

GRIMSBY POWER INCORPORATED

2008 ANNUAL REPORT

to April 30, 2008

for the

ONTARIO ENERGY BOARD

on

Conservation and Demand Management Programs

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**Grimsby Power Incorporated
C&DM Plan Annual Report for 2008**

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 2008. In this introductory section we will provide 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 \$221,750 over the plan period was approved by the OEB on March 23rd, 2005 (Board File No. RP-2004-0203 / EB 2004-0523). The following table shows the approved plan expenditures by project as well as actual expenditures to December 31, 2007.

Project	Target Customers	Approved Expenditures	Expenditures in 2008	Expenditures to Dec. 31, 2008	Percent Spent
Co-branded Mass Market Program	All Users	\$50,250	\$15,625.80	\$106,155.20	211.25%
Smart Metering / Prepaid Metering Program	Residential and small commercial (<50 kW)	\$39,750	-	\$5,128.28	12.90%
Energy Audits Programs	Residential and small commercial (<50 kW)	\$15,500	\$4,159.00	\$16,351.74	105.50%
Smart Metering / Interval Metering Program	Large commercial (>50kW)	\$22,500	-	\$0.00	0%
Energy Audits / Feasibility Audits	Large commercial (>50kW)	\$2,750	-	\$17,409.00	580%
Distribution Loss Reduction	All Users	\$91,000	\$23,182.34	\$76,705.78	58.82%

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Total	\$221,750	\$42,967.14	\$221,750.00	100.00%
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As shown in the table, 3rd tranche funding has been spent completely. Smart metering cannot be implemented using 3rd tranche funding as funding will be from other methods. The money spent previously (to date) is shown by the costs in red. The remaining budgets in red were shifted to other programs.

To make our initiatives as cost effective and beneficial for our customers as possible, we have shared and continue to share 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 NEPA Activities

As an active participant with the NEPA group we have helped and continue to develop the “Conserver Family” customer education and information program. This program includes an introductory booklet 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 paid to continue this ongoing program to educate customers on ways of saving energy and monies.

GPI/Local Activities

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

- New customer program –We offered 2 free CFLs and LED nightlights in an environmentally friendly tote bag to our new customers. This conservation initiative gave our new customers a positive first impression of our utility.
- Appliance rebate – Customers who purchased an Energy Star washing machine, refrigerator, dishwasher or freezer received a \$50 rebate and 2 free CFLs and LED nightlights in a tote bag
- Windows program - \$25 rebate per window for the installation of Energy Star windows. A \$50 rebate was offered by area vendors.
- Exit Sign Light Bulbs – 0.8 Watt LED Exit Sign bulb was offered as a replacement for incandescent bulbs to area businesses
- Distribution Loss – Energy Star rated transformers were used for our Mud Street job. This reduced line losses via reduced transformer impedance. Mud Street was required to eliminate local load transfers.

2. Evaluation of the CDM Plan

We have continued to move cautiously throughout 2008 as we are examining some lessons learned by others so that we can be assured of prudent programs aimed at delivering a high value for our customers.

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

The exit sign light bulb has proven to be a very effective way to deliver savings to our large and small business customers and was well received. Since exit lights are on all the time, by distributing a large number of bulbs we can reduce peak summer demand effectively.

Overall, we have learned how to market our programs better to our customers but advertising and administrative costs remain a large burden for a small utility.

3. Discussion of Programs

GPI delivered the following programs to customers.

➤ *Co-branding*

These programs were targeted at residential and small commercial customers.

• *Conservor Joe*

This was an educational program that was jointly developed by the NEPA group. We made Conservor Joe a few years back in an initial attempt to promote conservation prior to being a regulated requirement. We further developed Conservor 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.

For 2008, we maintained our website. The booklet and on-line tips are available to all who access our website. Should the need arise in the future to make Conservor Joe part of a marketing campaign we will use him.

• *Windows Program*

This was a rebate program offered in partnership with 5 local window contractors. A \$75 rebate was offered for each window having a price over \$250. The window installed had to

be Energy Star efficient. GPI paid \$25 of the rebate and the \$50 balance was offered by the local contractor.

- ***Watt Reader Program***

To encourage a more active approach to conservation, Grimsby Power partnered with the Grimsby Public Library to run a watt reader lending program. Grimsby area residents with a valid library card were allowed to borrow the watt reader for a period of 3 weeks. As an added bonus, participants received a tote bag with 4 CFLs and 2 LED nightlights. It is difficult to quantify the energy saved due to this educational initiative. This initiative was a continuation of the 2007 program and remains available for area residents.

- ***Appliance Rebate Program***

This was one of the most successful conservation programs to date in terms of customer participation. \$50 was given as an incentive for each Energy Star refrigerator, dishwasher, washing machine and freezer. Customers could only receive an incentive for each type of appliance. Therefore, if 2 refrigerators were purchased only a \$50 incentive was available. However, customers could purchase 4 different appliances and receive \$200 although no customers reached this level. This program was discontinued at the end of the 3rd tranche funding as the OPA could not justify the low TRC value. By giving away free CFLs and LED nightlights we raised the TRC.

- ***New Customers***

New customers of Grimsby Power were given a tote bag with 4 CFLs, 2 LED nightlights and energy saving brochures. This initiative left a positive first impression with our new customers. It also started them thinking about energy conservation.

- ***Energy Audit (GS>50 class)***

- ***LED Exit Sign Replacement Bulbs***

LED bulbs use 0.8 watts and replace 15 to 40 watt incandescent bulbs. LED bulbs also last 50,000 hours compared to 15,000 hours for an incandescent bulb. This may be a high estimate for incandescent lighting but it shows that an incandescent bulb will have to be replaced 3 times before an LED bulb burns out. This program was well received by the business community and if done in volume, effective in reducing peak demand since exit sign is lighting is on all the time.

- ***Distribution Loss***

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

Software was purchased in 2007 to evaluate our system distribution loss. We continue to use the software but cannot always operate at an efficient level between the two feeder distribution stations.

A line rebuild was completed for Mud Street by April 2008 and we have used more efficient transformers with lower impedance losses than minimum CSA standards. This exhausted the remaining distribution loss budget.

4. Lessons Learned

Utility Size Challenges

As a relatively small utility (approximately 10,000 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 \$221,750! 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'. The successful Appliance Rebate program is a good example as customers of neighbouring utilities are ineligible.

It was hoped that the OPA would continue the Appliance Rebate Program. However, using OPA Measures and Assumptions List showed the TRC of the appliances to be negative. Natural Resources Canada promotes Energy Star, the province of Ontario offers a PST point of sale rebate but the sad truth is that these appliances do not cover the incremental cost over their lifetime.

Shared Initiatives

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Without question shared initiatives reduce the 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. However, this remains a drawback to offering a program with a group. We all want different things for our utility. Our utility territories remain different and our customers may react differently to various marketing initiatives.

Programs 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. Therefore, the new and existing OPA C&DM initiatives listed in Next Steps above should benefit GPI customers with reduced costs. However, they must be easy to administer and deliver for our small utility.

Local Initiatives

Our own local programs can be effective as long as we can minimize staff time, which has not had any administration costs to date. For example, keep it simple and partner with others who are willing or 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. However, the OPA needs to save LDC harmless of risk and work with LDCs to adequately plan the programs at the grass roots versus the '35,000' level.

Customer Education Programs

Customer education remains 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 2008 is that, while education is important, it is impossible to quantify the results of customer education. (There is no test.) 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.

Other (future) issues

The first step in designing a conservation program starts with an evaluation of the measure to be implemented using the TRC test. Unfortunately, there few measures that is TRC positive given today's electricity prices. Perhaps instead of focusing on the TRC of the measure to be implemented, we should instead focus on the **reduction in electricity use**. The OEB could send the utilities a suggested list of possible projects. This would reduce the development time involved. More adventurous utilities could still pursue a custom or pilot project if desired.

Smaller utilities suffer from a lack of resources and require a designated conservation officer to be funded via rates. Too often the programs are implemented as a necessary evil because the person in charge has to attend to other duties. As a result, conservation initiatives are not as effective as they could be. The positive news is that energy conservation is environmentally friendly and viewed positively.

Summary

There are 3 key aspects that we should be emphasised on C&DM for the future. They are:

- Customer Education – we need to continue to educate customers on the value of CDM from a total resource adequacy perspective and that while some costs may increase, overall their total costs will go down.
- Consistent Messages – customers need to hear a clear and consistent message from all players to avoid duplication of effort.
- Pay Back – customers want and need to know the pay back of their efforts.

5. Conclusion

In 2008, the CDM 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, most are unwilling to change/ forfeit comfort. Customers also need to hear a consistent message from all players active with CDM.

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. If Grimsby Power has to implement conservation programs on its own, it will require the resources to do so.

Appendix C - Program and Portfolio Totals

Report Year: **2008**

1. Residential Programs

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

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

	TRC Benefits (PV)	TRC Costs (PV)	\$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures (\$)
Appliance Rebate	\$ 27,715	\$ 27,361	\$ 353	1.01	14,387	198,364	2	\$ 15,490
New Customers	\$ 14,764	\$ 1,259	\$ 13,504	11.72	33,547	340,766	1	\$ -
Conservor Joe (Educational)	\$ -	\$ 900	-\$ 900	0.00				
Energy Star Windows	\$ 3,090	\$ 3,090	\$ -	1.00	1,592	31,839	0	\$ 2,711
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	\$ 45,569	\$ 32,611	\$ 12,958	1.40	49,527	570,969	2	\$ 18,201
Residential Indirect Costs not attributable to any specific program								
Total Residential TRC Costs		\$ 32,611						
**Totals TRC - Residential	\$ 45,569	\$ 32,611	\$ 12,958	1.40				

2. Commercial Programs

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

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

	TRC Benefits (PV)	TRC Costs (PV)	\$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures (\$)
LED Exit Sign Lights	\$ 5,805	\$ 360	\$ 5,445	16.11	12,315	73,889	1	\$ -
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	\$ 5,805	\$ 360	\$ 5,445	16.11	12,315	73,889	1	\$ -

Commercial Indirect Costs not attributable to any specific program



Total TRC Costs		\$	360				
**Totals TRC - Commercial	\$	5,805	\$	360	\$	5,445	16.11

3. Institutional Programs

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

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

	TRC Benefits (PV)	TRC Costs (PV)	\$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures (\$)
Name of Program A			\$ -	0.00				
Name of Program B			\$ -	0.00				
Name of Program C			\$ -	0.00				
Name of Program D			\$ -	0.00				
Name of Program E			\$ -	0.00				
Name of Program C			\$ -	0.00				
Name of Program G			\$ -	0.00				
Name of Program H			\$ -	0.00				
Name of Program I			\$ -	0.00				
Name of Program J			\$ -	0.00				
*Totals App. B - Institutional	\$ -	\$ -	\$ -	0.00	0	0	0	\$ -

Institutional Indirect Costs not attributable to any specific program

Total TRC Costs		\$	-			
**Totals TRC - Institutional	\$	-	\$	-	\$	0.00

4. Industrial Programs

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

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

	TRC Benefits (PV)	TRC Costs (PV)	\$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures (\$)
Name of Program A			\$ -	0.00				
Name of Program 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 - Industrial	\$	-	\$	-	0.00	0	0	0	\$ -
Industrial Indirect Costs not attributable to any specific program	→								
Total TRC Costs		\$	-						
**Totals TRC - Industrial	\$	-	\$	-	0.00				

5. Agricultural Programs

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

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

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

6. LDC System Programs

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

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

	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 (\$)
Distribution Loss Software	\$ -	\$ 1,584	-\$ 1,584	0.00	0	0	0	\$ 1,584
Energy Star Transformers	\$ 13,457	\$ 9,004	\$ 4,453	1.49	14,051	351,276	2	\$ 23,182

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	\$ 13,457	\$ 10,588	\$ 2,869	1.27		14,051	351,276	2	\$ 24,766

LDC System Indirect Costs not attributable to any specific program →

Total TRC Costs		\$ 10,588							
**Totals TRC - LDC System	\$ 13,457	\$ 10,588	\$ 2,869	1.27					

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

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

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

	TRC Benefits (PV)	TRC Costs (PV)	\$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures (\$)
Name of Program A			\$ -	0.00				
Name of Program B			\$ -	0.00				
Name of Program C			\$ -	0.00				
Name of Program D			\$ -	0.00				
Name of Program E			\$ -	0.00				
Name of Program F			\$ -	0.00				
Name of Program G			\$ -	0.00				
Name of Program H			\$ -	0.00				
Name of Program I			\$ -	0.00				
Name of Program J			\$ -	0.00				
*Totals App. B - Other #1	\$ -	\$ -	\$ -	0.00	0	0	0	\$ -

Other #1 Indirect Costs not attributable to any specific program →

Total TRC Costs		\$ -							
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**Totals TRC - Other #1	\$ -	\$ -	\$ -	0.00
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9. Other #2 Programs

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

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

	TRC Benefits (PV)	TRC Costs (PV)	\$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures (\$)
Name of Program A			\$ -	0.00				
Name of Program B			\$ -	0.00				
Name of Program C			\$ -	0.00				
Name of Program D			\$ -	0.00				
Name of Program E			\$ -	0.00				
Name of Program C			\$ -	0.00				
Name of Program G			\$ -	0.00				
Name of Program H			\$ -	0.00				
Name of Program I			\$ -	0.00				
Name of Program J			\$ -	0.00				
*Totals App. B - Other #2	\$ -	\$ -	\$ -	0.00	0	0	0	\$ -
Other #2 Indirect Costs not attributable to any specific program								
Total TRC Costs		\$ -						
**Totals TRC - Other #2	\$ -	\$ -	\$ -	0.00				

LDC's CDM PORTFOLIO TOTALS

	TRC Benefits (PV)	TRC Costs (PV)	\$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures (\$)
*TOTALS FOR ALL APPENDIX B	\$ 64,831	\$ 43,559	\$ 21,272	1.49	\$ 75,893	\$ 996,133	\$ 5	\$ 42,967
Any other Indirect Costs not attributable to any specific program								
TOTAL ALL LDC COSTS		\$ 43,559						
**LDC' PORTFOLIO TRC	\$ 64,831	\$ 43,559	\$ 21,272	1.49				

* 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.