Peterborough to Kingston

Scoping Assessment Outcome Report

April 28, 2025

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1. Introduction

This Scoping Assessment Outcome Report is produced as part of the Ontario Energy Board's ("OEB" or "Board") regional planning process and sets out the planning approach to address electricity needs that have been identified in the Peterborough to Kingston region. This is the third cycle of planning for the region, and the process was initiated in September 2024. The Needs Assessment ("NA") is the first step in the regional planning process and was carried out by the Study Team led by Hydro One Networks Inc. ("Hydro One"), and the Technical Working Group (TWG) consisting of Hydro One, the Independent Electricity System Operator (IESO) and the Local Distribution Companies. The Needs Assessment Report was finalized and published on December 20, 2024, and identified a list of needs that either require further regional coordination or can be addressed by local planning. This information was an input to this Scoping Assessment Outcome Report.

During the Scoping Assessment, TWG reviewed the nature and timing of all the known needs in the region to determine the most appropriate planning approach, as well as geographically grouping the needs where beneficial to efficiently carry out the study. The planning approaches considered include:

- **An Integrated Regional Resource Plan ("IRRP") –** through which a greater range of options, including non-wires alternatives, are to be considered and/or closer coordination with communities and stakeholders is required.
- **A Regional Infrastructure Plan ("RIP")** led by the transmitter – which considers more straight-forward wires only option with limited engagement; or
- **A local plan** undertaken by the transmitter and affected local distribution company (LDC) – for which no further regional coordination is required.

This Scoping Assessment Report:

- Lists the needs requiring more comprehensive planning, as identified in the Needs Assessment report
- Reassesses the areas that need to be studied and the geographic grouping of the needs (if
- required)
- Determines the appropriate regional planning approach and scope where a need for regional
- coordination or more comprehensive planning is identified
- Establishes a Terms of Reference for an IRRP and/or wires planning, if required
- Establishes the composition of the Technical Working Group, if required

2. Study Team

The Scoping Assessment was carried out with the following participants:

- Independent Electricity System Operator ("IESO")
- Hydro One Networks Inc. ("Hydro One Transmission")
- Hydro One Networks Inc. ("Hydro One Distribution")
- Elexicon Energy Inc.
- Lakefront Utilities Inc
- Eastern Ontario Power Inc.
- Utilities Kingston

3. Overview of Region and Background

3.1 Overview of the Peterborough to Kingston Region

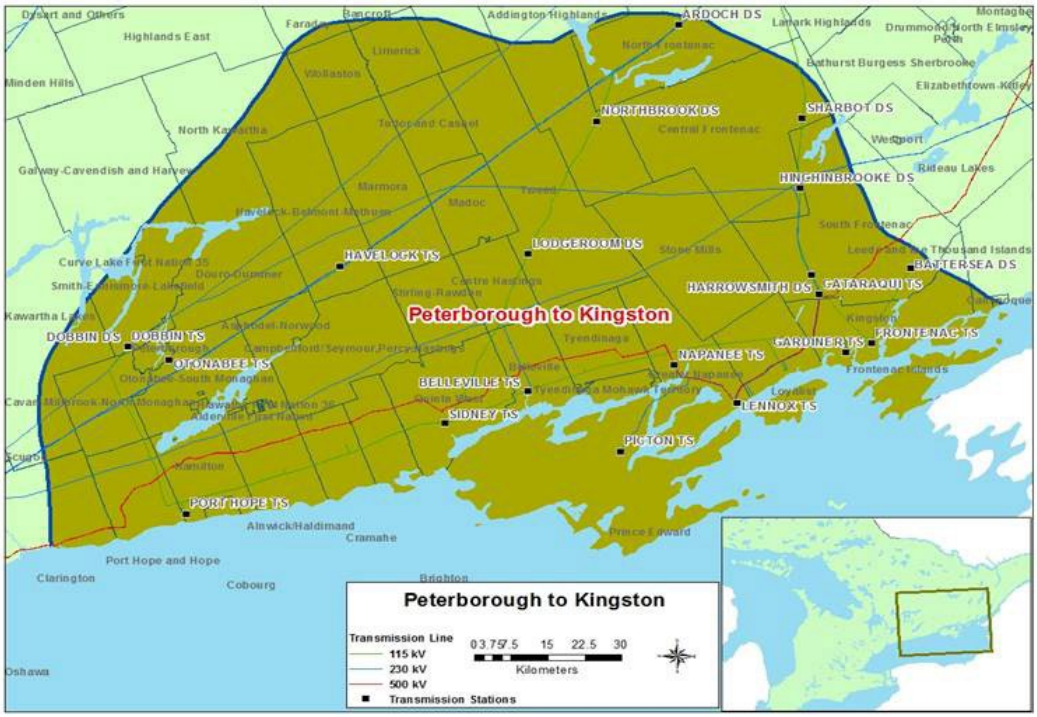
The Peterborough-Kingston region is located in eastern Ontario and is composed of the following: Municipality of Clarington located in the Regional Municipality of Durham, the City of Kingston, the County of Frontenac consisting of the Townships of North Frontenac, South Frontenac, Central Frontenac, and Frontenac Islands, The City of Belleville, City of Quinte West, Prince Edward County, the County of Hastings including the Municipalities of Centre Hastings, Hastings Highlands, Marmora and Lake, Tweed, the, Carlow/Mayo, Faraday, Limerick, Madoc, Stirling-Rawdon, Tudor & Cashel, Tyendinaga, Wollaston, and the Towns of Bancroft and Deseronto, the County of Northumberland consisting of the Municipalities of Brighton, Port Hope, Trent Hills, the Town of Cobourg, and the Townships of Alnwick/Haldimand, Cramahe, and Hamilton, the City of Peterborough and the County of Peterborough including the Townships of Asphodel-Norwood, Cavan Monaghan, and the Townships of Douro-Dummer, Havelock-Belmont-Methuen, North Kawartha, Otonabee-South Monaghan, Selwyn, and the Municipality of Trent Lakes, the County of Lennox and Addington including the Town of Greater Napanee, and the Townships of Addington Highlands, Loyalist, and Stone Mill.

Within the region, Peterborough and Kingston are the two largest population centres. The region also comprises several Indigenous communities including Alderville First Nation, Algonquins of Ontario, Algonquins of Pikwakanagan, Chippewas of Beausoleil First Nation, Chippewas of Georgina Island First Nation, Chippewas of Rama First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation, Mohawks of the Bay of Quinte, Kawartha Nishnawbe, Métis Nation of Ontario.

For electricity planning purposes, the planning region is defined by electricity infrastructure boundaries, not municipal boundaries. The electricity infrastructure supplying the Peterborough-Kingston region is shown in

Figure **1**. Hydro One owns the transmission assets in this region.

Figure 1| Overview of the Peterborough to Kingston region



The region is supplied by four local distribution companies (LDC). Eastern Ontario Power serves over 3,500 distribution customers in Gananoque, Ontario. Lakefront Utilities serves 10,000 distribution customers across the Town of Cobourg and the Village of Colborne. Utilities Kingston serves 28,000 distribution customers in Central Kingston. Hydro One Distribution supplies distribution customers in the surrounding areas of the region. These four LDCs receive power at the step-down transformer stations and distribute it to end users, i.e., industrial, commercial and residential customers.

Electrical supply to the Peterborough-Kingston region is provided through a network of 230 kilovolt (kV) and 115 kV circuits supplied by two 500/230 kV transformers at Lennox Transformer Station (TS), and four 230/115 kV transformers: two at Cataraqui TS and two at Dobbin TS. There are 10 step-down transformer stations in the area: Dobbin TS, Port Hope TS, Sidney TS, Picton TS, Otonabee TS, Havelock TS, Belleville TS, Napanee TS, Gardiner TS, and Frontenac TS. There are also eight Distribution Stations (DS) in the region: Dobbin DS, Ardoch DS, Northbook DS, Lodgeroom DS, Hinchinbrooke DS, Harrowsmith DS, Sharbot DS, and Battersea DS. Finally, there are five Customer Transformer Stations (CTS) in the region: TransCanada Pipelines Cobourg CTS, TransCanada Pipelines Shannonville CTS, Enbridge Pipelines Hilton CTS, Lafarge Canada Bath CTS, and Novelis CTS.

There are two major thermal generating stations located in the region, injecting at the 500 kV and 230 kV voltage levels: Lennox GS (~2,150 MW) and Napanee GS (~1,000 MW). In addition, there are over 400 MW of transmission-connected wind and solar generation facilities across the region. The 115 kV system between Dobbin TS and Frontenac TS is also connected via long 115 kV circuits to Barrett Chute GS located outside the region on the Madawaska River. Finally, there is a total of 189 MW of distribution-connected generation spread across the region.

As per Hydro One's Needs Assessment, this area has net extreme weather winter peak demand of approximately 1,249 MW, which occurred in the year 2024. This area is expected to grow to approximately 1,768 MW by the year 2033. Furthermore, the net extreme weather summer peak

demand was approximately 1,211 MW in the year 2024. This is expected to grow to approximately 1,642 MW by the year 2028. This corresponds to a growth rate of 4.6 percent per year in the winter and 4 percent in the summer.

3.2 Background of the Previous Planning Process

The first cycle of the regional planning process for Peterborough to Kingston was completed in February 2015 with the Needs Assessment concluding that there was no need at that time for further integrated planning for the region and that localized wires-only plans be developed for the needs identified.

The second cycle of was completed in 2021; during this regional planning process the TWG decided an IRRP was required for the region as several near-, mid- and long-term needs were identified and a range of options (including non-wire alternatives) had to be evaluated as part of the solution. As a result of the recommendations made within the second cycle, projects are currently in-progress to address these needs.

Table 1 lists the projects that have been completed since the region's second cycle.

Table 1| List of completed projects

Project	Completion Date
Gardiner TS (Station Capacity) – Load transfer (~10MW) from DESN1 to DESN2	2024
Belleville TS (Asset Renewal) – T1/T2 transformers were replaced by similar 75/100/125 MVA standard step-down transformers	2021/2022

Table 2 covers projects that are currently underway since the region's second cycle RIP.

Table 2| List of projects currently underway

Project	Expected Completion Date
Otonabee TS 44kV (Station Capacity) – 8 MW load transfer to Dobbin TS	2025
Belleville TS (Station Capacity) – Build new Belleville DESN #2 with two 75/100/125 MVA transformers at the existing Belleville TS site	2026
Gardiner TS DESN 1 (Asset Renewal) – T1/T2 to be replaced with two 75/100/125 MVA transformers	2026/2027
Durham-Kawartha Power Line (P15C 230kV & Q6S 115kV Supply Capacity) - Hydro One has initiated building a new 230kV double circuit line from Clarington TS to Dobbin TS as recommended in Gatineau Corridor End-of-Life Study published in December 2022	2029
Dobbin TS (Asset Renewal/Decommissioning) – Autotransformers T1 and T2 are expected to be replaced with two 150/250MVA along with the decommissioning of T5.	2028
Kingston MTS (Station Capacity) New 230kV DESN with two 75/100/125MVA transformer expected to serve load growth in Central Kingston.	2030
Port Hope TS (Asset Renewal) – Transformers T3/T4 to be replaced like for like with two 50/67/83 MVA units.	2033

During this regional planning cycle, the TWG will monitor and review the status of ongoing projects, specifically assessing the progress of previous recommendations and impact of asset renewals on system limits.

3.3 Needs Identified in the 2024 Needs Assessment

For this third cycle of regional planning, the NA identified several needs in the Peterborough-Kingston region based on a 10-year demand forecast and their most up-to-date asset sustainment plans. Additionally, the regional working group participants have considered the characteristics of the transmission and distribution systems in the region, the potential for regional coordination, and the opportunities for stakeholder and community engagement, to develop the following regional needs.

3.3.1 Station Capacity Needs

Station capacity refers to a stations ability to convert and deliver power from the transmission system to an LDC's distribution system. The NA identified several stations expected to exceed their current capacity as described in Table 3.

Table 3| Station capacity needs based on normal growth scenario

Station	Need Year
Gardiner TS (T1/T2)	Current*/2028
Napanee TS (T1/T2)	2026
Picton TS	2026
Hinchinbrooke DS	2028
Dobbin TS (T3/T4)	2032
Frontenac TS	2027

*Gardiner TS is projected to exceed its station capacity today; planned transformer replacements are expected to mitigate the station overload. Based on the NA load forecast, the new transformers will exceed station capacity in 2028.

When the high growth forecast is considered, there are additional station capacity needs at Otonabee TS and Sidney TS in the year 2026 and 2031, respectively.

3.3.2 Load Security and Restoration Needs

Load security criteria places limits on the total amount of load interrupted following major transmission outages. Load restoration criteria describe timeframes by which power must be restored to loads interrupted due to a major transmission outage. No load security or restoration needs were identified as part of this cycle's NA.

3.3.3 Supply Capacity Needs

Supply capacity needs identify the transmission system's ability to supply power through the transmission lines and auto-transformers to local distribution systems being serviced within the region. The NA identified several supply capacity needs, as summarized in **Table 4**.

Table 4| Supply Capacity Needs

Need	Need Description
Belleville TS	Transmission voltage issues under contingency, currently evaluated under Eastern Ontario Bulk Planning Study.
B1S (Q6S Out)	B1S is expected to exceed its thermal limits when Q6S is out of service during high hydro generators output.
Cataraqui TS	Review supply/station capacity in this IRRP.
X2H	Potential supply capacity need with Kingston MTS and a large transmission customer connection.
X4H	Potential supply capacity need with Kingston MTS and a large transmission customer connection.
B5QK	Re-evaluate supply capacity need in this IRRP.
Q3K	Potential supply capacity need under high growth or large transmission customer connection.

During the high growth forecast, an additional supply capacity needs exists on circuit P4S in the year 2031.

For the Cataraqui TS, it was recommended to upgrade the existing copper conductor on secondary side of auto transformers. However, in an assessment the conductor was found to be sufficient and an update to this recommendation was suggested, which will be discussed in this regional planning cycle.

In the second regional planning cycle, there was a long-term need identified for the circuit B5QK (in the year 2038). As recommended in the second cycle IRRP, IESO will re-evaluate this capacity need in next phases of current Regional Planning cycle, when 20-year load forecast will be developed. Given the potential of a large customer connection in Central Kingston, the supply capacity of both Q3K and B5QK will be reviewed.

In addition, the radial tap from 230kV circuits X2H and X4H serving Kingston through Gardiner TS DESN1 and DESN2 are expected to approach their summer Long Term Emergency (LTE). Given the Kingston MTS project that is underway and the potential of a large transmission customer connection, there will be a potential supply capacity need.

3.3.4 End-of-life Asset Replacement Needs

When assets are determined to be approaching end-of-life, an assessment needs to be performed on whether the asset should be replaced, refurbished, upgraded, retired, or another solution be developed. The NA newly identified asset renewal needs, as shown in **Table 5**.

Table 5| Stations with asset renewal needs

Station	End of Life Year	Description
Cataraqui TS	2034	T1/T2 expected to be replaced 2034
Gardiner TS	2027	Transformers at DESN1 expected to be replaced 2026-2027.
Port Hope TS	2033	T3/T4 planned to be replaced 2033
Dobbin TS	2028	Replacement of T1/T2 and decommissioning T5 for 2028.
Lennox TS	2026	Ten 230 kV ABCB & Oil breakers to be replaced by new SF6 breakers.
Picton TS	2026	T1/T2 planned to be replaced 2026

3.3.5 Analysis of Needs and Planning Approach

The regional participants have discussed the needs in the Peterborough-Kingston region. They considered several factors before determining the recommended planning approach, including the potential for regional coordination and for a wide range of solutions - including conservation, generation, and new technologies, wires infrastructure and non-wires solutions.

Needs identified through the NA were reviewed during the Scoping Assessment to determine whether a Local Plan, Regional Infrastructure Plan, or Integrated Regional Resource Plan regional planning approach is most appropriate.

An Integrated Regional Resource Plan is recommended for the Peterborough to Kingston region. The following sections outline the summary of needs that will be reviewed in the IRRP.

3.3.6 Summary of Needs to be Reviewed in the IRRP

Identified needs that will be reviewed in the IRRP are summarized in Table 6; their locations are shown in Figure 2.

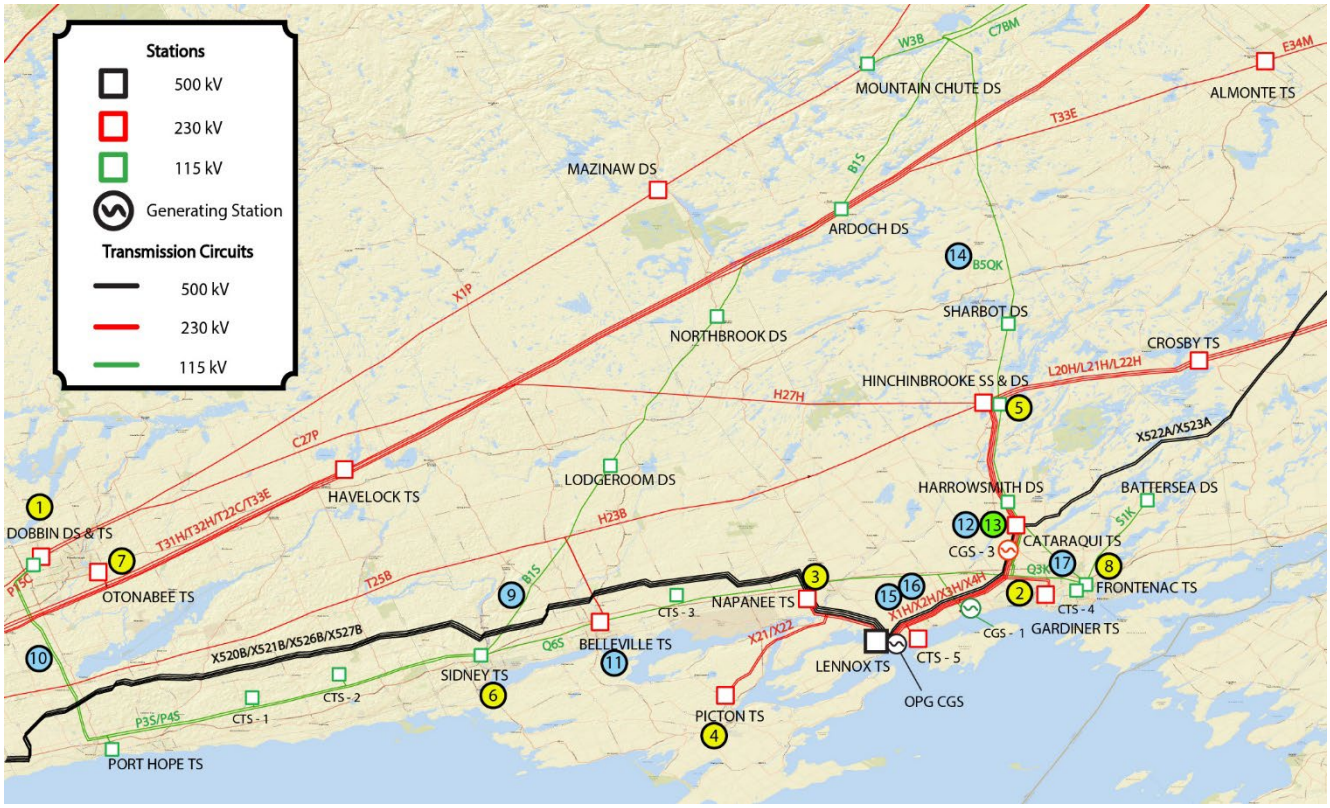
Table 6| Summary of the needs to be reviewed in the IRRP

#	Need	Need Type	Estimated Timing in N/A	Need Description
1	Dobbin TS (T3/T4)	Station Capacity	2032	Station Overload
2	Gardiner TS (T1/T2)	Station Capacity	Current/2028	Transformers are planned to be replaced but based on the needs assessment forecast, there is an overload in 2028.
3	Napanee TS (T1/T2)	Station Capacity	2026	Station Overload
4	Picton TS	Station Capacity	2026	Station Overload, transformers are expected to be replaced and could meet forecasted load.
5	Hinchinbrooke DS	Station Capacity	2028	Station Overload
6	Sidney TS*	Station Capacity	2031	Station Overload
7	Otonabee TS*	Station Capacity	2026	Station Overload
8	Frontenac TS	Station Capacity	2027	Station Overload
9	B1S (Q6S Out)	Supply Capacity	-	During high demand, the transmission line is expected to exceed its thermal limits when Q6S is out of service.
10	P4S*	Supply Capacity	-	Review the need with TWG during IRRP.
11	Belleville TS	Supply Capacity	-	Transmission voltage issues, currently being evaluated under Eastern Ontario Bulk Planning Study, including the timing of the need.
12	Cataraqui TS	Supply Capacity	-	Review the need with TWG during IRRP.
13	B5QK	Supply Capacity		Review the need with TWG during IRRP.
14	X2H	Supply Capacity	-	Potential supply capacity need with the connection of Kingston MTS and a large transmission customer.
15	X4H	Supply Capacity	-	Potential supply capacity need with the connection of Kingston MTS and a large transmission customer.

16	Q3K	Supply Capacity		Potential supply capacity need under high growth or large transmission customer connection.
17	Cataraqui TS	End-of-life Asset Replacement	2034	T1/T2 expected to be replaced 2034

*When high growth forecast is considered, there are station capacity needs at Otonabee TS and Sidney TS in the year 2026 and 2031 as well as supply capacity needs on circuit P4S in the year 2031.

Figure 2 | Geographic location of needs to be reviewed in the IRRP



4. Conclusion and Next Steps

This Scoping Assessment concludes that:

- Based on the available information, an IRRP will be undertaken for the Peterborough to Kingston region;
- The number and potential linkages between the station capacity, supply capacity, and end-of-life requirements as stated in the summary **Table 6** above require an IRRP;
- The recommendations from the previous planning cycle should be assessed and evaluated;
- The composition of the IRRP Working Group will include the IESO, Hydro One Transmission, Hydro One Distribution, Elexicon Energy Inc., Lakefront Utilities Inc., Eastern Ontario Power Inc., Kingston Hydro.
- Given the significant anticipated scope of the study, the full 18-month timeline for completion of the IRRP is expected to be required; and
- The Peterborough to Kingston IRRP will co-ordinate its findings with the East Bulk Study, and vice-versa.

All IRRPs include opportunities for engagement with local communities and stakeholders, as well as include discussion of any local initiatives focused on energy and/or reducing GHG emissions, and how the IRRP can coordinate with any plans. This could include Community Energy Plans, Net-Zero strategies, or similar. Particular attention will be paid to opportunities for information sharing and/or coordination of goals and outcomes.

The Terms of Reference for the Peterborough-Kingston IRRP are attached in Appendix B.

Appendix 1 – List of Acronyms

Acronym	Definition
CDM	Conservation and Demand Management
CGS	Customer Generating Station
CTS	Customer Transformer Station
DER	Distributed Energy Resources
DG	Distributed Generation
DS	Distribution Station
FIT	Feed-in-Tariff
GTA	Greater Toronto Area
IESO	Independent Electricity System Operator
IRRP	Integrated Regional Resource Plan
JCT	Junction
kV	Kilovolt
LDC	Local Distribution Company
LP	Local Plan
MTS	Municipal Transformer Station
MW	Megawatt
NA	Needs Assessment
NERC	North American Electric Reliability Corporation
NPCC	Northeast Power Coordinating Council
OEB	Ontario Energy Board
ORTAC	Ontario Resource and Transmission Assessment Criteria
PPWG	Planning Process Working Group
RIP	Regional Infrastructure Plan
SS	Switching Station
TS	Transformer Station

Appendix 2 – Terms of Reference

1. Introduction and Background

Peterborough to Kingston is one of the 21 electricity planning regions in Ontario as identified through the Ontario Energy Board's (OEB) formalized Regional Planning Process. These Terms of Reference establish the objectives, scope, key assumptions, roles and responsibilities, activities, deliverables and timelines for Peterborough to Kingston Integrated Regional Resource Plan ("IRRP").

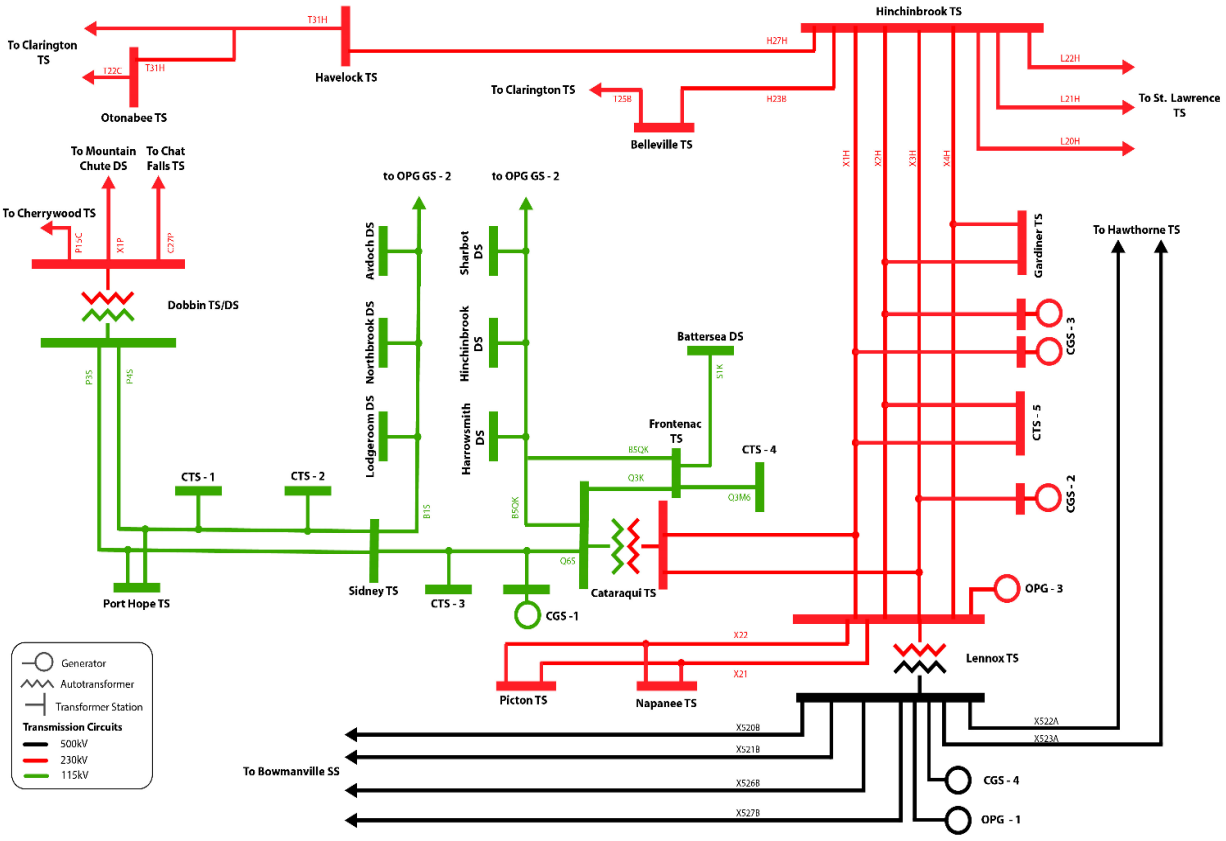
2. Electrical System of the Peterborough to Kingston area

Electrical supply to the Peterborough to Kingston Region ("Region") is provided through a network of 230 kV and 115 kV circuits supplied by 500/230 kV autotransformers at Lennox Transformer Station (TS) and 230/115 kV autotransformers at Cataraqui TS and Dobbin TS.

The existing facilities in the Region are summarized below and depicted in the single line diagram shown in Figure 3. The 500 kV system is part of the bulk power system and is not studied as part of this IRRP:

- Lennox TS is the major transmission station that connects the 500 kV network to the 230 kV system via two 500/230 kV autotransformers.
- Cataraqui TS and Dobbin TS are the transmission stations that connect the 230 kV network to the 115 kV system via 230/115 kV autotransformers.
- Ten step-down transformer stations supply the Peterborough to Kingston load: Dobbin TS, Port Hope TS, Sidney TS, Picton TS, Otonabee TS, Havelock TS, Belleville TS, Napanee TS, Gardiner TS, and Frontenac TS.
- There are also eight Distribution Stations that supply load in the Region: Dobbin DS, Ardoch DS, Northbrook DS, Lodgeroom DS, Hinchinbrooke DS, Harrowsmith DS, Sharbot DS, and Battersea DS.
- Five Customer Transformer Stations (CTS) are supplied in the Region: TransCanada Pipelines Cobourg CTS, TransCanada Pipelines Belleville CTS, Enbridge Pipelines Hilton CTS, Lafarge Canada Bath CTS, and Novelis CTS.
- There are 7 existing transmission connected generating stations in the Region as follows:
    - Lennox GS is a 2000 MW natural gas-fired station connected to Lennox TS
    - NPIF Kingston GS is a 130 MW gas-fired cogeneration facility that connects to 230 kV circuits X1H and X2H near Lennox TS
    - Wolfe Island GS is a 198 MW wind farm connected to circuit X4H near Gardiner TS
    - Napanee GS is a 910 MW gas-fired plant connected to Lennox TS to the 500 kV system.
    - Kingston Solar CGS is a 100 MW solar generation facility connected to 230 kV circuit X2H
    - Stone Mills CGS is a 60 MW solar generation facility connected to 230 kV circuit H23B
    - Amherst Island CGS is a 76 MW wind farm connected to 115 kV circuit Q6S

Figure 3 | Single line diagram of Peterborough to Kingston Region



3. Objectives

The Peterborough to Kingston Area IRRP will assess the adequacy of electricity supply to customers in the Region and will develop a set of recommended actions to maintain reliability of supply to the Region over the next 20 years (2025-2045). Specifically, this IRRP will:

- Assess the adequacy of electricity supply to customers in the Peterborough to Kingston Region over the next 20 years;
- Determine whether a need exists to initiate development work or fully commit infrastructure investments (wires or non-wires) in this planning cycle;
- Assess potential risks & uncertainties over the longer term and identify near-term actions to manage/mitigate these risks, where applicable;
- Develop an implementation plan that maintains flexibility to accommodate changes in key assumptions over time. The implementation plan should identify actions for near-term needs, preparation work for mid-term needs, and the planning direction for long-term needs; and
- Inform Local Distribution Companies' ("LDC") OEB rate filings.

4. Scope

This IRRP, developed with the Technical Working Group ("TWG"), will consist of an integrated plan to meet the needs of the region. The plan will assess all capacity, restoration and sustainment needs in the area and incorporate input from community engagement activities.

The IRRP process will consist of the following activities:

- Develop an updated 20-year demand forecast for the region.
- Evaluate previously identified needs and identify any new needs.
- Perform an assessment of options that meet each need identified. Options are evaluated using criteria including, but not limited to, technical feasibility, economics, reliability performance, environmental and social factors. The options analysis will be divided into groupings based on the priority/timing of the needs, any known lead time information, and the depth of analysis required.
- Development of the recommendations and implementation plan.

Publication of the IRRP report documenting the assessment, including the near, mid, and long-term needs, recommendations and implementation plan.

5. Data and Assumptions

The plan will consider the following data and assumptions, as applicable:

Demand forecast

- Historical peak demand in the region and historical weather correction for median and extreme conditions. The region's coincident demand and station level non-coincident demand will be forecasted to identify both the location and timing of reliability issues.
- Potential future load customers
- Gross peak demand forecast scenarios by station under normal growth and as needed, high and low growth.
- Peak demand forecast for transmission-connected customers

Conservation and Demand Management (CDM)

- LDC CDM plans
- Verified LDC results and progression towards OEB conservation targets, and any other CDM programs/opportunities in the area
- LDC customers' conservation forecasts
- Conservation potential studies, if available
- Load segmentation data for each TS based on customer type (residential, commercial, industrial)

Local supply resources

- Existing local generation, including distributed generation ("DG"), district energy, customer-based generation, Non-Utility Generators and hydroelectric facilities as applicable
- Existing or committed renewable generation from Feed-in-Tariff ("FIT") and non-FIT procurements
- Future district energy plans, combined heat and power, energy storage, or other generation proposals

Relevant local plans

- LDC Distribution System Plans
- Community Energy Plans and Municipal Energy Plans
- Municipal Growth Plans
- Any transit plans impacting electricity use

Criteria, codes and other requirements

- Ontario Resource and Transmission Assessment Criteria ("ORTAC")
    - Supply capability
    - Load security
    - Load restoration requirements
- NERC and NPCC reliability criteria, as applicable

    - OEB Transmission System Code
    - OEB Distribution System Code
    - Reliability considerations, such as the frequency and duration of interruptions to customers
- Other applicable requirements

Existing system capability

- Transmission line ratings as per transmitter records
- Transformer ratings (10-day LTR) as per asset owner records
- Load transfer capability for restoration during transmission system outages and/or for transmission level capacity needs
- Technical and operating characteristics of local generation

End-of-life asset considerations/sustainment plans & end of expected service life information

- Transmission assets
- Distribution assets

Other considerations, as applicable.

6. Technical Working Group ("TWG")

The following are the LDCs in the region:

- Elexicon Energy Inc.
- Utilities Kingston
- Lakefront Utilities Inc.
- Eastern Ontario Power Inc.
- Hydro One Networks Inc. (Distribution)

The TWG consists of the LDC stated above as well as the Independent Electricity System Operator ("IESO") and Hydro One Networks Inc. (Transmission).

Authority and Findings

Each entity involved in the study will be responsible for complying with regulatory requirements as applicable to the actions/tasks assigned to them under the implementation plan resulting from this IRRP. For the duration of the study process, each participant is responsible for their own funding.

7. Engagement

Integrating early and sustained engagement with communities and stakeholders in the planning process was recommended to, and adopted by, the provincial government to enhance the regional planning and siting processes in 2013. These recommendations were subsequently referenced in the

2013 Long Term Energy Plan. As such, the TWG is committed to conducting plan-level engagement throughout the development of the Peterborough-Kingston IRRP.

Engagement will consist of meetings with municipalities and Indigenous communities within the region, Indigenous communities who may have an interest in the region and the Métis Nation of Ontario to discuss regional planning, the development of the Peterborough-Kingston IRRP, and integrated solutions.

Engagement will continue throughout the development and completion of the IRRP.

8. Activities, Timeline and Primary Accountability

Table A-1 | Summary of IRRP timelines and activities

	Activity	Lead Responsibility	Deliverable(s)	Start – End Date
1	**Commence IRRP Process** - Prepare terms of reference considering stakeholder input - Kick-off meeting with working group members	*IESO*	- Finalized Terms of Reference	April-May 2025
2	**Develop the Planning Forecast for the Region**			
	- Establish historical peak demand information	*IESO*	- Long-term planning forecast scenarios	April – July 2025
	- Establish historical weather correction, median and extreme conditions	*IESO*		
	- Establish gross peak demand forecast and if applicable/need be, high/low growth scenarios	*LDCs*		
	- Establish existing, committed and potential DG	*LDCs*		
	- Establish near- and long-term conservation forecasts	*IESO*		
	- Develop planning forecast scenarios - including the impacts of CDM, DG and extreme weather conditions	*IESO*		
3	**Provide information on load transfer capabilities under normal and emergency conditions – for the purpose of analyzing transmission system**	*LDCs*	- Load transfer capabilities under normal and emergency conditions	April – July 2025

	needs and identifying options for addressing needs			
4	**Complete system studies to identify needs over a twenty-year period** - Develop load flow base case, including system assumptions as identified in the key assumptions - Apply reliability criteria as defined in ORTAC to demand forecast scenarios - Confirm and refine the need(s) and timing/load levels	*IESO, Hydro One Transmission*	- Summary of needs based on demand forecast scenarios for the 20-year planning horizon	Aug - Nov 2025
5	**Develop Options and Alternatives**			
	Develop conservation options	*IESO and LDCs*	- Develop flexible planning options for forecast scenarios - Deliverables staged according to the three phases	Dec 2025-Feb 2026
	Develop local generation options	*IESO and LDCs*		
	Develop transmission (see Action 7 below) and distribution options	*Hydro One, and LDCs*		
	Develop options involving other electricity initiatives (e.g., smart grid, storage)	*IESO/ LDCs with support as needed*		
	Develop portfolios of integrated alternatives	*All*		
	Technical comparison and evaluation	*All*		
6	**Plan and Undertake Community & Stakeholder Engagement**			
	- Early engagement with local municipalities and Indigenous communities within the Region, First Nation communities who may have an interest in the Region, and the Métis Nation of Ontario	*All*	- Community and Stakeholder Engagement Plan - Input from local communities	Q3/Q4 2025
	- Develop communications materials	*All*		Q4 2025-Q1 2026
	- Undertake community and stakeholder engagement	*All*		
	- Summarize input and incorporate feedback	*All*		

7	**Develop long-term recommendations and implementation plan based on community and stakeholder input**	*IESO*	- Implementation plan - Monitoring activities and identification of decision triggers - Hand-off letters - Procedures for annual review	March -May 2026
8a	**Prepare the IRRP report detailing the recommended near, medium and long-term plan for approval by all parties**	*IESO*	- IRRP report	June-August 2026
8b	**Review & publish IRRP report**	*IESO*	-	August-Oct 2026

Independent Electricity System Operator
1600-120 Adelaide Street West
Toronto, Ontario M5H 1T1

Phone: 905.403.6900
Toll-free: 1.888.448.7777
E-mail: customer.relations@ieso.ca

ieso.ca

@IESO_Tweets
linkedin.com/company/IESO

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