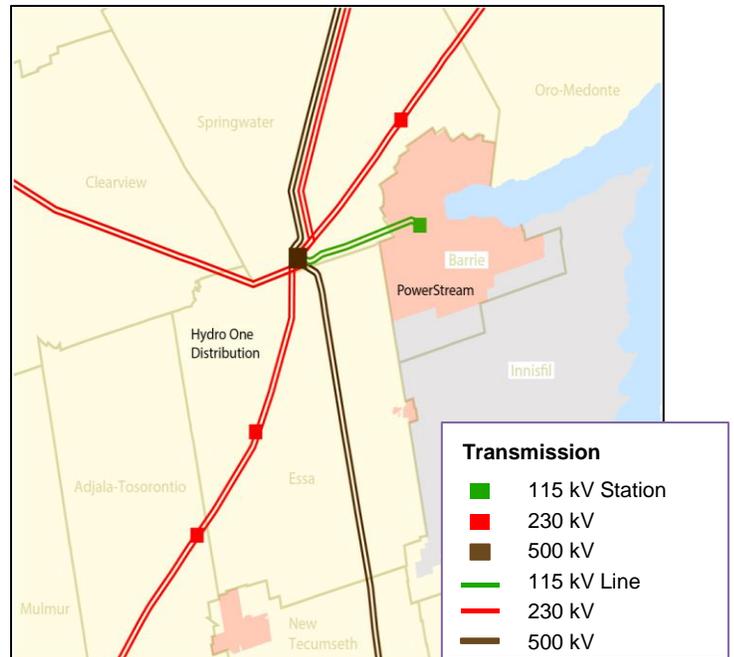


# Barrie/Innisfil IRRP - Backgrounder

## About Barrie/Innisfil

The Integrated Regional Resource Plan (“IRRP”) for the Barrie/Innisfil sub-region addresses the electricity needs for the area over the next 20 years from 2015-2034.

Barrie/Innisfil is a sub-region of the South Georgian Bay/Muskoka planning region and roughly encompasses the City of Barrie, the Towns of Bradford West Gwillimbury, Innisfil, and New Tecumseth and the Townships of Adjala-Tosorontio, Clearview, Essa, Mulmur, and Springwater. The approximate geographical boundaries of the sub-region are shown in the accompanying map. There are no First Nation communities supplied in the sub-region.



Barrie/Innisfil Sub-region Planning Area

The June 2015 Scoping Assessment report for the Southern Georgian Bay/Muskoka region identified urgent needs to replace infrastructure approaching its end-of-life and provide supply capacity in the area. As a result, the Barrie/Innisfil IRRP was conducted in two phases to ensure near-term needs were met in a timely fashion. The first phase of the IRRP was to review options to address near-term needs with consideration of future needs. This planning phase is now complete and Hydro One is in the initial stages of the development process of a near-term transmission project to address urgent local needs. The second phase of the IRRP was the development of a long-term plan for the Barrie/Innisfil sub-region for the next 20 years.

The Barrie/Innisfil IRRP was developed by a Working Group composed of the Independent Electricity System Operator (IESO), PowerStream, InnPower and Hydro One Networks Inc.

## Recommendations in the IRRP

The implementation of provincial conservation targets established in the 2013 Long-Term Energy Plan (LTEP) is important for managing demand in Ontario. Local peak-demand impacts associated with the provincial conservation targets were assumed before identifying residual needs, consistent with the Conservation First Framework.

In addition to the recommended actions outlined in the table below, provincial programs that encourage the development of distributed generation also contribute to reducing peak demand in the sub-region. The Local Distribution Companies (LDCs) and the IESO will continue their activities to support these initiatives and monitor their impacts.

<b>Near- and Medium-Term Needs</b>	<b>Recommendations</b>
Immediate transformer station capacity needs at Barrie Transformer Station (TS)	Rebuild and uprate Barrie TS and E3/4B to 230 kV
Supply capacity needs for the 115 kV supply to Barrie TS by 2019	PowerStream to transfer load from Barrie TS to Midhurst TS
End-of-life capacity needs for Barrie TS and components of its 115 kV supply by 2020	Relocate and expand InnPower feeder supply from Barrie TS
<b>Long-Term Need</b>	<b>Recommendations</b>
<p>There is a potential for electrical demand in the long-term to exceed the capacity of existing and planned-for transmission and distribution infrastructure serving the Barrie/Innisfil sub-region</p>	<p>Implementation of provincial conservation targets established in the 2013 Long-Term Energy Plan and encourage local distributed generation</p> <p>LDCs to conduct a Local Achievable Potential Study for the Barrie TS service area to determine conservation potential</p> <p>Undertake community engagement, including the formation of a Local Advisory Committee</p> <p>Increase the Limited Time Rating of Everett TS</p> <p>Explore conversion of the 13M3 115 kV corridor to 230 kV</p> <p>Explore community-based solutions such as combinations of conservation, district heating, local generation, storage, off-grid solutions, and other emerging technologies</p> <p>Monitor demand growth, conservation achievement and distributed generation uptake</p> <p>Initiate the next regional planning cycle early, if needed</p>

## **Community Engagement**

The first step in the engagement on the Barrie/Innisfil IRRP was meeting with the municipalities in the area. Between August and November 2015, the Working Group held individual and group meetings throughout the planning area. Key areas of discussion at these meetings included confirmation of the growth projections, discussion of the near- to medium-term needs identified in the area and recommended solutions, and potential long-term needs and discussion of the possible approaches to address the needs. Meetings were also held with the local municipalities in November 2016 prior to the posting of the IRRP to discuss the recommendations included in the plan as well as future engagement activities, including the development of a Local Advisory Committee (LAC) in early 2017.

The focus of the Barrie/Innisfil LAC will be to share information on local planning and electricity issues, foster an understanding of community growth and its relationship to electricity needs, explore options for community based solutions to potentially meet a long-term need, and obtain input on community preferences for various approaches to meeting needs.

Although there are no First Nation communities supplied in the sub-region, First Nation communities who may be interested in planning in this area will be invited to participate in the LAC.

The IESO remains open to additional meetings and discussions with municipalities and communities to support further engagement of the Barrie/Innisfil IRRP.

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## **About Regional Planning in Ontario**

- Regional planning is a process for identifying and meeting local electricity needs and typically focuses on 230 kV and 115kV infrastructure. The objective is to maintain a reliable and cost-effective electricity supply to customers. The IRRP process is an integrated approach, which looks at conservation, generation, wires, demand management and other innovative solutions for the near, medium and long term.
- Regional planning is part of the broader electricity system planning process, which includes the Long-Term Energy Plan which sets the policy framework and targets for resource procurement, bulk system planning which focuses on 230 kV and 500kv transmission lines, and distribution system planning.
- Developments over the past few years have changed how regional planning is done. In 2010, the OEB announced an initiative to develop a Renewed Regulatory Framework for Electricity, which concluded that a structured approach to regional planning was needed. In 2013, the Ontario Energy Board formalized the regional planning process.
  - Through this process, either Hydro One or the transmitter determines if there are regional electricity needs that require regional coordination. If yes, then the IESO

determines which type of study is required. If a more comprehensive study, beyond a simple “wires” (transmission and/or distribution) solution, is required, then the IESO leads the development of an IRRP examining conservation, generation and wires solutions.

- The IRRP addresses electricity needs over a 20-year period:
  - It identifies investments for immediate implementation to meet near-term needs, with consideration given to their lead times for development.
  - The IRRP also identifies approaches to meeting potential medium- and long-term needs, but given forecast uncertainty, it maintains flexibility for medium- and long-term options and does not commit to specific projects at this time.

### **Key Resources**

Barrie/Innisfil planning web page: <http://www.ieso.ca/barrie-innisfil>

About the regional planning process: [www.ieso.ca/regional-planning](http://www.ieso.ca/regional-planning)

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