



March 31, 2009

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
P.O. Box 2319
2300 Yonge Street, 26th Floor
Toronto, Ontario M4P 1E4

Dear Ms. Walli:

Re: Ontario Energy Board File RP-2004-0203 / EB-2004-0489
2008 Conservation and Demand Management Annual Reports

Enclosed please find three hard copies of the 2008 Conservation and Demand Management Annual Reports for Enersource Hydro Mississauga, a member of the Coalition of Large Distributors (CLD).

Other CLD members - Horizon Utilities Corporation, Hydro Ottawa Limited, PowerStream Inc., Toronto Hydro-Electric System Limited and Veridian Connections Inc., will be providing or have already sent their reports by separate cover.

Electronic copies, one of the entire report in PDF format and one in Excel format of the appendices, are included on the enclosed disk.

The attached submission package contains our individual annual report prepared in accordance with the Board's oral decision of December 10, 2004, the guidelines issued December 21, 2005 and the amended requirements for annual reporting of conservation and demand management (CDM) initiatives issued February 2, 2009.

For information regarding this submission, please contact the following:
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Sincerely,

Carmine DiRuscio
Chief Conservation Officer,
Enersource Hydro Mississauga Inc.
Encls.
cc: Gia DeJulio

Electronic Filing: Submitted electronically on March 31, 2009





**Conservation and Demand Management
2008 Annual Report**

3rd Tranche Funding

Ontario Energy Board File No. RP-2004-0203
Docket Number RP-2004-0203 / EB-2004-0489

March 31, 2009

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EXECUTIVE SUMMARY

This report is submitted in fulfillment of the requirements of the Ontario Energy Board (the "Board" or the "OEB") issued on December 10, 2004, Board file number RP-2004-0203. For Enersource Hydro Mississauga Inc. ("Enersource"), the Board issued its Final Order on February 3, 2005 under docket number RP-2004-0203 / EB-2004-0489. The report is structured according to the Board's February 2, 2009 Requirements for Annual Reporting of Conservation and Demand Management (CDM) Initiatives and presents an account of the CDM initiatives and programs started by Enersource upon issuance of the referenced Final Order and continued in 2008 with a compendium since their inception.

In 2005, Enersource launched its CDM program and, by December 31st, 2008, had invested approximately \$8.2 million which resulted in annual savings to-date of over 57 million kWh. Based on the life-cycle of all measures implemented since program inception, the cumulative energy savings are projected to be over 245 million kWh.

Since inception, the measured benefit-cost ratio is 2.3. This is based on the net benefit derived from TRC (Total Resource Cost) calculations for each program divided by the corresponding TRC cost, as per specific Board guidelines.

In 2007, several of Enersource's 3rd Tranche programs were completed, either because they attained a pre-determined objective or because a pre-determined termination date had occurred. Therefore, 2008 activities were limited in scope, compared to the previous years. Some initiatives continued, but under a different funding mechanism and therefore are not reported here.

Total spending from inception to December 31, 2007 was \$7.634 million. Expenditures relating to the 2008 programs were \$0.534 million, bringing the total expenditures since inception to \$8.168 million. At December 31, 2008 approximately \$95,000 remain unspent of the original \$8.263 million 3rd Tranche of MARR CDM funding.

Enersource's CDM Plan involves the following initiatives, in the specified areas:

Conservation and Demand Management

- *Residential and Small Commercial (<50kW)*
- *Commercial, Industrial and Institutional (CI&I) (>50kW)*

Highlights:

- With the measures implemented in 2008 we achieved cumulative annual energy savings of over 57,000,000 kWh and a permanently displaced summer peak demand of over 1.1 MW. Of these, 0.7 MW are in the Residential sector. In addition, we have the capability of controlling about 1.3 MW in the Residential sector and 12.4 MW in the CI&I sectors for Demand Response purposes.
- All initiatives under the CDM programs were screened for the Total Resource Cost (TRC) test. We calculated an average TRC Benefit-Cost Ratio of 2.3 for all initiatives since inception.
- The Residential Sector had a TRC of over 2.9, due to accumulating savings against lowering expenditures.

- We worked with the Ministry of Energy and Infrastructure (the “MEI”), the Ontario Power Authority (the “OPA”) and the Coalition of Large Distributors (the “CLD”) partners, to consolidate the powerWISE® brand launched in 2005 and a number of co-branded, mass-market CDM initiatives. These include:
 - Water Heater Tune-up.
 - Library Program.
 - Program-in-a-Box.
 - OPA Retailer Coupon Program.
 - OPA Refrigerator Retirement Program.
 - LED (Light Emitting Diode) Christmas Lights Exchange.
- In support of the MEI’s commitment to the installation of smart meters in all homes and small businesses across Ontario by 2010, Enersource installed 550 meters funded through the CDM program.
- There were 201 smart meters installed in a 186-unit residential high-rise building, converted from bulk metering to individual metering.
- In total, Enersource had installed over 114,000 smart meters by December 31, 2008.
- A powerWISE® Business Incentive Program (PBIP), launched in 2006 continued in 2007, to help improve the economics of certain energy conservation measures and their implementation in the commercial sector. This program was replaced by the OPA Energy Retrofit Incentive Program (ERIP) and carried out in 2008 under that aegis.
- Load control devices continued to be installed. These devices allow us to respond to price signals in all market sectors and to provide needed relief, during critical peak demand periods. A similar program in the residential sector (powerWISE®) was carried out under OPA funding in 2008.
- Cooperative efforts continued with the City of Mississauga and the Region of Peel on the installation of renewable energy projects. These projects were completed in 2008 and saw a contribution of \$150,000 to each for two solar photovoltaic energy projects.
- Local social housing corporations, non-profit homes and co-op housing continued to benefit from our programs in 2008. The primary types of projects were lighting retrofits. In 2008 we contributed about \$35,000 to two separate projects.

Distribution Loss Reduction

- o *Voltage Profile Management*

- Highlights:** - A pilot program was developed, to investigate a specific technology aimed at reducing power grid distribution losses. The pilot involved voltage conditioning at a distribution transformer station.
- No activities were carried out in 2008, since the pilot was successfully completed in 2007 with the production of a report.
 - The report was verified by a third party. The verification test proved annual energy savings to be over 3,600,000 kWh, well above the 1,553,000 kWh projected by an initial TRC. Cumulative annual savings

are now over 7 million kWh. Peak demand reduction was measured to be 420 kW.

Distributed Energy

- Load Displacement
- Stand-by Generators

Highlights: - We completed the design and development of a Demand Response Control Room, which has become the single dispatch point for demand response (DR) programs and loads aggregated by Enersource.

- Negotiations were conducted with a number of prospective customers for dispatching loads in DR.
- We are now capable of acting as aggregator and are offering this option to other LDCs. Erie-Thames and Oakville Hydro have contracted with us to act as aggregator of loads enrolled in their **peaksaver®** residential programs.
- Total summer peak dispatchable load is now about 13.7 MW, including Residential **peaksaver®** and CI&I Load Control and Stand-by Generators.
- By end of 2008, we permanently displaced 1.1 MW through Conservation measures.
- 36 kW of nominal capacity were displaced via two photovoltaic solar panel projects, completed in the Institutional sector.
- Cumulative TRC Cost-Benefit Ratios were calculated to be 2.5 for dispatched loads and 2.4 for stand-by generators in the Commercial, Institutional and Industrial sectors.

Overall Program Support

- powerWISE® Brand
- powerWISE® Fleet Branding
- powerWISE® Website
- Special Events Van
- CDM Program Compliance

Highlights: - The Special Events Van initiative, with its team, greatly supported all our CDM efforts, by bringing the conservation message and means to start conserving directly to our customers.

- Costs and results related to this initiative were compiled under the Co-Branded Mass Market Program, significantly contributing to that program's excellent cumulative TRC Benefit-Cost Ratio of 2.94 to end of 2008.
- In 2008 Special Events Van activities were not funded through 3rd Tranche. Highlights of activities below refer to the end of 2006.
- Funding for this program had ended in April 2006. Enersource applied for and received additional funding to continue this program in the 2006 rate application.

- The Special Events Van team delivered energy conservation messages, participating at 50 events to-date, 10 of which were in 2006. The team engaged thousands of people, distributing over 10,240 CFLs and thousands of promotional items and educational material, by the end of 2006.
- The powerWISE® website is designed to provide customers a centralized source of information on energy conservation issues and cost-effective measures. The powerWISE® brand has been used by the Ministry of Energy in their 2006 and 2007 and 2008 advertising campaign. Links are provided to each CLD member's website, where LDC-specific program information can be accessed. Enersource's site proved very successful, registering over 160,000 visitors in 2008.
- Developed a governance structure, with processes to manage project evaluations, approvals, status tracking and results monitoring and verification.

The past four years of CDM activities were successful for Enersource. Collaborative efforts with the CLD allowed us to launch many initiatives in a similar manner, providing for more consistent messaging in our promotional campaigns, while leveraging individual distributors' investments.

In 2007, several of Enersource's 3rd Tranche programs were completed, either because they attained a pre-determined objective or because a pre-determined termination date occurred. Expenditures incurred in 2008 brought the total since inception to over \$8,168,000, leaving a total of approximately \$95,000 of unspent funds.

The CLD members - representing about 40% of the province's load - have worked well together. They have jointly developed and delivered programs and launched the *powerWISE®* brand. Synergistic efforts have also helped promote the provincial directive to foster a **conservation culture** in Ontario.

In 2007 Enersource launched five programs developed by the OPA. Those programs continued in 2008 through OPA funding and results are not reported here. They include:

1. Every Kilowatt Counts
2. Great Refrigerator Round-up
3. **peaksaver®**
4. Energy Retrofit Incentive Program (ERIP)
5. Summer Savings (Summer Sweepstakes in 2008).

Also outside the scope of this report, during 2007 Enersource entered into an agreement with the MEI, in partnership with Hydro One Networks, to pilot a program, PowerHouse, to facilitate the adoption of renewable energy technologies for residential customers.

The aim of the program was to help customers acquire renewable energy equipment for their homes that would reduce electricity load and carbon emissions. The program offers customers an incentive on the cost of financing certain renewable energy technology projects, by either "buying down" the interest rate to zero percent or by providing a rebate.

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 (Enersource), Horizon Utilities Corporation, Hydro Ottawa Limited, PowerStream Inc., Toronto Hydro-Electric System Limited and Veridian Connections. Among other things, that decision requires that each distributor file an annual CDM Report. This Report fulfills that requirement.

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 21st, 2005 the Board issued a Guideline for Annual Reporting of CDM Initiatives that explained more fully the requirements. On March 3rd 2008 the Board issued Requirements for Annual Reporting of Conservation and Demand Management (CDM) Initiatives. This report is structured according to the Board’s February 2, 2009 Requirements for Annual Reporting of Conservation and Demand Management (CDM) Initiatives. These Reporting Requirements and Excel templates for Appendix A, Appendix B, Appendix C and Appendix D are available from the Board’s website¹. This report has been prepared in accordance with those guidelines and requirements.

Enersource has used funding from four different sources for its CDM programs:

- Third Tranche funding, as detailed in this report;
- Incremental CDM funding received in rates, as proposed by Enersource and approved by the OEB in its Decision and Order dated April 12, 2006, under docket number RP-2005-0020/EB-2205-0360, for rates effective May 1, 2006;
- OPA funding based on an online application process for each individual program, and approved by the OPA; and
- Funding directly from the Ministry of Energy and Infrastructure for one CDM pilot program called PowerHouse.

This report gives an overview of Enersource’s CDM Plan, an assessment of benefits, a description of each initiative undertaken under each program and an appraisal of results, where feasible, to the end of 2008 and lessons learned.

CDM initiatives were organized under the following program headings:

Conservation and Demand Management

- *Residential and Small Commercial (<50kW)*
 - Co-Branded Mass Market Program
 - Smart Meter Pilot Program
 - Residential Load Control Program
 - Smart Avenues
 - Social Housing Program
- *Commercial, Industrial and Institutional (>50kW)*

¹ Available at: http://www.oeb.gov.on.ca/html/en/industryrelations/ongoingprojects_cdm_thirdtranche.htm

- Smart Meter Program
- Leveraging Energy Conservation and/or Load Management Program
- Load Control Initiative
- On-the-Bill Financing

Distribution Loss Reduction

- Voltage Profile Management

Distributed Energy

- Load Displacement
- Stand-by Generators

Overall Program Support

- powerWISE® Website and Brand Development
- Special Events Van
- General Program Support
- CDM Program Compliance

Each initiative or program was assessed using the OEB's Total Resource Cost (TRC) Test Guide² - as revised in October 2006.

² Available at: http://www.oeb.gov.on.ca/documents/cases/RP-2004-0203/cdm_trcguide_021006.pdf

2. Evaluation of the CDM Plan

In 2008, the fourth year of CDM activities, Enersource successfully continued the development and implementation of the CDM programs started in 2005, reaching all market sectors. The CDM Plan was funded under 3rd Tranche of MARR.

Some components of our CDM plan relate to the deployment of smart meters, which is being undertaken to support provincial government policy direction. The impact of smart meters on kWh consumption and kW demand has not yet been definitively assessed.

Societal benefits resulting from our portfolio of CDM initiatives are evidenced by a 2008 TRC Cost-Benefit ratio of 2.3. Economics have improved since inception, since accruing benefits over longer periods reduce the impact of high initial program costs.

A detailed discussion of the impact on energy conservation and demand management resulting from the implementation of the various programs and projects is presented in Section 3.

Energy savings and TRC benefits for each program heading are summarized in a table format in Appendix A – Evaluation of the CDM Plan.

Individual Programs' results are presented in a series of appendices in Appendix B – Discussion of the Program.

Appendix C – Program and Portfolio Totals presents an overview of CDM Programs and Portfolio results.

Appendix D – Total Life Evaluation of the CDM Program gives a cumulative overview of results by customer sector.

3. Discussion of the Programs

3.1 Residential and Small Commercial (< 50 kW)

Co-Branded Mass Market Program

Description

This flagship Co-Branded Mass Market program (i.e., 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 electricity distributors, this program is becoming synonymous with initiatives such as Compact Fluorescent Lighting (CFL) Change-out programs, LED Christmas Lights 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 components of this program.

Target users

Mass-market including residential, commercial and industrial.

Benefits

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

Discussion of 2008 Activities

powerWISE® Brand

Action

- Hamilton Utilities Corp. (HUC) registered the powerWISE® mark prior to CDM activities.
- During CLD CDM plan preparation, it was agreed that the CLD would collectively develop a co-brand. HUC offered powerWISE® for joint ownership and the CLD agreed that we would use this mark.
- The Ministry of Energy and Infrastructure (“MEI”) executed television, radio and print advertising campaigns with David Suzuki to raise awareness of the brand.
- Weekly conference call meetings were held with the communications subcommittee to coordinate all powerWISE® and branding activities.
- The MEI (Director of Communications) participates on weekly conference calls, as does the Ontario Power Authority (Director of Marketing).

Results to Date

- powerWISE® is being used extensively by the CLD to brand CLD conservation programs.

- The powerWISE® brand has been used by the MEI (formerly the Ministry of Energy) in their 2007 advertising campaigns with David Suzuki.
- Ownership issues around the use of the powerWISE® brand have now been resolved among the MEI, the OPA, and the CLD.

Next Steps

- No further action is required as the brand has been adopted by the provincial government.

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.

Results to Date

- From January 1 to December 31, 2008 the powerWISE® website received over 160,000 visitors.
- We also received several phone calls per day from Enersource customers wanting more information on conservation.

Next Steps

- Continue to develop and promote www.powerWISE.ca in conjunction with the MEI, as a source of energy conservation information.
- Continue to improve and enhance the website with new materials and applications.

Ontario Power Authority – Every Kilowatt Counts (EKC)

The powerWISE® coupon redemption retailer program originally developed by the CLD was adopted by the OPA and re-launched province-wide as the EKC “Every Kilowatt Counts” Program, implemented through the Spring and Fall retail campaigns. The campaigns created enormous awareness and delivered over 12,500,000 kWh in annual energy savings in Mississauga or enough electricity to power almost 1,400 homes annually.

The following results relate to activities done under 3rd Tranche funding, to the end of 2007 or as indicated. Similar activities done in 2008 are not reported here, as they were fully funded by the OPA.

Action

- The Conservation Bureau of the OPA developed major Spring and Fall mass-market retail campaigns, 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.
- Spring Campaign: 1,179,626 coupons were redeemed province-wide.
 - EnergyStar CFL 15W bulbs
 - EnergyStar Ceiling Fans
 - Outdoor Motion Sensor
 - Dimmer Switch
 - Outdoor Solar Lights
 - Furnace and Air Conditioner Filters
- Fall Campaign: 1,551,328 coupons were redeemed province-wide. Enersource-specific results are not yet available from the OPA. Once they are, Enersource will apply for the LRAM benefits of this program.
 - EnergyStar CFL 15W bulbs
 - Seasonal LED lights (SLEDs)
 - T-8 Fixtures
 - EnergyStar Lighting Fixtures
 - Baseboard Programmable Thermostats
 - Lighting and Appliance Control Devices
 - Power Bar with Integrated Timer

Results to Date

- All Enersource customers received the coupon booklets both in Spring and Fall via an OPA direct mail campaign;
- Enersource distributed further coupon booklets at the head office reception lobby and at community events;
- Enersource distribution area-specific results were not yet available.
- In Ontario, the campaigns produced savings of more than 7,800 kW peak electricity demand and more than 1.2 million MWh of energy savings, over the life of the products purchased.
- Savings are equivalent to the electricity needed to supply over 120,000 households for a year.

Next Steps

- The OPA continues to market and operate this program.
- Enersource will support the program with local marketing if launched again by the OPA.
- Enersource to apply for the LRAM benefits of this program.

Ontario Power Authority – Great Refrigerator Roundup Program

- This pilot program closed in 2006. The Great Refrigerator Roundup Program is now an OPA-administered program and no 2008 results are reported here.

powerWISE® Fleet Branding

- This program is closed.

Code Green – TV Show

- This program is closed.

Water Heater Tune-Up

Action

- The Tune-ups are completed by contractors who visit the homes of Mississauga residents with electric water heater tanks.
- The Tune-up team:
 - wraps a thin insulating jacket around the hot water tank
 - installs up to four compact florescent light bulbs
 - installs a low flow shower head
 - installs a water aerators for sink taps
- Customers are left with conservation literature.

Results to Date

- 3rd Tranche funding for this program was exhausted by April 30th 2006.
- No 2007 or 2008 activities were carried out under 3rd Tranche funding.
- This program continued under Incremental CDM Funding Received in Rates.
- 1,621 Tune-Ups were completed by April 30, 2006 under 3rd Tranche funding.
- Installed or distributed under 3rd Tranche funding:
 - 1,592 Efficient Showerheads
 - 4,062 Faucet Aerators
 - 1,200 Faucet Washers
 - 1,553 Tank Wraps
 - 6,546 CFLs
 - 307 m of hot water tubing insulation.
- Summer peak demand reductions of 102 kW are projected.
- Resulting annual energy savings are over 2,182,500 kWh.

Next Steps

- The program was terminated at the end of April 2006 for lack of funding.
- This program was submitted to the OEB for incremental CDM funding received in rates and was approved to continue past April 30th 2006 under that funding mechanism.

LED Holiday Light Exchange

- 3rd Tranche funding for this program was exhausted in April 2006 and no LEDs were distributed in 2007 or in 2008 under this funding mechanism.
- This program is closed.

Library Loan Program

Action

- The “Watt Reader” energy measuring device lending program was developed in cooperation with the Mississauga Library System.
- Customers borrowing the Watt Reader device received operating instructions and two 13 W energy efficient compact fluorescent light (CFL) bulbs.
- Customers were also given details on how to calculate the cost of using any appliance, based on the readings from the device.

Results to Date

- Enersource customers borrowed the Watt Reader devices 927 times to the end of April 2006.
- 1,320 CFLs were distributed with the devices in 2006 to April 30th.
- Annual energy savings were projected at about 144,000 kWh.
- Non summer-peak demand reductions for 2006 were 62 kW.

Next Steps

- This program was submitted to the OEB for incremental CDM funding received in rates and continued in 2006-2007 under that funding mechanism.
- 2008 results are presented in a report specific to those programs continued under Incremental CDM Funding Received in Rates.

Mississauga Local Sponsorship

- This sponsorship closed in 2006.

Co-Branded Mass Market Program Results

- All initiatives' results refer to April 30th 2006 when 3rd Tranche funding for this program was exhausted. The following results are up to that date.
- 2006 annual energy savings from all initiatives are estimated at about 14,647,000 kWh.
- Summer on-peak demand savings are estimated at 472 kW and winter on-peak at 1,890 kW.
- Cumulative TRC results yielded a Benefit-Cost ratio of 2.9.

Smart Meter Pilot Programs

Description:

Pilot programs for residential smart meters were implemented to assess the metering, communications, settlement, load control and other technologies that could be used to accommodate the wider application of smart meters in the future. Further, sub-metering opportunities for the purpose of customer information in bulk-metered situations (i.e., condominiums) may be considered.

Enersource launched a pilot project, deploying 550 smart meters in a central Mississauga community in the area of Queensway West. The program will evaluate many aspects of smart meter technology, from the information that consumers receive, to the data arriving to the utility.

Target users

Residential and small commercial customers.

Benefits

This program supported the MEI's commitment to the installation of 800,000 smart meters across Ontario by 2007. It provided Enersource 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 provide customers participating in the pilot program with an incentive to reduce or shift energy consumption.

Description of 2008 Activities

Smart Meters – Elster MeshNetwork Pilot

Action

- No activities were carried out in 2008 under 3rd Tranche funding.
- A conservation forum and information session on the launch of a 550 home Smart Meter Pilot Program in a small neighbourhood in Mississauga was held in July 2005.
- The purpose of the pilot was to test the Elster MeshNetwork smart metering technology, with respect to meter functionality and communications performance, to determine if it would be a viable option for full deployment by Enersource.

Results to Date

- 550 smart meters were installed under 3rd Tranche funding - all in 2005.
- As part of the smart meter pilot we have combined a load control program. This offers an incentive or possible discount on the bill in exchange for us being able to control load during peak periods.
- There have been public meetings and information sessions held in 2005 and 2006 for the 550 residents to advise of the benefits of the smart metering system.

Next Steps

- No more installations are planned for this pilot. We have combined conservation products with the smart meter, to leverage the smart meter potential as a behavioural changing device, with respect to energy consumption habits.
- As such, this program became the core of the Smart Avenues Program described in the following section.
- The program is concluded.

Smart Avenues – A Community Pilot (Previously named “Electric Avenue”)

Description

A pilot neighbourhood of selected homes and/or small businesses may be selected to become a “showcase” community to demonstrate the overall effectiveness of smart energy conservation initiatives including energy audits, retrofits, load control devices and smart meters.

Target users

Existing Residential customers.

Benefits

This project will create a road map for LDCs (Local Distribution Companies) that will demonstrate the before and after impact of energy conservation and load control initiatives with the introduction of smart meters and Time-Of-Use Rates.

Description of 2008 Activities

Enersource/CLD RFP – Residential Load Control

Action

- This program was part of the smart meter program.
- As part of the smart meter program, we intended to test various technologies within a home, to demonstrate the potential savings that could result from an increased awareness of consumption levels and patterns through the day.
- Customers that receive a smart meter will eventually be able to use electricity more knowledgeably because of these technologies, once they receive Time-of-Use (TOU) rates.

Results to Date

- A Smart Avenues Community of 550 residents in the same neighbourhood was equipped with smart meter, to form the core of this pilot program.
- The 550 customers have been well advised through public meetings and information sessions – including a video CD - of our plans, which included a number of new technologies and initiatives:
 - In-Home Displays.
 - Time-of-Use Clocks.
 - Smart Appliances.
 - Power-Down on Peak.
 - **peaksaver®**.
- 80 customers signed up to-date for the Smart Metering Web Presentment Page.
- To increase customers’ awareness of their consumption, four different In-Home Display devices were sourced or developed:
 - Power consumption and cost monitoring “device 1”.

- We experienced technology problems with this device and decided to proceed with alternative technologies.
 - Power consumption and cost monitoring “device 2”.
 - We found that the installation of this device was prohibitively expensive and therefore did not go further.
 - Power consumption and cost monitoring “device 3”.
 - This monitoring device was still at a pre-commercialization development stage and therefore was not deployable yet.
- Enersource developed a TOU clock designed to clearly indicate time-of-use periods.
- The Power-Down on Peak pilot project has ended and the consultant’s report was submitted to us. Results indicated that an average of 3.5 kW of DR capacity per household are available from the eight homes sampled within the Smart Avenues community.
- In order to get as many **peaksaver**® thermostats installed in the Smart Avenues community, a Home Tune-up program was also offered. As part of the Home Tune-up package, customers receive the **peaksaver**® programmable thermostat.
- There were seven customers who have received the **peaksaver**® home tune up out of a goal of 50.
- The lack of TOU rates and the problems with the supply of essential technologies or the poor take up on certain initiatives severely limited the scope of the program, which resulted in poor TRC results.
- Annual energy savings were projected at 9,471 kWh and 35 kW of avoided summer peak demand.
- The **peaksaver**®/Home Tune-up program was re-marketed in early 2007, in order to meet the goal of 50 installations within Smart Avenues.

Next Steps

- None planned at this time.
- Funding for this program has been exhausted and is therefore terminated.

Residential Load Control Initiative

Description

Load control uses a real time communications link to enable or disable customer loads at the discretion of the utility. These controls are usually engaged during system peak periods or when required to relieve pressure on the system grid and may include such “dispatchable” loads as electric hot water tanks, pool pumps, lighting, air conditioners, etc. For this demonstration project the primary focus will be controlling central air conditioning units.

Target users

Direct load control applies to all market segments. Though the control systems and technologies may vary by market segment, the methodology remains the same. This demonstration project will be marketed to residential and small commercial customers that have central air conditioning units and/or electric water heaters and/or pool pumps.

Benefits

Load control allows customers to respond quickly to external price signals. This also provides a mechanism for utilities to relieve pressure on constrained areas within the distribution grid and also reduces the need to bring on large peaking generators.

Description of 2008 Activities

Residential Load Control Initiative

Action

- Enersource was targeting 1,600 residential and 200 small commercial customers to control their central air conditioners with outside condensers.
- In addition to central air conditioners, customers with electric water heaters and/or pool pumps were encouraged to have controls installed on those devices.
- Carried out two Direct Mail campaigns directed to customers.

Results to Date

- Installations continued in the second half of 2007 and in 2008 under OPA funding mechanisms.
- Results reported here relate to 3rd Tranche funding only.
- A web portal site for customers to remotely change their thermostat setting was set up.
- Over 12,000 direct mail pieces were sent out in two direct mail campaigns.
- Success of Direct Mail campaign was tracking at approximately 2%.
- The control device is a radio-controlled programmable thermostat.
- Based on contractor’s feedback, the recruitment of host sites and installation of programmable thermostats proceeds well, according to plan.
- 1,570 thermostats were installed in 2007, including seven in the Smart Avenues community, under this program funding mechanism.

Next Steps

- Continue to recruit host sites, according to the OPA funding mechanism.

Social Housing Program

Description

The Social Housing Sector is a prime candidate for CDM incentives, due to funding constraints that characterizes it and high incidences of electric heating.

Target users

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

Benefits

Synergies can be created through the combined initiatives of the various agencies.

Description of 2008 Activities

Enersource Social Housing Initiative

Action

- We have combined this program with some of our mass market programs. As a result, select customers are approached with these programs (e.g., the Water Heater Tune Up program).
- We are working with a non-profit high-rise building, to determine feasibility of implementing home tune up for these suites, including better control of baseboard heaters through programmable thermostats.
- We are currently directing two initiatives in this sector: Home Tune-ups and Water Heater Tune-ups.

Results to Date

- In 2008 we provided almost \$35,000 grants to two Social Housing buildings, in which lighting was retrofitted. These were 2007 projects completed in 2008, bringing cumulative total expenditures to over \$168,000 with projected avoided costs over the life of the equipment of more than \$427,000.
- A lighting retrofit project at the local Food Path facility has been completed. Enersource provided a 100% grant for this lighting retrofit.
- Other lighting and unitary A/C retrofits were performed at four Social Housing communities.
- Savings for these projects will be over 1,000,000 kWh per year and more than 6,000,000 over the life of the equipment installed.
- The program was well received and appreciated by the customers.
- We worked with the following two agencies, Winter Warmth and Share the Warmth, as channels to recruit customers in the Social Housing sector.
- In 2005 and 2006 we completed over 300 tune-ups for Social Housing units.
- We have worked with the local food banks, to help identify and help needy residents in lowering their energy costs.

Next Steps

- Program has concluded.

3.2 Commercial, Industrial and Institutional (> 50 kW)

Smart Meter Commercial Programs

Description

The Ontario Government has established targets for the installation of 800,000 residential smart meters by December 2007 and for all Ontario customers by December 2010. These meters will assist in establishing a 'conservation culture' in Ontario. In conjunction with appropriate rate structures, they will encourage customers to conserve energy or shift energy use.

Enersource will conduct a pilot program for commercial smart meters, to assess the metering, communications, settlement, load control and other technologies that could be used to accommodate the wider application of smart meters in the future.

The pilot project was launched in 2006, for the investigation of sub-metering opportunities in bulk-metered situations (i.e., condominiums). The principal aim will be to provide end-use customers with information related to their energy consumption habits.

Target users

Commercial, Industrial and Institutional customers (>50 kW).

Benefits

This program supported the MEI's commitment to the installation of 800,000 smart meters across Ontario by 2007. It will provide Enersource 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 encourage customers participating in the pilot program to conserve or shift energy use.

Description of 2008 Activities

Smart Meters – Commercial Pilot

Action

- Identify two multi-residential complexes for conversion from bulk commercial metering to individual smart meters in 2006.
- Convert at least one building.

Results to Date

- A multi-residential all electric complex was converted.
- A total of 201 smart meters were installed, to service 186 units and various services.
- Billing by individual metering started in July 2006.
- Preliminary results indicated there were savings of approximately 17%.

- A second building was identified, but the Condominium Board eventually declined to participate in the program, due to issues with responsibility of condominium owners for delinquent accounts.
- A report has been completed for this program.

Next Steps

- The program has concluded.

Leveraging Energy Conservation

Description

The CLD is working collectively to develop a program (The powerWISE® Business Incentive Program) that will give financial incentives to qualified customers that implement energy conservation projects.

The objective of this program is to leverage energy conservation and load management opportunities within the commercial, industrial and institutional sectors. This program will be offered in addition to existing funding (NRCan, Enbridge) to advance market uptake.

The LDCs are well positioned to introduce such programs to their customer base. Work will be conducted with the existing program providers to maximize leverage opportunities. Promotion will potentially include face-to-face meetings, conferences and seminars.

Within this framework, Enersource has implemented a Business Incentive Program, through which financial incentives are given to qualifying businesses that install energy efficient technologies within their facilities.

Target users

Customers that have an average peak demand of 50kW or more, including schools, large commercial, institutional, industrial, and municipal facilities.

Benefits

Customer awareness and additional incentives will help advance market uptake of audit services, feasibility studies and retrofit opportunities already established within the government program framework. The incentives provided through this program lower the simple payback of an energy efficiency project, to enable customers to move forward with implementation.

Description of 2008 Activities

powerWISE® Business Incentive Program

Action

- The program was made available to customers in the Commercial, Industrial and Institutional (>50 kW) sectors.

Results to Date

- Eight projects were pre-approved for incentives. Incentives paid to the eight customers amounted to \$83,000.
- The original funding for this program has been fully allocated and no more projects can be considered. The budget, however, was increased slightly

(from \$225,000 to \$281,000). This allowed for a few more projects to be completed through PBIP.

- Based on results to-date, expected annual energy and demand savings are over 6,444,000 kWh and 755 kW (summer peak). Over the life of the retrofitted equipment more than 40 million kWh will be saved.
- Benefit-Cost ratio for the program was over 2.

Next Steps

- The program has ended under 3rd Tranche funding and continued in 2008 under OPA funding.
- We will continue to work with the OPA's funding model for this program.

Commercial Industrial & Institutional (CI&I) Load Control Initiative

Description

Load control is part of our developing Demand Response (DR) initiatives. It aims at developing suitable systems to free up capacity during critical times of severe system demand.

This program uses a Web-based load controller, with a real time communications link, to enable or disable designated customer loads at the discretion of Enersource.

These controls are usually engaged during system peak periods or when required to relieve pressure on the system distribution grid.

Target Users

Larger commercial, industrial and institutional customers.

Benefit

Demand control provides lower costs and increased stability for customers and utilities.

Description of 2008 Activities

CI&I Load Control

Action

- Enersource has developed and launched a demand response program for the control of loads in the commercial and industrial sectors.
- Enersource aggregates all load reduction capacities offered by customers and administers customer participation in IESO and OPA demand response programs.
- There are two categories of customers in our program. The first category (on-call curtailment) of customers will not require the installation of load control equipment. They will reduce load upon receiving notification from Enersource.
- In the second category, load reduction equipment will be required to be supplied and installed by Enersource's contractor.

Results to Date

- An internal process of administering the demand response has been completed and a DR Control Room was built for load dispatch.
- Under On-Call Curtailment two industrial customers signed our demand response agreement with total capacity of 2,140 kW.
- Other customers are in various stages towards contract signing.
- We enrolled customers with the IESO and OPA making capacity available in summer of 2007. During calls for curtailment, their participation is voluntary.
- Total capacity under control at the end of 2008 is over 5 MW.
- Cumulative TRC Benefit-Cost Ratio was calculated at 2.5.

Next Steps

- Enersource will continue to maintain the Enersource DR Control Room, to allow for the dispatch of these loads, when required by the OPA and IESO.
- Enersource submitted a custom application to the OPA in 2008, seeking funding to continue with this program.
- Enersource will continue to obtain signed agreements from customers, regarding demand response.

On-the-Bill Payment Plan (Previously Named "On-the-Bill Financing")

Description

On-the-Bill Financing will start with a pilot offering, which will be developed to help remove a significant energy conservation purchase barrier.

This program will allow customers to finance their conservation investment off their balance sheet via an "expense budget" on their hydro bill, instead of having to contend with scarce capital dollars. Financing arrangements will be made with third party investment organizations and payment amounts will be presented on the customer's hydro bill.

Target Users

Larger commercial, industrial and institutional customers.

Benefit

Program will facilitate the adoption of capital intensive energy conservation measures.

Description of 2008 Activities

On-the-Bill Payment Plan

Action

- Advise CI&I customers and a select number of energy conservation consultants of this program through a direct mail marketing initiative. The mailing included specific marketing material and a Pre-Qualification form designed to capture customer and proposed project information (including costs and benefits), for an initial screening.
- Enersource will work with CitiCapital, the financial services provider for this program, on the application forms and other elements of the program.
- Customers will be advised of this program through various marketing initiatives such as commercial customer newsletters and bill messaging.

Results to Date

- This program was officially launched in October 2006.
- At present, we have five approved and funded customers; one declined.
- Summer peak demand savings are 115 kW.
- Annual energy savings are over 652,000 kWh.
- Cumulative TRC Benefit-Cost Ratio is 2.2.

Next Steps

- Enersource may decide to continue with this program as minimally operating costs are required.

3.3 Distribution Loss Reduction

Distribution Loss Reduction

Description

The Distribution Loss Program is a broad network based initiative to drive greater efficiencies within the distribution grid. This program will identify opportunities for system enhancements. Items to be addressed may include, but are not limited to:

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 IESO's voltage reduction program and will not interfere with the effectiveness of that program.

Target users

The results of this program will positively impact all of Enersource'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.

Description of 2008 Activities

Voltage Profile Management

Action

- An RFP was issued in October 2005 for the procurement of a conservation voltage reduction system (CVRS).
- Steps were taken to implement a project in 2006 to reduce voltage at Grossbeak MS using an AdaptiVolt CVRS system, which controls the transformer on-load-tap-changer to optimize the voltage profile.

Results to Date

- A contract was awarded for the procurement and installation of a CVRS at Grossbeak MS station.
- AdaptiVolt is the selected CVRS system; it controls the transformer on-load-tap-changer to optimize the voltage profile.
- Factory Acceptance Test on the Adaptivolt System was completed in early July 2006. Because of extreme weather conditions installation was not carried out, to avoid possible service interruptions.
- The project was considerably delayed because the Enersource Load Centers could not accommodate the Potential Transformers (PT's) that were sourced.
- A new design of the installation was required. The installation became operational in July 2007.

- The completed report was verified by a third party. The verification test proved annual energy savings to be over 3,600,000 kWh, well above the 1,553,000 projected by an initial TRC. Peak demand reduction was measured to be 420 kW.

Next Steps

- No further action required at this time.
- The program has concluded.

3.4 Distributed Energy

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.

Benefits

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, backup power possibilities, education and skills development.

Description of 2008 Activities

Load Displacement

Action

- Fund two renewable energy demonstration projects, matching funding on a dollar per dollar basis up to a maximum of \$150,000 for each project.
- Worked cooperatively with the City of Mississauga and the Region of Peel to identify suitable demonstration projects, like photovoltaic roof panels.

Results to Date

- Consideration was given to the Region of Peel and the City of Mississauga who both proposed renewable energy projects to Enersource.
- One project demonstrates photovoltaic roof panels at a major sports centre within Mississauga, with a capacity of 25.2 kW and projected energy savings of 29,000 kWh annually.

- The Peel Region project has been installed at a waste water treatment plant, with a capacity of 10.4 kW and projected energy savings of 12,700 kWh annually.
- Both installations were completed in early 2008.
- We continued to support the customers during all phases.
- Once the two projects were completed and costs finalized, we paid out \$300,000 in incentives.

Next Steps

- Continue contacts with the Region and the City to monitor and evaluate performance.
- No further action will be required.

Stand-by Generators

Description

This program provides 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.

Enersource will act as an aggregator of loads to be made available for the market place on a moment's notice, when economical to do so or during critical peak conditions.

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.

Description of 2008 Activities

Standby Generators

Action

- The CLD engaged a consultant to study technical, financial and operational issues of a DR program dispatching stand-by generators.
- Generators will be controlled from a single dispatch point at Enersource.
- Aggregate loads, to make them available during times of supply constraints.

Results to Date

- The design and development of a Demand Response Control Room, which became the single dispatch point for demand management, was completed.
- A 1.2 MW standby natural gas generator was installed and commissioned at Enersource and is available for dispatch.
- Enersource has registered this generator with the IESO under the Emergency Load Reduction Program.
- We have a total of eight participating customers.
- A major food retailer has agreed to use its natural gas stand-by generators at three locations in Mississauga to participate in the Enersource Demand Response Program. Enersource paid for the rewiring of loads required to transfer the load to the generators during demand response events.
- An estimated total of 100 kW of demand response capacity can be achieved through the food retailer projects.
- We have received applications for our demand response program from the GTAA airport (2,000 kW) and from two industrial customers (2,900 kW).
- Currently, we have 6,205 kW of dispatchable load of which 2.8 MW is available in summer.

- TRC results show a 2.4 Benefit-Cost ratio.

Next Steps

- Enersource will continue to obtain signed agreements from customers, regarding demand response.
- Enersource will apply to the OPA and the IESO to enroll the participating generators into the market.

3.5 Overall Program Support

Description

Several supporting initiatives were considered such as an annual Key Account Conference, Home Show participation, an energy conservation website, customer newsletters, staff training and media support activities etc.

Enersource launched the powerWISE® Brand and powerWISE® Website, already described in [Section 3](#), and the Special Events Van Team. The latter was created for the purpose of educating the public about energy conservation and ways for consumers to reduce their electricity bills. The team is constantly on the road with the natural gas fuelled van, interacting with the public. The van is promotionally wrapped in energy saving tips and graphics.

The team represents Enersource at various community venues. As part of the energy efficient message, our student employees hand out various promotional items including showerheads, compact fluorescent lamps, LED light sets and brochures.

This program also offers general support for all programs, with various marketing, consulting, management and general support of all CDM programs.

Target Users

All customer classes including the Low Income and Social Housing customers.

Benefits

Supports existing programs and drives energy conservation awareness that will facilitate the culture change in Ontario.

Description of 2008 Activities

Special Events Van

- Utilize the special events team to talk to customers about energy conservation, by participating in community events like Carassauga, the Bread and Honey Festival, the Islamic BBQ and similar.
- Distribute CFL bulbs, to foster the energy saving message.
- Distribute LED Christmas lights for the festive season.

Results

- 3rd Tranche funding was exhausted by the end of April 2006.
- Under 3rd Tranche, a total of 10,240 CFLs and thousands of educational and promotional items were distributed, to contribute spreading the energy efficiency and conservation message among the residents of Mississauga.
- To-date, they have participated at 50 events – 10 of which in 2006 - and made several 'drop-offs' at libraries and other venues.
- 3rd Tranche annual energy savings from distributed CFLs were calculated at 244,250 kWh.
- For TRC purposes, these results were included under the Co-Branded Mass Market Program, which served as the source for funding this initiative.

Next Steps

- 3rd Tranche funding for this program was exhausted and the program terminated.
- This program was submitted to the OEB for incremental CDM funding received in rates. It continued in 2007 and 2008 under that funding mechanism.

Regulatory Reporting

Action

- A regulatory compliance and reporting function was created in order to validate the project approval process, track projects and monitor and verify results.

Results to Date

- Program control and reporting processes were developed.
- All program benefits were validated through TRC cost test screening, in compliance with OEB TRC Guide.

Next Steps

- Continue with regulatory compliance and reporting function.

General Program Support

Action

- To offer general management and support of all programs as required.
- General overall marketing and consulting help to establish conservation culture.

Results to Date

- All programs benefited from the general support and management function.

Next Steps

- Enersource will continue to offer the general support and management required to implement the programs specified in this report.

4. Lessons Learned

Enersource has identified “lessons learned” in the following aspects of CDM program development and implementation:

- Customer decision making factors and time required for them to make a decision;
- Customer behaviour;
- Opportunities and relevant constraints; and
- Budgeting and other aspects of financial management.

Enersource found that consumers’ decisions were influenced by a number of factors. All customer groups want a tangible demonstration of ‘what’s in it for them’.

For residential customers:

- a simple demonstration of the net economic benefit of participating in a program or imparting the customer with a sense of responsibility for achieving a solution to a greater problem;

For small commercial customers:

- a simple demonstration of a short payback period arising from a program that does not conflict with their business;

For large commercial customers:

- a demonstration of a reasonably short payback period that does not disrupt their core business; and

For large use customers:

- a demonstration of a direct economic benefit and an accompanying qualitative benefit.

Enersource has also found that for the vast majority of its customers electricity is not considered a significant part of their operating costs. Therefore, projects need to make economic sense for their participation.

Another ‘lesson learned’ concerns the risks associated with differing levels and degrees of customer involvement. CDM programs that rely on the utility remotely controlling loads achieve more consistent results than do programs that rely on customers to respond to price signals or public appeals.

In the future, Enersource will give greater priority to programs designed to reduce both base load and peak load consumption. Such programs are capable of delivering energy reduction and demand reduction benefits, year round not necessarily in a season. From a distribution system operation perspective, reductions in base load and peak load provide enhanced operational flexibility and may relieve operating constraints. From a broader province wide system perspective, reducing base load and peak load gives the province more operating flexibility when required.

Enersource continues to believe that collaborative programs are highly desirable given that they rely on a consistent message and allow many parties to apply successful

programs, leveraging each other's knowledge. However, Enersource was surprised at the complexity of designing and administering joint programs – from the initial negotiation of enforceable legal instruments to the after-the-fact analysis of results.

Enersource appreciates the insights conveyed by the OEB's TRC Guide – in particular, the value it places on summer peak demand reductions. A tangible 'lesson learned' is to identify, evaluate and promote summer peak reduction programs as a priority. A direct consequence of application of the TRC Guide is an appreciation that the CFL Lighting Program is not a priority program, based on summer peak system benefits, but rather that its true value is in its ability to assist in developing a conservation culture and serving as a vehicle that allows the distributor to convey its conservation message to its customers.

Solar photovoltaic projects have very low TRC cost/benefit ratios and cannot be justified solely on economic terms. As already happening in other jurisdictions in North America, Europe and elsewhere, significant incentives are necessary to promote the adoption of this and other renewable energy technologies.

There are many benefits to multi-year funding. Multi-year funding can reduce the year-over-year uncertainty regarding budget and program continuity that often comes with funding on a year-by-year basis. It also allows us to better plan and manage the resources needed to deliver CDM programs. Longer term funding allows a more strategic approach to program planning, and the implementation of a portfolio of programs.

Multi-year funding can more closely match the requirements of customers, especially commercial and industrial customers as the sales cycle for these customers tends to be longer.

We discovered the need for additional resources in marketing and communications will continue to grow as new CDM programs are developed and piloted. Marketing these types of programs requires specialized skill sets. Going forward, the industry will have to work hard to attract candidates with the right type of skills.

In 2007, there was a gap between OEB funding and the start of OPA programs. In 2008 the same problem occurred with OPA-funded programs, delayed by contractual negotiations. Any gap in program continuity – whatever the reason - results in a loss of traction in the marketplace for program delivery. The key lesson learned is that once funding for a program begins, it shouldn't stop then restart; if this happens, the front-end costs increase as do overall development and implementation costs.

Lastly, Enersource has appreciated that CDM programs require a greater level of operational expenditures than capital expenditures, especially in the initial design stages. The costs to identify, develop and then deliver successful CDM programs are expenses of the period for financial reporting purposes. This fact will be applied to appropriately resource future programs and initiatives.

4.1 Comments on Program Success

Overall we feel that our CDM program has been successful. Full benefits from all our CDM Programs have started to be realized in 2006 and continued through and beyond 2008.

The following Table summarizes results:

	Successful? High (H) Medium (M) Low (L)	Continue?	Notes
Residential and Commercial <50kW			
Co-Branded Mass Market	Yes – H	Yes	Significant interest in mass market for techniques for saving energy.
Smart Meter Pilot Programs Residential	Yes – M	No (not with CDM funds)	As part of Provincial directive.
Residential Load Control Initiative	Yes –H	Yes	Residential Load Control was successful in 2007. It is now offered province-wide by OPA.
SMART Avenues Program (Previously called Electric Avenue)	No - L	No	Not cost effective.
Social Housing Program	Yes - M	Yes	Program should be integrated into our other programs (i.e. Mass Market and Events Van).
Commercial Institutional and Industrial >50kW			
Smart Meter Program Commercial	Yes - M	No (not with CDM funds)	
Leveraging Energy Conservation or Load Management	Yes - H	Yes	Currently funded by the OPA.
CI&I Load Control	Yes - H	Yes	Very good TRC results. Seeking funding from the OPA.
Off-the-Bill Payment Plan	Yes - M	Yes	This is a great program for all LDCs to implement at a low cost.
Distribution Loss Reduction			
Voltage Profile Management	Yes - H	Yes (not using CDM funds)	Significant potential for improving distribution efficiency.

Distributed Generation			
Load Displacement	Yes - H	Yes	Good for promotion of renewable energy projects.
Standby Generators	Yes - H	Yes	Significant potential for on-peak load reduction.
Overall Program Support			
Special Events Van	Yes - M	Yes	These activities support all the program areas and assist with marketing, promotion and governance. They also help the government in promoting a conservation culture.

5. Conclusions

The past four years of Conservation and Demand Management were successful for Enersource, although CDM Program development and implementation remains a complex and time-consuming process, with procurement and legal requirements often being more costly and time consuming than originally expected.

We were able to maximize our results, through collaborative efforts with the Coalition of Large Distributors (“CLD”), which allowed us to launch many initiatives in a similar manner, providing for more consistent messaging in our promotional campaigns, while leveraging individual distributors’ investments. By sharing knowledge and market experience, we were able to optimize our individual CDM plans as well.

Building on what started in 2005, 2006 was a year of further program development, implementation and continued learning for Enersource. The year 2008 saw the maturing of the CDM program, with the details of each program becoming clearer with increasing implementation of initiatives or replication of the same.

While our CDM Program proved to be cost-effective overall, some initiatives suffered from high initial set-up costs. However, economic results continued to improve in 2008, because programs launched throughout and prior to 2006 had time to operate for a longer period and generate more of the expected results, against lower required expenditures.

By December 31st, 2008, Enersource had invested approximately \$8.168M from the original 3rd Tranche CDM funding of \$8.263 million. The program resulted in annual savings to-date of 57.5 million kWh.

In 2008, the CDM Program’s cumulative benefit-cost (B/C) ratio was 2.3. The economics improved as there were increased savings against lower required expenditures, as programs matured.

In 2008, there was comparably lower activity, since several of Enersource’s 3rd Tranche programs were completed, either because they had attained a pre-determined objective or because a pre-determined termination date had occurred. At the end of 2008, approximately \$95,000 of unspent funds remained of the original \$8.263 million.

Enersource had some very successful programs. In some cases, funding was exhausted in 2006. Enersource had to seek and obtain funding from other sources such as the MEI and the OPA.

The CLD-developed powerWISE® coupon redemption retailer program was adopted by the OPA and re-launched in 2006 as the “Every Kilowatt Counts” Spring and Fall retail campaigns. The campaigns created enormous awareness. In 2007, it delivered over 1,200,000 MWh in energy savings in Ontario. In 2008 this initiative continued under OPA funding and results are not reported here.

Since launching, Enersource’s CDM Programs generated annual energy savings of 57.5 million kWh or enough capacity to supply 6,400 homes annually.

In 2007, Enersource designed and implemented a dedicated DR Control Room for the aggregation and dispatch of enlisted loads during critical peak times. By the end of 2008, we had over 11 MW of dispatchable loads in the CI&I sectors, 6.2 MW of which is coming from stand-by clean generators. An additional 1.3 MW comes from the **peaksaver®** program

The constraints facing the provincial electricity distribution system are well known and have created a heightened sense of urgency for all users to contribute to a better management of our electricity demand. Enersource is committed to enhancing a culture of conservation in the province and will work cooperatively with the OEB, the IESO, the OPA and other members of the CLD to make this happen.

Enersource's role in delivering energy efficiency programs is well established and our customers are recognizing the value of conserving electricity. Our CDM Programs play an essential role in promoting and fostering a "cultural change" with respect to energy utilization in Mississauga.

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.

	Total for 2008	Residential	Low Income	Commercial	Institutional	Industrial	Agricultural	LDC System	Smart Meters	Overall Program Support	Other #2
<i>Net TRC value (\$):</i>	-\$ 560,449	\$ 42,401	\$ 37,550	\$ (120,478)	\$ (501,544)	\$ 29,102	\$ -	\$ (814)		\$ -	\$ -
<i>Benefit to cost ratio:</i>	0.26	-7.81	992.56	0.38	0.11	-75.38	0.00	0.00		0.00	0.00
<i>Number of participants or units delivered:</i>	72	0	72								
<i>Lifecycle (kWh) Savings:</i>	1,451,468	617,468	617,468	0	834,000	0	0	0		0	0
<i>Report Year Total kWh saved (kWh):</i>	158,571	116,871	116,871	0	41,700	0	0	0		0	0
<i>Total peak demand saved (kW):</i>	36	0	0	0	36	0	0	0		0	0
<i>Total kWh saved as a percentage of total kWh delivered (%):</i>	0.00%	0.00%	0.00%	0.00%							
<i>Peak kW saved as a percentage of LDC peak kW load (%):</i>	0.00%	0.00%	0.00%	0.00%	0.00%						
¹ <i>Report Year Gross C&DM expenditures (\$):</i>	\$ 533,961	\$ 29,861	\$ 34,653	\$ 194,543	\$ 300,008	-\$ 381	\$ -	\$ 814	\$ 1,884	\$ 9,116	\$ -
² <i>Expenditures per kWh saved (\$/kWh):</i>	\$ 0.37	\$ 0.05	\$ 0.06	\$ -	\$ 0.36	\$ -	\$ -	\$ -		\$ -	\$ -
³ <i>Expenditures per kW saved (\$/kW):</i>	\$ 14,832.24	\$ -	0	\$ -	\$ 8,333.55	\$ -	\$ -	\$ -		\$ -	\$ -
<i>Utility discount rate (%):</i>	5.99%										

¹ Expenditures are reported on accrual basis. **Enersource's Note:** Low Income and Smart Meters costs are already included under Residential and Commercial costs shown, as applicable.

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

Appendix B - Discussion of the Program

A. **Name of the Program:** Residential Programs - Co-Branded Mass Market Program

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

powerWise™ is the flagship conservation program for Enersource Hydro Mississauga and five of Ontario's other major Local Electricity Distributors. It is a multifaceted approach to energy conservation in all sectors, designed to help foster a "conservation culture" in Ontario. Through development of a significant cooperative effort among six of the largest municipal LDC's, this program is becoming synonymous with initiatives such as Compact Fluorescent Lighting (CFL) change-out programs, LED Holiday Light exchanges, 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 components of this program.

Measure(s):

	Water Heater Tune-up	LED Light Exchange	Special Events Van
<i>Base case technology:</i>	Do Nothing	Incandescent String	Do Nothing
<i>Efficient technology:</i>	Efficient Showerhead, Faucet Aerator, Faucet Washer, Tank Insulating Wrap and Compact Fluorescent Bulbs.	LED Light String	Compact Fluorescent Bulbs.
<i>Number of participants or units delivered for reporting year:</i>	0	0	0
<i>Measure life (years):</i>	12,12,6,6 and 4	30	4
<i>Number of Participants or units delivered life to date</i>	1621	11000	8920

	Library Loan Program	Retailer Program	Refrigerator Retirement Progr.
<i>Base case technology:</i>	Incandescent Bulb	Incandescent Bulb, Do Nothing	Average Existing Stock
<i>Efficient technology:</i>	Compact Fluorescent	Compact fluorescent bulb, LED Christmas Lights, Programmable Thermostat, Indoor Timer, Outdoor Timer,	Retirement and Recycling
<i>Number of participants or units delivered for reporting year:</i>	0	0	0
<i>Measure life (years):</i>	4	4,30,18,20,20,20 and 25	6
<i>Number of Participants or units delivered life to date</i>	2160	65262	1117

B. TRC Results:	Reporting Year	Life-to-date TRC Results:
¹ TRC Benefits (\$):	\$ -	2492364
² TRC Costs (\$):		
<i>Utility program cost (excluding incentives):</i>	\$ -	\$ 846,744.55
<i>Incremental Measure Costs (Equipment Costs)</i>		
<i>Total TRC costs:</i>	\$ -	\$ 846,744.55
<hr/> <i>Net TRC (in year CDN \$):</i> <hr/>		

Benefit to Cost Ratio (TRC Benefits/TRC Costs): na 2.94

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

Conservation Programs:

<i>Demand savings (kW):</i>	<i>Summer</i>	0	624.81
	<i>Winter</i>	0	1890
<i>Energy saved (kWh):</i>	<i>lifecycle</i>	0	127,603,037
	<i>in year</i>	0	34,086,685
<i>Other resources saved :</i>			
<i>Natural Gas (m3):</i>			
<i>Water (m3):</i>	0	0	682,351

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):		
Energy savings (kWh):	<i>lifecycle</i>	<i>in year</i>

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):		
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D. <u>Actual Program Costs:</u>		Reporting Year	Cumulative Life to Date
<i>Utility direct costs (\$):</i>	<i>Incremental capital:</i>	\$ -	\$ 68,318.80
	<i>Incremental O&M:</i>	\$ -	\$ 778,425.75
	<i>Incentive:</i>		
	<i>Total:</i>	\$ -	\$ 846,744.55
<i>Utility indirect costs (\$):</i>	<i>Incremental capital:</i>	0 \$	-
	<i>Incremental O&M:</i>		
	<i>Total:</i>	0 \$	-

E. Assumptions & Comments:

powerWISE Brand

- powerWISE® is being used extensively by the CLD, to co-brand CDM programs.
- Interest in the powerWISE® brand was expressed by the Ministry of Energy, the OPA, Hydro One and other distribution utilities.
- The powerWISE® brand has also been translated to Eco-Consumer for French language purposes.
- The powerWISE® brand has been used by the Ministry of Energy in their 2006 advertising campaign.

Next Steps

- Continue to develop and promote the powerWISE® brand and website in conjunction with the Ministry of Energy and the OPA.

powerWISE® Website

- powerWISE® website has received over 160,000 visitors during 2008.

Next Steps

- Continue to develop and promote www.powerwise.ca in conjunction with the Ministry of Energy, as a source of energy conservation information.
- Continue to improve and enhance the website with new materials and applications.

Water Heater Tune-Up

- Over 1,620 Tune-Ups were completed to-date, under 3rd Tranche funding, which was exhausted in April 2006. More tune-ups were done under a different funding mechanism in 2007.

Next Steps

- No next steps. This highly successful program continued in 2007 under Supplemental Funding, reaching near saturation.

LED Holiday Light Exchange

- Enersource distributed approximately 11,000 LED light sets.
- 3rd Tranche funding was exhausted and no LEDs were distributed post 2006 under this funding mechanism.

Next Steps

- No next steps. This program was submitted to the OEB as a 2nd generation supplemental CDM plan and continued in 2006 under that

Special Events Van

- The Event Team attended 56 events in 2006, 10 of which under 3rd Tranche funding.
- 10,240 CFLs were distributed, including 1,320 CFLs distributed at Mississauga libraries, in 2006 under 3rd Tranche.

Next Steps

- No next steps. The program continued for 2007, under 2nd Generation Supplemental Funding.

Library Loan Program

- Enersource customers borrowed about 1,000 "Watt Reader" devices in 2006.
- 1,320 CFLs were distributed with the devices in 2006 under 3rd Tranche.

Next Steps**OPA Every Kilowatt Counts Retailer Coupon Program**

- The Conservation Bureau of the OPA developed major Spring and Fall mass-market retail campaigns, 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.
- All Enersource Hydro customers received the coupon booklets both in spring and fall.
- About 57,000 coupons were redeemed locally in 2006.

Next Steps

- Similar coupons distributions were planned for 2007 under OPA funding.
- The Conservation Bureau will continue to operate this program.

OPA Refrigerator Retirement Program

- Enersource Hydro Mississauga is the delivery partner for the OPA Refrigerator Retirement program.
- The Refrigerator Retirement Program provides pick-up and recycling (a \$110 value).
- 1,117 old refrigerators were removed and properly recycled.

Next Steps

- The OPA reviewed the results after the pilots and determine to roll out the program across the province.

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

A. **Name of the Program:** Residential Programs - SMART Meter Residential

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

Pilot programs for residential SMART meters were implemented to assess the metering, communications, settlement, load control and other technologies that could be used to accommodate the wider application of SMART meters in the future. Further, sub-metering opportunities for the purpose of customer information in bulk-metered situations (i.e. condominiums) may be considered. This program supports the Minister of Energy's commitment to the installation of 800,000 SMART meters across Ontario by 2007. It will provide Enersource with the experience and knowledge needed to efficiently expand the use of SMART meters over the next several years.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	Do nothing		
Efficient technology:	SMART Meters		
Number of participants or units delivered for reporting year:	0		
Measure life (years):			
Number of Participants or units delivered life to date	550		

B. TRC Results:	Reporting Year	Life-to-date TRC Results:
¹ TRC Benefits (\$):		
² TRC Costs (\$):		
Utility program cost (excluding incentives):	\$ 58.47	\$ 252,844.17
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	\$ 58.47	\$ 252,844.17
Net TRC (in year CDN \$):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	\$ -	0.00

C. Results: (one or more category may apply)	Cumulative Results:			
Conservation Programs:				
Demand savings (kW):	Summer	na	na	
	Winter	na	na	
		lifecycle	in year	
Energy saved (kWh):	na	na	na	na
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):		
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D. Actual Program Costs:		Reporting Year	Cumulative Life to Date
Utility direct costs (\$):	Incremental capital:	\$ -	\$ 144,861.62
	Incremental O&M:	\$ 58.47	\$ 107,982.55
	Incentive:		
	Total:	\$ 58.47	\$ 252,844.17
Utility indirect costs (\$):	Incremental capital:	0 \$	-
	Incremental O&M:		
	Total:	0 \$	-

E. Assumptions & Comments:

- A conservation forum and information session on the launch of a 550 home Smart Meter Pilot Program in a small neighborhood in Mississauga was held in July 2005.
- The purpose of the pilot was to test the Elster MeshNetwork smart metering technology, with respect to meter functionality and communications performance, to determine if it would be a viable option for full deployment at Enersource.
- The project was completed successfully in 2005.
- 555 SMART meters were installed by the end of 2005.
- Energy and peak load savings or shifting will come from behavioural changes of customers, once they learn to correlate time of usage rates with their consumption patterns.

Next Steps

- No more installations are planned for this pilot. We have combined conservation products with the smart Meter, to leverage the smart meter potential as a behavioral changing device, with respect to energy consumption habits.
- This program was stopped as a smart meter program as it had evolved beyond the original scope of just installing smart meters.
- As such, this program became the core of the Smart Avenues Program described in the following section.

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

A. **Name of the Program:** Residential Programs - SMART Avenues – A Community Pilot (Previously named “Electric Avenue”)

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

A pilot neighborhood of selected homes and/or small businesses may be selected to become a “showcase” community to demonstrate the overall effectiveness of smart energy conservation initiatives including energy audits, retrofits, load control devices and SMART meters.

This pilot may also include the design and construction of an energy efficient home that will showcase all the latest technologies in energy efficiency.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
<i>Base case technology:</i>	Do Nothing.		
<i>Efficient technology:</i>	Smart Meters.		
<i>Number of participants or units delivered for reporting year:</i>	0		
<i>Measure life (years):</i>			
<i>Number of Participants or units delivered life to date</i>	550		

B. TRC Results:	Reporting Year	Life-to-date TRC Results:
¹ TRC Benefits (\$):	\$ -	\$ 21,192
² TRC Costs (\$):		
<i>Utility program cost (excluding incentives):</i>	\$ 7,178.09	\$ 300,387.04
<i>Incremental Measure Costs (Equipment Costs)</i>		
Total TRC costs:	\$ 7,178.09	\$ 300,387.04
<hr/>		
<i>Net TRC (in year CDN \$):</i>		
<hr/>		
<i>Benefit to Cost Ratio (TRC Benefits/TRC Costs):</i>	\$ -	0.1

C. Results: (one or more category may apply)	Cumulative Results:			
Conservation Programs:				
<i>Demand savings (kW):</i>	<i>Summer</i>			35
	<i>Winter</i>			
	<i>lifecycle</i>	<i>in year</i>	<i>Cumulative Lifecycle</i>	<i>Cumulative Annual Savings</i>
<i>Energy saved (kWh):</i>			121,514	42,569
<i>Other resources saved :</i>				
<i>Natural Gas (m3):</i>				
<i>Annual Water Savings (m3):</i>				49
Demand Management Programs:				
<i>Controlled load (kW)</i>				
<i>Energy shifted On-peak to Mid-peak (kWh):</i>				
<i>Energy shifted On-peak to Off-peak (kWh):</i>				
<i>Energy shifted Mid-peak to Off-peak (kWh):</i>				
Demand Response Programs:				
<i>Dispatchable load (kW):</i>				
<i>Peak hours dispatched in year (hours):</i>				
Power Factor Correction Programs:				
<i>Amount of KVar installed (KVar):</i>				
<i>Distribution system power factor at beginning of year (%):</i>				
<i>Distribution system power factor at end of year (%):</i>				

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):		
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D. Actual Program Costs:		Reporting Year	Cumulative Life to Date
Utility direct costs (\$):	Incremental capital:	\$ -	\$ 64,428.37
	Incremental O&M:	\$ 7,178.09	\$ 235,958.67
	Incentive:		
	Total:	\$ 7,178.09	\$ 300,387.04
Utility indirect costs (\$):	Incremental capital:	0 \$	-
	Incremental O&M:		
	Total:	0 \$	-

E. Assumptions & Comments:

- This program was part of the Smart Meter program.
 - As part of the smart meter program, we intended to test various technologies within a home, to demonstrate the potential savings that could result from an increased awareness of consumption levels and patterns through the day.
 - Customers that receive a smart meter will eventually be able to use electricity more knowledgeably because of these technologies, once they receive Time-of-Use (TOU) rates.
 - The pilot neighborhood was selected and 555 smart meters were installed.
 - The customers were well advised of our plans.
 - The lack of TOU Rates and problems with the supply of essential technologies or the poor take up on certain initiatives severely limited the scope of the program, which resulted in poor TRC results.
- Next Steps**
- None planned at this time. Funding for this program was exhausted and it was therefore terminated.

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

A. **Name of the Program:** Residential Programs - Residential Load Control Initiative

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

Load control uses a real time communications link to enable or disable customer loads at the discretion of the utility. These controls are usually engaged during system peak periods or when required to relieve pressure on the system grid and may include such "dispatchable" loads as electric hot water tanks, pool pumps, lighting, air conditioners, etc. For this demonstration project the primary focus will be controlling central air conditioning units.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
<i>Base case technology:</i>	Do nothing		
<i>Efficient technology:</i>	LDC controlled programmable thermostats.		
<i>Number of participants or units delivered for reporting year:</i>	0		
<i>Measure life (years):</i>	18		
<i>Number of Participants or units delivered life to date</i>	202		

B. TRC Results:	Reporting Year	Life-to-date TRC Results:
¹ TRC Benefits (\$):	\$ -	\$ 2,252,370.76
² TRC Costs (\$):		
<i>Utility program cost (excluding incentives):</i>	-\$ 12,028.16	\$ 980,127.71
<i>Incremental Measure Costs (Equipment Costs)</i>		
<i>Total TRC costs:</i>	-\$ 12,028.16	\$ 980,127.71
Net TRC (in year CDN \$):		
<i>Benefit to Cost Ratio (TRC Benefits/TRC Costs):</i>	na	2.3

C. Results: (one or more category may apply)	Cumulative Results:			
Conservation Programs:				
<i>Demand savings (kW):</i>	Summer			1256
	Winter			
	<i>lifecycle</i>	<i>in year</i>	<i>Cumulative Lifecycle</i>	<i>Cumulative Annual Savings</i>
<i>Energy saved (kWh):</i>	-	-	4,493,340	467,142
<i>Other resources saved :</i>				
<i>Natural Gas (m3):</i>				
<i>Other (specify):</i>				
Demand Management Programs:				
<i>Controlled load (kW)</i>				
<i>Energy shifted On-peak to Mid-peak (kWh):</i>				
<i>Energy shifted On-peak to Off-peak (kWh):</i>				
<i>Energy shifted Mid-peak to Off-peak (kWh):</i>				
Demand Response Programs:				
<i>Dispatchable load (kW):</i>				
<i>Peak hours dispatched in year (hours):</i>				
Power Factor Correction Programs:				
<i>Amount of KVar installed (KVar):</i>				
<i>Distribution system power factor at beginning of year (%):</i>				
<i>Distribution system power factor at end of year (%):</i>				

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):		
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D. Actual Program Costs:		Reporting Year	Cumulative Life to Date
Utility direct costs (\$):	Incremental capital:	-\$ 31,383.36	\$ 643,893.71
	Incremental O&M:	\$ 19,355.20	\$ 336,234.00
	Incentive:		
	Total:	-\$ 12,028.16	\$ 980,127.71
Utility indirect costs (\$):	Incremental capital:		
	Incremental O&M:	\$ -	\$ -
	Total:	\$ -	\$ -

E. Assumptions & Comments:

- Mississauga Hydro participated with other CLD members in the design and implementation of a Load Control program targeting residential and small commercial customers' central air conditioners with outside condensers.
 - In addition to central air conditioners, customers with electric water heaters and/or pool pumps were encouraged by some CLD members to have controls installed on those devices.
 - Under 3rd Tranche, we installed 1570 programmable thermostats, the only device under Enersource's program. ■
- Indirect costs shown are projected costs required to continue the program over the life of the equipment, introduced for TRC purposes.

Next Steps

- Continue to recruit host sites, according to the OPA funding mechanism.

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

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

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

The Social Housing Sector is a prime candidate for CDM incentives, due to funding constraints that characterizes it and high incidences of electric heating.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
<i>Base case technology:</i>	Incandescent bulbs	T12 Fluorescent	Incandescent bulbs
<i>Efficient technology:</i>	CFL bulbs, Water Heater Tuneup	T8 Fluorescent	LED Exit Signs
<i>Number of participants or units delivered for reporting year:</i>		0	7
<i>Measure life (years):</i>	4.3, 6, 12	5	25
<i>Number of Participants or units delivered life to date</i>		313	192

B. TRC Results:	Reporting Year	Life-to-date TRC Results:
¹ TRC Benefits (\$):	\$ 37,588.32	\$ 427,036.12
² TRC Costs (\$):		
<i>Utility program cost (excluding incentives):</i>	\$ 37.87	\$ 133,986.78
<i>Incremental Measure Costs (Equipment Costs)</i>		
<i>Total TRC costs:</i>	\$ 37.87	\$ 133,986.78
<i>Net TRC (in year CDN \$):</i>		
<i>Benefit to Cost Ratio (TRC Benefits/TRC Costs):</i>	992.6	3.2

C. Results: (one or more category may apply)	Cumulative Results:			
Conservation Programs:				
<i>Demand savings (kW):</i>	Summer	16	42	
	Winter			
	<i>lifecycle</i>		<i>in year</i>	<i>Cumulative Lifecycle</i>
<i>Energy saved (kWh):</i>	617,468	116,871	6,563,779	1,142,726
<i>Other resources saved :</i>				
<i>Natural Gas (m3):</i>				
<i>Water (m3):</i>	-	-		121,453
Demand Management Programs:				
<i>Controlled load (kW)</i>				
<i>Energy shifted On-peak to Mid-peak (kWh):</i>				
<i>Energy shifted On-peak to Off-peak (kWh):</i>				
<i>Energy shifted Mid-peak to Off-peak (kWh):</i>				
Demand Response Programs:				
<i>Dispatchable load (kW):</i>				
<i>Peak hours dispatched in year (hours):</i>				
Power Factor Correction Programs:				
<i>Amount of KVar installed (KVar):</i>				
<i>Distribution system power factor at beginning of year (%):</i>				
<i>Distribution system power factor at end of year (%):</i>				

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):		
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D. Actual Program Costs:		Reporting Year	Cumulative Life to Date
Utility direct costs (\$):	Incremental capital:	\$ -	\$ -
	Incremental O&M:	\$ 37.87	\$ 133,986.78
	Incentive:	\$ 34,615.10	\$ 34,615.10
	Total:	\$ 34,652.97	\$ 168,601.88
Utility indirect costs (\$):	Incremental capital:	0	\$ -
	Incremental O&M:		
	Total:	0	\$ -

E. Assumptions & Comments:

- We have combined this program with some of our mass market programs. As a result, a selected list of customers was approached with similar programs such as the Water Heater Tune Up program and the LED Seasonal Light program.
 - Lighting and unitary A/C retrofits were performed at four Social Housing communities. Over \$130,000 were invested, with projected avoided costs over the life of the equipment of more than \$400,000.
 - A lighting retrofit project at the local Food Path facility was completed. Enersource provided 100% grant for this lighting retrofit. The program was well received and appreciated by the customers.
 - Two agencies (Winter Warmth, Share the Warmth) were identified as channels to deliver this initiative to needy Social Housing clients.
 - We are progressing with Social Housing communities within the Region of Peel. To date we have completed 313 tune-ups, besides the 30 done in 2005. 313 tune-ups, besides the 30 done in 2005.
 - In 2008 we provided \$35,000 grants to two Social Housing buildings, in which lighting was retrofitted. These were 2007 projects completed.
- Next Steps**
- Program has concluded, under 3rd Tranche funding.

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

A. **Name of the Program:** SMART Meter Commercial Program

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

Enersource is planning a pilot program for commercial SMART meters, to assess the metering, communications, settlement, load control and other technologies that could be used to accommodate the wider application of SMART meters in the future.

The pilot project will be launched in 2006, for the investigation of sub-metering opportunities in bulk-metered situations (i.e. condominiums). The principal aim will be to provide end-use customers with information related to their energy consumption habits.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
<i>Base case technology:</i>	Do nothing		
<i>Efficient technology:</i>	SMART Meters		
<i>Number of participants or units delivered for reporting year:</i>	0		
<i>Measure life (years):</i>	15		
<i>Number of Participants or units delivered life to date</i>	201		

TRC Results:	Reporting Year	Life-to-date TRC Results:
¹ TRC Benefits (\$):	\$ -	\$ 370,463
² TRC Costs (\$):		
<i>Utility program cost (excluding incentives):</i>	\$ 1,825.81	\$ 248,686.94
<i>Incremental Measure Costs (Equipment Costs)</i>		
Total TRC costs:	\$ 1,825.81	\$ 248,686.94
Net TRC (in year CDN \$):		
<i>Benefit to Cost Ratio (TRC Benefits/TRC Costs):</i>	\$ -	1.49

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

Conservation Programs:

<i>Demand savings (kW):</i>	Summer		30
	Winter		80

	<i>lifecycle</i>	<i>in year</i>	<i>Cumulative Lifecycle</i>	<i>Cumulative Annual Savings</i>
<i>Energy saved (kWh):</i>	0		6892979	919,064
<i>Other resources saved :</i>				
<i>Natural Gas (m3):</i>				
<i>Other (specify):</i>				

Demand Management Programs:

<i>Controlled load (kW)</i>		
<i>Energy shifted On-peak to Mid-peak (kWh):</i>		
<i>Energy shifted On-peak to Off-peak (kWh):</i>		
<i>Energy shifted Mid-peak to Off-peak (kWh):</i>		

Demand Response Programs:

<i>Dispatchable load (kW):</i>		
<i>Peak hours dispatched in year (hours):</i>		

Power Factor Correction Programs:

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

Line Loss Reduction Programs:

Peak load savings (kW):			
	<i>lifecycle</i>	<i>in year</i>	
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):		
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D. Actual Program Costs:		Reporting Year	Cumulative Life to Date
Utility direct costs (\$):	Incremental capital:	\$ -	\$ 178,959.24
	Incremental O&M:	\$ 1,825.81	\$ 69,727.70
	Incentive:		
	Total:	\$ 1,825.81	\$ 248,686.94
Utility indirect costs (\$):	Incremental capital:	0 \$	-
	Incremental O&M:		
	Total:	0 \$	-

E. Assumptions & Comments:

- Designated pilot building will shift from a single commercial account to multiple residential accounts, dependent on the number of its residential units.
- A multi-residential complex with 186 units was identified for retrofitting. Retrofit was completed in July 2006.
- A total of 201 smart meters were installed, to service the 186 units and various services.
- Individual metering started in July 2006 and results - compared to the average of the previous 3 years - show savings of 17%.
- A second building was identified, but the Condominium Board eventually declined to participate in the program.

Next Steps

- The program has concluded.

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

A. **Name of the Program:** Business Incentive Program (previously named Leveraging Energy Conservation)

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

Existing energy conservation and/or load management programs such as NRCan's Energy Innovators initiative, Enbridge initiatives etc. will be promoted and incentives may be provided to advance market uptake of these programs and implementation of the recommendations. The LDC's are well positioned to introduce such programs to their customer base. Work will be conducted with the existing program providers to maximize leverage opportunities. Promotion will potentially include face-to-face meetings, conferences and seminars.

Within this framework, Enersource has implemented a Business Incentive Program, through which financial incentives are given to qualifying businesses that install energy efficient technologies within their facilities.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	Do nothing		
Efficient technology:	LED exit signs, high efficient		
Number of participants or units delivered for reporting year:	0		
Measure life (years):	6,8,15,12,13,6,5		
Number of Participants or units delivered life to date	9		

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
¹ TRC Benefits (\$):		\$ 2,349,068.42
² TRC Costs (\$):		
Utility program cost (excluding incentives):	\$ -	\$ 138,014.08
Incremental Measure Costs (Equipment Costs)	\$ -	\$ 870,044.34
Total TRC costs:	\$ -	\$ 1,008,058.42

Net TRC (in year CDN \$):

Benefit to Cost Ratio (TRC Benefits/TRC Costs): na 2.3

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

Conservation Programs:

Demand savings (kW):	Summer	0	839
	Winter		

	lifecycle	in year	Cumulative Lifecycle	Cumulative Annual Savings
Energy saved (kWh):	0		- 40767375	12,269,371
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):		
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D. Actual Program Costs:		Reporting Year	Cumulative Life to Date
Utility direct costs (\$):	Incremental capital:	\$ -	\$ 100,331.00
	Incremental O&M:	\$ -	\$ 96,381.08
	Incentive:	\$ -	\$ 83,340.00
	Total:	\$ -	\$ 280,052.08
Utility indirect costs (\$):	Incremental capital:	0	
	Incremental O&M:		
	Total:	0	\$ -

E. Assumptions & Comments:

- The program was made available to customers in late 2005 and continued to funding exhaustion in 2007.
- Applications under the program consisted mainly of lighting upgrades.
- Of the projects pre-approved under the program, incentives were paid to 8 customers (8 projects), for a total of over \$83,000.
- Other applications were still under evaluation at funding exhaustion.
- Based on results to-date, expected annual energy and demand savings are over 6.4 million kWh and 839 kW (summer peak).

Next Steps

- The program has ended under 3rd Tranche funding and continued in 2008 under OPA funding.
- We will continue to work with the OPA's funding model for this program.

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

A. **Name of the Program:** Commercial (CI&I) Load Control Initiative

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

Load control is part of our developing Demand Response (DR) initiatives. It aims at developing suitable systems to free up capacity during critical times of severe system demand. This program uses a Web-based load controller, with a real time communications link, to enable or disable designated customer loads at the discretion of Enersource. These controls are usually engaged during system peak periods or when required to relieve pressure on the system distribution grid.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	Do nothing		
Efficient technology:	Lighting & Other Load Controllers.		
Number of participants or units delivered for reporting year:			
Measure life (years):	10		
Number of Participants or units delivered life to date	13		

B. TRC Results:	Reporting Year	Life-to-date TRC Results:
¹ TRC Benefits (\$):	\$ 74,065.10	\$ 4,722,098
² TRC Costs (\$):		
Utility program cost (excluding incentives):	\$ 192,717.23	\$ 1,898,185.29
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	\$ 192,717.23	\$ 1,898,185.29
Net TRC (in year CDN \$):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	0.4	2.5

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

Conservation Programs:			Cumulative Lifecycle	Cumulative Annual Savings
Demand savings (kW):	Summer	0		5140
	Winter	0		5140
Energy saved (kWh):	lifecycle	in year		
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):		
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D. Actual Program Costs:		Reporting Year	Cumulative Life to Date
Utility direct costs (\$):	Incremental capital:	\$ 36,956.00	\$ 315,594.67
	Incremental O&M:	\$ 155,761.23	\$ 839,170.71
	Incentive:		
	Total:	\$ 192,717.23	\$ 1,154,765.38
Utility indirect costs (\$):	Incremental capital:		\$ -
	Incremental O&M:		\$ 743,419.91
	Total:	\$ -	\$ 743,419.91

E. Assumptions & Comments:

- Enersource has developed and launched a demand response program.
- Enersource will act as an aggregator of all load reduction capacities offered by customers and will fully administer customer participation in the IESO and OPA's demand response programs.
- There are two categories of customers in our program. The first category (on-call curtailment) of customers will not require the installation of load control equipment. They will reduce load upon receiving notification from Enersource.
- In the second category, load reduction equipment will be required to be supplied and installed by Enersource's contractor.
- An internal process of administering the demand response has been completed.
- Under on-call curtailment we have signed-up 2 MW of demand response capacity.
- In the second category, we use RTP Controls ECO Power DR load control equipment.
- Total capacity under control at the end of 2008 is over 5 MW.
- Enersource have terminated the contract with Electric City due to poor performance.
- Cumulative TRC Benefit-Cost Ratio was calculated at 2.5.
- Annual energy savings are dependent on annual operating hours of hosting facility. Customer participation is voluntary.

Next Steps

- Enroll curtailable loads in IESO-OPA demand response programs.
- EHM submitted a custom application to the OPA in 2008, seeking funding to continue with this program.

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

A. **Name of the Program:** On-the-Bill Payment Plan Program (previously named On-the-Bill Financing)

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

On-the-Bill Financing will start with a pilot offering, which will be developed to help remove a significant energy conservation purchase barrier.

This program will allow customers to finance their conservation investment off their balance sheet via an "expense budget" on their hydro bill, instead of having to contend with scarce capital dollars.

Financing arrangements will be made with third party investment organizations and payment amounts will be presented on the customer's hydro bill.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	T12 w/magnetic ballast		
Efficient technology:	T8 w/electronic ballast		
Number of participants or units delivered for reporting year:		0	
Measure life (years):		5	
Number of Participants or units delivered life to date		5	

B. TRC Results:	Reporting Year	Life-to-date TRC Results:
¹ TRC Benefits (\$):		\$ 231,554
² TRC Costs (\$):		
Utility program cost (excluding incentives):	\$ -	\$ 107,007.79
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	\$ -	\$ 107,007.79
Net TRC (in year CDN \$):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	na	2.2

C. Results: (one or more category may apply)	Cumulative Results:			
Conservation Programs:				
Demand savings (kW):	Summer			114.8
	Winter			
		lifecycle	in year	
Energy saved (kWh):				Cumulative Lifecycle 3,259,565
Other resources saved :				Cumulative Annual Savings 1,303,826
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):		
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D. Actual Program Costs:		Reporting Year	Cumulative Life to Date
Utility direct costs (\$):	Incremental capital:	\$ -	\$ -
	Incremental O&M:	\$ -	\$ 107,007.79
	Incentive:		
	Total:	\$ -	\$ 107,007.79
Utility indirect costs (\$):	Incremental capital:	0 \$	-
	Incremental O&M:		
	Total:	0 \$	-

E. Assumptions & Comments:

- Following an RFI issued to 4 potential Financial Services vendors, we contracted with CitiCapital.
- We advised CI&I customers and a select number of energy conservation consultants of this program through a direct mail marketing initiative. The mailing included specific marketing material and a Pre-Qualification form designed to capture customer and proposed project information (including costs and benefits), for an initial screening.
- At present, we have 5 approved and funded customers, 1 declined.
- Enersource worked with the Financial Services Company on the application forms and other elements of this program.
- Customers were advised of this program through various marketing initiatives.
- The program has so far resulted in annual energy savings of over 652,000 kWh and summer peak demand savings are 115 kW.
- Cumulative TRC Benefit-Cost Ratio is over 2.2. Forthcoming projects should show improved TRC results, because of the limited on-going costs.

Next Steps

- EHM may decide to continue with this program as minimally operating costs are required.

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

A. **Name of the Program:** Distribution Loss Reduction

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

The Distribution Loss 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:

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 IESO's voltage reduction program and will not interfere with the effectiveness of that

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
<i>Base case technology:</i>	Do nothing.		
<i>Efficient technology:</i>	Adaptivolt system.		
<i>Number of participants or units delivered for reporting year:</i>	0		
<i>Measure life (years):</i>	15		
<i>Number of Participants or units delivered life to date</i>	1		

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
¹ TRC Benefits (\$):	na	na
² TRC Costs (\$):		
<i>Utility program cost (excluding incentives):</i>	\$ 813.78	\$ 571,506.27
<i>Incremental Measure Costs (Equipment Costs)</i>		
Total TRC costs:	\$ 813.78	\$ 571,506.27
Net TRC (in year CDN \$):		
<i>Benefit to Cost Ratio (TRC Benefits/TRC Costs):</i>	na	na

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

Conservation Programs:

<i>Demand savings (kW):</i>	<i>Summer</i>	420	420
	<i>Winter</i>	420	420

	<i>lifecycle</i>	<i>in year</i>	<i>Cumulative Lifecycle</i>	<i>Cumulative Annual Savings</i>
<i>Energy saved (kWh):</i>		-	54,531,000	7,270,800
<i>Other resources saved :</i>				
<i>Natural Gas (m3):</i>				
<i>Other (specify):</i>				

Demand Management Programs:

<i>Controlled load (kW)</i>		
<i>Energy shifted On-peak to Mid-peak (kWh):</i>		
<i>Energy shifted On-peak to Off-peak (kWh):</i>		
<i>Energy shifted Mid-peak to Off-peak (kWh):</i>		

Demand Response Programs:

<i>Dispatchable load (kW):</i>		
<i>Peak hours dispatched in year (hours):</i>		

Power Factor Correction Programs:

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

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):		
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D. Actual Program Costs:		Reporting Year	Cumulative Life to Date
Utility direct costs (\$):	Incremental capital:	\$ 813.78	\$ 550,806.67
	Incremental O&M:	\$ -	\$ 20,699.60
	Incentive:		
	Total:	\$ 813.78	\$ 571,506.27
Utility indirect costs (\$):	Incremental capital:	0	-
	Incremental O&M:		
	Total:	0	-

E. Assumptions & Comments:

- An RFP was issued in October 2005 for the procurement of a conservation voltage reduction system (CVRS).
- Steps were taken to implement a project in 2006 to reduce voltage at Grossbeak MS using an AdaptiVolt CVRS system, which controls the transformer on-load-tap-changer to optimize the voltage profile.
- AdaptiVolt is the selected CVRS system; it controls the transformer on-load-tap-changer to optimize the voltage profile.
- Factory Acceptance Test was completed on July 5th 2006 on the AdaptiVolt System. Product was received in July, but because of extreme weather conditions installation was not carried out, to avoid possible service interruptions.
- The project was delayed, because EHM Load Centers could not accommodate the Potential Transformers (PT's) that were sourced.
- A new design of the installation was required and the installation became operational in July 2007.
- Tests by an independent agency forecasted annual energy savings to be over 3,600,000 kWh.
- Peak demand reduction at the station is expected to be 420 kW.

Next Steps

- Consider installing other CVRS systems at other stations, under other funding mechanism.

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

A. **Name of the Program:** Load Displacement

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

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.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	Do nothing.		
Efficient technology:	Photovoltaic panels.		
Number of participants or units delivered for reporting year:	2		
Measure life (years):	20		
Number of Participants or units delivered life to date	2		

B. TRC Results:	Reporting Year	Life-to-date TRC Results:
¹ TRC Benefits (\$):	\$ 59,149.25	59149.25
² TRC Costs (\$):		
Utility program cost (excluding incentives):	\$ 7.84	\$ 68,976.35
Incremental Measure Costs (Equipment Costs)	\$ 560,685.37	560685.37
Total TRC costs:	\$ 560,693.21	\$ 629,661.72
Net TRC (in year CDN \$):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	0.09	0.09

C. Results: (one or more category may apply)	Cumulative Results:			
Conservation Programs:				
Demand savings (kW):	Summer	36		36
	Winter			
	lifecycle	in year	Cumulative Lifecycle	Cumulative Annual Savings
Energy saved (kWh):	834,000	41,700	834000	41700
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):		
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D. Actual Program Costs:		Reporting Year	Cumulative Life to Date
Utility direct costs (\$):	Incremental capital:	\$ -	\$ 3,308.07
	Incremental O&M:	\$ 7.84	\$ 65,668.28
	Incentive:	\$ 300,000.00	\$ 300,000.00
	Total:	\$ 300,007.84	\$ 368,976.35
Utility indirect costs (\$):	Incremental capital:	0 \$	-
	Incremental O&M:		
	Total:	0 \$	-

E. Assumptions & Comments:

- Funded two demonstration projects, matching funding on a dollar per dollar basis up to a maximum of \$150,000 for each project.
- The budget for this program has been decreased from \$775K to \$362K.
- Work cooperatively with the City of Mississauga and the Region of Peel to identify suitable candidate demonstration projects, like photovoltaic roof panels.
- The City of Mississauga made a presentation to Enersource outlining several potential projects.
- We agreed on demonstrating a 25.2 kW photovoltaic roof panel at the Hershey Centre.
- The Region of Peel has also submitted a paper outlining potential projects.
- They decided on one 10.4 kW project at a wastewater treatment plant.
- Both projects were fully operational in early 2008 for potential energy savings of about 42 MWh annually.
- A total of \$300,000 were paid out in incentives.

Next Steps

- Continue contacts with the Region and the City to monitor and evaluate performance.
- No further action will be required.

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

A. **Name of the Program:** Stand-by Generators

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

This program provides 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.

Enersource will act as an aggregator of loads to be made available for the market place on a moment's notice, when economical to do so or during critical peak conditions.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
<i>Base case technology:</i>	Do nothing.		
<i>Efficient technology:</i>	Stand-by Generators		
<i>Number of participants or units delivered for reporting year:</i>			
<i>Measure life (years):</i>	10		
<i>Number of Participants or units delivered life to date</i>	8		

TRC Results:	Reporting Year	Life-to-date TRC Results:
¹ TRC Benefits (\$):	\$ 28,720.93	\$ 5,700,509.71
² TRC Costs (\$):		
<i>Utility program cost (excluding incentives):</i>	-\$ 381.00	\$ 2,327,335.13
<i>Incremental Measure Costs (Equipment Costs)</i>		
Total TRC costs:	-\$ 381.00	\$ 2,327,335.13
Net TRC (in year CDN \$):		
<i>Benefit to Cost Ratio (TRC Benefits/TRC Costs):</i>	na	2.4

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

Conservation Programs:			Cumulative Lifecycle	Cumulative Annual Savings
<i>Demand savings (kW):</i>	Summer			6205
	Winter			6205
<i>Energy saved (kWh):</i>	lifecycle	in year		
<i>Other resources saved :</i>				
<i>Natural Gas (m3):</i>				
<i>Other (specify):</i>				
Demand Management Programs:				
<i>Controlled load (kW)</i>				
<i>Energy shifted On-peak to Mid-peak (kWh):</i>				
<i>Energy shifted On-peak to Off-peak (kWh):</i>				
<i>Energy shifted Mid-peak to Off-peak (kWh):</i>				
Demand Response Programs:				
<i>Dispatchable load (kW):</i>				
<i>Peak hours dispatched in year (hours):</i>				
Power Factor Correction Programs:				
<i>Amount of KVar installed (KVar):</i>				
<i>Distribution system power factor at beginning of year (%):</i>				
<i>Distribution system power factor at end of year (%):</i>				

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):		
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D. Actual Program Costs:		Reporting Year	Cumulative Life to Date
Utility direct costs (\$):	Incremental capital:	-\$ 381.00	\$ 1,250,472.15
	Incremental O&M:	\$ -	\$ 233,282.36
	Incentive:		
	Total:	-\$ 381.00	\$ 1,483,754.51
Utility indirect costs (\$):	Incremental capital:		
	Incremental O&M:		\$ 843,580.62
	Total:	0	\$ 843,580.62

E. Assumptions & Comments:

- The CLD engaged a consultant to study technical, financial and operational issues of a DR program dispatching stand-by generators. Generators will be controlled from a single dispatch point at Enersource.
- The design and development of a Demand Response Control Room, which will become the single dispatch point for demand management, was completed.
- A 1.25 MW standby natural gas generator was installed and commissioned at Enersource and is available for dispatch.
- Enersource has registered this generator with the IESO under the Emergency Load Reduction Program.
- Negotiations were conducted with a number of prospective customers.
- Loblaws has agreed to use its standby generators at three locations in Mississauga to participate in the Enersource Demand Response Program. An estimated total of 100 kW of demand response capacity can be achieved through the Loblaws projects.
- An estimated total of 100 kW of demand response capacity can be achieved through the Loblaws projects.
- Other participants include GTAA airport (2,000 kW), Orenda (2,400 kW) and Glaxo Smith Kline (500kW).
- Currently, we have 6.2 MW dispatchable capacity. 2.8 MW are available in summer.
- Cumulative TRC results show a 2.45 Benefit-Cost ratio.
- Indirect incremental costs shown above are for TRC calculation and do not represent actual expenditures to-date.

Next Steps

- Enersource will continue to obtain signed agreements from customers, regarding demand response.
- Enersource will apply to OPA and IESO to enroll the participating generators into the market.

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

A. **Name of the Program:** Overall Program Support

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

Several supporting initiatives were considered such as an annual Key Account Conference, Home Show participation, an energy conservation website, customer newsletters, staff training and media support activities etc..

Enersource Hydro launched the following initiative:

powerWISE Brand and powerWISE Website
These initiatives were already described in a previous section.

Special Events Van

The Special Events Van Team at Enersource was created for the purpose of educating the public about energy conservation and ways for consumers to reduce their electricity bills. The team is constantly on the road with the natural gas fuelled van, interacting with the public. The van is promotionally wrapped in energy saving tips and graphics. The team represents Enersource Hydro Mississauga at various community venues. As part of the energy efficient message, our students hand out various promotional items including showerheads, compact fluorescent lamps, LED light sets and brochures.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	Do nothing.		
Efficient technology:	Compact Fluorescent Bulbs.		
Number of participants or units delivered for reporting year:	0		
Measure life (years):	4		
Number of Participants or units delivered life to date	10,240		

B. TRC Results:	Reporting Year	Life-to-date TRC Results:
¹ TRC Benefits (\$):		
² TRC Costs (\$):		
Utility program cost (excluding incentives):	\$ 9,115.67	\$ 1,404,916.86
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	\$ 9,115.67	\$ 1,404,916.86
Net TRC (in year CDN \$):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	na	na

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

Conservation Programs:

	Summer		Cumulative Lifecycle	Cumulative Annual Savings
	lifecycle	in year		
Demand savings (kW):				
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):		
Energy savings (kWh):	lifecycle	in year

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):		
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D. Actual Program Costs:		Reporting Year	Cumulative Life to Date
Utility direct costs (\$):	Incremental capital:	\$ -	\$ 101,729.86
	Incremental O&M:	\$ 9,115.67	\$ 1,303,187.00
	Incentive:		
	Total:	\$ 9,115.67	\$ 1,404,916.86
Utility indirect costs (\$):	Incremental capital:	0 \$	-
	Incremental O&M:		
	Total:	0 \$	-

E. Assumptions & Comments:

- Utilized the special events team to talk to customers about energy conservation, by participating in community events like Carassauga, the Bread and Honey Festival, the Islamic BBQ and similar.
- Distributed CFL bulbs, to foster the energy saving message.
- 3rd Tranche funding was exhausted by the end of April 2006.
- The program continued under 2nd Generation 2006 Supplemental Funding.
- Under 3rd Tranche, a total of 10,240 CFLs and thousands of educational and promotional items were distributed, to contribute spreading the energy efficiency and conservation message among the residents of Mississauga.
- Since January 2006, they have participated at 56 events – 10 of which under 3rd Tranche - and made several 'drop-offs' at libraries and other venues.
- 3rd Tranche annual energy savings from distributed CFLs were calculated at 244,250 kWh.
- For TRC purposes, these results were included under the Co-Branded Mass Market Program, which served as the source for funding this initiative.

Next Steps

- 3rd Tranche funding for this program was exhausted and the program terminated.

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: **2008**

1. Residential 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 (\$)
Residential Programs - Co-Branded I	\$ -	\$ -	\$ -	0.00	0	0	0	\$ -
Residential Programs - SMART Mete	\$ -	\$ -	\$ -	0.00	0	0	0	\$ 58
Residential Programs - SMART Aven	\$ -	\$ 7,178	\$ -7,178	0.00	0	0	0	\$ 7,178
Residential Programs - Residential Lc	\$ -	\$ 12,028	\$ -12,028	0.00	0	0	0	\$ 12,028
Social Housing Program	\$ 37,588	\$ 38	\$ 37,550	992.56	116,871	617,468	0	\$ 34,653
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 - Residential	\$ 37,588	\$ 4,812	\$ 42,401	-7.81	116,871	617,468	0	\$ 29,861
Residential Indirect Costs not attributable to any specific program								
Total 5 Low Income TRC Costs		\$ 4,812						
**Totals TRC - Residential	\$ 37,588	\$ 4,812	\$ 42,401	-7.81				

2. Commercial 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 (\$)
SMART Meter Commercial Program	\$ -	\$ 1,826	\$ -1,826	0.00	0	0	0	\$ 1,826
Business Incentive Program (previou	\$ -	\$ -	\$ -	0.00	0	0	0	\$ -
Commercial (C&I) Load Control Initia	\$ 74,065	\$ 192,717	\$ -118,652	0.38	0	0	0	\$ 192,717
On-the-Bill Payment Plan Program (p	\$ -	\$ -	\$ -	0.00	0	0	0	\$ -
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 - Commercial	\$ 74,065	\$ 194,543	\$ -120,478	0.38	0	0	0	\$ 194,543
Commercial Indirect Costs not attributable to any specific program								
Total TRC Costs		\$ 194,543						
**Totals TRC - Commercial	\$ 74,065	\$ 194,543	\$ -120,478	0.38				

3. Institutional 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 (\$)
Load Displacement	\$ 59,149	\$ 560,693	\$ -501,544	0.11	41,700	834,000	36	\$ 300,008
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 J			\$ -	0.00				
*Totals App. B - Institutional	\$ 59,149	\$ 560,693	\$ -501,544	0.11	41,700	834,000	36	\$ 300,008
Institutional Indirect Costs not attributable to any specific program								
Total TRC Costs		\$ 560,693						
**Totals TRC - Institutional	\$ 59,149	\$ 560,693	\$ -501,544	0.11				

4. Industrial 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								
Stand-by Generators	\$ 28,721	-\$ 381	\$ 29,102	-75.38	0	0	0	-\$ 381
Name of Program C								
Name of Program D								
Name of Program E								
Name of Program F								
Name of Program G								
Name of Program H								
Name of Program I								
Name of Program J								
*Totals App. B - Industrial	\$ 28,721	-\$ 381	\$ 29,102	-75.38	0	0	0	-\$ 381
Industrial Indirect Costs not attributable to any specific program								
Total TRC Costs		-\$ 381						
**Totals TRC - Industrial	\$ 28,721	-\$ 381	\$ 29,102	-75.38				

5. Agricultural 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								
Name of Program C								
Name of Program D								
Name of Program E								
Name of Program F								
Name of Program G								
Name of Program H								
Name of Program I								
Name of Program J								
*Totals App. B - Agricultural	\$ -	\$ -	\$ -	0.00	0	0	0	\$ -
Agricultural Indirect Costs not attributable to any specific program								
Total TRC Costs		\$ -						
**Totals TRC - Agricultural	\$ -	\$ -	\$ -	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 (\$)
Distribution Loss Reduction	na	\$ 814	#VALUE!	0.00	0	0	0	\$ 814
Name of Program B								
Name of Program C								
Name of Program D								
Name of Program E								
Name of Program F								
Name of Program G								
Name of Program H								
Name of Program I								
Name of Program C								
*Totals App. B - LDC System	\$ -	\$ 814	\$ 814	0.00	0	0	0	\$ 814
#REF!								
Total TRC Costs		\$ 814						
**Totals TRC - LDC System	\$ -	\$ 814	\$ 814	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 (\$) → 1,884

8. 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 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 J			\$ -	0.00				
*Totals App. B - Overall Program Support Indirect Costs not attributable to any specific program	\$ -	\$ -	\$ -	0.00	0	0	0	\$ -
Total TRC Costs		\$ -						
**Totals TRC - Overall Program Support	\$ -	\$ -	\$ -	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 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 - Other #2	\$ -	\$ -	\$ -	0.00	0	0	0	\$ -
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	\$ 199,524	\$ 750,857	\$ 551,333	0.27	\$ 158,571	\$ 1,451,468	\$ 36	\$ 533,961
Any other Indirect Costs not attributable to any specific program		\$ 9,116						
TOTAL ALL LDC COSTS		\$ 759,973						
**LDC PORTFOLIO TRC	\$ 199,524	\$ 759,973	\$ 560,449	0.26				

* 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.

Appendix D - Total Life Evaluation of the CDM Plan

Table is to be completed manually by totalling the information from each year of activity

	⁵ Cumulative Totals Life-to-date	Residential	⁶ Low Income	Commercial	Institutional	Industrial	Agricultural	LDC System	⁴ Smart Meters	Overall Program Support	Other #2
Net TRC value (\$):	\$ 18,566,656	\$ 4,765,927	\$ 427,036	\$ 7,673,184	\$ -	\$ 5,700,510	\$	na	na	\$	\$
Benefit to cost ratio:	2.27	2.00	3.19	4.29	0.00	3.84		na	na		
Number of participants or units delivered:	91,575	90,832	505	227	2	8		1	751		
Lifecycle (kWh) Savings:	245,066,590	132,217,892	6,563,779	50,919,919	834,000	0		54,531,000			
Total kWh saved (kWh):	57,543,882	34,596,396	1,142,726	14,492,260	41,700	0		7,270,800			
Total peak demand saved (kW):	13,451	660	42	6,124	36	6,205		420			
Total kWh saved as a percentage of total kWh delivered (%):	0.73%	0.44%	0.01%	0.18%	0.00%	0.00%		0.09%			
Peak kW saved as a percentage of LDC peak kW load (%):	0.84%	0.04%	0.00%	0.38%	0.00%	0.39%		0.03%			
¹ Gross C&DM expenditures (\$):	\$ 8,168,372	\$ 2,380,103	\$ 168,602	\$ 1,790,512	\$ 368,976	\$ 1,483,755	\$	\$ 571,506	\$ 501,531.11	\$ 1,404,916.86	\$
² Expenditures per kWh saved (\$/kWh):	\$ 0.14195	\$ 0.07	\$ 0.15	\$ 0.12	\$ 8.85	\$ -	\$ -	\$ 0.08	\$ -	\$ -	\$ -
³ Expenditures per kW saved (\$/kW):	\$ 607.29	\$ 3,605.94	\$ 4,025.70	\$ 292.40	\$ 10,249.34	\$ 239.12	\$ -	\$ 1,360.73	\$ -	\$ -	\$ -
Utility discount rate (%):	5.99%										

¹ Expenditures are reported on cumulative basis. **Enersource's Note:** Smart Meters costs are already included under Residential and Commercial costs shown, as applicable.

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

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

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

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

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