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Triggering Greater Demand Response in Ontario

Demand response allows consumers to reduce their electricity consumption in response to prices and system needs. Not only can demand response reduce electricity costs for customers, but it has a significant impact on energy demand and helps reduce peaks, providing a valuable and cost-effective resource to the system. By reducing peaks on the highest demand days of the year, it offsets the need for additional new generation, including “peaker” plants that only run for a very few hours on hot summer days.

Demand response is already being practiced every day in Ontario, through initiatives such as Demand Response 3 (DR3), Time-of-Use (TOU) Rates and the Industrial Conservation Initiative (ICI). On peak days last summer, they contributed roughly 1,200 megawatts (MW) of reductions.

In recent months, the IESO has been working to assume responsibility for promoting greater levels of demand response in the province. The plan will see wholesale DR transitioned from a program approach to a market-based initiative, by linking it to Ontario’s market price for electricity.

DR3, a program that provides incentives for large companies to reduce consumption during times of higher demand, will soon be triggered by price signals. All other aspects of the program will remain unchanged.

Ontario’s market price for electricity is a true reflection of the demand and supply picture at any given moment – as such, it can help guide consumer actions.

The Industrial Conservation Initiative (ICI) has also recently expanded to allow more consumers to participate – the threshold has been reduced from 5 MW to 3 MW. Customers in this range must also own or operate a load facility classified under the North American Industry Classification System (NAICS) as one of the following: 21 (mining, quarrying, and oil and gas extraction), 31 to 33 (manufacturing), 1114 (greenhouse, nursery, and floriculture production), 49312 (refrigerated warehousing), or 518 (data processing, hosting and related services). ICI customers are charged global adjustment rates based on their consumption during the top five peak demand hours each year.

These changes are already in the works. The market-based DR3 dispatch will begin this summer. Over the longer term, the IESO is seeking to implement an auction to replace expiring demand response contracts. Through these changes, the IESO is attempting to expand opportunities for demand response to participate in the market – beyond just reducing peak demands. It is also working with the industry to develop a series of pilot programs that will allow potential DR customers to demonstrate what they can offer.

More information will be available on the IESO website. If you have any questions, please contact IESO Customer Relations at customer.relations@ieso.ca.

Tony Thoma’s Bright Light: *An Update on LED Lighting*

Tony Thoma, the residential consumer advocate on IESO’s Stakeholder Advisory Committee, provides an update on his experiment with LED lighting which first appeared in the November 2012 Electricity Insider. Seeking increased efficiency and savings in his new home, Tony replaced 14 halogen pot lights with LED lights.

The results were initially disappointing. Since installing the new lights, two of the 14 bulbs completely failed, one of them flickered continuously, and the rest produced a “yellowish” light that lacked intensity.

“After a number of complaints from the family I gave in and looked for a better solution,” said Tony. “I spent more time doing my homework learning about equivalent power levels relative to brightness, colour and angle.” There is a wide range

of quality in LED bulbs but check for manufacturers with the Energy Star rating – their products will generally have higher lumens, consistent colour rendering, and longer lifespans. LEDs are also rated for their “white” colour – bulbs with a lower Kelvin rating, such as 2600k, will produce a warmer yellow light while a bulb with a high Kelvin rating, such as 5000k, will produce a colder blue light.

After his research, Tony replaced his bulbs with brand name versions and upped the wattage from 5 to 10 watts. He reports “significant improvements” verified by a light meter.

LED lighting has quickly become commonplace on store shelves across Ontario. LEDs, with their energy efficiency and long lifespan, are an excellent alternative to incandescent bulbs in homes and businesses.



Power to Ontario. On Demand.

Stakeholder Priorities



Stakeholders representing a variety of interests recently tabled their priorities for the year at a meeting of the IESO's Stakeholder Advisory Committee (SAC). The SAC consists of representatives from electricity service providers, consumers, generators and conveyers.

There was support for forthcoming changes to demand response (DR). One committee member representing service providers encouraged the IESO to work on regional DR opportunities. Other members suggested the IESO consider ways it will educate, communicate and engage with these new and different types of consumers.

The Demand Response Working Group is currently implementing several pilot programs and initiatives to improve participation and opportunities with demand response. For more information on the DR Working Group, please visit our website: www.ieso.ca/Pages/Participate/Stakeholder-Engagement/Working-Groups/Demand-Response-Working-Group.aspx.

Following an unusually cold winter, questions were raised about the high electricity prices seen in January, February and March. Ted Leonard, IESO Vice President of Markets, advised that the market performed well and reliability was maintained but that high natural gas prices and above normal demands for electricity led to high market prices. He also noted that the Ontario Energy Board's Market Surveillance Panel reviews all high pricing events. For most consumers, the volatility in the market was largely offset by the Global Adjustment. For more information on the impact of the extreme cold weather, please see the IESO's backgrounder "Market Update - Winter 2014" www.ieso.ca/Documents/Pages/Ontario's-Power-System/IESO-Market-Update_Winter2014.pdf.

The next SAC meeting will be held August 20, 2014. For the full minutes, please visit our website: www.ieso.ca/Documents/consult/sac/sac-20140326-Minutes.pdf.



The IESO Annual Report Has Arrived

The IESO's annual report is out. Titled "Ready Set Go: Capturing the New-Found Flexibility in Ontario's Power Grid," it features a range of informative content related to Ontario's electricity system, including efforts to build greater resiliency

into the system, the impacts of a more complex operating environment and discussion of developments like storage, demand response and capacity markets. The report is online at www.ieso.ca/Documents/corp/IESO_2013AnnualReport.pdf

To order a hard copy, please contact IESO Communications at: communications@ieso.ca.

Consumer Engagement – Upcoming Schedule

The IESO will be exhibiting at the Canada Green Building Council (CaGBC) National Conference and Expo in Toronto on June 3 & June 4, 2014. With the theme of *Building Lasting Change*, the 2014 conference will explore the value of green through the lens of sustainable building, real estate and neighbourhood development. Come visit us at Booth #1124.

The IESO is a not-for-profit organization that manages the reliability of Ontario's power system and operates the wholesale electricity market where the hourly price of electricity is set. Through its market education program, the IESO works with consumers paying the market price by creating educational material on the market and providing opportunities for consumers to learn about the electricity sector and how they can better manage electricity costs. For more information on the IESO's market education program, please contact:

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