliminary Needs
- Next Steps and Discussion

Our Commitment to Respectful Participation

- One speaker at a time; please raise your hand to enter the speaking queue.
- Keep remarks concise (approximately 60-90 seconds) and focused on the agenda topic.
- Avoid repeating points already covered; detailed feedback may be submitted in writing for follow-up.
- Maintain a respectful tone at all times.
- The IESO may redirect discussion to keep the agenda on track.
- Participants that are unable to participate respectfully by adhering to these principles may have their microphone disabled.

Seeking Input

Local considerations and feedback are a critical component to the development of the Niagara Bulk Plan. The IESO wants to hear your perspectives about:

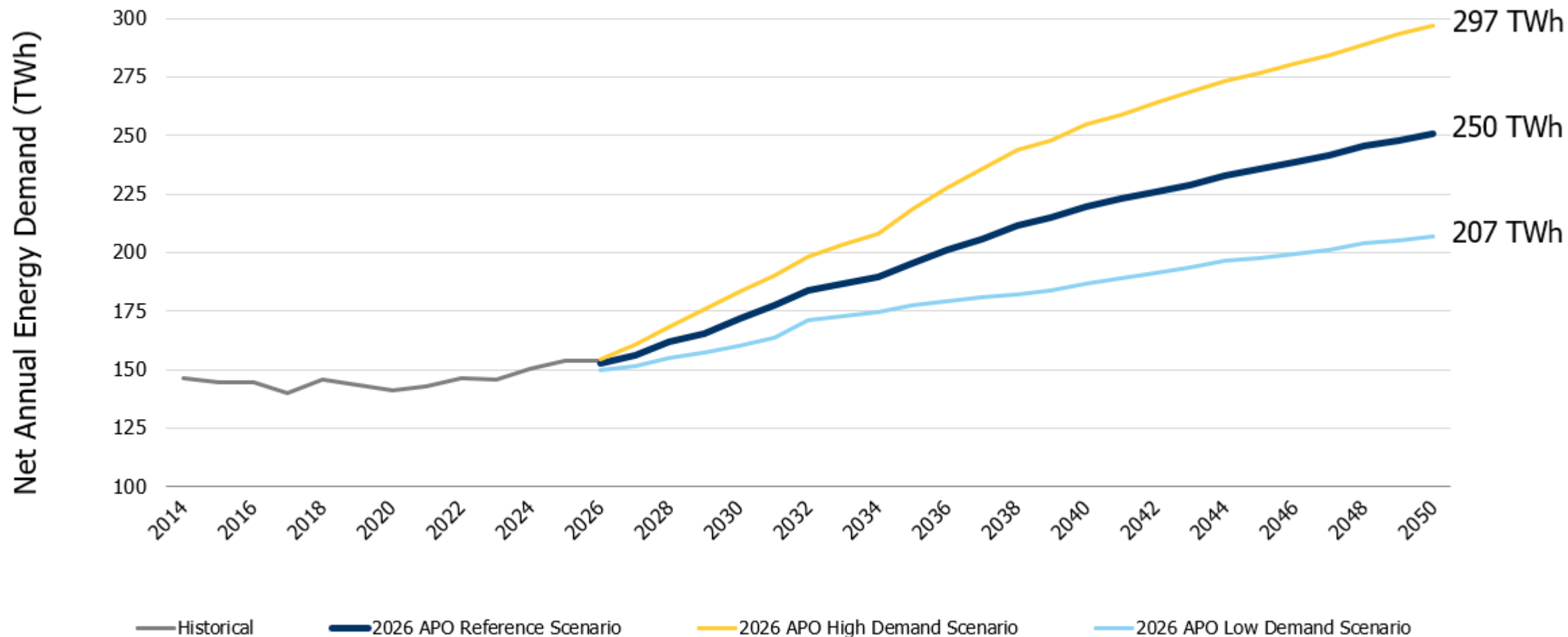
- What feedback do you have regarding the scope of work proposed?
- What additional information should be provided in future engagements to help share perspectives and insights?

The IESO welcomes written feedback until **Wednesday, August 5, 2026**. Please submit feedback to engagement@ieso.ca.

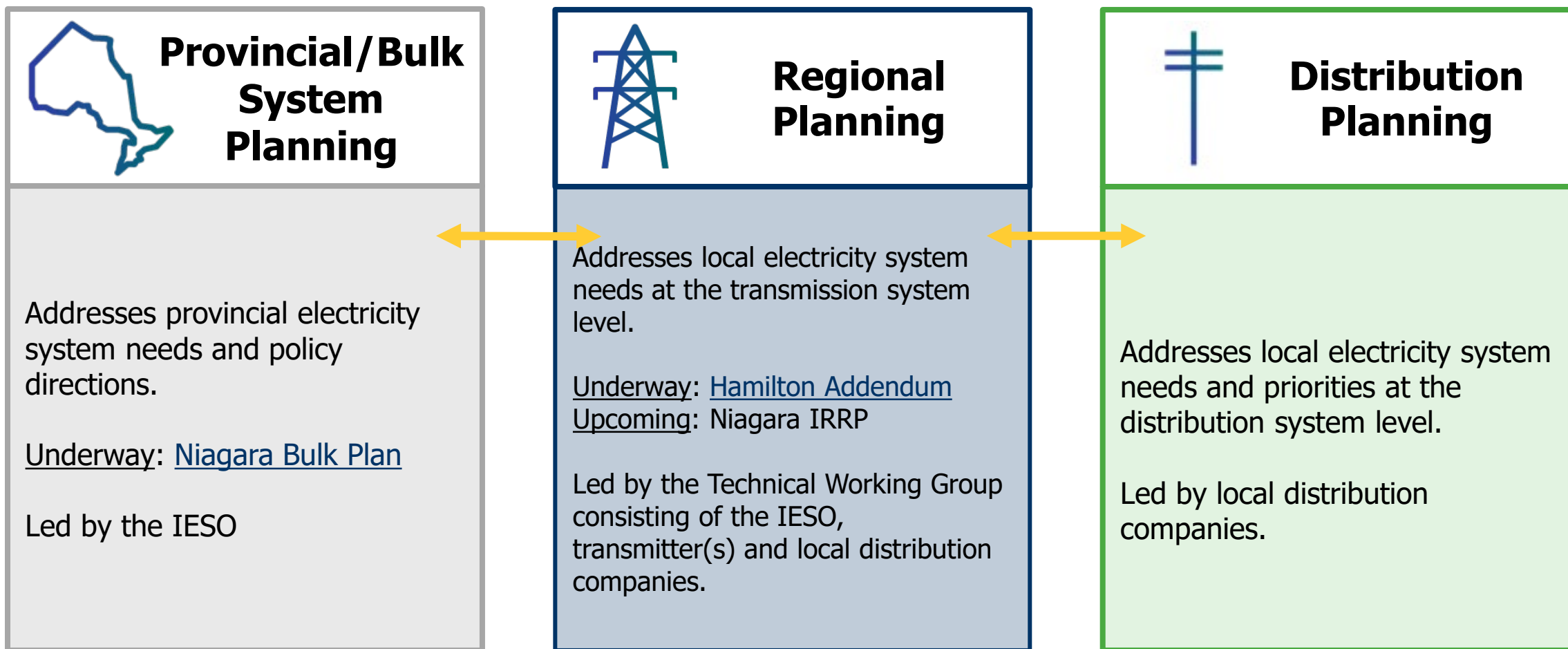


Electricity Planning in Ontario

Electricity Demand Long-Term Outlook



Electricity Planning in Ontario





Niagara Bulk Plan

Niagara Bulk Plan

- Through [bulk electricity planning studies](#), the IESO develops bulk system-level infrastructure plans to meet Ontario's future electricity needs.
- The IESO has launched a new bulk planning initiative for the Niagara Region and surrounding areas to address electricity demand growth and examine emerging needs.



Note: Map for illustrative purposes only

Background

- An Integrated Regional Resource Plan (IRRP) for the [Niagara Region](#) was completed in 2022, which included a plan to enable approximately 120 MW of additional supply to the Port Colborne/Welland area by 2028.
- This consisted of converting Crowland TS to a new 230 kV station, supplied by new 230 kV double circuit lines from Q24HM and Q29HM.
- The 2022 IRRP also identified a high load forecast scenario, with the potential to supply additional growth using the new 230 kV infrastructure, subject to further assessment if needed.
- Since the 2022 IRRP, increased momentum in customer connections, economic development and government policy has reinforced the Niagara region as an area of continued growth. Based on ongoing monitoring, the IESO has identified that load projections are now expected to exceed the 2022 IRRP high forecast scenario.
- As a result, there is a need to proactively assess the impact of this growth on the Queenston Flow West (QFW) interface and determine whether additional transmission reinforcements may be required.

Objectives

The objectives of this plan are to:

- Ensure continued, reliable bulk supply to the Niagara region and surrounding areas, in light of the Firm Load and potential economic development in the region, including consideration of the load connection configuration as it impacts the bulk system.
- Proactively investigate a range of potential economic development scenarios to inform future plans and possible system reinforcements if/when large new loads materialize.



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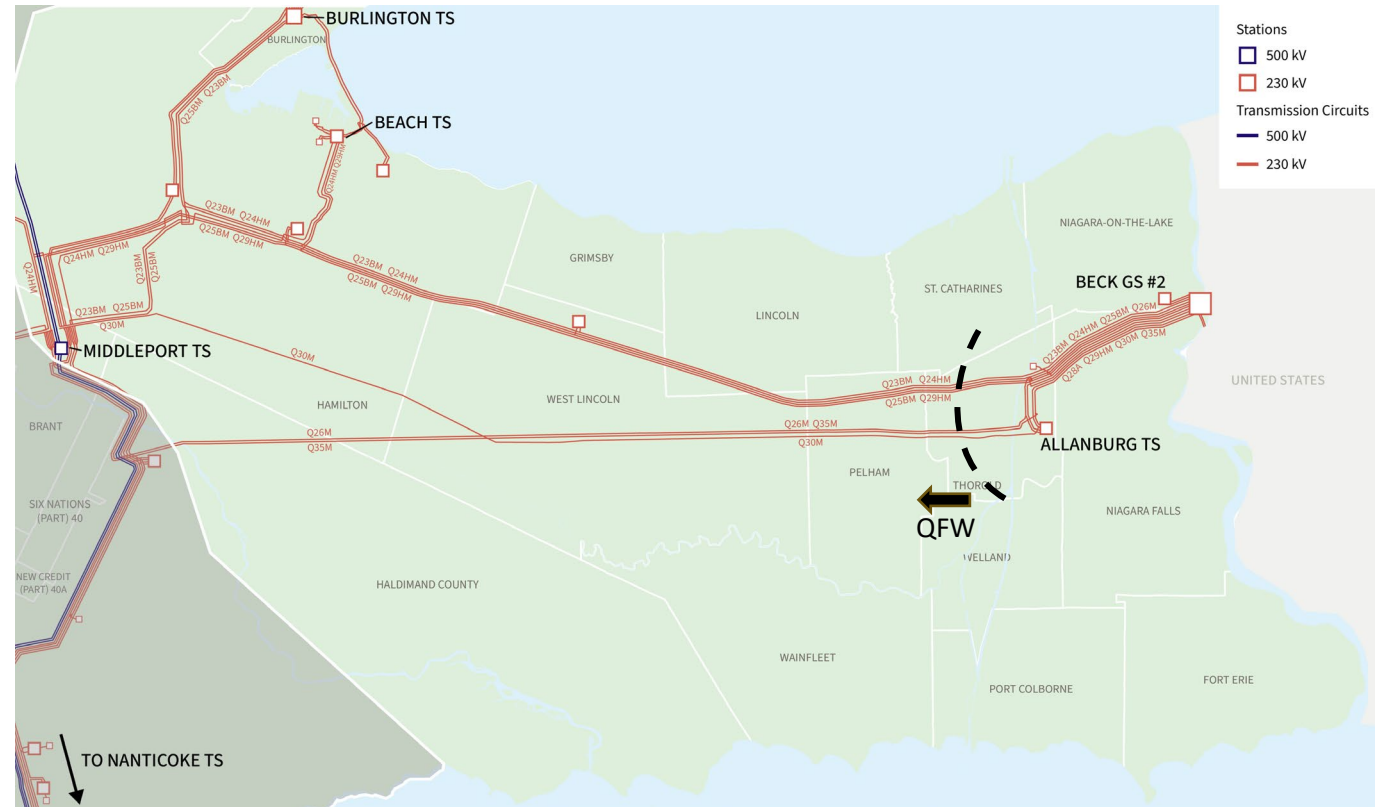
Infrastructure in Scope

The Queenston Flow West (QFW) interface is critical for delivering supply from the Niagara Zone and imports from New York to the rest of the province. The QFW interface includes:

- Two circuits from Beck 2 Transformer Station (TS) (City of Niagara Falls) towards Middleport TS (County of Brant) and Burlington TS (City of Burlington) - Q23BM, Q25BM
- Two circuits from Beck 2 TS towards Middleport TS and Beach TS (City of Hamilton) - Q24HM, Q29HM
- Three circuits from Beck 2 TS towards Middleport TS - Q30M, Q26M, Q35M

Other key infrastructure in scope includes:

- Middleport TS, Burlington TS, Beach TS, Allanburg TS (City of Thorold)
- Beck Pump Storage Generating Station (GS) #2



Linkages

The IESO appreciates there may be other planning initiatives of interest to participants in this engagement, including:

- **Regional Planning:** Given the interdependencies between the Hamilton Addendum, the upcoming Niagara Integrated Regional Resource Plan (IRRP) and the Niagara Bulk Plan, these studies will be coordinated with findings incorporated as planning progresses to ensure outcomes are aligned and reflect broader system needs.
- **Major Projects Identification Committees (MPICs):** In response to the Minister's [*Integrated Energy Plan*](#), the IESO launched the [MPIC process](#)—a **voluntary process** to capture early information on major projects and sites/lands to be developed. This voluntary process is designed to complement, not replace, existing IESO planning and connection processes.

Components of a Bulk Plan

Demand Forecasts

How much power is needed over the planning timeframe?

Key inputs:

- Annual Planning Outlook
- Regional Planning forecasts
- System Impact Assessments

Needs

Can the electricity system meet customer demand via a combination of local generation and transmission capacity and maintain reliability planning standards?

Evaluation of Options

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

- new transmission
- generation
- storage
- conservation
- Etc.

Recommendations

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



Study Approach, Demand Forecast and Preliminary Needs

Study Approach

The Niagara Bulk Plan will evaluate the transmission system's ability to support power transfers across the Queenston Flow West (QFW) interface while reliably serving future electricity demand.

- A 2035 study year was selected and includes forecast firm load and planned transmission infrastructure expected to be in service.
- The study will determine whether the transmission system can reliably service the Reference Forecast Scenario under normal operating conditions and a range of outage scenarios.
- Four areas across the QFW will be stress-tested under a range of forecast scenarios to identify potential transmission constraints and future infrastructure needs.
- Welland-Thorold and Hamilton Areas have been identified as "Priority Areas." Assessments in these areas will be completed first to support coordination with related planning activities, address emerging growth needs, and identify any potential early actions.

Study Areas

To understand how future growth could affect the Queenston Flow West (QFW) interface, the study will assess a range of load levels at four locations where significant load growth is expected or where changes in electricity demand could have a meaningful impact on the QFW. The **Welland-Thorold** and **Hamilton** areas have been identified as priority areas and will be assessed first:

Welland-Thorold Area: The area is experiencing continued firm and prospective load growth. Assessments are being advanced to support timely planning, inform future infrastructure needs, and evaluate potential impacts on the broader transmission system, including the QFW interface.

Hamilton Area: The Hamilton Area Addendum and Niagara Bulk Plan include assessment of shared transmission infrastructure. To support alignment between the two studies, Niagara Bulk Plan assessments related to Hamilton will be completed in coordination with the Hamilton Addendum schedule.

Allanburg TS: While located within the Welland-Thorold Area, Allanburg TS is being assessed separately due to its role as the primary supply point for the area's 115kV network.

Nanticoke TS: This area was assessed through the South and Central Bulk Study and is outside the scope of the Niagara Bulk Plan. However, a large proposed load in the area may affect power flows and system requirements within the Niagara bulk transmission system. Potential impacts on the Niagara system will therefore be considered as part of the study.

Demand Forecast Scenarios

To support the 2035 assessment, three forecast scenarios have been developed to reflect a range of potential future conditions:

- **Reference Forecast Scenario:** Includes the IESO's 2025 Annual Planning Outlook (APO), existing loads, facilities with completed System Impact Assessments (SIAs) and projects that have reached a committed stage.
- **Low Forecast Scenario:** Leverages the Reference Forecast Scenario but only includes firm customer connections.
- **High Forecast Scenario:** Builds on the Reference Forecast Scenario and incorporates additional potential economic development and load growth.

Planning recommendations will primarily be based on the Reference Forecast Scenario. High and Low Forecast Scenarios will be used to assess the robustness of recommendations and inform the potential timing of options.

Reference Forecast Scenario

Planning recommendations will be primarily based on the Reference Forecast Scenario, which reflects forecast firm electricity demand:

- ➔ Welland-Thorold Area* - 620 MW
- ➔ Hamilton Area* - 2100 MW
- ➔ Allanburg TS – 1100 MW

*Priority Areas - defined based on committed projects, known impacts on bulk transfer capability, infrastructure in-service dates, coordination with ongoing regional plans and regulatory timelines.



Note: Map for illustrative purposes only

High Forecast Scenario

To assess the transmission system's ability to accommodate additional economic development and load growth, key interfaces will be stress-tested beyond the Reference Forecast Scenario*:

- Welland-Thorold Area - 800 MW
- Hamilton Area - 700 MW
- Allanburg TS - 700 MW
- Nanticoke TS - 1500 MW

*Values are used for planning and sensitivity assessments based on customers, government policy and economic development and do not represent forecast firm demand



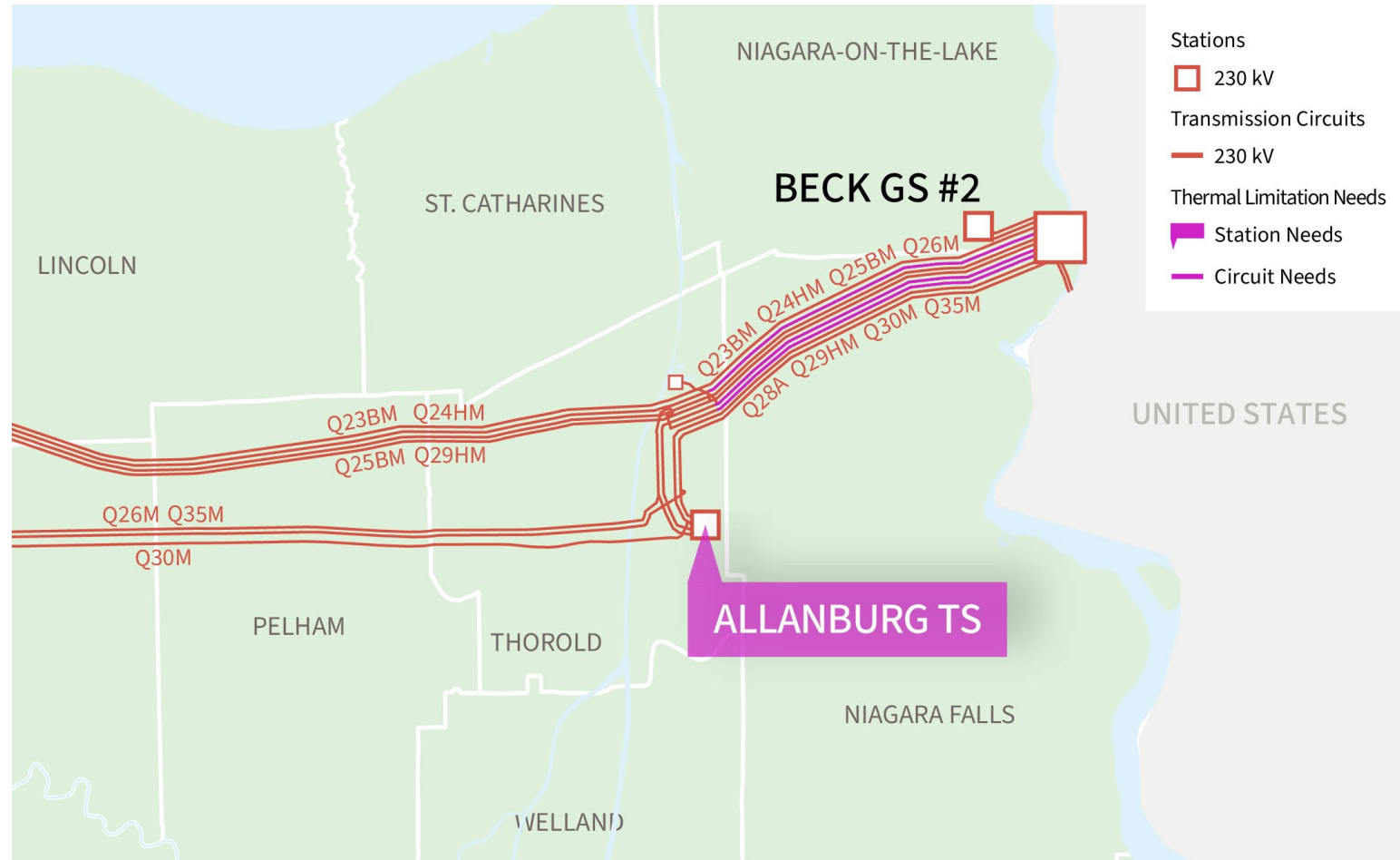
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Preliminary Needs

Preliminary assessments of the Priority Areas indicate that increasing electricity demand and power transfer requirements may result in thermal limitations on the following infrastructure:

- 230kV circuits between Beck 2 and the Welland-Thorold Area (Q24HM, Q29HM)
- 230kV circuit between Beck 2 and Thorold-Thorold Area (Q28A)
- Autotransformer at Allanburg TS

These preliminary findings represent an early view of potential transmission needs. Further analysis will be undertaken to identify additional needs and potential options.





Next Steps and Discussion

Outcomes

To meet needs identified through the assessment of the Priority Areas, the Niagara Bulk Plan is expected to identify early actions by Q1 2027, with the full set of recommendations confirmed by Q3 2027. The plan is anticipated to include a range of recommendation types:

- **Early Actions:** Firm recommendations identified early in the plan to support planned development and maintain reliability in the Welland-Thorold and Hamilton areas.
- **Implementation Ready Actions:** Recommendations that enable growth and maintain reliability, ready to proceed as needs are confirmed.
- **Future Ready Recommendations:** Actions that support readiness for larger demand growth and evolving system conditions, including early development activities while deferring construction.
- **Future Consideration Actions:** Options that are not required immediately and depend on the pace and magnitude of future demand and other indicators.

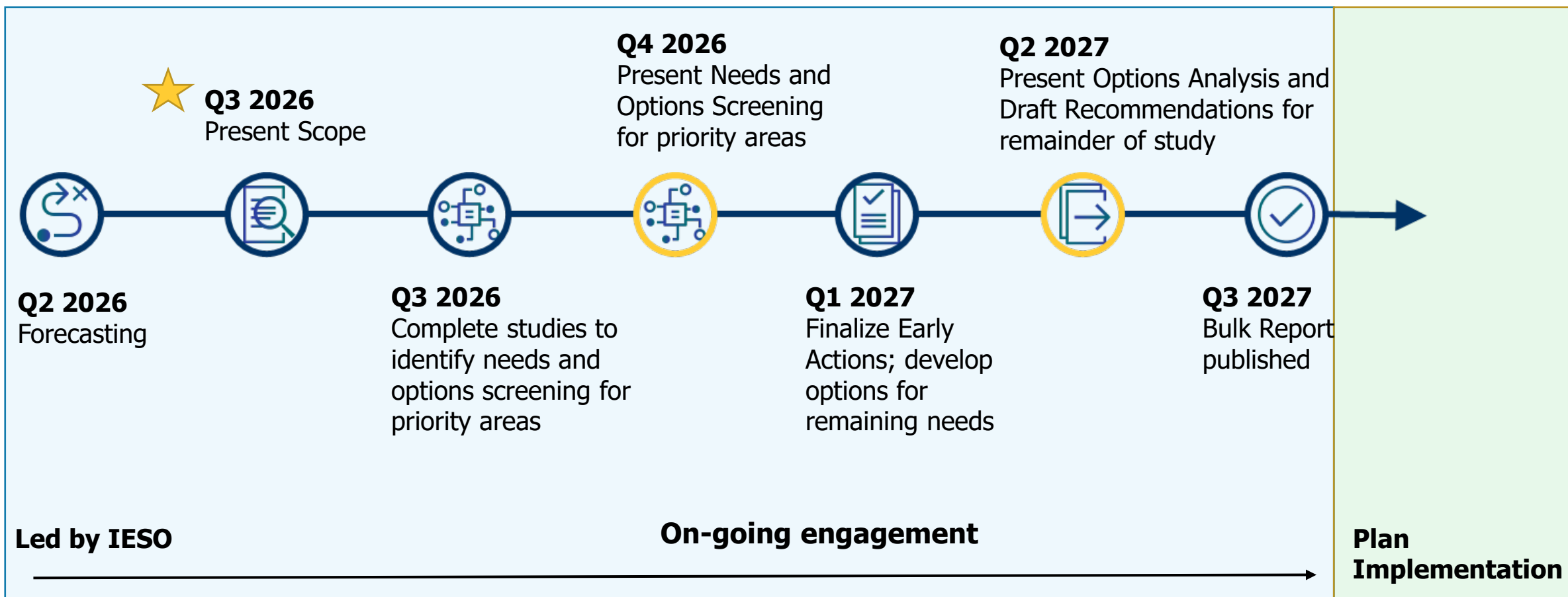
Shaping Bulk Studies Through Engagement

Input from the many voices and various perspectives across the electricity sector is essential to the IESO's decision-making process. Several tools are available to enable public participation, including:

- Announcements on upcoming public engagement webinars via the IESO's bulletin. Subscribe to receive updates at www.ieso.ca/subscribe.
- The [engagement webpage](#) for the Niagara Bulk Plan include webinar recordings and other materials.
- Feedback on information shared in public engagements are welcome. The IESO will consider all feedback received, including insights, perspectives and reports, and will post a response.
- [Digital guides](#) that explain how the IESO leads a reliable, affordable, and sustainable electricity system.

More information on how the IESO engages can be found on the [External Relations Engagement Framework](#) and [Indigenous Engagement Framework](#).

Niagara Bulk Timeline



Next Steps

- Feedback submissions for are due by August 5, 2026, to engagement@ieso.ca.
- The IESO will post a response shortly after on the Niagara Bulk engagement webpage.
- The next update is anticipated for Q4 2026, where the IESO will provide information on the needs and options for the priority areas.

Discussion

Local considerations and feedback are a critical component to the development of the Niagara Bulk Plan. The IESO wants to hear your perspectives about:

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Thank You

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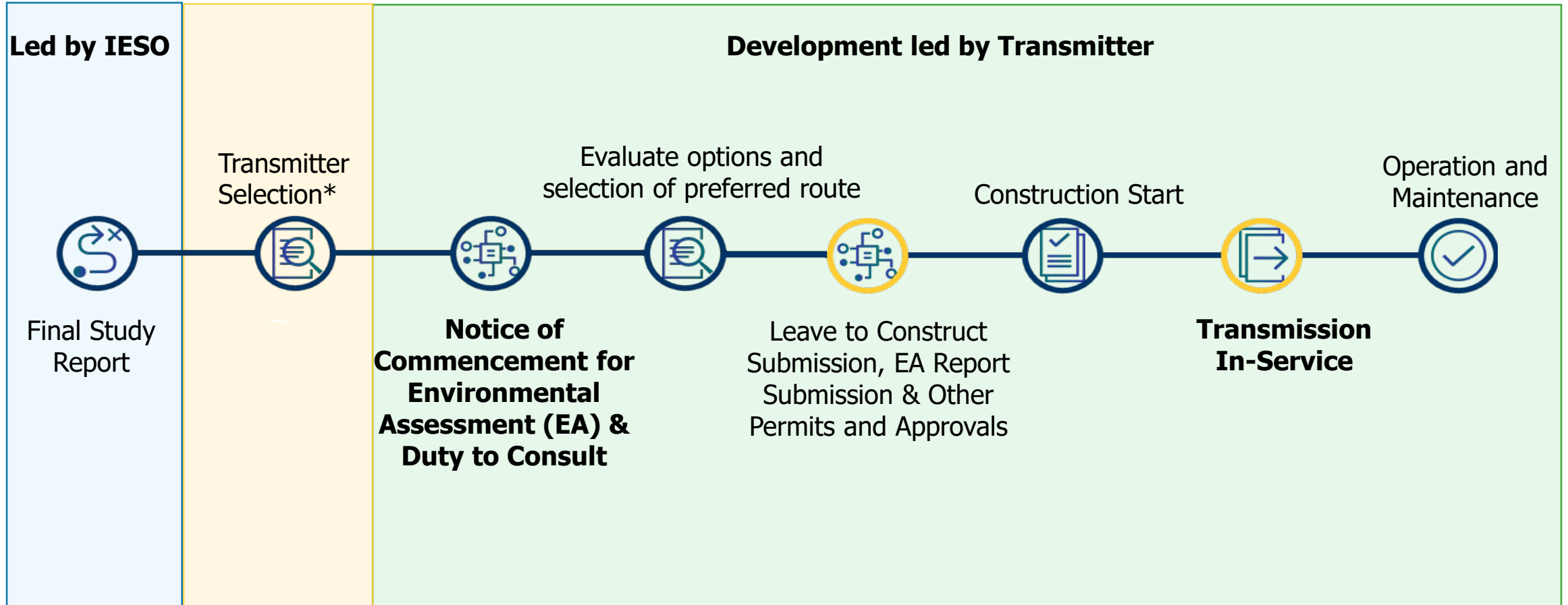


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Appendix

Typical Process for Transmission Development



*Currently, no standardized process exists to select a transmitter; Transmitter Selection Framework under development