

Welcome to the July 2009 e-newsletter from Langford & Associates, providing you with product updates and the latest news from Ontario's electricity sector.

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What's On

Watthour Engineering's third WeMeet, an intensive, two-day, training course tailored for meter professionals using WECO test equipment, will take place August 18-20 in Pearl, Mississippi. For further information contact Kris Fannin at (601) 933 0900.

The ION PowerLogic Annual User's Conference for 2009 will be held on October 23, 2009 at the Toronto Congress Centre. For more information and registration www.langford-assoc.com

Basler's 44th Annual Power Control and Protection Conference will be held October 5-8 in Fairview Heights, IL. The conference provides an overview and an in-depth look at specific aspects of controlling and protecting electrical generating power systems. For more information see www.basler.com

Ontario News

Procurement Suspended- The Government of Ontario has suspended the competitive RFP to procure two replacement nuclear reactors planned for the Darlington site. Proposal submissions were received from AREVA NP, Atomic Energy of Canada Limited and Westinghouse Electric Company on February 27, 2009 and have been carefully evaluated. Only the submission from AECL was compliant with the terms of the RFP and the objectives of the Government. However, concern about pricing and uncertainty regarding the company's future prevented Ontario from continuing with the procurement at this time. For full press release see www.mei.gov.on.ca

Carbon Market - Canada's Environment Minister, Jim Prentice, announced on June 10 that the Government is moving forward with its Offset System for Greenhouse Gases. The System will establish tradable credits and encourage cost-effective domestic greenhouse gas reductions in areas that will not be covered by planned federal greenhouse gas regulations, like the forestry and agricultural sectors. For example, potential offset projects could include methane capture and destruction from landfill gas, the creation of new forests, or agricultural soil management. Companies subject to the greenhouse gas emissions regulations will be able to purchase offset credits on the carbon market and use these credits for compliance with their regulated targets. In addition, other parties, such as small businesses, individuals and travellers, will be able to acquire and use these credits to voluntarily offset the greenhouse gas emissions from their activities. Interested parties will have 60 days to comment on the draft rules and guidance documents. For full press release see www.ec.gc.ca

Feed-In-Tariff - On June 8, 2009, the OPA released a draft of the Feed-In-Tariff (FIT) contract, which outlines the development of the facility, financial, operating and other obligations of renewable energy suppliers looking to provide electricity under the OPA's FIT program. The draft contract and related documents have been informed by a broad spectrum of stakeholders involved in a series of technical consultations conducted by the OPA. The OPA has indicated that the FIT program may launch during the summer of 2009. For full details see www.powerauthority.on.ca

Success - On May 25, employees at the Darlington nuclear generating station completed its largest and most complex project for the year – the Darlington Vacuum Building Outage (VBO). Occurring every 12 years, the Darlington VBO was launched on April 15 following more than two years of preparation. The outage lasted 40 days and involved over 4,000 OPG staff and contractors. The VBO required OPG to shut down all four of Darlington's nuclear reactors to allow for the inspection and maintenance of the station's vacuum building structure to ensure its continued availability. For full details see www.opg.com

Unplanned Shutdown - AECL extended the unplanned shutdown of the NRU reactor at its Chalk River Laboratories in late May and while

providing periodic updates on the progress of returning to service, no official date has been released. For latest update see www.aecl.ca

New Webpage - The OEB has launched a new webpage providing a central location for the Board's initiatives relating to the Green Energy and Green Economy Act. The page itemizes the various processes being set in place to address the issues facing distributors, transmitters and generators with the implementation of this new legislation. For full page see www.oeb.gov.on.ca

Number One - Hydro One has been named Canada's Top Corporate Citizen in Corporate Knights Magazine's annual ranking of the best 50 corporate citizens in the country. Corporate Knights Inc. is an independent Canadian-based media company that publishes the world's largest circulation magazine with an explicit focus on corporate responsibility. For full story see www.hydroone.com
Time-Of-Use - Ten thousand homes in Toronto will move to the new time-of-use electricity rates starting this June. By next summer, one million Ontario households will be on time-of-use rates. Under the rates, off-peak times occur on evenings and weekends. Currently, evening off peak hours start at 10 pm. Beginning Nov. 1, off-peak times will move to 9 pm. As of May 1, the three rates for electricity per kilowatt hour are: On-peak: 9.1 cents, Mid-peak: 7.6 cents, Off-peak: 4.2 cents. For full press release see www.mei.gov.on.ca

Wind Award - Ontario was hailed as North America's wind energy leader in June at an international conference in Korea, where George Smitherman, Ontario's Deputy Premier and Minister of Energy and Infrastructure, accepted the 2009 World Wind Energy Award. Awarded since 2002 Smitherman was the first Canadian to receive the award. For full story see www.mei.gov.on.ca

Lowest Yet - The month of May is typically known as the shoulder season, where both heating and air conditioning are not in use. May 2009 proved to be no exception as demand for electricity was the lowest since market opening in 2002. Due to the extremely mild weather and the economic downturn, demand for the month was 10,504 GWh, more than 900 GWh lower than last year at this time. For full update see www.ieso.ca

Count Me In - Woodstock Mayor Michael Harding issued a challenge to municipal leaders across Ontario on June 3 to compete in the Count Me In! Community Challenge Day on August 14, 2009. Participating municipalities can compete in two different categories: the highest percentage drop in electricity consumption on August 14 and the highest per capita participation in the Count Me In! pledge drive. Results of the provincewide challenge will be announced at the AMO Annual Conference on August 19th in Ottawa. For full details see www.powerauthority.on.ca

Rebalancing Energy Portfolio - Canada is in the enviable position of having an adequate electricity supply and multiple energy resources for future generation needs, says U.S. based Power Magazine. Its challenge is balancing rising carbon emissions against rising electricity demand when renewables, principally hydroelectric power, already supply almost 60% of its electricity. Given its ample natural gas reserves, a rapid short-term increase in construction of natural gas-fired combined-cycle plants is already under way to bring down carbon emissions and replace coal-fired baseload generation. In the longer term, new nuclear plants will likely supply the balance of power. For a full overview of Canada's Energy Policy and its issues see www.powermag-digital.com

Combined Heat and Power - Many veteran power professionals are somewhat surprised that combined heat and power (CHP) a well-established approach to the generation of electrical power and thermal energy, especially in Europe, is gaining popularity among energy analysts looking for solutions to America's growing need for sustainable electrical generation. In December 2008, Oak Ridge National Laboratory (ORNL) published the report "Combined Heat and Power: Effective Energy Solutions for a Sustainable Future" which highlights the sharpened focus on using CHP to deal with environmental and business challenges in the U.S. since it can provide reliable electricity, mechanical power, or thermal energy at a factory, university campus, hospital, or commercial building - wherever the power is needed. For full article from Power Magazine see www.powermag-digital.com

Just and Reasonable? - Owners of unregulated power generation in the Mid-Atlantic continued to enjoy high profits in 2008, despite the economic downturn, according to a study of financial data released on Monday by the American Public Power Association (APPA). "These RTO wholesale power markets were created to assure competition and lower electric rates and have done neither," said Mark Crisson, CEO of APPA. "Instead they produce power costs that unfairly reward a few generators and punish consumers." Prior studies conducted for APPA have documented extensive problems in RTO-run wholesale power markets and led APPA to the conclusion that these markets are not producing "just and reasonable" prices, as required under federal law. An analysis of data from the U.S. Department of Energy's Energy Information Administration, for instance, revealed that increases in retail electric prices were significantly greater in states with deregulated electric markets than in regulated states over the past decade. For full article see www.powermag.com

Product Spotlight... ... Rethinking Smart Buildings

In today's marketplace, the last thing on many building owners' minds is whether their building is "intelligent." Right now, the smartest buildings are the ones that attract and retain tenants through exceptional operations at reasonable costs as property professionals strive to enhance their market value during a recession. The other side of that argument, though, contends that high performance buildings will always be attractive in the marketplace and will be the first place tenants will look once the economy and the industry recovers. Integrated building systems bridge the gap between the disparate functions of a building – security, fire/life safety, elevators, HVAC, energy management, etc. – through a central monitoring system. And while there may not be as many tenants willing to pay a premium to work in a fully integrated building with Wi-Fi on every floor, they still expect a certain level of comfort and performance from their 9 to 5 "home." For owners of existing building who may not be ready or able to run the full gamut of integration, a smart area to invest in could be energy efficiency retrofits, especially since new deliveries in energy performance contracting (EPC) are breaking down the complexities inherent in traditional EPC models. In January BOMA International and the Clinton Climate Initiative (CCI) released the BOMA Energy Retrofit Program (BEPC), which removes many of the traditional barriers to investment

in energy efficiency and allows owners to make more sophisticated operational improvements. For full article by Laura Horsley in BOMA magazine see www.fmlink.com or for an article examining appraisals of green buildings see www.pikeresearch.com

Schneider Electric Power Quality Audit

Most electricity suppliers are charging penalties for reactive power, for exceeding subscribed power and setting standards for electrical network pollution. Additionally, equipment that generates harmonics is more and more prevalent (e.g. high-efficiency motors, variable speed drives, and computers). To address these growing issues, Schneider Canada has introduced several new services including motor and drive audits and power factor correction analysis. The Power Application Engineering team can assist you with: measurement of your site power factor, a health check on existing capacitor banks, and for power factors outside of required boundaries, a measurement of the total harmonic distortion to be able to propose the correct equipment. A power quality audit should be considered given the following events: production downtime, equipment malfunction, damaged equipment, random PLC operation, malfunctioning or premature tripping of protection devices. For further information contact sales@langford-assoc.com

ErlPhase - Meeting NERC requirements

The TESLA 3000 DFR is a multi-time frame recording system used to monitor electrical power systems at various voltage levels which includes 600V to 69kV (Generation and Distribution), 110kV, 130kV, 200kV, 500kV (Transmission). It can record up to 36 analog channels and 64 digital (status) channels and store up to 1000 recordings. This application note documents how The TESLA 3000 DFR meets or exceeds the NERC PRC-002-RFC-01 standard, a standard developed to establish ReliabilityFirst requirements for Disturbance monitoring and reporting to support NERC Reliability Standard PRC-002 that defines Regional Disturbance Monitoring and Reporting Requirements. For full details see www.erlphase.com

Did you know...

Once Bitten- China's Ministry of Environmental Protection (MEP) halted construction of two major hydroelectric projects this month on the Jinsha River for inadequate environmental reviews. The order has thrown into question a 200 billion yuan (US\$29.2 billion) investment in hydro projects along the middle reaches of the river. China Huaneng Group and China Huadian Group generate nearly 20% of the mainland's total electricity. Experts, like Zhao Yi, dean of the school of environmental science and engineering at North China Electric Power University, are calling the environmental order on the two companies "unprecedented," reported AsiaNews.

The MEP's crackdown follows the government's public admission that the 22,500-MW Three Gorges dam—the largest hydroelectric power station in the world—is ridden with problems, social and environmental. The dam has already caused the relocation of millions of people and flooded thousands of villages. Senior government officials report grappling with spreading algae problems, poor-quality water, and soil erosion—which has triggered landslides. For full article see www.powermag.com

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