

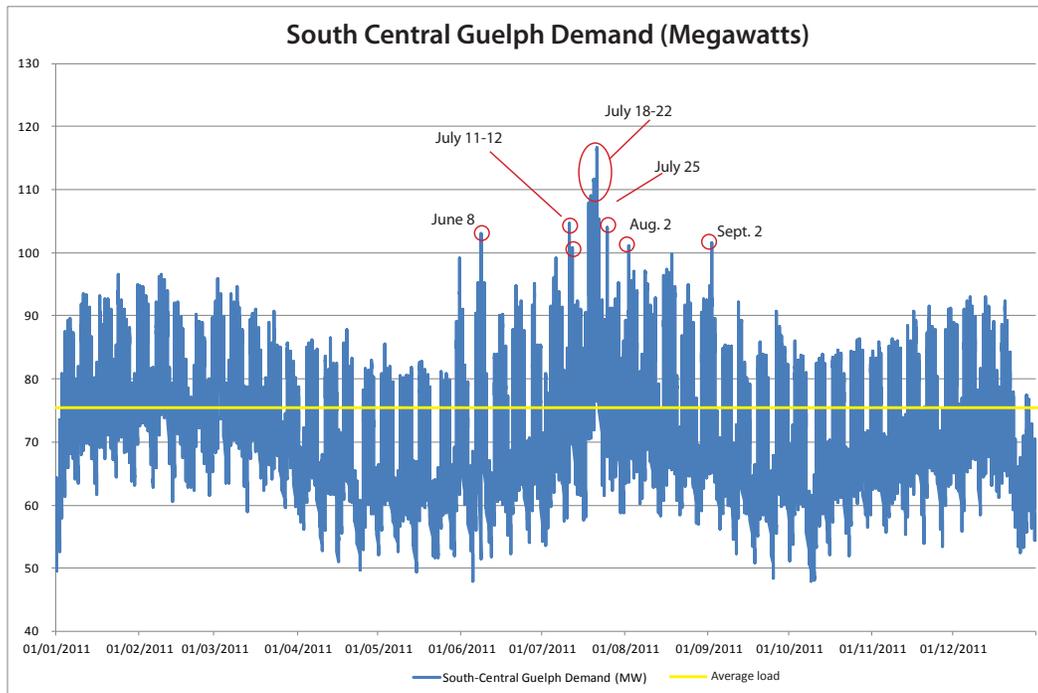
The Guelph Transmission Line: Pulling Guelph back to the 1950s

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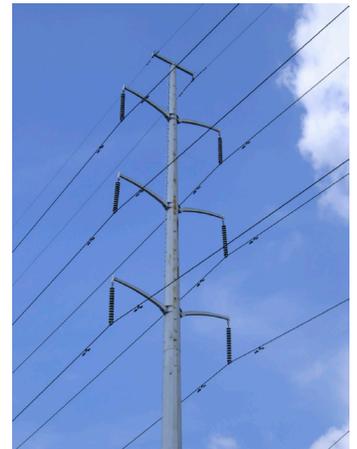
The Ontario Power Authority (OPA) and Hydro One are proposing to build a high-voltage transmission line that will require 10-storey-high hydro pylons marching parallel to Deerpath Drive in Guelph. There is a better option to meet south-central Guelph's electricity needs, protect our neighbourhoods and lower our energy bills while keeping energy dollars and jobs in the city, but it won't happen if decisions stay in the backrooms. Specifically, the OPA should work with the City to implement its visionary and responsible [Community Energy Plan](#).

The chart below, which plots south-central Guelph's demand for electricity during each hour of 2011, reveals a number of important facts. First, the demand for electricity spikes on a dozen very hot days when our air-conditioners are running full out. Second, on these days the peak hourly demand for electricity can be more than 50% higher than south-central Guelph's average hourly demand of 75 megawatts. Third, these summer needle peaks last for only a few hours at a time.



The OPA's and Hydro One's proposal is based on a conventional "hub and spoke" electricity system, where a handful of large generating stations distribute power over long-distance transmission lines. The result is a small group of inefficient and inflexible generating stations feeding power to consumers over long distances, a system that maximizes power losses (with line losses peaking when electricity

There are better ways to meet Guelph's peak electricity demand, while keeping energy dollars and jobs in Guelph



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demand is highest, but averaging 8% in Ontario) and is vulnerable to storm damage, accidents or intentional disruption.

This outdated approach is in stark contrast to the City of Guelph's *Community Energy Plan* which calls for an integrated combination of energy conservation and demand management, new renewables and natural gas-fired combined heat and power plants. This combination will provide the city with a more reliable, cost-effective and efficient electricity system and will directly contribute to better air quality and a reduced contribution to climate change for the city itself. We need to take the following steps to implement the City's *Plan* (available at http://guelph.ca/uploads/ET_Group/admin/CEP-executive-summary.pdf).



Guelph residents will benefit from programs that help them save energy and reduce costs – not more transmission lines



Step #1: Reducing the spikes in electricity demand on hot summer days

Guelph's *Community Energy Plan* calls for a reduction in the City's summer peak electricity demand of at least 40% by 2031 to avoid the need for investment in new electrical infrastructure to serve growth in the city.

Guelph Hydro should hire students to go door-to-door to sign up at least 90% of its residential and small business customers for its *peaksaver plus* program which controls the usage of air-conditioners, water heaters and pool pumps on hot summer days. Currently, only 3% of Guelph Hydro's residential and small commercial customers are enrolled in the *peaksaver* program. (See saveonenergy.ca/Consumer/Programs/PeaksaverPlus.aspx for more on how this program works and incentives.)

The OPA should increase its financial incentives for large volume commercial, institutional and industrial customers to reduce their demands on hot summer days.

The installation of solar photovoltaic systems on the roofs of homes and businesses is an ideal renewable energy option to reduce the spikes in demand for grid-supplied electricity on hot summer days when solar energy is at its strongest.

Step #2: Home Energy Retrofits

Guelph Hydro and Union Gas should establish a home energy retrofit program to help their customers reduce their energy consumption and lower their energy bills by investing in energy conservation measures (e.g., high-efficiency air-conditioners and furnaces, more insulation, energy-efficient windows and doors, solar photovoltaic and solar thermal systems, geothermal heating and cooling systems). Key features of the utilities' home energy retrofit program should be:

- low-interest, on-bill financing;
- the use of Natural Resources Canada's EnerGuide Rating System to forecast the energy savings of the proposed conservation measures and to establish proper sizing for equipment (e.g., air-conditioners, geothermal systems), as well as for verification of the actual savings after the measures are installed; and

- a list of reliable and professional contractors who can perform home energy retrofits.

Step #3: Increase financial incentives to save energy

The OPA should increase its payments to large-volume commercial, institutional and industrial customers to save electricity. Local hospitals, universities and factories should be paid up to the same amount to save a kWh as Bruce Power is paid to produce a kWh of electricity.

Step #4: Combined Heat & Power

Virtually every building and factory in Guelph uses natural gas to provide just one service, namely, heat. It is much more efficient to use these same molecules of natural gas to simultaneously produce heat and electricity. This is what combined heat and power (CHP) plants do. As a result, they can have an overall energy efficiency of 80-90%. We need to convert Guelph's apartment buildings, shopping malls, recreation centres, hospitals, university and factories into small-scale power plants.

Guelph's Community Energy Plan calls for 30% of the City's electricity needs to be met by CHP by 2031.

By reducing the demand for grid-supplied electricity, CHP plants can help eliminate the need for the proposed Guelph Transmission Line.

Step #5: What you can do

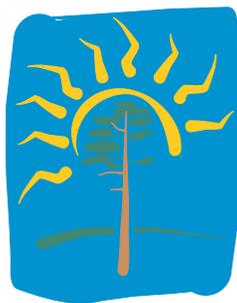
Please contact Energy Minister Chris Bentley (cbentley.mpp@liberal.ola.org) and Guelph MPP Liz Sandals (lsandals.mpp@liberal.ola.org) and ask them to direct the Ontario Power Authority to work with the City of Guelph to implement its *Community Energy Plan* in order to reduce our energy bills, protect our neighbourhoods, create jobs in Guelph, and avoid the need for the proposed Guelph Transmission Line.

Solar power is ideal for meeting the peak electricity demand that occurs on hot summer days





Guelph needs help to implement its farsighted Community Energy Plan, not more transmission lines.



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