
Niagara Falls Hydro Inc.

RP-2004-0203 / EB 2004-0523

Conservation and Demand Annual Report

2005

March 31, 2006

Table of Contents

1. <u>INTRODUCTION</u>	<u>3</u>
2. <u>EVALUATION OF THE CDM PLAN</u>	<u>5</u>
3. <u>DISCUSSION OF PROGRAMS</u>	<u>6</u>
4. <u>LESSONS LEARNED</u>	<u>8</u>
5. <u>CONCLUSION</u>	<u>9</u>
<u>APPENDIX A – EVALUATION OF THE CDM PLAN</u>	<u>10</u>
<u>APPENDIX B – DISCUSSION OF THE PROGRAM(S)</u>	<u>11</u>

**Niagara Falls Hydro Inc.
C&DM Plan Annual Report for 2005**

1. Introduction

On December 9, 2004 the Ontario Energy Board (“Board”) issued its Notice of Application and Written Hearing in the RP-2004-0203 proceeding, with respect to Niagara Erie Public Power Alliance (NEPPA) Coalition nine (9) applications were filed by NEPPA comprising of 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 Limited Inc., St. Catharines Hydro Utility Services Inc., and Welland Hydro-Electric System Corp. This report is a requirement of that decision. In respect of the application filed by Niagara Falls Hydro the Board issued its Final Order on February 18, 2005 under docket number RP-2004-0203 / EB 2004-0523.

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 21, 2005 the Board issued a Guideline for Annual Reporting of CDM Initiatives that explained the requirements. This report has been prepared in accordance with those guidelines.

The following report is provided by Niagara Falls Hydro Inc. (NFH) to provide results and activities relating to Conservation and Demand Management (CDM) during the calendar year 2005.

The following table shows the approved plan expenditures by project as well as actual expenditures to December 31, 2005.

Program	Target Customers	Approved Budget	Actual Expenditures to Dec. 31, 2005
Co-branding Mass Market	Residential and <50 kw	\$134,091.38	\$88,703.46
Smart Metering / Prepaid Metering	Residential and <50 kw	\$125,674.78	\$493.82
Energy Audits	Residential and <50 kw	\$33,522.85	\$493.82
Social Programs	Residential (Low Income)	\$25,106.24	\$246.91
Smart/Interval Meters	>50 kw	\$34,442.12	\$246.91
Energy Audits	>50 kw	\$34,442.12	\$246.91
LED Traffic Lights	<50 kw Municipality/Region	\$16,833.20	\$246.91
Load Management	>50 kw	\$45,922.82	\$246.91
Distribution Loss Reduction	All Customers	\$450,035.50	\$18,435.61
Total		\$900,071.00	\$109,361.26

As shown in the above table, some of the planned projects are underway and others have yet to be implemented. The 2006 report will reflect changes to these programs due to the proposed changes in the Smart Metering Segment, TRC requirements and re-organizing of some programs to better meet our current CDM proposed initiatives for the current year.

To make our initiatives as cost effective and beneficial for our customers as possible, we have shared in programs with other utilities as well as implementing local programs specifically designed for our customers and their needs. The following information is provided as an overview of each of these shared and local programs.

Shared Provincial Initiatives

NFH took part in the “Lighten Your Electricity Bill” coupon program. Coupons were redeemable for in-store discounts on several energy-efficient products available at Canadian Tire stores. It was well accepted by our customers with a 9 % participation rate.

In addition we participated in the Proctor and Gamble Phase II cold water wash coupon program.

NFH is a member of the Ontario Utility Smart Metering working group (OUSM) and have shared costs and the results of that group initiative.

Current members of the Canadian Energy Efficiency Alliance(CEEA) and participants of the Ontario Caucus webinars.

Shared NEPPA Activities

As an active participant with the NEPPA group we helped to develop the “Conserver Family” customer education and information program. This program includes a Conservation handbook, energy saving bill inserts, radio scripts and a web site for “Conserver Family” energy saving tips (www.conserverjoe.com)

NEPPA utilities also developed and distributed a Request For Proposals (RFP) from energy audit firms and, based on the responses and follow up presentations, produced a list of “approved” firms to recommend to larger customers (>50 KW) interested in energy audits of their facilities.

Local Programs

The following is a listing and an overview of local programs initiated by NFH specifically for our customers:

- **Holiday Lighting Exchange program.** (Total 3500 LED Light Sets)
 - Working with the Winter Festival of Lights(WFOL), NFH sponsored two (2) exchange days where customers could exchange old incandescent lights and receive up to two (2) sets of multi-coloured LED Holiday lights.
 - 2000 LED light sets were given out and the program took in over 5000 sets of old incandescent light sets.
 - NFH also offered an additional incentive coupon of two (\$2.00) off an additional purchase of LED light sets at the local Home Hardware retailers.
 - 1500 LED light sets were used by the WFOL to replace existing incandescent lights in the holiday illumination displays.
- **Staff training**
 - Presented training sessions for all customer contact office staff on energy efficiency information and current programs.
- **System Improvements**
 - Electrical Distribution System Loss Reduction and system improvements.
 - In 2005 preliminary work was to analyze opportunities and plan for distribution system efficiency improvements for 2006.

2. Evaluation of the CDM Plan

As shown in Appendix A, the NFH plan has some very effective residential components with actual program results being very positive. Examples of this type of program include:

- Holiday LED Exchange Program
- Lighten Your Electricity Bill
- Conserver Joe Education Program (No TRC Value)

Some programs are not designed to have specific quantifiable energy savings but we feel it is very important in our view. Examples of this is the Education program which includes:

- Educational components like the “Conserver Family” Handbook and informative bill insert conservation tips.
- The pre-planned schedule of Conserver Joe bill inserts of energy conservation articles continues to be published during 2005/2006.
- Creation of Conserverjoe.com website.

3. Discussion of Programs

Detailed information about our CDM plan is attached to this report in the Appendix B for each program. In the following Appendix B appendices - information is provided as an overview of the various programs subsets. Summary data for all program components is found in Appendix A of this section.

Smart Meter Program

Niagara Falls Hydro does not have a smart metering pilot program in place. We have been actively participating with membership in the OUSM group initiative.

At this point we have not completed a TRC analysis for Smart Metering. Costs are shown on Appendix A in the Gross C&DM expenditures total. For this item, only the current year's expenditure (2005) has been included since there may be no need for a "pilot" depending on the results of the various pilots currently taking place. The planned expenditure for this initiative will be reallocated to another new program subsequent to OEB approval of the funds being transferred.

Distribution Loss Reduction

This program component was not actually started in 2005 although the majority of the work involved and expenditures will be completed in 2006 and 2007.

2005 Lighten Your Electricity Bill - Residential

This Residential Coupon Program ran from October 1st to December 31, 2005. Niagara Falls Hydro partnered with Enerconnect/Energyshop and Canadian Tire to deliver this 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. The program focused on distribution of discounted coupons for the following products - ceiling fans, LED Lights, CFL, Programmable Thermostats, Indoor and Outdoor Timers. The following information is an overview of the various program components.

CFL Coupon

The 2005 program provided customers with a \$3.00 coupon on any pack of compact fluorescent bulbs. Using store data provided by Energyshop.com, the number of bulbs sold by wattage was used to develop the average wattage of bulb sold. Based on this information, it was assumed that the average wattage sold during this program was 15 watts. Additionally the average number of bulbs per package/coupon was 2.65.

LED Holiday Light Coupon

Like the CFLs, customers were provided with a \$5.00 coupon for the purchase of any package of LED seasonal lights. Using store data provided by Energyshop.com, the

Niagara Falls Hydro Inc.
C&DM Plan Annual Report for 2005

average size of LED light string sold during the campaign was determined. Based on this information, it was assumed that the average string sold had 59 bulbs. TRC calculations comparators were all based on 5 watt per bulb only.

Programmable Thermostat Coupon

Customers were provided with a \$15.00 coupon off the purchase of a programmable thermostat. The savings estimate outlined in the TRC Guide were used for programmable thermostat savings calculations are based on the heating period only.

Indoor /Outdoor Timer Coupons

In the absence of TRC calculations for indoor timers the savings estimates are all based on the Outdoor timers values. Coupons varied from \$1.00 to \$4.00.

Information provided by See Line Group was not used in this report.

Based on discussions with EnergyShop.com it was assumed that 50% of the timers would be used for lighting and the remaining 50% would be used for air conditioners. SLG made an additional assumption and assumed that it was unlikely that all of the timers would be used appropriately; participation rates were reduced by 30%.

Ceiling Fan Coupon

No TRC Calculation

At the time of this analysis, there was not enough significant evidence to support a savings estimate for ceiling fans. Customers were provided with \$5.00 off coupons to purchase ceiling fans.

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. The TRC savings calculation was not completed based on insufficient information to calculate savings. Costs for this program component have been included in the gross in year C&DM expenditures in the residential customer class.

Cold Water Wash – Phase II

This is the second time NFH has participated in this promotion. Costs for this initiative has been applied to the gross in year expenditures.

Phase II of this residential coupon program ran from October 1st, 2005 until February 28, 2006.

No results are known at this time and will be reported on the next annual report.

Conserver Family

In 2005 we participated with the NEPPA utility group in development and distribution of the "Conserver Family" energy information and literature. Development costs were shared among 11 other Utilities (NEPPA).

Training

Training in 2005 included the work to train customer service staff on energy efficient equipment and programs.

C & DM Common Costs

Some C & DM costs have been included across all the programs and are not specific to any particular activities. Examples of these types of costs are the costs for regulatory compliance, TRC Calculator and membership with the Canadian Energy Efficiency Alliance and webinars.

4. Lessons Learned

Resource Challenges

Most Local Distribution Companies (LDC's) (small & medium size) have struggled with the planning and delivery of their C&DM plans. The most difficult is finding the time to allocate towards the C&DM programs and with the lack of resources it takes too long to create momentum to fully develop a planned program. The resource issue was identified early in the C&DM program and most LDC's started working together to create a virtual C&DM department, which is workable to a certain level but lacks sustainability.

Shared Initiatives

Shared initiatives reduce the administrative cost component in delivery of CDM programs. Where they apply to our customer groups, they are a very effective way of implementing CDM.

- Two examples of this type of effective initiative in 2005 were the "Lighten Your Electricity Bill" coupon program and the "Conserver Family" customer education and information program.

Customer Education Programs

Customer education is key to the future of all conservation programs. All LDC's have provided some form of education components in their C&DM programs but it is extremely difficult and very costly to quantify the results of these initiatives. (TRC undefined).

5. Conclusion

The results of our efforts are positive but we need to stay the course with Energy Efficiency and Conservation to assist in the Provincial goals. The solution NFH would put forth is that the province should create the C&DM programs and let the local Utilities deliver them along with any local flavour program they may choose to deliver. The approach would be consistent and the reporting would be standardized.

Appendix A – Evaluation of the CDM Plan

See attached.

Appendix B – Discussion of the Program(s)

See attached.

Appendix A - Evaluation of the CDM Plan

	Total	Residential	<50 kw	>50kw	LDC System	Other
<i>Net TRC value (\$):</i>	\$314,209	\$314,209				
<i>Benefit to cost ratio:</i>	43.30	43.30				
<i>Number of participants or units delivered:</i>	7,394	7,394				
<i>Total kWh to be saved over the lifecycle of the plan (kWh):</i>	8,214,735	8,214,735				
<i>Total in year kWh saved (kWh):</i>	603,949	603,949				
<i>Total peak demand saved (kW):</i>	326	326				
<i>Total kWh saved as a percentage of total kWh delivered (%):</i>	0.2123%	0.2123%				
<i>Peak kW saved as a percentage of LDC peak kW load (%):</i>	0.3083%	0.3083%				
<i>Gross in year C&DM expenditures (\$):</i>	\$109,361	\$81,526	\$8,658	\$741	\$18,436	
<i>Expenditures per kWh saved (\$/kWh)*:</i>	\$0.18	\$0.13				
<i>Expenditures per kW saved (\$/kW)**:</i>	\$335.46	\$250.08				
<i>Utility discount rate (%):</i>	7.06					

*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:** Holiday Light Exchange Program

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

This program promoted the use of LED Holiday Lights as replacements to traditional incandescent lights. Working with the Winter Festival of Lights (WFOL) we were able to deliver 3500 LED light sets and take in over 5000 old incandescent sets. Redemption coupons were also given out to further expand the uptake on this program. The program had two exchange days November 12 and December 19 2005. We limited the exchange to two (2) sets of LED per customer and the demand for this program was tremendous.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	Incandescent 5 watt/bulb Xmas		
Efficient technology:	LED 1.8 watt/string Xmas		
Number of participants or units delivered:	3500		
Measure life (years):	30		

B. TRC Results:

TRC Benefits (\$):		\$ 73,125.34
TRC Costs (\$):		
	Utility program cost (less incentives):	\$ 54,975.34
	Participant cost:	\$ 6,650.00
	Total TRC costs:	\$ 61,625.34
Net TRC (in year CDN \$):		\$ 11,500.00
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		1.19

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

Conservation Programs:

Demand savings (kW):	Summer	
	Winter	27
	lifecycle	in year
Energy saved (kWh):	1,880,966	62,699
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 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 (\$):	<i>Incremental capital:</i>	
	<i>Incremental O&M:</i>	\$ 54,975.34
	<i>Incentive:</i>	\$ 494.00
	<i>Total:</i>	\$ 55,469.34

Utility indirect costs (\$):	<i>Incremental capital:</i>	
	<i>Incremental O&M:</i>	
	<i>Total:</i>	

Participant costs (\$):	<i>Incremental equipment:</i>	
	<i>Incremental O&M:</i>	
	<i>Total:</i>	

E. **Comments:**

This program is well worth repeating next year (2006) with perhaps more exchange days.

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

Appendix B - Discussion of the Program

(complete this section for each program)

A. **Name of the Program:** Lighten Your Electricity Bill - Fall 2005

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

This program promoted the use of LED Holiday Lights as replacements to traditional incandescent lights. Working with (2) local Canadian Tire retailers our customers we were able to redeem 1243 coupons for \$ 5.00 off LED Holiday light sets. Program was from Oct 1 to Dec 31 2005

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	Incandescent 5 watt/bulb Xmas		
Efficient technology:	LED 1.8 watt/string Xmas		
Number of participants or units delivered:	1243		
Measure life (years):	30		

B. TRC Results:

TRC Benefits (\$):	\$ 25,948.28
TRC Costs (\$):	
Utility program cost (less incentives):	\$ 2,476.89
Participant cost:	\$ 2,362.00
Total TRC costs:	\$ 4,838.89
Net TRC (in year CDN \$):	\$ 21,109.39
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	5.36

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

Conservation Programs:

Demand savings (kW):	Summer		
	Winter		10
	lifecycle	in year	
Energy saved (kWh):	668,012		22,267
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 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 (\$):	<i>Incremental capital:</i>	
	<i>Incremental O&M:</i>	\$ 2,476.89
	<i>Incentive:</i>	\$ 6,215.00
	<i>Total:</i>	\$ 8,691.89
Utility indirect costs (\$):	<i>Incremental capital:</i>	
	<i>Incremental O&M:</i>	
	<i>Total:</i>	
Participant costs (\$):	<i>Incremental equipment:</i>	
	<i>Incremental O&M:</i>	
	<i>Total:</i>	

E. Comments:

This program is well worth repeating next year (2006).

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

Appendix B - Discussion of the Program

(complete this section for each program)

A. **Name of the Program:** Lighten your Electricity Bill -Fall 2005

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

This program promoted the use of Compact Fluorescent Lights(CFL) as replacements to traditional incandescent lights. Working with (2) local Canadian Tire retailers our customers we were able to redeem 874 coupons for \$ 3.00 off CFL purchase. Program ran from Oct 1 to Dec 31 2005.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	Incandescent 60 watt bulb		
Efficient technology:	CFL 15 watt		
Number of participants or units delivered:	2316		
Measure life (years):	4		

B. **TRC Results:**

TRC Benefits (\$):		\$ 55,084.02
TRC Costs (\$):		
	Utility program cost (less incentives):	\$ 4,615.02
	Participant cost:	\$ 4,169.00
	Total TRC costs:	\$ 8,784.02
Net TRC (in year CDN \$):		\$ 46,300.00
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		6.27

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

Conservation Programs:

Demand savings (kW):	Summer	
	Winter	47
	lifecycle	in year
Energy saved (kWh):	870,445	217,611
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 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:	\$ 4,615.02
	Incentive:	\$ 2,622.00
	Total:	\$ 7,237.02
Utility indirect costs (\$):	Incremental capital:	
	Incremental O&M:	
	Total:	
Participant costs (\$):	Incremental equipment:	
	Incremental O&M:	
	Total:	

E. Comments:

This program is well worth repeating next year (2006).

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

Appendix B - Discussion of the Program

(complete this section for each program)

A. **Name of the Program:** Lighten your Electricity Bill -Fall 2005

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

This program promoted the use of Programmable Thermostats as replacements to traditional manual on/off thermostats. Working with (2) local Canadian Tire retailers our customers we were able to redeem 208 coupons for \$ 15.00 off Programmable Thermostat purchase. Program ran from Oct 1 to Dec 31 2005.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	Standard Thermostat		
Efficient technology:	Programmable Stat		
Number of participants or units delivered:	208		
Measure life (years):	18		

B. TRC Results:

TRC Benefits (\$):	\$	220,046.47
TRC Costs (\$):		
Utility program cost (less incentives):	\$	414.47
Participant cost:	\$	11,232.00
Total TRC costs:	\$	11,646.47
Net TRC (in year CDN \$):	\$	208,400.00
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		18.89

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

Conservation Programs:

Demand savings (kW):	Summer	
	Winter	220
	lifecycle	in year
Energy saved (kWh):	4,202,895	274,499
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 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:	\$ 414.47
	Incentive:	\$ 3,120.00
	Total:	\$ 3,534.47
Utility indirect costs (\$):	Incremental capital:	
	Incremental O&M:	
	Total:	
Participant costs (\$):	Incremental equipment:	
	Incremental O&M:	
	Total:	

E. Comments:

Programmable Thermostats were considered all used during heating season.

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

Appendix B - Discussion of the Program

(complete this section for each program)

A. **Name of the Program:** Lighten your Electricity Bill -Fall 2005

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

This program promoted the use of Indoor and Outdoor Timers as replacements to traditional non timer controlled lights or small appliances. Working with (2) local Canadian Tire retailers our customers we were able to redeem 127 coupons for discounts from \$1.00 to \$4.00 off the purchase. Program ran from Oct 1 to Dec 31 2005.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	Non Timer Controlled		
Efficient technology:	Select Time Operable Device		
Number of participants or units delivered:	127		
Measure life (years):	20		

B. TRC Results:

TRC Benefits (\$):	\$	29,439.07
TRC Costs (\$):		
Utility program cost (less incentives):	\$	253.07
Participant cost:	\$	2,286.00
Total TRC costs:	\$	2,539.07
Net TRC (in year CDN \$):	\$	26,900.00
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		11.59

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

Conservation Programs:

Demand savings (kW):	Summer	
	Winter	22
	lifecycle	in year
Energy saved (kWh):	592,417	26,873
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 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:	\$ 253.07
	Incentive:	\$ 355.00
	Total:	\$ 608.07
Utility indirect costs (\$):	Incremental capital:	
	Incremental O&M:	
	Total:	
Participant costs (\$):	Incremental equipment:	
	Incremental O&M:	
	Total:	

E. Comments:

All timers were grouped under one category, no separation between Lighting and/or A/C load was accounted for with indoor timers.

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