



3240 Mavis Road
Mississauga, Ontario
L5C 3K1

Tel: (905) 566-2727
Fax (905) 566-2737

November 17, 2009

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

Dear Ms. Walli:

Re: Enersource Hydro Mississauga Inc. Application for Approval and Recovery of Amounts Related to Conservation and Demand Management (EB-2009-0400)

Enclosed is the application and evidence (the "Application") submitted by Enersource Hydro Mississauga Inc. ("Enersource") for the recovery, starting May 1, 2010, of amounts related to the Lost Revenue Adjustment Mechanism ("LRAM"). The total amount is related to revenues lost during the periods May 1, 2007 to December 31, 2007 and calendar year 2008 from Conservation and Demand Management Programs funded under Third Tranche, funded through incremental funding approved in rates, and funded by the Ontario Power Authority.

If the proposed rate changes are approved by the Board, the total bill impact for a typical residential customer with a monthly consumption of 800 kilowatt hours would be an increase of \$0.48 per month over a period of eight months effective May 1, 2010 and ending December 31, 2010. Enersource seeks the Board's issuance of the final Rate Order by April 1, 2010 to ensure the implementation of this LRAM recovery by May 1, 2010.

This Application is being filed via the Board's RESS. Two hard copies of the Application will be delivered via courier to the Board.

If you have any questions or concerns with this Application, please do not hesitate to contact me at (905) 283-4098.

Sincerely,

(Original signed by)

Gia M. DeJulio
Director, Regulatory Affairs

cc. Dan Pastoric, Executive Vice-President and Chief Operating Officer
Norman Wolff, Executive Vice-President and Chief Financial Officer

I N D E X

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Manager's Summary Tab B

Schedules

Schedule 1 - Breakdown of Lost Revenues for the Periods May 1 to
December 31, 2007 and January 1 to December 31, 2008

Schedule 2 - Proposed LRAM Rate Riders

Schedule 3 – Monthly Bill Impacts of LRAM Amount for
Recovery

Attachments

Attachment A – 2006-2008 OPA Conservation Results for Enersource
Hydro Mississauga

Attachment B – Report on Independent Third Party Review by SeeLine
Group Ltd.

Attachment C - Enersource's Conservation and Demand Management
2007 Annual Report for 3rd Tranche Funding

Attachment D - Enersource's Conservation and Demand Management
2007 Annual Report for Incremental CDM Funding
Approved In Rates

Attachment E - Enersource's Conservation and Demand Management
2008 Annual Report for 3rd Tranche Funding

Attachment F - Enersource's Conservation and Demand Management
2008 Annual Report for Incremental CDM Funding
Approved In Rates

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ONTARIO ENERGY BOARD

IN THE MATTER OF the *Ontario Energy Board Act, 1998*,
S.O.1998, c.15 (Sched. B);

AND IN THE MATTER OF an application by Enersource Hydro
Mississauga Inc. for an Order or Orders pursuant to the *Ontario
Energy Board Act, 1998*, approving the recovery of amounts
related to Conservation and Demand Management activities.

A P P L I C A T I O N

1. Enersource Hydro Mississauga Inc. (“Enersource”) distributes electricity to the inhabitants of the City of Mississauga, pursuant to a distribution license (ED-2003-0017) issued by the Ontario Energy Board (the “Board” or the “OEB”), and charges Board-authorized rates (EB-2008-0171) for the distribution service it provides.
2. Pursuant to section 78 of the *Ontario Energy Board Act, 1998*, Enersource seeks an order or orders of the Board approving the recovery of amounts related to Conservation and Demand Management (“CDM”) activities.
3. This application (the “Application”) is supported by written evidence that may be amended from time to time, prior to the Board’s final decision on this Application.
4. In EB-2008-0037, the Board’s Guidelines for Electricity Distributor Conservation and Demand Management issued on March 28, 2008 (the “Board’s Guidelines”) provide information on the Board’s policies relating to CDM activities undertaken by electricity distributors in Ontario, including the review and approval of claims for Lost Revenue Adjustment Mechanism (“LRAM”) recovery associated with distributors’ CDM activities.
5. Enersource applies here for the approval to recover the total LRAM amount for the period May 1, 2007 to December 31, 2008 of \$704,377 and the related carrying costs as of December 31, 2009 of \$38,533 over a period of eight months, May 1 to December 31, 2010, for a total of \$742,910.
6. Enersource also applies to the OEB for such interim order or orders approving interim rates or other charges and accounting orders as may be appropriate or necessary.
7. This Application is supported by written evidence. This evidence may be amended from time to time as required by the OEB, or as circumstances may require.

8. The address of service for Enersource is:

Enersource Hydro Mississauga Inc.
3240 Mavis Road,
Mississauga, Ontario L5C 3K1
Attn: Gia M. DeJulio
Director, Regulatory Affairs
Tel: 905-283-4098
Fax: 905-566-2737
Email: gdejulio@enersource.com

DATED at Mississauga, Ontario, this 17th day of November, 2009.

(Original signed by)

Gia M. DeJulio
Director, Regulatory Affairs
Enersource Hydro Mississauga Inc.

Manager's Summary

1 Introduction

Enersource Hydro Mississauga Inc. ("Enersource") herewith applies to the Ontario Energy Board (the "Board" or the "OEB") for approval and recovery of historical lost revenues under the Lost Revenue Adjustment Mechanism ("LRAM") related to Conservation and Demand Management ("CDM") activities during the following periods:

- May 1, 2007 to December 31, 2007 ("Period 1"); and
- January 1, 2008 to December 31, 2008 ("Period 2").

On a combined basis, the relief sought by Enersource will result in a 0.51% increase (\$0.48 per month) in the total monthly bill of a residential customer with a monthly consumption of 800 kilowatt hours for the period, May 1 to December 31, 2010.

1.1 Basis for the Calculation of the LRAM Amount

The LRAM amount (or lost revenues) requested for recovery is related to distribution volumes (net of free rider volumes) lost during the periods May 1 to December 31, 2007 and January 1 to December 31, 2008 resulting from:

- 1 • CDM Programs funded by the Ontario Power Authority (“OPA”) and implemented
2 in 2007 and 2008:
- 3 • CDM Programs funded under Third Tranche and implemented in 2005, 2006 and
4 2007; and
- 5 • CDM Programs funded through incremental funding approved in rates and
6 implemented in 2006 and 2007.

7

8 None of the load reductions resulting from the above programs were reflected in the load
9 forecast underpinning 2007 and 2008 rates. Thus, Enersource seeks the recovery of the lost
10 revenues related to these load reductions.

11

12 Enersource seeks to recover an LRAM amount of \$704,377. Of this amount, \$190,828 is
13 related to OPA-funded programs (comprised of \$53,108 of revenues lost in Period 1 and
14 \$137,720 lost in Period 2); \$371,028 is related to Third Tranche-funded programs (comprised
15 of \$141,282 of revenues lost in Period 1 and \$229,746 lost in Period 2); and \$142,522 is related
16 to programs funded by incremental funds in rates (comprised of \$53,937 of revenues lost in
17 Period 1 and \$88,584 lost in Period 2). Combined carrying charges amount to \$38,533. The
18 total requested LRAM recovery related to all CDM activities for the period May 1, 2007 to
19 December 31, 2008 is therefore \$742,910.

1 Tab B, Schedule 1, page 1 of 5 presents the total distribution revenues lost due to CDM
2 activities for Period 1 and Period 2 broken down by rate class. It also presents a breakdown of
3 the amount by program year (2005 to 2008) and source of funding. Tab B, Schedule 1, pages 2
4 to 5 of 5 provide detailed supporting information for each program year, including information
5 on volumes lost and distribution rates that were used to calculate lost revenues.

6
7 **1.2 Previous LRAM Recovery and Rates Proceeding**

8 The LRAM amounts were last recovered in OEB proceeding EB-2007-0706 which established
9 Enersource's 2008 rates under a cost of service mechanism. In that proceeding, the Board
10 issued a rate order dated April 18, 2008 that reflected the terms of the Board-approved
11 settlement agreement ("the Settlement Agreement") among the parties to the proceeding ("the
12 Parties"). The Settlement Agreement reflected the Parties' agreement that Enersource recover
13 LRAM and SSM amounts associated with CDM activities undertaken from January 1, 2005 to
14 April 30, 2007 through a volumetric rate rider for the period May 1, 2008 to April 30, 2009. It
15 also reflected the Parties' agreement that Enersource exclude any load forecast adjustment for
16 volumes lost or forecast to be lost through Enersource's CDM activities. Given that the lost
17 volumes from CDM activities are not reflected in rates, all lost revenues attributable to CDM
18 activities after April 30, 2007, net of free ridership, are eligible for future recovery.

1.3 Authorization for Recovery

Enersource is authorized to seek recovery of LRAM amounts based on the Board's Guidelines for Electricity Distributor Conservation and Demand Management issued on March 28, 2008 (the "Board's Guidelines") in EB-2008-0037. In preparing this Application, Enersource relied upon and conformed with the Board's Guidelines. Enersource also relied upon the Board's Prescribed Interest Rates Applicable to the Approved Regulatory Accounts of Natural Gas Utilities, Electricity Distributors and Other Rate-Regulated Entities (which the Board updates quarterly) to calculate the carrying costs on the LRAM amount.

2 Summary of Application

Enersource seeks the Board's approval to recover the total LRAM amount for the period May 1, 2007 to December 31, 2008 of \$704,377 and the related carrying costs as of December 31, 2009 of \$38,533 over a period of eight months, May 1 to December 31, 2010, for a total of \$742,910. The summary and details of the LRAM amount are presented in Tab B, Schedule 1. The calculation of the carrying costs is discussed in Section 2.3.

Consistent with the Board's Decision in EB-2007-0706, Enersource proposes to recover the LRAM amount and the corresponding carrying costs by way of volumetric rate riders by rate

1 class. Enersource also requests approval for a recovery period of 8 months, from May 1 to
2 December 31, 2010.

3
4 The calculations of the rate riders are shown in Tab B, Schedule 2. Enersource has calculated
5 the volumetric rate rider per customer class using its latest forecast of 2010 load information.

6
7 **2.1 Determination of the LRAM Amounts**

8 Enersource has determined the LRAM amounts, including those pertaining to prior years' lost
9 volumes carried over to 2007 and 2008, in accordance with the Board's Guidelines in EB-
10 2008-0037 and the Board's letter dated January 27, 2009 in EB-2008-0352 which endorsed the
11 use of the OPA's Measures and Assumptions List.

12
13 As stated in the Board's Guidelines, the LRAM "is designed to compensate a distributor only
14 for unforecasted lost revenues associated with CDM activities undertaken by the distributor
15 within its licensed service area." Thus, the LRAM amount should be calculated on the basis of
16 the variances between the distribution volumes lost from CDM activities and the load forecast
17 that are used in setting rates. For the rate years 2006 to 2009, there were no adjustments made
18 to Enersource's load forecasts for the effects of CDM programs. Therefore, the entire sum of

1 the load reductions, resulting from Enersource's CDM activities from May 1, 2007 to
2 December 31, 2008 and the load reductions from CDM activities carried over from 2005, 2006
3 and January to April 2007 are eligible for LRAM treatment.

4
5 Tab B, Schedule 1, page 1 of 5 shows the Breakdown of Lost Revenues for the Periods May 1
6 to December 31, 2007 and January 1 to December 31, 2008 by rate class on a total basis, and
7 broken down by source of funding. Tab B, Schedule 1, pages 2 to 5 of 5 provide the details on
8 the LRAM amounts by Program Year from 2005 to 2008.

9
10 In calculating the LRAM amounts by rate class, the lost volumes (in kWh and kW) were
11 multiplied by the appropriate Board-approved variable distribution rates for the period.

12
13 The distribution rates used in calculating the LRAM amount were from Enersource's Board-
14 approved Tariff of Rates and Charges for the pertinent year. Each of the distribution rates used
15 to calculate lost revenues in Period 2 is a four-twelfths ("4/12") and eight-twelfths ("8/12")
16 blend of the 2007 rates and 2008 rates (both of which have an effective date of May 1).

17
18 In accordance with the Board's Guidelines, Enersource calculated the volumes lost from CDM
19 programs using the latest input assumptions at the time of the third party assessment.

1
2 For OPA-funded programs, Enersource adopted the OPA's 2006- 2008 OPA Conservation
3 Program Results - Enersource Hydro Mississauga. These results are presented in Attachment
4 A.

5
6 In its letter dated January 27, 2009, the Board "determined that it will endorse the OPA List for
7 use by distributors for the purposes of applications for new distribution rate-funded CDM
8 programs, Lost Revenue Adjustment Mechanism ("LRAM") and Shared Savings Mechanism
9 ("SSM") at this time." Consistent with this determination, Enersource used the latest OPA
10 Measures and Assumptions list to calculate lost volumes for the other CDM program measures
11 where such information was available. For CDM Program measures where lost volume
12 information was not available in the OPA list, Enersource used the latest OEB-approved Inputs
13 and Assumptions for Calculating Total Resource Cost (dated March 28, 2008). The OPA's
14 latest Measures and Assumptions and the OEB-approved Inputs and Assumptions for
15 Calculating Total Resource Cost are accessible through the following links:

16
17 http://www.powerauthority.on.ca/Page.asp?PageID=1224&SiteNodeID=483&BL_ExpandI

18 [D=](#)

19

1 [http://www.oeb.gov.on.ca/documents/cases/EB-2008-](http://www.oeb.gov.on.ca/documents/cases/EB-2008-0037/Inputs_and_Assumptions_20080328.pdf)
2 [0037/Inputs_and_Assumptions_20080328.pdf](http://www.oeb.gov.on.ca/documents/cases/EB-2008-0037/Inputs_and_Assumptions_20080328.pdf)

3
4 For custom programs where published measures were not available, Enersource used the latest
5 information based on customer-provided engineering calculations. This methodology is in
6 accordance with the Board's Guidelines and consistent with Enersource's application in EB-
7 2008-0706 which was approved by the Board.

8
9 All the lost volumes claimed by Enersource are net of free riders. For all the programs and
10 measures, Enersource calculated net lost volumes using the free-ridership adjustment factors
11 supporting the OPA's 2006-2008 OPA Conservation Program Results.

12 13 14 **2.2 Verification and Evaluation of Results**

15 As stated previously and in accordance with the Board's guidelines, Enersource calculated the
16 volumes lost from CDM programs using the latest input assumptions at the time of the third
17 party assessment.

18
19 Enersource engaged an independent third party, the SeeLine Group Ltd. ("SeeLine"), to
20 conduct an independent third party review of its 2009 LRAM savings claim relating to 2005 to

1 2008 program activity from its third tranche activity along with the 2007 to 2008 results from
2 its enrollment in OPA-funded programs. SeeLine's final report, dated October 23, 2009, stated
3 that they closely examined the annual savings (or volumes lost through CDM programs) in
4 Enersource's claim and concluded that the savings claims are justified. SeeLine's report is
5 presented in Attachment B.

6
7 At the time of the third party review, the latest available information on Enersource's CDM
8 results from the OPA was dated July 15, 2009. SeeLine's report, dated October 23, 2009, was
9 based on this OPA report. On November 6, 2009, the OPA provided a revised report on
10 Enersource's CDM results. The lost revenues calculated based on the latest OPA report is
11 lower by the nominal amount of approximately \$4,800 than the lost revenues in the previous
12 report. For this reason, Enersource believes that it is not necessary that SeeLine conduct
13 another assessment based on the latest OPA report and that SeeLine's opinion that
14 Enersource's savings claim is justified is still valid.

15
16 Further information on each of the programs is available in the following annual reports on
17 CDM which Enersource filed with the Board. The reports are listed below and are attached:

18
19 Attachment C - Enersource's Conservation and Demand Management 2007 Annual
20 Report for 3rd Tranche Funding

Attachment D - Enersource's Conservation and Demand Management 2007 Annual
Report for Incremental CDM Funding Approved In Rates

Attachment E - Enersource's Conservation and Demand Management 2008 Annual
Report for 3rd Tranche Funding

Attachment F - Enersource's Conservation and Demand Management 2008 Annual
Report for Incremental CDM Funding Approved In Rates

2.3 Carrying Costs

The total carrying cost on the LRAM amount is \$38,533 as at December 31, 2009 as shown in the table below. The amount is the cumulative amount of quarterly carrying costs starting in the third quarter of 2007. The quarterly carrying costs are equivalent to the prorated quarterly LRAM amount multiplied by the appropriate interest rate. Enersource has relied upon the Board's Prescribed Interest Rates Applicable to the Approved Regulatory Accounts of Natural Gas Utilities, Electricity Distributors and Other Rate-Regulated Entities.

	Q3 2007	Q4 2007	Q1 2008	Q2 2008	Q3 2008	Q4 2008	Q1 2009	Q2 2009	Q3 2009	Q4 2009	Total
Interest Rate	4.59%	5.14%	5.14%	4.08%	3.35%	3.35%	2.45%	1.00%	0.55%	0.55%	
Full LRAM Amount	668,481	668,481	709,247	709,247	709,247	709,247	709,247	709,247	709,247	709,247	
LRAM Amount Attracting Carrying Costs*	501,361	668,481	176,094	352,189	528,283	704,377	704,377	704,377	704,377	704,377	
Carrying Charges	\$5,753	\$8,590	\$2,263	\$3,592	\$4,424	\$5,899	\$4,314	\$1,761	\$968	\$968	\$38,533

Source: Enersource Hydro Mississauga

1 The carrying costs are presented by rate class in Tab B, Schedule 2.

2

3 **2.4 Allocation and Manner of Recovery of LRAM Amounts**

4 Enersource proposes to allocate the LRAM amount and the related carrying costs to be
5 recovered in proportion to the lost revenues attributable to the different rate classes. This
6 approach is consistent with the manner of recovery approved in EB-2007-0706.

7 Enersource also proposes that these amounts be recovered from the respective customer class
8 through volumetric rate riders calculated using its latest 2010 forecast load information.

9 The rate riders are presented in Tab B, Schedule 2.

10

11 **2.5 Rate Implementation and Bill Impacts**

12 Enersource submits that the LRAM amount and the related carrying costs totaling \$742,910
13 proposed for recovery are material to Enersource's operations and proposes to recover the total
14 amount through volumetric rate riders for the appropriate customer classes over a period of
15 eight months effective May 1, 2010 and ending December 31, 2010. Tab B, Schedule 2
16 presents the proposed rate riders by rate class. The schedule shows that the rate rider for the
17 residential class is \$0.0006/kWh.

18

1 Tab B, Schedule 3 presents the monthly bill impacts by rate class expressed as amounts and as
2 percentages. The bill impacts were calculated based on Enersource's current Board-approved
3 distribution rates, and assumes that the commodity and transmission rates are unchanged. The
4 schedule shows that the bill impact per month per customer is \$0.48 or 0.51% for the
5 residential rate class.

6
7 Enersource submits that the rate impacts arising from recovery of the amounts proposed are
8 reasonable and modest and do not warrant mitigation by way of an extended period of
9 recovery.

Lost Revenue Adjustment Mechanism

Breakdown of Lost Revenues for the Periods May 1 to December 31, 2007 and January 1 to December 31, 2008

[illegible]

			May 1 to December 31, 2007				January 1 to December 31, 2008					Total 2007 and 2008 Lost Revenues
Line			Amounts by CDM Program Year			2007 Total Lost Revenues	Amounts by CDM Program Year				2008 Total Lost Revenues	
No.	Rate Class		2005 ⁽¹⁾	2006 ⁽²⁾	2007 ⁽³⁾		2005 ⁽¹⁾	2006 ⁽²⁾	2007 ⁽³⁾	2008 ⁽⁴⁾		
			(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
1	All Programs											
2	Residential		\$ 14,546	\$ 126,298	\$ 91,255	\$ 232,099	\$ 22,605	\$ 196,274	\$ 164,972	\$ 18,574	\$ 402,426	\$ 634,525
3	GS <50 kW		\$ 498	\$ 2,620	\$ 159	\$ 3,277	\$ 631	\$ 3,323	\$ 222	\$ 796	\$ 4,972	\$ 8,249
4	GS 50-499 kW		\$ -	\$ 2,992	\$ 3,913	\$ 6,905	\$ -	\$ 6,440	\$ 10,050	\$ 11,548	\$ 28,038	\$ 34,943
5	GS 500-4,999 kW		\$ -	\$ 255	\$ 5,791	\$ 6,046	\$ -	\$ 654	\$ 14,983	\$ 4,566	\$ 20,203	\$ 26,249
6	Large Users >5,000 kW		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 412	\$ 412	\$ 412
7		Grand Total	\$ 15,044	\$ 132,165	\$ 101,118	\$ 248,327	\$ 23,237	\$ 206,691	\$ 190,227	\$ 35,896	\$ 456,050	\$ 704,377
8	Breakdown of Totals by Source of Funding											
9	OPA-Funded Programs											
10	Residential		\$ -	\$ -	\$ 51,309	\$ 51,309	\$ -	\$ -	\$ 102,178	\$ 14,526	\$ 116,704	\$ 168,013
11	GS <50 kW		\$ -	\$ -	\$ 18	\$ 18	\$ -	\$ -	\$ 32	\$ 796	\$ 828	\$ 847
12	GS 50-499 kW		\$ -	\$ -	\$ 1,672	\$ 1,672	\$ -	\$ -	\$ 5,080	\$ 9,733	\$ 14,813	\$ 16,485
13	GS 500-4,999 kW		\$ -	\$ -	\$ 109	\$ 109	\$ -	\$ -	\$ 397	\$ 4,566	\$ 4,962	\$ 5,072
14	Large Users >5,000 kW		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 412	\$ 412	\$ 412
15		Total for OPA-Funded Programs	\$ -	\$ -	\$ 53,108	\$ 53,108	\$ -	\$ -	\$ 107,687	\$ 30,033	\$ 137,720	\$ 190,828
16	Third Tranche-Funded Programs											
17	Residential		\$ 14,546	\$ 110,534	\$ 1,773	\$ 126,854	\$ 22,605	\$ 171,776	\$ 2,756	\$ -	\$ 197,137	\$ 323,991
18	GS <50 kW		\$ 498	\$ 2,620	\$ 141	\$ 3,259	\$ 631	\$ 3,323	\$ 189	\$ -	\$ 4,144	\$ 7,402
19	GS 50-499 kW		\$ -	\$ 2,992	\$ 2,241	\$ 5,233	\$ -	\$ 6,440	\$ 4,970	\$ 1,815	\$ 13,225	\$ 18,458
20	GS 500-4,999 kW		\$ -	\$ 255	\$ 5,682	\$ 5,937	\$ -	\$ 654	\$ 14,587	\$ -	\$ 15,240	\$ 21,177
21	Large Users >5,000 kW		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
22		Total for Third Tranche-Funded Programs	\$ 15,044	\$ 116,401	\$ 9,837	\$ 141,282	\$ 23,237	\$ 182,193	\$ 22,502	\$ 1,815	\$ 229,746	\$ 371,028
23	Incremental Funding-Funded Programs											
24	Residential		\$ -	\$ 15,764	\$ 38,173	\$ 53,937	\$ -	\$ 24,498	\$ 60,038	\$ 4,048	\$ 88,584	\$ 142,522
25	GS <50 kW		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
26	GS 50-499 kW		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
27	GS 500-4,999 kW		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
28	Large Users >5,000 kW		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
29		Total for Incremental Funding-Funded Programs	\$ -	\$ 15,764	\$ 38,173	\$ 53,937		\$ 24,498	\$ 60,038	\$ 4,048	\$ 88,584	\$ 142,522

Lost Volumes and Revenues for 2005 CDM Program Year

[illegible]

Lost Volumes and Revenues for 2006 CDM Program Year

(2)	Each of the distribution rates used to calculate lost revenues in 2008 is a four-twelfths ("4/12") and eight-twelfths ("8/12") blend of the 2007 rates and 2008 rates (both of which have an effective date of May 1).
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[illegible]

Line No.	Funding Mechanism/ Program/Rate/ Rate Class	2007 Lost Volumes Carried Over to Year ⁽¹⁾				Distribution Rates				Lost Revenues		
		2007		2008		2007		2008 ⁽²⁾		2007	2008	Total
		(kWh)	(kW)	(kWh)	(kW)	(\$/kWh)	(\$/kW)	(\$/kWh)	(\$/kW)	(i) = [(a) x (e)] + (b) x (f)]	(j) = [(c) x (g)] + (d) x (h)]	(k) = (i) + (j)
1	OPA-Funded Programs											
2	Residential											
3	Summer Savings	1,897,088	2	2,845,632	1,581							
4	OPA Refrigerator Retirement Program	286,076	31	429,115	47							
5	Retailer (EKC) Program	2,196,271	86	5,245,870	201							
6	Residential DR Load Control	242,970	234	364,455	350							
7	Subtotal for Residential Class	4,622,405	352	8,885,072	2,179	0.0111		0.0115		51,309	102,178	153,487
8	GS <50 kW											
9	Electricity Retrofit Incentive Program	1,214	2	2,571	3	0.0149		0.0126		18	32	50
10	GS 50-499 kW											
11	Electricity Retrofit Incentive Program	65,153	48	137,970	101		4.39		4.1995	1,672	5,080	6,752
12	GS 500-4,999 kW											
13	Electricity Retrofit Incentive Program	92,794	8	196,504	17	1.6906			1.9289	109	397	506
14	Large Users >5,000 kW											
15	Electricity Retrofit Incentive Program	-	-	-	-	2.7937		2.8332		-	-	-
16	Total for OPA-Funded Programs	4,781,566	409	9,222,117	2,301					53,108	107,687	160,795
17	Third Tranche-Funded Programs											
18	Residential											
19	Water Heater Tune Up											
20	LED Seasonal Lights Exchange											
21	Events Van Program											
22	OPA Refrigerator Retirement Program											
23	Retailer (EKC) Program											
24	Residential DR Load Control	159,760	154	239,639	230							
25	Subtotal for Residential Class	159,760	154	239,639	230	0.0111		0.0115		1,773	2,756	4,529
26	GS <50 kW											
27	Social Housing	711	0	1,898	0							
28	Leveraging Energy Conservation (BIP)											
29	On-the-Bill (Financing) Payment Plan	8,758	2	13,136	4							
30	Subtotal for GS <50 kW Class	9,469	2	15,034	4	0.0149		0.0126		141	189	331
31	GS 50-499 kW											
32	CFL-23W Exchange - Retrofit of Res. Buil	57,291	2	152,775	6							
33	CFL-13W Exchange - Retrofit of Res. Buil	8,668	0	23,115	1							
34	On-the-Bill (Financing) Payment Plan	366,124	61	549,186	92							
35	Subtotal for GS 50-499 kW	432,083	64	725,076	99	4.39		4.1995		2,241	4,970	7,211
36	GS 500-4,999 kW											
37	Leveraging Energy Conservation (BIP)	3,495,001	420	5,242,502	630							
38	Load Control Initiative (DR)			-	-							
39	DE - Stand-by Generators			-	-							
40	Subtotal for GS 500-4,999 kW	3,495,001	420	5,242,502	630	1.6906		1.9289		5,682	14,587	20,269
41	Large Users >5,000 kW											
42	EB-2007Subtotal for Large Users >5,000 kW	-	-	-	-	2.7937		2.8332		-	-	-
43	EB-2009-0400, Tab B, Schedule 1, page 3 of 5.											
43	EB/ Total for Third Tranche-Funded Programs	4,096,313	640	6,222,252	963					9,837	22,502	32,339
43	EB-2009-0400, Tab B, Schedule 1, page 5 of 5.											
44	Incremental Funding-Funded Programs											
45	Residential											
46	Water Heater Tune Up	1,263,286	92	1,854,981	112							
47	LED Seasonal Lights Exchange	-	-	-	-							
48	Bulb Drop Program (Events Van) CFL-13W	2,175,738	48	3,365,719	75							
49	Total for Incremental Funding-Funded Program	3,439,024	141	5,220,700	187	0.0111		0.0115		38,173	60,038	98,211
50	Total	12,316,902	1,190	20,665,069	3,451					101,118	190,227	291,346
Notes:												
(1)	The 2007 volumes are applicable to the period May 1 to December 31, 2007. The lost volume calculations reflect the staggered nature of volume losses during the year, being the first year of program implementation. Thus, the 2007 volumes shown are lower than the fully effective volumes reflected in the independent third party report. The 2007 lost volumes are carried over to 2008 at their fully effective levels as presented in the independent third party report.											
(2)	Each of the distribution rates used to calculate lost revenues in 2008 is a four-twelfths ("4/12") and eight-twelfths ("8/12") blend of the 2007 rates and 2008 rates (both of which have an effective date of May 1).											

	<u>Enersource Hydro Mississauga Inc.</u>
	Lost Revenue Adjustment Mechanism
	<u>Lost Volumes and Revenues for 2008 CDM Program Year</u>

Line No.	Funding Mechanism/ Program/Rate/ Rate Class	Lost Volumes ⁽¹⁾		Distribution Rates ⁽²⁾		Lost Revenues
		2008		2008		2008
		(kWh)	(kW)	(\$/kWh)	(\$/kW)	(\$)
		(a)	(b)	(c)	(d)	(e) = [(a) x (c)] + (b) x (d)]
1	OPA-Funded Programs					
2	Residential					
3	Summer Sweepstakes	486,643	124			
4	OPA Refrigerator Retirement Program	632,247	67			
5	Retailer (EKC) Program	-	-			
6	Residential DR Load Control	144,213	626			
7	Subtotal for Residential Class	1,263,103	817	0.0115		14,526
8	GS <50 kW					
9	Electricity Retrofit Incentive Program	63,177	1	0.0126		796
10	GS 50-499 kW					
11	Electricity Retrofit Incentive Program	779,780	193		4.1995	9,733
12	GS 500-4,999 kW					
13	Electricity Retrofit Incentive Program	1,346,565	197		1.9289	4,566
14	Large Users >5,000 kW					
15	Electricity Retrofit Incentive Program	-	12		2.8332	412
16	Total for OPA-Funded Programs	3,452,625	1,221			30,033
17	Third Tranche-Funded Programs					
18	Residential					
19	Subtotal for Residential Class	-	-	0.0115		-
20	GS <50 kW					
21	Social Housing					
22	Leveraging Energy Conservation (BIP)					
23	On-the-Bill (Financing) Payment Plan					
24	Subtotal for GS <50 kW Class	-	-	0.0126		-
25	GS 50-499 kW					
26	Social Housing-Erin Court Co-Op Homes	75,356	9			
27	Social Housing-Tomken Grove Non-Profit	25,883	5			
28	On-the-Bill (Financing) Payment Plan	-	-			
29	DE - Load Displacement	25,541	22			
30	Subtotal for GS 50-499 kW	126,781	36		4.1995	1,815
31	GS 500-4,999 kW					
32	Leveraging Energy Conservation (BIP)					
33	Load Control Initiative (DR)					
34	Subtotal for GS 500-4,999 kW	-	-		1.9289	-
35	Large Users >5,000 kW					
36	Subtotal for Large Users >5,000 kW	-	-		2.8332	-
37	Total for Third Tranche-Funded Programs	126,781	36			1,815
38	Incremental Funding-Funded Programs					
39	Residential					
40	Water Heater Tune Up	-	-			
41	EB-2009 LED Seasonal Lights Exchange	-	-			
42	EB-2009 Bulb Drop Program (Events Van) CFL-13W	352,041	4			
43	EB-2009-0400, Tab B, Schedule 1, page 4 of 5.					
43	EB- Total for Incremental Funding-Funded Programs	352,041	4	0.0115		4,048
44	Total	3,931,446	1,261			35,896
Notes:						
(1)	The volumes reflect the staggered nature of volume losses during the year, being the first year of program implementation. Thus, the volumes shown are lower than the fully effective volumes reflected in the independent third party report.					
(2)	Each of the distribution rates used to calculate lost revenues in 2008 is a four-twelfths ("4/12") and eight-twelfths ("8/12") blend of the 2007 rates and 2008 rates (both of which have an effective date of May 1).					

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EB-2009-0400

Tab B

Schedule 2

Page 1 of 2

Enersource Hydro Mississauga Inc.
Lost Revenue Adjustment Mechanism
Proposed LRAM Rate Riders
For the Period May 1 to December 31, 2010

<u>Line No.</u>	<u>Rate Class</u>	<u>Billing Units</u>	<u>LRAM Amount for Recovery ⁽¹⁾</u>	<u>Carrying Costs ⁽²⁾</u>	<u>Total Amount for Recovery</u>	<u>Forecast Load ⁽³⁾</u>	<u>LRAM Rate Rider per Billing Unit</u>
1	Residential	kWh	\$ 634,525	\$ 34,712	\$ 669,237	1,052,845,389	\$ 0.0006
2	General Service < 50 kW	kWh	\$ 8,249	\$ 451	\$ 8,700	432,486,304	\$ -
3	General Service 50 to 499 kW	kW	\$ 34,943	\$ 1,912	\$ 36,854	4,285,804	\$ 0.0086
4	General Service 500 to 4,999 kW	kW	\$ 26,249	\$ 1,436	\$ 27,685	3,306,514	\$ 0.0084
5	Large Users > 5000 kW	kW	\$ 412	\$ 23	\$ 435	1,212,554	\$ 0.0004
6	Total		<u>\$ 704,377</u>	<u>\$ 38,533</u>	<u>\$ 742,910</u>		

Notes:

(1) EB-2009-0400, Tab B, Schedule 1, Page 1.

(2) The total amount of carrying cost in EB-2009-0400, Tab B is prorated based on the LRAM amount for recovery.

(3) Forecast load for the period May 1 to December 31, 2010.

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EB-2009-0400

Tab B

Schedule 3

Page 1 of 2

Enersource Hydro Mississauga Inc.
Lost Revenue Adjustment Mechanism
Monthly Bill Impacts of LRAM Amount for Recovery
For the Period May 1 to December 31, 2010

Line					Monthly Bill Impact	
No.	Rate Class	LRAM Rate Rider ⁽¹⁾	Monthly Volume ⁽²⁾		\$	%
1	Residential	\$ 0.0006	800	kWh	\$ 0.48	0.51%
2	General Service < 50 kW	\$ -	10,000	kWh	\$ -	0.00%
3	General Service 50 to 499 kW	\$ 0.0086	350	kW	\$ 3.01	0.03%
4	General Service 500 to 4,999 kW	\$ 0.0084	940	kW	\$ 7.90	0.02%
5	Large Users > 5000 kW	\$ 0.0004	15,000	kW	\$ 6.00	0.00%

Note:

(1) EB-2009-0400, Tab B, Schedule 2.

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EB-2009-0400
Tab B
Attachment A

2006-2008 OPA Conservation Results for Enersource Hydro Mississauga

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From: James Yue [mailto:James.Yue@powerauthority.on.ca]
Sent: November 6, 2009 9:05 PM
To: Antonio Galati; Michael Gemin; Sabrina Scott; Gia DeJulio
Cc: Raegan Bunker
Subject: 2006-8 OPA Conservation Program Results - Enersource



November 6, 2009

Re: Estimated allocation of 2006-2008 provincial conservation results to Local Distribution Company service territories - update to July 2009 report

Dear Antonio, Michael and Sabrina & Gia:

The Ontario Power Authority (OPA) is pleased to provide the enclosed report as an update to the Conservation and Demand Management (CDM) Program Results Data report which was distributed to LDCs on July 14, 2009.

About this report

Two updates have been made to the report circulated in July:

- preliminary results for 2008 programs have been updated based on final results of OPA's 2008 conservation programs now that the evaluation process is complete.
- statistics from the recently published 2008 OEB Yearbook of Electricity Distributors have been used for allocation of 2008 provincial results.

No changes have been made to the 2006 or 2007 provincial program results or the estimated allocation of 2006 and 2007 results to individual LDC service territories. All results presented herein are considered final.

The results provided in the enclosed report are in accordance with current OPA practices and policies for reporting progress against the provincial conservation goals. Demand Response initiatives, for example, are reported based on the total DR resources that were available (based on contracted nameplate capacity) rather than the actual demand reduction which occurred at the one-hour system peak in 2008. Additionally, customer based generation resources shown for the Renewable Energy Standard Offer Program are based on total contracts signed in each year, rather than in-service date.

The OPA welcomes inquiries regarding the estimation province-wide results and/or allocation of these CDM program results to individual LDC territories, however it is unable to provide any technical or regulatory advice to LDCs regarding specific treatment of these OPA funded program savings for the purposes of Lost Revenue Adjustment

Mechanism or other filings by LDCs to the Ontario Energy Board (OEB). Such inquiries should be directed to the OEB.

Allocation methodologies

As described in the memo distributed July 3, 2009, the OPA has used four distinct methodologies to estimate the allocation of provincial savings to individual LDC service territories, depending on the conservation program type:

- LDC delivered programs: Savings were allocated based on participation data that was tracked by individual LDCs.
- Third-party (non-LDC) delivered programs:
 - Where geographic participant data was readily available, savings were allocated to corresponding LDC territory.
 - Where geographic participation was not readily available, savings were allocated based on each LDC's share of the provincial energy consumption for the customer class targeted by the program, based on data from the Ontario Energy Board Yearbook of Electricity Distributors for the respective year the program was delivered. For example, if an LDC has 10% of the residential energy consumption of Ontario in 2008, they would be allocated 10% of the savings from the 2008 province wide Every Kilowatt Counts Power Savings Event retail coupon initiative (as it is delivered by third party and does not include LDC-specific participant data).
- Programs run exclusively in Toronto: All energy and demand savings were allocated to Toronto Hydro.

The specific allocation methodology that was used for each conservation initiative in 2006 through 2008 is summarized in a table at the end of this memo.

Report structure

The structure of the enclosed spreadsheet-based report is unchanged from the previous version. It includes the following tabs:

- 1) **Summary:** Provides a portfolio-level summary of the annual resources savings (MW and MWh, net and gross for each) for the 2006, 2007 and 2008 program portfolios. The summary includes both province wide results, as well as the estimated share of those results which occurred in your LDC service territory.
- 2) **Annual net demand savings – LDC:** Provides a stacked bar graph of the annual net summer peak demand savings (MW) that are estimated to occur within your service territory from 2006 through 2032, as a result of 2006, 2007 and 2008 programs.
- 3) **Annual net energy savings – LDC:** Provides a stacked bar graph of the annual net energy savings (MWh) that are estimated to occur within your service territory from 2006 through 2032, as a result of 2006, 2007 and 2008 programs.
- 4) **Annual net demand savings – Prov:** Provides a stacked bar graph of the annual net summer peak demand savings (MW) that are estimated to occur across the province from 2006 through 2032, as a result of 2006, 2007 and 2008 programs.

- 5) **Annual net energy savings – Prov:** Provides a stacked bar graph of the annual net energy savings (MWh) that are estimated to occur across the province from 2006 through 2032, as a result of 2006, 2007 and 2008 programs.
- 6) **Initiative level:** Provides a breakdown of the portfolio-level summary information provided in Summary tab, by individual initiative and year.
- 7) **Measures:** For each initiative in each year, this tab provides (where available): per unit savings assumptions (summer peak demand savings, annual energy savings, effective useful life), net-to-gross adjustment factors, and participation numbers (provincial and estimated share for your LDC service territory).
- 8) **Local Distribution Companies:** includes the OEB-Year Book data that was used for results allocation amongst LDCs.

Third party evaluation reports

If you would like to receive a copy of the third-party impact evaluation reports for 2007 third-party program evaluations (Great Refrigerator Roundup, Cool Savings Rebate, Summer Savings and Every Kilowatt Counts) please send a request to james.yue@powerauthority.on.ca. Third-party impact evaluation reports for 2008 are currently being finalized and LDCs will be notified once they are available.

We hope that you find this report both informative and useful. If you have any questions, please do not hesitate to contact us.

With kind regards,

Raegan Bunker
Manager, Conservation Portfolio

Sent on behalf by,

James Yue

Analyst – Conservation Portfolio

Conservation and Sector Development

Ontario Power Authority

120 Adelaide Street West

Suite 1600

Toronto ON M5H 1T1

Tel: 416.969.6217

Fax: 416.967.1947

Email: james.yue@powerauthority.on.ca

Web: www.powerauthority.on.ca

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OPA Conservation & Demand Management Programs

Initiative Results

For: Enersource Hydro Mississauga Inc.

#	Initiative Name	Program Name	Program Year	Results Status	Allocation Methodology	Net Summer Peak Demand Savings (MW)				Net Annual Energy Savings (MWh)				Gross Summer Peak Demand Savings (MW)				Gross Annual Energy Savings (MWh)			
						2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009
1	2006 Every Kilowatt Counts (spring)	Consumer	2006	Final	2006 LDC Residential Energy Throughput	0.04	0.04	0.04	0.04	5,443	5,443	5,443	5,443	0.04	0.04	0.04	0.04	6,047	6,047	6,047	6,047
2	2006 Cool Savings Rebate Program	Consumer	2006	Final	2006 LDC Residential Energy Throughput	0.42	0.42	0.42	0.42	415	415	415	415	0.47	0.47	0.47	0.47	461	461	461	461
3	2006 Secondary Fridge Retirement Pilot	Consumer	2006	Final	2006 LDC Residential Energy Throughput	0.05	0.05	0.05	0.05	223	223	223	223	0.06	0.06	0.06	0.06	248	248	248	248
4	2006 Every Kilowatt Counts (fall)	Consumer	2006	Final	2006 LDC Residential Energy Throughput	0.13	0.13	0.13	0.13	8,829	8,829	8,829	8,829	0.15	0.15	0.15	0.15	9,810	9,810	9,810	9,810
6	2006 Demand Response 1	Industrial, Business	2006	Final	2006 LDC Non-Residential Energy Throughput	22.03	22.03	22.03	0.00	0	0	0	0	22.03	22.03	22.03	0.00	0	0	0	0
2006 Subtotal						22.68	22.68	22.68	0.64	14,910	14,910	14,910	14,910	23	23	23	1	16,566	16,566	16,566	16,566
7	2007 Great Refrigerator Roundup	Consumer	2007	Final	LDC Participation	0.00	0.05	0.05	0.05	0	429	429	429	0.00	0.11	0.11	0.11	0	1,064	1,064	1,064
8	2007 Cool Savings Rebate	Consumer	2007	Final	2007 LDC Residential Energy Throughput	0.00	0.79	0.79	0.79	0	1,199	1,199	1,199	0.00	1.58	1.58	1.58	0	2,283	2,283	2,283
9	2007 Aboriginal – Pilot	Consumer	2007	Final	LDC Participation	0.00	0.00	0.00	0.00	0	0	0	0	0.00	0.00	0.00	0.00	0	0	0	0
10	2007 Every Kilowatt Counts	Consumer	2007	Final	2007 LDC Residential Energy Throughput	0.00	0.20	0.18	0.18	0	5,246	5,182	5,182	0.00	0.29	0.26	0.26	0	7,436	7,320	7,320
11	2007 peaksaver®	Consumer, Business	2007	Final	LDC Participation	0.00	0.43	0.43	0.43	0	0	0	0	0.00	0.48	0.48	0.48	0	0	0	0
12	2007 Summer Savings	Consumer	2007	Final	Evaluation Contractor Determined	0.00	1.58	1.58	0.00	0	2,846	2,846	0	0.00	13.17	13.17	0.00	0	23,714	23,714	0
13	2007 Affordable Housing – Pilot	Consumer	2007	Final	LDC Participation	0.00	0.00	0.00	0.00	0	0	0	0	0.00	0.00	0.00	0.00	0	0	0	0
14	2007 Social Housing – Pilot	Consumer	2007	Final	2007 LDC Residential Energy Throughput	0.00	0.06	0.06	0.06	0	473	473	473	0.00	0.06	0.06	0.06	0	473	473	473
15	2007 Energy Efficiency Assistance for Houses – Pilot	Consumer	2007	Final	LDC Participation	0.00	0.01	0.01	0.01	0	14	14	14	0.00	0.01	0.01	0.01	0	14	14	14
16	2007 Toronto Comprehensive	Business	2007	Final	LDC Participation	0.00	0.00	0.00	0.00	0	0	0	0	0.00	0.00	0.00	0.00	0	0	0	0
17	2007 Electricity Retrofit Incentive Program	Business	2007	Final	LDC Participation	0.00	0.12	0.12	0.12	0	337	337	337	0.00	0.13	0.13	0.13	0	374	374	374
18	2007 Demand Response 1	Industrial, Business	2007	Final	2007 LDC Non-Residential Energy Throughput	0.00	4.11	4.11	0.00	0	0	0	0	0.00	4.11	4.11	0.00	0	0	0	0
19	2007 Other Demand Response	Industrial, Business	2007	Final	2007 LDC Non-Residential Energy Throughput	0.00	2.11	2.11	0.00	0	0	0	0	0.00	2.11	2.11	0.00	0	0	0	0
20	2007 Renewable Energy Standard Offer	Consumer, Business, Industrial, Low-Income	2007	Final	LDC Participation	0.00	0.03	0.03	0.03	0	33	33	33	0.00	0.03	0.03	0.03	0	33	33	33
2007 Subtotal						0.00	9.49	9.47	1.67	0	10,577	10,513	7,667	0	22	22	3	0	35,390	35,275	11,561
21	2008 Great Refrigerator Roundup	Consumer	2008	Final	LDC Participation	0.00	0.00	0.11	0.11	0	0	1,000	1,000	0.00	0.00	0.20	0.20	0	0	1,840	1,840
22	2008 Cool Savings Rebate	Consumer	2008	Final	2007 LDC Residential Energy Throughput	0.00	0.00	0.57	0.57	0	0	906	906	0.00	0.00	1.00	1.00	0	0	1,576	1,576
23	2008 Aboriginal	Consumer	2008	Final	LDC Participation	0.00	0.00	0.00	0.00	0	0	0	0	0.00	0.00	0.00	0.00	0	0	0	0
24	2008 Summer Sweepstakes	Consumer	2008	Final	LDC Participation	0.00	0.00	0.14	0.08	0	0	542	196	0.00	0.00	0.18	0.10	0	0	695	251
25	2008 Every Kilowatt Counts Power Savings Event	Consumer	2008	Final	2007 LDC Residential Energy Throughput	0.00	0.00	0.25	0.24	0	0	4,651	4,631	0.00	0.00	0.61	0.58	0	0	11,535	11,477
26	2008 peaksaver®	Consumer, Business	2008	Final	LDC Participation	0.00	0.00	1.67	1.67	0	0	33	33	0.00	0.00	1.85	1.85	0	0	37	37
27	2008 Electricity Retrofit Incentive	Business	2008	Final	LDC Participation	0.00	0.00	0.76	0.76	0	0	4,042	4,042	0.00	0.00	1.31	1.32	0	0	7,125	7,125
28	2008 Toronto Comprehensive	Business	2008	Final	LDC Participation	0.00	0.00	0.00	0.00	0	0	0	0	0.00	0.00	0.00	0.00	0	0	0	0
29	2008 High Performance New Construction	Business	2008	Final	2007 LDC Non-Residential Energy Throughput	0.00	0.00	0.03	0.03	0	0	23	23	0.00	0.00	0.04	0.04	0	0	33	33
30	2008 Power Savings Blitz	Business	2008	Final	LDC Participation	0.00	0.00	0.00	0.00	0	0	0	0	0.00	0.00	0.00	0.00	0	0	0	0
31	2008 Chiller Plant Re-Commissioning	Business	2008	Final	LDC Participation	0.00	0.00	0.00	0.00	0	0	0	0	0.00	0.00	0.00	0.00	0	0	0	0
32	2008 Demand Response 1	Industrial, Business	2008	Final	2007 LDC Non-Residential Energy Throughput	0.00	0.00	9.76	0.00	0	0	0	0	0.00	0.00	9.76	0.00	0	0	0	0
33	2008 Demand Response 3	Industrial, Business	2008	Final	2007 LDC Non-Residential Energy Throughput	0.00	0.00	6.79	6.79	0	0	0	0	0.00	0.00	6.79	6.79	0	0	0	0
34	2008 Other Demand Response	Industrial, Business	2008	Final	2007 LDC Non-Residential Energy Throughput	0.00	0.00	0.22	0.00	0	0	0	0	0.00	0.00	0.22	0.00	0	0	0	0
35	2008 LDC Custom	Consumer, Business, Industrial, Low-Income	2008	Final	LDC Participation	0.00	0.00	0.00	0.00	0	0	0	0	0.00	0.00	0.00	0.00	0	0	0	0
36	2008 Renewable Energy Standard Offer	Consumer, Business, Industrial, Low-Income	2008	Final	LDC Participation	0.00	0.00	0.01	0.01	0	0	8	8	0.00	0.00	0.01	0.01	0	0	8	8
37	2008 Other Customer Based Generation	Consumer, Business, Industrial, Low-Income	2008	Final	LDC Participation	0.00	0.00	0.00	0.00	0	0	0	0	0.00	0.00	0.00	0.00	0	0	0	0
2008 Subtotal						0.00	0.00	20.31	10.25	0	0	11,205	10,838	0	0	22	12	0	0	22,849	22,347
Overall Total						22.68	32.16	52.45	12.56	14,910	25,486	36,628	33,415	23	45	67	15	16,566	51,956	74,690	50,475

Filed: 2009-11-17
EB-2009-0400
Tab B
Attachment B

Report on Independent Third Party Review by SeeLine Group Ltd.

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Independent Third Party Review

OF

**Enersource Hydro Mississauga Inc.'s 2005 to 2008
Conservation and Demand Management (CDM) Savings
Attributable to its Lost Revenue Adjustment Claim**

**Prepared By:
SeeLine Group Ltd.
416-703-8695**

October 23, 2009

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Executive Summary

As part of its reporting commitment to the Ontario Energy Board (OEB), Enersource Hydro Mississauga Inc. (EHM) engaged SeeLine Group Ltd. (SeeLine) to perform an independent third party review of its 2005 to 2008 Conservation and Demand Management (CDM) results. These results constitute the basis for a Lost Revenue Adjustment Mechanism (LRAM) claim attributable to CDM achievements from its third tranche of Market Adjustment Revenue Requirement (MARR) funding and enrollment in Ontario Power Authority (OPA) sponsored programs.

Following guidelines set forth by the OEB in its 'Guidelines for Electricity Distributor Conservation and Demand Management – Board File No. EB-2008-0037' and its letter of January 27th 2009 to all Licensed Electricity Distributors, SeeLine closely examined all inputs and assumptions relating to the reported savings, focusing on verifying the assumptions and assessing the accuracy of the assigned values. Detailed results from this exercise can be found in the report Appendices.

Given that the programs have ended and the review provides justified savings claims, no further evaluation efforts are recommended.

1.0 Introduction

In 2008 EHM completed its final year CDM activity with funding made available through the third installment of MARR and its incremental funding for 2nd generation programs. This marked the end of a four-year effort resulting in about 19.9 MW of summer peak demand and over 75 GWh in annual energy savings.

In 2006, new CDM funding and province wide programs became available through the OPA. EHM continued its support of CDM and the development of a 'culture of conservation' in the province of Ontario through its enrollment in many of the Ontario Power Authority (OPA) standard programs.

2.0 Scope

On March 28th 2007, the OEB established its ongoing role in electricity distributors (LDCs) CDM activities through its 'Guidelines for Electricity Distributor Conservation and Demand Management – Board File No.: EB-2008-0037 (the Guidelines). These Guidelines provide the framework for the review and approval of CDM spending, reporting guidelines, program evaluation, and the review and recovery of LRAM and SSM claims.

The policies set out in the Board's Guidelines lay the foundation for providing accurate CDM program reporting and has been used to guide EHM in the evaluation of its CDM achievements.

SeeLine was contracted by EHM to undertake an independent third party review of its 2009 LRAM savings claim relating to 2005 to 2008 program activity from its third tranche activity along with the 2007 to 2008 results from its enrollment in OPA sponsored programs.

This review included the following activities as outlined by the OEB in its Guidelines which state that the following be conducted by a third party:

- Provide an opinion on the cost effectiveness results that are material to the LRAM and SSM amounts proposed;
- Verify the participant levels;
- Confirm that the inputs are those posted on the Board's website. Where any inputs assumptions have changed in previous years, confirm that the input assumptions were implemented consistent with section 7.3 of the Guidelines;
- Where the distributor has varied from the input assumptions posted on the Board's website, review the reasonableness for the input assumptions used.

3.0 Findings from the Review of Savings Material to Proposed LRAM Claim

As part of this review process, SeeLine closely examined the annual savings included in EHM's LRAM claim. Results from this exercise have provided CDM saving estimates, which use appropriate input assumptions consistent with section 7.3 of the Guidelines and verified participation levels. In cases where there was unpredictability of results (for example, Load Control Initiative-DR and DE-Stand-by Generators), SeeLine recommended these savings not be included in the proposed LRAM claim. A complete list of program and savings details by year and rate class can be found in the report's Appendices.

3.1 Demand and Energy Savings

The following tables provide a summary of EHM's fully effective net savings by rate class. Note that these savings are based on a full 12-month period and have not been adjusted to reflect first year program savings.

Table 1 – Summary of EHM's 2005 Fully Effective Net Savings as Verified by SeeLine

Program	kW Savings	kWh Savings
Residential	68.3	1,965,671
GS < 50 kW	1.7	50,113
GS 50 - 499 kW	-	-
GS 500 - 4999 kW	-	-
Large Users > 5000 kW	-	-
Total	70	2,015,784

Table 2 – Summary of EHM's 2006 Fully Effective Net Savings as Verified by SeeLine

Program	kW Savings	kWh Savings
Residential	459	17,067,315
GS < 50 kW	26	263,726
GS 50 - 499 kW	128	743,664
GS 500 - 4999 kW	28	247,376
Large Users > 5000 kW	-	-
Total	641	18,322,081

Table 3 – Summary of EHM’s 2007 Fully Effective Net Savings as Verified by SeeLine

Program	kW Savings	kWh Savings
Residential	2,597	14,345,412
GS < 50 kW	7	17,605
GS 50 - 499 kW	199	863,046
GS 500 - 4999 kW	647	5,439,006
Large Users > 5000 kW	-	-
Total	3,451	20,665,069

Table 4 – Summary of EHM’s 2008 Fully Effective Net Savings as Verified by SeeLine

Program	kW Savings	kWh Savings
Residential	1,308	1,798,061
GS < 50 kW	5	93,461
GS 50 - 499 kW	720	1,298,472
GS 500 - 4999 kW	694	1,992,062
Large Users > 5000 kW	43	-
Total	2,770	5,182,056

4.0 Verification of Participation Level

As part of the detailed review of the various program results, SeeLine examined the documentation supporting the participation rates for accuracy and was satisfied with participant claims made by EHM. Detailed program participation and freeridership rates can be found in the report's Appendices.

5.0 Further Evaluation and Program Considerations

The year 2008 marked the end of EHM's CDM programs that relied on Board approved third tranche and incremental funding. With the OPA now facilitating the majority of CDM funding in Ontario, the programs identified in this review no longer exist (funded through rates) or were completed for the funding year (OPA).

Given that the programs have ended and the review indicates that the savings claims are justified, no further evaluation efforts or program enhancements are recommended.

APPENDIX A – 2005 Detailed Program Results

2005 Third Tranche Program Results									
Program/Measure	Participants	Unit kW Assumption	Unit kWh Assumption	Free Ridership	Total Annual Gross kW	Total Annual Gross kWh	Total Annual Net kW	Total Annual Net kWh	Source of Input Assumptions
Residential									
Water Heater Tune Up									
Insulation Blankets	1,200	0.019	270.0	5%	23	324,000	21.7	307,800	OEB Measure List
Piping (# of 3ft lengths):	-	0.003	38.0	10%	-	-	-	-	OPA Measure List
CFL-13W (60W):	4,800	0.000	44.9	10%	-	215,573	-	194,016	Prorated based on OPA Measure List
Aerator	3,600	0.002	22.0	10%	7	79,200	6.48	71,280	OPA Measure List
Shower Heads	1,200	0.029	377.0	10%	35	452,400	31.3	407,160	OPA Measure List
LED Seasonal Lights	11,000	0.000	13.7	5%	-	150,700	-	143,165	OPA Measure List
Events Van					-	0	-	-	OPA Measure List
CFL-13W (60W):	8,000	0.000	44.9	10%	-	359,200	-	323,280	Prorated based on OPA Measure List
Co-Branded Mass Market subtotal					65	1,581,073	59.5	1,446,701	
Retailer (EKC) Program									
CFL-13W (60W):	9,633	0.000	44.9	10%	-	432,510	-	389,259	OPA Measure List
Seasonal LED - 50% 5 WATT Christmas lights C-7(25 lights)	3,682	0.000	13.7	5%	-	50,443	-	47,921	OPA Measure List
Progr. T-Stats (Heating, Single Family Detached)	131	0.000	44.0	10%	-	5,764	-	5,188	OPA Measure List
Progr. T-Stats (Cooling, Single Family Detached)	341	0.163	138.0	10%	56	47,058	-	42,352	OPA Measure List
Timer - Outdoor Light	245	0	41.1	10%	-	10,070	-	9,063	OPA Measure List
Timer - Indoor - Light	53	0.007	219.0	10%	0	11,607	0	10,446	OPA Measure List
Timer - Indoor - Air Conditioners	54	0.174	108.0	10%	9	5,832	8	5,249	OPA Measure List
Ceiling Fans	116	0	89.8	10%	-	10,417	-	9,375	OPA Measure List
EnerGuide for Existing Homes - Space Heating	1	0	130.0	10%	-	130	-	117	OPA Measure List
Retailer EKC Program subtotal					65	573,831	9	518,970	
Total Residential					130	2,154,905	68	1,965,671	
GS <50 kW									
Social Housing									
Insulation Blankets	30	0.0190	270.0	1%	0.6	8,100	0.56	8,019	OEB Measure List
Piping (# of 3ft lengths):	66	0.0030	38.0	1%	0.2	2,508	0.20	2,483	OPA Measure List
CFL-13W (60W):	90	0.0000	44.9	1%	-	4,041	-	4,001	Prorated based on OPA Measure List
Aerator	30	0.0002	22.0	1%	0.0	660	0.01	653	OPA Measure List
Shower Heads	30	0.0290	377.0	1%	0.9	11,310	0.86	11,197	OPA Measure List
Faucet Washers	1,200	0.0001	20.0	1%	0.1	24,000	0.12	23,760	OEB Measure List
Total GS <50 kW					1.8	50,619	1.75	50,113	
Total 2005 Savings (Third Tranche)					132	2,205,524	70	2,015,784	

APPENDIX B – 2006 Detailed Program Results

2006 Third Tranche Program Results									
Program/Measure	Participants	Unit kW Assumption	Unit kWh Assumption	Free Ridership	Total Annual Gross kW	Total Annual Gross kWh	Total Annual Net kW	Total Annual Net kWh	Source of Input Assumptions
Residential									
Water Heater Tune Up									
Insulation Blankets	353	0.019	270.0	5%	6.7	95,275	6	90,511	OEB Measure List
Piping (# of 3ft lengths):	335	0.003	38.0	10%	1.0	12,734	1	11,461	OPA Measure List
CFL-20W:	573	0.000	52.6	10%	-	50,153	-	45,138	OPA Measure List
CFL-15W:	56	0.000	43.0	10%	-	2,408	-	2,167	OPA Measure List
CFL-13W:	1,117	0.000	44.9	10%	-	30,140	-	27,126	Prorated OPA Measure List
Aerator	462	0.002	22.0	10%	0.9	10,164	1	9,148	OPA Measure List
Shower Heads	392	0.029	377.0	10%	11.4	147,784	10	133,006	OPA Measure List
Events Van									
CFL-13W:	2,240	0.000	44.9	10%	-	100,576	-	90,518	Prorated OPA Measure List
Co-Branded Mass Market <i>subtotal</i>					20.0	449,234	18	409,074	
OPA Refrigerator Retirement Program					56.1	247,568	56	222,811	OPA Report, Appendix E
Retailer (EKC) Program (Spring Campaign)					39.4	6,047,238	39	5,442,514	OPA Report, Appendix E
Retailer (EKC) Program (Fall Campaign)					147.6	9,810,452	148	8,829,406	OPA Report, Appendix E
Residential Load Control	203	0.500	0.0	10%	102	-	91	-	OEB Measure List
Peaksaver Progr. T-Stats	203	0.175	182.0	10%	36	36,946		33,251	OPA Measure List
Total Residential					400	16,591,438	353	14,937,058	
GS <50 kW									
Social Housing									
Insulation Blankets	148	0.0193	270.0	1%	2.8	39,960	2.8	39,560	OPA Measure List
Piping (# of 3ft lengths):	324	0.003	38.0	1%	1.5	12,298	1.5	12,175	OPA Measure List
CFL-13W (60W):	1,132	0.000	44.9	1%	-	50,827	-	50,319	Prorated OPA Measure List
Aerator	283	0.002	22.0	1%	0.6	6,226	0.6	6,164	OPA Measure List
Shower Heads	283	0.029	377.0	1%	8.2	106,691	8.1	105,624	OPA Measure List
Faucet Washers	-	0.0001	20.0	1%	-	-	-	-	OEB Measure List
Leveraging Energy Conservation (BIP)				10%	5.6	28,317	5	25,485	Project Application
On-the-Bill (Financing) Payment Plan				10%	8.7	27,110	8	24,399	Project Application
Total GS <50 kW					27.4	271,429	26	263,726	
GS 50-499 kW									
Dec-06 Lighting Retrofit of Res. Building				1%	10.8	46,055	10.7	45,594	Project Application
Smart Meter Commercial				10%	30	459,532	27	413,579	EHM Internal Assumptions
Leveraging Energy Conservation (BIP)				10%	100	316,101	90	284,491	Project Application
Total GS 50-499 kW					141	821,688	128	743,664	
GS 500-4,999 kW									
Leveraging Energy Conservation (BIP)		na	na	10%	31	274,862	28	247,376	Project Application
Total GS 500-4,999 kW					31	274,862	28	247,376	
Large Users >5,000 kW									
Total Large Users >5,000 kW					-	-	-	-	
Total 2006 Savings (Third Tranche)					600	17,959,416	535	16,191,823	

2006 Incremental Funding Approved in Rates (2nd Generation)									
Program/Measure		Unit kW Assumption	Unit kWh Assumption	Free Ridership	Total Annual Gross kW	Total Annual Gross kWh	Total Annual Net kW	Total Annual Net kWh	Source of Input Assumptions
Residential									
Water Heater Tune Up									
Insulation Blankets	1,899	0.019	270.0	5%	36.1	512,730	34	487,094	OEB Measure List
Piping (# of 3ft lengths):	1,762	0.003	38.0	10%	5.3	66,956	5	60,260	OPA Measure List
CFL-13W:	7,614	0.000	44.9	10%	-	341,869	-	307,682	Prorated OPA Measure List
Aerator	1,733	0.002	22.0	10%	3.5	38,126	3	34,313	OPA Measure List
Shower Heads	1,822	0.029	377.0	10%	71.1	686,894	64	618,205	OPA Measure List
LED Exchange	6,277	0.000	13.7	5%	-	85,995	-	81,695	OPA Measure List
Bulb Drop Program (Events Van)						0			
CFL-13W (60W):	13,388	0.000	44.9	10%	-	601,121	-	541,009	Prorated OPA Measure List
Total 2006 Savings (Incremental Funding)					116	2,333,691	106	2,130,258	
Total 2006 Savings (CDM Portfolio)					716	20,293,107	641	18,322,081	

APPENDIX C – 2007 Detailed Program Results

2007 Third Tranche Program Results									
Program/Measure	Participants	Unit kW Assumption	Unit kWh Assumption	Free Ridership	Total Annual Gross kW	Total Annual Gross kWh	Total Annual Net kW	Total Annual Net kWh	Source of Input Assumptions
Residential									
Residential Load Control	1,463	0.175	182	10%	256.0	266,266	230	239,639	OPA Assumptions
Total Residential					256.0	266,266	230	239,639	
GS <50 kW									
Social Housing									
Insulation Blankets	1	0.019	270.0	1%	0	270	0	267	OEB Measure List
Piping (# of 3ft lengths):	1	0.003	38.0	1%	0	38	0	38	OPA Input Assumptions
CFL-13W (60W):	24	0.000	44.9	1%	-	1,078	-	1,067	OPA Input Assumptions
Aerator	7	0.002	22.0	1%	0	154	0	153	OPA Input Assumptions
Shower Heads	1	0.029	377.0	1%	0	377	0	373	OPA Input Assumptions
On-the-Bill (Financing) Payment Plan				10%	4	14,596	3.6	13,136	Project Application
Total GS <50 kW					4	16,513	4	15,034	
GS 50-499 kW									
Dec-06 Lighting Retrofit of Res. Building									
CFL-23W Exchange:									
Turtle Creek (Wawel Villa)	780	0.002	49.7	1%	2	38,766	2	38,378	OPA Input Assumptions
Clarkson Home (Wawel Villa)	475	0.002	49.7	1%	1	23,608	1	23,371	OPA Input Assumptions
Moby (Erin Court)	1,850	0.002	49.7	1%	4	91,945	4	91,026	OPA Input Assumptions
CFL-13W Exchange:	-								
Moby (Erin Court)	520	0.001	44.9	1%	1	23,348	1	23,115	Proated based on OPA Measure List
On-the-Bill (Financing) Payment Plan				10%	102	610,207	92	549,186	Project Application
Total GS 50-499 kW					109	787,874	99	725,076	
GS 500-4,999 kW									
Leveraging Energy Conservation (BIP)		na	na	10%	700	5,825,002	630	5,242,502	Project Appliaction
Load Control Initiative (DR)		na	na	0%	-	-			Project Appliaction
On-the-Bill (Financing) Payment Plan		na	na	na	-	-			
DE - Load Displacement		na	na	na					
DE - Stand-by Generators		na	na	0%	-				Project Appliaction
Total GS 500-4,999 kW					700	5,825,002	630	5,242,502	
Large Users >5,000 kW									
Total 2007 Savings (Third Tranche)					1,069	6,895,655	963	6,222,252	

2007 Incremental Funding Approved in Rates (2nd Generation)									
Program/Measure		Unit kW Assumption	Unit kWh Assumption	Free Ridership	Total Annual Gross kW	Total Annual Gross kWh	Total Annual Net kW	Total Annual Net kWh	Source of Input Assumptions
Residential									
Water Heater Tune Up									
Insulation Blankets	2,381	0.019	270.0	5%	46.0	642,870	44	610,727	OEB Measure List
Piping (# of 3ft lengths):	2,007	0.003	38.0	10%	6.0	76,261	5	68,635	OPA Assumptions
CFL-13W:	7,924	0.000	44.9	22%	-	355,876	-	277,583	OPA Assumptions
CFL-15W:	3,038	0.000	43.0	22%	-	130,634	-	101,895	OPA Assumptions
Aerator	2,715	0.002	22.0	10%	6.5	59,795	6	53,815	OPA Assumptions
Shower Heads	2,188	0.029	377.0	10%	63.5	824,807	57	742,327	OPA Assumptions
LED Exchange	-	-	-	-	-	-	-	-	
Bulb Drop Program (Events Van) CFL-13W	96,103	0.001	44.9	22%	96.1	4,315,025	75	3,365,719	OPA Assumptions
Total 2007 Savings (Incremental Funding)					218	6,405,268	187	5,220,700	
2007 OPA Program Results									
Program/Measure					Total Annual Gross kW	Total Annual Gross kWh	Total Net kW	Total Net kWh	Source of Input Assumptions
Residential									
Summer Savings				88%	13,174	23,713,598	1,581	2,845,632	OPA Report, Appendix E
OPA Refrigerator Retirement Program				60%	114	1,063,665	47	429,115	OPA Report, Appendix E
Retailer (EKC) Program				29%	292	7,435,811	201	5,245,870	OPA Report, Appendix E
Residential DR Load Control						-		-	OPA Report, Appendix E
Residential DR Load Control - Programmable Therm	2,225	0.175	182	10%	389	404,950	350	364,455	Enersource and OPA Measure List
GS <50 kW									
SC Direct Install/BLITZ Program					-	-	-	-	
GS <50 kW and All Other CI&I Rate Classes									
Electricity Retrofit Incentive Program				10%	134.8	374,495	121	337,046	OPA Report, Appendix E
Total 2007 Savings (OPA Programs)					14,104	32,992,520	2,301	9,222,118	
Total 2007 Savings (CDM Portfolio)					15,392	46,293,442	3,451	20,665,069	

APPENDIX D – 2008 Detailed Program Results

2008 Third Tranche Program Results									
Program/Measure	Participants	Unit kW Assumption	Unit kWh Assumption	Free Ridership	Total Annual Gross kW	Total Annual Gross kWh	Total Annual Net kW	Total Annual Net kWh	Source of Input Assumptions
Residential									
GS < 50 kW									
GS 50-499 kW									
Social Housing									
Erin Court Co-Op Homes									
Underground Garage Lighting Retrofit				1%	10	86,991	10	86,121	Project Application
Tomken Grove Non-Profit Housing Corp.							-	-	
Lighting Retrofit				1%	6	28,224	6	27,942	Project Application
LED Exit Lights				1%	0	1,656	0	1,639	Project Application
DE - Load Displacement				30%	36	41,700	25	29,190	Project Application
Total GS 50-499 kW					52	158,571	41	144,892	
GS 500-4,999 kW									
Large Users >5,000 kW									
Total 2008 Savings (Third Tranche)					52	158,571	41	144,892	
2008 Incremental Funding Approved in Rates (2nd Generation)									
Program/Measure		Unit kW Assumption	Unit kWh Assumption	Free Ridership	Total Annual Gross kW	Total Annual Gross kWh	Total Annual Net kW	Total Annual Net kWh	Source of Input Assumptions
Residential									
Bulb Drop Program (Events Van)									
CFL-13W (60W):	19,632	0.001	44.9	22%	19.6	881,477	15	687,552	OPA Assumptions
Total Residential					19.6	881,477	15	687,552	
Total 2008 Savings (Incremental Funding)					20	881,477	15	687,552	
2008 OPA Program Results									
Program/Measure					Total Annual Gross kW	Total Annual Gross kWh	Total Net kW	Total Net kWh	Source of Input Assumptions
Residential									
Summer Sweepstakes				30%	20	-	7	-	OPA Report
OPA Refrigerator Retirement Program				54%	153	1,656,553	70	759,322	OPA Report
Residential DR Load Control - Programmable Therm				10%	1,351	390,208	1,216	351,187	OPA Report and OPA Measures List
Total Residential							1,293	1,110,509	
GS <50 kW									
GS >50 kW and All Other CI&I Rate Classes									
Electricity Retrofit Incentive Program				30%	2,029.5	4,627,290	1,421	3,239,103	OPA Report
Total GS > 50 kW and All Other CI&I Rate Classes							1,421	3,239,103	
Total 2008 Savings (OPA Programs)					3,553	6,674,052	2,714	4,349,612	
Total 2008 Savings (CDM Portfolio)					3,625	7,714,100	2,770	5,182,057	

APPENDIX E – Excerpt from OPA Report - 2006 – 2008 OPA Conservation Results – Enersource Hydro Mississauga Inc.

OPA Conservation & Demand Management Programs

Initiative Results

For: Enersource Hydro Mississauga Inc.

#	Initiative Name	Program Name	Program Year	Results Status	Net Summer Peak Demand Savings (MW)				Net Annual Energy Savings (MWh)				Gross Summer Peak Demand Savings (MW)				Gross Annual Energy Savings (MWh)			
					2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009
1	2006 Every Kilowatt Counts (spring)	Consumer	2006	Final	0.04	0.04	0.04	0.04	5,443	5,443	5,443	5,443	0.04	0.04	0.04	0.04	6,047	6,047	6,047	6,047
2	2006 Cool Savings Rebate Program	Consumer	2006	Final	0.42	0.42	0.42	0.42	415	415	415	415	0.47	0.47	0.47	0.47	461	461	461	461
3	2006 Secondary Fridge Retirement Pilot	Consumer	2006	Final	0.05	0.05	0.05	0.05	223	223	223	223	0.06	0.06	0.06	0.06	248	248	248	248
4	2006 Every Kilowatt Counts (fall)	Consumer	2006	Final	0.13	0.13	0.13	0.13	8,829	8,829	8,829	8,829	0.15	0.15	0.15	0.15	9,810	9,810	9,810	9,810
6	2006 Demand Response 1	Industrial, Business	2006	Final	15.07	0.00	0.00	0.00	0	0	0	0	22.03	0.00	0.00	0.00	0	0	0	0
2006 Subtotal					16	1	1	1	14,910	14,910	14,910	14,910	23	1	1	1	16,566	16,566	16,566	16,566
7	2007 Great Refrigerator Roundup	Consumer	2007	Final	0.00	0.05	0.05	0.05	0	429	429	429	0.00	0.11	0.11	0.11	0	1,064	1,064	1,064
8	2007 Cool Savings Rebate	Consumer	2007	Final	0.00	0.79	0.79	0.79	0	1,199	1,199	1,199	0.00	1.58	1.58	1.58	0	2,283	2,283	2,283
9	2007 Aboriginal – Pilot	Consumer	2007	Final	0.00	0.00	0.00	0.00	0	0	0	0	0.00	0.00	0.00	0.00	0	0	0	0
10	2007 Every Kilowatt Counts	Consumer	2007	Final	0.00	0.20	0.18	0.18	0	5,246	5,182	5,182	0.00	0.29	0.26	0.26	0	7,435,811	7,320	7,320
11	2007 peaksaver®	Consumer, Business	2007	Final	0.00	0.43	0.43	0.43	0	0	0	0	0.00	0.48	0.48	0.48	0	0	0	0
12	2007 Summer Savings	Consumer	2007	Final	0.00	1.58	1.58	0.00	0	2,846	2,846	0	0.00	13.17	13.17	0.00	0	23,714	23,714	0
13	2007 Affordable Housing – Pilot	Consumer	2007	Final	0.00	0.00	0.00	0.00	0	0	0	0	0.00	0.00	0.00	0.00	0	0	0	0
14	2007 Social Housing – Pilot	Consumer	2007	Final	0.00	0.06	0.06	0.06	0	473	473	473	0.00	0.06	0.06	0.06	0	473	473	473
15	2007 Energy Efficiency Assistance for Houses – Pilot	Consumer	2007	Final	0.00	0.01	0.01	0.01	0	14	14	14	0.00	0.01	0.01	0.01	0	14	14	14
16	2007 Toronto Comprehensive	Business	2007	Final	0.00	0.00	0.00	0.00	0	0	0	0	0.00	0.00	0.00	0.00	0	0	0	0
17	2007 Electricity Retrofit Incentive Program	Business	2007	Final	0.00	0.12	0.12	0.12	0	337	337	337	0.00	0.13	0.13	0.13	0	374	374	374
18	2007 Demand Response 1	Industrial, Business	2007	Final	0.00	25.39	25.39	0.00	0	0	0	0	0.00	25.39	25.39	0.00	0	0	0	0
19	2007 Other Demand Response	Industrial, Business	2007	Final	0.00	2.11	0.00	0.00	0	0	0	0	0.00	2.11	0.00	0.00	0	0	0	0
20	2007 Renewable Energy Standard Offer	Consumer, Business, Ind	2007	Final	0.00	0.03	0.03	0.03	0	33	33	33	0.00	0.03	0.03	0.03	0	33	33	33
2007 Subtotal					0	31	29	2	0	10,577	10,513	7,667	0	43	41	3	0	35,390	35,275	11,561
21	2008 Great Refrigerator Roundup	Consumer	2008	Preliminary	0.00	0.00	0.07	0.07	0	0	759	759	0.00	0.00	0.15	0.15	0	0	1,657	1,657
22	2008 Cool Savings Rebate	Consumer	2008	Preliminary	0.00	0.00	0.57	0.57	0	0	710	710	0.00	0.00	1.00	1.00	0	0	1,237	1,237
23	2008 Aboriginal	Consumer	2008	Preliminary	0.00	0.00	0.00	0.00	0	0	0	0	0.00	0.00	0.00	0.00	0	0	0	0
24	2008 Summer Sweepstakes	Consumer	2008	Preliminary	0.00	0.00	0.01	0.00	0	0	0	0	0.00	0.00	0.02	0.00	0	0	0	0
25	2008 Every Kilowatt Counts Power Savings Event	Consumer	2008	Preliminary	0.00	0.00	0.12	0.11	0	0	1,775	1,760	0.00	0.00	0.24	0.23	0	0	2,483	2,457
26	2008 peaksaver®	Consumer, Business	2008	Preliminary	0.00	0.00	1.22	1.22	0	0	0	0	0.00	0.00	1.35	1.35	0	0	0	0
27	2008 Electricity Retrofit Incentive	Business	2008	Preliminary	0.00	0.00	1.42	1.42	0	0	3,239	3,239	0.00	0.00	2.03	2.03	0	0	4,627	4,627
28	2008 Toronto Comprehensive	Business	2008	Preliminary	0.00	0.00	0.00	0.00	0	0	0	0	0.00	0.00	0.00	0.00	0	0	0	0
29	2008 High Performance New Construction	Business	2008	Preliminary	0.00	0.00	0.01	0.01	0	0	23	23	0.00	0.00	0.01	0.01	0	0	33	33
30	2008 Power Savings Blitz	Business	2008	Preliminary	0.00	0.00	0.00	0.00	0	0	0	0	0.00	0.00	0.00	0.00	0	0	0	0
31	2008 Chiller Plant Re-Commissioning	Business	2008	Preliminary	0.00	0.00	0.00	0.00	0	0	0	0	0.00	0.00	0.00	0.00	0	0	0	0
32	2008 Demand Response 1	Industrial, Business	2008	Preliminary	0.00	0.00	0.00	0.00	0	0	0	0	0.00	0.00	0.00	0.00	0	0	0	0
33	2008 Demand Response 3	Industrial, Business	2008	Preliminary	0.00	0.00	6.39	0.00	0	0	0	0	0.00	0.00	6.39	0.00	0	0	0	0
34	2008 Other Demand Response	Industrial, Business	2008	Preliminary	0.00	0.00	2.34	0.00	0	0	0	0	0.00	0.00	2.34	0.00	0	0	0	0
35	2008 LDC Custom	Consumer, Business, Ind	2008	Preliminary	0.00	0.00	0.00	0.00	0	0	0	0	0.00	0.00	0.00	0.00	0	0	0	0
36	2008 Renewable Energy Standard Offer	Consumer, Business, Ind	2008	Preliminary	0.00	0.00	0.01	0.01	0	0	8	8	0.00	0.00	0.01	0.01	0	0	8	8
37	2008 Other Customer Based Generation	Consumer, Business, Ind	2008	Preliminary	0.00	0.00	0.00	0.00	0	0	0	0	0.00	0.00	0.00	0.00	0	0	0	0
2008 Subtotal					0	0	12	3	0	0	6,514	6,499	0	0	14	5	0	0	10,044	10,018
Overall Total					16	31	41	6	14,910	25,486	31,936	29,076	23	44	55	8	16,566	51,956	61,885	38,145

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Tab B
Attachment C

Enersource's Conservation and Demand Management 2007 Annual
Report for 3rd Tranche Funding

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**Conservation and Demand Management
2007 Annual Report**

3rd Tranche Funding

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

March 31, 2008

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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, 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 March 2007 Guideline for Annual Reporting of CDM Initiatives and presents an account of the CDM initiatives and programs started or continued by Enersource Hydro Mississauga (EHM or Enersource) in 2007.

In 2005 Enersource launched its CDM program and, by December 31st, 2007, invested approximately \$8.0M which resulted in annual savings to-date of 31.9 million kWh. The 2007 benefit-cost ratio was 2.0. Since the inception, the measured ratio is 1.74. This is because a number of the CDM programs had high up-front development costs with respect to their projected savings. The economics are expected to improve significantly, as savings are accrued against lower required expenditures every year as programs mature.

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. A total of \$264,000 of unspent funds has been identified. Enersource has re-deployed these funds to support negotiations with the OPA. Assuming these negotiations are successful, Enersource will be in a position to further re-deploy these funds to recruit new Demand Response participants.

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

Conservation and Demand Management

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

Highlights: - In 2007 we implemented measures resulting in about 21,333,000 kWh annual energy savings and a summer peak demand savings of 5.7 MW in the residential and in the CI&I sectors.

- All initiatives under the CDM programs were screened for the Total Resource Cost (TRC) cost test. We calculated an average TRC Benefit-Cost Ratio for the year of 2.0 and of 2.3 for the initiatives launched in the CI&I sector.
- The Residential & Small Commercial Sector, with a TRC of 1.4, was lower due to the higher initial development costs.
- We worked with the Ministry of Energy, the Ontario Power Authority (OPA) and 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 Ministry of Energy's commitment to the installation of 800,000 SMART meters across Ontario by 2007, Enersource installed 550 meters funded through the CDM program, in addition, Enersource installed approximately 60,000 meters in 2007.
 - There were 201 SMART Meters installed in a 186 unit residential building, converted from bulk metering to individual metering.
 - 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. This program was replaced by the OPA Energy Retrofit Incentive Program (ERIP).
 - 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.
 - Cooperative efforts continued with the City of Mississauga and the Region of Peel on the installation of renewable energy projects. These projects are expected to be completed in the second quarter of 2008.
 - Local social housing corporations, non-profit homes and co-op housing continued to benefit from our programs in 2007. The primary types of projects in 2007 were lighting retrofits.

Distribution Loss Reduction

- *Voltage Profile Management*

Highlights: - A pilot program was developed, to investigate a specific technology aimed at reducing power grid distribution losses. The pilot was completed in 2007 and report was produced. The pilot involved voltage conditioning at a distribution transformer station.

- 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.

Distributed Energy

- Load Displacement
- Stand-by Generators

Highlights: - We completed the design and development of a Demand Response Control Room, which will 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. Total summer peak dispatchable load is now 7.8 MW, including CI&I Load Control and Stand-by Generators.

- The 2007 TRC Cost-Benefit Ratios were calculated to be 3.0 for dispatched loads and 2.5 for stand-by generators.

Overall Program Support

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

Highlights: - The Special Events Van initiative, with its team, greatly supports all our CDM efforts, by bringing the conservation message and means to start conserving directly to our customers. Activities, costs and results related to this initiative were compiled under the Co-Branded Mass Market Program, significantly contributing to that program's excellent TRC Benefit-Cost Ratio of 3.54 for 2006. Funding for this program ended in April 2006. Highlights below refer to that year. 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.
- 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 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 167,000 visitors in 2006.
- Developed a governance structure, to develop processes to manage project evaluations, approvals, status tracking and results monitoring and verification.

The past three years of Conservation and Demand Management were successful for Enersource. Collaborative efforts with the Coalition of Large Distributors allowed us to launch many initiatives in a similar manner, providing for more consistent messaging in our promotional campaigns, while leveraging individual distributors' investments.

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 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 include;

1. Every Kilowatt counts

2. Fridge Round-p
3. Peak Saver
4. Energy Retrofit Incentive Program (ERIP)
5. Summer Savings

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. A total of \$264,000 of unspent funds has been identified. Enersource has re-deployed these funds to support negotiations with the OPA. Assuming these negotiations are successful, Enersource will be in a position to further re-deploy these funds to recruit new DR Room participants.

During 2007, Enersource entered into an agreement with the Ministry of Energy, in partnership with Hydro One Networks, to pilot a program to facilitate the adoption of renewable energy technologies for residential customers.

The aim of the program is 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 February 8, 2008 the Board has issued for stakeholder comments draft Guidelines for Electricity Distributor Conservation and Demand Management. On March 3rd 2008 the Board issued Requirements for Annual Reporting of Conservation and Demand Management (CDM) Initiatives. These Reporting Requirements and Excel templates for Appendix A, Appendix B, and Appendix C are available from the Board’s website¹. This report has been prepared in accordance with those guidelines and requirements.

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, 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)*
 - SMART Meter Program
 - Leveraging Energy Conservation and/or Load Management Program
 - Load Control Initiative
 - On-the-Bill Financing

Distribution Loss Reduction

- Voltage Profile Management

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

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 this third year of our CDM Plan, Enersource Hydro Mississauga successfully continued the development and implementation of programs started in 2005, reaching all market sectors.

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 2007 TRC Cost-Benefit ratio of 2.0. Economics have improved from the previous 1.35 ratio, 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.

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 LDCs, 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 2007 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 MOE 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 Ministry of Energy (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 Ministry of Energy in their 2007 advertising campaigns with David Suzuki.
- The MOE continued negotiations with HUC for ownership of the powerWISE brand. No resolution has yet been reached.

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, 2007 the PowerWISE website has received over 167,000 visitors.
- We also receive 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 Ministry of Energy, 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 developed last year by the CLD was adopted by the Ontario Power Authority 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 energy savings in Mississauga or enough electricity to power almost 1,400 homes annually (2006 data). 2007 data not yet available at time of writing.

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

Ontario Power Authority – Refrigerator Retirement Program

- This pilot program closed in 2006. The Great Refrigerator Retirement Program is now an OPA administered program.

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 activities were carried out under 3rd Tranche funding.
- 1,621 Tune-Ups were completed by April 30, 2006.
- This program continued under 2nd generation funding.
- Installed or distributed to-date:
 - 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 as a 2nd generation supplemental CDM plan and continued 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 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 in 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 as a 2nd generation supplemental CDM plan and continued in 2006-2007 under that funding mechanism.

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.
- 2006 annual energy savings from all initiatives are projected at about 14,647,000 kWh.
- Summer on-peak demand savings are projected at 472 kW and winter on-peak at 1,890 kW.
- TRC results yielded a Benefit-Cost ratio of 3.5.

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 Hydro Mississauga 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 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.

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 2007 Activities

SMART Meters – Elster MeshNetwork Pilot

Action

- No activities were carried out in 2007 under 3rd Tranche funding.
- 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 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. We are currently recruiting customer volunteers in the SMART meter pilot area to participate in this program.

- 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 behavioral 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 has now concluded.

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

Description

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.

Target users

Existing Residential customers.

Benefits

This project will create a road map for LDC 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 2007 Activities

Enersource/CLD RFP – Residential Load Control

Action

- This program is 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 neighborhood was equipped with Smart Meters, 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
 - Peak Saver
- 80 customers have signed up to-date for the Smart Metering Web Presentment Page.
- To increase customers’ awareness of their consumption, 4 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 is still at a pre-commercialization development stage and therefore is not deployable yet.
- Enersource developed a Time of Use clock designed to clearly indicate time-of-use periods. We plan to deploy them together with the distribution of the Smart Meters.
 - The Power-Down on Peak pilot project has ended and the consultant's report submitted to us. Results indicate that an average of 3.5 kW of DR capacity per household are available from the 8 homes sampled within the Smart Avenues community.
 - In order to get as many Peak Saver 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 Peak Saver programmable thermostat.
 - There have been 7 customers who have received the Peak Saver 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 are projected at 9,471 kWh and 35 kW of avoided summer peak demand. Too early to observe behavioral changes.
 - The Peak Saver/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 2007 Activities

Residential Load Control Initiative

Action

- Enersource is 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 will be encouraged to have controls installed on those devices.
- Carry out 2 Direct Mail campaigns directed to customers.

Results to Date

- 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 2 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 thermostat were installed in 2007, including seven in the Smart Avenues community, under this program funding mechanism.
- Installations continued in the second half of 2007, under a different 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 2007 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 hi-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

- A lighting retrofit project at the local Food Path facility has been completed. Enersource provided 100% grant for this lighting retrofit.
- Other 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.
- 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, 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.
- In 2007 we provided grants for two Social Housing buildings, in which lighting was retrofitted.

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 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 supports the Ministry 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.

In conjunction with appropriate rate structures, the program will encourage customers participating in the pilot program to conserve or shift energy use.

Description of 2007 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 indicate 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 2007 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

- 9 projects were pre-approved for incentives. Incentives paid to the 9 customers were \$145,000.
- The original funding for this program has been fully allocated and no more projects could be considered. The budget, however, was increased slightly

(from \$225K to \$281K). 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

- No more projects can be accepted under PBIP.
- Monitor and evaluate programs, to measure and verify savings as projects are completed.
- 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 2007 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 2 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. There were no calls for curtailment.
- Total capacity under control at the end of 2007 is over 5 MW.
- TRC Benefit-Cost Ratio was calculated at 3.0.

Next Steps

- EHM will continue to maintain the EHM DR Control Room, to allow for the dispatch of these loads, when required by the OPA and IESO.
- EHM will submit a custom application to the OPA in 2008 and seek funding to continue with this program.
- Enersource will continue to obtain signed agreements from customers, regarding demand response.
- Enersource will continue to spend the remaining 3rd tranche funding for this project until the funds are completely depleted.

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 2007 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 5 approved and funded customers, 1 declined..
- Summer peak demand savings are 115 kW.
- Annual energy savings are over 652,000 kWh.
- TRC Benefit-Cost Ratio is over 1.0.

Next Steps

- EHM 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 EHM'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 2007 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 Conservation Voltage Reduction System (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 EHM 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 2007 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 have both proposed renewable energy projects to Enersource.

- One project will demonstrate photovoltaic roof panels at a major sports centre within the City, with a capacity of 25.2 kW and projected energy savings of 29,000 kWh annually.
- The Peel Region project will be 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 in progress in 2007.
- We continued to support the customers during all phases.

Next Steps

- Continue contacts with the Region and the City to monitor and evaluate performance, once projects are operational in early 2008. Finalize TRC forecast.
- Pay out incentives, once projects have been completed and costs finalized.
- 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 2007 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 will become 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 8 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. 2.8 MW are available in summer.
- TRC results show a 2.5 Benefit-Cost ratio.

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.

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 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.

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 2007 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 Traunche funding was exhausted by the end of April 2006.
- Under 3rd Traunche, 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 Traunche 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 2nd Generation Supplemental Funding. It continued in 2007 under that funding mechanism, once approved.

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

- EHM 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
- 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.
- For large use customers: a demonstration of a direct economic benefit and, perhaps, an accompanying qualitative benefit (e.g., increased reliability through fewer interruptions).

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, EHM 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.

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. The gap resulted 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 the first two years of our program was successful. Full benefits from all our CDM Programs have started to be realized in 2006 and will continue through and beyond 2007.

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	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 LDC 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 three 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, 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. 2007 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 for 2007 improved over 2006, 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, 2007, Enersource had invested approximately \$8.0M from the original 3rd Tranche CDM funding of \$8.263M. The program resulted in annual savings to-date of 31.9 million kWh.

In 2007 the CDM Program's benefit-cost (B/C) ratio was 2.0, however the overall B/C ratio was 1.74. The economics improved as there were increased savings against lower required expenditures, as programs matured.

The improving trend is also evidenced by comparing year-to-year cost effectiveness metrics, like \$/kWh and \$/kW. They now stand at \$0.031/kWh and \$507.71/kW, while overall 2006 results were \$ 0.045/kWh and \$ 607.69/kW.

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. A total of \$264,000 of unspent funds has been identified. Enersource has re-deployed these funds to support negotiations with the OPA. Assuming these negotiations are successful, Enersource will be in a position to further re-deploy these funds to recruit new DR Room participants.

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 Ministry of Energy and the OPA.

The CLD-developed powerWISE coupon redemption retailer program was adopted by the Ontario Power Authority 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.

Since its launch, Enersource CDM Program generated annual energy savings of almost 32,000,000 kWh or enough capacity to supply 3,500 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. We have over 11 MW of dispatchable loads of which 6.2 MW is coming from stand-by clean generators.

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 Hydro is committed to enhancing a culture of conservation in the Province 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.

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.

	⁵ Cumulative Totals Life-to-date	Total for 2007	Residential and Small Comm <50	Comm Ind Inst >50 kW	Dist Loss Reduction	Dist Energy	Overall Program Support		⁴ Smart Meters	Other #1	Other #2
Net TRC value (\$):	\$ 18,438,491	\$ 4,294,705	\$ 622,143	\$ 1,678,460	\$ 47,004	\$ 3,337,028	\$ (1,389,930)	\$ -		\$ -	\$ -
Benefit to cost ratio:	1.74	2.03	1.41	2.29	0.00	100.56	0.00	0.00		0.00	0.00
Number of participants or units delivered:	103,830	59,465	59,454	5	1	5	0				
Lifecycle (kWh) Savings:	243,863,553	134,372,149	99,337,249	35,034,900	0	0	0	0		0	0
Report Year Total kWh saved (kWh):	31,927,637	21,332,945	15,507,856	5,825,089	0	0	0	0		0	0
Total peak demand saved (kW):	14,661	5,716	1,566	1,380	0	2,770	0	0		0	0
Total kWh saved as a percentage of total kWh delivered (%):	0.20%	0.27%	0.20%	0.07%							
Peak kW saved as a percentage of LDC peak kW load (%):		0.35%	0.10%	0.09%	0.00%	0.17%					
¹ Report Year Gross C&DM expenditures (\$):	\$ 7,443,792	\$ 2,806,095	\$ 702,354	\$ 727,297	-\$ 47,004	\$ 33,518	\$ 1,389,930	\$ -	\$ 9,223	\$ -	\$ -
² Expenditures per kWh saved (\$/kWh):	\$ 0.031	\$ 0.02	\$ 0.01	\$ 0.02	\$ -	\$ -	\$ -	\$ -		\$ -	\$ -
³ Expenditures per kW saved (\$/kW):	\$ 507.71	\$ 490.90	\$ 448.39	\$ 527.11	\$ -	\$ 12.10	\$ -	\$ -		\$ -	\$ -
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, 2007 CDM Annual report for third tranche will include 2006, 2005 and 2004 numbers, if any).

Appendix B - Discussion of the Program

A. **Name of the Program:** 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	56,676	1117
<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 (\$):		
Utility program cost (excluding incentives):	\$ 7,851.00	\$ 846,392.00
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	\$ 7,851.00	\$ 846,392.00
Net TRC (in year CDN \$):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	\$ -	2.94

C. Results: (one or more category may apply)	Cumulative Results:			
Conservation Programs:				
<i>Demand savings (kW):</i>				
Summer	472		624.81	
Winter	1890		1890	
	<i>lifecycle</i>	<i>in year</i>	<i>Cumulative Lifecycle</i>	<i>Cumulative Annual Savings</i>
<i>Energy saved (kWh):</i>	92,249,585	14,646,944	127,603,037	19,439,741
<i>Other resources saved :</i>				
Natural Gas (m3):				
Water (m3):	131,654	10,971		671,380

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
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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. <u>Actual Program Costs:</u>		<u>Reporting Year</u>	<u>Cumulative Life to Date</u>
Utility direct costs (\$):	Incremental capital:	\$ -	\$ 68,319.00
	Incremental O&M:	\$ 7,851.00	\$ 778,073.00
	Incentive:		
	Total:	\$ 7,851.00	\$ 846,392.00
Utility indirect costs (\$):	Incremental capital:	0	\$ -
	Incremental O&M:		
	Total:	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

- Extend the powerWISE brand to the Ministry of Energy, the OPA, Hydro One and other LDCs.
- 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 167,000 visitors since its launch.

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.

Next Steps

- This highly successful program will continue in 2007 under Supplemental Funding.

LED Holiday Light Exchange

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

Next Steps

- This program was submitted to the OEB as a 2nd generation supplemental CDM plan and continued in 2006 under that funding mechanism.

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

- Continue the program 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.

Next Steps**■ Continue the program for 2006.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

Next Steps

- Similar coupons distributions are planned for 2007.
- 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 will be reviewing the results after the pilots and determine whether the program rolls out across the province and what incentives

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 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):	\$ 9,223.00	\$ 253,146.00
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	\$ 9,223.00	\$ 253,146.00
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:

	Summer	Winter	Cumulative Lifecycle	Cumulative Annual Savings
Demand savings (kW):	na	na	na	na
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):

	<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):

D. Actual Program Costs:		Reporting Year	Cumulative Life to Date
Utility direct costs (\$):	Incremental capital:	\$ -	\$ 144,862.00
	Incremental O&M:	\$ 9,223.00	\$ 108,284.00
	Incentive:		
	Total:	\$ 9,223.00	\$ 253,146.00
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.
 - 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
- Combine conservation products with the Smart Meter, to leverage the smart meter potential as a behavioural changing device, with respect to energy consumption habits.
 - Energy and summer peak load savings or shifting will potentially come from behavioral changes of customers, once they learn to correlate time of usage rates - when available - with their consumption patterns and associated costs.
 - This program will stop as a smart meter program as it has evolved beyond the original scope of just installing smart meters.
 - As such, this program is now at the core of the SMART Avenues Program described next.

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 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)
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 (\$):	\$ -	\$ 21,192
² TRC Costs (\$):		
Utility program cost (excluding incentives):	\$ 68,011.02	\$ 286,226.02
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	\$ 68,011.02	\$ 286,226.02
Net TRC (in year CDN \$):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	\$ -	0.1

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

Cumulative Results:

Conservation Programs:

	Summer	Winter	Cumulative Lifecycle	Cumulative Annual Savings
Demand savings (kW):				35
Energy saved (kWh):			121,514	21,285
Other resources saved :				
Natural Gas (m3):				
Annual Water Savings (m3):				49

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):

	<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):

D. Actual Program Costs:		Reporting Year	Cumulative Life to Date
Utility direct costs (\$):	Incremental capital:	-\$ 28,862.00	\$ 64,428.00
	Incremental O&M:	\$ 96,873.02	\$ 221,798.02
	Incentive:		
	Total:	\$ 68,011.02	\$ 286,226.02
Utility indirect costs (\$):	Incremental capital:	0	\$ -
	Incremental O&M:		
	Total:	0	\$ -

E. Assumptions & Comments:

- This program is part of the Smart Meter program.
 - As part of the Smart Meter program we are testing various technologies within a home to demonstrate what would be required to demonstrate savings in a home which receives a smart meter.
 - Customers that receive a Smart Meter should eventually receive Time-Of-Use rates. We want to demonstrate the potential savings that may result in adopting these rates along with the technologies implemented.
 - The neighborhood has been selected and smart meters have been installed.
 - The customers have been 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**
- Re-market the Peak Saver/Home Tune-up program in early 2007, in order to meet the goal of 50 installations within Smart Avenues.

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 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)
Base case technology:	Do nothing		
Efficient technology:	LDC controlled programmable thermostats.		
Number of participants or units delivered for reporting year:	1368		
Measure life (years):	18		
Number of Participants or units delivered life to date	1570		

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
¹ TRC Benefits (\$):	\$ 1,962,575.28	\$ 2,252,370.76
² TRC Costs (\$):		
Utility program cost (excluding incentives):	\$ 1,393,941.18	\$ 1,765,699.18
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	\$ 1,393,941.18	\$ 1,765,699.18
Net TRC (in year CDN \$):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	1.4	1.3

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

Cumulative Results:

Conservation Programs:

Demand savings (kW):	Summer	1094	1256
	Winter		

	lifecycle	in year	Cumulative Lifecycle	Cumulative Annual Savings
Energy saved (kWh):	3,915,216	217,512	4,493,340	249,630
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:

Utility direct costs (\$):

Incremental capital:

Reporting Year**Cumulative Life to Date**

\$ 391,025.00 \$ 675,025.00

Incremental O&M:

\$ 180,865.20 \$ 268,623.20

Incentive:

Total:

\$ 571,890.20 \$ 943,648.20

Utility indirect costs (\$):

Incremental capital:

Incremental O&M:

Total:

\$ 822,050.98 \$ 822,050.98

\$ 822,050.98 \$ 822,050.98

E. Assumptions & Comments:

■ Mississauga Hydro is participating 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 will be encouraged to have controls installed on those devices.

■ To-date, we installed

1570 programmable thermostats. Economics are negatively impacted by high fixed costs.

projected costs to continue the program over the life of the equipment, introduced for TRC purposes.

■ Indirect costs shown are

Next Steps

■ Installations continued in the second half of 2007 under a different 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):

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	Incandescent bulbs		
Efficient technology:	CFL bulbs, Water Heater Tuneup		
Number of participants or units delivered for reporting year:	293		
Measure life (years):	4.3, 6, 12		
Number of Participants or units delivered life to date	606		

B. TRC Results:	Reporting Year	Life-to-date TRC Results:
¹ TRC Benefits (\$):	\$ 174,749.51	\$ 401,657.51
² TRC Costs (\$):		
Utility program cost (excluding incentives):	\$ 45,379.00	\$ 133,486.00
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	\$ 45,379.00	\$ 133,486.00
Net TRC (in year CDN \$):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	3.9	3.0

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

Cumulative Results:

Conservation Programs:

Demand savings (kW):	Summer	26	52
	Winter		

	lifecycle	in year	Cumulative Lifecycle	Cumulative Annual Savings
Energy saved (kWh):	3,172,448	643,400	6,194,742	1,025,855
Other resources saved :				
Natural Gas (m3):				
Water (m3):	102,118	8,510		112,943

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:	\$ 45,379.00	\$ 133,486.00
	Incentive:		
	Total:	\$ 45,379.00	\$ 133,486.00
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.
- We are working with a non profit 132 suites hi-rise to determine feasibility of implementing home tune up for these suites, including better control of baseboard heaters through programmable thermostats.
- A lighting retrofit project at the local Food Path facility has been completed. Enersource will provide 100% grant for this lighting retrofit, estimated to cost \$14,000. The program was well received and appreciated by the customers.
- We have identified 2 agencies (Winter Warmth, Share the Warmth), 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.

Next Steps

- Finalize program design for low income and social housing house tune up and launch in early 2007.

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)
Base case technology:	Do nothing		
Efficient technology:	SMART Meters		
Number of participants or units delivered for reporting year:	0		
Measure life (years):	15		
Number of Participants or units delivered life to date	201		

B. TRC Results:	Reporting Year	Life-to-date TRC Results:
¹ TRC Benefits (\$):	\$ -	\$ 370,463
² TRC Costs (\$):		
Utility program cost (excluding incentives):	\$ 26,909.00	\$ 247,109.00
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	\$ 26,909.00	\$ 247,109.00
Net TRC (in year CDN \$):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	\$ -	1.50

C. Results: (one or more category may apply)	<u>Cumulative Results:</u>			
<u>Conservation Programs:</u>				
Demand savings (kW):	Summer			30
	Winter			80

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:	\$ -	\$ 178,959.00
	Incremental O&M:	\$ 26,909.00	\$ 68,150.00
	Incentive:		
	Total:	\$ 26,909.00	\$ 247,109.00
Utility indirect costs (\$):	Incremental capital:	0	\$ -
	Incremental O&M:		
	Total:	0	\$ -

E. Assumptions & Comments:

- A multi-residential complex with 186 units was identified for retrofitting. Retrofit was completed in July 2006.
 - Designated pilot building will shift from a single commercial account to multiple residential accounts, dependent on the number of its residential units.
 - A total of 201 Quadlogic SMART meters were installed, to service 186 units and various services.
 - Individual metering started in July 2006 and preliminary 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**
- Establish a baseline consumption for retrofitted building and compare with current data, to determine actually achieved savings.
 - An alternative building will need to be sourced.

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:	3		
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 (\$):	\$ 1,987,556.42	\$ 2,349,068.42
² TRC Costs (\$):		
Utility program cost (excluding incentives):	\$ 114,581.00	\$ 280,546.00
Incremental Measure Costs (Equipment Costs)	\$ 675,000.34	\$ 870,044.34
Total TRC costs:	\$ 789,581.34	\$ 1,150,590.34
Net TRC (in year CDN \$):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	2.5	2.0

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

Cumulative Results:

Conservation Programs:

Demand savings (kW):	Summer	701	839
	Winter		

	lifecycle	in year	Cumulative Lifecycle	Cumulative Annual Savings
Energy saved (kWh):	35034900	5,825,089	40767375	6,444,282
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:

Utility direct costs (\$):

Incremental capital:

Incremental O&M:

Incentive:

Total:

Reporting Year**Cumulative Life to Date**

\$	58,697.00	\$	100,697.00
\$	55,884.00	\$	179,849.00
\$	105,168.00	\$	142,038.00
\$	219,749.00	\$	422,584.00

Utility indirect costs (\$):

Incremental capital:

Incremental O&M:

Total:

	0		
	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 9 customers (9 projects), for a total of \$142,038.
- Other applications were still under evaluation at funding exhaustion.
- Based on results to-date, expected annual energy and demand savings are over 5.8 million kWh and 839 kW (summer peak).

Next Steps

- Accept a few more applications in 2007 as a result of a minor budget increase.
- Monitor and evaluate programs, to measure and verify savings as projects are completed.
- We will plan to rate-base this program in the 2008 rate application.

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 Industrial & Institutional (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 Load Controllers.		
Number of participants or units delivered for reporting year:	2		
Measure life (years):			
Number of Participants or units delivered life to date	8		

B. TRC Results:	Reporting Year	Life-to-date TRC Results:
¹ TRC Benefits (\$):	\$ 988,033.19	\$ 4,648,033
² TRC Costs (\$):		
Utility program cost (excluding incentives):	\$ 461,234.04	\$ 1,536,483.33
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	\$ 461,234.04	\$ 1,536,483.33
Net TRC (in year CDN \$):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	2.1	3.0

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

Cumulative Results:

Conservation Programs:

Demand savings (kW):	Summer	679	5085
	Winter	679	5085

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

Demand Management Programs:

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

Demand Response Programs:

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

Power Factor Correction Programs:

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

Line Loss Reduction Programs:

Peak load savings (kW):

lifecycle

in year

Energy savings (kWh):

Distributed Generation and Load Displacement Programs:

Amount of DG installed (kW):

Energy generated (kWh):

Peak energy generated (kWh):

Fuel type:

Other Programs (specify):

Metric (specify):

D. Actual Program Costs:

Utility direct costs (\$):

Incremental capital:

Incremental O&M:

Incentive:

Total:

Reporting Year**Cumulative Life to Date**

\$ 75,400.00 \$ 279,400.00

\$ 385,834.04 \$ 552,863.04

\$ 461,234.04 \$ 832,263.04

Utility indirect costs (\$):

Incremental capital:

Incremental O&M:

Total:

\$ -

\$ 704,220.29

\$ - \$ 704,220.29

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 5 MW of demand response capacity.
- In the second category, we have 2 projects controlled through ECO Power DR load control equipment.
- The total estimated demand response capacity under this category is 1,556kW.
- Enersource have terminated the contract with Electric City due to poor performance.
- TRC Benefit-Cost Ratio was calculated at 3.7.
- Annual energy savings are dependent on annual operating hours of hosting facility.

Next Steps

- Enroll curtailable loads in IESO-OPA demand response programs.
- We also need to implement an internal process of demand response.

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):	\$ 19,405.00	\$ 107,013.00
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	\$ 19,405.00	\$ 107,013.00
Net TRC (in year CDN \$):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	-	2.2

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

Cumulative Results:

Conservation Programs:

Demand savings (kW):	Summer		114.8
	Winter		

	lifecycle	in year	Cumulative Lifecycle	Cumulative Annual Savings
Energy saved (kWh):			3,259,565	651,913
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:

Utility direct costs (\$):

Incremental capital:

Incremental O&M:

Incentive:

Total:

Reporting Year**Cumulative Life to Date**

\$	-	\$	-
\$	19,405.00	\$	87,603.00
\$	19,405.00	\$	107,013.00

Utility indirect costs (\$):

Incremental capital:

Incremental O&M:

Total:

	0	\$	-
	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, 1 declined and 1 funded customers.
- Enersource will work with the Financial Services Company on the application forms and other elements of this program.
- Customers will be advised of this program through various marketing initiatives such as commercial customer newsletters and bill messaging.
- The program has so far resulted in annual energy savings of over 637,000 kWh and summer peak demand savings are 137 kW.
- TRC Benefit-Cost Ratio is over 2.6. Forthcoming projects will show improved TRC results, because of the limited on-going costs.
- Prepare a Program-In-A-Box for this program so that other utilities can offer the same type of program to their customers.

Next Steps

- Continue working with CitiCapital to perfect all elements of the program's process flow.
- Continue promoting the program, through another mailing and at workshops organized for other CDM programs. Forthcoming projects
- Consider launching a similar program directed to the residential sector.

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)
Base case technology:	Do nothing.		
Efficient technology:	Adaptivolt system.		
Number of participants or units delivered for reporting year:	1		
Measure life (years):	15		
Number of Participants or units delivered life to date	1		

B. TRC Results:	Reporting Year	Life-to-date TRC Results:
¹ TRC Benefits (\$):		
² TRC Costs (\$):		
Utility program cost (excluding incentives):	-\$ 47,004.00	\$ 570,280.00
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	-\$ 47,004.00	\$ 570,280.00
Net TRC (in year CDN \$):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		

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

Cumulative Results:

Conservation Programs:

Demand savings (kW):	Summer	420	420
	Winter	420	420

	lifecycle	in year	Cumulative Lifecycle	Cumulative Annual Savings
Energy saved (kWh):		3,635,400	54,531,000	3,635,400
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:

Utility direct costs (\$):

Incremental capital:

Incremental O&M:

Incentive:

Total:

Reporting Year**Cumulative Life to Date**

-\$	51,420.00	\$	549,580.00
\$	4,416.00	\$	20,700.00
-\$	47,004.00	\$	570,280.00

Utility indirect costs (\$):

Incremental capital:

Incremental O&M:

Total:

0	\$	-
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.
- Forecasted Peak demand reduction at the station is expected to be 420 kW.

Next Steps

- Consider installing other CVRS systems at other stations.

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):			
Number of Participants or units delivered life to date	2		

B. TRC Results:	Reporting Year	Life-to-date TRC Results:
¹ TRC Benefits (\$):		
² TRC Costs (\$):		
Utility program cost (excluding incentives):	\$ 10,679.00	\$ 70,548.00
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	\$ 10,679.00	\$ 70,548.00
Net TRC (in year CDN \$):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		

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

Cumulative Results:

Conservation Programs:

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

Utility direct costs (\$):

Incremental capital:

Incremental O&M:

Incentive:

Total:

Reporting Year**Cumulative Life to Date**

\$	600.00	\$	4,434.00
\$	10,079.00	\$	66,114.00
\$	10,679.00	\$	70,548.00

Utility indirect costs (\$):

Incremental capital:

Incremental O&M:

Total:

0	\$	-
0	\$	-

E. Assumptions & Comments:

- Fund 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 10.8 kW project at a wastewater treatment plant..

- No kW or kWh results to report in 2007. Both projects will be fully operational in early 2008.

Next Steps

- Continue contacts with the Region and the City to monitor and evaluate performance, once projects are operational in early 2008.

Finalize TRC forecast.

- Pay out incentives, once projects are set and costs finalized.

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.

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:

Utility direct costs (\$):

Incremental capital:

Incremental O&M:

Incentive:

Total:

Reporting Year**Cumulative Life to Date**

\$ 2,696.00 \$ 1,249,696.00

\$ 20,143.00 \$ 233,509.00

\$ 22,839.00 \$ 1,483,205.00

Utility indirect costs (\$):

Incremental capital:

Incremental O&M:

Total:

\$ 785,833.40

0 \$ 785,833.40

E. Assumptions & Comments:

- Generators will be controlled from a single dispatch point at Enersource. ■ A 1.25
- MW standby natural gas generator was installed and commissioned at Enersource.
- Enersource has registered this generator with the IESO under the Emergency Load Reduction Program. and IESO
- Negotiations were conducted with a number of prospective customers.
- Loblaw's has agreed to use its standby generators at three locations in Mississauga to participate in the Enersource Demand Response Program. Enersource will pay for the installation of transfer switches in order 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 Loblaw's projects.
- Other participants include GTAA airport (2,000 kW), Orenda (2,400 kW) and Glaxo Smith Kline (500kW).
- Currently, we have 2,770 kW and 3,435 kW dispatchable in summer and winter respectively.
- TRC results show a 2.5 Benefit-Cost ratio.

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:

¹ TRC Benefits (\$):

Reporting Year

Life-to-date TRC Results:

² TRC Costs (\$):

Utility program cost (excluding incentives):	\$	61,701.56	\$	1,389,929.56
Incremental Measure Costs (Equipment Costs)				
Total TRC costs:	\$	61,701.56	\$	1,389,929.56
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:

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

Demand Management Programs:

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

Demand Response Programs:

Dispatchable load (kW):

Peak hours dispatched in year (hours):

Power Factor Correction Programs:

Amount of KVar installed (KVar):

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

Distribution system power factor at end of year (%):

Line Loss Reduction Programs:

Peak load savings (kW):

lifecycle

in year

Energy savings (kWh):

Distributed Generation and Load Displacement Programs:

Amount of DG installed (kW):

Energy generated (kWh):

Peak energy generated (kWh):

Fuel type:

Other Programs (specify):

Metric (specify):

D. <u>Actual Program Costs:</u>		<u>Reporting Year</u>	<u>Cumulative Life to Date</u>
Utility direct costs (\$):	Incremental capital:	-\$ 52,197.00	\$ 101,730.00
	Incremental O&M:	\$ 113,898.56	\$ 1,288,199.56
	Incentive:		
	Total:	\$ 61,701.56	\$ 1,389,929.56
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 Traunche funding was exhausted by the end of April 2006.
- The program continued under 2nd Generation 2006 Supplemental Funding.
- Under 3rd Traunche, 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 Traunche 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

- We are reviewing a number of different approaches that can be taken to implement the Bulb Drop portion of the 2nd Generation Supplemental Funding program, including outsourcing its delivery.
- In the meantime, the Events Van team continues to participate in events around the city to distribute CFLs, funded under 2nd Generation
- Continue to interact with the public to further spread the energy conservation message.

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: 2007

1. Residential and Small Comm <50 Programs

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

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

	TRC Benefits (PV)	TRC Costs (PV)	\$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures (\$)
Co-Branded Mass Market Program	\$ -	\$ 7,851	\$ -	0.00	14,646,944	92,249,585	472	\$ 7,851
SMART Meter Residential	\$ -	\$ -	\$ -	0.00	0	0	0	\$ 9,223
SMART Avenues – A Community Pk	\$ -	\$ 68,011	\$ -	0.00	0	0	0	\$ 68,011
Residential Load Control Initiative	\$ 1,962,575	\$ 1,393,941	\$ 568,634	1.41	217,512	3,915,216	1,094	\$ 571,890
Social Housing Program	\$ 174,750	\$ 45,379	\$ 129,371	3.85	643,400	3,172,448	0	\$ 45,379
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 and Small Comm <50	\$ 2,137,325	\$ 1,515,182	\$ 622,143	1.41	15,507,856	99,337,249	1,566	\$ 702,354
Residential and Small Comm <50 Indirect Costs not attributable to any specific program								
Total Residential and Small Comm <50 TRC Costs		\$ 1,515,182						
**Totals TRC - Residential and Small Comm <50	\$ 2,137,325	\$ 1,515,182	\$ 622,143	1.41				

2. Comm Ind Inst >50 kW 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	\$ -	\$ 26,909	\$ -	0.00	0	0	0	\$ 26,909
Business Incentive Program (previo	\$ 1,987,556	\$ 789,581	\$ 1,197,975	2.52	5,825,089	35,034,900	701	\$ 219,749
Commercial Industrial & Institutional (\$ 988,033	\$ 461,234	\$ 526,799	2.14	0	0	679	\$ 461,234
On-the-Bill Payment Plan Program (I	\$ -	\$ 19,405	\$ -	0.00	0	0	0	\$ 19,405
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 - Comm Ind Inst >50	\$ 2,975,590	\$ 1,297,129	\$ 1,678,460	2.29	5,825,089	35,034,900	1,380	\$ 727,297
Comm Ind Inst >50 kW Indirect Costs not attributable to any specific program								
Total TRC Costs		\$ 1,297,129						
**Totals TRC - Comm Ind Inst >50	\$ 2,975,590	\$ 1,297,129	\$ 1,678,460	2.29				

3. Dist Loss Reduction Programs

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

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

	TRC Benefits (PV)	TRC Costs (PV)	\$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures (\$)
Distribution Loss Reduction	\$ -	\$ 47,004	\$ -	0.00	0	0	0	\$ 47,004
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 - Dist Loss Reductio	\$ -	\$ 47,004	\$ -	0.00	0	0	0	\$ 47,004
Dist Loss Reduction Indirect Costs not attributable to any specific program								
Total TRC Costs		\$ 47,004						
**Totals TRC - Dist Loss Reduction	\$ -	\$ 47,004	\$ -	0.00				

4. Dist Energy 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	\$ -	\$ 10,679	\$ - 10,679	0.00	0	0	0	\$ 10,679
Stand-by Generators	\$ 3,370,546	\$ 22,839	\$ 3,347,707	147.58	0	0	2,770	\$ 22,839
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 - Dist Energy	\$ 3,370,546	\$ 33,518	\$ 3,337,028	100.56	0	0	2,770	\$ 33,518
Dist Energy Indirect Costs not attributable to any specific program								
Total TRC Costs		\$ 33,518						
**Totals TRC - Dist Energy	\$ 3,370,546	\$ 33,518	\$ 3,337,028	100.56				

5. Overall Program Support Programs

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

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

	TRC Benefits (PV)	TRC Costs (PV)	\$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures (\$)
Name of Program A			\$ -	0.00				
Name of Program 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 S	\$ -	\$ -	\$ -	0.00	0	0	0	\$ 1,389,930
Overall Program Support Indirect Costs not attributable to any specific program								
Total TRC Costs		\$ 1,389,930						
**Totals TRC - Overall Program Su	\$ -	\$ 1,389,930	\$ 1,389,930	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	\$ 8,483,460	\$ 4,188,755	\$ 4,294,705	2.03	\$ 21,332,945	\$ 134,372,149	\$ 5,716	\$ 2,806,095
Any other Indirect Costs not attributable to any specific program								
TOTAL ALL LDC COSTS		\$ 4,188,755						
**LDC' PORTFOLIO TRC	\$ 8,483,460	\$ 4,188,755	\$ 4,294,705	2.03				

* 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.

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Filed: 2009-11-17
EB-2009-0400
Tab B
Attachment D

Enersource's Conservation and Demand Management 2007 Annual Report
for Incremental CDM Funding Approved In Rates

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Conservation and Demand Management 2007 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, 2008

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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, and the Guidelines for Electricity Distributor Conservation and Demand Management, issued on March 28, 2008. Both documents include requirements for reporting on Incremental CDM Funding Approved in Rates¹².

This report – due April 30th, 2008 - has been prepared in accordance with the above referenced guidelines and requirements and gives an account of three Conservation and Demand Management (CDM) residential 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 Guide³, in its October 2006 revision.

The approved CDM residential programs are highlighted below:

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

- Highlights:**
- In 2007 we carried out 2,940 Tune-ups, for a total of 4,915 since program inception, resulting in over 2,849,000 kWh annual energy savings and about 5,200,000 kWh cumulatively.
 - On a lifecycle basis, energy savings are projected at over 22,200,000 kWh for the year and about 40,700,000 kWh since inception.
 - Summer peak demand reduction of 126 kW and winter peak demand reduction of 580 kW are also projected, based on 2007 results.
 - Cumulative results are 237 kW and 1030 kW respectively.
 - Efficient, low flow shower heads and faucet aerators were also distributed, resulting in water savings projected at about 110,000 m³ annually and almost 1,318,000 m³ on a lifecycle basis.
 - This initiative was screened for Total Resource Cost (TRC) cost test, yielding a Benefit-Cost Ratio of 3.4 for 2007.
 - Actual results since program inception show a TRC Benefit-Cost Ratio of 4.3.

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

² Available at:
[http://www.oeb.gov.on.ca/OEB/Industry+Relations/OEB+Key+Initiatives/Conservation+and+Demand+Management+\(CDM\)/Guidelines+for+Electricity+Distributor+CDM#20080328](http://www.oeb.gov.on.ca/OEB/Industry+Relations/OEB+Key+Initiatives/Conservation+and+Demand+Management+(CDM)/Guidelines+for+Electricity+Distributor+CDM#20080328)

³ Available at: http://www.oeb.gov.on.ca/documents/cases/RP-2004-0203/cdm_trcguide_021006.pdf

▪ Seasonal Light Exchange Program

- Highlights:**
- This program was not carried out in 2007, as funds were exhausted.
 - 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.
 - Cumulative lifecycle energy savings are projected at about 3,111,000 kWh.
 - Results to date show a TRC Benefit-Cost Ratio of 1.6 against a projected 1.1.
 - Actual results would have been better, if not for unforeseen quality problems, which required a massive recall of distributed sets and unplanned expenses to inform the public and source other sets.
 - Cooperative efforts in 2006 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, supported all our CDM efforts, by bringing the conservation message and means to start conserving directly to our customers.
 - The Event Team participated at 70 events at various venues around the City, since the program began.
 - A highly successful **switch4earth** 2-day event campaign was developed by Enersource and held in conjunction with Earth Day weekend in April 2007. Over 70,000 CFLs were distributed through a major food retailer and at a Family Earth Day weekend at Civic Square, City Hall.
 - Over 110,000 CFLs and thousands of educational and promotional items were distributed since program inception, to contribute spreading the energy efficiency and conservation message among the residents of Mississauga.
 - Annual energy savings from distributed CFLs since program inception were calculated at over 11,470,000 kWh.
 - Lifecycle energy savings are projected at over 41,000,000 kWh.
 - A TRC Benefit-Cost Ratio of 5.3 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 4.6, based on actual results for 2006 and 2007. Projected cumulative value was 3.3.

For the above three CDM programs, by December 31st, 2007, Enersource invested approximately \$1,419,000 that resulted in cumulative annual savings to-date of over 17 million kWh and over 94,000,000 kWh on a lifecycle basis. Annual savings constitute enough electricity to power 1,892 homes for a year.

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. Guidelines for Electricity Distributor Conservation and Demand Management, were issued on March 28, 2008. This report – due April 30th, 2008 - 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 an overall TRC Cost-Benefit ratio of 4.6. Economics improved from the previous year's 3.8 ratio, since accruing benefits reduced 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 2007 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

- 4,915 water heater Tune-Ups were completed since program inception, 1,975 in 2006.
- Program has reached saturation with near exhaustion of electric water heaters' stock in Mississauga.

- EHM ran an integrated communications campaign from Feb 12 – April 2, 2007 targeted at the remaining 5,000 electric water heater customers who did not have tune ups performed between 2005-2006. Campaign included Mississauga News print ads, and Mississauga.com banner ads, addressed direct mail and the creation of a dedicated micro Web site named www.wrapit.ca.
- Installed or distributed to-date:
 - 4,010 Efficient Showerheads
 - 4,448 Faucet Aerators
 - 4,280 Tank Wraps (some already had water heater blankets)
 - 18,576 CFLs
 - 3,447 m of hot water tubing insulation.
- Summer peak demand reduction of 237 kW is projected.
- Winter peak demand reduction of 1,034 kW is projected.
- Annual energy savings since program inception are projected at about 5,200,000 kWh.
- Cumulative lifecycle energy savings are projected at about 40,700,000 kWh.
- About 109,812 m³ of cumulative annual water savings and over 729,000 m³ on a lifecycle basis.
- Of the approved \$475,000 budget, close to \$383,000 were spent by December 31st, 2007.
- Actual results to date show an excellent 4.3 TRC Benefit-Cost Ratio against a projected Benefit-Cost Ratio of 3.0.

Next Steps

- The program terminated and no further steps are planned at this time.

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 2007 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

- The program was terminated at the end of available funding and could not be implemented in 2007.
- Enersource distributed over 6,300 LED light sets in 2006.
- No summer peak demand reduction is attributable.
- Winter peak demand reduction of 34 kW is projected.
- Annual energy savings are projected at about 103,700 kWh.
- Lifecycle energy savings are projected at about 3,111,000 kWh.
- Results to date show a TRC Benefit-Cost Ratio of 1.6 against a projected 1.1.

Next Steps

- No further steps are planned at this time.

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 2007 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

- Over 110,000 CFLs and thousands of educational and promotional items were distributed since program inception, to contribute spreading the energy efficiency and conservation message among the residents of Mississauga.
- A highly successful **switch4earth** 2-day event campaign was developed by Enersource and held in conjunction with Earth Day weekend in April 2007. Over 70,000 CFLs were distributed through a major food retailer and at a Family Earth Day weekend at Civic Square, City Hall.
- The Event Team participated at 70 events at various venues around the City, since the program began.
- Annual energy savings from distributed CFLs since program inception were calculated at over 11,470,000 kWh.
- Lifecycle energy savings are projected at over 41,000,000 kWh.
- Close to \$679,000 of the approved \$985,000 budget were spent by December 31st, 2007.
- A TRC Benefit-Cost Ratio of 5.3 was calculated based on cumulative results to date, against a projected value of 3.6.

Next Steps

- The program will terminate when funding is exhausted.

4. Lessons Learned

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 2006 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.

It was confirmed that 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.

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

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, matured in 2007 and will continue 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	No	Program has reached saturation with near 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.

Of the three programs, the LED Holiday Light Exchange Program was not carried out in 2007 due to exhaustion of funds. Based on results for the three programs in 2006 and 2007, we can conclude the following:

- By December 31st 2007, Enersource invested approximately \$1,419,000 or approximately 93% of the available funding.
- The investment resulted in annual savings of over 17 million kWh and over 94,000,000 kWh on a lifecycle basis, based on results to-date.
- Annual savings constitute enough electricity to power 1,892 homes for a year.
- The effectiveness of programs' design and delivery was proven by a cumulative TRC Benefit-Cost Ratio of 4.6 for the three-program portfolio, based on actual results for 2006 and 2007. The originally projected cumulative ratio 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.

The past three 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.

In carrying out these programs, it was confirmed that 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.

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.

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 2007	Residential	Commercial	Institutional	Industrial	Agricultural	LDC System	⁴ Smart Meters	Other #1	Other #2
Net TRC value (\$):	\$ 5,054,864	\$ 2,852,985	\$ 2,852,985	\$ -	\$ -	\$ -	\$ -	\$ -		\$ -	\$ -
Benefit to cost ratio:	4.56	4.12	4.12	0.00	0.00	0.00	0.00	0.00		0.00	0.00
Number of participants or units delivered:	146,607	104,586	104,586								
Lifecycle (kWh) Savings:	94,011,501	63,307,002	63,307,002	0	0	0	0	0		0	0
Report Year Total kWh saved (kWh):	17,023,592	12,400,495	12,400,495	0	0	0	0	0		0	0
Total peak demand saved (kW):	1,030	126	126	0	0	0	0	0		0	0
Total kWh saved as a percentage of total kWh delivered (%):	0.22%	0.16%	0.16%								
Peak kW saved as a percentage of LDC peak kW load (%):		0.01%	0.01%								
¹ Report Year Gross C&DM expenditures (\$):	\$ 1,418,969	\$ 914,349	\$ 914,349	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
² Expenditures per kWh saved (\$/kWh):	\$ 0.02	\$ 0.01	\$ 0.01	\$ -	\$ -	\$ -	\$ -	\$ -		\$ -	\$ -
³ Expenditures per kW saved (\$/kW):	\$ 1,377.12	\$ 7,269.01	\$ 7,269.01	\$ -	\$ -	\$ -	\$ -	\$ -		\$ -	\$ -
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, 2007 CDM Annual report for third tranche will include 2006, 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:	752,5335	2715	3039
Measure life (years):	6	12	4
Number of Participants or units delivered life to date	4280	4010	18,576

	Aerators on Faucets	Pipe Insulation	
Base case technology:	Do Nothing	Do Nothing	
Efficient technology:	Aerators on Faucets	Install insulating sleeves on hot water pipes (equivalent to 8 ft average per water heater as per OEB Measures List).	
Number of participants or units delivered for reporting year:	0	753	
Measure life (years):	12	6	
Number of Participants or units delivered life to date	4,448	1,413	

B. TRC Results:

	Reporting Year	Life-to-date TRC Results:
¹ TRC Benefits (\$):	\$ 1,318,688.75	\$ 2,670,611.19
² TRC Costs (\$):		
Utility program cost (excluding incentives):	382,874.00	627,439.00
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	\$ 382,874.00	\$ 627,439.00
Net TRC (in year CDN \$):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	\$ 3.44	4.26

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

Cumulative Results:

Conservation Programs:

<u>Conservation Programs:</u>				
Demand savings (kW):	Summer	126		1,030
	Winter	580		1030
			Cumulative	Cumulative
	lifecycle	in year	Lifecycle	Annual Savings
Energy saved (kWh):	22,236,445	2,849,202	39,859,284	5,049,842
Other resources saved :				
Natural Gas (m3):				
Water (m3):	729,178	60,765		109,812

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):

D. <u>Actual Program Costs:</u>		<u>Reporting Year</u>	<u>Cumulative Life to Date</u>
Utility direct costs (\$):	Incremental capital:		
	Incremental O&M:	\$ 382,874.00	\$ 627,439.00
	Incentive:		
	Total:	\$ 382,874.00	\$ 627,439.00
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

- 4,915 water heater Tune-Ups were completed since program inception, 1,975 in 2006.
- Installed or distributed to-date:
 - 4,010 Efficient Showerheads
 - 4,448 Faucet Aerators
 - 4,280 Tank Wraps (water heater blankets)
 - 18,576 CFLs
 - 3,447 m of hot water tubing insulation, corresponding to 1,413 units of 8-ft lengths of insulation (average from OEB Measures List).
- Summer peak demand reductions of 237 kW are projected.
- Winter peak demand reductions of 1,034 kW are projected.
- Annual energy savings since program inception are projected at about 5,200,000 kWh.
- Cumulative lifecycle energy savings are projected at about 40,700,000 kWh.

Next Steps

- The program terminated and no further steps are planned at this time.

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.					
The inefficient lights, exchanged by residents, are being disposed of in an environmentally friendly manner.					
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:			0 0		
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 (\$):			\$ 177,293	
	² TRC Costs (\$):				
	Utility program cost (excluding incentives):	\$	2,683.00	\$	112,712.00
	Incremental Measure Costs (Equipment Costs)				
	Total TRC costs:	\$	2,683.00	\$	112,712.00
Net TRC (in year CDN \$):					
Benefit to Cost Ratio (TRC Benefits/TRC Costs):					
			-		1.6
C.	Results: (one or more category may apply)			Cumulative Results:	
Conservation Programs:					
Demand savings (kW):		Summer			0
		Winter			34.2
				</	

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):

D. Actual Program Costs:		Reporting Year	Cumulative Life to Date
Utility direct costs (\$):	Incremental capital:		
	Incremental O&M:	\$ 2,683.00	\$ 112,712.00
	Incentive:		
	Total:	\$ 2,683.00	\$ 112,712.00
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

- The program was terminated at the end of available funding and could not be implemented in 2007.
- Enersource distributed over 6,300 LED light sets in 2006.
- No summer peak demand reductions attributable.
- Winter peak demand reductions of 34 kW are projected.
- Annual energy savings since program inception are projected at about 103,700 kWh.
- Lifecycle energy savings are projected at about 3,111,000 kWh.

Next Steps

- No further steps are planned at this time.

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:		97327			
Measure life (years):		4			
Number of Participants or units delivered life to date		110715			
B.	TRC Results:		Reporting Year	Life-to-date TRC Results:	
¹ TRC Benefits (\$):			\$ 2,448,645.54	\$ 3,625,929.58	
² TRC Costs (\$):					
Utility program cost (excluding incentives):			\$ 528,792.00	\$ 678,818.00	
Incremental Measure Costs (Equipment Costs)					
Total TRC costs:			\$ 528,792.00	\$ 678,818.00	
Net TRC (in year CDN \$):					
Benefit to Cost Ratio (TRC Benefits/TRC Costs):			4.6	5.3	
C.	Results: (one or more category may apply)		Cumulative Results:		
Conservation Programs:					
Demand savings (kW):		Summer	0	0	
		Winter	1971	2449	
		lifecycle	in year	Cumulative Lifecycle	Cumulative Annual Savings
Energy saved (kWh):		41,070,557	9,551,292	51,041,214	11,870,050
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):

	<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):

D. Actual Program Costs:		Reporting Year	Cumulative Life to Date
Utility direct costs (\$):	Incremental capital:		
	Incremental O&M:	\$ 528,792.00	\$ 678,818.00
	Incentive:		
	Total:	\$ 528,792.00	\$ 678,818.00
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

- Over 110,000 CFLs and thousands of educational and promotional items were distributed since program inception, to contribute spreading the energy efficiency and conservation message among the residents of Mississauga.
- A highly successful switch4earth 2-day event campaign was developed by Enersource and held in conjunction with Earth Day weekend in April 2007. Over 70,000 CFLs were distributed through a major food retailer and at a Family Earth Day weekend at Civic Square, City Hall.
- The Event Team participated at 70 events at various venues around the City, since the program began.
- Annual energy savings from distributed CFLs since program inception were calculated at over 11,470,000 kWh.
- Lifecycle energy savings are projected at over 41,000,000 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 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	\$ 1,318,689	\$ 382,874	\$ 935,815	3.44	2,849,202	22,236,445	126	\$ 382,874
Seasonal Light Exchange	\$ -	\$ 2,683	\$ -2,683	0.00	0	0	0	\$ 2,683
Events Van	\$ 2,448,646	\$ 528,792	\$ 1,919,854	4.63	9,551,292	41,070,557	0	\$ 528,792
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	\$ 3,767,334	\$ 914,349	\$ 2,852,985	4.12	12,400,495	63,307,002	126	\$ 914,349

Residential Indirect Costs not attributable to any specific program

Total Residential TRC Costs \$ 914,349

****Totals TRC - Residential** \$ 3,767,334 \$ 914,349 \$ 2,852,985 4.12

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 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 - 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 J			\$ -	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	\$ 3,767,334	\$ 914,349	\$ 2,852,985	4.12	\$ 12,400,495	\$ 63,307,002	\$ 126	\$ 914,349
Any other Indirect Costs not attributable to any specific program								
TOTAL ALL LDC COSTS		\$ 914,349						
**LDC' PORTFOLIO TRC	\$ 3,767,334	\$ 914,349	\$ 2,852,985	4.12				

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

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

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Tab B
Attachment E

Enersource's Conservation and Demand Management 2008 Annual Report
for 3rd Tranche Funding

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**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 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.

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

Distribution Loss Reduction

- Voltage Profile Management

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

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, perhaps, an accompanying qualitative benefit (e.g., increased reliability through fewer interruptions).

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, 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 about \$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. We have 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	⁵ Low Income	Commercial	Institutional	Industrial	Agricultural	LDC System	⁴ 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			
Base case technology:		Do Nothing		Incandescent String		Do Nothing			
Efficient technology:		Efficient Showerhead, Faucet Aerator, Faucet Washer, Tank Insulating Wrap and Compact Fluorescent Bulbs.		LED Light String		Compact Fluorescent Bulbs.			
Number of participants or units delivered for reporting year:		0		0		0			
Measure life (years):		12,12,6,6 and 4		30		4			
Number of Participants or units delivered life to date		1621		11000		8920			
		Library Loan Program		Retailer Program		Refrigerator Retirement Progr.			
Base case technology:		Incandescent Bulb		Incandescent Bulb, Do Nothing		Average Existing Stock			
Efficient technology:		Compact Fluorescent		Compact fluorescent bulb, LED Christmas Lights, Programmable Thermostat, Indoor Timer, Outdoor Timer,		Retirement and Recycling			
Number of participants or units delivered for reporting year:		0		0		0			
Measure life (years):		4		4,30,18,20,20,20 and 25		6			
Number of Participants or units delivered life to date		2160		65262		1117			
B. TRC Results:						Reporting Year		Life-to-date TRC Results:	
¹ TRC Benefits (\$):						\$ -		2492364	
² TRC Costs (\$):									
Utility program cost (excluding incentives):						\$ -		\$ 846,744.55	
Incremental Measure Costs (Equipment Costs)									
Total TRC costs:						\$ -		\$ 846,744.55	
Net TRC (in year CDN \$):									
Benefit to Cost Ratio (TRC Benefits/TRC Costs):						na		2.94	
C. Results: (one or more category may apply)						Cumulative Results:			
Conservation Programs:									
Demand savings (kW):		Summer	0				624.81		
		Winter	0				1890		

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. <u>Actual Program Costs:</u>		<u>Reporting Year</u>	<u>Cumulative Life to Date</u>
Utility direct costs (\$):	Incremental capital:	\$ -	\$ 68,318.80
	Incremental O&M:	\$ -	\$ 778,425.75
	Incentive:		
	Total:	\$ -	\$ 846,744.55
Utility indirect costs (\$):	Incremental capital:	0	\$ -
	Incremental O&M:		
	Total:	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:	<u>Reporting Year</u>	<u>Life-to-date TRC Results:</u>
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)	<u>Cumulative Results:</u>			
<u>Conservation Programs:</u>					
Demand savings (kW):		Summer	na	na	
		Winter	na	na	
	lifecycle	in year	Cumulative Lifecycle	Cumulative Annual Savings	
Energy saved (kWh):		na	na	na	na
Other resources saved :					
	Natural Gas (m3):				
	Other (specify):				
<u>Demand Management Programs:</u>					
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):					
<u>Demand Response Programs:</u>					
Dispatchable load (kW):					
Peak hours dispatched in year (hours):					
<u>Power Factor Correction Programs:</u>					
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:

\$ - \$ 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:

0 \$ -

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.

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:

Utility direct costs (\$):

Incremental capital:

Reporting Year**Cumulative Life to Date**

\$ - \$ 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:

0 \$ -

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)
Base case technology:	Do nothing		
Efficient technology:	LDC controlled programmable thermostats.		
Number of participants or units delivered for reporting year:	0		
Measure life (years):	18		
Number of Participants or units delivered life to date	202		

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
¹ TRC Benefits (\$):	\$ -	\$ 2,252,370.76
² TRC Costs (\$):		
Utility program cost (excluding incentives):	-\$ 12,028.16	\$ 980,127.71
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	-\$ 12,028.16	\$ 980,127.71
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		1256
	Winter		

	lifecycle	in year	Cumulative Lifecycle	Cumulative Annual Savings
Energy saved (kWh):	-	-	4,493,340	467,142
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:

Utility direct costs (\$):

Incremental capital:

Reporting Year**Cumulative Life to Date**

-\$ 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(s):	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	Incandescent bulbs	T12 Fluorescent	Incandescent bulbs
Efficient technology:	CFL bulbs, Water Heater Tuneup	T8 Fluorescent	LED Exit Signs
Number of participants or units delivered for reporting year:	0	72	7
Measure life (years):	4.3, 6, 12	5	25
Number of Participants or units delivered life to date	313	192	7

B. TRC Results:

TRC Results:		Reporting Year	Life-to-date TRC Results:
¹ TRC Benefits (\$):		\$ 37,588.32	\$ 427,036.12
² TRC Costs (\$):			
	Utility program cost (excluding incentives):	\$ 37.87	\$ 133,986.78
	Incremental Measure Costs (Equipment Costs)		
	Total TRC costs:	\$ 37.87	\$ 133,986.78

Net TRC (in year CDN \$):

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

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

Cumulative Results:

Conservation Programs:

Demand savings (kW):	Summer	16	42
	Winter		

	<i>lifecycle</i>	<i>in year</i>	<i>Cumulative Lifecycle</i>	<i>Cumulative Annual Savings</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:

Control 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:

Utility direct costs (\$):

Incremental capital:

Reporting Year**Cumulative Life to Date**

\$	-	\$	-
\$	37.87	\$	133,986.78
\$	34,615.10	\$	34,615.10
\$	34,652.97	\$	168,601.88

Incremental O&M:

Incentive:

Total:

Utility indirect costs (\$):

Incremental capital:

Incremental O&M:

Total:

0	\$	-
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 complete.
- 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)
Base case technology:	Do nothing		
Efficient technology:	SMART Meters		
Number of participants or units delivered for reporting year:	0		
Measure life (years):	15		
Number of Participants or units delivered life to date	201		

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

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

Conservation Programs:

Demand savings (kW):	Summer	30
	Winter	80

	lifecycle	in year	Cumulative Lifecycle	Cumulative Annual Savings
Energy saved (kWh):	0		6892979	919,064
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:

Utility direct costs (\$):

Incremental capital:

Reporting Year**Cumulative Life to Date**

\$ - \$ 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		8			
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):			\$ -	\$ 196,712.08	
Incremental Measure Costs (Equipment Costs)			\$ -	\$ 870,044.34	
Total TRC costs:			\$ -	\$ 1,066,756.42	
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	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):

	<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):

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:

Demand savings (kW):	Summer	0	5140
	Winter	0	5140

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

Demand Management Programs:

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

Demand Response Programs:

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

Power Factor Correction Programs:

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

Line Loss Reduction Programs:

Peak load savings (kW):

lifecycle

in year

Energy savings (kWh):

Distributed Generation and Load Displacement Programs:

Amount of DG installed (kW):

Energy generated (kWh):

Peak energy generated (kWh):

Fuel type:

Other Programs (specify):

Metric (specify):

D. Actual Program Costs:

Utility direct costs (\$):

Incremental capital:

Reporting Year**Cumulative Life to Date**

\$ 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):	<p>On-the-Bill Financing will start with a pilot offering, which will be developed to help remove a significant energy conservation purchase barrier.</p> <p>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.</p> <p>Financing arrangements will be made with third party investment organizations and payment amounts will be presented on the customer's hydro bill.</p>			
	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:	<u>Reporting Year</u>	<u>Life-to-date TRC Results:</u>	
	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
	<u>Net TRC (in year CDN \$):</u>			
	Benefit to Cost Ratio (TRC Benefits/TRC Costs):	na		2.2

C.	Results: (one or more category may apply)	<u>Cumulative Results:</u>			
	Conservation Programs:				
	Demand savings (kW):	Summer			114.8
		Winter			
		lifecycle	in year	Cumulative Lifecycle	Cumulative Annual Savings
	Energy saved (kWh):			3,259,565	1,303,826
	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):

	<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):

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)	
Base case technology:	Do nothing.			
Efficient technology:	Adaptivolt system.			
Number of participants or units delivered for reporting year:	0			
Measure life (years):	15			
Number of Participants or units delivered life to date	1			
B.	TRC Results:		Reporting Year	Life-to-date TRC Results:
¹	TRC Benefits (\$):		na	na
²	TRC Costs (\$):			
	Utility program cost (excluding incentives):	\$	813.78	\$ 571,506.27
	Incremental Measure Costs (Equipment Costs)			
	Total TRC costs:	\$	813.78	\$ 571,506.27
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:				
Demand savings (kW):	Summer	420	420	
	Winter	420	420	
	lifecycle	in year	Cumulative Lifecycle	Cumulative Annual Savings
Energy saved (kWh):		-	54,531,000	7,270,800
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):

	<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):

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(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:

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		

	<i>lifecycle</i>	<i>in year</i>	<i>Cumulative Lifecycle</i>	<i>Cumulative Annual Savings</i>
<i>Energy saved (kWh):</i>	834,000	41,700	834000	41700
<i>Other resources saved :</i>				
<i>Natural Gas (m3):</i>				
<i>Other (specify):</i>				

Demand Management Programs:

<u>Demand Management Programs:</u>		
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:

Utility direct costs (\$):

Incremental capital:

Reporting Year**Cumulative Life to Date**

\$ - \$ 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)
Base case technology:	Do nothing.		
Efficient technology:	Stand-by Generators		
Number of participants or units delivered for reporting year:			
Measure life (years):	10		
Number of Participants or units delivered life to date	8		

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

C.	Results: (one or more category may apply)	Cumulative Results:			
Conservation Programs:					
Demand savings (kW):	Summer				6205
	Winter				6205
				</	

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):

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.
- Loblaw's 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 Loblaw's projects.
- An estimated total of 100 kW of demand response capacity can be achieved through the Loblaw's 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:

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

	<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):

D. <u>Actual Program Costs:</u>		<u>Reporting Year</u>	<u>Cumulative Life to Date</u>
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	\$ -	0.00	0	0	0	\$ 7,178
Residential Programs - Residential L	\$ -	\$ 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	\$ -	0.00	0	0	0	\$ 1,826
Business Incentive Program (previo	\$ -	\$ -	\$ -	0.00	0	0	0	\$ -
Commercial (CI&I) Load Control Initia	\$ 74,065	\$ 192,717	\$ -	0.38	0	0	0	\$ 192,717
On-the-Bill Payment Plan Program (j	\$ -	\$ -	\$ -	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			\$ -	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	\$ 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			\$ -	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 (\$)
Distribution Loss Reduction	na	\$ 814	#VALUE!	0.00	0	0	0	\$ 814
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	\$ -	\$ 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 S	\$ -	\$ -	\$ -	0.00	0	0	0	\$ -
Overall Program Support Indirect Costs not attributable to any specific program								
Total TRC Costs		\$ -						
**Totals TRC - Overall Program Su	\$ -	\$ -	\$ -	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	\$ 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.

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EB-2009-0400
Tab B
Attachment F

Enersource's Conservation and Demand Management 2008 Annual Report for
Incremental CDM Funding Approved In Rates

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Conservation and Demand Management 2008 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, 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), under the Amended Requirements for Annual Reporting of Conservation and Demand Management Initiatives, issued on March 1st 2007, and the report is structured according to the Board’s February 2, 2009 Requirements for Annual Reporting of Conservation and Demand Management (“CDM”) Initiatives. Both documents include requirements for reporting on Incremental CDM Funding Approved in Rates.^{1, 2}

This report – due April 30th, 2009 - has been prepared in accordance with the above referenced guidelines and requirements and gives an account of three CDM residential programs proposed by Enersource Hydro Mississauga Inc. (“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 Guide³, in its October 2006 revision, and its further update presented in Appendix A of the Guidelines for Electricity Distributor Conservation and Demand Management EB-2008-0037, issued March 28, 2008.⁴

The approved CDM residential programs are highlighted below:

Hot Water Heater Tune-up Program

Highlights:

- Program did not run in 2008, since funds were exhausted in 2007;
- 4,915 water heater tune-ups were completed since program inception, including 1,975 in 2006;
- A total of almost \$644,000 has been invested, since inception;
- Cumulative annual energy savings since program inception are estimated at over 5,600,000 kWh.
- Cumulative lifecycle energy savings are projected at almost 44,000,000 kWh;
- Summer peak demand reduction of 773 kW is estimated;
- Winter peak demand reduction is estimated at 1,145 kW; and

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

² Available at:
[http://www.oeb.gov.on.ca/OEB/Industry+Relations/OEB+Key+Initiatives/Conservation+and+Demand+Management+\(CDM\)/Guidelines+for+Electricity+Distributor+CDM#20080328](http://www.oeb.gov.on.ca/OEB/Industry+Relations/OEB+Key+Initiatives/Conservation+and+Demand+Management+(CDM)/Guidelines+for+Electricity+Distributor+CDM#20080328)

³ Available at: http://www.oeb.gov.on.ca/documents/cases/RP-2004-0203/cdm_trcguide_021006.pdf

⁴ Available at:
[http://www.oeb.gov.on.ca/OEB/Industry+Relations/OEB+Key+Initiatives/Conservation+and+Demand+Management+\(CDM\)/Guidelines+for+Electricity+Distributor+CDM/Guidelines+for+Electricity+Distributor+CDM](http://www.oeb.gov.on.ca/OEB/Industry+Relations/OEB+Key+Initiatives/Conservation+and+Demand+Management+(CDM)/Guidelines+for+Electricity+Distributor+CDM/Guidelines+for+Electricity+Distributor+CDM)

- This program also included the distribution of efficient, low flow shower heads and faucet aerators, resulting in water savings projected at about 588,000 m³ on a lifecycle basis.

This initiative was screened for Total Resource Cost (TRC) test, yielding a Benefit-Cost Ratio of 4.1, based on cumulative results.

Seasonal Light Exchange Program

Highlights:

- The program was terminated at the end of available funding in 2006 and could not be implemented in 2007 and 2008;
- In 2006 we distributed over 6,300 LED light sets resulting in approximately 110,000 kWh annual energy savings and a winter peak demand reduction of 36 kW;
- Cooperative efforts in 2006 involving a major Region of Peel food bank facilitated the distribution of seasonal lights to needy customers;
- Cumulative lifecycle energy savings are projected at about 3,300,000 kWh; and
- Actual results would have been better, if not for unforeseen quality problems, which required a massive recall of sets distributed in 2006 and consequent unplanned expenses to inform the public, and source other sets for redistribution.

Results from inception to date show a TRC Benefit-Cost Ratio of 1.6 against an investment of just over \$112,700.

Events Van Program

Highlights: -

- The Events Van initiative, with its Event Team, supported all our CDM efforts, by bringing the conservation message and means to start conserving directly to our customers.
- The Event Team participated at 137 events and site-visits at various venues around the City of Mississauga ("City"), since the program began.
- In cooperation with the City library system, the Event Team was instrumental in securing the success of the "Kill-A-Watt" program, involving the circulation of energy monitoring devices, each accompanied by two CFL bulbs when borrowed through the City libraries.
- A highly successful "switch4earth" two-day event campaign was developed by Enersource and held in conjunction with Earth Day weekend in April 2007; over 70,000 CFLs were distributed through a major food retailer and at a Family Earth Day weekend at Civic Square, City Hall.
- Almost 125,000 CFLs and thousands of educational and promotional items were distributed since program inception, to contribute spreading the energy efficiency and conservation message among the residents of Mississauga; almost 6,800 CFLs were distributed through the libraries.
- Annual energy savings from distributed CFLs since program inception were calculated at over 13,600,000 kWh.
- Winter demand savings are estimated at over 2,800 kW;

- Cumulative lifecycle energy savings are projected at almost 59,000,000 kWh.
- and
- Since 2006, about \$726,000 has been invested.

A TRC Benefit-Cost Ratio of 5.2 was calculated based on results to date, against an initially projected value of 3.6.

Cumulative Results

The cumulative TRC Benefit-Cost Ratio for the three-program portfolio was calculated at 4.5, based on cumulative results for 2006, 2007 and 2008. Before program launch, the projected cumulative value was 3.3.

For the above three CDM programs, by December 31st, 2008, Enersource invested over \$1,482,000, or 97.2% of the \$1,525,000 approved funding, which resulted in cumulative annual savings to-date of approximately 19,400,000 kWh and approximately 106,300,000 kWh on a lifecycle basis.

Annual energy savings constitute enough electricity to power about 1,900 homes for a year.

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

1. Introduction

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

Included in that Decision was approved funding of \$1,525,000 for three residential 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, 2008 and lessons learned.

On December 21st, 2005 the Board 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. Guidelines for Electricity Distributor Conservation and Demand Management, were issued on March 28, 2008. On February 2, 2009, the Board issued Requirements for Annual Reporting of Conservation and Demand Management Initiative.

This report was 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 - and further updated and presented in Appendix A of the Guidelines for Electricity Distributor Conservation and Demand Management EB-2008-0037, issued March 28, 2008.

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 an overall TRC Benefit-Cost ratio of 4.5, since program inception. Economics improved from the first year's 3.8 ratio, since accruing benefits reduced the impact of high initial program costs. The economic effectiveness of these CDM programs is further evidenced when considering that, before project launch, TRC Benefit-Cost ratio was projected at 3.3.

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 provide numerical results in a table format:

Appendix A – Evaluation of the CDM Plan

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

Appendix B – Discussion of the Program

- Individual summary descriptions of each program, annual, cumulative, 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 programs' costs, TRC benefits, summer peak demand reduction and annual and lifecycle results for energy savings.

Appendix D – Total Life Evaluation of the CDM Plan

- Presents a cumulative account on a portfolio basis of the three CDM programs, since program inception.

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, and insulate hot water pipe leaving the tank. 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 Activities

Action

- The Tune-ups are completed by summer students who visit the homes of Mississauga residents with rented 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

- No tune-ups were carried out in 2008.
- 4,915 water heater tune-ups were completed since program inception.
- Program has reached saturation with near exhaustion of electric water heaters' stock in Mississauga.

- Enersource ran an integrated communications campaign from Feb 12 – April 2, 2007 targeting the remaining 5,000 electric water heater customers who did not have tune ups performed between 2005 and 2006. Campaign included Mississauga News print ads, and Mississauga.com banner ads, addressed direct mail and the creation of a dedicated micro web site named www.wrapit.ca.
- Installed or distributed to-date:
 - 4,010 Efficient Showerheads
 - 4,448 Faucet Aerators
 - 4,280 Tank Wraps (some already had water heater blankets)
 - 18,576 CFLs
 - 3,447 m of hot water tubing insulation.
- Summer peak demand reduction of 773 kW is estimated.
- Winter peak demand reduction of 1,145 kW is estimated.
- Annual energy savings since program inception are estimated at about 5,600,000 kWh.
- Cumulative lifecycle energy savings are projected at about 44,000,000 kWh.
- About 110,000 m³ of annual water savings and over 588,500 m³ on a lifecycle basis are estimated.
- Approximately \$644,000 was spent by December 31st, 2008.
- Actual results to date show an excellent 4.1 TRC Benefit-Cost Ratio against a projected Benefit-Cost Ratio of 3.0.

Next Steps

- The program terminated and no further steps are planned at this time.

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 the Region of Peel's largest community food bank, 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 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

- No 2008 activities to report. The program was terminated at the end of available funding and could not be implemented in 2007 and 2008.
- Enersource distributed over 6,300 LED light sets in 2006.
- No summer peak demand reduction is attributable.
- Winter peak demand reduction of 36 kW is estimated.
- Annual energy savings are about 109,000 kWh.
- Lifecycle energy savings are projected at about 3,300,000 kWh.
- Results to date show a TRC Benefit-Cost Ratio of 1.6 against a projected 1.1 at program inception.

Next Steps

- No further steps are planned at this time.

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 efficiency 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 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

- Over 14,000 CFL bulbs were distributed in 2008, together with educational and promotional material.
- Close to 125,000 CFLs and thousands of educational and promotional items were distributed since program inception, to contribute spreading the energy efficiency and conservation message among the residents of Mississauga.
- A highly successful **switch4earth** two-day event campaign was developed by Enersource and held in conjunction with Earth Day weekend in April 2007. Over 70,000 CFLs were distributed through a major food retailer and at a Family Earth Day weekend at Civic Square, City Hall.
- The Event Team participated at 137 events at various venues around the City, since the program began.
- Annual energy savings from distributed CFLs since program inception were calculated at over 13,600,000 kWh.
- Lifecycle energy savings are projected at approximately 59,000,000 kWh.
- Close to \$726,000 were spent by December 31st, 2008.
- A TRC Benefit-Cost Ratio of 5.2 was calculated based on cumulative results to date, against an initially projected value of 3.6.

Next Steps

- The program will terminate when funding is exhausted. Approximately \$42,000 remained unspent at the end of 2008.

4. Lessons Learned

Enersource benefited from the experience with similar CDM pilot programs, launched in 2005 under 3rd Tranche of MARR funding, in the design and delivery of the programs reported in this report and funded through distribution rates.

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 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 with which we partnered, in delivering the 2006 Seasonal Lights program, because of the direct benefit to their needy clients and our ability to target this audience directly.
 - Constraints we had to overcome:
 - After we started distribution in November 2006, the LED strands were found to be sub-standard and had to be recalled. The strands we bought were stamped and approved by CSA.
 - This incident seriously affected our original program, since it was difficult to source replacement LEDs in sufficient quantities, that late in the year. The unplanned efforts required for informing the public and recovering the already distributed strands raised the cost of the program significantly.
 - In the future precautionary steps will be required, including having multiple suppliers to avoid similar problems.
 - There has been a terrific response to the Events Van program in

Mississauga, based on the number of people who engaged the Events Van Team 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.

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 CFL bulb distribution is not a priority program, based on summer peak system benefits alone, 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. This concept has been proven through our experience with the Special Events Van and the activities carried out by its team.

It was confirmed that there are many benefits to multi-year funding of programs. 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.

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

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, matured in 2007 and will continue beyond 2008 and 2009.

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	No	Program has reached saturation with near 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.
Events Van Program	Yes - H	Yes	Event Van activities support all program areas and assist with effectively marketing and promoting the conservation message.

5. Conclusions

This report gives an account of three Residential Conservation and Demand Management 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.

Of the three programs, the LED Holiday Light Exchange Program could only be run in 2006. The Hot Water Heater Tune-up Program was carried out in 2006 and 2007 and the Events Van/Bulb Drop program continued also in 2008. Based on results to-date for the three programs since 2006, we can conclude the following:

- By December 31st 2008, Enersource invested over \$1,482,000 or approximately 97% of the approved \$1,525,000 funding.
- The investment resulted in annual savings of almost 19,400,000 kWh and over 106,000,000 kWh on a lifecycle basis.
- Annual savings constitute enough electricity to power 1,900 Mississauga homes for a year.
- The effectiveness of the three programs' design and delivery was proven by a cumulative TRC Benefit-Cost Ratio of 4.5 for the three-program portfolio, based on actual results for 2006, 2007 and 2008 as applicable. The originally projected cumulative ratio was 3.3, determined in 2006.
- 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, in the design and delivery of these programs.

The past four years of CDM 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.

In carrying out these programs, it was confirmed that 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.

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.

The capacity constraints facing the electricity distribution systems 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 is committed to assisting in the promotion of a culture of conservation as directed by the provincial government, and will work cooperatively with the OEB, the Independent Electricity System Operator, the Ontario Power Authority, the Ministry of Energy and Infrastructure, and other members of the Coalition of Large Distributors to support that culture.

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 D – Total Life Evaluation of the CDM Plan

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.

	Total for 2008	Residential	⁵ Low Income	Commercial	Institutional	Industrial	Agricultural	LDC System	⁴ Smart Meters	Other #1	Other #2
Net TRC value (\$):	\$ 365,201	\$ 365,201	\$	\$ -	\$ -	\$ -	\$ -	\$ -		\$ -	\$ -
Benefit to cost ratio:	6.84	6.84		0.00	0.00	0.00	0.00	0.00		0.00	0.00
Number of participants or units delivered:	14,252	14,252									
Lifecycle (kWh) Savings:	6,682,364	6,682,364		0	0	0	0	0		0	0
Report Year Total kWh saved (kWh):	1,554,038	1,554,038		0	0	0	0	0		0	0
Total peak demand saved (kW):	0	0		0	0	0	0	0		0	0
Total kWh saved as a percentage of total kWh delivered (%):	0.02%	0.02%									
Peak kW saved as a percentage of LDC peak kW load (%):	0.00%	0.00%									
¹ Report Year Gross C&DM expenditures (\$):	\$ 62,525	\$ 62,525	\$	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
² Expenditures per kWh saved (\$/kWh):	\$ 0.01	\$ 0.01	\$	\$ -	\$ -	\$ -	\$ -	\$ -		\$ -	\$ -
³ Expenditures per kW saved (\$/kW):	\$ -	\$ -	\$	\$ -	\$ -	\$ -	\$ -	\$ -		\$ -	\$ -
Utility discount rate (%):	5.99%										

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

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, and insulate hot water pipe leaving the tank. 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:	0	0	0
Measure life (years):	6	12	4
Number of Participants or units delivered life to date	4280	4010	18,576

	Aerators on Faucets	Pipe Insulation
Base case technology:	Do Nothing	Do Nothing
Efficient technology:	Aerators on Faucets	Install insulating sleeves on hot water pipes (equivalent to 8 ft average per water heater as per OEB Measures List).
Number of participants or units delivered for reporting year:	0	0
Measure life (years):	12	6
Number of Participants or units delivered life to date	1,733	1,413

B. TRC Results:

	Reporting Year	Life-to-date TRC Results:
¹ TRC Benefits (\$):	\$ -	\$ 2,670,611.19
² TRC Costs (\$):		
Utility program cost (excluding incentives):	15,395.84	643,988.87
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	\$ 15,395.84	\$ 643,988.87
Net TRC (in year CDN \$):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	\$ -	4.1

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

Conservation Programs:

	Summer	Winter	Cumulative Lifecycle	Cumulative Annual Savings
Demand savings (kW):				
				773
				1145
Energy saved (kWh):	0	0	44,288,086	5,610,935
Other resources saved :				
Natural Gas (m3):				
Water (m3):	0	0		588,562

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):		
	<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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Actual Program Costs:

		<u>Reporting Year</u>	<u>Cumulative Life to Date</u>
Utility direct costs (\$):	Incremental capital:		
	Incremental O&M:	\$ 15,395.84	\$ 643,988.87
	Incentive:		
	Total:	\$ 15,395.84	\$ 643,988.87
Utility indirect costs (\$):	Incremental capital:	\$ -	\$ -
	Incremental O&M:		
	Total:	\$ -	\$ -

Assumptions & Comments:**Action**

- The Tune-ups are completed by students 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

- Program did not run in 2008, since funds were exhausted in 2007. 4,915 water heater Tune-Ups were completed since program inception, 1,975 of which in 2006.
- Installed or distributed to-date:
 - 4,010 Efficient Showerheads
 - 4,448 Faucet Aerators
 - 4,280 Tank Wraps (water heater blankets)
 - 18,576 CFLs
 - 3,447 m of hot water tubing insulation, corresponding to 1,413 units of 8-ft lengths of insulation (average from OEB Measures List).
- Summer peak demand reductions of 773 kW are estimated.
- Winter peak demand reductions of 1,145 kW are estimated.
- Cumulative annual energy savings since program inception are estimated at over 5,600,000 kWh. About 5,050,000 after accounting for freeriders, for TRC purposes.
- Cumulative lifecycle energy savings are estimated at almost 44,000,000 kWh.

Next Steps

- The program was terminated when funding was exhausted in 2007.
- No further steps are planned.

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.

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.					
The inefficient lights, exchanged by residents, are being disposed of in an environmentally friendly manner.					
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:		0	0		
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 (\$):				\$ 178,874	
² TRC Costs (\$):					
	Utility program cost (excluding incentives):	\$	-	\$	112,711.16
	Incremental Measure Costs (Equipment Costs)				
	Total TRC costs:	\$	-	\$	112,711.16
Net TRC (in year CDN \$):					
Benefit to Cost Ratio (TRC Benefits/TRC Costs):					
		na		1.6	
C. Results: (one or more category may apply)					
Cumulative Results:					
Conservation Programs:					
Demand savings (kW):		Summer		0	
		Winter		36.0	

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):

D. Actual Program Costs:		Reporting Year	Cumulative Life to Date
Utility direct costs (\$):	Incremental capital:		
	Incremental O&M:	\$ -	\$ 112,711.16
	Incentive:		
	Total:	\$ -	\$ 112,711.16
Utility indirect costs (\$):	Incremental capital:		
	Incremental O&M:		
	Total:	\$ -	\$ -

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

- The program was terminated at the end of available funding in 2006 and could not be implemented in 2007 and 2008.
- Enersource distributed over 6,300 LED light sets in 2006.
- No summer peak demand reductions attributable.
- Winter peak demand reductions of 36 kW are projected.
- Cumulative annual energy savings since program inception are projected at about 109,000 kWh.
- Lifecycle energy savings are projected at about 3,300,000 kWh.

Next Steps

- The program was terminated when funding was exhausted in 2006.
- No further steps are planned.

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(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:	14252		
Measure life (years):	4		
Number of Participants or units delivered life to date	124967		

B. TRC Results:	Reporting Year	Life-to-date TRC Results:
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<u>TRC Measure</u>	<u>Reporting Year</u>	<u>End-to-date TRC Measure</u>
¹ TRC Benefits (\$):	\$ 427,725.77	\$ 3,760,220.29
² TRC Costs (\$):		
Utility program cost (excluding incentives):	\$ 47,129.26	\$ 725,903.31
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	\$ 47,129.26	\$ 725,903.31

Total TRC costs:	\$	47,129.20	\$	129,903.31
Net TRC (in year CDN \$):				

Benefit to Cost Ratio (TRC Benefits/TRC Costs):	9.1	5.2
---	-----	-----

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

Conservation Programs:

Demand savings (kW):	Summer	0.00	0
	Winter	321	2819

	<i>lifecycle</i>	<i>in year</i>	<i>Cumulative Lifecycle</i>	<i>Cumulative Annual Savings</i>
<i>Energy saved (kWh):</i>	6,682,364	1,554,038	58,745,958	13,661,851

Energy saved (kWh):	6,662,664	1,664,666	66,146,666	16,661,661
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:	\$ 47,129.26	\$ 725,903.31
	Incentive:		
	Total:	\$ 47,129.26	\$ 725,903.31
Utility indirect costs (\$):	Incremental capital:	\$ -	\$ -
	Incremental O&M:		
	Incentive:		
	Total:	\$ -	\$ -

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

- In 2008, over 14,000 CFLs and thousands of educational and promotional items were distributed. Resulting annual savings were over 1,500,000 kWh or almost 1,400,000 kWh if accounting for free-riders.
- Almost 8,600 CFL bulbs were distributed through the Mississauga Library System since program inception, through an initiative called Kill-A-Watt Library Loan Program. Clients borrow the "Kill-A-Watt" device to monitor energy consumption and receive 2 CFL bulbs as an incentive.
- Almost 125,000 CFLs and thousands of educational and promotional items were distributed since program inception, to contribute spreading the energy efficiency and conservation message among the residents of Mississauga.
- A highly successful "switch4earth" 2-day event campaign was developed by Enersource and held in conjunction with Earth Day weekend in April 2007. Over 70,000 CFLs were distributed through a major food retailer and at a Family Earth Day weekend at Civic Square, City Hall.
- The Event Team participated at 137 events at various venues around the City, since the program began.
- Cumulative annual energy savings from distributed CFLs since program inception were calculated at over 13,600,000 kWh.
- Lifecycle energy savings are projected at almost 59,000,000 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 C – Program and Portfolio Totals

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 (\$)
Hot Water Heater Tune-up	\$ -	\$ 15,396	\$ - 15,396	0.00	0	0	0	\$ 15,396
Seasonal Light Exchange	\$ -	\$ -	\$ -	0.00	0	0	0	\$ -
Events Van	\$ 427,726	\$ 47,129	\$ 380,597	9.08	1,554,038	6,682,364	0	\$ 47,129
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	\$ 427,726	\$ 62,525	\$ 365,201	6.84	1,554,038	6,682,364	0	\$ 62,525
Residential Indirect Costs not attributable to any specific program								
Total Residential TRC Costs		\$ 62,525						
**Totals TRC - Residential	\$ 427,726	\$ 62,525	\$ 365,201	6.84				

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 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 - 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 J			\$ -	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 G			\$ -	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	\$ 427,726	\$ 62,525	\$ 365,201	6.84	\$ 1,554,038	\$ 6,682,364	\$ -	\$ 62,525
Any other Indirect Costs not attributable to any specific program								
TOTAL ALL LDC COSTS		\$ 62,525						
**LDC' PORTFOLIO TRC	\$ 427,726	\$ 62,525	\$ 365,201	6.84				

* 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

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	Other #1	Other #2
Net TRC value (\$):	\$ 6,609,705	\$ 6,609,705	\$	\$	\$	\$	\$	\$		\$	\$
Benefit to cost ratio:	4.5	4.46									
Number of participants or units delivered:	161,308	161,308									
Lifecycle (kWh) Savings:	106,308,783	106,308,783									
Total kWh saved (kWh):	19,381,943	19,381,943									
Total peak demand saved (kW):	773	773									
Total kWh saved as a percentage of total kWh delivered (%):	0.24%	0.24%									
Peak kW saved as a percentage of LDC peak kW load (%):	0.05%	0.05%									
¹ Gross C&DM expenditures (\$):	\$ 1,482,603	\$ 1,482,603	\$	\$	\$	\$	\$	\$	\$	\$	\$
² Expenditures per KWh saved (\$/kWh):	\$ 0.01	\$ 0.01	\$	\$	\$	\$	\$	\$		\$	\$
³ Expenditures per KW saved (\$/kW):	\$ 1,917	\$ 1,917.12	\$	\$	\$	\$	\$	\$		\$	\$
Utility discount rate (%):	5.99%										

¹ Expenditures are reported on cumulative basis.

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

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

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

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

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