



# LANGFORD & associates incorporated

Manufacturer's Representatives for Ontario's Power Industry

Welcome to the June 2011 e-newsletter providing you with product updates and the latest news from Ontario's electricity sector.

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Mark the calendar for the 2011 EDA Niagara Grand & Western Districts Joint Metering Exhibition & Workshop held on November 16&17 at the Holiday Inn Burlington Hotel & Conference Centre. For more information see [aelwood@brantford.ca](mailto:aelwood@brantford.ca)

[Ontario News](#)

**Break on Through** - On May 13 Big Becky broke through to daylight after a 10.2 kilometre journey beneath the City of Niagara Falls. It marks the completion of one of the largest underground excavations in history and is a major milestone in the tunnel project that is expected to be completed in 2013. OPG will be donating the cutter head from the tunnel boring machine to the community as an artefact for future generations. For video and details see [opg.com](http://opg.com)

**Smart Grid Fund** - The Ontario government has launched the Smart Grid Fund (SGF) that will target financial support for projects that advance the development of the smart grid in Ontario and provide economic development opportunities. The SGF has a Capacity Building and a Demonstration category and each application must fall into only one category. To meet eligibility requirements for Capacity category the project must have among other things, a maximum time frame of four years and a minimum project total of \$1.5 million. For details see [mei.gov.on.ca](http://mei.gov.on.ca)

In a related story, the Ontario Smart Grid Forum released its report "Modernizing Ontario's Electricity System: Next Steps," in early May. The report makes a series of recommendations that focus on removing barriers to smart grid development and taking full advantage of its intended benefits. Recommendations include annual surveys, tracking electric vehicle registration, promoting the deployment of energy storage, and greater standardization, among others. For full press release see [ieso.ca](http://ieso.ca)

**GridEx 2011** - The NERC plans to conduct a large-scale grid security exercise later this year that will involve bulk North American power system owners and operators. The cybersecurity incident readiness exercise, called GridEx 2011, is scheduled for November 15-17. It will test NERC and the electricity industry's crisis response plans, and validate current readiness in response to a cyber incident. The exercise, modeled after the Department of Homeland Security's Cyber Storm exercise series, will allow participants to respond to scenario events as they would in the case of a real-time incident. For details see [powermag.com](http://powermag.com) In a related story, NERC President and CEO Gerry Cauley, has been testifying in front of a series of committees in relation to a U.S. joint staff draft bill pertaining to cybersecurity of the bulk power system and electric infrastructure, see [nerc](http://nerc.org)

**Investing in Infrastructure** - The Conference Board of Canada has released its report "Canada's Electricity Infrastructure: Building a Case for Investment." This report analyzes the current state of Canadian electricity infrastructure and examines the investments that might be made between 2010 and 2030 in Canada's electricity generation, transmission, and distribution industries. The sector is expected to invest \$293.8 billion from 2010 to 2030 to maintain existing assets and meet market growth. For the full study see [conferenceboard.ca](http://conferenceboard.ca)

**IPSP** - The OPA is in the midst of formal consultations to update the province's Integrated Power System Plan, a 20-year blueprint for the province's electricity system that outlines needed investments in conservation, generation and transmission. For further details see

[powerauthority.on.ca](http://powerauthority.on.ca)

**Final Channel** - In early May, Bruce Power workers installed the last of 480 new fuel channels in the Unit 1 reactor at Bruce A, a major milestone to return the 750 megawatt unit to service in early 2012. Installed horizontally, each channel consists of a six-metre-long pressure tube with complex end components that allow the reactors to be refueled on line. During reactor operation, each channel holds 12 uranium bundles. The work follows similar efforts to refurbish Unit 2, which is expected to synchronize with Ontario's electricity grid later this year. For press release see [brucepower.com](http://brucepower.com)

**Turning 100** - This month Toronto Hydro-Electric System marked its 100th anniversary. It was on May 2, 1911 that Toronto Hydro officially turned on the electricity in the city. For full history see [thestar.com](http://thestar.com) As well, OPG celebrated 100 years of hydroelectric generation on the Mattagami River at the Sandy Falls Generating Station, see [opg.com](http://opg.com)

**Stringing Wire**- There were several slowdowns on the 401 during May as Hydro One installed power lines across the highway near the Jarvis Snow Parkway off-ramp in Milton. At some points helicopters were used to string the conductor and traffic was slowed on several occasions for safety reasons. The approximately 180-kilometre, double-circuit 500 kilovolt transmission line is being built on a widened existing corridor, extending from the Bruce Power Facility in Kincardine to Hydro One's Milton Switching Station. For details see [hydroone.com](http://hydroone.com)

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### Product Spotlight!... - Wireless Smart Transformer Monitoring

GridSense announced its partnership with On-Ramp Wireless to develop the first affordable utility distribution point monitoring system. The comprehensive system for distribution automation combines the GridSense TransformerIQ platform with On-Ramp's Ultra-Link Processing system. This enables utilities to deploy secure and reliable monitoring throughout their distribution network to accomplish asset monitoring, indication to improve outage restoration, alert to power quality issues, capture power theft and act as a hub for demand-side load management all with a single wireless device. The demand for distribution asset management is on the exponential climb due to electric vehicles and charging stations being deployed at many residential points, adding additional load to the current infrastructure. GridSense TransformerIQ offers a quick retrofit solution onto existing energized distribution transformers, enabling a lower cost system upgrade without the impact of an outage or downtime. Working with On-Ramp, GridSense is providing utilities with the resources necessary to effectively monitor their distribution assets and improve their performance and bottom lines. For details see [gridsense.com](http://gridsense.com)

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### Schneider Electric- Choosing ION

One of the most significant costs for any mining operation is energy. Mining is a machine-intensive operation and all machines require power to operate. When a mining company began planning its Ontario-based nickel mine, it wanted to ensure it kept its energy costs under control, while minimizing its environmental footprint. After looking at solutions from several vendors, the mining company and its engineering partner Hatch chose to install Schneider Electric's PowerLogic ION Enterprise Energy Management System and PowerLogic ION power meters to manage the mine's energy consumption. The mining company and Hatch chose PowerLogic ION Enterprise because it is one of the most cost-effective solutions on the market. For full case study see [langford-assoc.com](http://langford-assoc.com)

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### Gridsense - PF Live

PFLive allows the user to manually connect to a live installation and instantaneously acquire power factor information. This test can be performed in less than 5 minutes without any need for an outage, and at the rated voltage of the apparatus. The test system consists of a minimum of three sensors permanently connected to a series of capacitive bushing taps and uses PFLive software and a PCMCIA data acquisition module to acquire a user settable number of cycles of power factor data to a laptop computer. Connection from the PF Live bus monitor to the laptop has been upgraded to a USB cable. The cost of a PF Live is less than a single Doble test and can be used for successful tests. For further details contact [sales@langford-assoc.com](mailto:sales@langford-assoc.com)

### ERLPhase - Open Conductor Detection

Open conductors can cause system instability due to reduced power transfer capability, overload in the healthy phases, and higher voltages on ungrounded systems. This application note from ERLPhase provides a solution to detect open conductor events in the case where the conductors have not touched the ground. The TESLA 4000 Digital Fault Recorder functions and Boolean logic are used in order to create a

open conductor detection solution. This method can be used on transmission lines or distribution systems. See [erlphase.com](http://erlphase.com)

#### Did you know...

**State of the Industry** -An annual survey of more than 100 executives from the U.S. and Canadian electric and natural gas industries by consulting firm Capgemini has found that the five most critical challenges facing the North American energy industry are environmental regulation, aging infrastructure, non-environmental regulation, an aging industry workforce, and the need for new pricing mechanisms.

The study also asked the industry leaders to offer their opinions about the future of the energy industry. Among the key findings, the survey revealed that over the next five to ten years utility executives plan to increase their focus on environmental regulation and pricing/rates, end users and consumer technologies such as electric vehicles and energy-efficient appliances, and infrastructure; most utilities anticipate their companies will increase the use of wind, solar, and natural gas in their overall fuel mix while the majority of executives at utilities with coal generation expect to decrease their use of coal; more than half of utility executives strongly agree the industry needs to focus more on systems and cyber security; and eighty percent of the respondents believe the industry should create business models that support decoupling, but a small proportion strongly agrees the industry will actually move in this direction. For full survey see [powermag.com](http://powermag.com)

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