

PERFORMANCE

Ontario Power Generation

Ontario Power Generation Ontario, Canada

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Schneider Electric helps Ontario Power Generation Nanticoke to complete a controls integration and performance improvement project to help meet the energy demands of its customers

“By choosing to go with Schneider Electric Process Automation controls products, we made the decision to utilize their products for future modifications or upgrades... We expect that it will also ensure a high degree of reliability in the future.”

- Mike Considine, Project Leader, Nanticoke

Schneider Electric solution helps Ontario Power Generation revitalize Nanticoke plant

Ontario, Canada – Ontario Power Generation (OPG) is a major North American electricity generating company, based in Ontario, Canada, that operates a fleet of nuclear, hydroelectric, and fossil generating facilities. Each of these facilities — along with its expanding portfolio of green power sources — plays a unique role in meeting its customers’ energy needs. OPG’s goal is to be a premier North American energy company, providing customers with reliable, clean, and competitively priced power while operating in a safe, open, and environmentally responsible manner. OPG supplies about 85 percent of all electricity consumed in Ontario through a portfolio of 80 efficient and relatively low cost generating stations.

Goals

- Complete a controls integration and performance improvement project to help the plant meet the energy demands of its customers today — and position it to meet future demands

Challenges

- Improve energy efficiency, lower product costs, and ensure cleaner electricity production while meeting customers’ energy demands

Solutions

- Foxboro® Distributed Control System

Results

- Assist in providing continuous power, producing 20 to 24 billion kilowatt-hours (kWh) of energy to run nearly 2.5 million households for a full year
- Increase boiler efficiency and responsiveness
- Reduce maintenance and fuel costs
- Reduce emissions through the use of advanced control
- Provide the responsiveness to market demands that OPG needs to compete effectively in its competitive environment
- Position OPG to meet future demands

As electricity demands grow worldwide, energy providers must maintain highly efficient and modern facilities that can produce the energy their customers require — or risk losing the competitive battle. That explains why OPG focuses on continually improving its plants to improve energy efficiency, lower product costs and ensure cleaner electricity production. That focus has resulted in a recent revitalization project at its Nanticoke Generating Station in Ontario, Canada.

OPG's Nanticoke Generating Station is one of the largest coal-burning stations in North America. Its eight generating units annually produce approximately 20 to 24 billion kilowatt-hours (kWh), which represents enough electricity to run nearly 2.5 million households for a full year.

In 2000, legacy management turned to Schneider Electric to help them complete a controls integration and performance improvement project that would help the plant meet the energy demands of its customers today — and position it to meet future demands.

Mike Considine, Project Leader says, "The legacy control systems at Nanticoke were designed and installed in the early 1970s and were no longer supported by the vendor, which was a great concern to us. In addition, the control systems had limited or no expansion capability. We began experiencing deterioration in reliability, and we had limited diagnostics capabilities, which delayed our ability to make necessary repairs. So we knew we had to make significant improvements in our control systems."

Delivering a Cost-Effective Solution

For 40 years, Foxboro has provided solutions to OPG and its predecessor company, Ontario Hydro. But with this project, Foxboro went a step further — signing a corporate alliance agreement that ensures OPG will receive the support it needs to cost-effectively complete the control integration and performance improvement project, which will be phased in over a five-year period.

Mike Considine, Project Leader says, "We originally requested quotes from a few vendors, with the intent of choosing the vendor that offered hardware maturity, reliability, backward compatibility, and a mature and proven software design. We visited other utilities that used Foxboro® control systems and were impressed with their excellent track record."

Schneider Electric is moving forward aggressively on this project, which will entail replacing the plant's current control systems with a Foxboro Distributed Control System on all eight units. In fact, Foxboro delivered and installed 4,000 points of control in a nine-month period — an accomplishment that is virtually unheard of in the industry. Schneider Electric also supplied new operator control interfaces, advanced control packages, engineering, integration, installation, and commissioning services.

Mike Considine, Project Leader says, "While this project was justified as a sustaining effort to deal with obsolescence, we also wanted to provide a solid base for future technological/operating improvements like artificial intelligence, optimized soot blowing and smart annunciation. By choosing to go with Schneider Electric controls products, we made the decision to utilize their products for future modifications or upgrades that will allow us to avoid a mix of technologies and 'black box' interfaces with different systems. This will simplify our training and help us avoid the need for employing a host of experts that understand different systems. We expect that it will also ensure a high degree of reliability in the future."

Addressing Future Needs

When completed, the project improvements are expected to help increase boiler efficiency and responsiveness, enhance productivity, reduce maintenance and fuel costs, and reduce emissions using advanced controls. This will provide the responsiveness to market demands that OPG needs to compete effectively in its competitive environment.



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Innovation At Every Level

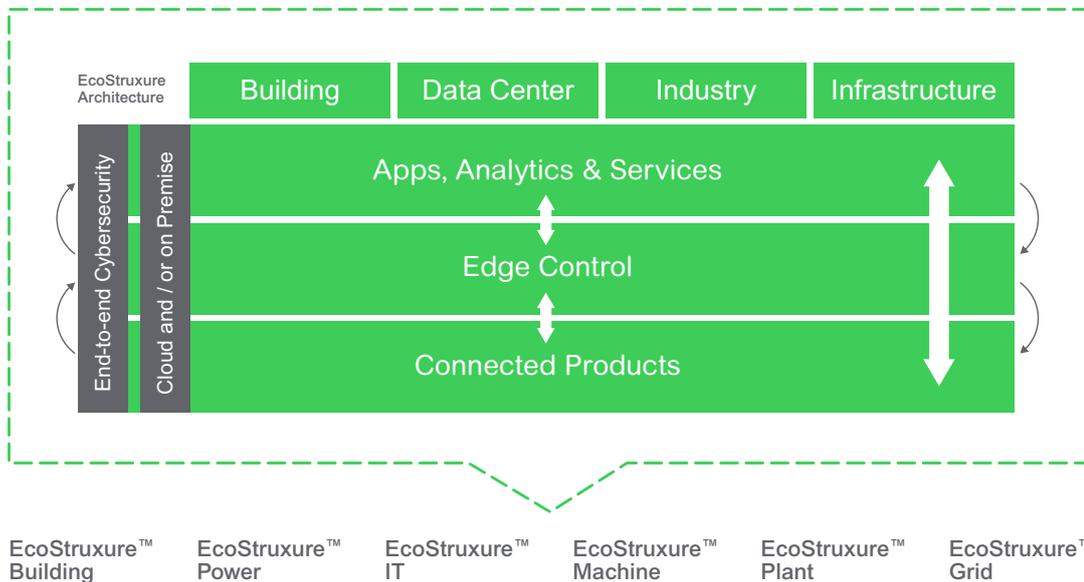
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October 2016

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