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March 31, 2008

Delivered by Courier

Ontario Energy Board
P.O. Box 2319
2300 Yonge Street
Suite 2700
Toronto, ON M4P 1E4

Attention: Ms. Kirsten Walli
Board Secretary

**Re: Haldimand County Hydro Inc.
RP-2004-0203 \ EB-2004-0523
Conservation and Demand Annual Report – 2007
Third Tranche Funding**

Further to the Ontario Energy Board's (the "Board") orders approving electricity distributor conservation and demand ("CDM") plans, the Board requires that each distributor file an annual report including a cost benefit analysis.

Haldimand County Hydro Inc.'s submission is pursuant to the Board's "*Guideline for Annual Reporting of CDM Initiatives*" issued December 21, 2005 and the updated "*Requirements for Annual Reporting of CDM Initiatives*" issued March 1, 2007. Current reporting requirements have remained the same as per the Board's letter dated March 3, 2008.

Please find enclosed three (3) hard copies which include the following:

- 2007 Annual Report – CDM Third Tranche Funding, dated March 31, 2008;
- Appendix A – Evaluation of the CDM Plan;
- Appendix B – Discussion of the Programs "Co-Branded Mass Market and Social Housing", "Smart Meter <50 kW", "Smart Meter >50 kW", "Energy Audit Feasibility Study", and "Distribution Conversion".
- Appendix C – Program and Portfolio Totals; as listed in Appendix B.

Also enclosed are electronic copies (CD) which include:

1. "2007 Annual Report,CDM Third Tranche Funding_Haldimand_20080331"
(SINGLE PDF DOCUMENT - ALL MATERIALS) (*PDF*)
2. "2007 Annual Report,CDM Third Tranche Funding_Haldimand_20080331"
(APPENDICES A, B AND C, AS NOTED ABOVE) (*EXCEL*)

These electronic files have also been forwarded to your attention, by email to Boardsec@oeb.gov.on.ca, today.

Yours truly,
HALDIMAND COUNTY HYDRO INC.

Original signed by J.A. Scott

Jacqueline A. Scott
Finance Manager

**2007 OEB Annual
Conservation and Demand
Management Report**



Submitted By Haldimand County Hydro Inc.
R. Jane Albert, Consumer Services Manager

RP-2004-0203/EB-2004-0523

March 31, 2008

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1.0 Introduction

Haldimand County Hydro Inc. distributes electricity to 20,237 customers in Haldimand County. Our customer base is made up of a unique combination of rural and suburban customers stretching over 1252 square kilometers.

Our desire to promote a sustainable conservation culture with our customers facilitated our participation in a regional approach to program development to derive economies of scale but to also create consistent regional information to the customers across 11 LDC's, known as NEPA (Niagara Erie Public Power Alliance).

The NEPA group has long been known in the industry as a leader in facilitating regional understanding of regulatory changes, public safety messaging, co-ordination of training and now conservation and demand management.

Our Conservation and Demand Management (CDM) plan was prepared as a NEPA initiative. Together we represent 525,000 Ontario electric customers and a total of \$5.5 million dollars of CDM funding. Our primary goal is to leverage common solutions and deliverables to maximize results when ever feasible.

During 2005 and 2006, and finally in 2007 our primary concentration was to plan and create our foundation. High on the list was emphasizing customer communication branding in the form of Conserver Joe to begin changing and building awareness for the long term and well as engaging both our community and staff in thinking conservation on a daily basis.

Our budget for 2007 was based on \$41, 846.50 from the balance of our third tranche funding with an additional \$16,829.02 reported on projects that exceeded budget. Furthermore, our regulatory asset account as reported to the OEB will reflect a total of \$453,762.52.

Further community based Conservation programs were facilitated through our normal budget process and through our ongoing participation with the OPA standard programs.

Reallocation of Third Tranche Funding

Reallocation of Third Tranche Funding

Program	Approved Budget	Final Expenditures	Deviation
Co-branded Mass Market Program	60,000	\$68,204.38	\$ 8,204.38
Social Housing	\$20,000.00	\$7,469.28	\$ 12,530.72
Smart Metering Low Volume	\$15,000	\$13,810.77	\$ 1,189.23
Energy Audit >50kW	\$5,000.00	\$9,968.19	\$ 4,968.19
Smart Metering >50kW	\$37,500	\$33,514.26	\$ 3,985.74
Distribution Assets – Voltage Conversion	\$294,585.00	\$298,570.74	\$3,985.74
Administration	\$5,000	\$22,224.90	\$17,224.90
Total \Third Tranche Budget	437,085	\$ 453,762.52	\$ 52,088.90
Budget Portion Over Third Tranche MARR			\$ 16,677.52
Maximum Value of Funds to be Re -allocated within 20% of total Approved Budget (20% of \$437,085)			\$ 87,417.00

During the course of the three year implementation, \$52,088.90 was re-allocated between programs. \$3,985.74 represented a capital re-allocation from the Smart Meter >50kW to the Distribution Asset-Voltage Conversion. \$48,103.16 represents the expenditure re-allocation between non-capital projects.

The Regulatory Asset quarterly reporting component to the OEB for account “1565” will reflect the capital re-allocation of \$3,985.74 which represents final capital dollars spent and allocated to Third Tranche funding.

2.0 Evaluation of the CDM Plan

Haldimand County Hydro has implemented CDM projects that have effectively reduced a cumulative total of 173kW in demand with annual savings of 877,698 kWh and total project savings over the lifespan of the technology of 8,629,533 kWh.

Appendix A depicts our overall CDM portfolio summarizing both programs with qualitative and quantitative results. Our overall TRC value is negative \$94,412 with total spending of \$453,493. We have opted to not project TRC calculations for projects that are deemed qualitative but recognize and strongly support the need for such programs that instill the long-term message of conservation to our customers.

Haldimand County Hydro is a strong advocate of actively participating with the OPA on their residential programs. In 2007 we participated in EKC promotions as well as the OPA standard programs commencing June 2007. In this report we are not reporting on statistics of products purchased. It is our intention to continue promoting with staff and customers through our standard bill insert messages and local website which are presented to our customers.

Some programs are not designed to have specific quantifiable energy savings but are nevertheless effective and important in our view. Examples of this second category of programs include:

- Educational components like the “Conserver Family” information
- Active participation in the implementation study of smart meters for low volume customers in Ontario
- Energy Audits and industry information sessions.

3.0 Discussion of the Programs

Below is a brief summary of our specific CDM activities completed in 2007.

3.1 LED Christmas Light Exchange

TRC - \$10,600

Timeline – July 1, 2007 – September 30, 2007



In conjunction with our NEPA members, Haldimand County Hydro supported and promoted the use of seasonal LED lights in Haldimand County. Our overall annual savings of 16,345 with product lifecycle savings of 484,406 kWh.

Our program was planned to work with multiple levels of customer groups to promote a seasonal lighting alternative. Our key events were as follows:

- Customer Light Up Night
- Community Christmas Light Committees
- Local Parade

Organized Events

1. LED Exchange Program with Haldimand County Residents

A customer light exchange was co-ordinated with the Cayuga Christmas Light Up night. We noticed a significant trend in 2007. In 2007 we hosted one light exchange. Customer numbers dropped significantly. We had many customers just drop by to tell us that all their Christmas lights have been changed. Over 600 sets of old lights were collected and disposed of through a recycling program.



4. Caledonia Parade

Haldimand County Hydro volunteers participated in the Caledonia Christmas parade. Our theme – Conservation. Accompanied by our mascot, Conserver Abby, we handed out 200 sets of LED lights and promoted our Light Exchange in Cayuga.



3.3 Low Income Kits – Lighten Your Load

TRC – \$131,600

Timeline – April, 2007 – July 15, 2007

Haldimand County Hydro provided 350 conservation kits for low income families in our community. The kits contained the following:

- 4 – 15 watt compact fluorescents
- Conserver Joe Booklet and general information
- Notepad/check list

We utilized our local food banks to ensure kits properly distributed to those in need.



3.4 Large User Energy Seminar and Audit Program

TRC - Qualitative

Timeline – July 1, 2006 – March 2007

The objective of the seminar and the audit program was to provide a better understanding of energy use for our largest users. We know from the Ontario Power Authorities Integrated Power Plan that our commercial and industrial customers provide the largest opportunity of peak demand reductions in the province. Haldimand County Hydro has a large and strong agricultural base and their presence was strong at the seminar.

Customers in attendance were offered the opportunity to receive up to \$3000.00 towards an energy audit by a pre-approved contractor and implemented energy changes. Funding was available for a maximum of 7 customers. As of December 31, 2006, a total 4 out of 7 audits have been complete. Customer's had until March 31, 2007 to complete their audit. Final results, 6 customers completed an audit however no notification was received of any implemented conservation projects.

3.5 Conserver Joe Website

TRC – Qualitative

Timeline – May 2005 to September 30, 2007

In partnership with the NEPA group, we continue to maintain a diversified customer education package built around Conserver Joe and his family. The development of the design was built around the concept of a family approach to saving energy. Each family member brings their own special touch to encouraging and sharing conservation.

Introducing the Conserver Family



We know that changing our consumers' habits to sustain ongoing support and belief in conservation would take the resources of the working folks, as well as the push and enthusiasm of our youth.

To assist in local use of the Conserver Family, Product Use guidelines have been developed to keep our Conserver Family used in a consistent manner.

Conserver Joe and his family continue to make appearances in various media as follows:

- **Conservation Handbook** – advises residential customers how to seasonally tune up their home to optimize energy use.
- **Newsletter** – a tabloid designed to share the success stories across LDCs utilizing Conserver Joe.
- **Bill Inserts** – Initially 10 bill inserts have been developed each sharing a single conservation message. All four family members share tips on saving energy.
- **Website** – www.conserverjoe.com – the website was developed to create a consistent message and branding. All NEPPA participants are able to use the website links.
- **Print Ads** – a selection of print ads have been developed for easy and quick circulation.

3.6 Smart Metering – Low Volume Customers

TRC - Qualitative

Timeline – May, 2005 – September 30, 2007

Haldimand County Hydro has elected not to directly facilitate a low volume smart metering pilot. However, we have embraced our responsibility to understand and

participate in the development of smart metering implementation. We hold an active role on the OUSM working group in all facets and contribute to a more localized working group with the 11 NEPA members to explore regional solutions.

All funding attributed to Smart Metering for low volume customers is to support our involvement in both these organizations. Haldimand County Hydro is preparing our implementation for 2009.

3.7 Smart Metering – Large Volume Customers

TRC - Qualitative

Timeline – May 2005 – September 30, 2007

In 2007 a further 10 customers received an interval meter. In total 23 customers received an interval meter with this program. These customers use a monthly average demand of greater than 150kW. In November, a meeting was held with all large use customers with a key focus on how to use their interval meter to aid in energy reductions. During the meeting customers were made aware of the OPA business incentives program. Changes to our Conditions of Service will ensure that all new construction with loading greater than 200 kW will automatically have an interval meter installed.

3.8 Administrative

TRC – Qualitative

Timeline – January 1, 2006 – September 30, 2008

For the preparation and review of our Distribution Conversion program, a consulting firm was utilized to prepare the engineering analysis of the final project. Their involvement included initial review of the project as well and the final TRC calculation.

4.0 Lessons Learned

Creating a balanced plan requires a concerted effort to include a mix of localized programming to engage a community commitment and broader initiatives to connect Haldimand County Hydro to a provincial goal and solution.

Our plan was developed with the express desire to improve our overall customer base efficiency and target specific customer segments. Our limited budget of \$437,000 required some creative approaches.

Never underestimate the power of a strong community program. Our signature program this year was our second annual seasonal LED light exchange. We took extra effort to engage our whole community. First we engaged the enthusiasm of our Christmas community light leaders to change their lighting displays from incandescent to LED. We met with customers during light up night to exchange lights, challenged our own staff to reduce their seasonal lighting energy use and we provided LED lights to customer in our local Christmas parade.

In 2006 we converted our 13 largest customers that were currently without an interval meter. In 2007 we were able to install an additional 9 interval meters whose annual peak demand is greater than 150 kW. Converting our largest customers to interval meters is an important start to initiating other demand response programs. Showing customers when they use power with the relative price signal, creates the proper support for ongoing efforts on their part that could lead to onsite capital improvements to reduce their consumption and demand.

A valued component of our CDM efforts is joint co-operation with the NEPA members. It is clear that consistent messaging and branding over a larger geographical area supports the long term goal of a sustained conservation culture. Our NEPA members continue to be a source of positive energy in maintaining the ongoing development of CDM in the province. We believe we are able to promote and deliver more cost effective programs than by operating on our own.

5.0 Conclusion

2007 we continued our focus on the engagement of our community. Extra effort was made to explore awareness. We looked to zero incremental cost measures such as press releases, CDM messages on all bill inserts and staff awareness.

Haldimand County Hydro has benefited by actively participating with the NEPA group to leverage programming, remaining adaptable to the regulatory changes, maintaining low cost initiatives through bulk purchasing and, whenever possible, fostering a regional solution for our customers. During the course of 2007, we have been able to maintain active participation with our current staff complement.

New in 2007

1. Low Income Program – *Lighten Your Load*
2. LED Seasonal Light Promotions – second annual
3. Additional Interval Meters Installed
4. Energy Seminar

We are committed to local delivery of CDM programming to our customers and look forward to continued cost effective innovative solutions in conjunction with the OPA.

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 (\$):	-\$ 94,412	\$ 132,578	\$ 132,578	\$ -	\$ -	\$ -	\$ -	\$ -		\$ -	\$ -
Benefit to cost ratio:	\$ 15.14	14.78	14.78	0.00	0.00	0.00	0.00	0.00		0.00	0.00
Number of participants or units delivered:	7371	1001	1000					1			
Lifecycle (kWh) Savings:	8,629,533	2,411,109	897,724	0	0	0	0	1,513,385		0	0
Report Year Total kWh saved (kWh):	877,698	143,929	143,929	0	0	0	0	0		0	0
Total peak demand saved (kW):	173	33	33	0	0	0	0	0		0	0
Total kWh saved as a percentage of total kWh delivered (%):**	0.226%	0.038%	0.038%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
Peak kW saved as a percentage of LDC peak kW load (%):	0.001967385	0.039%	0.039%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
¹ Report Year Gross C&DM expenditures (\$):	\$ 453,969	\$ 59,457	\$ 14,521	\$ 4,588	\$ -	\$ -	\$ -	\$ 3,986	\$ 18,808	\$ -	\$ -
² Expenditures per kWh saved (\$/kWh):	\$ 0.08	\$ 0.02	\$ 0.02	\$ -	\$ -	\$ -	\$ -	\$ 0.00		\$ -	\$ -
³ Expenditures per KW saved (\$/kW):	\$ 3,657.73	\$ 1,801.73	\$ 440.02	\$ -	\$ -	\$ -	\$ -	\$ -		\$ -	\$ -
Utility discount rate (%):	7.52										

¹ Expenditures are reported on accrual basis.

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

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

⁴ Please report spending related to 3rd tranche of MARR funding only. TRC calculations are not required for Smart Meters. Only actual expenditures for the year need to be reported.

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

** Correction was made to 2005 Appendix A as input to cumulative Totals Life-to-date

Appendix B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** Co-Branded Mass Market and Social Housing

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

2007 Program included: community Light Exchange Program - exchange incandescent lights for LED lights. Conserver Joe Website - Annual Hosting Fees (2006 and 2007). Your Load - Low Income Kits	LED Light Lighten
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Measure(s):

	5 Watt	Mini Watt	Lighten Your Load Kits
<i>Base case technology:</i>	5 WATT Christmas lights C-7(64 lights)	Incandescent Mini Lights	Average existing stock
<i>Efficient technology:</i>	LED Christmas Lights (indoor or outdoor)	LED Christmas Lights (indoor or outdoor)	1400 CFL (4 15w lights per kit)
<i>Number of participants or units delivered for reporting year:</i>	500	500	350
<i>Measure life (years):</i>	30	30	1
 <i>Number of Participants or units delivered life to date</i>	 500	 500	 350

B. TRC Results:	Reporting Year	Life-to-date TRC Results:
¹ TRC Benefits (\$):	\$ 142,200	\$ 390,848.00
² TRC Costs (\$):		
<i>Utility program cost (excluding incentives):</i>	-\$ 5,202	-\$ 40,931.22
<i>Incremental Measure Costs (Equipment Costs)</i>	-\$ 4,420	-\$ 30,328.00
Total TRC costs:	-\$ 9,622	-\$ 71,259.22
Net TRC (in year CDN \$):	\$ 132,578	\$ 319,588.78
 <i>Benefit to Cost Ratio (TRC Benefits/TRC Costs):</i>	 14.78	 5.48

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

Conservation Programs:

<i>Demand savings (kW):</i>		<i>Summer</i>	0	22
		<i>Winter</i>	33	158

	<i>lifecycle</i>	<i>in year</i>	<i>Cumulative Lifecycle</i>	<i>Cumulative Annual Savings</i>
<i>Energy saved (kWh):</i>	897,724	143929	5,602,762	518,528
<i>Other resources saved :</i>				
<i>Natural Gas (m3):</i>				
<i>Other (specify):</i>				

Demand Management Programs:

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

Demand Response Programs:

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

Power Factor Correction Programs:

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

Line Loss Reduction Programs:

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

Distributed Generation and Load Displacement Programs:

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

Other Programs (specify):

Metric (specify):		
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D. Actual Program Costs:		Reporting Year	Cumulative Life to Date
Utility direct costs (\$):	<i>Incremental capital:</i>		
	<i>Incremental O&M:</i>	\$ 4,951	\$ 50,834
	<i>Incentive:</i>	\$ 9,362	\$ 43,992
	<i>Total:</i>	\$ 14,313	\$ 94,826
Utility indirect costs (\$):	<i>Incremental capital:</i>		
	<i>Incremental O&M:</i>		
	<i>Total:</i>		

E. Assumptions & Comments:

All TRC analysis completed using OEB published Assumptions/Measures List.
 Total 2007 TRC costs include expenditures for Conserver Joe Website .
 Cumulative TRC results include 2006 results . 2007 Conserver Joe Website
 Maintenance Fees
 2005 Customer Education program and staff training costs are included in total cumulative Life to Date Actual Program Costs

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

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

Appendix B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** Smart Meter <50 kW

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

Smart Meter Study Program

Measure(s):

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

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

C. Results: (one or more category may apply)	<u>Cumulative Results:</u>	
<u>Conservation Programs:</u>		
Demand savings (kW):	Summer	
	Winter	
	lifecycle	in year
Energy saved (kWh):		Cumulative Lifecycle
Other resources saved :		Cumulative Annual Savings
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):			
	<i>lifecycle</i>	<i>in year</i>	
Energy savings (kWh):			

Distributed Generation and Load Displacement Programs:

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

Other Programs (specify):

Metric (specify):		
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D. <u>Actual Program Costs:</u>		<u>Reporting Year</u>	<u>Cumulative Life to Date</u>
Utility direct costs (\$):	<i>Incremental capital:</i>	\$ 207.54	\$ 13,810.77
	<i>Incremental O&M:</i>		
	<i>Incentive:</i>		
	<i>Total:</i>	\$ 207.54	\$ 13,810.77
Utility indirect costs (\$):	<i>Incremental capital:</i>		
	<i>Incremental O&M:</i>		
	<i>Total:</i>		

E. Assumptions & Comments:

[Redacted area]

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 b

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

Appendix B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** Smart Meter >50 kW

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

Install and implement interval meters with all customer > 150kW

Measure(s):

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

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

C. Results: (one or more category may apply)	<u>Cumulative Results:</u>	
<u>Conservation Programs:</u>		
Demand savings (kW):	Summer	
	Winter	
	lifecycle	in year
Energy saved (kWh):		Cumulative Lifecycle
Other resources saved :		Cumulative Annual Savings
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):			
	<i>lifecycle</i>	<i>in year</i>	
Energy savings (kWh):			

Distributed Generation and Load Displacement Programs:

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

Other Programs (specify):

Metric (specify):		
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D. <u>Actual Program Costs:</u>		<u>Reporting Year</u>	<u>Cumulative Life to Date</u>
Utility direct costs (\$):	Incremental capital:	\$ 18,600.01	\$ 33,514.26
	Incremental O&M:		
	Incentive:		
	Total:	\$ 18,600.01	\$ 33,514.26
Utility indirect costs (\$):	Incremental capital:		
	Incremental O&M:		
	Total:		

E. Assumptions & Comments:

[Redacted area]

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 b

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

Appendix B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** Energy Audit Feasibility Study

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

Energy Audit sponsor program. Six Haldimand County Hydro customer completed their audit.

Measure(s):

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

B. TRC Results:	<u>Reporting Year</u>	<u>Life-to-date TRC Results:</u>
¹ TRC Benefits (\$):		
² TRC Costs (\$):		
Utility program cost (excluding incentives):	-\$	1,061
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	-\$	1,061
<u>Net TRC (in year CDN \$):</u>		-\$ 1,061
 Benefit to Cost Ratio (TRC Benefits/TRC Costs):	#DIV/0!	-

C. Results: (one or more category may apply)	<u>Cumulative Results:</u>	
<u>Conservation Programs:</u>		
Demand savings (kW):	Summer	
	Winter	
	lifecycle	in year
Energy saved (kWh):		Cumulative Lifecycle
Other resources saved :		Cumulative Annual Savings
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):			
	<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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<u>Actual Program Costs:</u>		<u>Reporting Year</u>	<u>Cumulative Life to Date</u>
Utility direct costs (\$):	Incremental capital:		
	Incremental O&M:		\$ 4,319.55
	Incentive:	\$ 4,587.64	\$ 4,587.64
	Total:	\$ 4,587.64	\$ 8,907.19
Utility indirect costs (\$):	Incremental capital:		
	Incremental O&M:		
	Total:		

E. Assumptions & Comments:

In total 7 customers applied for and 6 completed their energy audit. As of December 31, 2007 - none of the 6 customers have indicated completion of any of the initiatives. NO TRC is being reported.

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 b

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

Appendix B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** Distribution Conversion

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

Hagersville line voltage conversion from 4 kV to 27.6 kV. 2007 reflects an adjustment to third tranche reported capital of \$3985.74. This

Measure(s):

	27.6 kV Conversion	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	4.16 kV System		
Efficient technology:	27.6 kV System		
Number of participants or units delivered for reporting year:	1		
Measure life (years):	25		
Number of Participants or units delivered life to date	0		

B. TRC Results:	Reporting Year	Life-to-date TRC Results:
¹ TRC Benefits (\$):		\$ 75,616.26
² TRC Costs (\$):		
Utility program cost (excluding incentives):	-\$	510,643.53
Incremental Measure Costs (Equipment Costs)	\$ -	\$ -
Total TRC costs:	\$ -	-\$ 510,643.53
Net TRC (in year CDN \$):	\$ -	-\$ 435,027.27
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	#DIV/0!	\$ 0.15

C. Results: (one or more category may apply)	Cumulative Results:	
Conservation Programs:		
Demand savings (kW):	Summer	
	Winter	
	lifecycle	in year
Energy saved (kWh):		Cumulative Lifecycle
Other resources saved :		Cumulative Annual Savings
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):			14
	<i>lifecycle</i>	<i>in year</i>	
Energy savings (kWh):	1,513,385		63,058

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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<u>D. Actual Program Costs:</u>		<u>Reporting Year</u>	<u>Cumulative Life to Date</u>
Utility direct costs (\$):	Incremental capital:	\$ 3,985.74	\$ 298,570.74
	Incremental O&M:		
	Incentive:		
	Total:	\$ 3,985.74	\$ 298,570.74
Utility indirect costs (\$):	Incremental capital:		
	Incremental O&M:		
	Total:		

E. Assumptions & Comments:

No TRC reported in 2005 since conversion work was not complete.
 Total TRC costs include non 3rd tranche funding of 216,059.
 Total Cumulative Life to Date expenditures of \$295,585 represents total 3rd tranche funding.
 Since the voltage conversion was completed in 2 phases, 2006 TRC results included avoided energy and peak benefits as well as 2006 TRC costs only; 2005 expenditures were included in Cumulative Life to Date TRC costs.
 2007 a Capital cost adjustments of \$3985.74 was included to reflect the adjustment made at the 2007 year end. No change in TRC required as the total project cost was used to determine TRC.

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 b

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

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 (\$)
Co-Branded Mass Market and Social	\$ 142,200	\$ 9,622	\$ 132,578	14.78	143,929	897,724	33	\$ 14,313
Smart Meter <50kw			\$ -	0.00				\$ 208
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 - Residential	\$ 142,200	\$ 9,622	\$ 132,578	14.78	143,929	897,724	33	\$ 14,521
Residential Indirect Costs not attributable to any specific program	→							
Total Residential TRC Costs		\$ 9,622						
**Totals TRC - Residential	\$ 142,200	\$ 9,622	\$ 132,578	14.78				

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 (\$)
Energy Audit Feasibility Study		\$ -	\$ -	0.00				\$ 4,588
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 - Commercial	\$ -	\$ -	\$ -	0.00	0	0	0	\$ 4,588

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 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 - 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 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 - 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.

Name of Program	TRC Benefits (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 (\$)
	TRC Benefits (PV)	TRC Costs (PV)						
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	0	0	\$ -
Agricultural Indirect Costs not attributable to any specific program	→							
Total TRC Costs		\$		-				
**Totals TRC - Agricultural	\$	-	\$	-				

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.

Name of Program	TRC Benefits (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 (\$)
	TRC Benefits (PV)	TRC Costs (PV)						
Distribution Conversion	\$ -	\$ -	\$ -	0.00	0	1,513,385	0	\$ 3,986
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	1,513,385	0	\$ 3,986
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 (\$) → 18,808

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	\$ -
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	\$ 142,200	\$ 9,622	\$ 132,578	14.78	\$ 143,929	\$ 2,411,109	\$ 33	\$ 59,457
Any other Indirect Costs not attributable to any specific program		\$ 17,555.32						
TOTAL ALL LDC COSTS		\$ 27,177						
**LDC' PORTFOLIO TRC	\$ 142,200	\$ 27,177	\$ 115,023	5.23				

* 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.

***Peak demand displayed represents winter peak demand