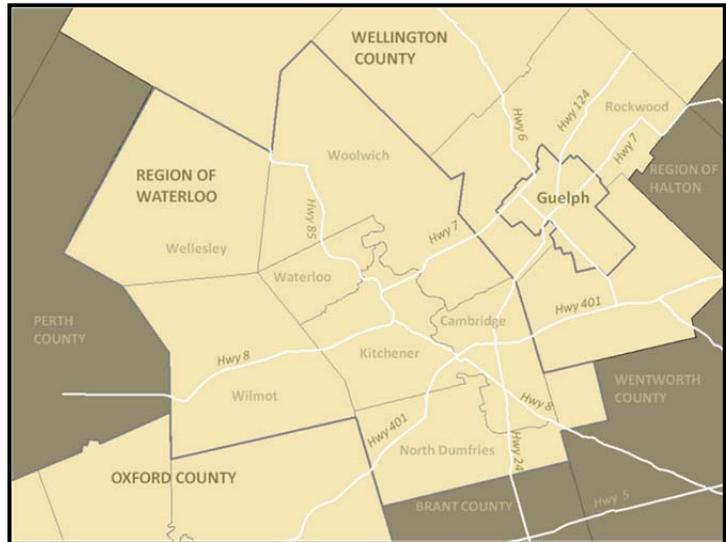


Kitchener-Waterloo-Cambridge-Guelph IRRP - Backgrounder

About KWCG

The Kitchener-Waterloo-Cambridge-Guelph (KWCG) Region is located in southwestern Ontario and includes the Region of Waterloo, the City of Guelph, Wellington County and the Township of Blandford-Blenheim (Oxford County).

The KWCG Region is a growing community with an estimated population of over 735,000 people. The region's electricity demand is a mix of residential, commercial and industrial loads, and includes diverse economic activities such as major educational institutions and automobile manufacturing.



KWCG IRRP Area

The KWCG Integrated Regional Resource Plan (IRRP) was developed by a working group composed of the Independent Electricity System Operator (IESO), Guelph Hydro Electric Systems Inc., Waterloo North Hydro, Kitchener-Wilmot Hydro, Cambridge and North Dumfries Hydro 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 a key component of the near-term plan. Peak-demand impacts associated with the provincial targets were assumed before identifying residual needs, consistent with the Conservation First Framework.

In addition to the recommended actions provided in the table below, provincial programs that encourage the development of distributed generation such as the Feed-in Tariff (FIT), microFIT and Combined Heat and Power Standard Offer (CHPSOP) programs also contribute to reducing peak demand in the regions. The LDCs and the IESO will continue their activities to support these initiatives and monitor their impacts.

Timeframe	Need	Action
Near- and Medium-Term	<ul style="list-style-type: none"> - Provide sufficient supply capacity to support growth in South-Central Guelph, Kitchener and Cambridge - Improve ability to restore electricity supply to customers in Waterloo and Guelph 	<ul style="list-style-type: none"> - Implement the Guelph Area Transmission Refurbishment (GATR) Project, which includes: the installation of two autotransformers, switching facilities and upgrade of an existing transmission line in Guelph (Hydro One)
	<ul style="list-style-type: none"> - Improve ability to restore electricity supply to customers in Cambridge and Kitchener 	<ul style="list-style-type: none"> - Install two circuit switchers at Galt Junction and explore opportunities to further improve restoration capability in the Cambridge area (Hydro One)
Long-Term	<ul style="list-style-type: none"> - Transformer station capacity needs may arise in the Region of Waterloo beyond 2023 	<ul style="list-style-type: none"> - Continue to engage with municipalities and environmental and sustainability groups (IESO/LDCs) - Monitor demand growth, conservation achievement and distributed generation uptake in the area (IESO) - Explore opportunities to coordinate use and development of transformation station facilities in the Region of Waterloo (LDCs)

Community, Aboriginal and Stakeholder Outreach

The first step in the engagement was providing information to the municipalities and First Nation communities who may have an interest in the planning area. Presentations were made to KWCG Region municipal planners and a meeting was held with representatives of the Six Nations Elected Council. During these meetings, key topics of discussion included confirmation of the growth projections, discussion of the needs identified in the area, as well as Hydro One’s Guelph Area Transmission Refurbishment Project (GATR). Invitations to meet to discuss the KWCG Region IRRP were also extended to the Mississaugas of the New Credit First Nation and to the Haudenosaunee Confederacy Chiefs Council. The IESO remains committed to responding to any questions or concerns from these communities.

Continued regional and community engagement will follow the posting of the IRRP. In spring 2015, the Working Group will host an informational webinar to explain the near-term needs in the region and provide an update on the long-term outlook. Presentations on the KWCG Region IRRP will also be made to municipal councils and/or staff, First Nation communities and the Métis Nation of Ontario communities on request and follow-up meetings will be held in the future.

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. 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.
 - The process is that 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 the electricity needs of the KWCG Region over the next 20 years:
 - 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 medium- and long-term needs, but given forecast uncertainty and the potential for technological change, it maintains flexibility for long-term options and does not commit to specific projects at this time.

Key Resources

KWCG regional planning web page: www.ieso.ca/KWCG

About the regional planning process: www.ieso.ca/regional-planning

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