



GE Energy

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## Press Release

### **GE Energy's Gas Engines Powering First North American Cogeneration Plant for Commercial Greenhouses**

*Onsite Power Project Showcases GE's Jenbacher Technology to Reduce Emissions and Cost*

TORONTO, ONTARIO—July 10, 2009—Canadian government and business leaders today gathered near Lake Erie in southern Ontario for the grand opening of North America's first GE-designed greenhouse cogeneration plant installed to generate more reliable onsite power and heat for commercial greenhouses and help the country reduce its emissions from energy production.

Great Northern Hydroponics, a division of Detroit- based Soave Enterprises, installed the 12-megawatt (MW) commercial greenhouse power plant at Soave's sprawling, 55-acre tomato greenhouse complex in Kingsville, Ontario. The complex is located near Lake Erie's north shore in the Leamington region, about 350 kilometers (km) west of Toronto and about 50 km east of Detroit.

The high-efficiency onsite power plant, powered by four of GE's Jenbacher cogeneration modules, was among seven natural gas fuelled CHP projects approved by the Ontario Power Authority in 2006 to showcase how advanced cogeneration technologies could help make industrial plants more energy independent, improve local grid reliability and support Canada's clean and renewable energy goals.

Surplus power from the greenhouse power plant is being sold to the local grid under a 20-year contract with the Ontario Power Authority. The plant supplies enough electricity to Ontario's transmission grid to power 12,000 – 15,000 Canadian homes annually.

In addition to generating power and heat to support greenhouse operations, the power plant also treats the gas engines' exhaust, enabling CO<sub>2</sub> from the exhaust to be recycled and applied as a special fertilizer to enhance greenhouse crop production.

Because cogeneration (or combined heat and power) plants are inherently more energy efficient than the use of separate systems to create electrical and thermal power, less fuel is consumed to produce the same amount of power. As a result, cogeneration can help to lower regional industrial emissions associated with energy production.

"Our inaugural greenhouse cogeneration project was made possible because of Ontario's commitment to energy efficiency and initiatives to add significant amounts of energy from cogeneration to the provincial power grid," said Guido van het Hof, President of Great Northern Hydroponics.

The cogeneration plant allows Soave to control its greenhouse operating expenses and improve its competitive position against other growers in North America, Great Northern's van het Hof explained.

The project also will support Ontario's renewable energy goals because high efficiency, dispatchable cogeneration projects—including the Soave Hydroponics project—are helping the integration of renewable energy projects into the grid, Soave's van het Hof said.

The special CO<sub>2</sub> fertilization / cogeneration system was developed by GE Energy's Jenbacher gas engine business, which operates a global horticultural applications center of excellence in The Netherlands.

The Soave plant features four of GE's ecomagination-certified, JMS 620 Jenbacher gas engines as well as heat recovery and exhaust treatment equipment, noise abatement and systems controls.

The complete greenhouse cogeneration system was supplied by DDACE Power Systems, GE's Jenbacher engine distributor for eastern Canada. H.H. Angus and Associated Ltd of Toronto provided engineering services for the North American reference plant.

"GE is pleased that its special Jenbacher greenhouse cogeneration technology is supporting Soave Hydroponics' and the Ontario government's goals to increase local energy efficiency and energy reliability in support of Canada's anti-climate change initiatives," said Roger George, general manager for GE's Jenbacher gas engine business in North America. "Facilitating additional cogeneration projects in the greenhouse industry will support new sustainable energy, environment and employment opportunities throughout this multi-billion dollar industry."

### **About GE Energy**

GE Energy ([www.ge.com/energy](http://www.ge.com/energy)) is one of the world's leading suppliers of power generation and energy delivery technologies, with 2008 revenue of \$29.3 billion. Based in Atlanta, Georgia, GE Energy works in all areas of the energy industry including coal, oil, natural gas and nuclear energy; renewable resources such as water, wind, solar and biogas; and other alternative fuels.

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