Horizon Utilities Corporation

Conservation and Demand Management

2006 Annual Report

Ontario Energy Board File No. RP-2004-0203
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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 Enersource Hydro Mississauga, Horizon Utilities Corporation, Hydro Ottawa Limited, PowerStream Inc. Toronto Hydro-Electric System Limited and Veridian Connections. This report is a requirement of that decision. In respect of the application filed by Horizon Utilities Corporation, the Board issued its Final Order on February 3, 2005 under docket number RP-2004-0203/ EB-2004-0488.

The Board's decision 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. The Board issued amended requirements for reporting CDM activities on March 1, 2007. This report has been prepared in accordance with those guidelines and amended requirements.

Currently, Horizon Utilities has two separate Conservation and Demand Management Plans filed 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.

Horizon Utilities has been active in implementing many more programs in the second year of its CDM program that delivered results in several customer segments. Highlights from 2006 include:

- A customer link from Horizon's website to the site www.powerwise.ca.
- 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.
- The powerWISE® Business Incentive Program gained popularity with our Industrial and Commercial customers in 2006 with 17 applications being received. 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.
- 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, 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.

- Horizon installed 7,306 smart meters in a pilot project that tested technologies and procedures to be used during full deployment.
- Our Energy Audit and Self Evaluation program with partner Green Venture came to an end with the Federal government's funding cuts to the EnerGuide for Homes program. No new audits were conducted but Horizon did commit to provide funding for those residential customers completing follow-up audits by March 2007.
- Horizon provided conservation messaging through various energy conservation channels including media interviews, billing inserts, online newspapers and public information sessions.

With 2006 being the second year of Horizon's three-year plan, many programs previously planned in 2005 were successfully delivered to Horizon customers. Horizon 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 CDM team. Horizon Utilities is committed to helping the government build a sustainable long-term conservation culture in Ontario.

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 best serves its customers as the main channel for effective conservation programs. Horizon has finalized plans to finish conservation projects funded through Third Tranche MARR and has applied to the OEB for a transfer of funds on February 12, 2007 to carry out these plans. At this time, Horizon is investigating 2nd generation conservation program funding through the OPA application process. Besides participation in the Every Kilowatt Counts Spring Mailout, Horizon is preparing for the four upcoming OPA programs that include: Appliance Retirement, Business Incentive Program, Summer Challenge, and Residential Load Control.

2. Evaluation of Overall Plan

As noted in the Appendices, Horizon's 2006 CDM programs more than quadrupled 2005 energy savings, exceeding 29 million kWh (gross) and 2.25 MW in demand reduction. However, on a dollar per kilowatt-hour basis, the results remained steady at $0.14 / kWh. In 2006, this equated to 0.5% of total electricity delivered. Considering peak demand, the 2.255 MW reduction cost just over $1,607 / kW. This equated to 0.20 % of the maximum demand during 2006. Horizon's $1.7 Mil investment in smart meter technologies must be factored into the cost per kwhr and kw demand reduced as it represented approximately 30% of the gross expenditures in 2006. Please refer to the Appendices for a detailed evaluation of Horizon's CDM activities during 2006.

Horizon's approach was to deliver the majority of conservation and demand management programs in 2006 in order to meet budget targets by September 30th, 2007. It should be noted that many of the tasks completed were critical ingredients in the development of the conservation culture within Horizon territory. However, many of these efforts do not contribute directly to the key performance benchmarks of $/kWh and $/kW. This included smart meter deployment, community events, energy audits, the Kill-A-Watt meter lending program, powerWISE® Smart Home conservation model, education, and many other initiatives that are critical when fostering the culture of conservation.

CDM program development is a complex and time-consuming process. Procurement and legal processes were more costly and time consuming than originally expected. Horizon was able to maximize our results by working with the Coalition of Large Distributors, which provided a significant advantage in knowledge and resource sharing, efficiency and cost effectiveness. As we gained market experience, we were able to fine-tune our individual CDM plans as well. Through continued efforts of the CLD, Horizon was able to offer residential customers the ***peaksaver***™ program, installing 881 programmable thermostats in time to save energy on their winter heating bills.

In reviewing the information provided in both Appendices A, B and C, it should be noted that significant costs related to the residential smart meter pilot in 2006. This component of Horizon's CDM plan (i.e. deployment of smart meters), aligned with provincial government policy direction. The impact of smart meters on kWh consumption and kW demand has not been assessed, and therefore has not been included in this report. However, it should be noted that this significantly reduces the overall cost benefit analysis provided in Appendix A.

Horizon continued to foster relations and plan projects in 2006 with social housing service providers that have now resulted in a cumulative annual savings of 6,309,230 kWh. There are still more second generation opportunities to be explored with our local service providers.

Appearing at over 40 community events last year, Horizon 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.

Increasing awareness about key conservation concepts, including consumption (kWh), demand (kW) 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.

Opportunities to deliver cost-effective conservation measures in the area of Distribution System Loss Reduction were not developed. Therefore, a request to transfer this funding was carried out on Feb 12, 2007. Since that time, the request has been approved.

Finally, the fact that the powerWISE® for Business Incentives Program (PBIP) customers must complete energy efficient projects within a specific timeframe poses some risk to Horizon. Although CDM funds are allocated to project applications received and pre-approved, projects must be completed and verified before payment is issued. Since many of the projects specified in the 2006 applications were not completed, Horizon is now taking steps to confirm completion dates and thereby reduce the potential of stranding funds.

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.

3. Discussion of Programs & 2006 Activities

3.1 Residential and Small Commercial (< 50 kW)

3.1.1 Co-Branded Mass Market Program

Description

This flagship co-branded mass-market program (powerWISE®) is a multifaceted approach to fostering the conservation culture in Ontario. Through development of a significant cooperative effort among six of the largest municipal LDC's, this program has become aligned with specific initiatives such as Compact Fluorescent Lighting (CFL) change out programs, LED Christmas Light Exchanges, Energy Star, Multi-Choice, energy audits, hot water heater blanket wraps, school based education and a host of other programs aimed at providing customers with the tools and education needed to reduce their energy usage. Access to online services such as energy consumption calculators, an energy expert and personalized energy audit services are being considered as future components of this program.

Target users

Mass-market including residential and small commercial <50 kW of monthly demand

Benefits

Increased awareness, improved product supply, culture shift, and significant demand and energy reductions.

3.1.1.1 Activity with the powerWISE® brand

Action

- Hamilton Utilities Corp. (HUC) registered the powerWISE® mark prior to Ontario's CDM activities.
- During CLD CDM plan preparation, it was agreed that the CLD would collectively develop and use the brand. HUC offered powerWISE® for license and the CLD agreed that we would use this mark.
- The Ministry of Energy requested a license to use the brand on television, radio and print advertising campaigns that were executed throughout 2006 to raise awareness of energy conservation and the brand.

Results to Date

- Interest in the powerWISE® brand has been expressed by the OPA and other utilities.

Next Steps

- Extend the powerWISE® brand to the OPA and other LDC's.

3.1.1.2 Activity with powerWISE® Website

Action

- The powerWISE® website www.powerwise.ca was jointly developed and announced on April 1st, 2005.
- This website provides one common location for general electricity conservation information and useful industry links.
- Links have also been provided for customers to reach their CLD member's home website for specific local program information.
- The site also has an archive of the various advertising campaigns that ran throughout the year
- The website also features an "Ask the Expert" section.

Results to Date

- In 2006 the powerWISE® website had over 181,000 visitors.
- Since inception, the powerWISE® website has had over 218,000 visitors.

Next Steps

- Continue to promote www.powerwise.ca as a source for conservation information

3.1.1.3 Children's Discovery Centre (Conservation Model)

Action

- Horizon has purchased a powerWISE® Home for display at the Niagara Children's Discovery Centre in St. Catharines.
- The model has been delivered and is a featured energy conservation educational teaching aid for primary school students.
- The hardware for the interactive theatre is being developed.
- A script is being developed based upon the conservation themes related to the model.
- Creative media material will be developed around the conservation model script, and, once completed, will be interfaced with the theatre hardware to create an interactive education model.

Results to Date

- The model is located permanently at the Children's Discovery Centre, and is being used to educate school children.
- Basic educational curriculum has been developed to facilitate learning.

Next Steps

- Complete all of the components to the interactive model and enhance the learning experience
- Consider replicating and education material (DVD's) of classroom curriculum to maximize exposure and education.

3.1.1.4 Christmas Light Exchange

New LED Christmas lights are almost 90% more efficient than their incandescent counterparts. Programs in Hamilton include a municipal incentive of $25,000, plus exchange programs for residential and small commercial customers.

Action
- Horizon Utilities completed a 2-for-1 internal exchange with Horizon Employees.
- Other scheduled public SLED (Seasonal Light Emitting Diode) string exchanges were cancelled due to a joint media advisory and product recall issued by the ESA and CSA.
- Horizon has pledged to support the City of Hamilton's Seasonal LED program with a $25,000 incentive during 2007.

Results to Date
- As part of the 2 for 1 promotion, 2,000 old Christmas light strings were exchanged with 1,000 SLED strings. The exchanges were completed internally.

Next Steps
- Work with our municipal entities to promote SLED's as an important conservation measure.
- Consider future in-store or coupon promotion to minimize vulnerability due to product quality.

3.1.1.5 Code Green

Action
- The television show titled "Code Green Canada", is a six-part television series sponsored in part by the CLD members.
- It was broadcast by CBC in the spring of 2006 and provided homeowners across Canada with valuable information on how to reduce energy consumption and save money.
- In Code Green, twelve contestants from across the country competed by retrofitting their homes to reduce electricity, gas, and water consumption. Each homeowner was given $15,000 to complete the modifications.
- The EnerGuide for Houses pre- and post-retrofit comprehensive energy audit also accounted for general energy measures plus building envelope improvements.
- The homeowner who achieved the greatest conservation benefits won a gas-electric 2006 hybrid Prius, courtesy of Toyota Canada.

Results to Date
- Series production for the CLD was completed and the program was aired in 2006.
- The series was viewed at the Horizon Utilities John Street location over six lunch & learn sessions.

Next Steps
- The Code Green series will be shown at the Horizon Utilities St. Catharines location on Vansickle Road over 6 lunch & learn sessions.
- Determine other mechanisms to promote the education videos.

- Promotion of the video is being considered in partnership with local libraries or other community partners.

3.1.1.6 Community Events

Action
- Horizon Utilities participated in over 40 community events to bring the conservation message to our customers. Events included home shows, parades, festivals and neighbourhood activities.
- Event management involved all logistics including volunteer management, ordering and provision of give-aways, registration, and co-ordination between all components.

Results to Date
- Two summer students were hired to assist with this process.
- The events van was purchased and decaled with conservation features to promote the message, and also enhance Horizon's presence at events.
- A wheel of conservation measures was created to increase public engagement at the Horizon booth.
- A light display was built to demonstrate the different styles of energy efficient light bulbs.
- The conservation model was used to enhance the message at events.
- High profile in the community has resulted in a demand for Horizon to attend and support numerous community events.

Next Steps
- Continue to bring the conservation message to the public.
- Evaluate future events to maximize promotion of 2007 conservation programs.

3.1.1.7 Conservation Model

Action
- A powerWISE® Home model is being used as a conservation prop at the community events and home shows. This model is identical to the model situated at the Niagara Children's Discovery Centre.

Results to Date
- The model enhances the conservation message at community events.
- The model has also been featured internally at safety meetings and other corporate events as an educational tool.

Next Steps
- Continue to display the model at community events. Once more curriculum is developed, deploy as an educational resource to complement other initiatives.

3.1.1.8 E-billing – Go Paperless

Action
This promotion encouraged customers to Go Paperless with Horizon by adopting e-billing and pre-authorized automatic billing. The incentives included:

- For customers that adopt the e-billing services, a donation to support a local tree-planting initiative
- Customers that select both options will receive a conservation kit.

Results to Date
- 540 customers received conservation kits for participating in the Go Paperless campaign.

Next Steps
- The Program is ongoing.
- Conservation kits are currently mailed to customers. Consideration will be given to improve this process through a central pickup location or coupon mailout for redemption of conservation kit contents.

3.1.1.9 Environment Hamilton

Action
This project was performed in partnership with Environment Hamilton and the Hamilton Street Railway, as part of an existing project to gather transit information. The program was enhanced by Horizon Utilities providing free energy conservation kits to North Hamilton residents upon completion of conservation surveys.

Results to Date
- The door-to-door survey being conducted by Environment Hamilton's street teams began in early June and continued until late August. The target areas were residential areas north of Barton Street.
- 6,128 residences were visited, and 3,215 conservation surveys were completed.
- For each conservation survey completed, the customer received a conservation package that included a re-usable cloth market bag, 4 compact fluorescent light bulbs and conservation literature. Participants with electric hot water heaters also received a low-flow showerhead.

Next Steps
- Review opportunities for similar community outreach programs in the future.
- Review survey results.

3.1.1.10 Events Van / Fleet Messaging

Action
- In an effort to increase conservation messaging to the mass market, Horizon purchased an events van and decorated the vehicle with decals to promote the conservation message.

- The rest of the Horizon Utilities fleet continues to promote the conservation culture through fleet messaging.

Results to Date
- The events van was used to transport display materials and conservation giveaways at numerous events. Besides promoting conservation at public events, the conservation vehicle was also instrumental in general distribution of conservation materials for various programs in the community.
- The van was also showcased in the St. Catharines and Hamilton Santa Claus Parades.
- The license plate of the events van reads “POWRWISE”.

Next Steps
- Ongoing vehicle branding
- Attend community events
- Interest has been expressed by other LDC’s to borrow the Horizon events van.

3.1.1.11 Fridge Retirement Program

Action
- Horizon Utilities supported the OPA Fridge Retirement Pilot Project that involved the City of St. Catharines. As part of this program, participants received a free in-house pickup of their refrigerator pending verification that the appliance was in working condition. Canadian Tire coupons for a free six-pack of CFL bulbs and a timer were then mailed to these customers.
- In an effort to maximize the program effectiveness, Horizon Utilities partnered with other NEPA members including; Niagara-on-the-Lake Hydro, Niagara Falls Hydro, Penwest Utilities, Grimsby Power and Welland Hydro, to support the same program in their respective communities. Since the OPA was already financing the pilot program in St. Catharines, Horizon used CDM funds to implement the program in the remaining Horizon territory (i.e. Hamilton).
- The same delivery agent was used for these programs.

Results to Date
- In St. Catharines, 830 refrigerators were retired.
- In Hamilton, 619 fridges and 11 freezers were retired.
- These results exceeded target expectations.

Next Steps
- Work with the OPA to offer the Appliance Retirement Program in 2007.

3.1.1.12 Horizon Utilities Website

Action
- The website www.horizonutilities.com was revised to provide a stronger emphasis on conservation.
- The website now offers numerous conservation options, including; information for residential customers, business customers, and general conservation advice under the powerWISE® category.
- This conservation component of the website is designed to provide Horizon customers with immediate access to local conservation initiatives

- Another highlight is the "ask-the-expert" feature whereby experts within the Horizon Conservation and Demand Management Department answer questions related to conservation.
- The website is also updated to provide links and details on active conservation programs.

Results to Date

- Since its launch www.horizonutilities.com has received 191,896 visitors. Internally, the www.horizonutilities.net has received 156,433 site visits.
- Horizon Utilities also answers conservation related questions from:
  1) Ask the Expert,
  2) Corporate Communications,
  3) Horizon Utilities Information communication channels, and:
  4) The general public.

Next Steps

- Continue to enhance the website with new materials, links and applications.
- Continue to respond to customer enquiries.

3.1.1.13 Horizon Conservation Champions Committee

Action

- The Conservation Champions committee includes employee volunteers from many departments interested in energy conservation at Horizon Utilities. Regular meetings are held to discuss Horizon's external programs and to develop internal initiatives. Goals of the committee are to:
  1. Recommend ways to reduce Horizon's demand by 5% and overall consumption by 10%.
  2. Create an energy and water use checklist to be used with our health and safety workplace inspections.
  3. Assist in creating an action plan around the IESO calls for reduced energy use, as part of preparation for 2006 summer peak.
  4. Design and implement an energy and water conservation awareness campaign at Horizon.
- In late 2005 / early 2006, the committee developed a Horizon staff "Call to Action" contest, whereby each staff member was given a conservation starter kit.
- In January 2006, a personal computer system was offered for each of the staff and kids' pledge categories.

Results to Date

- Call to Action Program: 207 adult and 97 kids pledge forms, and 159 self-evaluation surveys were received.
- Developed an internal energy conservation audit for Horizon Utilities Building
- Conducted conservation audits of each facility
- Tracked energy consumption of Horizon facilities (consumption and demand) at meetings
- Managed internal viewing of Code Green video series in Hamilton
- Provided volunteers and paid support at conservation events (including community events)

- Leadership in promoting and participating with internal programs including the employee incandescent light bulb exchange, Christmas light exchange, Kill-A-Watt-meter lending program, and others.
- Horizon's internal light bulb exchange retired 2,293 incandescent bulbs and exchanged these with CFL's.
- Followed progress of the comprehensive building audits as completed by outside consultants.
- Track conservation opportunities as per audit recommendations.
- Met regularly to review conservation projects and bring that message back to respective departments.

Next Steps
- The potential adoption of the Horizon program by other institutions is being explored.
- Creation of a 'Code of Conduct' for Committee Members to encourage participation in the variety of conservation activities.
- Encouraging Horizon employee and corporate leadership in embracing conservation opportunities.

3.1.1.14 Keep Cool

Action
This turnkey project managed by the Clean Air Foundation involved a room air conditioner drop-off program over three weekends at the three Home Depot locations within the Horizon Utilities territory (two locations in Hamilton, one in St. Catharines).

Results to Date
- The event dates were: **June 10th/11th**, **June 17th/18th**, & **June 24th/ 25th**.
- In total, 2,645 room air conditioners were dropped-off within Horizon territory. This greatly exceeded the target of 750 room A/C's.

Next Steps
- Promote the benefits of exchanging old room A/C's for more efficient alternatives.
- Participate and support a future program if funds are available. This includes the OPA Appliance Program.

3.1.1.15 Kill-A-Watt Meter Library Loaner Project

Action
- In conjunction with the Kill-A-Watt Meter Library Loaner Project established by Hydro Ottawa and Enersource, Horizon Utilities developed a similar program in partnership with the Hamilton and St. Catharines Public Library Systems.
- Horizon also set up a loaner program for internal staff in March 2006.
- The Kill-A-Watt meter library loaner program is demonstrated and promoted at local community events by Horizon Utilities.
- In support of the library loaner program, meter instruction cards were developed bearing Horizon's logo and appropriate library contact details. These cards are distributed with the meter.

Results to Date

- Meters borrowed to date:
    - 55 – St. Catharines Public Library
    - 354 – Hamilton Public Library
    - 50 – Horizon Loaner Program
- This project was launched at the Downtown Hamilton Public Library on January 23rd & 24th, 2006, with 2,500 CFL bulbs given out to library patrons.
- The internal Horizon lending program started on March 6, 2006, and the devices have been borrowed internally 50 times to date.

Next Steps
- Extend loaner program to other Horizon affiliates, including City of St. Catharines, City of Hamilton, and Social Housing providers.
- Promote participation results
- Determine next promotional campaign

3.1.1.16 Ontario Power Authority – Every Kilowatt Counts

Action
- The Conservation Bureau of the OPA developed a major mass-market retail campaign to advance the penetration of energy efficient devices into the marketplace through point of purchase redeemable coupons
- Coupon and information booklets were distributed through the mail to all Ontario households for each campaign.
- Horizon supported the OPA in its endeavor to reach all customers.
- Horizon audited all participating retailers to ensure that all point of purchase materials were in order. Results were reported back to the program delivery agent.
- Horizon promoted these mail-out programs on the website and at all community events.
- Horizon promoted the program internally by distributing the coupon booklets with pay stubs.
- Horizon promoted the program externally by providing related training to CSR's.
- Horizon also cross-promoted this program with the City of Hamilton.

3.1.1.16.1 Spring Campaign May 1, 2006 to August 31, 2006
- Compact Fluorescent Light bulbs (CFL) ($5.00 off each multi-pack)
- Indoor/outdoor timers ($5.00 off)
- Ceiling fans ($25.00 off)
- Programmable thermostats ($15.00 off)
- Promoted Keep Cool – a Clean Air Foundation program
- Promoted Cool Savings Rebate program

3.1.1.16.2 Fall Campaign October 1, 2006 to November 30, 2006
- Compact Fluorescent Light bulbs (CFL) ($3.00 off)
- Seasonal LED lights (SLEDs) ($5.00 off string with 50 bulbs or more)
- Motion Sensor Switches ($5.00 off)
- Programmable Thermostats ($15.00 off)
- Programmable Baseboard Thermostats ($15.00 off)
- Dimmer Switches ($3.00 off)

- Promoted Hot Savings Rebate program

Results to Date
- All Horizon Utilities residential and bulk metered customers received the coupon booklets for both the spring and fall campaigns
- Over 67,000 coupons were redeemed locally
- The Campaigns produced savings of greater than 185 kW and over 15 million kWh.

Next Steps
- The Conservation Bureau will continue to operate this program.
- The Spring 2007 EKC program will run April 16 to June 17.
- A Fall 2007 EKC program is being planned.

3.1.1.17 Smart Pak (Education)

Action
- Horizon ordered 1,900 powerWISE® Smart Paks for grade 5 and 6 students in Hamilton. Contents of the backpack included 2 compact fluorescent lights, faucet aerators, low flow showerhead, a nightlight and information related to energy conservation.

Results to Date
- 1,900 powerWISE® smart paks were delivered to the primary school children in February 2006.

Next Steps
- Continue to develop educational curriculum with educational and classroom / home components.
- Participation depends upon future funding availability
- Investigate existing provincial and local school board engagement with the comprehensive ECO-Schools curriculum. Co-ordination with existing safety training programs may be an option.

3.1.1.18 TAPS Program

Action

Enbridge was the delivery agent for this hot-water tank tune-up program that involved conservation measures including: CFL bulbs, low flow showerheads, pipe-wrap and faucet aerators. Enbridge is the gas utility for St. Catharines. However, since Union Gas services the Hamilton area, the two gas utilities reached an innovative agreement whereby Enbridge implemented the TAPS Program in Hamilton as well. Program delivery was achieved using third-party agents.

Results to Date
- In Hamilton, 582 electric hot-water tune-ups were performed.
- In St. Catharines, 60 electric hot-water tune-ups were performed, and 1,094 gas customers received CFL bulbs incented my Horizon Utilities.

Next Steps

- Promote the results of the program
- Participate in a future program related to TAPS.
- Continually look for ways to cross-promote and integrate various programs.
- Consider a program-in-a-box approach to the TAPS concept.

3.1.2 Smart Meter Pilot

Description

A pilot program for residential SMART meters will be deployed to enable the assessment of metering, communications, settlement, load control and other technologies that may be used to accommodate the universal application of SMART meters in the future. Further, sub-metering opportunities for the purposes of customer information in bulk-metered situations (i.e. condominiums) may be considered.

This initiative will commence upon the release of a formal definition of a SMART meter by the Board.

Target users

Residential and small commercial customers.

Benefits

This program supports the Minister of Energy's commitment to the installation of 800,000 SMART meters across Ontario by 2007. It will provide Horizon with the experience and knowledge needed to efficiently expand the use of SMART meters over the next several years.

In conjunction with appropriate rate structures, the program will also provide customers participating in the pilot programs with an incentive to conserve or shift energy use.

Action

- A smart meter pilot of 7500 meters was undertaken in Hamilton in 2006. This purpose of this pilot project was to test technologies, systems and processes that would be required in a full deployment strategy.
- A work management system was purchased to manage meter changes and data flow back to the CIS.
- Customer education materials were issued to all customers receiving a smart meter.
- End to end testing of these implemented technologies was tested in 2006.

Results to Date

- There were 7,306 residential customers that received a smart meter and customer information package in 2006.
- A smart meter display and information was created to train Horizon staff.
- Customers visited the smart meter display and conservation booth at the Dundas Cactus Festival and Grape and Wine Festival in St. Catharines.

Next Steps

- Finish installation of the balance of 194 smart meters to residential customers.
- Evaluate the effectiveness of the work management software and processes used in the smart meter pilot project.
- Prepare for first stage of smart meter full deployment to residential customers in 2007.

3.1.3 Energy Audit Program (Residential and Small Commercial)

Description

Horizon Utilities supports the completion of energy audits using existing auditors or service providers, to make specific recommendations for energy savings in such areas as major appliances, lighting, air leakage, hot water, heating and cooling. Incentives are also offered. Services could be further tailored to specific subsidized housing applications.

In this scenario, two projects were supported. 1) The EnerGuide for Houses Program through Green Venture whereby audits received a $50 discount, and 2) the Cool Shops program offered by the Clean Air Foundation.

Target users

Residential and small commercial customers

Benefits

The consumer receives a clear, concise and prioritized report identifying opportunities for energy savings as well as the associated costs and payback period (as applicable).

3.1.3.1 powerWISE® for Homes – Energy Audit & Self Evaluation Pilot

Action

- Horizon Utilities, in partnership with Green Venture, designed a residential energy audit incentive program.
- Customers filled out an energy use self evaluation survey and pledge form in exchange for a powerWISE® power pack, consisting of two CFL's, an LED night light, powerWISE® conservation handbook, $50 coupon for an EnerGuide for homes energy audit, and other water and electricity conservation information.
- In addition to the EnerGuide for homes energy audit, Green Venture added an electricity component. Recommendations for reducing electricity use includes lighting and appliance review.
- All self-evaluations and pledge forms are entered into a database to assist in the design of future energy conservation programs.

Results to Date

- During 2006, Horizon customers, in exchange for the powerWISE® power packs, completed a total of 1,930 surveys self-evaluation surveys.
- Horizon has given out incentives to 70 customers as part of the powerWISE® for homes and EnerGuide home energy audits. However, support ceased in mid-2006 when the Federal Government cancelled the program.
- The initiative was stopped after the home shows in Hamilton and St. Catharines.

Next Steps

- Determine if the program will be re-instated in another form by the Federal government. Announcements have been made, but the actualization of further details is still pending.

3.1.3.2 Cool Shops

Action

Cool Shops is a program offered by the Clean Air Foundation that targets small commercial enterprises within Business Improvement Areas (BIA's). Participating businesses receive an audit (conducted using a palm-pilot), several energy conservation gadgets, the option to order discounted conservation measures from Home Depot or Nedco, and decal of certification as a Cool Shops participant.

Results to Date

- Within the Horizon Utilities territory, 561 audits were completed at participating small commercial locations in Hamilton and St. Catharines. The target of 500 was exceeded.
- The program duration was May until August.
- Attended the post-project Cool Shops forum in Toronto.

Next Steps

- Participate and support a future program if funds are available.
- Use the gathered information and increased awareness to enhance the small commercial market.

3.1.3.3 powerWISE® Energy Conservation Handbook

Action

- Horizon Utilities participated with the NEPPA utilities to develop an energy conservation handbook. This handbook contains hundreds of tips and features a seasonal checklist of energy saving activities.
- This handbook was printed and distributed at community events with our Energy Audit and Self Evaluation project, and public libraries with the Kill-A-Watt Meter loaner program.

Results to Date

- Over 11,000 handbooks were distributed in 2006.

Next Steps

- Continue to distribute the powerWISE® Energy Conservation Handbook at community events in 2007.
- Update the handbook with new energy savings tips as required.

3.1.3.4 powerWISE® PowerPack

Action

- Horizon Utilities used the powerWISE® PowerPack for promotional purposes. The PowerPack consists of:
    - 2 Compact Fluorescent (CFL) bulbs
    - an LED nightlight
    - powerWISE® Tips brochure
    - a series of other energy conservation pamphlets
    - $50 coupon off a home energy audit
- The powerWISE® PowerPack was available for free pick-up at local partner Green Venture
- To qualify to receive a free powerWISE® PowerPack (retail value $20), Horizon Utilities customers were required to participate in a Horizon conservation program such as the residential energy audit self-evaluation survey.
- This offer was stopped in 2006 once the target number of surveys was completed.

Results to Date

- 1,930 powerWISE® PowerPacks distributed in 2006. To date, a total of 3,340 have been given out.
- The powerWISE® PowerPack concept is also used by other members of the CLD in a variety of promotional opportunities

Next Steps

- Continue to promote powerWISE®
- Continue to use the power pack version in Horizon's Go Paperless e-billing campaign
- A version of the power pack was also used to support the City of Hamilton's Community Conservation Day.

3.1.4 Social Housing Program

Description

A province-wide centralized energy management service for the social housing sector may be developed in collaboration with the Provincial Government, utilities (e.g. Enbridge, Union Gas) and others.

A pilot program will be conducted to determine feasibility with an expectation that a full-scale provincial program would follow.

Target users

Local social housing corporations, non-profit homes, co-op housing and low-income housing.

Benefits

Synergies will be created though the combined initiatives of various agencies.

Action

- Horizon expanded incentive offerings to social housing service providers.
- Horizon Utilities continued funding of a pilot retrofit (CFL's, toilet dams, flow restrictors) for social housing units with Hamilton Housing Corporation.
- A study and conservation program design was ordered by Horizon. This study and prescriptive program design is the basis for social housing retrofit project incentives.
- Investigation of a low income energy conservation program was undertaken.

Results to Date

- City of Hamilton Housing – handed out 475 conservation kits
- Victoria Park Community Homes – prescriptive incentive for over 7,055 light bulbs
- Niagara Regional Housing (Kenworth Acres Seniors Residence) – comprehensive conservation measures for 211 units under the prescriptive program design.
- Used the Horizon social housing prescriptive incentive guidelines for various 2006 social housing retrofit projects.
- Green Venture / Union Gas Low Income Housing Pilot Project – 39 audits

Next Steps

- Work with Social Housing Service Corporation to ensure program incentives are made available to service providers in Horizon's service area.
- Investigate opportunities for delivery and funding of low-income and social housing conservation programs.
- Partner with the Green Communities Association (Green Venture as local partner) for their provincial low-income initiative.

3.2 Commercial, Industrial and Institutional (> 50 kW)

3.2.1 Energy Audits and Feasibility Studies

Description

The Energy Audits and Feasibility Studies program is being accomplished through the powerWISE® Energy Audit Incentive program. This program offers financial incentives to large customers for performing energy audits. Interested customers must submit an application along with the necessary documentation. All details for this program are available at www.horizonutilities.com.

Target users

Large customers with peak demand of at least 50 kW. This includes schools, large commercial facilities, institutional facilities, industrial facilities, and municipal facilities such as recreation centres, arenas, and libraries.

Benefits

Customers applying for the powerWISE® Energy Audit Incentive program can receive an incentive of up to $5,000. Customers performing feasibility studies may be eligible for higher monetary incentives.

Actions:

- Processed and organized powerWISE® Energy Audit Incentive applications.
- Funded feasibility study for Horizon Utilities' four main facilities.
- Worked with City of Hamilton and City of St. Catharines to encourage energy audits and feasibility studies.
- Updated information and application at www.horizonutilities.com.

Results to Date:

- Received eight powerWISE® Energy Audit Incentive applications, seven of which were approved for incentives totaling $41,000.
- Issued incentives totaling $26,000 to four customers.
- Approved incentive of $12,000 to City of Hamilton for feasibility study to upgrade City Hall renovation design to a LEED standard.

Next Steps

- Issue incentives for energy audits still remaining to be completed.
- Verify status of existing applications.

3.2.2 Smart Meter Program

Description

Horizon Utilities will conduct a pilot to test Elster Smart Meter/Interval Meter technology by Commercial, Industrial and Institutional customers. The pilot will test meter technology, WAN backhaul capabilities and the integration to our current meter data collection computer and customer information system (CIS). Meters were ordered in 2006 for installation of meters in 2007. It is Horizon's intent to leverage the current Elster EnergyAxis Mesh technology in conjunction with an effective WAN backhaul communication technology for this pilot

Target users

Commercial, Industrial and Institutional customers larger than 50 kW's.

Benefits

This program supports the Minister of Energy's commitment to the installation of 800,000 SMART meters across Ontario by 2007. These meters are seen as an important means of establishing a 'conservation culture' in Ontario. Customers will be able to view their consumption patterns daily and be able to prepare their operation for future rate design. The Customer's ability to better understand the load profile and in conjunction with appropriate rate structures, will encourage customers to conserve or shift energy use.

Action

- Horizon Utilities 2006 expenditures in this program involved investigating cost effective communication technologies to be used for interval metering for customers >50 kW
- Ordering of Elster interval meters for a pilot project in 2006 was performed.

Results to Date

- Installation of interval metering was performed at all Horizon's, four work centres.
- 500 various forms of Elster Interval Meters have been received.
- Project Plan has been developed and customer communication documents prepared for notification of pilot and deployment.
- Interval meters were received in 4th Qtr of 2006 and planning an installation schedule for 2007 commenced.

Next Steps

- Horizon is in the process of revising the conditions of service document to reflect the requirement of interval metering >50kw.
- Seek standardization on the charging of communication costs for interval metering with the CLD group and OEB.
- Continue to investigate cost effective communication systems for interval metered customers.
- Installation of Interval Meters on customer locations.
- Prepare internal web presentment tool for customers to access meter data
- Planning of installation schedule and deployment of new interval meters.

3.2.3 LED Retrofits for Traffic Lights

Description

This initiative supports the replacement of existing traffic signals at intersections with new light-emitting diode (LED) technology.

Target users

Municipalities

Benefits

This program results in significant energy savings since the LED technology uses approximately 80% less electricity. Other benefits include reduced maintenance (LED's last longer) and improved visibility.

Action

- Horizon Utilities provided an incentive to both the Cities of Hamilton and St. Catharines to encourage replacement of incandescent traffic lights with LED lighting fixtures.
- The City of Hamilton established a 2006 budget for replacement of incandescent traffic lighting with LED technology.

Results to Date

- The report on retrofitting their traffic signals with LED bulbs was sent to City of Hamilton council for approval. Now approved in principle, progress is conditional on provision of an individual assigned specifically to this project.
- The target of $150/kW in reduced demand was established as an incentive or 25% of the capital cost of an LED fixture.
- The City of Hamilton upgraded 19 locations while the City of St. Catharines upgraded two locations.

Next Steps

- The Cities of Hamilton and St. Catharines will report fixtures replaced and corresponding reduction in electrical demand / consumption for each location.
- Horizon will verify the installations upon completion and process the request for incentives.
- The City of Hamilton has gained approval on a major LED retrofit for the City of Hamilton and Horizon will endeavor to support them with incentives to complete this work.

3.2.4 Leveraging Energy Conservation and Load Management

3.2.4.1 powerWISE® Business Incentive Program

Description

Leveraging Energy Conservation is being accomplished through the powerWISE® Business Incentive Program. This program offers financial incentives to large customers for projects that improve electricity consumption and reduce peak demand. Interested customers must submit an application along with the necessary documentation. All details for this program are available on www.horizonutilities.com. All other CLD members are participating in this program.

There are two application paths for customers: prescriptive and custom. The prescriptive path is for common measures and lighting retrofits. The custom path offers flexibility for customers performing retrofits that do not fall under the prescriptive path, and requires that the project reduces peak demand by at least 10 kW.

Target Users

Large customers with peak demand of at least 50 kW. This includes schools, large commercial facilities, institutional facilities, industrial facilities, and municipal facilities like recreation centres, arenas, and libraries.

Benefits

Under the prescriptive path, customers receive pre-set incentives per retrofit performed. Under the custom path, customers receive $150 per kW reduced. The maximum incentive to any one customer is $50,000.

Actions:
- Organized a half-day seminar for customers in partnership with Osram Sylvania.
- Expanded program to include St. Catharines.
- Processed and organized applications.
- Performed post-installation inspections.
- Updated information and application forms at www.horizonutilities.com.

Results to Date:
- Received 17 powerWISE® Business Incentive Program applications, 15 of which were approved for incentives totaling $84,000 and demand reduction totaling more than 500 kW.
- Issued incentives totaling $4,000 to two customers.

Next Steps
- Issue incentives for projects pending completion.
- Verify project status with applicants as per the Sept 2007 deadline.
- Integrate into OPA BIP Program as details are clarified and agreement is reached.

3.2.5 Load Control Initiative

Description

The Load Control Initiative materialized as the ***peaksaver™*** Pilot Program. It was officially launched in September of 2006.

This load control initiative involves the free installation of programmable thermostats (for central air conditioning) and load control switches (for electric water heaters and pool pumps). The devices (thermostats and switches) are being supplied by Cannon Technologies, while the service provider is Honeywell Utility Solutions. The target is 2000 points (approximately 2 MW), with 75% in Hamilton and 25% in St. Catharines. The control strategy will involve off/on cycling for air conditioning loads and complete shut-off for electric water heaters and pool pumps during the control period.

Target Users

Residential customers with consumption profiles indicative of the use of central air conditioning in the summer. Small commercial customers with small air conditioning units and electric water heaters.

Benefits

For customers who receive programmable thermostats, the benefits include free professional installation, ability to adjust the thermostat through the Internet, and call centre support. Customers who only receive a load control switch are given a $25 cheque, as an additional incentive.

For Horizon Utilities, this program provides a mechanism to reduce load during times of peak electricity demand in the Province of Ontario.

Actions:
- RFP process for service provider completed and contract with winning bidder signed.
- Hardware ordered and wireless communications setup complete.
- Call centre and installation procedures set up.
- Program information posted on website at www.horizonutilities.com.
- Direct mail pieces mailed out to more than 80,000 customers.
- Newspaper and radio advertisements.

Results to Date:
- 881 installations with almost 500 appointments scheduled pending by the end of 2006.

Next Steps
- Complete installation of balance of 1,600 residential thermostats, 200 commercial thermostats and 200 load control switches by May 31, 2007.

- Integration with OPA Residential Load Control Program as details are clarified and agreement is reached.
- Investigate opportunities for working with the CLD to create a common monitoring and verification plan.

3.3 Distribution Loss Reduction

Description

The Distribution Loss Reduction Program is a broad network based initiative to drive greater efficiencies within the distribution grid. This program will identify opportunities for system enhancements. Next steps will be to complete the engineering analysis and feasibility studies. Projects will be prioritized and selected based on the most attractive investment to results ratio. Items to be addressed may include, but are not limited to:

Power Factor Correction - Under the Power Factor Correction initiative, a power factor assessment will be completed which will identify locations for the installation of power factor correction capacitor banks. The results and available funding will determine which projects proceed.

Voltage Conversion - Voltage upgrades can save up to 90% of the losses associated with a feeder as higher voltages and lower current results in lower losses. This study will ascertain the locations and value of voltage conversions. This program could also involve changing out all the meters on a particular feeder to SMART Meters so that the exact losses can be determined.

Power System Load Balancing - This program is designed to ascertain where load shifting can occur within the grid to improve system efficiency including the location of optimized "open points". It is estimated that approximately 5% - 10% of system losses could be saved.

Voltage Profile Management - Changing voltage profiles at the distribution station level can result in a peak reduction at the controllable distribution stations. This is in addition to the IMO's voltage reduction program and will not interfere with the effectiveness of that program.

Line Loss Reductions - Replacement of conductors such as #6 AWG copper with #2 AWG aluminum can reduce line losses. An evaluation of where such opportunities exist may be undertaken. The results and available funding will determine which projects proceed.

Transformer and Other Losses – Using infrared scans of transformers this program will help to identify additional electricity losses including overloaded equipment. "Hot" transformers will be investigated further to determine operational improvement opportunities.

Target users

The results of this program will positively impact all of Horizon's customers.

Benefits

Reduced electricity distribution system delivery losses will reduce system demand, relieve network capacity to accommodate growth, and reduce the requirement for new generating capacity in the Province. Costs associated with distribution system delivery losses are recovered through electricity distribution charges. Reductions in these costs will therefore benefit all customers.

Action

- Horizon did not spend its budget on this program in 2005 or 2006.
- Horizon purchased an infra-red camera to monitor for hot spots in the distribution network, as well as support investigation of lost revenue opportunities within the service territory.
- Horizon purchased Distribution System Loss Analysis software and is now creating a distribution system model. The purpose will be to evaluate system optimization opportunities.

Results to Date

- Assessment of the TRC results of voltage conversion indicates that other programs can achieve better results.
- Distribution system analysis software was purchased and the creation of the system model is under development.

Next Steps

1. Horizon has applied to the OEB to transfer the balance of funding out of the Distribution System Loss reduction program to other programs.
2. Approval from the Board to carry out this transfer has been received.

3.4 Distributed Energy

3.4.1 Load Displacement

Description

Distributed generation behind the customer's meter provides an excellent opportunity to displace load from the local distribution system's grid in a very effective manner. Load displacement technology, such as combined heat and power systems, provides increased power efficiency and thermal systems. Combined with an existing or new district heating distribution system this technology contributes to the development of sustainable energy networks within Ontario's communities.

Other technologies such as micro-turbines, wind, biomass fuels and solar provide additional options to meet the customer's needs. This initiative will facilitate the development and implementation of these opportunities. Financial incentives will be considered based on the project's viability.

Development of educational and technology programs in conjunction with local colleges and universities may be considered. Small pilots or demonstration projects to promote alternative and renewable energy sources may also be considered.

Target Users

Commercial, industrial, and residential, schools, colleges and universities.

Benefit

Benefits include additional capacity within the grid. Cleaner technologies result in reductions in Green House Gas (GHG) emissions. Other benefits include improved system reliability, reduced harmonics, back-up power possibilities, education and skills development.

Action
- Horizon participated in a study with five CLD members on Demand Response business case and potential participatory roles of LDC's.
- Horizon assessed its role in the electricity market and the regulatory impact of aggregating customer generation capacity.

Results to Date
- Horizon determined that more experience was necessary before approaching customers to participate and partner with Horizon
- No projects or installation activities have been undertaken to date.

Next Steps
- A list of future opportunities includes the District School Board of Niagara standby generation project.

3.4.2 Stand-by Generators

Description

This program may provide for the use of customers' existing standby generators when required and/or economical. Environmentally friendly generators will be the primary focus of this initiative however all generators may be considered if needed during an emergency.

Target Users

Commercial and industrial customers with sufficiently sized standby generators.

Benefits

Reduction of customer and system peak demand and energy costs. This additional supply may be able to bid into the Ontario energy market in the future.

Action

- Horizon is planning to install new standby generators in both the John Street and Vansickle Road locations. Operational control will be performed through the John Street Control Centre.
- Horizon would like to install standby generation at all major facilities to enhance system reliability, but also to participate in the Provincial Emergency Load Response Plan (ELRP) and provide leadership in demand management.

Results to Date

- Investigation of power generation and control system options for all major facilities. These include John Street, Stoney Creek, Nebo Road and Vansickle Road.
- Developed and issued an RFP to seek related project proposals.
- Hired a consultant to review options and manage the project.
- Applied for a transfer of CDM funds to finance the John Street and Vansickle Road projects.

Next Steps

- Select a vendor
- Complete the installations
- Participate in the ELRP
- Capture the results

4. Lessons Learned

During the past two years, Horizon has built numerous relationships during the design and delivery of quality conservation and demand management programs to our customers. The members of the Coalition of Large Distributors (Toronto Hydro, Hydro Ottawa, Horizon Utilities, Veridian, Enersource Hydro Mississauga and Powerstream) have been a provincial focal point by working collectively on many of these conservation initiatives. Horizon has also connected with community partners, and has used these resources to achieve impressive results.

Many lessons have been learned along the way, including:

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. For example, the Cool Shops program used a local BIA member or case study as a lever to gain trust and open doors within that business district.

- 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 Fridge Retirement Program that was implemented in partnership with the Niagara members of the NEPA Group and the OPA.

- The powerWISE® brand is one of the most recognized conservation brands in Ontario. Horizon customers look for this trusted symbol to identify conservation opportunities. During 2006 the Ministry of Energy also promoted the powerWISE® name extensively. This enhanced the image of Horizon's programs and the efforts of other CLD members that were also using the brand.

- Our powerWISE® for Business Incentive Program revealed that Commercial and Industrial customer timelines for conservation retrofit projects are usually longer then Horizon Utilities expected and have a lower sense of urgency then 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.

- Horizon's experience with the internal seasonal LED exchange program flagged product defects that were immediately reported to the ESA. By this feedback, Horizon staff helped to prevent defective products from reaching the general public. We learned how defective products are investigated, scrutinized, gathered, and subsequently handled to ensure that public safety is not compromised. During this process, communication with other CLD members was maintained to manage potential risks.

Education

- Public education and energy audits are important as Horizon 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 develops a conservation culture in Ontario, Horizon 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's 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.

- Through a customer focus group, Horizon 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 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 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.

- Seniors will be receptive to energy efficiency upgrades if given the opportunity to become involved. The light bulb exchange held at Kenworth Acres was a very successful event to launch the start of energy efficient upgrades for the Seniors Residence. The launch included a question and answer session on the energy conservation measures being installed at their senior's residence. The residents

were thus involved, confident and more receptive to the installations performed within their suites and common areas.

Regulatory Issues

- 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.

- 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.

4.1 Recommendations by Program Area

Residential and Commercial <50 kW	Successful / H/M/L	Continue	Notes
Co-Branded Mass Market	Yes – H	Yes	Educational funding is required, as well as further outreach to bring conservation to the community. The process to engage with province-wide projects must be streamlined to ensure efficiency.
Smart Meter Pilot	Yes – H	Yes	Over 7,300 meters were deployed in 2006. Increasing the public understanding about Smart Meters as a conservation tool is required.
Energy Audit Program	Yes – M	Yes	The established EnerGuide program was cancelled. Local programs such as Cool Shops, are needed to bring the conservation message to BIA's. Case studies are required to engage customers.
Social & Low Income Housing Program	Yes – H	Yes	Continued engagement with local projects are required. Case studies are required to engage participants.
Residential Load Control	Yes – H	Yes	The program has great potential to reduce peak loads, especially with the province-wide efforts. An

			effective awareness piece must be developed to inform the public.
Refrigerator Retirement	Yes – H	Yes	The OPA Appliance Roundup program has tremendous potential, especially when various appliances are coupled with fridge pickups.
Commercial Institutional and Industrial > 50 kW			
Smart Meter Program	Yes – H	Yes	The installation of smart and interval meters is proceeding now. Again, awareness through case studies is required.
Energy Audits and Feasibility Studies	Yes – M	Yes	Audits educate customers and lead to retrofits. More support is needed for this educational step.
LED Retrofits for Traffic Lights	Yes - M	Yes	Effective program, but Municipal governments are slow to complete LED retrofits.
Leveraging Energy Conservation or Load Mgmt	Yes – H	Yes	The PBIP Program has great potential, especially when the OPA launches the province-wide initiative. More case studies and awareness is required.
CI&I Load Control	Too early to tell	Yes	This program has great potential to deliver key summer peak reductions.
Distribution Loss Reduction			
Distribution Loss Reduction	N – L	No	Funds have been diverted to more TRC-beneficial conservation options.
Distributed Generation			
Load Displacement	Too early to tell	Yes	These programs have considerable potential to encourage new distributed generation as well as to utilize existing generators. Again, more awareness required.
Standby Generators	Too early to tell	Yes	
Overall Program Support			
Program Support Initiatives	Yes	Yes	These activities support all the program areas and assist with marketing and promotion

5. Conclusions

Horizon's 2006 CDM program delivery more than quadrupled the energy savings results from 2005. As well, the smart meter initiative tested systems, processes and tools in preparation for Horizon's full deployment in 2007. Development of action plans and strategic relationships fostered during program design and implementation has created valuable experience and understanding. This insight will be important as we evaluate opportunities for second-generation CDM programs.

Planning activities and CDM programs initially launched in 2005, thrived in 2006, thereby increasing customer exposure and acceptance. The powerWISE® retail coupon was so effective that it was adopted by the Ontario Power Authority and re-launched as the "Every Kilowatt Counts" Spring and Fall Campaigns.

CDM Program development is a complex and time-consuming process. Procurement and legal processes were more costly and time consuming than originally expected. Horizon was able to maximize our results by working with the Coalition of Large Distributors, which provided a significant advantage in knowledge and resource sharing, efficiency and cost effectiveness. As we gained market experience, we were able to fine-tune our individual CDM plans as well. Through continued efforts of the CLD, Horizon was able to offer residential customers the peaksaver program, installing 881 programmable thermostats in time to save energy on their winter heating bills.

Horizon continued to foster relations and plan projects in 2006 with social housing service providers that have now resulted in a cumulative annual savings of 6,309,230 kWh. There are still more second generation opportunities to be explored with our local service providers.

Appearing at over 40 community events last year, Horizon 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.

Increasing awareness about key conservation concepts, including consumption (kWh), demand (kW) and underling 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.

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 A - Evaluation of the CDM Plan

Highlighted boxes are to be completed manually, white boxes are linked to Appendix C and will be brought forward automatically

	[5] Cumulative Totals Life-to-date	Total for 2006	Conservation and Demand Management Residential and Small Commercial <50kW	Conservation and Demand Management Commercial, Industrial and Institutional >50kW	Distribution Loss Reduction	Distributed Energy & Load Displacement	Overall Program Support	[4] Smart Meters
Net TRC value ($):	$ 10,847,135	**$ 9,091,359**	**$ 9,727,514**	**$ 43,396**	**$ (78,984)**	**$ (15,182)**	**$ (585,385)**	
Benefit to cost ratio:	5.91	4.12	5.72	1.25	0.00	0.00	0.00	
Number of participants or units delivered:	314,967	262,406	261,595	811	-	-	-	
Lifecycle (kWh) Savings:	184,818,854	149,654,514	145,678,590	3,975,924	0	0	0	
Report Year Total kWh saved (kWh):	34,280,931	27,190,845	26,841,326	349,519	0	0	0	
Total peak demand saved (kW):	2,377	2,255	2,209	46	0	0	0	
Total kWh saved as a percentage of total kWh delivered (%):	0.34%	0.49%	0.49%	0.01%	n/a	n/a	n/a	
Peak kW saved as a percentage of LDC peak kW load (%):		0.20%	0.20%	0.00%	n/a	n/a	n/a	
[1] *Report Year Gross C&DM expenditures ($):*	$ 4,629,611	$ 3,774,298	$ 1,371,111	$ 33,032	$ 78,984	$ 15,182	$ 585,385	$ 1,690,604
[2] *Expenditures per KWh saved ($/kWh):*	$ 0.14	$ 0.14	$ 0.05	$ 0.09	$ -	$ -	$ -	
[3] *Expenditures per KW saved ($/kW):*	$ 1,947.82	$ 1,673.88	$ 620.83	$ 713.59	$ -	$ -	$ -	

Utility discount rate (%):	6.28

[1] Expenditures are reported on accrual 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. Only actual expenditures for the year need to be reported.
[5] Includes total for the reporting year, plus prior year, if any (for example, 2006 CDM Annual report for third tranche will include 2005 and 2004 numbers, if any.

Appendix B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** Co-Branded Mass Markets

Description of the program (including intent, design, delivery, partnerships and evaluation):

This flagship co-branded mass-market program (powerWISE®) is a multifaceted approach to fostering the conservation culture in Ontario. Through development of a significant cooperative effort among six of the largest municipal LDC's, this program has become aligned with specific initiatives such as Compact Fluorescent Lighting (CFL) change out programs, LED Christmas Light Exchanges, Energy Star, Multi-Choice, energy audits, hot water heater blanket wraps, school based education and a host of other programs aimed at providing customers with the tools and education needed to reduce their energy usage. Access to online services such as energy consumption calculators, an energy expert and personalized energy audit services are being considered as future components of this program.

Measure(s):

	LED Light Exchange	Community Events	Conservation Champs
Base case technology:	5 WATT Christmas Lights C-7(25 lights)	Incandescent Bulb and Average Standard Stock Showerhead	Incandescent Bulb and Average Standard Stock Showerhead
Efficient technology:	LED Christmas Lights (indoor or outdoor)	13 Watt CFL, Low Flow Showerhead and Night Lights	13 Watt CFL, Low Flow Showerhead and Night Lights
Number of participants or units delivered for reporting year:	1000	36,796 CFLs, 6,012 Showerheads and 9,143 Night Lights	6,000 CFLs, 3,000 Showerheads and 3,000 Night Lights
Measure life (years):	30	CFLs - 4 years and Showerhead - 7 years	CFLs - 4 years and Showerhead - 7 years
Number of Participants or units delivered life to date	1,000	51,951	12,000

Measure(s):

	EBilling	Environment Hamilton	Fridge Bounty
Base case technology:	Incandescent Bulb and Average Standard Stock Showerhead	Incandescent Bulb and Average Standard Stock Showerhead	Average Existing Stock Refrigerator, Average Existing Stock Freezer, Incandescent Bulb and 2 Flood Lights, 75W Incandescent, on 50% time
Efficient technology:	13 Watt CFL, Low Flow Showerhead and Night Lights	13 Watt CFL, Low Flow Showerhead and Night Lights	Refridgerator Recycling, Freezer Recycling, 13 Watt CLFs, Outdoor Timer
Number of participants or units delivered for reporting year:	1,080 CFLs, 540 Showerheads and 540 Night Lights	12,860 CFLs, 125 Showerheads and 3,215 Night Lights	1,449 Refrigerator Recycling, 11 Freezer Recycling, 1,518 CFLs and 177 Timers
Measure life (years):	CFLs - 4 years and Showerhead - 7 years	CFLs - 4 years and Showerhead - 7 years	Refrigerator Recycling - 6 years, Freezer Recycling - 6 years, CFLs - 4 years and Timer - 20 years
Number of Participants or units delivered life to date	2,160	16,200	3,155

Measure(s):

	Keep Cool	Smart Pak	TAPS
Base case technology:	Average Existing Stock Room Air Conditioners	Incandescent Bulb and Average Standard Stock Showerhead	Incandescent Bulb and Average Standard Stock Showerhead,

Efficient technology:	Retired Working Units and Retired Working Units Replaced with Energy Star Units	13 Watt CFL, Low Flow Showerhead and Night Lights	13 Watt CFLs, Low Flow Showerhead, Pipewrap, and Aerators
Number of participants or units delivered for reporting year:	1,428 Retired Working Units and 1,058 Retired Working Units Replaced with Energy Star Units	3,800 CFLs, 1,900 Showerheads and 1,900 Night Lights	6,916 CFLs, 788 Showerheads, 642 PipeWrap and 1,284 Aerators
Measure life (years):	Retired Working Units - 6 years and Retired Working Units Replaced with Energy Star Units - 6 years	CFLs - 4 years and Showerhead - 7 years	CFLs - 4 years, Showerhead - 7 years, PipeWrap - 6 years and Aerators - 12 years
Number of Participants or units delivered life to date	2,486	7,600	9,594

Measure(s):	OPA EKC Spring Campaign	OPA EKC Fall Campaign	Other
Base case technology:	Incandescent Bulb and Average Existing Stock	Incandescent Bulb, Average Existing Stock, 5 WATT Christmas lights C-7(25 lights) and Incandescent Mini Lights	
Efficient technology:	CFLs, Ceiling Fan, Timer and Programmable Thermostat	CFLs, Base Board Programmable Thermostats, Motion Sensors, Programmable Thermostat and Dimmer Switch	
Number of participants or units delivered for reporting year:	63,595 CFLs, 918 Ceiling Fans, 1,935 Timers and 872 Programmable Thermostats	64,728 CFLs, 172 Base Board Programmable Thermostats, 361 Motion Sensors, 2,042 Programmable Thermostat and 929 Dimmer Switch	
Measure life (years):	CLFs - 4 years, Ceiling Fan - 20 years, Timer - 20 years and Programmable Thermostat - 18 years	CFLs - 4 years, Base Board Programmable Thermostats - 18 years, Motion Sensors - 20 years , Programmable Thermostat - 18 years and Dimmer Switch - 10 years	
Number of Participants or units delivered life to date	67,320	68,232	10,464

B.	**TRC Results:**	**Reporting Year**	**Life-to-date TRC Results:**
[1]	*TRC Benefits ($):*	*$ 9,902,208.00*	$ 10,766,466.00
[2]	*TRC Costs ($):*		
	Utility program cost (excluding incentives):	*$ 801,476.00*	$ 821,832.00
	Incremental Measure Costs (Equipment Costs)	$ 652,032.00	$ 740,272.00
	Total TRC costs:	$ 1,453,508.00	$ 1,562,104.00
	Net TRC (in year CDN $):	$ 8,448,700.00	$ 9,204,362.00
	Benefit to Cost Ratio (TRC Benefits/TRC Costs):	$ 6.81	6.89

C. **Results:** (one or more category may apply)

Cumulative Results:

Conservation Programs:

Demand savings (kW):	*Summer*	1,447	1,568	
	Winter	n/a	n/a	

	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):	*129,842,742*	23,711,355	145,985,128	26,218,698
Other resources saved :				
Natural Gas (m3):				
Other (Water m3):	2,080,953	298,244	2,120,201	301,514

Demand Management Programs:

Controlled load (kW)		
Energy shifted On-peak to Mid-peak (kWh):		
Energy shifted On-peak to Off-peak (kWh):		
Energy shifted Mid-peak to Off-peak (kWh):		

Demand Response Programs:

Dispatchable load (kW):		
Peak hours dispatched in year (hours):		

Power Factor Correction Programs:

Amount of KVar installed (KVar):		
Distribution system power factor at beginning of year (%):		
Distribution system power factor at end of year (%):		

Line Loss Reduction Programs:

Peak load savings (kW):		
	lifecycle	*in year*
Energy savings (kWh):		

Distributed Generation and Load Displacement Programs:

Amount of DG installed (kW):		
Energy generated (kWh):		
Peak energy generated (kWh):		
Fuel type:		

Other Programs (specify):

Metric (specify):		

D. **Actual Program Costs:**

		Reporting Year	**Cumulative Life to Date**
Utility direct costs ($):	*Incremental capital:*	$ 66,092.00	$ 68,955.00
	Incremental O&M:	$ 735,384.00	$ 921,808.00
	Incentive:	$ -	$ -
	Total:	$ 801,476.00	$ 990,763.00
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:		

E. Assumptions & Comments:

- "Other" measures represent 2005 Co-Branded initiatives not included in 2006. Includes Retailer Program, Cold Water Wash and 'Call to Action'. All TRC input assumptions based on OEB measure list.

[1] Benefits should be estimated if costs have been incurred and the technology has been deployed. Benefits reflect the present value of the measure for the number of units deployed in the year, i.e. the number of units times the net present value per unit benefit specified in the TRC Guide.

[2] For technologies which have not been deployed but for which the LDC has incurred costs, report only the TRC costs on a present value basis. Incentives (e.g. rebates) from the LDC to a customer are not a component of the TRC costs. However, payments made to a third party service provider to run an incentives program are program costs, and are to be included as TRC costs under the "Utility Program Costs" line.

Appendix B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** Load Control Initiative

Description of the program (including intent, design, delivery, partnerships and evaluation):

The Load Control Initiative materialized as the peaksaver Pilot Program. It was officially launched in September of 2006.

This load control initiative involves the free installation of programmable thermostats (for central air conditioning) and load control switches (for electric water heaters and pool pumps). The devices (thermostats and switches) are being supplied by Cannon Technologies, while the service provider is Honeywell Utility Solutions. The target is 2000 points (approximately 2 MW), with 75% in Hamilton and 25% in St. Catharines. The control strategy will involve off/on cycling for air conditioning loads and complete shut-off for electric water heaters and pool pumps during the control period.

Measure(s):

	Residential A/C Load Control	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	Do Nothing		
Efficient technology:	Utility Controlled Relay with Programmable Thermostat		
Number of participants or units delivered for reporting year:	881		
Measure life (years):	Utility Controlled Relay - 12 years and Programmable Thermostat - 18 years		
Number of Participants or units delivered life to date	881		

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*	*$ 860,098.00*	$ 860,098.00
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	*$ 283,283.00*	$ 283,283.00
Incremental Measure Costs (Equipment Costs)	$ -	$ -
Total TRC costs:	$ 283,283.00	$ 283,283.00
Net TRC (in year CDN $):	$ 576,815.00	$ 576,815.00
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	$ 3.04	$ 3.04

C. **Results:** (one or more category may apply)

Cumulative Results:

Conservation Programs:

Demand savings (kW):	*Summer*	129	129
	Winter	n/a	n/a

	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):	*2,270,478*	126,137	2,270,478	126,137
Other resources saved :				
Natural Gas (m3):				
Other (specify):				

Demand Management Programs:

Controlled load (kW)		
Energy shifted On-peak to Mid-peak (kWh):		
Energy shifted On-peak to Off-peak (kWh):		
Energy shifted Mid-peak to Off-peak (kWh):		

Demand Response Programs:

Dispatchable load (kW):	440.5	440.5
Peak hours dispatched in year (hours):		

Power Factor Correction Programs:

Amount of KVar installed (KVar):		
Distribution system power factor at beginning of year (%):		
Distribution system power factor at end of year (%):		

Line Loss Reduction Programs:

Peak load savings (kW):			
	lifecycle	*in year*	
Energy savings (kWh):			

Distributed Generation and Load Displacement Programs:

Amount of DG installed (kW):		
Energy generated (kWh):		
Peak energy generated (kWh):		
Fuel type:		

Other Programs (specify):

Metric (specify):		

D. **Actual Program Costs:**

		Reporting Year	Cumulative Life to Date
Utility direct costs ($):	*Incremental capital:*	$ 197,204.00	$ 213,404.00
	Incremental O&M:	$ 86,079.00	$ 86,079.00
	Incentive:	$ -	$ -
	Total:	$ 283,283.00	$ 299,483.00
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:		

E. Assumptions & Comments:

All TRC inputs based on OEB Measure List.

[1] Benefits should be estimated if costs have been incurred and the technology has been deployed. Benefits reflect the present value of the measure for the number of units deployed in the year, i.e. the number of units times the net present value per unit benefit specified in the TRC Guide.

[2] For technologies which have not been deployed but for which the LDC has incurred costs, report only the TRC costs on a present value basis. Incentives (e.g. rebates) from the LDC to a customer are not a component of the TRC costs. However, payments made to a third party service provider to run an incentives program are program costs, and are to be included as TRC costs under the "Utility Program Costs" line.

Appendix B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** Residential Energy Audits

Description of the program (including intent, design, delivery, partnerships and evaluation):

Horizon Utilities supports the completion of energy audits using existing auditors or service providers, to make specific recommendations for energy savings in such areas as major appliances, lighting, air leakage, hot water, heating and cooling. Incentives are also offered. Services could be further tailored to specific subsidized housing applications.

Measure(s):

	Energy Audits	Cool Shops	Other
Base case technology:	Do Nothing	Incandescent and T12 Lighting	
Efficient technology:	Audit	CFL and T8 Lighting	
Number of participants or units delivered for reporting year:	powerwise powerpaks, 3860 CFL's 13 W, 1930 Night Lights	3038 Bulbs	
Measure life (years):	CFL's - 4 Years	2	
Number of Participants or units delivered life to date	5,790	3,038	4,682

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*	*$ 169,182.00*	$ 303,454.00
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	*$ 105,520.00*	$ 169,563.00
Incremental Measure Costs (Equipment Costs)	$ 11,947.22	$ 11,947.22
Total TRC costs:	$ 117,467.22	$ 181,510.22
Net TRC (in year CDN $):	$ 51,714.78	$ 121,943.78
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	$ 1.44	1.67

C. **Results:** (one or more category may apply)

Cumulative Results:

Conservation Programs:

Demand savings (kW):	*Summer*	99	99
	Winter	n/a	n/a

	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):	*2,329,278*	785,834	4,879,391	1,277,346
Other resources saved :				
Natural Gas (m3):				
Other (specify):				

Demand Management Programs:

Controlled load (kW)		
Energy shifted On-peak to Mid-peak (kWh):		
Energy shifted On-peak to Off-peak (kWh):		
Energy shifted Mid-peak to Off-peak (kWh):		

Demand Response Programs:

Dispatchable load (kW):		
Peak hours dispatched in year (hours):		

Power Factor Correction Programs:

Amount of KVar installed (KVar):		
Distribution system power factor at beginning of year (%):		

Distribution system power factor at end of year (%):			
Line Loss Reduction Programs:			
Peak load savings (kW):			
	lifecycle	*in year*	
Energy savings (kWh):			
Distributed Generation and Load Displacement Programs:			
Amount of DG installed (kW):			
Energy generated (kWh):			
Peak energy generated (kWh):			
Fuel type:			
Other Programs (specify):			
Metric (specify):			

D. **Actual Program Costs:**

		Reporting Year	Cumulative Life to Date
Utility direct costs ($):	*Incremental capital:*	$ -	$ -
	Incremental O&M:	$ 105,520.00	$ 184,399.00
	Incentive:	$ 3,500.00	$ 3,500.00
	Total:	$ 109,020.00	$ 187,899.00
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:		

E. Assumptions & Comments:

Other measures represent 2005 initiatives not included in 2006. Includes Powerwise PowerPak. TRC inputs based on Cool Shop Report.

[1] Benefits should be estimated if costs have been incurred and the technology has been deployed. Benefits reflect the present value of the measure for the number of units deployed in the year, i.e. the number of units times the net present value per unit benefit specified in the TRC Guide.

[2] For technologies which have not been deployed but for which the LDC has incurred costs, report only the TRC costs on a present value basis. Incentives (e.g. rebates) from the LDC to a customer are not a component of the TRC costs. However, payments made to a third party service provider to run an incentives program are program costs, and are to be included as TRC costs under the "Utility Program Costs" line.

Appendix B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** Social Housing

Description of the program (including intent, design, delivery, partnerships and evaluation):

A province wide centralized energy management service for the social housing sector may be developed in collaboration with the Provincial Government, utilities (e.g. Enbridge, Union Gas) and others.

A pilot program will be conducted to determine feasibility with an expectation that a full-scale provincial program would follow.

Measure(s):

	City of Hamilton	Green Venture/Union	Victoria Park
Base case technology:	Incandescent Bulb and Average Standard Stock Showerhead	Incandescent Bulb	Incandescent Bulb
Efficient technology:	13 Watt CFL, Low Flow Showerhead and Night Lights	13 Watt CFL	11 and 15 Watt CFL
Number of participants or units delivered for reporting year:	950 CFLs, 475 Showerheads and 475 Night Lights	39 customer participants: 168 CFLs, 1 electric tank customer tank 1 kitchen faucet aerators, 1 Water heater pipe wrap, 35 night lights.	7,055 CFLs
Measure life (years):	CFLs - 4 years and Showerhead - 7 years	CFLs - 4 years , Aerator - 12 years and Pipewrap - 6 years	4 years
Number of Participants or units delivered life to date	1,473	205	7,055

Measure(s):

	Niagara Regional Housing	Other
Base case technology:	Average Existing Stock and T-12 Lighting	
Efficient technology:	Refrigerator Recycling, T-8 Lighting, Motion Sensors, LED Exit Signs, Limiting Thermostats	
Number of participants or units delivered for reporting year:	213 Refrigerator Recycling, 63 Double T-8 Fixtures, 150 Single T-8 Fixtures, 1 Motion Sensor, 60 LED Exit Signs, 422 Limiting Thermostats	
Measure life (years):	Refrigerator Recycling - 6 years, T-8 - 5 years, Motion Sensors - 10 years, LED Exit Signs - 25 years, Limiting Thermostats - 18 years	
Number of Participants or units delivered life to date	908	37,415

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*	*$ 856,272.00*	$ 1,890,074.00
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	*$ 57,829.00*	$ 161,747.00
Incremental Measure Costs (Equipment Costs)	$ 144,949.00	$ 144,949.00
Total TRC costs:	$ 202,778.00	$ 306,696.00
Net TRC (in year CDN $):	$ 653,494.00	$ 1,583,378.00
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	$ 4.22	6.16

C. **Results:** (one or more category may apply)

Cumulative Results:

Conservation Programs:

Demand savings (kW): *Summer*	93	93	
Winter	n/a	n/a	

	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):	*11,236,092*	2,218,000	27,707,933	6,309,230
Other resources saved :				
Natural Gas (m3):				
Other (m3 Water):	89,110	12,730	132,634	19,494

Demand Management Programs:

Controlled load (kW)	
Energy shifted On-peak to Mid-peak (kWh):	
Energy shifted On-peak to Off-peak (kWh):	
Energy shifted Mid-peak to Off-peak (kWh):	

Demand Response Programs:

Dispatchable load (kW):	
Peak hours dispatched in year (hours):	

Power Factor Correction Programs:

Amount of KVar installed (KVar):	
Distribution system power factor at beginning of year (%):	
Distribution system power factor at end of year (%):	

Line Loss Reduction Programs:

Peak load savings (kW):		
	lifecycle	*in year*
Energy savings (kWh):		

Distributed Generation and Load Displacement Programs:

Amount of DG installed (kW):	
Energy generated (kWh):	
Peak energy generated (kWh):	
Fuel type:	

Other Programs (specify):

Metric (specify):	

D.	**Actual Program Costs:**		**Reporting Year**	**Cumulative Life to Date**
	Utility direct costs ($):	*Incremental capital:*	$ -	$ -
		Incremental O&M:	$ 57,529.00	$ 161,447.00
		Incentive:	$ 119,803.00	$ 119,803.00
		Total:	$ 177,332.00	$ 281,250.00
	Utility indirect costs ($):	*Incremental capital:*		
		Incremental O&M:		
		Total:		

E. Assumptions & Comments:

Other measures represent 2005 initiatives not included in 2006. Includes CFLs, water dams and flow restrictors.

[1] Benefits should be estimated if costs have been incurred and the technology has been deployed. Benefits reflect the present value of the measure for the number of units deployed in the year, i.e. the number of units times the net present value per unit benefit specified in the TRC Guide.

[2] For technologies which have not been deployed but for which the LDC has incurred costs, report only the TRC costs on a present value basis. Incentives (e.g. rebates) from the LDC to a customer are not a component of the TRC costs. However, payments made to a third party service provider to run an incentives program are program costs, and are to be included as TRC costs under the "Utility Program Costs" line.

Appendix B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** LED Traffic Lights

Description of the program (including intent, design, delivery, partnerships and evaluation):

This initiative supports the replacement of existing traffic signals at intersections with new light-emitting diode (LED) technology.

Measure(s):

	City of Hamilton	City of St. Catharines	Measure 3 (if applicable)
Base case technology:	Average Standard Stock	Average Standard Stock	
Efficient technology:	LED	LED	
Number of participants or units delivered for reporting year:	1 - City of Hamilton	1 - City of St. Catharines	
Measure life (years):	23	23	
Number of Participants or units delivered life to date	1	1	

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*	*$ 164,244.00*	
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	*$ -*	
Incremental Measure Costs (Equipment Costs)	$ -	
Total TRC costs:	$ -	
Net TRC (in year CDN $):	$ 164,244.00	
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	n/a	

C. **Results:** (one or more category may apply)

Cumulative Results:

Conservation Programs:

Demand savings (kW):	*Summer*	17	
	Winter	n/a	

	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):	*3,370,212*	147,615		
Other resources saved :				
Natural Gas (m3):				
Other (specify):				

Demand Management Programs:

Controlled load (kW)		
Energy shifted On-peak to Mid-peak (kWh):		
Energy shifted On-peak to Off-peak (kWh):		
Energy shifted Mid-peak to Off-peak (kWh):		

Demand Response Programs:

Dispatchable load (kW):		
Peak hours dispatched in year (hours):		

Power Factor Correction Programs:

Amount of KVar installed (KVar):		
Distribution system power factor at beginning of year (%):		
Distribution system power factor at end of year (%):		

Line Loss Reduction Programs:

	lifecycle	in year	
Peak load savings (kW):			
Energy savings (kWh):			

Distributed Generation and Load Displacement Programs:

Amount of DG installed (kW):		
Energy generated (kWh):		
Peak energy generated (kWh):		
Fuel type:		

Other Programs (specify):

Metric (specify):		

D. **Actual Program Costs:**

		Reporting Year	Cumulative Life to Date
Utility direct costs ($):	*Incremental capital:*	$ -	
	Incremental O&M:	$ -	
	Incentive:	$ 2,805.00	$ 2,805.00
	Total:	$ 2,805.00	$ 2,805.00
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:		

E. Assumptions & Comments:

Participants include 21 locations for LED traffic light installations.

[1] Benefits should be estimated if costs have been incurred and the technology has been deployed. Benefits reflect the present value of the measure for the number of units deployed in the year, i.e. the number of units times the net present value per unit benefit specified in the TRC Guide.

[2] For technologies which have not been deployed but for which the LDC has incurred costs, report only the TRC costs on a present value basis. Incentives (e.g. rebates) from the LDC to a customer are not a component of the TRC costs. However, payments made to a third party service provider to run an incentives program are program costs, and are to be included as TRC costs under the "Utility Program Costs" line.

Appendix B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** Leveraging Conservation and/or Load Management

Description of the program (including intent, design, delivery, partnerships and evaluation):

Leveraging Energy Conservation is being accomplished through the powerWISE Business Incentive Program. This program offers financial incentives to large customers for projects that improve electricity consumption and reduce peak demand. Interested customers must submit an application along with the necessary documentation. All details for this program are available on www.horizonutilities.com. All other CLD members are participating in this program.

There are two application paths for customers: prescriptive and custom. The prescriptive path is for common measures and lighting retrofits. The custom path offers flexibility for customers performing retrofits that do not fall under the prescriptive path, and requires that the project reduces peak demand by at least 10 kW.

Measure(s):

	PBIP	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	Existing Lighting		
Efficient technology:	Energy Efficient Lighting		
Number of participants or units delivered for reporting year:	2 Projects		
Measure life (years):	3		
Number of Participants or units delivered life to date	3		

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*	$ 50,471.00	
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	$ 1,310.00	
Incremental Measure Costs (Equipment Costs)	$ 86,389.00	
Total TRC costs:	$ 87,699.00	
Net TRC (in year CDN $):	-$ 37,228.00	
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	$ 0.58	

C. **Results:** (one or more category may apply)

Cumulative Results:

Conservation Programs:

Demand savings (kW):	*Summer*	29		
	Winter	n/a		
	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):	*605,712*	201,904		
Other resources saved :				
Natural Gas (m3):				
Other (specify):				

Demand Management Programs:

Controlled load (kW)		
Energy shifted On-peak to Mid-peak (kWh):		
Energy shifted On-peak to Off-peak (kWh):		
Energy shifted Mid-peak to Off-peak (kWh):		

Demand Response Programs:

Dispatchable load (kW):		
Peak hours dispatched in year (hours):		

Power Factor Correction Programs:

Amount of KVar installed (KVar):		

Distribution system power factor at beginning of year (%):			
Distribution system power factor at end of year (%):			
Line Loss Reduction Programs:			
Peak load savings (kW):			
	lifecycle	*in year*	
Energy savings (kWh):			
Distributed Generation and Load Displacement Programs:			
Amount of DG installed (kW):			
Energy generated (kWh):			
Peak energy generated (kWh):			
Fuel type:			
Other Programs (specify):			
Metric (specify):			

D.	**Actual Program Costs:**		**Reporting Year**	**Cumulative Life to Date**
	Utility direct costs ($):	*Incremental capital:*	$ -	$ -
		Incremental O&M:	$ 1,310.00	$ 10,798.00
		Incentive:	$ 3,902.00	$ 3,902.00
		Total:	$ 5,212.00	$ 14,700.00
	Utility indirect costs ($):	*Incremental capital:*		
		Incremental O&M:		
		Total:		

E. Assumptions & Comments:

TRC inputs based on PBIP application information.

[1] Benefits should be estimated if costs have been incurred and the technology has been deployed. Benefits reflect the present value of the measure for the number of units deployed in the year, i.e. the number of units times the net present value per unit benefit specified in the TRC Guide.

[2] For technologies which have not been deployed but for which the LDC has incurred costs, report only the TRC costs on a present value basis. Incentives (e.g. rebates) from the LDC to a customer are not a component of the TRC costs. However, payments made to a third party service provider to run an incentives program are program costs, and are to be included as TRC costs under the "Utility Program Costs" line.

Appendix B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** Energy Audits and Feasibility Studies

Description of the program (including intent, design, delivery, partnerships and evaluation):

The Energy Audits and Feasibility Studies program is being accomplished through the powerWISE Energy Audit Incentive program. This program offers financial incentives to large customers for performing energy audits. Interested customers must submit an application along with the necessary documentation. All details for this program are available at www.horizonutilities.com.

Measure(s):

	Measure 1 (if applicable)	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:			
Efficient technology:			
Number of participants or units delivered for reporting year:			
Measure life (years):			
Number of Participants or units delivered life to date			

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*	$ -	
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	$ 25,015.00	
Incremental Measure Costs (Equipment Costs)	$ -	
Total TRC costs:	$ 25,015.00	
Net TRC (in year CDN $):	-$ 25,015.00	
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	$ -	

C. **Results:** (one or more category may apply)

Cumulative Results:

Conservation Programs:

Demand savings (kW):	*Summer*			
	Winter			
	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):				
Other resources saved :				
Natural Gas (m3):				
Other (specify):				

Demand Management Programs:

Controlled load (kW)		
Energy shifted On-peak to Mid-peak (kWh):		
Energy shifted On-peak to Off-peak (kWh):		
Energy shifted Mid-peak to Off-peak (kWh):		

Demand Response Programs:

Dispatchable load (kW):		
Peak hours dispatched in year (hours):		

Power Factor Correction Programs:

Amount of KVar installed (KVar):		
Distribution system power factor at beginning of year (%):		
Distribution system power factor at end of year (%):		

Line Loss Reduction Programs:

Peak load savings (kW):			
	lifecycle	*in year*	
Energy savings (kWh):			

Distributed Generation and Load Displacement Programs:

Amount of DG installed (kW):		
Energy generated (kWh):		
Peak energy generated (kWh):		
Fuel type:		

Other Programs (specify):

Metric (specify):		

D. **Actual Program Costs:**

		Reporting Year	Cumulative Life to Date
Utility direct costs ($):	*Incremental capital:*	$ -	$ -
	Incremental O&M:	$ 25,015.00	$ 51,928.00
	Incentive:	$ -	$ -
	Total:	$ 25,015.00	$ 51,928.00
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:		

E. Assumptions & Comments:

No TRC benefits to report.

[1] Benefits should be estimated if costs have been incurred and the technology has been deployed. Benefits reflect the present value of the measure for the number of units deployed in the year, i.e. the number of units times the net present value per unit benefit specified in the TRC Guide.

[2] For technologies which have not been deployed but for which the LDC has incurred costs, report only the TRC costs on a present value basis. Incentives (e.g. rebates) from the LDC to a customer are not a component of the TRC costs. However, payments made to a third party service provider to run an incentives program are program costs, and are to be included as TRC costs under the "Utility Program Costs" line.

Appendix C - Program and Portfolio Totals

Report Year: **2006**

1. Conservation and Demand Management Residential and Small Commercial <50kW Programs

List each Appendix B in the cells below; Insert additional rows as required.

Note: To ensure the integrity of the formulas, please insert the additional rows in the middle of the list below.

	TRC Benefits (PV)	TRC Costs (PV)	$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures ($)
Co-Branded Mass Market	$ 9,902,208	$ 1,453,508	$ 8,448,700	6.81	23,711,355	129,842,742	1,447	$ 801,476
Residential Energy Audits	$ 169,182	$ 120,967	$ 48,215	1.40	785,834	2,329,278	99	$ 109,020
Social Housing	$ 856,272	$ 202,488	$ 653,784	4.23	2,218,000	11,236,092	93	$ 177,332
Load Control Initiative	$ 860,098	$ 283,283	$ 576,815	3.04	126,137	2,270,478	570	$ 283,283
Name of Program E			$ -	0.00				
Name of Program F			$ -	0.00				
Name of Program G			$ -	0.00				
Name of Program H			$ -	0.00				
Name of Program I			$ -	0.00				
Name of Program J			$ -	0.00				
***Totals App. B - Conservation and Demand Management Residential and Small Commercial <50kW**	$ 11,787,760	$ 2,060,246	$ 9,727,514	5.72	26,841,326	145,678,590	2,209	$ 1,371,111
Conservation and Demand Management Residential and Small Commercial <50kW Indirect Costs not attributable to any specific	→							
Total Conservation and Demand Management Residential and Small Commercial <50kW TRC Costs		$ 2,060,246						
****Totals TRC - Conservation and De**	**$ 11,787,760**	**$ 2,060,246**	**$ 9,727,514**	**5.72**				

2. Conservation and Demand Management Commercial, Industrial and Institutional >50kW Programs

List each Appendix B in the cells below; Insert additional rows as required.

Note: To ensure the integrity of the formulas, please insert the additional rows in the middle of the list below.

	TRC Benefits (PV)	TRC Costs (PV)	$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures ($)
Energy Audit & Feasibility Studies	$ -	$ 25,015	-$ 25,015	0.00	0	0	0	$ 25,015
LED Traffic Lights	$ 164,244	$ 58,605	$ 105,639	2.80	147,615	3,370,212	17	$ 2,805
Leveraging Conservation and/or Load Management	$ 50,471	$ 87,699	-$ 37,228	0.58	201,904	605,712	29	$ 5,212
Name of Program D			$ -	0.00				
Name of Program E			$ -	0.00				
Name of Program F			$ -	0.00				
Name of Program G			$ -	0.00				
Name of Program H			$ -	0.00				
Name of Program I			$ -	0.00				
Name of Program J			$ -	0.00				
***Totals App. B - Conservation and Demand Management Commercial, Industrial and Institutional >50kW**	$ 214,715	$ 171,319	$ 43,396	1.25	349,519	3,975,924	46	$ 33,032
Conservation and Demand Management Commercial, Industrial and Institutional >50kW Indirect Costs not attributable to any specific	→							
Total TRC Costs		$ 171,319						
****Totals TRC - Conservation and De**	**$ 214,715**	**$ 171,319**	**$ 43,396**	**1.25**				

3. Distribution Loss Reduction Programs

List each Appendix B in the cells below; Insert additional rows as required.

Note: To ensure the integrity of the formulas, please insert the additional rows in the middle of the list below.

	TRC Benefits (PV)	TRC Costs (PV)	$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures ($)
Name of Program A			$ -	0.00				
Name of Program B			$ -	0.00				
Name of Program C			$ -	0.00				
Name of Program D			$ -	0.00				
Name of Program E			$ -	0.00				
Name of Program C			$ -	0.00				
Name of Program G			$ -	0.00				
Name of Program H			$ -	0.00				
Name of Program I			$ -	0.00				
Name of Program J			$ -	0.00				
***Totals App. B - Distribution Loss R**	$ -	$ -	$ -	0.00	0	0	0	$ 78,984
Distribution Loss Reduction Indirect Costs not attributable to any specific program	→	78,984						
Total TRC Costs		$ 78,984						
****Totals TRC - Distribution Loss Re**	**$ -**	**$ 78,984**	**-$ 78,984**	**0.00**				

4. Distributed Energy & Load Displacement Programs

List each Appendix B in the cells below; Insert additional rows as required.

Note: To ensure the integrity of the formulas, please insert the additional rows in the middle of the list below.

	TRC Benefits (PV)	TRC Costs (PV)	$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures ($)
Name of Program A			$ -	0.00				
Name of Program C			$ -	0.00				
Name of Program C			$ -	0.00				
Name of Program D			$ -	0.00				
Name of Program E			$ -	0.00				
Name of Program F			$ -	0.00				
Name of Program G			$ -	0.00				
Name of Program H			$ -	0.00				
Name of Program I			$ -	0.00				
Name of Program J			$ -	0.00				
***Totals App. B - Distributed Energy**	$ -	$ -	$ -	0.00	0	0	0	$ 15,182
Distributed Energy & Load Displacement Indirect Costs not attributable to any specific program	→	15,182						
Total TRC Costs		$ 15,182						
****Totals TRC - Distributed Energy &**	**$ -**	**$ 15,182**	**-$ 15,182**	**0.00**				

5. Overall Program Support Programs

List each Appendix B in the cells below; Insert additional rows as required.

Note: To ensure the integrity of the formulas, please insert the additional rows in the middle of the list below.

	TRC Benefits (PV)	TRC Costs (PV)	$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures ($)
Name of Program A			$ -	0.00				
Name of Program C			$ -	0.00				
Name of Program C			$ -	0.00				
Name of Program D			$ -	0.00				
Name of Program E			$ -	0.00				
Name of Program F			$ -	0.00				
Name of Program G			$ -	0.00				
Name of Program H			$ -	0.00				
Name of Program I			$ -	0.00				
Name of Program J			$ -	0.00				
**Totals App. B - Overall Program Su	$ -	$ -	$ -	0.00	0	0	0	$ 585,385
Overall Program Support Indirect Costs not attributable to any specific program	→	585,385						
Total TRC Costs		$ 585,385						
****Totals TRC - Overall Program Sup**	**$ -**	**$ 585,385**	**-$ 585,385**	**0.00**				

6. LDC System Programs

List each Appendix B in the cells below; Insert additional rows as required.

Note: To ensure the integrity of the formulas, please insert the additional rows in the middle of the list below.

	TRC Benefits (PV)	TRC Costs (PV)	$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures ($)
Name of Program A			$ -	0.00				
Name of Program B			$ -	0.00				
Name of Program C			$ -	0.00				
Name of Program D			$ -	0.00				
Name of Program E			$ -	0.00				
Name of Program F			$ -	0.00				
Name of Program G			$ -	0.00				
Name of Program H			$ -	0.00				
Name of Program I			$ -	0.00				
Name of Program C			$ -	0.00				
Totals App. B - LDC System	$ -	$ -	$ -	0.00	0	0	0	$ -
LDC System Indirect Costs not attributable to any specific program	→							
Total TRC Costs		$ -						
****Totals TRC - LDC System**	**$ -**	**$ -**	**$ -**	**0.00**				

7. Smart Meters Program

Only spending information that was authorized under the 3rd tranche of MARR is required to be reported for Smart Meters.

Report Year Gross C&DM Expenditures ($)	→ 1,690,604

Note: Smart Meter expenditure includes Res. and Small Commercial <50 kW and Comm., Ind. And Instit. >50kW.

8. Other #1 Programs

List each Appendix B in the cells below; Insert additional rows as required.

Note: To ensure the integrity of the formulas, please insert the additional rows in the middle of the list below.

	TRC Benefits (PV)	TRC Costs (PV)	$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures ($)
Name of Program A			$ -	0.00				$ -
Name of Program B			$ -	0.00				
Name of Program C			$ -	0.00				
Name of Program D			$ -	0.00				
Name of Program E			$ -	0.00				

9. Other #2 Programs

List each Appendix B in the cells below; Insert additional rows as required.

Note: To ensure the integrity of the formulas, please insert the additional rows in the middle of the list below.

	TRC Benefits (PV)	TRC Costs (PV)	$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures ($)
Name of Program A			$ -	0.00				
Name of Program B			$ -	0.00				
Name of Program C			$ -	0.00				
Name of Program D			$ -	0.00				
Name of Program E			$ -	0.00				
Name of Program C			$ -	0.00				
Name of Program G			$ -	0.00				
Name of Program H			$ -	0.00				
Name of Program I			$ -	0.00				
Name of Program J			$ -	0.00				
***Totals App. B - Other #2**	$ -	$ -	$ -	0.00	0	0	0	$ -
Other #2 Indirect Costs not attributable to any specific program	→							
Total TRC Costs		$ -						
****Totals TRC - Other #2**	**$ -**	**$ -**	**$ -**	**0.00**				

LDC's CDM PORTFOLIO TOTALS

	TRC Benefits (PV)	TRC Costs (PV)	$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures ($)
***TOTALS FOR ALL APPENDIX B**	$ 12,002,475	$ 2,911,116	$ 9,091,359	4.12	$ 27,190,845	$ 149,654,514	$ 2,255	$ 3,774,298
*Any **other** Indirect Costs not attributable to any specific program*	→	$ -						
TOTAL ALL LDC COSTS		$ 2,911,116						
****LDC' PORTFOLIO TRC**	$ 12,002,475	$ 2,911,116	$ 9,091,359	4.12				

* The savings and spending information from this row is to be carried forward to Appendix A.
** The TRC information from this row is to be carried forward to Appendix A.