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Susan Frank

Vice President and Chief Regulatory Officer
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April 30, 2010

VIA COURIER

Ms. Kirsten Walli
Secretary
Ontario Energy Board
2300 Yonge Street
Suite 2700
P.O. Box 2319
Toronto, ON
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Dear Ms. Walli:

2009 Annual Report of CDM Activities for Hydro One Networks Inc. - Distribution

Please find attached the Hydro One Networks Inc.'s Distribution Annual Report of CDM Activities for the year ended December 31, 2009.

These statements comply with the Board's Annual Reporting Item 2.1.12.

Sincerely,

A handwritten signature in cursive script that reads "Susan Frank".

Susan Frank

Attachment

Hydro One Networks Inc.

Conservation and Demand Management Plan

Reporting of 2009 Incremental CDM Funding Approved in Rates

April 30, 2010

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Introduction

In its 2008 distribution rate submission to the OEB (File EB-2007-0681), Hydro One Networks requested \$1 million in Incremental CDM funding to:

- maintain the programs initiated under the MARR funding
- maintain a base level of CDM capability required to participate in industry activities
- assess resources required to develop future CDM programs and prepare funding applications

On December 18, 2008, the Board issued its Decision with Reasons approving, among other things, the CDM incremental funding request.

On February 9, 2009, the Board issued updated 2008 Annual Report Guidelines, including an additional summary table, Appendix D. This 2009 Incremental CDM Funding annual report provides the information requested in the most recent Guidelines. As Networks does not have any energy savings or TRC results to report for the year, Appendix A to D are not included in this report.

Hydro One's MARR funded programs were completed in 2008. Hydro One continued to offer all OPA core LDC conservation programs in 2009 as well as one custom program (Double Return). Reporting on these initiatives has been provided to the relevant parties separately and is not covered in this report.

Under the Green Energy Act, Local Distribution Companies (LDCs), including Networks, are expected to play a greater role in designing and delivering CDM programs in Ontario. In anticipation of the directive requiring the Board to assign CDM targets to licensed distributors, Networks' activities in 2009 focused on (i) continue programs initiated under MARR, (ii) set up a team of trusted advisors on energy efficiency for residential customers, and (iii) carry out research to assess the achievable potential in its own territory, and to begin packaging a portfolio of CDM programs to be designed and delivered for the period 2011-2014. Once these processes are finalized, Hydro One Distribution will be in a position to assemble a portfolio of CDM programs for the Board's review and approval.

Evaluation of the CDM Plan

Over the period 2005-2008, Networks has been successful at managing and rolling out programs across all sectors, including residential, farm, commercial and industrial, as well as the Municipalities, Universities, Schools, and Hospitals (MUSH) sector. Networks has worked with partners from the retail sector, as well as with community-based organizations, schools and governmental bodies for the successful delivery of Conservation and Demand Management programs and management of existing / prospective participants in various initiatives. In 2009, Networks has continued fostering its relation with customers within First Nations communities, conducted pilot projects to assess acceptance of new technologies in the marketplace and funded research to understand its customer base and potential programs to be implemented in each specific customer sector (e.g. residential, commercial, etc).

The following table provides an overview of Networks' incremental CDM expenditures for 2009, funded from the approved \$1 million in incremental funding. These expenditures were incurred to:

- 1) maintain programs initiated under MARR funding,
- 2) Establish a specialized team of call agents to act as trusted energy management advisors for residential and small business customers
- 3) maintain a base level of CDM capability required to participate in industry activities
- 4) Engage in specific studies (including CME and Navigant research projects) to assess Networks achievable potential and portfolio of programs for potential implementation in 2011-2014
- 5) Prepare applications and filings

Expenditures for 3), 4) and 5) are categorized under Program Management and Research.

Table 1: 2009 Reporting of Incremental CDM Funding Approved in Rates

PROGRAM ACTIVITIES	2009 Incremental Expenditures (K)	SAVINGS KW	ANNUAL SAVINGS kWh	LIFECYCLE SAVINGS kWh
Current programs				
Residential / General service				
Online Energy Audit	105			
Energy Conservation Team - Call Center	250			
Subtotal	355			
Industrial				
Interim Time of Use	61			
Subtotal	61			
Current programs	subtotal			
				416
Common				
Program Management and Research	494			
Common	Subtotal			494
Grand Total				910

Program highlights in 2009, post MARR funding:

1. An additional 9,100 customers completed a portion of the on-line audit program and received some recommendations on energy efficiency, bringing the total to over 30,400 since its inception. Over 3,000 of these additional customers proceeded to complete a full audit, bringing the total number of participants completing full audits to approximately 13,000 households and small businesses.
2. The Interim Time of Use Pilot Program approved by the Board by Order dated November 24, 2004 was to be concluded in April 2008. However, the Board in its December 18, 2008 Distribution Rate Decision deemed as reasonable that one customer continue to receive the pilot rate structure until April 2010. The cost of this is to be charged against the approved \$1 million in annual Incremental CDM funding.
3. Starting January 2009, Hydro One set up a specialized team within the customer call center (Energy Conservation Team) trained to discuss all aspects of the customer's energy consumption, including equipment, behaviour, and available conservation programs. In 2009 the team had interactions with almost 10,000 residential and small business customers
4. Networks commissioned a study for the design of an energy efficiency and demand response portfolio of programs based on the achievable potential in its territory, for possible implementation during 2011- 2014

In addition to these highlights, Hydro One continued to fund new program design and research to ensure continuity of both customer specific and province wide knowledge of customers, CDM programs, and new energy efficiency technologies and practices. Several surveys have been carried out to evaluate current initiatives and the evolution of customers' behaviour and attitudes towards energy efficiency and demand response.

Discussion of the Programs

The following initiatives are related to the maintenance of programs in place during MARR funding. For further details on each program, please refer to 2005 – 2008 MARR funding submissions to the OEB.

1) PowerSaver Plus Online Energy Audit (Residential/Small Commercial)

The online audit program was launched in September 2007. In 2009 post MARR funding, 3,000 customers took the self-administered Online Energy Audit program and received recommendations on how they could lower their usage and electricity bill, bringing the total to 13,000 full audits completed since the program inception in 2007. Of those who completed the full audit, about 200 were small businesses. The program was offered to small businesses until September 2009.

2) Interim Time of Use Pilot (Industrial)

This pilot, which commenced in 2006, offered customers incentives through the application of rates to shift electricity demand away from periods of maximum demand and into the off-peak periods. Depending on the difference in demand between the two time periods, customers could realize substantial savings in their distribution bills.

The Interim Time of Use was to be concluded in April 2008. However, as instructed by the Board in its December 18, 2008 Distribution Rate Decision, one customer will continue to receive the pilot structure until April 2010. The cost of this is to be charged against the approved \$1 million in annual Incremental CDM funding.

3) Energy Conservation Team Initiative – Call Center

Starting January 2009, Hydro One set up a specialized team (Energy Conservation Team) of five members who were trained to discuss all aspects of the customer's energy consumption, including equipment, behaviour, and available conservation programs. The general agent population continued to support customers in the manner they always have, but customers requesting additional information/assistance were transferred to the specialized team. Initially the team supported residential, seasonal and farm customers, but expanded to small commercial customers towards the end of 2009.

The program was officially launched on January 5, 2009, and by the end of the year this handled almost 10,000 enquiries while maintaining consistently high customer satisfaction scores (by end of 2009 the quality score was as high as 89.42%, while customer satisfaction was consistently at the 98% mark). Throughout the year the team referred over 1,000 customers to CDM programs (primarily residential programs).

Program Management and Research

In 2009 Networks continued to fund new program design and research to:

- a) obtain customer specific and aggregate knowledge of customer behaviour and actions;
- b) keep abreast of new energy efficiency technologies and practices;
- c) work towards the design of a portfolio of potential programs for possible implementation in the 2011-2014 period

Highlights for research undertaken in 2009:

1) Study to Identify CDM Programs and their Impacts on Load Forecast

Under the Green Energy and Green Economy Act, Local Distribution Companies (LDCs), including Networks, are expected to play a greater role in designing and delivering CDM programs in Ontario. Networks engaged a consultant in June 2009 to undertake a two-part study. Part A of the study was to identify energy efficiency and demand response opportunities for residential and general service customers for the 2011-2014. Part B of the study was to advise Networks how to incorporate the CDM impacts in the load forecast.

2) Study to Measure the Impact of Customer Conservation Actions

Networks undertook 2 studies in September 2009 to measure the conservation actions initiated by our customers on their own. These conservation actions are difficult to measure because they are not program specific and therefore the savings are not easily traceable and measureable. The results of the first study using econometric analysis show that at least 170 GWh of savings over the 2004-2008 period can be attributed to conservation actions from our customers that are incremental to natural conservation and participation to Networks conservation programs. The results of the second study using customer billing analysis for the same period for 381,000 residential and 76,000 general service customers support the findings of the econometric analysis.

3) Nipissing First Nation Pilot

A one year Time-of-Use pilot project was initiated with the Nipissing First Nation-community, to operate from June 2009 to May 2010, and involving approximately 570 electricity customers. The intent of the project is to understand the impact of Time-of-Use rates in First Nations communities, and to provide customers with information to help them better understand Time-of-use rates and modify their energy usage behaviour. Throughout the pilot, customers receive monthly Comparison Statements comparing their current electricity commodity charges under RPP two-tier rates with what they would have paid during the same period if they were on RPP Time-of-Use rates. Every customer was also provided with an In-Home-Display (IHD) device to help them understand their energy usage at different times of

the day and prices. Analysis of the bill impacts, customer responses (consumption and feedback), and IHD usage patterns is underway.

4. 2009 CDM Survey

Networks initiated a study in June 2009 to assess the impacts of conservation actions undertaken by Hydro One retail customers that are not captured by program results reported by Networks, the OPA and other federal and provincial government agencies. Of the approximately 9,500 e-mail surveys sent out, over 2,800 customers responded. The 2009 CDM survey results show our residential customers have continued to participate in conservation challenge and have taken various conservation actions on their own to save electricity.

5. 2009 General Service Customer Survey

Networks initiated a survey in November 2009 using bill inserts to request information from our general service customers. A total of 455 general service customers responded to the survey and provided useful information about their business activities as well as equipment usage. The majority of the customers who responded are interested in getting more information about the Peaksaver program and the lighting audit program offered by Networks.

6. Energy Management in Ontario's Industrial and Manufacturing Sectors

Networks participated in a study from Canadian Manufacturers & Exporters (CME) related to "Energy Management in Ontario Industrial and Manufacturing Sector". The outcomes from this study will help assess Energy Management potential in Ontario industry and provide the basis for program initiatives targeted to help Ontario industry increase its competitiveness and reduce greenhouse gas (GHG) emissions and criteria air contaminant (CAC) emissions. The study will assist Networks to assess potential programs targeting specific end-uses in the industrial sector. By the end of 2009, the study was well under way.

Aside from specific research initiatives and studies, Networks continued to sponsor communication initiatives to customers. In 2009 Networks engaged a professional service provider to assist in updating the collection of Hydro One's Power Saver brochures for residential customers. The new versions reflected technological advancements, updates, current Federal and provincial efficiency standards and provided tips for customers in preparation of the upcoming Time-of-Use rates implementation.

Networks continued to be a member of the Customer Energy Solutions Interest Group (CESIG) of CEA Technologies Inc.. Members include many of the provincial utilities across Canada, Natural Resources Canada and the National Rural Electric Cooperative Association in the United States. In the last few years Networks has participated in funding several CESIG initiatives, including the testing of Energy Star CFLs and the preparation of a series of reference guides similar to the Product Knowledge Guide series originally published by Ontario Hydro.

In 2009 Networks renewed its membership with Continental Automated Buildings Association (CABA); in the same year, Networks has been selected to sit on the Board of Directors. This cooperation fostered teamwork with other organizations in various research studies and provided valuable industry intelligence on product trends in home automated residential energy management as well as future trends in the commercial market.

Lessons Learned

From 2005 onward Networks' efforts in Conservation and Demand Management (CDM) have identified a number of lessons learned or key findings. While the findings have already been cited in recent submissions for the programs being extended, the 2009 \$1 million funding has been invaluable in providing Networks with the resources necessary to continue those programs, to deliver additional pilot programs and to prepare for the implications of the GEGEA.

Customer Feedback

- A significant fraction of customers (business and residential) are motivated to reduce their consumption of electricity and to reduce their peak demand. However, they have a limited understanding of the impact of appliances on their electricity consumption. With access to information (Online Energy Audit Pilot, etc.), trusted LDCs agents and reasonable incentives, customers make not only technology changes, but also behavioural changes in order to reduce their electricity consumption.
- Programs designed for residential customers may not be attractive to other customer segments in the same form, as these customers have different needs and interests. LDCs need to find compelling ways communicate the “value proposition” of initiatives for the on-residential market.

Program Management

- Each LDC has a unique customer base and channel partners, and requires a range of diverse and individual strategies and tactics for successful local CDM program implementation
- For new and emerging technologies, or for new or high risk applications in the marketplace, pilots (such as the First Nations Time-of-Use program) and/or staged rollouts within a diverse customer base are very valuable in:
 - establishing the effectiveness of the device in either reducing energy consumption and/or shifting peak demand
 - refining logistics, incentive levels, and product selection,
 - assessing delivery channels, marketing and delivery costs,
 - determining customer acceptance and overcoming barriers to customer participation.
- For long term success, it is necessary to have stable funding that provides the ability for LDCs to plan, design and implement CDM programs and for customers to make decisions over a multi-year time-frame.
- Programs have a life of their own once launched and cannot be easily shut down to closely match a fixed budget.
- Sufficient resources are required to properly fund “success” in a pilot or program to avoid premature termination.

Lessons Learned - Program Success and Future Delivery Implications/Recommendation

	<u>Success</u>	<u>Future Delivery Implications/Recommendations</u>
Residential		
PowerSaverPlus Online Home Energy Audits	successful	residential version is well used
Energy Conservation Team Initiative - Call Center	successful	customers seeking specialized advice recognize in the ECT team within the call center a group of trusted advisors
Commercial		
PowerSaverPlus Online Business Energy Audits	unsuccessful	would not recommend small commercial version be deployed by others unless it is possible to determine how to significantly increase participation levels from those experienced
Industrial		
Interim Time of Use	not applicable	pilot project not open to new customers in 2009, but continued for one customer as per OEB decision