Conservation and Demand Management
2006 Annual Report

Incremental CDM Funding Approved in Rates

Ontario Energy Board File No. RP-2005-0020
Docket Number RP-2005-0020 / EB-2005-0360

April 30, 2007

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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), under the Amended Requirements for Annual Reporting of Conservation and Demand Management Initiatives, issued on March 1st 2007, which also included requirements for reporting on Incremental CDM Funding Approved in Rates[1].

This report – due April 30th, 2007 - has been prepared in accordance with the above referenced guidelines and requirements and gives an account of three Conservation and Demand Management (CDM) programs proposed by Enersource and accepted by the Board in the rate filing approved with a Decision and Order issued on April 12, 2006, under docket number RP-2005-0020/EB-2005-0360, approving distribution rates effective May 1st, 2006. The accepted CDM programs are directed to the Residential Sector.

Each of the three CDM programs was assessed for economic feasibility, using the OEB's Total Resource Cost (TRC) Test Guide[2], in its October 2006 revision.

The approved CDM programs are highlighted below:

- **Hot Water Heater Tune-up Program**

Highlights: - In 2006 we carried out 1,975 Tune-ups, between May 1st and December 31st, resulting in over 2,445,000 kWh annual energy savings.
- On a lifecycle basis, energy savings are projected at about 19,600,000 kWh.
- Summer peak demand reduction of 114 kW and winter peak demand reduction of 454 kW are also projected, based on results.
- Efficient, low flow shower heads and faucet aerators were also distributed, resulting in water savings projected at about 54,500 m^3 annually and 654,000 m^3 on a lifecycle basis.
- This initiative was screened for Total Resource Cost (TRC) cost test, yielding a projected Benefit-Cost Ratio of 3.0.
- Actual results to date show a 5.9 TRC Benefit-Cost Ratio.

- **Seasonal Light Exchange Program**

Highlights: - In 2006 we distributed over 6,300 LED light sets resulting in about 110,000 kWh annual energy savings and a winter peak demand reduction of 51 kW.

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

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

- Lifecycle energy savings are projected at about 3,275,000 kWh.
- Results to date show a TRC Benefit-Cost Ratio of 1.3 against a projected 1.1.
- Actual results would have been better, if not for unforeseen quality problems, which required a massive recall and unplanned expenses to inform the public.
- Cooperative efforts involving a major Region of Peel food bank facilitated the distribution of seasonal lights to needy customers.

- **Events Van Program**

Highlights: - The Special Events Van initiative, with its team, supports all our CDM efforts, by bringing the conservation message and means to start conserving directly to our customers.
- Between May 1st and December 31st, the team has participated at 46 events at various venues around the City, spreading the energy efficiency and conservation message among the residents of Mississauga.
- Almost 13,400 CFLs and thousands of educational and promotional items were distributed.
- Annual energy savings from distributed CFLs were calculated at over 1,460,600 kWh.
- Lifecycle energy savings are projected at over 6,280,700 kWh.
- A TRC Benefit-Cost Ratio of 2.3 was calculated based on results to date, against a projected value of 3.6.

The cumulative TRC Benefit-Cost Ratio for the three-program portfolio was calculated at 3.8, based on actual results for 2006. Projected cumulative value was 3.3.

For the above three CDM programs, by December 31st, 2006, Enersource invested approximately $500,000 that resulted in annual savings to-date of over 4 million kWh and about 30,000,000 kWh on a lifecycle basis. It should be noted that the benefits of these projects will continue to accrue in 2007 and results will further improve as deployment increases.

Enersource' CDM efforts help promote the Provincial directive to foster a ***conservation culture*** in Ontario.

1. Introduction

On April 12, 2006 the Ontario Energy Board (the Board) issued its Decision and Order (decision) in the RP-2005-0020/EB-2005-0360 proceeding, with respect to an application filed by Enersource Hydro Mississauga Inc. (Enersource), for an order or orders approving distribution rates, effective May 1st, 2006.

Among other things, that decision approved funding for three Conservation and Demand Management (CDM) Initiatives proposed by Enersource in the referenced rate filing:

- Hot Water Heater Tune-up Program
- Seasonal Light Exchange Program
- Events Van Program

This report gives an overview of the three CDM programs referenced above, an assessment of their benefits, a description of each initiative undertaken under each program and an appraisal of results to December 31st, 2006 and lessons learned.

On December 21st, 2005 the Board had issued a Guideline for Annual Reporting of CDM Initiatives that explained the requirements and timing for annual reporting of CDM initiatives. On March 1st 2007 the Board issued Amended Requirements for Annual Reporting of Conservation and Demand Management Initiatives, which also included requirements for reporting on Incremental CDM Funding Approved in Rates. This report – due April 30th, 2007 - has been prepared in accordance with the above referenced guidelines and requirements.

Further, each initiative or program was assessed for economic feasibility, using the OEB's Total Resource Cost (TRC) Test Guide - as revised in October 2006.

2. Evaluation of the CDM Plan

Following the experience with similar pilot CDM Programs previously implemented under 3rd Tranche funding, Enersource successfully implemented three programs directed to the residential customer sector:

- Hot Water Heater Tune-up Program
- Seasonal Light Exchange Program
- Events Van Program

All programs support the Provincial Government's efforts to promote a cultural shift towards energy conservation in Ontario, by increasing awareness of our customers towards this need.

Societal benefits resulting from the implementation of the above CDM initiatives are evidenced by a TRC Cost-Benefit ratio of 3.8. Economics are expected to improve moving forward towards the completion of these programs, since accruing benefits will 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 three programs is presented in Section 3. A series of Appendices also give numerical results in a table format:

Appendix A – Evaluation of the CDM Plan

- Summarizes cumulative energy savings and TRC benefits for the three programs.

Appendix B – Discussion of the Program

- Individual Programs' summary description, annual and lifecycle energy savings and benefit results are presented in a series of three appendices.

Appendix C - Program and Portfolio Totals

- Presents an overview on a portfolio basis of the three CDM Program's costs, TRC benefits, summer peak demand reduction and annual and lifecycle results for energy savings.

3. Discussion of the Programs

3.1 Residential

Hot Water Heater Tune-up Program

Description

The Water Heater Tune-up Program was created for the purpose of reducing the energy consumption by the residents of Mississauga. The Tune-ups are completed by co-op students who visit the homes of Mississauga residents who rent electric water heater tanks.

The forty-five minute appointments consist of a team of two who enter the home, wrap a thin insulation jacket around the hot water tank, install up to four compact fluorescent light bulbs, a low flow shower head, as well as a water aerator for sink taps. After each appointment is completed and questions are answered, the residents are left with some information on ways they can further reduce their energy consumption.

Target users

All residential customers, including Low Income and Social Housing customers.

Benefits

This program is geared towards reducing system peak and electricity consumption, while increasing customer awareness of the need to conserve both electricity and water, in support of a shift towards a conservation culture.

Discussion of 2006 Activities

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 an 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

- 1,975 Tune-Ups were completed between May 1st and December 31st.
- Installed or distributed to-date:
  - 1,822 Efficient Showerheads
  - 1,733 Faucet Aerators
  - 1,899 Tank Wraps (some already had water heater blankets)

    - 7,613 CFLs
    - 1,612 m of hot water tubing insulation.
- Summer peak demand reduction of 114 kW is projected.
- Winter peak demand reduction of 454 kW is projected.
- Annual energy savings are projected at over 2,445,000 kWh.
- Lifecycle energy savings are projected at about 19,600,000 kWh.
- About 54,500 m^3 of annual water savings and 654,000 m^3 on a lifecycle basis.
- Of the approved $475,000 budget, close to $245,000 were spent by December 31st, 2006.
- Actual results to date show an excellent 5.9 TRC Benefit-Cost Ratio against a projected Benefit-Cost Ratio of 3.0.

Next Steps

- The program will terminate when funding is exhausted.

LED Holiday Light Exchange Program

Description

Enersource is encouraging residents to "set free" their old incandescent holiday lighting, by exchanging them with LED strands at various special events held around the City. LED lights result in an 80% energy savings over traditional lights and help reduce winter demand.

Enersource partnered with one of the Region of Peel's largest community food banks, to deliver energy savings to the city's neediest residents during the Holiday Season.

The old lights are disposed of in an environmentally friendly manner.

Target users

All residential customers, including Low Income and Social Housing customers.

Benefits

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

Discussion of 2006 Activities

Action

- Implement an exchange campaign that encourages customers to exchange their incandescent Christmas lighting, for energy saving LED lights.
- Exchange LED lights during the Christmas season, at various special events in Mississauga.
- Partner with community food banks, to deliver energy savings to the city's neediest residents during the Holiday Season.
- Give customers energy efficiency educational information.
- Dispose of old inefficient lights in an environmentally friendly manner.

Results to Date

- Enersource distributed over 6,300 LED light sets in 2006.
- No summer peak demand reduction is attributable.
- Winter peak demand reduction of 51 kW is projected.
- Annual energy savings are projected at about 110,000 kWh.
- Lifecycle energy savings are projected at about 3,275,000 kWh.
- Results to date show a TRC Benefit-Cost Ratio of 1.3 against a projected 1.1.

Next Steps

- The funding was exhausted and the program terminated in 2006.

Special Events Van Program

Description
The Special Events Van Program was created for the purpose of educating the public about energy conservation and promoting ways for consumers to reduce their electricity bills. The program includes a team of contract students, constantly on the road with the natural gas fuelled van, interacting with the public. The van is wrapped with energy saving tips and graphics.

The team represents Enersource Mississauga at various community venues. As part of the energy efficient message, the students hand out compact fluorescent lamps and brochures.

Target Users
All residential customers, including Low Income and Social Housing customers.

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

Description of 2006 Activities

Action

- 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.
- Distribute CFL bulbs to foster the energy saving message.

Results

- Almost 13,400 CFLs and thousands of educational and promotional items were distributed, to contribute spreading the energy efficiency and conservation message among the residents of Mississauga.
- Between May 1st and December 31st, they have participated at 46 events at various venues around the City.
- Annual energy savings from distributed CFLs were calculated at over 1,460,600 kWh.
- Lifecycle energy savings are projected at over 6,280,700 kWh.
- Close to $150,000 of the approved $985,000 budget were spent.
- A TRC Benefit-Cost Ratio of 2.3 was calculated based on results to date, against a projected value of 3.6.

Next Steps

- The program will terminate when funding is exhausted.

4. Lessons Learned

The three CDM programs being reported on were delivered to the residential sector exclusively. Enersource benefited from the experience with similar CDM pilot programs, launched in 2005 under 3rd Tranche funding.

Relative to the implementation of these programs, Enersource has identified "lessons learned' in the following aspects:

- Customer decision making factors with respect to energy efficiency measures:
  - All customers showed a great interest in energy conservation.
  - All were eager to learn about energy saving opportunities.
  - Customers are most responsive when incentives or giveaways are offered.
- Customer behaviour:
  - Customers educated in energy conservation and the economic benefit of adopting CDM measures were gratified with the sense of responsibility imparted by the realization of contributing to achieving a solution to a greater problem.
  - The Water Heater Tune-up program was very successful, with numerous calls received from satisfied customers or others interested in signing up for the program.
  - Response and participation to the other two programs were equally positive.
- Opportunities and relevant constraints:
  - There was considerable support from the Peel Region food bank we partnered with, in delivering the Seasonal Lights program, because of the direct benefit to their needy clients.
  - Constraints we had to overcome:
    - After we started distribution in November, the LED strands were found to be sub-standard, presenting shock and fire hazard and had to be recalled.
    - This incident seriously affected our original program, since – besides the unplanned efforts required for informing the public and recovering the already distributed strands – it was difficult to source replacement LEDs in sufficient quantities that late in the year.
  - In a future program repeat, precautionary steps will have to be taken, including multiple suppliers, to avoid similar problems, even if at the expense of cost efficiency.
  - There has been a terrific response to the Events Van program in Mississauga, based on the number of people who engaged the students with energy conservation questions. In fact, participation

in community events throughout the City proved to be a key factor, as the events van team was able to attract crowds of customers eager to learn about energy conservation.

4.1 Comments on Program Success

Interest was noted in the residential market for techniques for saving energy. All programs were found effective to help support the Provincial Government's efforts to promote a cultural shift towards energy conservation in Ontario.

Based on results to date and confirming the experience with similar pilot CDM Programs previously implemented under 3rd Tranche funding, we feel that the current programs were successful. Full benefits started to be realized in 2006 and will continue through 2007 and beyond.

The following Table summarizes results:

	Successful? High (H) Medium (M) Low (L)	**Continue?**	**Notes**
Residential Market Sector			
Hot Water Heater Tune-up Program	Yes – H	Yes	Program could continue until exhaustion of electric water heaters' stock in Mississauga.
LED Holiday Light Exchange Program	Yes – H	Yes	Very successful, especially with low income customers. All customers were appreciative of chance to save energy.
Special Events Van Program	Yes - H	Yes	Event Van activities support all program areas and assist with marketing and promoting the conservation message.

5. Conclusions

This report gives an account of three Residential Conservation and Demand Management (CDM) programs proposed by Enersource and accepted by the Board in the rate filing approved with a Decision and Order issued on April 12, 2006, under docket number RP-2005-0020 / EB-2005-0360, approving distribution rates effective May 1st, 2006.

Based on results for the three programs to the end of December 2006, we can conclude the following:

- By December 31st 2006, Enersource invested approximately $500,000 or approximately 30% of the available funding.
- The investment resulted in annual savings of over 4 million kWh and about 30,000,000 kWh on a lifecycle basis, based on results to-date.
- The benefits of these projects will continue to accrue in 2007 and results will further improve as deployment increases.
- The effectiveness of programs' design and delivery was proven by a cumulative TRC Benefit-Cost Ratio of 3.8 for the three-program portfolio, based on actual results for 2006. The projected cumulative value was 3.3.
- The delivery of CDM Programs by Enersource created enormous awareness among the residents of Mississauga for the need to save energy and reduce consumption.
- Enersource benefited from the experience with similar CDM pilot programs, launched in 2005 under 3rd Tranche funding.
- Annual savings constitute enough electricity to power over 440 homes.

The capacity constraints facing the electricity distribution system in Ontario during periods of high demand are well known and have created a heightened sense of urgency for all users to contribute to a better management of our electricity. Enersource Hydro is committed to helping promote the shift to a culture of conservation and will work cooperatively with the Energy Board, the IESO, the Ontario Power Authority and other members of the Coalition of Large Distributors to make this happen.

Appendices

Appendix A – Evaluation of the CDM Plan

Appendix B – Discussion of the Program

- **Appendix B1 – Hot Water Heater Tune-up**
- **Appendix B2 - Seasonal Light Exchange**
- **Appendix B3 - Events Van**

Appendix C - Program and Portfolio Totals

Appendix A – Evaluation of the CDM Plan

Appendix A - Evaluation of the CDM Plan

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

	[5] Cumulative Totals Life-to-date	Total for 2006	Residential and Small Comm <50	Commercial	Institutional	Industrial	Agricultural	LDC System	[4] Smart Meters	Other #1	Otl
Net TRC value ($):	$ 1,405,343	**$ 1,405,343**	**$ 1,405,343**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**		**$ -**	**$**
Benefit to cost ratio:	3.77	3.77	3.77	0.00	0.00	0.00	0.00	0.00		0.00	
Number of participants or units delivered:	30,280	30,280	30,280								
Lifecycle (kWh) Savings:	29,136,380	29,136,380	29,136,380	0	0	0	0	0		0	
Report Year Total kWh saved (kWh):	4,014,944	4,014,944	4,014,944	0	0	0	0	0		0	
Total peak demand saved (kW):	114	114	114	0	0	0	0	0		0	
Total kWh saved as a percentage of total kWh delivered (%):	0.05%	0.05%	0.05%								
Peak kW saved as a percentage of LDC peak kW load (%):		0.01%	0.01%								
[1] *Report Year Gross C&DM expenditures ($):*	$ 508,210	$ 508,210	$ 508,210	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$
[2] *Expenditures per KWh saved ($/kWh):*	$ 0.02	$ 0.02	$ 0.02	$ -	$ -	$ -	$ -	$ -		$ -	$
[3] *Expenditures per KW saved ($/kW):*	$ 4,457.98	$ 4,457.98	$ 4,457.98	$ -	$ -	$ -	$ -	$ -		$ -	$

Utility discount rate (%):	6.07

[1] Expenditures are reported on accrual basis.
[2] Expenditures include all utility program costs (direct and indirect) for all programs which primarily generate energy savings.
[3] Expenditures include all utility program costs (direct and indirect) for all programs which primarily generate capacity savings.
[4] Please report spending related to 3rd tranche of MARR funding only. TRC calculations are not required for Smart Meters. Only actual expenditures for the year need to be reported.
[5] Includes total for the reporting year, plus prior year, if any (for example, 2006 CDM Annual report for third tranche will include 2005 and 2004 numbers, if any.

Appendix B – Discussion of the Program

Appendix B1 - Discussion of the Program

A. **Name of the Program:** **Hot Water Heater Tune-up**

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

The Water Heater Tune-up Program was created for the purpose of reducing the energy consumption within the residents of Mississauga's many communities. The Tune-ups are completed by co-op students who visit the homes of Mississauga residents who rent electric water heater tanks from Reliance Home Comfort.
The forty-five minute appointments consist of a team of two who enter the home, wrap a thin insulation jacket around the hot water tank, install up to four compact fluorescent light bulbs, a low flow shower head, as well as a water aerator for sink taps. After each appointment is completed and questions are answered, the residents are left with some information on ways they can further reduce their energy consumption.
This program is geared towards reducing system peak and electricity consumption, while increasing customer awareness of the need to conserve both electricity and water.

Measure(s):

	Water Heater Blankets	**Low Flow Showerhead**	**Compact Fluorescent Lighting**
Base case technology:	Do Nothing	Existing Showerheads (3 GPM typ.)	Incandescent Bulb
Efficient technology:	Install Tank Insulating Wrap on Electric Hot Water Heaters.	One Efficient, Low Flow Showerhead per Home Visited.	Install up to 4 Compact Fluorescent Lighting Bulbs (CFL-13W) per Home Visited.
Number of participants or units delivered for reporting year:	1899	1822	7613
Measure life (years):	6	12	4
Number of Participants or units delivered life to date	1899	1822	7613

	Aerators on Faucets	**Pipe Insulation**	
Base case technology:	Do Nothing	Do Nothing	
Efficient technology:	Aerators on Faucets	Install insulating sleaves on hot water pipes (8 ft average per water heater).	
Number of participants or units delivered for reporting year:	1,733	661	
Measure life (years):	12	6	
Number of Participants or units delivered life to date	1733	661	

B. **TRC Results:**

	Reporting Year	**Life-to-date TRC Results:**
[1] *TRC Benefits ($):*	*$ 1,433,127.63*	$ 1,433,127.63
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):		
Incremental Measure Costs (Equipment Costs)	$ 244,633.00	244,633.00
Total TRC costs:	$ 244,633.00	$ 244,633.00
Net TRC (in year CDN $):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	$ 5.86	5.86

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

Conservation Programs:

			Cumulative Results:	
Demand savings (kW):	*Summer*	114		114
	Winter	454		454
	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):	19,580,928	2,445,155	19,580,928	2,445,155
Other resources saved :				
Natural Gas (m3):				
Water (m3):	653,937	54,495		54,495

Demand Management Programs:			
Controlled load (kW)			
Energy shifted On-peak to Mid-peak (kWh):			
Energy shifted On-peak to Off-peak (kWh):			
Energy shifted Mid-peak to Off-peak (kWh):			
Demand Response Programs:			
Dispatchable load (kW):			
Peak hours dispatched in year (hours):			
Power Factor Correction Programs:			
Amount of KVar installed (KVar):			
Distribution system power factor at beginning of year (%):			
Distribution system power factor at end of year (%):			
Line Loss Reduction Programs:			
Peak load savings (kW):			
	lifecycle	*in year*	
Energy savings (kWh):			
Distributed Generation and Load Displacement Programs:			
Amount of DG installed (kW):			
Energy generated (kWh):			
Peak energy generated (kWh):			
Fuel type:			
Other Programs (specify):			
Metric (specify):			

D.	**Actual Program Costs:**		**Reporting Year**	**Cumulative Life to Date**
	Utility direct costs ($):	*Incremental capital:*		
		Incremental O&M:	$ 244,633.00	$ 244,633.00
		Incentive:		
		Total:	$ 244,633.00	$ 244,633.00
	Utility indirect costs ($):	*Incremental capital:*	0	$ -
		Incremental O&M:		
		Total:	0	$ -

E. Assumptions & Comments:

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

- 1,975 Tune-Ups were completed between May 1st and December 31st.
- Installed or distributed to-date:
  - 1,822 Efficient Showerheads
  - 1,733 Faucet Aerators
  - 1,899 Tank Wraps (water heater blankets)
  - 7,613 CFLs
  - 1,612 m of hot water tubing insulation, corresponding to 661 units of 8-ft lengths of insulation (average from OEB Measures List).
- Summer peak demand reductions of 114 kW are projected.
- Winter peak demand reductions of 454 kW are projected.
- Annual energy savings are projected at over 2,445,000 kWh.
- Lifecycle energy savings are projected at about 19,600,000 kWh.

Next Steps

- The program will terminate at the end of available 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 B2 - Discussion of the Program

A. **Name of the Program:** **Seasonal Light Exchange**

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

Enersource is encouraging residents to "set free" their old incandescent holiday lighting, by exchanging them with LED strands at various special events held around the City. LED lights result in an 80% energy savings over traditional lights and help reduce winter demand.

Enersource partnered with one of the Region of Peel's largest community food banks, to deliver energy savings to the city's neediest residents during the Holiday Season.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	5W C7 Christmas Lights	Incandescent Mini Lights	
Efficient technology:	LED Christmas (Seasonal) Light	LED Christmas (Seasonal) Light	
Number of participants or units delivered for reporting year:	3164	3164	
Measure life (years):	30	30	
Number of Participants or units delivered life to date	3164	3164	

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*	*$ 143,220.00*	143220
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	$ 113,837.27	$ 113,837.27
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	$ 113,837.27	$ 113,837.27
Net TRC (in year CDN $):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	$ 1.26	1.26

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

Cumulative Results:

Conservation Programs:

Demand savings (kW):	*Summer*	0	0
	Winter	51	51

	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):	*3274740*	109158	3274740	109158
Other resources saved :				
Natural Gas (m3):				
Other (specify):				

Demand Management Programs:

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

Demand Response Programs:

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

Power Factor Correction Programs:

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

Line Loss Reduction Programs:

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

Distributed Generation and Load Displacement Programs:

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

Other Programs (specify):

Metric (specify):		

D. **Actual Program Costs:**

		Reporting Year	Cumulative Life to Date
Utility direct costs ($):	*Incremental capital:*		
	Incremental O&M:	$ 113,837.27	$ 113,837.27
	Incentive:		
	Total:	$ 113,837.27	$ 113,837.27
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:	0	$ -

E. Assumptions & Comments:

Action

- Implement an exchange campaign that encourages customers to exchange their incandescent Christmas lighting, for energy saving LED lights.
- Exchange LED lights during the Christmas season, at various special events in Mississauga.
- Partner with community food banks, to deliver energy savings to the city's neediest residents during the Holiday Season.
- Give customers energy efficiency educational information.
- Dispose of old inefficient lights in an environmentally friendly manner.

Results to Date

- Enersource distributed over 6,300 LED light sets in 2006.
- No summer peak demand reductions attributable.
- Winter peak demand reductions of 51 kW are projected.
- Annual energy savings are projected at about 110,000 kWh.
- Lifecycle energy savings are projected at about 3,275,000 kWh.

Next Steps

- The program will terminate at the end of available 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 B3 - Discussion of the Program

A. **Name of the Program:** **Events Van**

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

The Special Events Van Program was created for the purpose of educating the public about energy conservation and promoting ways for consumers to reduce their electricity bills. The program includes a team of contract students, 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 in Mississauga. As part of the energy efficiency message, our students hand out compact fluorescent lamps and brochures as an inducement to start conserving.
The Events Van drives energy conservation awareness that will facilitate the culture change in Ontario, with respect to adopting more efficient energy consumption practices.

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:	13388		
Measure life (years):	4		
Number of Participants or units delivered life to date	13388		

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*	*$ 337,206.00*	$ 337,206.00
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	$ 149,740.00	$ 149,740.00
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	$ 149,740.00	$ 149,740.00
Net TRC (in year CDN $):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	$ 2.25	2.25

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

Cumulative Results:

Conservation Programs:

Demand savings (kW):	*Summer*	0	0
	Winter	271	271

	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):	*6280712*	1460631	6280712	1460631
Other resources saved :				
Natural Gas (m3):				
Other (specify):				

Demand Management Programs:

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

Demand Response Programs:

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

Power Factor Correction Programs:

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

Line Loss Reduction Programs:

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

Distributed Generation and Load Displacement Programs:

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

Other Programs (specify):

Metric (specify):		

D. **Actual Program Costs:**

		Reporting Year	Cumulative Life to Date
Utility direct costs ($):	*Incremental capital:*		
	Incremental O&M:	$ 149,740.00	$ 149,740.00
	Incentive:		
	Total:	$ 149,740.00	$ 149,740.00
Utility indirect costs ($):	*Incremental capital:*	0	$ -
	Incremental O&M:		
	Total:	0	$ -

E. Assumptions & Comments:

Action

■ 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.

Results

■ Almost 13,400 CFLs and thousands of educational and promotional items were distributed, to contribute spreading the energy efficiency and conservation message among the residents of Mississauga.
■ Between May 1st and December 31st, they have participated at 46 events at various venues around the City.
■ Annual energy savings from distributed CFLs were calculated at over 1,460,600 kWh.
■ Lifecycle energy savings are projected at over 6,280,700 kWh.

Next Steps

■ The program will terminate at the end of available 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 C - Program and Portfolio Totals

Appendix C - Program and Portfolio Totals

Report Year: 2006

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 ($)
Hot Water Heater Tune-up	$ 1,433,128	$ 244,633	$ 1,188,495	5.86	2,445,155	19,580,928	114	$ 244,633
Seasonal Light Exchange	$ 143,220	$ 113,837	$ 29,383	1.26	109,158	3,274,740	0	$ 113,837
Events Van	$ 337,206	$ 149,740	$ 187,466	2.25	1,460,631	6,280,712	0	$ 149,740
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 - Residential	$ 1,913,554	$ 508,210	$ 1,405,343	3.77	4,014,944	29,136,380	114	$ 508,210
Residential Indirect Costs not attributable to any specific program →								
Total Residential TRC Costs		$ 508,210						
****Totals TRC - Residential**	**$ 1,913,554**	**$ 508,210**	**$ 1,405,343**	**3.77**				

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 ($)
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 - Commercial	$ -	$ -	$ -	0.00	0	0	0	$ -
Commercial Indirect Costs not attributable to any specific program →								
Total TRC Costs		$ -						
****Totals TRC - Commercial**	**$ -**	**$ -**	**$ -**	**0.00**				

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 ($)
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 - Institutional	$ -	$ -	$ -	0.00	0	0	0	$ -
Institutional Indirect Costs not attributable to any specific program →								
Total TRC Costs		$ -						
****Totals TRC - Institutional**	**$ -**	**$ -**	**$ -**	**0.00**				

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			$ -	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 - Industrial	$ -	$ -	$ -	0.00	0	0	0	$ -
Industrial Indirect Costs not attributable to any specific program →								
Total TRC Costs		$ -						
****Totals TRC - Industrial**	**$ -**	**$ -**	**$ -**	**0.00**				

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			$ -	0.00				
Name of Program C			$ -	0.00				
Name of Program C			$ -	0.00				
Name of Program D			$ -	0.00				
Name of Program E			$ -	0.00				
Name of Program F			$ -	0.00				
Name of Program G			$ -	0.00				
Name of Program H			$ -	0.00				
Name of Program I			$ -	0.00				
Name of Program J			$ -	0.00				
**Totals App. B - 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 ($)
Name of Program A			$ -	0.00				
Name of Program B			$ -	0.00				
Name of Program C			$ -	0.00				
Name of Program D			$ -	0.00				
Name of Program E			$ -	0.00				
Name of Program F			$ -	0.00				
Name of Program G			$ -	0.00				
Name of Program H			$ -	0.00				
Name of Program I			$ -	0.00				
Name of Program C			$ -	0.00				
**Totals App. B - LDC System	$ -	$ -	$ -	0.00	0	0	0	$ -
LDC System Indirect Costs not attributable to any specific program →								
Total TRC Costs		$ -						
****Totals TRC - LDC System**	**$ -**	**$ -**	**$ -**	**0.00**				

7. Smart Meters Program

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

Report Year Gross C&DM Expenditures ($) →

8. Other #1 Programs

List each Appendix B in the cells below; Insert additional rows as required.
Note: To ensure the integrity of the formulas, please insert the additional rows in the middle of the list below.

	TRC Benefits (PV)	TRC Costs (PV)	$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures ($)
Name of Program A			$ -	0.00				
Name of Program B			$ -	0.00				
Name of Program C			$ -	0.00				
Name of Program D			$ -	0.00				
Name of Program E			$ -	0.00				
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 #1	$ -	$ -	$ -	0.00	0	0	0	$ -
Other #1 Indirect Costs not attributable to any specific program	→							
Total TRC Costs		$ -						
****Totals TRC - Other #1**	**$ -**	**$ -**	**$ -**	**0.00**				

9. Other #2 Programs

List each Appendix B in the cells below; Insert additional rows as required.
Note: To ensure the integrity of the formulas, please insert the additional rows in the middle of the list below.

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

LDC's CDM PORTFOLIO TOTALS

	TRC Benefits (PV)	TRC Costs (PV)	$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures ($)
**TOTALS FOR ALL APPENDIX B	$ 1,913,554	$ 508,210	$ 1,405,343	3.77	$ 4,014,944	$ 29,136,380	$ 114	$ 508,210
*Any **other** Indirect Costs not attributable to any specific program*	→							
TOTAL ALL LDC COSTS		$ 508,210						
****LDC' PORTFOLIO TRC**	$ 1,913,554	$ 508,210	$ 1,405,343	3.77				

* 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.