

March 30, 2006

Delivered by Courier

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

Attention: Mr. John Zych
Board Secretary

**Re: Haldimand County Hydro Inc.
RP-2004-0203 \ EB-2004-0523
Conservation and Demand Annual Report – 2005**

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.

Pursuant to the Board's "*Guideline for Annual Reporting of CDM Initiatives*" issued December 21, 2005, please find enclosed five (5) hard copies and two (2) electronic copies of Haldimand County Hydro Inc.'s 2005 annual reporting which includes the following:

- Letter, dated March 31, 2006, from J. Albert on behalf of the NEPPA CDM Working Group;
- 2005 Conservation and Demand Management Annual Report, dated March 31, 2006;
- Appendix A – Evaluation of the CDM Plan;
- Appendix B – Discussion of the Program "Lighten Your Electricity Bill"; and
- Reporting Tool, "Energy and Demand Savings", prepared in conjunction with Appendices A and B

Yours truly,
HALDIMAND COUNTY HYDRO INC.

Original signed by J.A. Scott

Jacqueline A. Scott
Finance Manager

March 31, 2006

Board Secretary at Ontario Energy Board
P.O. Box 2319
2300 Yonge Street
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2005 Annual Conservation and Demand Management Report RP-2004-0203 / EB 2004-0523
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On December 9, 2004 Niagara Erie Public Power Alliance (NEPPA)¹ members filed their plans to implement conservation and demand management programs. During plan preparations, concerted effort amongst the group to organize and share initiatives when ever possible to share costs and improve the overall consistency of programming.

Some key joint initiatives have included

1. Conserver Joe – Family Education Package
 - a. Handbook
 - b. Bill Inserts
 - c. Newsletters
 - d. Print Ads
 - e. Website
2. RFP process to select qualified commercial/agricultural and industrial auditors
3. Participation in provincial coupon campaigns.
 - a. Lighten Your Electricity Bill
 - b. Cold Water Wash
4. Training and Development
5. LED Traffic Lights

¹ NEPPA comprising Canadian Niagara Power Inc. Grimsby Power Inc., Haldimand County Hydro Inc. Niagara Falls Hydro Inc., Niagara On The Lake Hydro Inc., Norfolk Power Distribution Inc., Peninsula West Utilities, St. Catharines Hydro Utility Services Inc., and Welland Hydro-Electric System Corp., Brant County Power, Brantford Power.

How Did We Do?

Collectively our NEPPA members contributed to annual energy savings of **5,383,735.54** kWh and demand savings of **2292.73** kW².

Energy reductions occurred from a variety of programming both through joint initiatives and localized community programming.

Opportunities

As we develop a conservation culture in Ontario we must continue to balance the need for short-term results while fostering a long-term conservation attitude among the citizens and businesses in the province. The industry must continue to coordinate its efforts to ensure that program delivery is efficient and available to all customers. Our goal should be rapid program deployment and using the LDC's clear channel to market. Clarity regarding the roles of the LDC's, OPA, IESO, etc. would be beneficial in this regard.

Further, clarity on the topics of LDC cost recovery, lost revenues, and criteria for assessing prudence of CDM spending would also be helpful. This will lead to more aggressive applications for second generation funding. At all times, we must strive to minimize bureaucracy wherever possible. For example, the opportunity to determine and agree on effective conservation programs up front should minimize the measurement and verification efforts required to substantiate these same programs at their conclusion.

Our commitment remains firm of remaining an active participant and advocacy of developing and promoting a conservation culture in Ontario.

Regards,

NEPPA Member
R. Jane Albert
Consumer Services Manager
Chair Person, NEPPA CDM Working Group
Haldimand County Hydro Inc.

² Energy Saved does not include data from St. Catharine's Hydro as they submitted a joint data statement with the CLD group to share collective results. At time of this report we were still waiting for Penwest, Fortis and Brantford to report their Kwh & Kw numbers therefore the numbers shown are incomplete from a complete NEPPA Collective Reporting.

**2005 OEB Annual
Conservation and Demand
Management Report**



Submitted By Haldimand County Hydro Inc.

RP-2004-0203/EB-2004-0523

March 31, 2006

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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 NEPPA (Niagara Erie Public Power Alliance).

The NEPPA 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 NEPPA initiative. Together we represent 525,000 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, 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. In 2006 our customers will enjoy further localized programming as well as our support for programming designed and delivered by the OPA.

The following table shows the approved plan expenditures by project as well as actual expenditures to December 31, 2005.¹

Project	Target Customers	Shared Initiative with NEPPA	Approved Expenditures	Actual Expenditure to Dec. 31, 2005
Co-branded Mass Market Program	Residential and <50 kW customers	Development of Conserver Family	60,000	\$44,983.29 ²
Social Housing	Residential	Under Review	\$20,000	\$0
Smart Metering Low Volume	Residential	NEPPA and OUSM	\$15,000	\$5,989.51
Energy Audit >50kW	>50kW	Under Review	\$5000.00	\$1,061.00
Smart Metering >50kW	>50kW	Local to HCH	\$37,500	\$4,985.70
Distribution Assets – Voltage Conversion	All	Local to HCH	\$294,585.00	\$103,833.68
Administration	All	Local to HCH	\$5,000.00	\$2,458.24
Project and Budget Totals			\$437,085.00	\$163,311.42

¹ All programs completed or started in 2005 are detailed in Appendix B with accumulated results in Appendix A. Actual reported spending varies from our 4th quarter filing spending by \$20,130.00 to account for final expenditures for Lighten Your Electricity Bill coupon event.

² Co-Branded expenditures as reported in fourth OEB Quarterly Filings was \$24,831.91. We have opted to include additional expenditures that were spent in 2006 but accrued to 2005. First Quarter 2006 filings for OEB CDM reporting will reflect the new information.

2.0 Evaluation of the CDM Plan

The Haldimand County Hydro has implemented CDM projects that has effectively reduced 88kW in demand with annual savings of 243,054 kWh and total project savings over the lifespan of the technology of 2,786,841 kWh.

Appendix A depicts our overall CDM portfolio summarizing both programs with qualitative and quantitative results. Our overall TRC value is \$149,612 with total spending of \$173,260.00. We have opted to not project TRC calculations for projects not completed by December 31, 2005.

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 program include:

- Educational components like the “Conserver Family” information
- Active participation in the implementation study of smart meters for low volume customers in Ontario
- Staff development and education in CDM

Our overall plan shows a NPV based on the Total Resource Cost analysis of the individual programs of \$149,612.00. 2005 expenditures totaled \$163,311.42

3.0 Discussion of the Programs

Below is a brief summary of our specific CDM activities completed and/or started in 2005. Appendix B includes details on programs with TRC values listed below.

Completed Projects

Lighten Your Electricity Bill

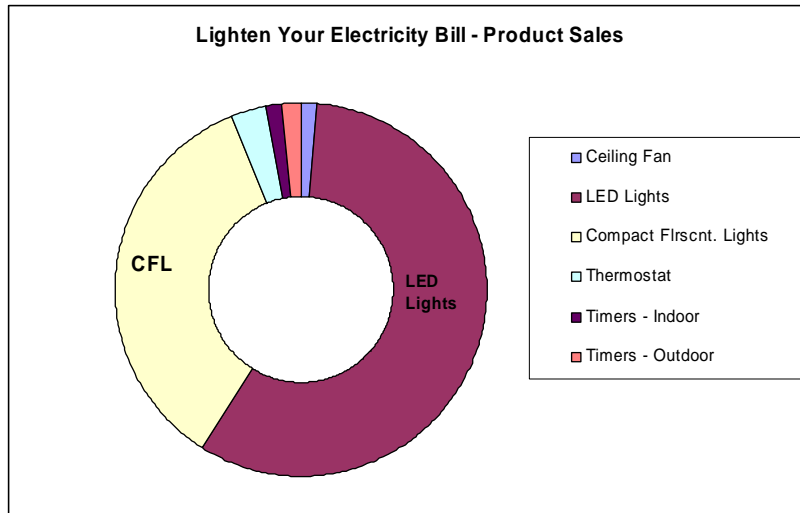
TRC - \$149,612.00

Timeline – October 31, to December 31, 2005

In conjunction with other NEPPA members and LDC’s across the province, we participated in a coupon campaign that offered customers the opportunity to purchase energy efficient products at Canadian Tire between October 1 to December 31, 2005.

All our residential customers received their Lighten Your Electricity Bill coupons via a special unaddressed package which also included a Conserver Joe Pamphlet and a coupon for Cold Water Wash Tide. In total 18,072 packages were mailed to both our

individually metered and bulk metered residential customers. The response was amazing. 25% of our customers took advantage of the coupons with a grand total of 4418 products purchased. The following chart depicts the product preferences of customers. Most popular were LED Christmas and Compact Fluorescents lights.



Ongoing Projects – Initiated in 2005

Cold Water Wash

TRC – to be provided with 2006 OEB Annual Report

Timeline – October 1, 2005 – March 31, 2006

In conjunction with other NEPPA members and LDCs across the province, Haldimand County Hydro supported and promoted the use of cold water to wash clothes. In partnership with Proctor and Gamble, we distributed 18,072 coupons.

We are expecting participation results in 2006 between 2-4%.

Voltage Conversion of Hagersville 4 kV to 27.6 kV

TRC - to be provided with 2006 OEB Annual Report

Timeline – August 2005 – August 2006

Permanent improvements to our overall loss factor will benefit all our customers. Haldimand County Hydro still has several areas that can and should be converted to a higher distribution voltage. In the community of Hagersville, an opportunity to change

sections of line from 4 kV to 27.6 kV was determined to provide overall benefits to our customer base. This conversion also provides us with the opportunity to take older (high loss) transformers out of service and replace them with more efficient transformers built to today's standards. In addition to the distribution transformers it allows us to take out of service a 4 kV substation operating with old high loss transformers.

The line conversion in Hagersville will be completed in two phases. The first phase of construction began in the last quarter of 2005. As of December 31, 2005 the new transformation was not yet ready to be energized. In 2006 it is anticipated that Phase I and Phase II will be completed.

Consver Joe Media Kit

TRC - Qualitative

Timeline – May 2005- December 2006

In partnership with the NEPPA group, we developed a diversified customer education package referred to as our media kit. The media kit is built around Consver Joe and his family. The development of the kit was designed around the concept of a family approach. Each family member brings their own special touch to encouraging and sharing conservation.



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. The media kit was developed with the knowledge that the product could be further expanded; including for example, an interactive youth website, school educational programs, updates on new technology and specific programming messaging.

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

Conserver Joe and his family will be making 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.

Haldimand County Hydro, in conjunction with five NEPPA members, embarked on a mass mailing of the Conservation Handbook in a specially marked unaddressed envelope to all residential households in Haldimand County, including any bulk metered customers. We leveraged our mass mailer to also include the Lighten Your Electricity Bill coupons and the Cold Water Wash coupon from Proctor and Gamble.

Training

TRC- Qualitative

Timeline – May 2005 – December 31, 2006

Haldimand County Hydro embarked on very limited training. Our training efforts were stemmed around understanding the application of the Total Resource Cost (TRC) calculations. Training included attendance at a generic seminar with Seeline and the purchase of a TRC Calculator tool from Enerspectrum.

Smart Metering – Low Volume Customers

TRC - Qualitative

Timeline – May 2005 – December 31, 2006

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 NEPPA members to explore regional solutions.

All funding attributed to Smart Metering for low volume customers is to support our involvement in both these organizations.

Smart Metering – Large Volume Customers

TRC- To be Determined

Timeline – September 2005 – December 31, 2006

In response to the smart meter initiative all our large customers (>50 kW) who use greater than 200kW will have an interval meter installed. In total 13 customers will be receiving an interval meter. 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.

We also plan to communicate with all interval account customers to encourage monitoring and influence changes in their energy consumption and demand.

Administrative

TRC – Qualitative

Timeline – May 2005 – December 31, 2006

General administrative costs cover our participation in the Ontario Caucus Webinars, meeting expenses, and media costs for CDM plan notification. Administrative funds are not directly attributed to any one program, but rather are considered to be a general expense to cover our cost to participate.

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.

The improvement of our overall loss factor by the conversion of 4 kV line in Hagersville to 27.6 kV benefits our entire customer base. Converting thirteen of our largest customers to interval meters is an important start to initiating other demand response

programs. Showing customers when they use the 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.

Our participation in the Lighten Your Electricity Bill campaign was surprisingly successful and resulted in our ranking fifth in sales in the province. During our initial budgeting process we expected to see customer participation between a low of 3% and a high of 10%. Very early in the program we were tracking significantly higher customer participation. Final results - a whopping 25% customer participation.

A valued component of our CDM efforts is joint co-operation with the NEPPA members. It is clear that consistent messaging and branding over a larger geographical area supports the long term goal of a sustained conservation culture. In 2006 we are exploring the inclusion of other working groups to streamline messaging to customers, learn from each other and, whenever possible, co-ordinate programming to maximize customer results, share in costs and reduce confusion in the market.

Our greatest feat has been finding ways to stretch our programs to address needs of all our customers. We have explored minimal incremental cost initiatives to engage our community such as trade shows, school visits, and on-site visits with our large customers.

On the home front, we have turned our staff into “Kilowatt Busters” - daring them to find ways to reduce power on site, share their favourite tips, engage their families at home and generally become more aware of energy conservation. Our staff will always be our best ambassadors.

In 2006 we will continue to strive towards continued customer education to build on our past efforts and support of specific customer projects in lighting and social housing.

5.0 Conclusion

In 2005 we embarked on key initiatives to introduce our customers to our collective goals to commit to changing our energy usage. Our overall conclusion is that our customers are ready and very willing to participate in using new products and using energy differently. We were encouraged by a 25% participation response to the Lighten Your Electricity Bill campaign. Overall we rated 5th in the province in sales.

Haldimand County Hydro has benefited by actively participating with the NEPPA 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 2005, we have been able to maintain active participation with our current staff complement. Limited outside assistance has been contracted for TRC reporting purposes.

In 2006, we will be continuing to administer our plan with the start of new programs as well as the completion of programs initiated in 2005.

New in 2006

1. Low Income Program
2. LED Christmas Light Exchange
3. School Education

Ongoing from 2005

1. Cold Water Wash
2. Line Conversion in Hagersville
3. Smart Metering Customers >50kW General Service
4. Customer Education

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

Appendix A - Evaluation of the CDM Plan

Haldimand County Hydro Inc.	Programming is Quantitative Results					Programming with Qualitative Results					
	Total	Residential	< 50 GS	>50 GS	LDC System Hagersville Conversions	Total Non TRC PROGRAMS	Administration and Training	Customer Education	Energy Audit >50 GS	Smart Metering Low Volume (Residential & < 50kW)	Other 4
<i>Net TRC value (\$):</i>	\$149,612	\$149,612				\$0		\$0			
<i>Benefit to cost ratio:</i>	\$7.26	\$7.26				\$0		\$0			
<i>Number of participants or units delivered:</i>	4369	4356		13		38149		18072		20077	
<i>Total kWh to be saved over the lifecycle of the plan (kWh):</i>	2786841.5	2786841.5				\$0		\$0			
<i>Total in year kWh saved (kWh):</i>	243,054.77	243,054.77				\$0		\$0			
<i>Total peak demand saved (kW):</i>	88.00	88.00				\$0		\$0			
<i>Total kWh saved as a percentage of total kWh delivered (%):</i>	88.00	0.0610%				\$0		\$0			
<i>Peak kW saved as a percentage of LDC peak kW load (%):</i>	0.00	0.0993%				\$0		\$0			
<i>Gross in year C&DM expenditures (\$):</i>	\$163,311.42	\$26,677.10		\$4,985.70	\$103,833.68	\$27,815	\$4,600.01	\$16,164.42	\$1,061.00	\$5,989.51	
<i>Expenditures per kWh saved (\$/kWh)*:</i>	\$0.0586	\$0.0096				\$0		\$0			
<i>Expenditures per kW saved (\$/kW)**:</i>	\$1,856	\$303				\$0		\$0			

<i>Utility discount rate (%):</i>	8.56
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HCH Energy Stats - 2005	
2005 HCH Annual Energy Consumption	398288338 kWh
2005 Annual Peak Demand	88,622 kW

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

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

Appendix B - Discussion of the Program

(complete this section for each program)

A. **Name of the Program:**

Lighten Your Electricity Bill

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

Include as much detail about the program.

Residential Coupon Program running from October 1st to December 31, 2005. Haldimand County Hydro partnered with Energysshop, Canadian Tire and 9 NEPPA members to deliver the a residential program that offered energy efficient products at a discounted rate. We joined 32 other LDC's across the province to launch a provincial campaign. Included discounts for the following products - ceiling fans, LED Lights, CFL, Programable Thermostats, Indoor and Outdoor Timers. . Our results have been extraordinary. We achieved a 25% participation from our customers. **NOTE - Ceiling fans were not included in the calculations as no supporting data was available to quantify savings. Total dollars attributed to Ceiling fans have been included in total Utility Costs.**

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)	Measure4 (if applicable)
Base case technology:	Incandescent Xmas Lights	Incandescent - 60 watt	Non-programable Thermostat	No Timer
Efficient technology:	LED Lights	CFL- 15 watt	Programable Thermostats	In Door and Outdoor Timer
Number of participants or units delivered:	2545	1535	141	135
Measure life (years):	30	4	18	20

B. **TRC Results:**

	\$	173,508.73
TRC Costs (\$):		
Utility program cost (less incentives):	\$	6,297.10
Participant cost:	\$	17,600.00
Total TRC costs:	\$	23,897.10
Net TRC (in year CDN \$):	\$	149,611.63
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	\$	7.26

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

Conservation Programs:

Demand savings (kW):	Summer	9
	Winter	88
	lifecycle	in year
Energy saved (kWh):	2786841.5	243,054.77
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 savngs (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. Program Costs*:

Utility direct costs (\$):	Incremental capital:	\$	-
	Incremental O&M:	\$	6,297.10
	Incentive:	\$	20,130.00
	Total:	\$	26,427.10

Utility indirect costs (\$):	Incremental capital:	
	Incremental O&M:	
	Total:	

Participant costs (\$):	Incremental equipment:	
	Incremental O&M:	
	Total:	

E. Comments:

LDC direct costs were determined based on the assumption that costs were shared as a percentage of overall sales. Incentive dollars are specific to coupon product.

*Please refer to the TRC Guide for the treatment of equipment cost in the TRC Test.