# Canada Unveils New On-Demand Power Plant for Cleaner Energy

The York Energy Centre

The 393-megawatt, natural-gas-fired, electricity-generating facility serves Ontario's northern York region.

**The York Energy Centre,** completed in the spring of 2012, is representative of a new breed of power plants coming on line. This quick-response facility provides a stable electrical power supply to the greater Toronto, Ontario's entire York Region during periods of peak demand. Capable of rapid starts to provide on-demand power, it also minimizes air emissions and impacts to the environment.

Veresen Inc. and Harbert Power Corp., Birmingham, Ala., awarded the project to Lill and DiFazio Constructors Canada Inc., a U.S.- and Canada-based EPC contractor specializing in the construction of power-generation facilities. They, in turn, hired POWER Engineers to provide detailed design for the installation of the two turbine-generator packages and associated Balance of Plant (BOP)facilities. Project construction began in the fall of 2010 with a high emphasis placed on getting major foundations installed before the onset of winter.

York Energy Centre in Ontario, Canada

## Advanced, High-Efficiency Turbines

The over $300-million facility incorporates Siemens' SG6-PAC-5000F, a "highly reliable and efficient combustion turbine capable of rapid starts and low emissions," says Todd Krankkala, project manager with POWER Engineers. The facility is equipped with ultra low-NOx emissions controls and uses continuous emissions-monitoring systems to meet provincial- and federal-emissions standards. "The centre represents a clear advance in the province's goal of reducing carbon emissions by displacing power that would otherwise be generated in coal-fired power plants," Krankkala says.

## Quick Response

A key feature for the project is the ability for the plant to quickly come on line when dispatched by the Ontario Power Authority (OPA). The turbines have the ability to achieve 130 MW within 20 minutes and full load within 25 minutes. This rapid-start capability has been repeatedly put to the test since the plant went into commercial operation and this flexibility is highly appreciated by OPA. The units at the plant have each been dispatched over 60 times since it went commercial in May 2012. ■

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