March 30, 2007

### **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: Niagara Falls Hydro Inc. RP-2004-0203 / EB 2004-0523 Conservation and Demand Annual Report – 2006

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 and the updated *"Requirements for Annual Reporting of CDM Initiatives*" issued March 1, 2007, please find enclosed three (3) hard copies and two (2) electronic copies of Haldimand County Hydro Inc.'s 2006 annual reporting which includes the following:

- 2006 Conservation and Demand Management Annual Report, (dated March 31, 2007)
- Appendix A Evaluation of the CDM Plan;
- Appendix B Discussion of the Programs
- Appendix C Program and Portfolio Totals; as listed in Appendix B.

Yours truly, NIAGARA FALLS HYDRO INC.

Michael J. Freel C.E.T., P.Mgr. Director of Administration

## Niagara Falls Hydro Inc.

RP-2004-0203 / EB 2004-0523

2006 Annual Report CDM Third Tranche Funding

## **Table of Contents**

<u>1.</u>	INTRODUCTION	3
<u>2.</u>	EVALUATION OF THE CDM PLAN	7
<u>3.</u>	DISCUSSION OF PROGRAMS	8
<u>4.</u>	LESSONS LEARNED	8
<u>5.</u>	CONCLUSION	9
AP	PENDIX A – EVALUATION OF THE CDM PLAN	10
<u>AP</u>	PENDIX B – DISCUSSION OF THE PROGRAM(S)	11
<u>AP</u>	PENDIX C – PROGRAM AND PORTFOLIO TOTALS	12

## 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 Power Alliance (NEPA) 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 31<sup>st</sup> of the following year" and would be subject to a public review. On March 1<sup>st</sup> 2007 & March 9<sup>th</sup> 2007 the Board issued an Amended Requirement for Annual Reporting of Conservation and Demand Management ("CDM") Initiatives. This report has been prepared in accordance with those revised appendices.

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 2006.

The following table shows the approved plan expenditures by project as well as actual expenditures to December 31, 2006.

Program	Target Customers	Approved Budget	Actual Expenditures to Dec. 31, 2006
Co-branding / Mass Market Advertising	Residential and <50 kw	\$134,091.38	\$101,096.37
Fridge Magnet Program Holiday Lighting Exchange	Residential	\$125,674.78	\$127,117.88
School Conservation Lighting Incentive	Residential	\$33,522.85	\$5068.82
Social Programs	Residential	\$25,106.24	\$946.91
Current Program under Review (Metering)	>50 kw	\$34,442.12	\$246.91
Energy Audits Lighting Incentives	>50 kw	\$34,442.12	\$2102.63
LED Traffic Lights	<50 kw Municipality/Region	\$16,833.20	\$246.91
Load Management	>50 kw	\$45,922.82	\$2246.91
Distribution Loss	All Customers	\$450,035.50	\$39,941.79
Total		\$900,071.00	\$279,508.95

As mentioned in the 2005 Annual Report and 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**

## **Every Kilowatt Counts (EKC)**

NFH took part in the promotion of the Ontario Power Authority "Every Kilowatt Counts" (EKC) Programs. During 2006 two programs were promoted Spring 2006 EKC and Fall 2006 EKC programs. The EKC Spring and Fall 2006 Program is a Residential and coupon incentive campaign of the Ontario Power Authority (OPA). It had the following Goal and Objectives:

Goal:

Provide homeowners and tenants with the necessary tools to save energy and have a positive impact on the environment by implementing "easy-to-do and low cost" programs.

Objectives:

Provide homeowners with information on easy to do conservation activities within their homes or apartments.

Provide meaningful incentives to homeowners and tenants to take action on one or more of the easy to do actions identified in the program.

EKC Spring 2006 Product Incentives	
Compact Fluorescent (2 pack or higher)	\$ 5.00
Indoor/Outdoor Timer	\$ 5.00
Ceiling Fans (Energy Star)	\$ 25.00
Programmable Thermostats	\$ 15.00

Cool Savings Rebate was also offered to provide incentives for Central Air conditioning upgrades.

### **EKC Fall 2006 Product Incentives**

Compact Fluorescent (2 pack or higher)	\$ 3.00
Dimmer Switches	\$ 3.00
Programmable Thermostats (Baseboard)	\$15.00
Programmable Thermostats	\$15.00
Seasonal LED Holiday Lights	\$ 5.00

Motion Sensor Switches

\$ 7.00

Specific results for each of the EKC programs are available upon request. These program results will be available through the OPA.

### Cold Water Wash Phase II

In addition we participated in the Proctor and Gamble Phase II cold water wash coupon program. This promotion was designed to influence consumer behaviour to wash and rinse in cold water. NFH participation was to provide a bill insert/coupon and supporting website information. The coupon redemption results showed 2.4% uptake on the program.

### Smart Metering Initiative

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

## Shared NEPA Activities

As an active participant with the NEPA 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 (<u>www.conserverjoe.com</u>)

Bill Inserts have been scheduled for each billing to a have conserver message over the next 2 years.

## Local Programs

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

• School Safety and Conservation Program – (3500 students for 2006)

Local School Boards have been participating in NFH's School Safety Program for more than 25 years and over the last two years with the additional component of Energy Conservation.

The program explains the different type of energy, the costs and where they might come from and the environmental impact from some fuels. The students are explained about items that are found in the home that consume energy and how much it costs each month. They are questioned about what they can do to save energy and also provided with quiz sheets and Conserver Joe materials to take home.

### • ConserverJoe.com Website

This web site was provided as a common website for 11 regional LDC's to help promote Conservation and provides easy tips to conserve energy thorough the year.

Check out www.conserverjoe.com

### • Fridge Magnet Program (Provincial and Local Pilot)

- 250 Fridges was our Local Target for Participating in this Provincial Pilot and was funded through our 3<sup>rd</sup> Tranche CDM Budget.
- Final Count was 301 Refrigerator Retirements and 9 Freezer Retirements.
- Incentives included 151 Participants (receiving a 6 pack of 13w CFLs and 1 indoor timer)
- Final Report from EnergyShop.com provides details regarding this program and is available upon request.

## • Earth Day 2006

Earth Day Green Expo was a one-day event that strived to educate individuals and organizations on the increasingly wide variety of ecofriendly products and services available. NFH provide 750 -15w CFL's to the attendees with Educational Materials and had educational displays to illustrate energy savings using CFL's instead of Incandescent bulbs.

## • Holiday Lighting Exchange Program - 2<sup>nd</sup> Annual Event. (2006)

- Working with the Winter Festival of Lights (WFOL), NFH sponsored Three (3) exchange days where customers could exchange old incandescent lights and receive up to two (2) sets of multi-coloured LED Holiday lights.
- 5000 LED light sets were given out and the program took in over 15,000 sets of old incandescent light sets.
- NFH also offered an additional incentive coupon of two (\$5.00) off an additional purchase of 2 LED light sets at the local Home Hardware retailers.
- 1400 LED light sets were used by the WFOL to replace existing incandescent lights in the holiday illumination displays.
- 150 LED light sets were used by the Downtown BIA to replace existing incandescent lights in the holiday illumination displays.

• Total LED Lights including the coupon purchases = 7482 LED Lights

## • Staff training

• Presented training sessions/briefing notes for all customer service staff on energy efficiency information and current programs.

## • System Improvements

- Electrical Distribution System Loss Reduction and system improvements.
- In 2006 preliminary work was to analyze opportunities and plan for distribution system efficiency improvements for 2007.

## 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
- Fridge Magnet Program
- Earth Day
- Conserver Joe Education Program website (No TRC Value)
- School Safety & Conservation 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 2005/2006/2007.
- 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 C 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.

### Distribution Loss Reduction

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

## Cold Water Wash – Phase II

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

## **Conserver Family**

In 2006 we participated with the NEPA utility group in development and distribution of the "Conserver Family" energy information and literature. Development costs were shared among 11 other Utilities (NEPA).

## Training

Training in 2006 included the work to train customer service staff on energy efficient equipment and programs.

## CDM Common Costs

Some CDM 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 memberships.

## 4. Lessons Learned

### **Resource Challenges**

Most Local Distribution Companies (LDC's) (small & medium size) are still struggling with the planning and delivery of their CDM plans. The most difficult is finding the time to allocate towards the CDM 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 CDM department, which is workable to a certain level but lacks sustainability. The LDC's look forward to working with the OPA on the 4 CDM Programs that are going to be launched in 2007.

### 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 2006 were the "Fridge Magnet Program" and the "Conserver Family" web site.

## 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 CDM 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 CDM 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. The OPA has provided a mechanism to all LDC to be the delivery agents for CDM in 2007 and beyond. We look forward to participating with the new programs that the OPA have designed.

## Appendix A – Evaluation of the CDM Plan

See attached.

## Appendix B – Discussion of the Program(s)

See attached.

## **APPENDIX C – Program and Portfolio Totals**

See attached

## Appendix A - Evaluation of the CDM Plan

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

	₅ Cumulative Totals Life-to- date	Total for 2006	Residential	Commercial	Institutional	Industrial	Agricultural	LDC System	₄ Smart Meters	Other #1	Other #2
Net TRC value (\$):	531457	\$ 217,248	\$ 204,578	\$ 12,670	\$-	\$-	\$-	\$-		\$-	\$-
Benefit to cost ratio:	45.4	2.10	2.06	3.74	0.00	0.00	0.00	0.00		0.00	0.00
Number of participants or units delivered.	16623	9229	8479	750							
Lifecycle (kWh) Savings:	18039520	9,824,785	9,542,905	281,880	0	0	0	0		0	0
Report Year Total kWh saved (kWh):	1559972	956,023	885,553	70,470	0	0	0	0		0	0
Total peak demand saved (kW):	491	165	150	15	0	0	0	0		0	0
Total kWh saved as a percentage of total kWh delivered (%):		0.4018%	0.3244%	0.0774%							
Peak kW saved as a percentage of LDC peak kW load (%):		0.0434%	0.0394%	0.0039%							
1 Report Year Gross C&DM expenditures (\$):	279508 95	\$ 148,963	\$ 143,823	\$ 5,140	\$-	\$-	\$-	\$-	\$-	\$-	\$-
<sup>2</sup> Expenditures per KWh saved (\$/kWh).	0.2	\$ 0.02	\$ 0.02	\$ 0.02	\$-	\$-	\$-	\$-		\$-	\$-
₃ Expenditures per KW saved (\$/kW).	1238.27	\$ 902.81	\$ 958.82	\$ 342.67	\$-	\$-	\$-	\$-		\$-	\$-
Utility discount rate (%):	7.06										

1 Expenditures are reported on accrual basis.

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

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

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

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

# **Appendix B - Discussion of the Program**

### (complete this Appendix for each program)

A. Name of the Program: C

Co-Branded/Mass Market Program - Residential

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

Cold Water Wash Phase II Participation by NFH. Influence consumer behavior to wash and rinse in cold water. Provided information supplement with coupon and supporting website. Redemption percentage 2.4%.

#### Measure(s):

	measure(s):					
		Measure 1	Me	asure 2 (if applicable)		Measure 3 (if applicable)
	Base case technology:	Average Existing Stock				
	Efficient technology:	Cold water Washing Detergen	t			
	Number of participants or units					
	delivered for reporting year:	696				
	Measure life (years):	1				
	measure me (years).	•				
	Number of Participants or units					
	delivered life to date	696				
В.				Dementing Mann		
	TRC Results:		•	Reporting Year		Life-to-date TRC Results:
	TRC Benefits (\$):		\$	60,470.00	\$	60,470.00
2	<sup>2</sup> TRC Costs (\$):					
	Utility prog	gram cost (excluding incentives):	\$	250.00	\$	250.00
	Incremental M	easure Costs (Equipment Costs)	\$	5,220.00	\$	5,220.00
		Total TRC costs:		5,470.00		5,470.00
	Not TBC (in year CDN ();	Total TRC Costs.	ψ	\$55,000.00		
	Net TRC (in year CDN \$):			\$55,000.00	\$	55,000.00
	Benefit to Cost Ratio (TRC Benefits/	TRC Costs)	\$	11.05	\$	11.05
			Ψ	11.00	Ψ	11.00
C.	Results: (one or more category may	apply)				Cumulative Results:
	Conservation Programs:					
	Demand savings (kW):	Summer		11		11
		Winter		13		13
		lifecycle		in year		Cumulative Lifecycle
	Energy saved (kWh):	325,217		325,217		325,217
	Other resources saved :	323,217		323,217		323,217
	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					
	Energy shined who peak to on peak	(((()))).				
	Demand Response Programs:					
	Dispatchable load (kW):					
	Peak hours dispatched in year (hour	5).				
	Power Factor Correction Program	s:				
	Amount of KVar installed (KVar):	<u></u>				
	. ,					
	Distribution system power factor at b					
	Distribution system power factor at e	nd of year (%):				

#### Line Loss Reduction Programs:

	Peak load savings (kW):			
		lifecycle	in year	
	Energy savings (kWh):			
	Distributed Generation and Load	Displacement Programs:		
	Amount of DG installed (kW):			
	Energy generated (kWh):			
	Peak energy generated (kWh):			
	Fuel type:			
	Other Programs (specify):			
	Metric (specify):			
D.	Actual Program Costs:		Reporting Year	Cumulative Life to Date
D.	Actual Program Costs: Utility direct costs (\$):	Incremental capital:	Reporting Year	Cumulative Life to Date
D.		Incremental capital: Incremental O&M:	Reporting Year \$ 250.00	
D.		•		
D.		Incremental O&M:	\$ 250.00	\$ 250.00 \$ -
D.		Incremental O&M: Incentive:	\$ 250.00 \$ -	\$ 250.00 \$ -
D.		Incremental O&M: Incentive:	\$ 250.00 \$ -	\$ 250.00 \$ -
D.	Utility direct costs (\$):	Incremental O&M: Incentive: Total:	\$ 250.00 \$ -	\$ 250.00 \$ -
D.	Utility direct costs (\$):	Incremental O&M: Incentive: Total: Incremental capital:	\$ 250.00 \$ -	\$ 250.00 \$ -

#### E. Assumptions & Comments:

<sup>1</sup> Benefits should be estimated if costs have been incurred <u>and</u> 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

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:

Earth Day - 2006 (Co- Branding / Mass Market <50kw)

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

Earth Day Green Expo was a one (1) day event held at our Community Centre on Saturday April 22 2006 This event was presented to small businees owners and employees to help promote conservation at the workplace and the home. This event provided NFH with an opportunity to promote CFL's and educational material around conservation. 750 CFL's were distributed to the attendees.

	Measure(s):					
	measure(s).	Measure 1	Me	asure 2 (if applicable)	Measure 3	(if applicable)
	Base case technology:	Incandescent 60 watt		······		(
		CFL 15 w				
	Number of participants or units	0.2.0.1				
	delivered for reporting year:	750				
	Measure life (years):	4				
	mododio mo (youro).					
	Number of Participants or units					
	delivered life to date	750				
В.	TRC Results:			Reporting Year	Life-to-date	TRC Results:
	<sup>1</sup> TRC Benefits (\$):		\$	17,290.00	\$	17,290.00
	<sup>2</sup> TRC Costs (\$):			,	•	,
		program cost (excluding incentives):	\$	3,275.00	\$	3,275.00
		Measure Costs (Equipment Costs)		1,350.00		1,350.00
		Total TRC costs:		4,620.00		4,620.00
	Net TRC (in year CDN \$):	10181 1110 00313.	\$	10,800.00	φ	\$ 10,800.00
			Ψ	10,000.00		φ 10,000.00
	Benefit to Cost Ratio (TRC Benefits/	TRC Costs):	\$	3.74	\$	3.74
C.	Results: (one or more category may	apply)			Cumulati	ve Results:
	Conservation Programs:					
	Demand savings (kW):	Summer				
	Demand Savings (KW).		15			15
		Winter	15			10
					Cumulative	Cumulative
		lifecycle		in year	Lifecycle	Annual Savings
	Energy saved (kWh):	281880	70470	in your	281880	70470
	Other resources saved :	201000	10410		201000	10410
	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					
	Energy shifted Mid-peak to Off-peak					
	Demand Response Programs:					
	Dispatchable load (kW):					
	Peak hours dispatched in year (hour	s):				
	Power Factor Correction Program					
	Amount of KVar installed (KVar):	<u></u>				
	Distribution system power factor at b	eainning of year (%):				
	Distribution system power factor at e	nu oi year (%):				

#### Line Loss Reduction Programs:

	Peak load savings (kW):					
		lifecycle		in year		
	Energy savings (kWh):					
	Distributed Generation and Load I Amount of DG installed (kW): Energy generated (kWh): Peak energy generated (kWh): Fuel type:	Displacement Programs:				
	Other Programs (specify):					
D.	Metric (specify): Actual Program Costs:		Rep	orting Year	Cum	ulative Life to Date
D.	Actual Program Costs:	Incremental capital:	<u>Rep</u>	orting Year	Cum	ulative Life to Date
D.		Incremental capital: Incremental O&M:	Repo \$	orting Year 3,275.00		ulative Life to Date 3,275.00
D.	Actual Program Costs:	•			\$	
D.	Actual Program Costs:	Incremental O&M:	\$	3,275.00	\$ \$	3,275.00

#### E. Assumptions & Comments:

<sup>1</sup> Benefits should be estimated if costs have been incurred <u>and</u> 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:

Fridge Magnet Program -2006

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

This Program was part of the Provincial OPA Program pilot for Removing the secondary fridges from homes. NFH was one many LDC's that participated in this pilot program. NFH targeted 250 units and took in 301. An incentive of CFL's and indoor timer was offered to all who participated in this event.

#### Measure(s):

	weasure(s).					
		Fridges		Freezers	CFL	Timers
	Base case technology:	Average Existing Stock	Average	Existing Stock	Incandescent 60w	Non time Control
	Efficient technology:	Recycle Program	Recycle I	Program	CFL 15w	Time Control
	Number of participants or units				906	106
	delivered for reporting year:	301		9		
	Measure life (years):	6		6	4	20
	Number of Participants or units				906	106
	delivered life to date	301		9		
				Ū		
В.	TRC Results:		<u>F</u>	Reporting Year	Life-to-date	TRC Results:
1	TRC Benefits (\$):		\$	182,078.04	\$	182,078.04
2	TRC Costs (\$):					
		program cost (excluding incentives):	\$	56,348.04	\$	56,348.04
		I Measure Costs (Equipment Costs)	+	31,430.00	•	31,430.00
	noromona					
	Net TRC (in year CDN \$):	Total TRC costs:		94,300.00	\$	94,300.00 \$ 87,778.00
	Net TRC (III year CDN \$).		\$	87,778.00		φ 07,770.00
	Benefit to Cost Ratio (TRC Benefits,	/TRC Costs):	\$	1.93	\$	1.93
	· · · · · · · · · · · · · · · · · · ·	·	•			
C.	Results: (one or more category mag	y apply)			Cumulati	ve Results:
	Conservation Programs:		~ ~ ~ =			
	Demand savings (kW):	Summer	80.95			80.95
		Winter	82.9			82.9
					Cumulative	Cumulative
		lifecycle		in year	Lifecycle	Annual Savings
	Energy saved (kWh):	2516076	426304		2516076	426304
	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 (hou	rs):				
	Power Factor Correction Program	IS:				
	Amount of KVar installed (KVar):					
	Distribution system power factor at l					
	Distribution system power factor at e	end of year (%):				

#### Line Loss Reduction Programs:

Peak load savings (kW):				
	lifecycle		in year	
Energy savings (kWh):				
Distributed Generation and Lo	ad Displacement Programs:			
Amount of DG installed (kW):				
Energy generated (kWh):				
Peak energy generated (kWh):				
Fuel type:				
Other Programs (specify):				
Other Frograms (Specify).				
Matric (spacify):				
Metric (specify):				
Metric (specify): Actual Program Costs:		Re	porting Year	Cumulative Life to Date
	Incremental capital:	Re	porting Year	Cumulative Life to Date
Actual Program Costs:	Incremental capital: Incremental O&M:	<u>Re</u> \$	porting Year 56,348.04	Cumulative Life to Date
Actual Program Costs:	•			Cumulative Life to Date
Actual Program Costs:	Incremental O&M:	\$	56,348.04	Cumulative Life to Date
Actual Program Costs:	Incremental O&M: Incentive:	\$ \$	56,348.04 4,141.50	Cumulative Life to Date
Actual Program Costs:	Incremental O&M: Incentive:	\$ \$	56,348.04 4,141.50	Cumulative Life to Date
Actual Program Costs: Utility direct costs (\$):	Incremental O&M: Incentive: Total:	\$ \$	56,348.04 4,141.50	Cumulative Life to Date

#### E. Assumptions & Comments:

<sup>1</sup> Benefits should be estimated if costs have been incurred <u>and</u> 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:

Holiday Lighting Exchange - 2006

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

This the 2nd Annual Exchange Program for the Holiday LED Lights.

Working with the Winter Festival of Lights of Niagara Falls.

NFH sponsored (3) Exchange Days where residents of Niagara Falls could exchange as many old incandescent Holiday lights to receive a max. of 2 sets of LED Holiday lights.

	Measure(s):						<i></i>
		Measure 1		Measu	ure 2 (if applicable)	Measure 3	(if applicable)
	Base case technology:	Incandescent 5w/bulb LED 1.8w/string					
	Efficient technology: Number of participants or units	LED 1.8w/string					
	delivered for reporting year:		7482				
	Measure life (years):		30				
	measure me (years).		30				
	Number of Participants or units						
	delivered life to date		7482				
3.	TRC Results:			R	eporting Year	Life-to-date	TRC Results:
	<sup>1</sup> TRC Benefits (\$):			\$	154,439.49	\$	154,439.49
	<sup>2</sup> TRC Costs (\$):						
	Utility	program cost (excluding incenti	ives):	\$	78,423.49	\$	78,423.49
	Incrementa	al Measure Costs (Equipment C	costs)	\$	14,216.00	\$	14,216.00
		Total TRC o		-	92,639.49		92,639.49
	Net TRC (in year CDN \$):			\$	61,800.00		\$ 61,800.00
	Benefit to Cost Ratio (TRC Benefits	/TRC Costs):		\$	1.67	\$	1.67
С.	Results: (one or more category ma	y apply)				Cumulati	ve Results:
	Conservation Programs:						
	Demand savings (kW):	Summe	er				
	5 ( )	Winte	er	58			
						Cumulative	Cumulative
		lifecycle			in year	Lifecycle	Annual Savings
	Energy saved (kWh):	6701612		134032		6701612	134032
	Other resources saved :						
	Natural Gas (m3)						
	Other (specify)						
	Demand Management Programs:						
	Controlled load (kW)						
	Energy shifted On-peak to Mid-pea	k (kWh):					
	Energy shifted On-peak to Off-peak						
	Energy shifted Mid-peak to Off-pea	. ,					
	Demand Response Programs:						
	Dispatchable load (kW):						
	Peak hours dispatched in year (hou	rs):					
	Peak hours dispatched in year (hou						
	Peak hours dispatched in year (hou Power Factor Correction Program						
	Peak hours dispatched in year (hou	<u>15:</u>					

#### Line Loss Reduction Programs:

Peak load savings (kW):					
	lifecycle		in year		
Energy savings (kWh):					
Distributed Generation and Lo	oad Displacement Programs:				
Amount of DG installed (kW):					
Energy generated (kWh):					
Peak energy generated (kWh):					
Fuel type:					
Other Programs (specify):					
Metric (specify):					
moulo (opcony).					
Actual Program Costs:			Reporting Year	<u>C</u>	umulative Life to Date
Utility direct costs (\$):	Incremental capital:				
	Incremental O&M:	\$	78,423.49	\$	78,423.49
	Incentive:	\$	4,660.00	\$	4,660.00
	Total:	\$	83,083.49	\$	83,083.49
	Total.	Ψ	00,000.40	Ψ	00,000.10
	Total.	Ψ	00,000.40	Ψ	00,000.10
Utility indirect costs (\$):	Incremental capital:	ψ	00,000.40	Ψ	00,000.10
Utility indirect costs (\$):		Ψ	00,000.40	Ψ	

#### E. Assumptions & Comments:

<sup>1</sup> Benefits should be estimated if costs have been incurred <u>and</u> 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

## **<u>1. Residential Programs</u>**

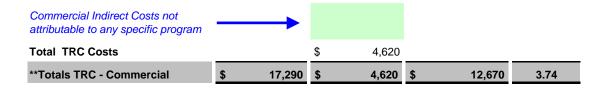
List each Appendix B in the cells below; Insert additional rows as required.

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

Note. To ensure the integrity of the	C Benefits (PV)		t 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	\$ 60,470	\$ 5,470	\$ 55,000	11.05	325,217	325,217	11	\$	250
Holiday Lighting Exchange	\$ 154,439	\$ 92,639	\$ 61,800	1.67	134,032	6,701,612	58	\$	83,083
Fridge Magnet Program	\$ 182,078	\$ 94,300	\$ 87,778	1.93	426,304	2,516,076	81	\$	60,490
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	\$ 396,988	\$ 192,409	\$ 204,578	2.06	885,553	9,542,905	150	\$	143,823
Residential Indirect Costs not attributable to any specific program	 								
Total Residential TRC Costs		\$ 192,409							
**Totals TRC - Residential	\$ 396,988	\$ 192,409	\$ 204,578	2.06					

## **2. Commercial Programs**

		C Benefits			E 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 (\$)	
Earth Day Co-Branded/Mass Market	\$	17,290	\$ 4	4,620	\$	12,670	3.74	70,470	281,880	15	\$	5,140
Name of Program B					\$	-	0.00					
Name of Program C					\$	-	0.00					
Name of Program D					\$	-	0.00					
Name of Program E					\$	-	0.00					
Name of Program F					\$	-	0.00					
Name of Program G					\$	-	0.00					
Name of Program H					\$	-	0.00					
Name of Program I					\$	-	0.00					
Name of Program J					\$	-	0.00					
*Totals App. B - Commercial	\$	17,290	\$ 4	4,620	\$	12,670	3.74	70,470	281,880	15	\$	5,140



## **3. Institutional Programs**

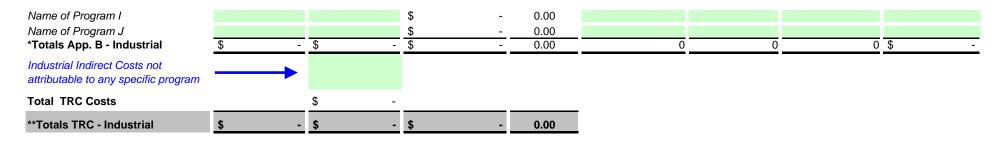
List each Appendix B in the cells below; Insert additional rows as required.

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

Note. To ensure the integrity of the	TRC Benefits (PV)		\$ Net TRC Benefits	Benefit/Cost		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**

	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				



## 5. Agricultural Programs

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

Note: To ensure the integrity of the	TRC Benefits (PV)		\$ Net TRC Benefits	Benefit/Cost	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures (\$)
Name of Program A			\$-	0.00				
Name of Program C			\$-	0.00				
Name of Program C			\$-	0.00				
Name of Program D			\$-	0.00				
Name of Program E			\$-	0.00				
Name of Program F			\$-	0.00				
Name of Program G			\$-	0.00				
Name of Program H			\$-	0.00				
Name of Program I			\$-	0.00				
Name of Program J			\$-	0.00				
*Totals App. B - Agricultural	\$ -	\$ -	\$-	0.00	0	0	C	<u> </u>
Agricultural Indirect Costs not attributable to any specific program								
Total TRC Costs		\$-						
**Totals TRC - Agricultural	\$ -	\$ -	\$ -	0.00				

## 6. LDC System Programs

							Total Peak	Report Year
	TRC Benefits			Benefit/Cost	Report Year Total	Lifecycle (kWh)	Demand (kW)	Gross C&DM
	(PV)	TRC Costs (PV)	\$ Net TRC Benefits	Ratio	kWh Saved	Savings	Saved	Expenditures (\$)
Name of Program A			\$-	0.00				
Name of Program B			\$ -	0.00				

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

## 7. Smart Meters Program

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

Report Year Gross C&DM Expenditures (\$)

## 8. Other #1 Programs

Note. To ensure the integrity of the	TRC Benefits (PV)		\$ Net TRC Benefits	Benefit/Cost		Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures (\$)
Name of Program A			\$-	0.00				
Name of Program B			\$-	0.00				
Name of Program C			\$-	0.00				
Name of Program D			\$-	0.00				
Name of Program E			\$-	0.00				
Name of Program F			\$-	0.00				
Name of Program G			\$-	0.00				
Name of Program H			\$-	0.00				
Name of Program I			\$-	0.00				
Name of Program J			\$-	0.00				
*Totals App. B - Other #1	\$-	\$-	\$-	0.00	0	0	0	- \$
Other #1 Indirect Costs not attributable to any specific program								
Total TRC Costs		\$-						
**Totals TRC - Other #1	\$ -	\$ -	\$ -	0.00				

9. Other #2 Programs List each Appendix B in the cells below; Insert additional rows as required. Note: To ensure the integrity of the formulas, please insert the additional rows in the middle of the list below.

	TRC Benefits			Benefit/Cost	Report Year Total	Lifecycle (kWh)	Total Peak Demand (kW)	Report Year Gross C&DM
	(PV)	TRC Costs (PV)	\$ Net TRC Benefits	Ratio	kWh Saved	Savings	Saved	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)		(PV) TRC Costs (PV) \$1		Net TRC Benefits	Benefit/Cost Report Year Total Ratio kWh Saved				ecycle (kWh) Savings	Total Peak Demand (kW) Saved		Report Year Gross C&DM Expenditures (\$)	
<b>*TOTALS FOR ALL APPENDIX B</b>	\$	414,278	\$ 197,02	9 \$	\$ 217,248	2.10	\$	956,023	\$	9,824,785	\$	165	\$	148,963
Any <u>other</u> Indirect Costs not attributable to any specific program														
TOTAL ALL LDC COSTS			\$ 197,02	9										
**LDC' PORTFOLIO TRC	\$	414,278	\$ 197,02	9 \$	\$ 217,248	2.10								

\* 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.