BRANTFORD POWER INC.
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2006 ANNUAL REPORT, CDM FUNDED THROUGH RATES, BRANTFORD POWER INC.

1. INTRODUCTION

In developing its 2006-07 Conservation and Demand Management Plan, Brantford Power was guided by the following principles:

- Avoid lost opportunities and keep options open
- The program should address all customer classes
- The program should build on existing programs and leverage other sources of funding, where possible, and
- The portfolio should provide experience that will be helpful in the design and delivery of future conservation and demand management programs.

Brantford Power's 2006-07 conservation and demand management portfolio comprised the following core program elements:

1. Low Income Energy Conservation Program
2. Residential Load Management Program to Control Water Heater Tanks
3. Customer Outreach. Communications to Mass Market
4. Customer Outreach, CFL Swap Program
5. Customer Outreach. Key Accounts Seminar Series
6. LED Traffic Signal Replacement

Each of these programs is discussed in greater detail in Section 2, 3 and 4 along with Appendices A, B and C.

2. EVALUATION OF THE CONSERVATION AND DEMAND MANAGEMENT PLAN

With $313,392 dedicated to 2006/07 Conservation and Demand Management programming, the net TRC value of the portfolio is $456,683 and resulted in a benefit to cost ratio of 3.71. The Evaluation of the Conservation and Demand Management Plan is set out in Appendix A and Appendix C to this report.

3. DISCUSSION OF PROGRAMS

3.1 LOW INCOME ENERGY CONSERVATION PROGRAM

The low-income conservation program is a continuation of "Conserving Homes," which Brantford Power piloted in 2005 in cooperation with the Ministry of Energy and the charitable organization "Share the Warmth" (STW). Participants in Brantford with incomes, which are at or below Statistics Canada's pre-tax, post-transfer Low-income Cut-off (LICO) are qualified for the program and includes homeowners and tenant-occupied premises where

occupants directly pay their electricity bills. With program intake through STW's local non-profit partners, program participants receive a detailed home energy audit, installed basic conservation measures, conservation information, and a follow-up visit. The first visit is also used to screen participants for deeper conservation measures, which may include an Energy Star refrigerator and/or room air conditioner, as well as draft proofing.

The Low Income Energy Conservation Program results in total expenditures of $43,772, which include costs for program administration, home energy audits and participant education in energy conservation practices. In keeping with the recent Ontario Power Authority Conservation Bureau's directive to reduce energy consumption by 100 MW through low-income energy conservation programming, Brantford Power is of the view that the Low Income program is an essential component of its 2006 Conservation and Demand Management Portfolio.

The specific technologies comprising the Conserving Homes Low Income Program are described below.

1a. 15w CFL Replacement Technology
1b. 23w CFL Replacement Technology
1c. Clothes Racking Technology
1d. Pipe Wrap Technology
1e. Water Heater Wrap Technology
1f. Refrigerator Replacements with EnergyStar Refrigerators

This program resulted in a positive net TRC of $18,037 and a benefit to cost ratio of 1.79.

3.2 RESIDENTIAL LOAD MANAGEMENT

Prior to market opening, Brantford Power operated a load management system that could shed load from Brantford Power owned load control units on 3000 electric water heaters with a connected load of approximately 9 MW and a demand load of approximately 4 MW.

The load control program was idled with market opening. As a result, current staff did not have experience with the program and system testing. As well, upgrades to software and hardware were required to reactivate the system. These activities were completed and the system was tested in 2005.

Conservation and demand management expenditures in 2006 in the amount of $58,755 include software maintenance and staff training costs incurred in controlling loads in 2006. There was also an additional incentive of $1.50 per month per participant to retain existing participants. In 2006, the load management system was in operation for 192 hours during the On Peak period. The average On Peak kW saved was 1360 kW during the operation hours. 262,000 kWh of energy were shifted from the On Peak period to the Mid-Peak period during this time.

The proposed Residential Load Management Program yields a positive net present value total resource cost result of $201,426, with a benefit to cost ratio of 10.98.

3.3 CUSTOMER OUTREACH AND MASS MARKET

Brantford Power plans to continue providing information to customers through bill inserts, website, and advertising. Communication materials are being developed in cooperation with the Niagara Erie Public Power Alliance (NEPPA).

Total program costs were $14,937. As no incremental demand or energy savings are projected as a result of this program, no benefits have been projected.

3.4 CUSTOMER OUTREACH. CFL SWAP PROGRAM

With a target goal of replacing 8000 60-watt incandescent light bulbs with 13 watt compact fluorescent ones, the CFL Swap Program is geared to the residential class and includes materials and some program administration costs. Total expenses were $26,947.

The Customer Outreach CFL Swap Program yields a positive net present value total resource cost result of $166,047 and a benefit to cost ratio of 11.78.

3.5 CUSTOMER OUTREACH. KEY ACCOUNTS SEMINAR SERIES

Building on the success of the 2005 Key Accounts Seminar series, Brantford Power held another seminar series offered to commercial and industrial customers. The series is delivered in collaboration with existing business associations, such as the Brantford Chamber of Commerce, the Brantford Business Improvement Area and the City of Brantford Economic Development Department.

Brantford Power Inc. hosted three one-day sessions for General Service customers. On November 7, 2006, 20 participants attended. On November 8, there were 16 participants and on November 9, there were 15 participants. The "Energy Saving Opportunities Workshops" were lead by Garth J. White, and Stephen D.P. Dixon. The purpose of the seminars was to discuss strategies to reduce energy consumption, which could help make buildings and facilities more efficient, more competitive and more environmentally friendly. Suggested participants included energy managers, plant and process engineers and managers, maintenance supervisors, electrical and mechanical trades people, facility operators, "shop floor" personnel, contractors and consultants.

The workshops featured a number of hands-on physical demonstrations including energy basics, motors, lighting, power factor, electrical metering, dynamics of fan and pump systems and compressed air system.

The goal of the workshops was to educate participants on how to carry out an energy self-audit or self-assessment of any industrial, commercial or institutional facility. The emphasis was on spotting low and no-cost ways to cut energy consumption and related costs in an organization.

With expenditures of $13,733 for the Key Accounts Seminar Series, there were no kWh or kW savings identified. As a result, TRC benefits do not apply to this program.

3.6 LED TRAFFIC SIGNAL REPLACEMENTS

In cooperation with the City of Brantford, the LED Traffic Lighting conversion program with a target of 40 intersections is a continuation of the program initiated in 2005. Brantford Power paid the material cost only of converting existing incandescent traffic lights to LED type, with labour costs being covered by the City of Brantford.

With expenditures of $79,957 in 2006/07 for this program, there was a net TRC benefit of $101,342 and a benefit to cost ratio of 2.27.

4. LESSONS LEARNED

The 2006/07 Conservation and Demand Management program provided the opportunity for staff to gain experience in the design and delivery of conservation and demand management programs, as well as develop methodologies for tracking, monitoring and evaluating those programs within the Total Resources Cost test framework.

With respect to specific programs in the 2006/07 Conservation and Demand Management portfolio, the following lessons were learned:

4.1 **"Conserving Homes", the Low Income Consumer Retrofit Pilot Program**, while challenging in terms of program design and customer outreach, it was an important component of the 2006/07 Conservation and Demand Management portfolio, providing needed services to the particular group of low income consumers. Through partnership, Share the Warmth brought its expertise in the area of low-income energy consumers to the design and delivery of the program. As one of the fundamental objectives of the Conserving Homes program was to assist low income households in reducing their electricity burden, in-service education and training with program recipients conducted through the energy assessments and follow-ups was as critical to the success of the program as installing electricity efficient measures and appliances. Otherwise, with changes in distribution, transmission and commodity prices reflected on the customers' bills, it can be challenging for customers to identify the savings realized through energy conservation measures.

4.2 The **Residential Water Heater Load Control Program**, which was an existing Brantford Power program idled at market opening, focused on shifting demand from the On Peak period to the Mid-Peak period of the day. The load management system was in operation for up to 4 hours per day. Brantford Power received only one call related to the operation of the load management system. At the end of each load management event, the load management system was allowed to restore power to all load control units over a very short period. This resulted in a noticeable spike in overall system demand as power was restored. In the future, Brantford Power will

adjust the restoration algorithm to reduce the demand spike at the end of each load control event. Brantford Power continues to support residential water heater load control as an important contributor to CDM, and will be looking for funding to allow continued operation of the system.

4.3 Although **Customer Outreach** through **Communications** and bill stuffers did not yield quantifiable electricity reductions, Brantford Power suggests that customer communications are critical to changing consumer electricity consumption behaviour and are a vital part of a Conservation and Demand Management program.

4.4 The **Customer Outreach - CFL SWAP Program's** success can largely be attributed to the partnerships developed with other organizations within the community. The Kiwanis Club of Brantford, in partnership with the PJ Key Club, helped organize a fundraiser that facilitated the distribution of thousands of CFL bulbs. A similar partnership was formed with Scouts Canada (Brantford) who also helped distribute approximately 1500 CFLs. Another notable contribution was made by community co-operative and non-profit housing organizations associated with the City of Brantford. These organizations made a tremendous effort by directly contacting tenants and distributing the CFLs and CDM information door-to-door. Brantford Power is grateful to such organizations for their willingness to help with our conservation initiatives.

4.5 The **Customer Outreach - Key Accounts Seminar Series** 3 seminars were attended by a total of 54 participants, indicating a capacity within the commercial and industrial sectors to undertake conservation and demand management initiatives. Many of the participants in the seminars were eager to get involved in in-house conservation and demand activities as a means of reducing costs. Many participants were looking for ideas to retrofit facilities, indicating a willingness to make an investment of time and money with the expectation of achieving energy cost savings in the long run. Participants are looking for ways to influence financial decision makers within their organizations to authorize necessary expenditures.

4.6 The **LED Traffic Signal Conversion Program** proved to be an easily implemented Conservation and Demand Management program with a net TRC value of $101,342 and a benefit to cost ratio of 2.27. Again, a partnership with the City of Brantford helped contribute to the success of the program as the City pitched in by managing the purchase of the LED conversion kits and covering the cost of labour.

5. CONCLUSION

Brantford Power is pleased to report that the programs outlined in our 2006-2007 Conservation and Demand Management Plan have been delivered. Our investment in CDM resulted in a positive net TRC benefit. In the previous year, we noted that the groundbreaking, low–income, conservation program "Conserving Homes," was very well received by customers. This year the program actually resulted in a positive TRC. In addition to this, partnerships formed during the LED traffic light replacement and CFL

Swap programs with other organizations in the community also helped contribute to the CDM program's success. We learned from our 2006-2007 programs, and Brantford Power remains committed to delivering Conservation and Demand Management to our customers.

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 ($):	**$ 635,868**	**$ 456,683**	**$ 356,840**	**$ -**	**$ 101,342**	**$ -**	**$ -**	**$ -**		**$ -**	**$ -**
Benefit to cost ratio:	**1.55**	3.71	5.09	0.00	2.27	0.00	0.00	0.00		0.00	0.00
Number of participants or units delivered:	10,581	9,402	9,332		70						
Lifecycle (kWh) Savings:	43,347,994	9,601,834	6,084,716	0	3,517,118	0	0	0		0	0
Report Year Total kWh saved (kWh):	2,798,831	1,640,071	1,249,280	0	390,791	0	0	0		0	0
Total peak demand saved (kW):	1,570	1,410	1,365	0	45	0	0	0		0	0
Total kWh saved as a percentage of total kWh delivered (%):	*0.13%*	0.15%	0.11%		0.04%						
Peak kW saved as a percentage of LDC peak kW load (%):		0.72%	0.69%		0.02%						
[1] *Report Year Gross C&DM expenditures ($):*	$ 1,579,602	$ 239,602	$ 158,145	$ -	$ 79,957	$ -	$ -	$ -	$ -	$ -	$ -
[2] *Expenditures per KWh saved ($/kWh):*	$ 0.04	$ 0.02	$ 0.03	$ -	$ 0.02	$ -	$ -	$ -		$ -	$ -
[3] *Expenditures per KW saved ($/kW):*	$ 1,006.31	$ 169.93	$ 115.83	$ -	$ 1,792.32	$ -	$ -	$ -		$ -	$ -

Utility discount rate (%):	7.79

[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:** Low Income Energy Conservation Program

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

Our proposed low-income conservation program is a continuation of "Conserving Homes," which Brantford Power piloted in 2005 in cooperation with the Ministry of Energy and the charitable organization "Share the Warmth" (STW). The program targets residential customers below the federal Low Income Cut-Off. With program intake through STW's local non-profit partners, program participants receive a detailed home energy audit, installed basic conservation measures, conservation information, and a follow-up visit. The first visit is also used to screen participants for deeper conservation measures, which may include Energy Star refrigerator and/or room air conditioner, as well as draft proofing.

Customer Class Targeted: Residential

Measure(s):

	Indoor Lighting 23 W CFL	Indoor Lighting 15W CFL	Clothes Racks
Base case technology:	100W Incandescent	60W Incandescent	Average existing stock
Efficient technology:	CFL Screw-In 25W	CFL Screw-In 15W	Clothes Line Kit
Number of participants or units delivered for reporting year:	53	1,102	74
Measure life (years):	4	4	10
Number of Participants or units delivered life to date	106	2,109	139

	Pipe Wrap	Water Heater Tank Wraps	Air Conditioners
Base case technology:	Average existing stock	Average existing stock	Current standard for room air conditioner
Efficient technology:	Pipe Insulation (6-10')	Tank Wrap	Energy Star Room Air Conditioner
Number of participants or units delivered for reporting year:	49	14	20
Measure life (years):	6	6	12
Number of Participants or units delivered life to date	88	28	20

	Fridges	Measure 2	Measure 3
Base case technology:	Current standard for refridgerator		
Efficient technology:	Energy Star Refrigerators		
Number of participants or units delivered for reporting year:	20		
Measure life (years):	19		
Number of Participants or units delivered life to date	20		

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*	$ 40,988.65	$ 75,225.64
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	-$ 14,185.77	-$ 79,634.90
Incremental Measure Costs (Equipment Costs)	-$ 8,765.95	-$ 14,921.90
Total TRC costs:	-$ 22,951.72	-$ 94,556.80
Net TRC (in year CDN $):	$ 18,036.93	-$ 19,331.16
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	1.79	0.80

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

Conservation Programs:

Demand savings (kW):	*Summer*	4	6
	Winter	28	52

	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):	860,240	151,961	1,443,427	274,533
Other resources saved :				
Natural Gas (m3):				
Other (specify):				

Demand Management Programs:

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

Demand Response Programs:

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

Power Factor Correction Programs:

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

Line Loss Reduction Programs:

	lifecycle	in year	
Peak load savings (kW):			
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
Utility direct costs ($):	*Incremental capital:*	$ -	$ -
	Incremental O&M:	$ 14,185.77	$ 128,553.53
	Incentive:	$ 29,586.70	$ 35,742.65
	Total:	$ 43,772.47	$ 164,296.18
Utility indirect costs ($):	*Incremental capital:*	$ -	$ -
	Incremental O&M:	$ -	$ -
	Total:	$ -	$ -

E. Assumptions & Comments:

OEB published assumptions and measures tables applied for all TRC Calculations; 15W CFL measure assumed as a reasonable proxy for 13W CFL's; 25W CFL measure assumed for 23W CFL's

[1] Benefits should be estimated if costs have been incurred and 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:** Residential Load Management Program to Control Water Heater Tanks

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

A demand reduction program, the Brantford Load Management System is an existing system. Brantford Power is able to control approximately 3,000 electric water heaters, a connected load of approximately 9 mW and 4mW load under control. Costs of the program include a monthly customer incentive of $1.50, program administration, training and hardware and software maintenance.

Customer Class Targeted: Residential

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:			
Efficient technology:			
Number of participants or units delivered for reporting year:			
Measure life (years):			
Number of Participants or units delivered life to date			

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*	*$ 221,605.11*	$ 221,605.11
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	-$ *20,178.97*	-$ 20,178.97
Incremental Measure Costs (Equipment Costs)	$ -	$ -
Total TRC costs:	-$ 20,178.97	-5474.84
Net TRC (in year CDN $):	$ 201,426.14	$ 216,130.27
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	10.98	1.53

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

Cumulative Results:

Conservation Programs:

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

Demand Management Programs:

Controlled load (kW)	1,361	
Energy shifted On-peak to Mid-peak (kWh):	262,119	
Energy shifted On-peak to Off-peak (kWh):	0	
Energy shifted Mid-peak to Off-peak (kWh):	0	

Demand Response Programs:

Dispatchable load (kW):		

Peak hours dispatched in year (hours):		
Power Factor Correction Programs:		
Amount of KVar installed (KVar):		
Distribution system power factor at beginning of year (%):		
Distribution system power factor at end of year (%):		

Line Loss Reduction Programs:

	lifecycle	in year	
Peak load savings (kW):			
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
Utility direct costs ($):	*Incremental capital:*	$ -	$ 86,096.92
	Incremental O&M:	$ 5,474.84	$ 5,474.84
	Incentive:	$ 53,280.00	$ 53,280.00
	Total:	$ 58,754.84	$ 144,851.76
Utility indirect costs ($):	*Incremental capital:*	$ -	$ -
	Incremental O&M:	$ -	$ -
	Total:	$ -	$ -

E. Assumptions & Comments:

[1] Benefits should be estimated if costs have been incurred and 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:** Customer Outreach Communications to Residential Customers

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

Brantford Power plans to continue providing information to customers through bill inserts, website, and advertising. Communication materials are being developed in cooperation with the Niagara Erie Public Power Alliance (NEPPA).

Customer Class Targeted: Residential

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:			
Efficient technology:			
Number of participants or units delivered for reporting year:			
Measure life (years):			
Number of Participants or units delivered life to date			

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*		
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):		
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:		
Net TRC (in year CDN $):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		

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

Cumulative Results:

Conservation Programs:

Demand savings (kW):	*Summer*			
	Winter			
	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
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 beginning of year (%):		
Distribution system power factor at end of year (%):		

Line Loss Reduction Programs:

	lifecycle	in year	
Peak load savings (kW):			
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
Utility direct costs ($):	*Incremental capital:*	$ -	$ -
	Incremental O&M:	$ 14,937.41	$ 14,937.41
	Incentive:	$ -	$ -
	Total:	$ 14,937.41	$ 14,937.41
Utility indirect costs ($):	*Incremental capital:*	$ -	$ -
	Incremental O&M:	$ -	$ -
	Total:	$ -	$ -

E. Assumptions & Comments:

[1] Benefits should be estimated if costs have been incurred and 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:** Customer Outreach CFL Swap Program

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

With a target goal of replacing 5000 60-watt incandescent light bulbs with 15 watt compact fluorescent ones, the CFL Swap Program is geared to the residential class and includes materials and some program administration costs.

Customer Class Targeted: Residential

Measure(s):

	Indoor Lighting - CFL 13 W	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	60W Incandescent		
Efficient technology:	CFL Screw-In 15W		
Number of participants or units delivered for reporting year:	8000		
Measure life (years):	4		
Number of Participants or units delivered life to date	8000		

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*	$ 181,447.13	$ 181,447.13
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	-$ 1,000.00	-$ 1,000.00
Incremental Measure Costs (Equipment Costs)	-$ 14,400.00	-$ 14,400.00
Total TRC costs:	-$ 15,400.00	-$ 15,400.00
Net TRC (in year CDN $):	$ 166,047.13	$ 166,047.13
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	11.78	11.78

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

Cumulative Results:

Conservation Programs:

Demand savings (kW):	*Summer*	0	0
	Winter	180	180

	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):	4,176,000	835,200	4,176,000	835,200
Other resources saved :				
Natural Gas (m3):				
Other (specify):				

Demand Management Programs:

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

Demand Response Programs:

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

Power Factor Correction Programs:

Amount of KVar installed (KVar):		

Distribution system power factor at beginning of year (%):		
Distribution system power factor at end of year (%):		

Line Loss Reduction Programs:

	lifecycle	in year	
Peak load savings (kW):			
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
Utility direct costs ($):	*Incremental capital:*	$ -	$ -
	Incremental O&M:	$ 1,000.00	$ 1,000.00
	Incentive:	$ 25,947.33	$ 25,947.33
	Total:	$ 26,947.33	$ 26,947.33
Utility indirect costs ($):	*Incremental capital:*	$ -	$ -
	Incremental O&M:	$ -	$ -
	Total:	$ -	$ -

E. Assumptions & Comments:

[1] Benefits should be estimated if costs have been incurred and 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:** Customer Outreach Key Accounts Seminar Series

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

Building on the success of the 2005 Key Accounts Seminar series, Brantford Power will continue its breakfast seminar series offered to commercial and industrial customers. Targeting two seminars in 2006, the series is delivered in collaboration with existing business associations, such as the Brantford Chamber of Commerce, the Brantford Business Improvement Area and the city of Brantford Economic Development Department.

Customer Class Targeted: General Service <50 kWh; General Service >50kWh

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:			
Efficient technology:			
Number of participants or units delivered for reporting year:			
Measure life (years):			
Number of Participants or units delivered life to date			

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*		
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):		
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:		
Net TRC (in year CDN $):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		

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

Cumulative Results:

Conservation Programs:

Demand savings (kW):	*Summer*			
	Winter			
	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
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 beginning of year (%):		
Distribution system power factor at end of year (%):		

Line Loss Reduction Programs:

	lifecycle	in year	
Peak load savings (kW):			
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
Utility direct costs ($):	*Incremental capital:*	$ -	$ -
	Incremental O&M:	$ 13,732.62	$ 13,732.62
	Incentive:	$ -	$ -
	Total:	$ 13,732.62	$ 13,732.62
Utility indirect costs ($):	*Incremental capital:*	$ -	$ -
	Incremental O&M:	$ -	$ -
	Total:	$ -	$ -

E. Assumptions & Comments:

[1] Benefits should be estimated if costs have been incurred and 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:** LED Traffic Signal Replacement

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

In cooperation with the City of Brantford, the LED Traffic Lighting conversion program with a target of 21 intersections is a continuation of the program initiated in 2005. Brantford Power will pay the material cost only of converting existing incandescent traffic lights to LED type, with labour costs being covered by the City of Brantford.

Customer Class Targeted: General Service <50kWh

Measure(s):

	LED Traffic Lights	Standalone Flashing Lights	Measure 3 (if applicable)
Base case technology:	Average Existing Stock	Average Existing Stock	
Efficient technology:	LED Traffic Lights	Standalone Flashing Lights	
Number of participants or units delivered for reporting year:	40	30	
Measure life (years):	8	8	
Number of Participants or units delivered life to date	49	30	

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*	$ 181,299.27	$ 232,895.01
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	-$ *79,956.88*	-$ 105,288.28
Incremental Measure Costs (Equipment Costs)	$ -	$ -
Total TRC costs:	-$ 79,956.88	-$ 105,288.28
Net TRC (in year CDN $):	$ 101,342.39	$ 127,606.73
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	2.27	2.21

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

Cumulative Results:

Conservation Programs:

Demand savings (kW):	*Summer*	45	58
	Winter	45	58

	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):	3,517,118	390,791	4,436,702	505,739
Other resources saved :				
Natural Gas (m3):				
Other (specify):				

Demand Management Programs:

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

Demand Response Programs:

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

Power Factor Correction Programs:

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

Distribution system power factor at end of year (%):		

Line Loss Reduction Programs:

	lifecycle	in year	
Peak load savings (kW):			
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
Utility direct costs ($):	*Incremental capital:*	$ -	$ -
	Incremental O&M:	$ 79,956.88	$ 105,288.28
	Incentive:	$ -	$ -
	Total:	$ 79,956.88	$ 105,288.28
Utility indirect costs ($):	*Incremental capital:*	$ -	$ -
	Incremental O&M:	$ -	$ -
	Total:	$ -	$ -

E. Assumptions & Comments:

[1] Benefits should be estimated if costs have been incurred and 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 C - Program and Portfolio Totals

Report Year: **2006**

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 ($)
Low Income Energy Cons Program	$ 40,989	$ 22,952	$ 18,037	1.79	151,961	860,240	4	$ 43,772
Res Load Mgmt Prgm ('WH Tanks)	$ 221,605	$ 20,179	$ 201,426	10.98	262,119	1,048,476	1,361	$ 58,755
Cust Outreach, Communications	$ -	$ 14,937	-$ 14,937	0.00	0	0	0	$ 14,937
Cust Outreach, CFL Swap Prgm	$ 181,447	$ 15,400	$ 166,047	11.78	835,200	4,176,000	0	$ 26,947
Cust Outreach, Key Accts Seminar	$ -	$ 13,733	-$ 13,733	0.00	0	0	0	$ 13,733
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**	$ 444,041	$ 87,201	$ 356,840	5.09	1,249,280	6,084,716	1,365	$ 158,145
Residential Indirect Costs not attributable to any specific program	→							
Total Residential TRC Costs		$ 87,201						
****Totals TRC - Residential**	**$ 444,041**	**$ 87,201**	**$ 356,840**	**5.09**				

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 ($)
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 - Commercial**	$ -	$ -	$ -	0.00	0	0	0	$ -

Commercial Indirect Costs not attributable to any specific program →				
Total TRC Costs		$ -		
****Totals TRC - Commercial**	**$ -**	**$ -**	**$ -**	**0.00**

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 ($)
LED Traffic Signal Replacement	$ 181,299	$ 79,957	$ 101,342	2.27	390,791	3,517,118	45	$ 79,957
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**	$ 181,299	$ 79,957	$ 101,342	2.27	390,791	3,517,118	45	$ 79,957
Institutional Indirect Costs not attributable to any specific program →								
Total TRC Costs		$ 79,957						
****Totals TRC - Institutional**	**$ 181,299**	**$ 79,957**	**$ 101,342**	**2.27**				

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 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 - 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	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 ($)
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

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		$ -						
****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 (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**	$ 625,340	$ 167,158	$ 458,183	3.74	$ 1,640,071	$ 9,601,834	$ 1,410	$ 239,602
*Any **other** Indirect Costs not attributable to any specific program* →		$ 1,500						
TOTAL ALL LDC COSTS		$ 168,658						
****LDC' PORTFOLIO TRC**	$ 625,340	$ 168,658	$ 456,683	3.71				

* 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.