



SEPTEMBER 15, 2026

Niagara Regional Electricity Planning

Scoping Assessment Narrated Presentation

Niagara Land Acknowledgement

The IESO acknowledges that the Niagara region is the traditional territory of many nations including the Mississaugas of the Credit First Nation, the Haudenosaunee, and the Anishinabeg.

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

- Regional Electricity Planning Process and the Niagara Electrical Region
- Draft Scoping Assessment
- Components of an Integrated Regional Resource Plan (IRRP)
- Engagement and Next Steps

Summary

- Regional planning has kicked-off in the Niagara electrical area and the Technical Working Group has recommended to develop an Integrated Regional Resource Plan (IRRP) to understand needs and propose solutions to meet the growing electricity demand due to:
 - Several preliminary needs identified require a coordinated manner to meet them.
 - Potential for exploring multiple types of options to meet the needs (including non-wires solutions)
 - Potential for regional changes having implication on the upstream bulk power system
 - Opportunity for public engagement
- The IRRP will look at the unique electricity needs of the region and consider a range of options and resources to meet the growing demand.
- As work progresses, the IESO will share more information, answer questions and seek feedback at key milestones.

Seeking Input

Local considerations and feedback are a critical component to the planning process. The IESO wants to hear from you:

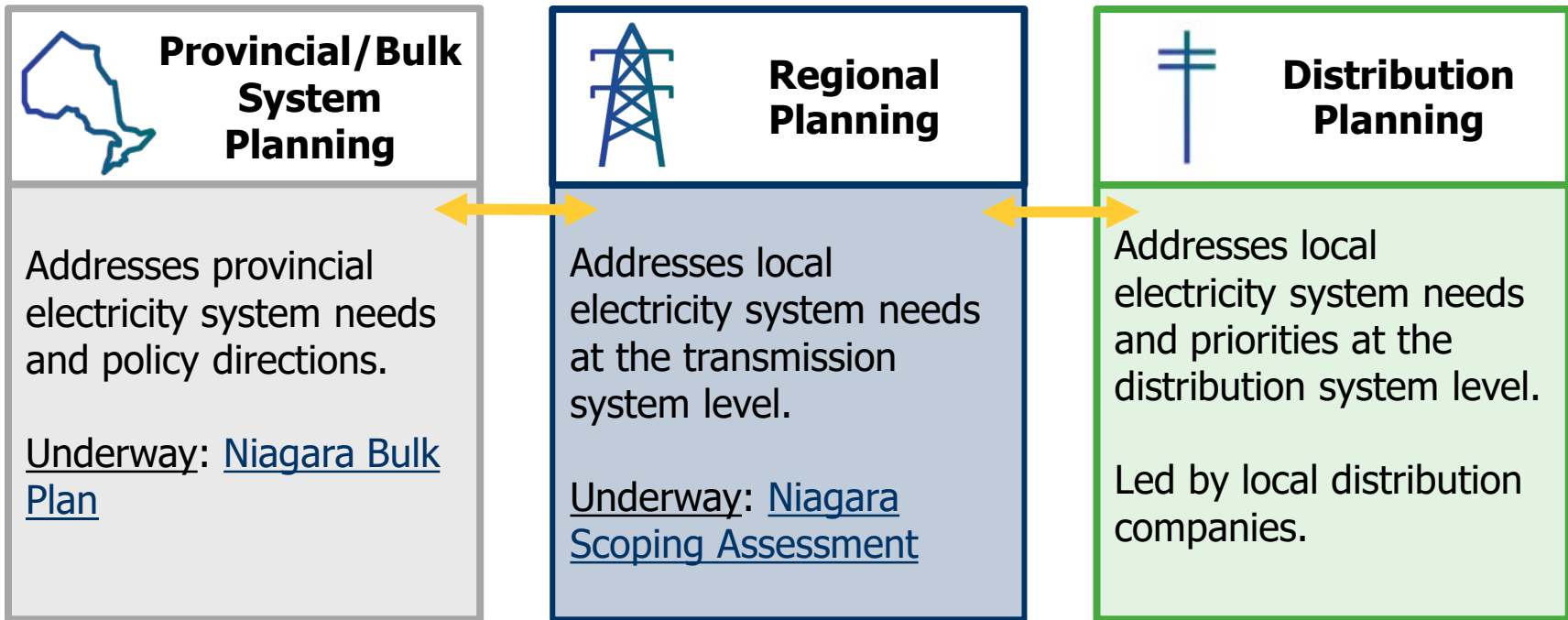
- What additional information should be considered as part of the Scoping Assessment?
- What other considerations based on local developments should be made regarding the areas identified as requiring further study?
- What other areas or specific considerations should be examined through regional planning?

Please submit your written comments by email to engagement@ieso.ca by October 5, 2026. Your submitted feedback and the IESO response to feedback will be available on the [Niagara Regional Planning engagement page](#).



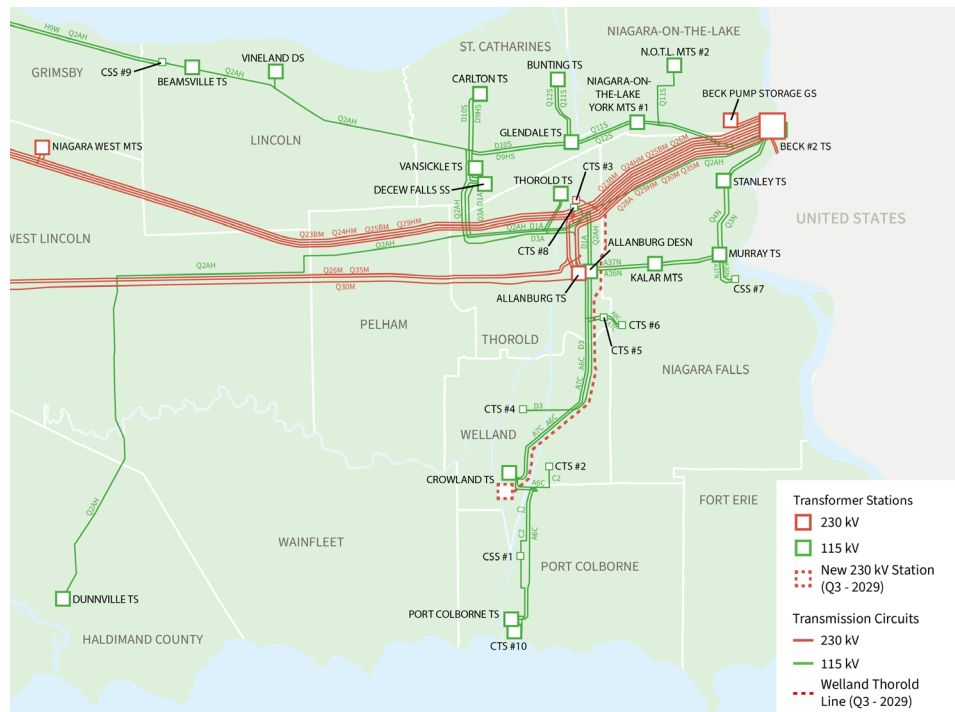
Regional Electricity Planning Process and the Niagara Electrical Region

Electricity Planning in Ontario



Niagara Electrical Region

- The Niagara electrical area (referred in the study as the Niagara Region) is serviced by 115 and 230 kilovolt (kV) lines and transformer stations (TS), with supply coming from Thorold Generating Station (GS), Sir Adam Beck GS and Decew Falls GS to the region and province.
- Regional Planning focuses on the local transmission system and does not assess the province-wide system, including interties.



Technical Working Group

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

Team Lead, System
Operator

- Independent Electricity System Operator (IESO)

Lead Transmitter

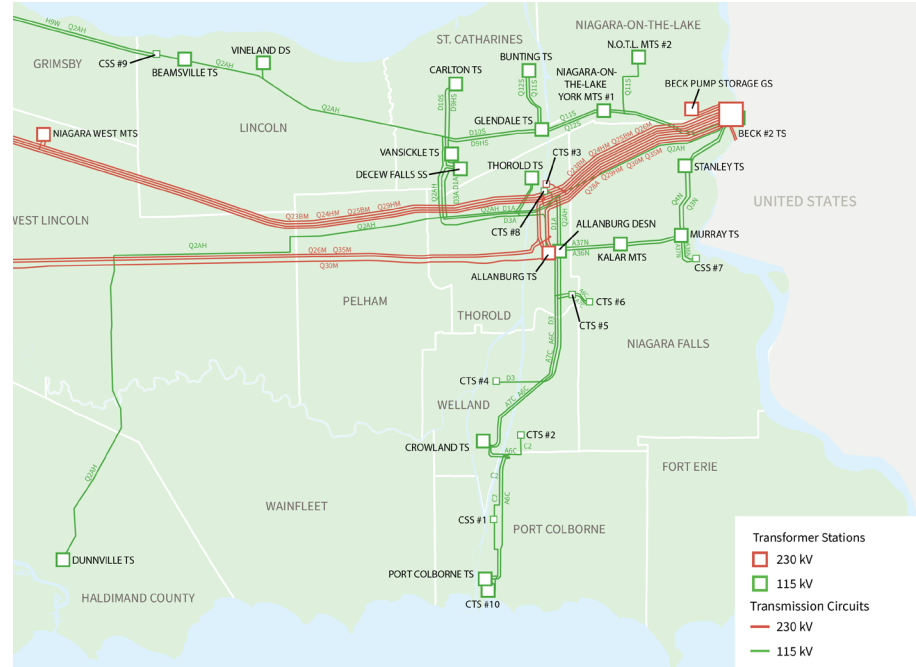
- Hydro One Networks Inc. (HONI)

Local Distribution
Companies

- Alectra Utilities
- Canadian Niagara Power Inc.
- Grimsby Power Inc.
- Hydro One Networks Inc.
- Niagara Peninsula Energy Inc.
- Niagara-on-the-Lake Hydro Inc.
- Welland Hydro-Electric System Corp.

Communities in the Niagara Region

- The Niagara Region includes the City of Port Colborne, City of Welland, City of Thorold, City of Niagara Falls, Town of Niagara-on-the-Lake, City of St. Catharines, Town of Fort Erie, Town of Lincoln, Township of West Lincoln, Town of Grimsby, Township of Wainfleet, Town of Pelham, Regional Municipality of Niagara and Haldimand County.
- The electrical region also encompasses Mississaugas of the Credit First Nation, Oneida Nation of the Thames, Six Nations of the Grand River as represented by Six Nations Elected Council as well as the Haudenosaunee Confederacy Chiefs Council, Métis Nation of Ontario and Niagara Region Métis Council.

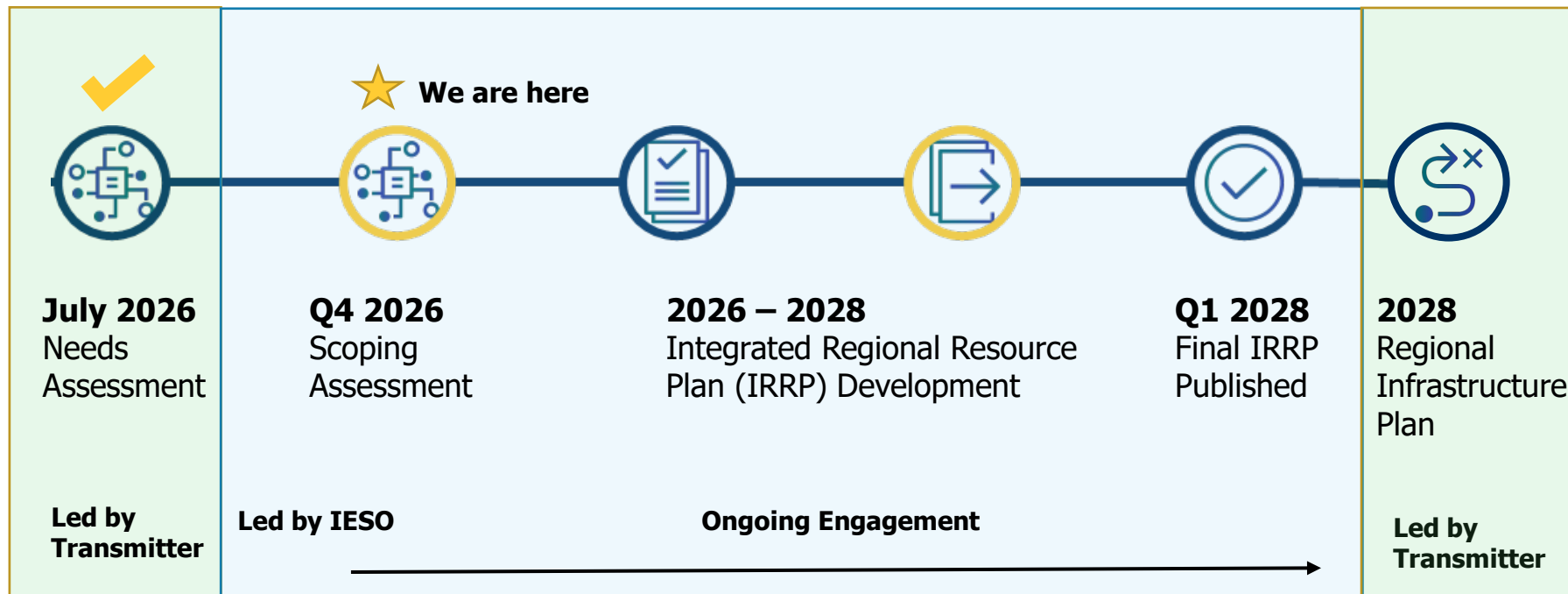


Note: Regional Planning focuses on the electricity system within a defined electrical boundary, which may not align with municipal boundaries. Therefore, some cities may appear partially within the map's coverage areas.

Previous Electricity Planning for Niagara

- 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 230kV station, supplied by new 230kV double circuit lines from Q24HM and Q29HM ([Welland-Thorold Power Line](#)).
- 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.
- As a result, the Niagara electrical region will require more electricity planning through the regional planning process.

Regional Planning Timeline



*Reflects typical 18-month IRRP timeline. Working Group has the flexibility to extend to 24 months where required.



Draft Scoping Assessment

Preliminary Needs Identified in Niagara

Hydro One recently completed a [Needs Assessment](#) report which included a preliminary demand forecast and high-level assessment of potential electricity infrastructure needs. Based on available information at the time, Hydro One identified several needs that require a coordinated approach with the Technical Working Group to further study including:

- **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 Renewal:** Replacement or refurbishing work on utility assets driven by degradation, end-of-service life, or risk of failure.

What is a Scoping Assessment?

As part of the Scoping Assessment, the Technical Working Group will review the Needs Assessment and determine the best planning approach to meet the electricity needs of the Niagara electrical region.

Key Elements:



Review needs that require comprehensive planning



Determine the appropriate regional planning approach and scope



Establish the draft Terms of Reference for an Integrated Regional Resource Plan, if one is required, and composition of the Technical Working Group

Preliminary Electricity Needs Identified (1)

Need Type	Location	Considerations
Station Capacity Ability of a station to deliver power from the grid down to the distribution system.	Allanburg DESN TS	Load demand exceeds its capacity in 2028.
	Carlton TS	Load demand exceeds its capacity in 2028.
	Murray TS (T11, T12)	Load demand exceeds its capacity in 2031.
	Vineland DS	Load demand expected to exceed its capacity after 2035
Supply Capacity Ability of the system to supply power through the transmission lines to a local area.	D1A/D3A circuits	Section expected to approach its limit by 2026.
	A37N/A36N circuits	Section expected to approach its limit by 2031.
	D6HS/D10S circuits between Vansickle TS and Louth Junction	Section approaching its limit by 2035.

Preliminary Electricity Needs Identified (2)

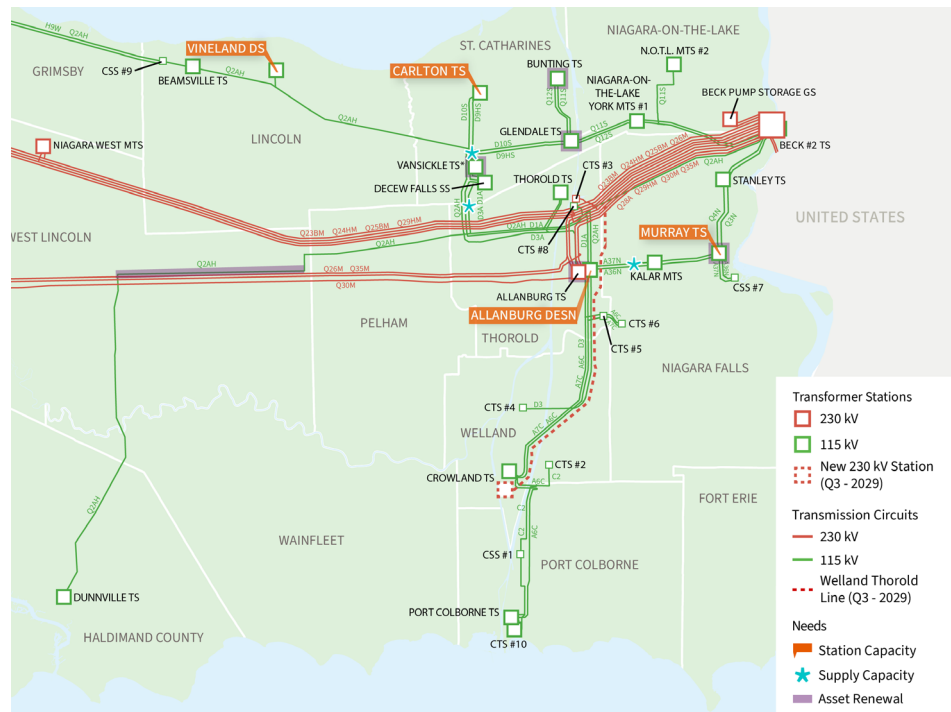
Need Type	Location	Considerations
Asset Renewal Replacement or refurbishing work on utility assets driven by degradation, end-of-service life, or risk of failure.	Q2AH circuit between Rosedene and St. Anns Junction*	Like for like replacement by Q4-2031.
	Glendale TS (T1)*	Like for like replacement by Q4-2031
	Allanburg TS (T3)	Like for like replacement by Q4-2032
	Murray TS (T13,T14)	Like for like replacement by Q4-2032
	Murray TS (T11,T12)	Higher rating replacement by Q4-2032
	Vansickle TS (LV Switchyard)*	Like for like replacement by Q4-2034
	Bunting TS (T3)	Like for like or higher rating replacement > 2035

Map of Preliminary Needs

The IESO have reviewed these needs and supports the recommendations to proceed with an Integrated Regional Resource Plan (IRRP) to further study these needs.

As part of the IRRP, the Technical Working Group is undertaking a more detailed analysis of future electricity demand and system capabilities.

As a result, new needs may be identified. In addition, preliminary needs identified may be refined or no longer be required.



Draft Scoping Assessment Recommendations

An Integrated Regional Resource Plan (IRRP) is recommended for several electricity needs identified in the region, specifically:

- The potential linkages between needs and their required coordination
- The opportunity for public engagement
- The potential for exploring multiple types of options to meet the needs (including non-wires solutions)
- The potential for regional changes having implications on the upstream bulk power system

For more details, please refer to the draft Scoping Assessment Report and IRRP Terms of Reference, which can be found on the [Niagara engagement webpage](#).



Components of an Integrated Regional Resource Plan (IRRP)

Components of an IRRP

Demand Forecast

How much power is needed over the planning timeframe?

Needs

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

Screening 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?

Determining Options as Part of the IRRP Process

Over the course of the planning process, the IESO will:

Evaluate various wire and non-wire options, to address the region's near, medium and long-term electricity needs including:



Traditional wire options to supply local area



Non-wire alternatives (NWA), such as distributed generation, conservation & demand management, demand response or transmission connected generation facilities*

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

*More information regarding screening NWAs can be found in the [IESO's Guide to Assessing NWAs](#).



Engagement and Next Steps

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](#) by selecting the Niagara region



Follow the Niagara regional planning activities [online](#)

Next Steps

The IESO will continue to engage and inform throughout the IRRP's development. Participants can expect to hear from the IESO at these milestones:

October 5, 2026: Feedback due

October 16, 2026: IESO response to feedback and final Scoping Assessment Outcome Report posted

IRRP Timelines

Q1 2027: Present demand forecast in a public engagement webinar and solicit feedback.

Q3 2027: Present needs and potential options in a public engagement webinar and solicit feedback.

Q4 2027: Present options analysis and draft recommendations in a public engagement webinar and solicit feedback.

Q1 2028: IRRP report will be completed and published on the engagement webpage.

Seeking Input

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Thank You

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21 Regional Electricity Planning Regions

- Regional electricity planning aims to ensure affordable and reliable electricity to local areas across Ontario.
- The process is completed on a cyclical basis and assesses the unique needs of a region and considers a range of options to keep the lights on.
- The regional planning process kicked off this year and the IESO is currently completing a scoping assessment, which will guide the development of an Integrated Regional Resource Plan (IRRP).

