



# HYDRO ONE / ENERGY INNOVATORS Combined Heat and Power

7.9<sup>MW</sup>

of electricity output

35,000<sup>lbs/hr</sup>

of 250 psig steam

## CHP DRIVES DOWN DEMAND, DELIVERS BIG SAVINGS

### INVISTA

Kingston, Ontario

- Installed a Combined Heat and Power (CHP) plant to displace the load normally supplied from the grid. Heat is used for process and space heating.

### Combined Heat and Power

The CHP output is 7.9 MW of electricity and up to 35,000 pounds per hour of 250 psig steam

### Savings

Annual electricity savings: up to 50 GWh

### Incentives

\$5.8 million under the **Process & Systems Upgrade** program

Project payback = four years



Partners in Powerful Communities



# HYDRO ONE / ENERGY INNOVATORS Combined Heat and Power

**SAVE ON  
ENERGY**  
POWER WHAT'S NEXT



## "Peak demand reduction was the driving reason for the project."

The INVISTA plant in Kingston, Ontario manufactures engineering polymers and the fibre used to make airbags. The major power demand is from air compressors, pumps, motors, fans, lighting and office systems.

### System Designed for Load Displacement

Over the past 10 years, INVISTA had considered a number of configurations for a Combined Heat and Power (CHP) plant. Upon analysis, they elected to install a gas turbine generator designed solely for load displacement.

"We are a Class A customer so the real savings come from the reduction in peak demand," said Steve Hughes, Site Energy Leader for INVISTA. "We worked very closely with Hydro One throughout this project. The new plant offers significant energy savings and other efficiencies that made this project hard to turn away from. CHP is helping us meet a key corporate goal of reducing energy intensity by 20% before 2020."

### CHP Works with Existing Boilers

During the project, INVISTA took the opportunity to replace a 1950s-era boiler, one of a group of four, and upgrade it with a new larger model. Most of the steam generated by the CHP system is blended with the steam from the boilers that supply heat to the plant.

### Advice for Potential CHP Candidates



Hughes recommends that anyone considering CHP should be clear on their objectives. CHP can also be built to sell excess power and/or provide emergency backup power. It's critical to analyze the project requirements, costs for both heat and power, and then weigh the options for how the system would be best configured to meet the site's needs.

### SOLUTIONS TO HELP YOU BECOME MORE ENERGY EFFICIENT

Hydro One offers significant financial incentives to encourage businesses and industries of all types to better manage their electricity use:

- energy audits
- lighting upgrades
- equipment retrofits
- chilled water system upgrades
- process and systems upgrades
- energy managers
- major renovations and new construction
- and more

**Get on the fast track to energy efficiency. Contact us to get started.**

 [HydroOne.com/CHP](http://HydroOne.com/CHP)  
 1-866-650-4709  
 [SaveOnEnergy@HydroOne.com](mailto:SaveOnEnergy@HydroOne.com)

Subject to additional terms and conditions found at [www.HydroOne.com/Business](http://www.HydroOne.com/Business). Subject to change without notice. Save on Energy is powered by the Independent Electricity System Operator and brought to you by Hydro One Inc. <sup>SM</sup>Official Mark of the Independent Electricity System Operator. Used under licence. The Hydro One & Design trade-mark is owned by Hydro One Inc. "Partners in Powerful Communities" is an Official Mark owned by Hydro One Networks Inc.

**hydro  
one**

Partners in Powerful Communities