



Horizon Utilities Corporation

Conservation and Demand Management 2008 Annual Report

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1. Introduction

On December 10, 2004 the Ontario Energy Board (“Board”) issued its oral decision in the RP-2004-0203 proceeding, with respect to six (6) applications filed by the Coalition of Large Distributors (“CLD”) comprising of Enersource Hydro Mississauga, Horizon Utilities Corporation, Hydro Ottawa Limited, PowerStream Inc., Toronto Hydro-Electric System Limited and Veridian Connections.

As part of that proceeding, Horizon Utilities filed two separate Conservation and Demand Management Plans with the OEB for the former Hamilton Hydro Inc. (HHI) RP-2004-0203 / EB-2004-0488 and St. Catharines Hydro Utility Services Inc. (SCHUSI) RP-2004-0203 / EB-2004-0523. On November 7, 2006, Board staff agreed with Horizon’s recommendation to account for CDM spending on a consolidated basis under the single Distribution License No. ED-2006-0031.

The Board’s RP-2004-0203 decision also indicated that annual reporting “should be done on a calendar year and should be filed with the Board no later than March 31st of the following year” and would be subject to a public review. On December 21, 2005 the Board issued a Guideline for Annual Reporting of CDM Initiatives that explained the detailed requirements. Horizon Utilities has submitted previous annual CDM reports based on those Board guidelines.

On February 12, 2007 Horizon Utilities submitted a request to the Board to transfer funds between programs. Included in this request was a deadline extension for the Standby Generation and LED Traffic Light Retrofit programs until March 31, 2008.

In a letter issued February 2, 2009 all licensed electrical distributors the Board updated the annual reporting requirements of CDM funded under 3rd Tranche of MARR. Although Horizon Utilities had finalized and completed all of its CDM programs in 2007, the activities carried out by in 2008 were intended to finalize the commitments to the projects funded through 3rd Tranche Market Adjusted Revenue Requirement (MARR). Given the completion of 3rd Tranche CDM activities in 2007, this 2008 CDM report provides a synopsis of CDM activities undertaken in 2005, 2006, and 2007.

Throughout these 3rd Tranche CDM activities, Horizon Utilities has demonstrated the ability to deliver conservation programs in a resourceful and cooperative manner. Important partners, including the CLD, NEPA, OPA, local gas distributors and local community groups, enhanced the efforts of the Horizon Utilities CDM team. Horizon Utilities is committed to helping the government build a sustainable long-term conservation culture in Ontario.

Horizon Utilities 3rd Tranche program implementation activities spanned a broad array of customers segments and program designs. Program activity highlights include:

- Established the powerWISE® brand and web site www.powerwise.ca along with the CLD in 2005. In 2006, Horizon added a customer link from the powerWISE site to Horizon Utilities website.
- Launched the “Lighten Your Electricity Bill” program, an initiative in which all of Horizon’s 208,000 residential customers received money-saving coupons through bill inserts, redeemable at Canadian Tire for in-store discounts on several energy-efficient projects

including compact fluorescent lights (CFL's), ceiling fans, outdoor and indoor timers, programmable thermostats and LED seasonal lights in 2005. The CLD was successful in leveraging this program with a total of 31 utilities, which collectively distributed 2.3 million retail coupons in Q4, 2005. The energy saving results from all 31 utility program participants indicate a demand reduction of 6 MW and savings of 16 million kWh's.

- Launched the powerWISE Business Incentive Program in 2005. Through the program, Horizon provided financial incentives to qualifying commercial, industrial and institutional customers with an electricity demand of 50kW or more. The incentive level started at \$150 per kW saved. The Program gained popularity with our Industrial and Commercial customers with 17 applications being received in 2006, and 9 applications in 2007. Horizon's incentive provided lighting solutions that delivered a reduction in energy use and more adequate illumination to facilities including the Pigott building in Hamilton.
- Branded 100 Horizon vehicles with powerWISE energy conservation tips in 2005.
- Engaged a pilot CFL retrofit project with Hamilton Community housing in 2005 by installing over 23,000 bulbs into homes where people need to cut energy use and costs most.
- Provided funding for 475 social housing units in the Social Housing Services Corporation provincial energy audit study in 2005.
- In 2006, Horizon reached out to our social housing service providers including Victoria Park Homes, Niagara Housing, and the Hamilton Housing Authority. Project scopes varied. Victoria Park Homes retrofitted four buildings with 7,055 new CFL's for in-suite lighting. Niagara Housing completed their first energy efficient pilot retrofit project at Kenworth Acres Senior's complex. Meanwhile, Hamilton Community Housing carried on with in-suite CFL installations by installing 950 bulbs into homes where people need to cut energy use and costs most.
- Participated in 14 community events promoting energy conservation including a pilot of two Social Housing energy conservation workshops in 2005.
- Smart Meters: Installed 1000 Smart Meters and pilot tested two technologies in 2005, and expanded the pilot in 2006 to the installation of 7,306 smart meters that tested technologies and procedures to be used during full deployment.
- Delivered an Energy Audit and Self Evaluation program with partners Green Venture at Community events. Provided energy tips, free electricity saving products and reduced cost energy audits through Green Venture (a local non-profit organization that promotes energy efficiency). The Energy Audit and Self Evaluation program came to an end with the Federal government's funding cuts to the EnerGuide for Homes program. No new audits were conducted in 2006 but Horizon did commit to provide funding for those residential customers completing follow-up audits by March 2007.
- Participated in several public events that allowed us to spread the conservation message throughout the community. These events included the St. Catharines Rotary Rib Fest, Santa Claus Parade, Hamilton Locke Street Festival, Dundas Cactus Festival, McMaster Institute of Energy Studies Workshop, Port Authority Days and energy events sponsored by MPP's such as Judy Marsales, and Ted McMeekin.

- Participated in the Refrigerator Retirement Program in conjunction with five NEPA LDC's and the OPA. St. Catharines was a provincial pilot site but Horizon ran this program in Hamilton along with the NEPA participants using the same OPA delivery agents. This successful program removed 1,449 secondary fridges from Horizon's service territory.
- Horizon partnered with Honeywell to launch the *peaksaver*[™] program in September of 2006. By the end of 2006, 881 residential customers had load control thermostats professionally installed.
- In 2006 our events van hit the road bringing energy efficient ideas to our customers at community events. Horizon attended over 40 events to promote conservation in 2006.
- Provided conservation messaging through varied energy conservation channels, including media interviews, regular billing inserts, online newspapers and public information sessions.
- Provided a customer link from Horizon's website to the site www.powerwise.ca in 2006.

1.1 Ongoing Opportunities

As Ontario develops the conservation culture, it is necessary to balance the need for short-term results while fostering a long-term conservation attitude among provincial citizens and businesses. The industry must continue to coordinate its efforts to ensure that program delivery is efficient and available to all customers. Our goal should be rapid program deployment using the LDC's clear channel to market. Horizon Utilities best serves its customers as the main channel for effective conservation and demand management programs. Horizon Utilities has now completed its plans and projects funded through 3rd Tranche MARR. At this time, Horizon Utilities has proven to be an effective delivery agent for the OPA core programs in 2007 and 2008, despite the limited time to market made available for these programs in 2006.

Beyond final completion of the programs in Horizon Utilities' 3rd Tranche CDM plan in 2007 we also have been resourceful with implementation of four core OPA programs since 2007; Great Refrigerator Round Up, PeakSAVER, Summer Savings, and Electricity Retrofit Incentives Program.

2. Lessons Learned

Evolution of Horizon

At the same time that our CDM plan was being carried out the merger of Hamilton Hydro Inc. and St. Catharines Hydro Utility Services Inc. evolved to become Horizon Utilities. The merger plans involved hiring a dedicated resource in March 2005 to manage Horizon's CDM plan going forward.

Working Together

From the outset in the fall of 2004, St. Catharines Utility Services Inc. worked with the NEPPA member LDC's to plan CDM activities including the joint plan filing by nine members. On March 1, 2005 the merger took place and Horizon Utilities focused on looking for opportunities to implement activities that fit both the HHI and SCHUSI CDM plans. The SCHUSI plan activities were also influenced by the work of the Coalition of Large Distributors (Toronto Hydro, Hydro Ottawa, Horizon Utilities, Veridian, Enersource Hydro Mississauga and Powerstream). This group, representing 40% of the Province's load has shared experiences, jointly prepared and delivered programs and launched the powerWISE brand.

Horizon has also connected with community partners, and has used these resources to achieve impressive results. Learning throughout the process, we have accomplished much to date by working with and leveraging various partnerships and relationships, by leveraging healthy individual LDC thought and innovation, and by developing programs at the "grassroots" level. The benefits of this joint action are numerous and are identified below, along with other lessons learned over the past four years.

Program Development

- CDM program development does take time. In particular, procurement, legal and environmental issues must be thoroughly addressed up front in order to ensure long-term sustainable conservation success.
- Conservation opportunities exist with residential and small commercial customers. However, getting this effective message to the target audience can be challenging. Specific examples of conservation measures that are clear and relate directly to that customer's needs help to increase participation.
- Working together with other LDC's to expand a program offering can maximize program effectiveness through cross-jurisdictional advertising and reduce overall costs. An example was the peakSAVER Program that was implemented in partnership with the CLD.
- LDCs have demonstrated that they are the most effective channel to their customers for conservation programs. Customers have grown to depend on their local distributor for conservation support, advice and programs. This is critical to minimizing customer confusion while maximizing brand equity, cost effectiveness and conservation results.

- The powerWISE® brand is one of the most recognized conservation brands in Ontario. Horizon Utilities customers look for this trusted symbol to identify conservation opportunities. The Ministry of Energy also began to promote the powerWISE® name extensively through the Dr. David Suzuki ads in 2007. This enhanced the image of Horizon Utilities' programs and the efforts of other CLD members that were also using the brand.
- Commercial Load Control (Demand Response) and Distributed Energy programs piloted as part of the CDM plan show great promise as a means of reducing electricity system demand but require considerable time and effort to overcome customer implementation barriers. Customer revenues provided by these programs have to address the financial realities that customers face in making this capacity available.
- Each LDC has unique markets, resources and needs requiring a range of diverse and individual strategies and tactics that can be customized for successful local CDM program implementation. Providing communities with a variety of provincial OPA programs, in conjunction with custom LDC programs, makes good strategic sense.
- Horizon found that simple, low cost incentives like the powerWISE® Power Pack or free CFL bulbs were very well received by residential customers, offered good Total Resource Cost ("TRC") results and proved that customers did not require significant incentives to participate in programs. In fact, ease of participation accompanied by moderate incentives with a perceived high value to customers appear to be the hallmarks of program success. Demonstrating sample measures at community events is an engaging experience for customers that they are likely to share with others.
- Our powerWISE® for Business Incentive Program revealed that Commercial and Industrial customer timelines for conservation retrofit projects are usually longer than Horizon Utilities expected and have a lower sense of urgency than Horizon Utilities would prefer. Incentives have to be very meaningful, in order to encourage and speed up conservation projects at this level. For example, in 2006, seventeen applications were received and only two of the projects were completed and thus received PBIP incentives.
- Commercial Programs must address the needs of the customers at the corporate, Municipal, Provincial and National levels to allow implementation across jurisdictions and beyond individual stores. Coordination and consistency is required to allow large Corporations to make programs available to all store locations regardless of location by City or Province.

Education

- Public education and energy audits are important as Horizon Utilities builds a culture of conservation. Yet under the current reporting format, no reportable benefits can be attributed to these activities. This effectively penalizes utilities from participating in these worthwhile and necessary initiatives. Energy audits also provide an opportunity to educate customers on what effective measures can be taken to save energy.
- As Horizon Utilities develops a conservation culture in Ontario, Horizon Utilities must continue to balance the need for short-term results while fostering a long-term conservation attitude among the citizens and businesses in the province. If fostering conservation is to become a sustainable entity in Horizon Utilities' business portfolio, a stable, risk-averse methodology for funding must exist.

- Residential customers are generally aware of the simple products and initiatives that are available to help them to reduce their energy consumption. However, they have a limited understanding of the dollar impact and quick return provided by these simple solutions such as pipe wrap, SLED's and CFL bulbs. It is critical to educate our customers and to provide a savings comparison in dollars to highlight these impacts. A variety of case studies would be an effective means to achieve customer awareness. Real time, in home, energy monitors offer customers an effective tool to better understand and manage their consumption, particularly when time of use pricing comes into effect.
- Introduction of more complicated programs such as the residential demand response program peakSAVER requires customer education to gain acceptance and understanding of its importance. Cooperation to ensure that installed resources are used effectively in a manner that is prudent in reducing consumer costs and reinforces the benefit of customer enrolment in demand response. In 2007 peakSAVER devices were not officially called upon to operate as part of the IESO ELRP. Dispatched imported power requirements could be mitigated by calling on demand response capability as a measure.
- Through a customer focus group, Horizon Utilities learned that its larger Commercial and Industrial customers want direct customer contact on matters relating to energy conservation and emerging technologies. It is important to offer Commercial and Industrial customers access to information through convenient forums such as workshops and trade shows. The LDC can play a role by introducing service providers to customers. Relying on current customer contacts in the billing database will not always produce the appropriate contact that manages facility energy use. Using a dedicated Horizon Utilities resource to address energy conservation needs of larger industrial, commercial and MUSH sector customers will lead to increased participation and adoption of energy efficient technologies.
- Horizon Utilities' sponsorship of the Generation Conservation grade 5 curriculum and development of the powerWISE Home - "Power for Tomorrow" conservation model are steps taken to build a new generation of conservation savvy citizens. Introducing this curriculum to four school boards in two municipalities through teacher workshops has been well received.

Regulatory Issues

- It was clear that CDM programs require and will benefit from continuity and consistency of funding. The funding transition to the OPA that occurred in 2007 created a period of uncertainty, disrupting programs at the beginning of the year followed by a ramping up in mid-year. The result was lost momentum in conservation programs savings and customer confusion.
- The energy industry must coordinate the individual efforts of its many organizations to ensure that program delivery is efficient, readily available and understood by all customers. Most customers don't understand the relationship between the various organizations within the hydro industry, so an attempt to deliver programs to the end customer by these different organizations only confuses the customer and suggests a lack of industry coordination. Clarity regarding the roles of the LDC, OEB, OPA, and the IESO would be beneficial in this regard.

- TRC analysis has become more complicated with the introduction of new TRC Analysis tools and measures lists. There are two sets of standards, one from the OEB and one from the OPA. We recommend the use of a single financial standard set by the OEB.
- OEB's new proposed CDM regulatory structure deals with pilots and it is recommended that it should also consider adding a separate R&D process to support program development. This would encourage development of new ideas and control any potential risks involving new technologies.
- As a deregulated industry with shareholders, it is worth remembering that LDC shareholders expect some remuneration from CDM. All programs must balance the needs of market transformation and sustainability with a consistent rate of return.
- Finally, we must strive to streamline the LDC's administrative reporting efforts where possible. Reporting requirements must be consistent and applicable to all participants thereby removing regulatory duplication.

3. Conclusions

Horizon Utilities has embraced its role of implementing CDM programs to our customers. In doing so many new relationships were formed and a renewed focus on bringing value to our customers. Flexibility in adapting to customer demands and gaining understanding of new regulatory requirements around the business of CDM evolved. Plan and budget adjustments were required by Horizon Utilities to finalize the completion of its CDM plans within the budget allowed.

Energy Savings results delivered by Horizon Utilities programs in 2007 were 6.5 million kWh in energy savings reflective of the activities in winding down the various programs in anticipation of the OPA core program offerings.

Appearing at over 28 community events last year, Horizon Utilities offered a unique opportunity to engage over 50 staff volunteers in learning about conservation measures, then extending this knowledge and leadership to the public. An addition of the smart meter display has proven useful in preparing customers for time-of-use rates and introducing conservation concepts that will allow them to seek cost savings when those rates take effect. Demand for Horizon Utilities to appear at community events is growing as the public demands more information about energy efficiency measures and assistance through CDM programs.

Increasing awareness about key conservation concepts, including consumption (kWh), demand (kWh) and underlying reasons for Ontario's CDM campaign has been challenging both internally and externally. Internally, the Conservation Champions Committee brings the message to each department. Externally, this message is shared with the community at events, programs and media channels.

The activities around Distributed Energy completed by Horizon Utilities in 2007 are aimed at providing leadership in demand response capabilities. Assisting customers to achieve demand and energy reduction is a role that Horizon Utilities can play an integral part going forward.

Horizon Utilities is very proud to be filing our 2007 Annual Conservation and Demand Management report that documents the completion of all projects and budget associated with the 3rd Tranche MARR.

Lastly Horizon Utilities is currently playing an active role in assisting the Province to meet the Conservation and Demand Management targets set out in the Integrated Power System Plan. Our customers are the reason we exist and they are pleased with Horizon's role in delivery of programs that meet their needs. Horizon is reviewing second-generation opportunities to carry this message further using established relationships with the CLD, Ontario Power Authority, NEPA, other LDC's and our local community partners.

Appendix D – Total Life Evaluation of the CDM Plan

	§ Cumulative Totals Life-to-date	Residential	¶ Low Income	Commercial	Institutional	Industrial	Agricultural	LDC System	Smart Meters	Other #1	Other #2
Net TRC value (\$):	\$ 11,210,111	\$ 11,640,789	\$ 1,679,921	(\$1,724,293)	\$ 1,731,767	\$ -	\$ -	\$ -	\$ -	(\$438,152)	\$ -
Benefit to cost ratio:	2.36	4.98	6.29	0.41	2.24	n/a		n/a	n/a	0.59	n/a
Number of participants or units delivered:	332,930	315,139	47,483	17,332	456	-		-	-	3	-
Lifecycle (kWh) Savings:	299,770,904	180,722,626	28,653,002	30,400,677	88,647,601	0		0	0	0	0
Total kWh saved (kWh):	40,465,778	34,034,334	6,696,172	3,698,440	2,733,004	0		0	0	0	0
Total peak demand saved (kW):	4,626	2,336	93	1,186	316	0		0	0	788	0
Total kWh saved as a percentage of total kWh delivered (%):	0.24%	0.20%	0.04%	0.02%	0.02%	n/a		n/a	n/a	0.00%	n/a
Peak kW saved as a percentage of LDC peak kW load (%):	0.14%	0.07%	0.00%	0.04%	0.01%	n/a		n/a	n/a	0.02%	n/a
¹ Gross C&D expenditures (\$):	\$ 7,084,062	\$ 2,400,759	\$ 291,694	\$ 250,381	\$ 106,162	\$ 66,589	\$ -	\$ 84,192	\$ 2,117,079	\$ 1,136,600	\$ 922,300
² Expenditures per kWh saved (\$/kWh):	\$ 0.18	\$ 0.07	\$ 0.04	\$ 0.07	\$ 0.04	n/a	\$ -	n/a	n/a	n/a	n/a
³ Expenditures per kW saved (\$/kW):	\$ 1,531	\$ 1,028	\$ 3,136	\$ 211	\$ 336	n/a	\$ -	n/a	n/a	\$ 1,442	n/a

	2005	2006	2007	Total
Utility discount rate (%):	7.90%	6.28%	6.28%	
Total kWh delivered:	5,837,439,604	5,530,341,344	5,547,020,317	16,914,801,265
Peak kW load:	1,069,467	1,125,946	1,168,910	3,364,323

¹ Expenditures are reported on cumulative basis.

² Expenditures include all utility program costs (direct and indirect) for all programs which primarily generate energy savings.

³ Expenditures include all utility program costs (direct and indirect) for all programs which primarily generate capacity savings.

⁴ Please report spending related to 3rd tranche of MARR funding only. TRC calculations are not required for Smart Meters. Actual expenditures for the total third tranche period need to be reported.

⁵ Includes total for the reporting year, plus prior years, if any (for example, 2008 CDM Annual report for third tranche will include 2007, 2006, 2005 and 2004 numbers, if any).

⁶ Includes totals from Low Income programs that fall under both commercial and residential.