GRIMSBY POWER INCORPORATED

ANNUAL REPORT

to

ONTARIO ENERGY BOARD

on

Conservation and Demand Management Programs

March 31, 2006

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1. Introduction

The following report is the Grimsby Power Incorporated (GPI) results and activities relating to Conservation and Demand Management (CDM) during the calendar year 2005. In this introductory section we will provide some of the approval background for the plan and then an overview of the activities and results of those activities.

The GPI CDM plan was based on Niagara Erie Public Power Alliance (NEPPA) Conservation and Demand Management Plan (Ontario Energy Board File No. RP-2004-0203). The GPI Market Adjusted Revenue Requirement of $221,745 over the plan period was approved by the OEB on March 23rd, 2005 (Board File No. RP-2004-0203 / EB 2004-0523). The NEPPA plan had nine (9) applications filed and comprised 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. Each LDC filed a separate schedule, which outline their specific plan. Schedule 2 of the plan documents the GPI projects and customers associated with the various initiatives.

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

Project	Target Customers	Approved Expenditures	Expenditures to Dec. 31, 2005	Percent Expensed
Co-branded Mass Market Program	All Users	$50,250	$11,159.09	22.21%
Smart Metering / Prepaid Metering Program	Residential and small commercial (<50 kW)	$39,750	$5,397.14	8.67%
Energy Audits Programs	Residential and small commercial (<50 kW)	$15,500	$00.00	0%
Smart Metering / Interval Metering Program	Large commercial (>50kW)	$22,500	$00.00	0%
Energy Audits / Feasibility Audits	Large commercial (>50kW)	$2,750	$00.00	0%

Distribution Loss Reduction	All Users	$91,000	$28,099.67	30.88
	Total	**$221,750**	**$44,655.90**	**20.14%**

As shown in the table, some of the planned projects are underway and others have yet to be implemented.

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. In the following information we provide an overview of each of these shared and local programs.

Shared Provincial Initiatives

GPI took part in the "Lighten Your Electricity Bill" coupon program. It was well accepted by our customers with an approximate 8% participation rate.

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

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

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 (at this time) an introductory booklet, energy saving bill inserts, radio scripts and a web site for "Conserver Family" energy saving tips directly at www.conserverjoe.com/np/ or on our website at www.grimsbypower.com/conservation. GPI has distributed the booklets with the energy saving inserts to all customers as part of an ongoing program to educate customers on ways of saving energy and monies.

NEPPA utilities also developed and distributed a Request For Proposals 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. We have included this list of pre approved firms on our website under Conservation.

GPI/Local Activities

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

- Educational Initiatives:
  We developed a local educational initiative. This initiative was delivered to
  - Town Council, which is delivered via the local community channel to customers in our area both live and later by video tape.
  - Service Clubs have invited GPI to speak to them on critical issues and we have taken advantage of the opportunity to deliver our key message.
- Staff training
  We have trained key staff on energy efficiency information and current programs.
- Load Control
  We are studying ways to implement load control systems along with the Smart Meter Technologies.
- Electrical Distribution System Loss Reduction and system improvements.
  In 2005 preliminary work was completed to analyse opportunities and plan for distribution system efficiency improvements.
- Green Power Study
  We have initiated a proposal regarding Green Energy and potentially Greening the Community.

2. Evaluation of the CDM Plan

Initially, we were taking a very aggressive role in the delivery of our CDM plans. Unfortunately, the generic hearing on CDM and total resource costing (TRC) caused us to pull back for fear that plans would require modification due to OEB decisions.

Despite our decision, the programs we offered our customers were well received and appeared to be accepted by many consumers. We believe that many consumers want/need some financial incentive/rebate to prod them into purchasing more expensive items like a CFL versus an incandescent bulb.

In our preliminary discussions with larger commercial customers it appears they need a minimum one year payback to cover it off in an existing budget. This will be a challenge to effectively deliver programs to this customer class.

3. Discussion of Programs

GPI delivered the following programs to customers.

➢ *Co-branding*

These programs were targeted at residential and small commercial customers.

- ***Lighten Your Electricity Bill***

This program had about 41 LDCs participating from across the province. We offered, in conjunction with Canadian Tire Corporation coupons that consumers could redeem for a discount on products that would reduce consumption. The products offered were CFLs, LED Christmas Lights, Programmable Thermostats, Timers and Ceiling Fans. For a first time offering, we had an 8% take up rate from our customers. The coupons expired December 31, 2005. Therefore, this is a completed projected and it has a net TRC benefit.

- ***Conserver Joe***

This was an educational program that was jointly developed by the NEPPA group. We made Conserver Joe a few years back in an initial attempt to promote conservation prior to a regulated requirement. We further developed Conserver Joe to have a family consisting of a wife and children. The booklet we developed was an effort to reach the entire family through the educational messages. In addition, we developed 10 bill inserts to capture what we believed were key aspects delivering the biggest bang for customers to reduce consumption. We see this as a completed program. However, we feel that other educational programs, which might continue to enhance the brand name conserver Joe as an on going initiative. Unfortunately, these types of programs have no TRC benefit but are necessary to continue to change the culture of consumers.

- ***Cold Water Wash***

This was a coupon program that we jointly participated in with other LDCs and Proctor in Gamble. It was designed to provide customers with a rebate when they purchased cold water wash laundry detergent. The coupons expired February 28, 2006. Therefore, this is a partially completed program. We have used 8% as the take up rate to qualify the estimated TRC. The 8% is the take up rate for the coupon program.

➢ *Smart Metering*

This program was targeted at residential and small commercial customers.

GPI joined the Ontario Utility Smart Metering group (OUSM) to partner with other LDCs to effectively pilot and study the best solutions for GPI. Cooperatively, OUSM tested many technologies from Smart Meters to communication protocols. OUSM proactively engaged LDCs and manufacturing companies to provide a detailed analysis of the test results, which were shared between all participants. December 13, 2005 the results of this initiative were presented to the participants. Unfortunately, the government introduced legislation prohibiting LDCs from further funding this initiative. Therefore, this project from a CDM initiative is complete and it is difficult to assess any TRC benefit, so none is provided.

➢ *Distribution Loss*

This program was target to assist all customer classes served by GPI.

GPI has initiated a long term plan to analyze the overall lowest cost line construction methodology to reduce the system losses within our LDC. In 2005, we initiated a line rebuild, which will eventually tie into an alternative power supply, which will lower our overall system losses. One portion of this project was completed in 2005 and the balance is due to be completed in 2006. As part of this work, we are optimizing conductor size and installing lower impedance transformers to reduce the losses currently in the system. It is also our intention to eliminate older distribution stations. The transformers in theses distribution stations have high impedance losses which compound the overall system losses. Since this project is only partially finished, we have estimated the TRC benefit solely for the portion of the line that was constructed in 2005.

Next Steps

GPI is committed to working with partners to deliver programs\joint ventures to effectively deliver CDM. In 2006, we plan to:

- Continue customer education through the further development of Conserver Joe with NEPPA LDCs;
- Continue another coupon campaign with the OPA
- Start a refrigerator buy back program with partners;
- Start commercial information meetings with customers to offer energy savings tips and introduce partners that can assist them with audits;
- Continue our distribution loss reduction program to effectively reduce system losses; and
- Evaluate the best way to deal with the previously approve Smart Metering monies.

4. Lessons Learned

Utility Size Challenges

As a relatively small utility (approximately 9,500 customers) we face challenges that larger utilities do not share. Costs to initiate and operate CDM programs are generally not dependent on utility size. This makes program development and administration cost control difficult. In addition, meeting regulatory and reporting requirements, while important, become a high cost when compared to the overall program budget. These regulatory costs are typically independent of utility size. A regulatory cost of $20,000 may be a relatively insignificant in a budget of millions of dollars but significantly reduces the funds available for customer programs when a total CDM budget is $220,745! Further, larger utilities are able to use dedicated staff while smaller LDCs assign CDM to an existing staff member along with the myriad of other duties they are required to perform.

A smaller budget restricts the programs that smaller LDCs can offer their customers. This means that customers in smaller LDCs are being disadvantaged to the types of programs being run in

larger neighbouring LDCs. This means that the province as a whole is missing an opportunity to reduce load symmetrically across the province.

It appears the provincially funded CDM programs locally delivered allows the province to collectively reduce load. Thereby it maintains the confidence of customers in their local LDC, with a continued position of trust and reliability, and it provides customers with a common collective message from all entities, government, OPA and LDCs. This avoids mixed and confused messages if we are all trying to do our own CDM 'thing'.

Shared Initiatives

Without question shared initiatives reduce the administrative cost component in delivery of CDM programs. Where they apply to our customer groups, they have proven to be 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.

Programs like these can be offered provincially and delivered locally. This way it reduces administration costs and offers a common province wide initiative to the benefit of all consumers and the reduction of demand for the province, which benefits all consumers.

Local Initiatives

Our own local programs can be effective as long as we can minimize administration. For example, keep it simple and partner with others who are willing/able to provide administrative support and management of the initiative. This we believe can be best done by the OPA with utility involvement in program design. Customers appear to have a trust in their local utility and see them as their trusted expert in electricity matters.

Customer Education Programs

Customer education is extremely important as most customers know little about electricity. An educated customer helps energy efficiency become more of a focus for future consumers of electricity. Certainly one of the lessons learned during 2005 is that, while education is important, it is very difficult and can be expensive to quantify the results of customer education. Statistically accurate survey information is expensive and this expense is of particular concern when the CDM budget is relatively small. Further studies have shown that a cultural change takes many years of continued efforts to achieve the desired results.

The result of this issue with customer education and the validation of results is that this type of CDM component may be stopped in future, unless some type of reduction in the requirements for TRC analysis is made for important customer education initiatives.

Summary

There are 3 key aspects that we feel bear emphasizing on lessons learned. They are:

- Resources – we need to ensure adequate staffing and financial resources to continue CDM programs.
- Consistent Messages – customers need to hear a clear and consistent message from all players to avoid duplication of effort.
- Regulatory – we need to avoid costly regulatory review, hearings and debate. This wastes time resources and effort to meet the provincial goal to help to ensure resource adequacy in generation. It must also be remembered that CDM appears only to address generation and does nothing for the consideration of resource adequacy for transmission and distribution. Reduction of distribution loss factors helps to ensure resource adequacy in these aspects.

5. Conclusion

In 2005 CDM was initiated and the programs GPI was involved with were well received by our customers. Many customers appear to understand and they appear to want to help reduce demand. However, they need to receive a consistent and constant message of education.

Grimsby Power Incorporated is committed to CDM. It makes sense for everyone and we will continue to offer programs that benefit our customers (in both the short and long term). However, we believe that the best way to deliver CDM is provincially funded locally delivered programs.

Sharing costs and ideas only makes sense to effectively deliver CDM programs and to achieve the desired results.

Appendix A - Evaluation of the CDM Plan

	Total	Coupons	Con Joe (Res/com)	Smart Meter - Res/Com	LDCSystem Loss	Other - General Administration
Net TRC value ($):	$ 49,500.00	$ 47,600.00	$0	$0	$1,900	$0
Benefit to cost ratio:	38.54	37.47			1.07	
Number of participants or units delivered:	19924	1124	9350	0	9450	0
Total KWh to be saved over the lifecycle of the plan (kWh):	1768102.80	1111686.55	0	0	656416.25	0
Total in year kWh saved (kWh):	144375.77	89674.42			54701.35	
Total peak demand saved (kW):	37.73	31.73			6.00	
Total kWh saved as a percentage of total kWh delivered (%):	0.16148	0.10030			0.06118	
Peak kW saved as a percentage of LDC peak kW load (%):	0.01208%	0.01042%			0.00166%	
Gross in year C&DM expenditures ($):	$ 44,655.90	$ 2,400.78	$8,418	$5,128	$27,208	$1,500
Expenditures per KWh saved ($/kWh):*	$ 0.0436	$0.0022			$0.0414	
*Expenditures per KW saved ($/kW)**:*	$ 4,610.40	$75.66			$4,534.74	

Utility discount rate (%):	8.13

*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:** Ceiling Fan Coupon Program with Canadian Tire

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

Coupon campaign to provide an incentive to customers for the purchase of a ceiling fan and claim a rebate.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	No Fan		
Efficient technology:	Fan		
Number of participants or units delive	17		
Measure life (years):	10		

B. **TRC Results:**

TRC Benefits ($):		
TRC Costs ($):		
Utility program cost (less incentives):		
Participant cost:	$	-
Total TRC costs:	$	-
Net TRC (in year CDN $):	$	-
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	#DIV/0!	

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

Conservation Programs:

Demand savings (kW):	*Summer*		
	Winter	0	
	lifecycle	*in year*	
Energy saved (kWh):	*0*	0	
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 begining 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:	$ 52.46
	Incentive:	$ 85.00
	Total:	$ 137.46
Utility indirect costs ($):	*Incremental capital:*	
	Incremental O&M:	
	Total:	
Participant costs ($):	*Incremental equipment:*	
	Incremental O&M:	
	Total:	

E. Comments:

There is no TRC benefit for ceiling fans and we have arbitrarily set a Measure Life of 10 years

*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:** CFLs Coupon Program with Canadian Tire

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

Coupon campaign to provide an incentive to customers for the purchase of CFL lights and claim a rebate.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	Incadesense 60 W		
Efficient technology:	CFLs 15 W		
Number of participants or units delive	686.35		
Measure life (years):	4		

B. **TRC Results:**

TRC Benefits ($):	*$*	*15,499.21*
TRC Costs ($):		
Utility program cost (less incentives):	$	799.21
Participant cost:	$	500.00
Total TRC costs:	$	1,299.21
Net TRC (in year CDN $):	$	14,200.00
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	$	11.93

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

Conservation Programs:

Demand savings (kW):	*Summer*		
	Winter	13.8985875	
	lifecycle	*in year*	
Energy saved (kWh):	*193468.338*	48367.0845	
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 begining of year (%):	
Distribution system power factor at end of year (%):	

Line Loss Reduction Programs:

	lifecycle	in year
Peak load savings (kW):		
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:	$ 799.21
	Incentive:	$ 777.00
	Total:	$ 1,576.21
Utility indirect costs ($):	*Incremental capital:*	
	Incremental O&M:	
	Total:	
Participant costs ($):	*Incremental equipment:*	
	Incremental O&M:	
	Total:	

E. Comments:

CFLs were sold in packages of 2 but primarily 3. Therefore, we assumed that each package contained 2.65 bulbs.

*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:** Tide Cold Water Wash

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

A campaign to encourage customers to wash with cold water, a discount coupon to use for a Cold Water Wash Detergent ws provided to

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	Warm Water Washing		
Efficient technology:	Promotion of Cold Water Washing		
Number of participants or units delive	9350		
Measure life (years):	1		

B. **TRC Results:**

TRC Benefits ($):	*$*	*2,950.00*
TRC Costs ($):		
Utility program cost (less incentives):	$	250.00
Participant cost:	$	800.00
Total TRC costs:	$	1,050.00
Net TRC (in year CDN $):	$	1,900.00
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	$	2.81

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

Conservation Programs:

Demand savings (kW):	*Summer*		
	Winter	2	
	lifecycle	*in year*	
Energy saved (kWh):	*46725*	46725	
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 begining of year (%):	
Distribution system power factor at end of year (%):	

Line Loss Reduction Programs:

	lifecycle	in year
Peak load savings (kW):		
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:	$ 250.00
	Incentive:	$ -
	Total:	$ 250.00
Utility indirect costs ($):	*Incremental capital:*	
	Incremental O&M:	
	Total:	
Participant costs ($):	*Incremental equipment:*	
	Incremental O&M:	
	Total:	

E. Comments:

We ran the program until February 28, 2006 and we are estimating the results.

*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:** Conserver Joe Educational Awareness

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

See report.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	Limited Education on C&DM		
Efficient technology:	Promote C&DM		
Number of participants or units delive	9350		
Measure life (years):	10		

B. **TRC Results:**

TRC Benefits ($):		
TRC Costs ($):		
Utility program cost (less incentives):		
Participant cost:		
Total TRC costs:	$	-
Net TRC (in year CDN $):	$	-
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	#DIV/0!	

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

Conservation Programs:

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

Demand Management Programs:

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

Demand Response Programs:

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

Power Factor Correction Programs:

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

Line Loss Reduction Programs:

	lifecycle	in year
Peak load savings (kW):		
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:	$ 8,418.40
	Incentive:	
	Total:	$ 8,418.40
Utility indirect costs ($):	*Incremental capital:*	
	Incremental O&M:	
	Total:	
Participant costs ($):	*Incremental equipment:*	
	Incremental O&M:	
	Total:	

E. Comments:

Grimsby Power in conjunction with the NEPPA group developed a customer educational program with bill inserts and a booklet to promote C&DM. The promotional was targeted at the family unit. We expect that a cultural shift normally takes 10 years to change habits.

*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:** Distribution Loss

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

See report.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	High System Losses		
Efficient technology:	Reduce System Losses		
Number of participants or units delive	9450		
Measure life (years):	25		

B. **TRC Results:**

TRC Benefits ($):	*$*	*29,108.44*
TRC Costs ($):		
Utility program cost (less incentives):	$	27,208.44
Participant cost:		
Total TRC costs:	$	27,208.44
Net TRC (in year CDN $):	$	1,900.00
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	$	1.07

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

Conservation Programs:

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

Demand Management Programs:

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

Demand Response Programs:

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

Power Factor Correction Programs:

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

Line Loss Reduction Programs:

Peak load savings (kW):		6
	lifecycle	*in year*
Energy savngs (kWh):	656,416.25	54,701.35

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:*	$ 27,208.44
	Incremental O&M:	
	Incentive:	
	Total:	
Utility indirect costs ($):	*Incremental capital:*	
	Incremental O&M:	
	Total:	
Participant costs ($):	*Incremental equipment:*	
	Incremental O&M:	
	Total:	

E. Comments:

We are estimating the system loss reduction for this program and should have better values once the entire program is completed.

*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:** LEDs Coupon Program with Canadian Tire

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

Coupon campaign to provide an incentive to customers for the purchase of LED Christmas lights and claim a rebate.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	Incadesent Christmas Lights		
Efficient technology:	LEDs		
Number of participants or units delive	306		
Measure life (years):	30		

B. **TRC Results:**

TRC Benefits ($):	*$*	*9,644.24*
TRC Costs ($):		
Utility program cost (less incentives):	$	944.24
Participant cost:	$	1,400.00
Total TRC costs:	$	2,344.24
Net TRC (in year CDN $):	$	7,300.00
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	$	4.11

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

Conservation Programs:

Demand savings (kW):	*Summer*		
	Winter	3.866699721	
	lifecycle	*in year*	
Energy saved (kWh):	*266028.9408*	8867.63136	
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 begining of year (%):	
Distribution system power factor at end of year (%):	

Line Loss Reduction Programs:

	lifecycle	in year
Peak load savings (kW):		
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:	$ 944.24
	Incentive:	$ 1,530.00
	Total:	$ 2,474.24
Utility indirect costs ($):	*Incremental capital:*	
	Incremental O&M:	
	Total:	
Participant costs ($):	*Incremental equipment:*	
	Incremental O&M:	
	Total:	

E. Comments:

We used 306 and had to do a conversion in the TRC model to calculate the number of LED's per string versus the incandent string.

*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:** Thermostats Coupon Program with Canadian Tire

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

Coupon campaign to provide an incentive to customers for the purchase of a programmable thermostat.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	Non Programmable Thermostat		
Efficient technology:	Programmable Thermostat		
Number of participants or units delive	74		
Measure life (years):	18		

B. **TRC Results:**

TRC Benefits ($):	*$*	*18,928.35*
TRC Costs ($):		
Utility program cost (less incentives):	$	228.35
Participant cost:	$	2,500.00
Total TRC costs:	$	2,728.35
Net TRC (in year CDN $):	$	16,200.00
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	$	6.94

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

Conservation Programs:

Demand savings (kW):	*Summer*	5	
	Winter	14	
	lifecycle	*in year*	
Energy saved (kWh):	*389968.2689*	21664.90383	
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 begining 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:	$ 228.35
	Incentive:	$ 1,110.00
	Total:	$ 1,338.35
Utility indirect costs ($):	*Incremental capital:*	
	Incremental O&M:	
	Total:	
Participant costs ($):	*Incremental equipment:*	
	Incremental O&M:	
	Total:	

E. Comments:

There were 74 thermostats sold. We based the TRC model on the fuel types from provincial statistic. Therefore, we applied 17.3% of sales or 13 to space heating and 45% of slaes to gas with airconditioning or 33. The remainder where assumed to be gas heated and were not applied in the TRC calculation.

*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:** Smart Metering Work

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

Work with the OUSM group to analyze smart meters, communication protocols and CIS with other LDCs and vendors to proactively report results to all participants.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	No Smart Meter		
Efficient technology:	Smart Meter		
Number of participants or units delivered:			
Measure life (years):			

B. **TRC Results:**

TRC Benefits ($):		
TRC Costs ($):		
Utility program cost (less incentives):		
Participant cost:	$	-
Total TRC costs:	$	-
Net TRC (in year CDN $):	$	-
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	#DIV/0!	

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

Conservation Programs:

Demand savings (kW):	*Summer*		
	Winter	0	
	lifecycle	*in year*	
Energy saved (kWh):	*0*	0	
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 begining 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:	$ 5,128.28
	Incentive:	
	Total:	$ 5,128.28
Utility indirect costs ($):	*Incremental capital:*	
	Incremental O&M:	
	Total:	
Participant costs ($):	*Incremental equipment:*	
	Incremental O&M:	
	Total:	

E. Comments:

Grimsby Power Participated with the OUSM group that was actively testing meters and systems to assess their capabilities. Since the introduction of Bill 21, we have ceased this program.

*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:** Indoor & Outdoor Timers Coupon with Canadian Tire

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

Coupon campaign to provide an incentive to customers for the purchase of timers and claim a rebate.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	No Timer		
Efficient technology:	Indoor & Outdoor Timers		
Number of participants or units delive	41		
Measure life (years):	20		

B. **TRC Results:**

TRC Benefits ($):	*$*	*8,826.52*
TRC Costs ($):		
Utility program cost (less incentives):	$	126.52
Participant cost:	$	700.00
Total TRC costs:	$	826.52
Net TRC (in year CDN $):	$	8,000.00
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	$	10.68

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

Conservation Programs:

		lifecycle	in year
Demand savings (kW):	*Summer*		
	Winter		6.966465517
Energy saved (kWh):		*215496*	10774.8
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 begining of year (%):	
Distribution system power factor at end of year (%):	

Line Loss Reduction Programs:

	lifecycle	in year
Peak load savings (kW):		
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:	$ 126.52
	Incentive:	$ 116.00
	Total:	$ 242.52
Utility indirect costs ($):	*Incremental capital:*	
	Incremental O&M:	
	Total:	
Participant costs ($):	*Incremental equipment:*	
	Incremental O&M:	
	Total:	

E. Comments:

TRC did not have a value for indoor timers. Therefore, we included the indoor timers with the outdoor timers for the TRC calculation.

*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:** General Administration

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

The Neppa group collectively purchased a TRC calculator model which we are assigning to the administration cost of our CDM plan.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:			
Efficient technology:			
Number of participants or units delivered:			
Measure life (years):			

B. **TRC Results:**

TRC Benefits ($):		
TRC Costs ($):		
Utility program cost (less incentives):		
Participant cost:		
Total TRC costs:	$	-
Net TRC (in year CDN $):	$	-
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	#DIV/0!	

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

Conservation Programs:

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

Demand Management Programs:

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

Demand Response Programs:

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

Power Factor Correction Programs:

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

Line Loss Reduction Programs:

	lifecycle	in year
Peak load savings (kW):		
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:	$ 1,500.00
	Incentive:	
	Total:	$ 1,500.00
Utility indirect costs ($):	*Incremental capital:*	
	Incremental O&M:	
	Total:	
Participant costs ($):	*Incremental equipment:*	
	Incremental O&M:	
	Total:	

E. Comments:

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