Burlington Hydro Inc.
Conservation and Demand Annual Report

Overview

The following report is consistent with the directions provided by the OEB in the "Guideline for Annual Reporting of CDM Initiatives" as posted on the OEB website December 21, 2005.

This report includes the following sections:

- Section 1 - Introduction,
- Section 2 – Evaluation of the CDM Plan,
- Section 3 – Discussion of the Program,
- Section 4 – Lessons Learned, and
- Section 5 - Conclusion.

In addition, the following appendices are attached:

- Appendix A – Evaluation of the CDM Plan Chart;
- Appendix B – Discussion of the Program Sheets,
- Appendix C – Total Resource Cost Test Assessment of the '2005 Lighten your Electricity Bill' Program

Section 1
Introduction

Burlington Hydro Inc. ("BHI") filed a CDM plan with the OEB in November 2004 in accordance with the directions provided by the Ministry of Energy with respect to the third installment of the incremental market adjusted revenue requirement ("MARR"). This plan was approved by the OEB in its Final Order dated February 17, 2005.

The total spending included in the plan is $2,157,862.

The components included in the plan are as follows:

- distribution system improvements
- general service smart metering;
- smart meter pilots;
- BHI lighting retrofit;
- municipal new construction;
- municipal building retrofit;
- appliance replacement;
- public education and outreach;
- home developers program;
- education and outreach – general service;
- CCIW showcase;
- voluntary demand management;
- staff development program; and
- planning, administration and monitoring.

Eleven of the fourteen projects have been initiated. Details of each of the projects are included in Section 3.

Section 2
Evaluation of the CDM Plan

This summary is provided at Appendix A.

Section 3
Discussion of Programs

BHI has only two active projects that are appropriate for TRC calculations at this time, the Lighten Your Electricity Bill coupon program and the BHI Lighting Retrofit. There are additional projects that will be subject to TRC analysis once they have moved from the planning stage to screening and execution. BHI has a number of projects that are

focused primarily on consumer education and awareness that are of benefit to the utility and the province, that are not subject to TRC testing in accordance with the TRC Guide.

The summary sheets outlining each of the BHI programs are provided at Appendix B. In addition, the project related to public education and outreach included a coupon program entitled "Lighten Your Electricity Bill". The package that Enerconnect provided to BHI including the TRC calculations is included at Appendix C of this report.

In each of the summary sheets, BHI has provided as much written detail as possible to provide overview of the project and the current status.

Section 4
Lessons Learned

BHI has gone through a tremendous learning exercise related to CDM. Not only has BHI begun to develop some internal expertise, but also there has been considerable amount of effort made in developing relationships with the City of Burlington, Burlington Economic Development Corporation, the Region of Halton, Environment Canada (through the CCIW program), Ministry of Energy, other LDCs, various vendors/promoters of energy efficient programs/products, and most important our customers.

BHI is encouraging the establishment of programs within our region and is working to determine how to best provide consistent programs to our mutual customers. As we, and other utilities, continue to learn, it is anticipated that there will be more effective delivery of programs to customers. This will be assisted by the development of a more dominant role of the OPA. BHI is very supportive of programs that are centrally delivered over a larger number of utilities, be that through the OPA, PowerWise, or other partners.

BHI will continue to review and monitor the success of the programs that have been initiated, and it is anticipated that there will be shifting of funds between projects in 2006. An example of this is the kick-off of a new lighting retrofit program for our general service customers. This was initiated due to both the success of our own lighting retrofit program, and the number of customer calls that we had received by our customers that

would be interested in this type of program. Based on that request, we have responded with the development of a lighting retrofit program that will be included in the 2006 reporting. As mentioned in the detailed sheets, should there be cumulative fund transfers in excess of 20% of the approved budget, BHI will apply to the OEB for approval of the modifications.

Section 5
Conclusion

BHI has learned that there is customer support for conservation programs. BHI will continue to support these programs and will monitor the industry for updates and new initiatives that are in the best interest of our customers and the province in general.

Appendix A - Evaluation of the CDM Plan

	Total	Residential	Commercial	Institutional	Industrial	Agricultural	LDC System	Other 1	Other 2	Other 3	Other 4
Net TRC value ($):	*$171,906*	$163,820	$8,086								
Benefit to cost ratio:		3.48	1.13								
Number of participants or units delivered:	*4,985*	4,984	1								
Total KWh to be saved over the lifecycle of the plan (kWh):	*6,349,999*	5,098,092	1,251,907								
Total in year kWh saved (kWh):	*711,952*	485,473	226,479								
Total peak demand saved (kW):	*65.15*	33.23	31.92								
Total kWh saved as a percentage of total kWh delivered (%):	*0.37%*	0.29%	0.07%								
Peak kW saved as a percentage of LDC peak kW load (%):	*0.02%*	0.01%	0.01%								
*Gross in year C&DM expenditures ($)***:*	*$441,960*	$168,809	$133,457				$83,338	$56,356			
Expenditures per KWh saved ($/kWh):*	*$0.14*	$0.08	$0.27								
*Expenditures per KW saved ($/kW)**:*	$1,491.07	$1,114.11	$1,883.49								

Utility discount rate (%):	8.57%

*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.

**Gross in year expenditures include only utility direct program costs.

Appendix B - Discussion of the Program

(Project #1 - Distribution System Improvements)

A. **Name of the Program:** Distribution System Improvements

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

Burlington Hydro is in the process of conducting detailed modeling of its distribution system to identify opportunities for system optimization, improved phase balancing, installation of capacitor banks and voltage conversions. An initial review has identified several older municipal substations which distribute electricity at 4.16 kV, which is less energy efficient that the current practice of 27.6 kV. Upgrading these substations would reduce energy losses and increase system efficiency.

Measure(s):

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

B. **TRC Results:**

TRC Benefits ($):		*tbd*
TRC Costs ($):		
	Utility program cost (less incentives):	
	Participant cost:	
	Total TRC costs:	
Net TRC (in year CDN $):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		

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):		
	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:*	$83,338.00
	Incremental O&M:	$-
	Incentive:	$-
	Total:	$83,338.00
Utility indirect costs ($):	*Incremental capital:*	$-
	Incremental O&M:	$12,148.00
	Total:	$12,148.00
Participant costs ($):	*Incremental equipment:*	*na*
	Incremental O&M:	*na*
	Total:	*na*

E. Comments:

As of the end of 2005, a study has been completed that includes the modeling of the BHI system, and identification of a number of distribution system improvements that may be appropriate for CDM spending. BHI is currently reviewing these recommendations to determine which projects will be selected and to determine the implementation plan to be followed for 2006 and 2007.

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

Appendix B - Discussion of the Program

(Project #2 - General Services Smart Metering)

A. **Name of the Program:** General Services Smart Metering

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

Burlington Hydro is implementing a program to upgrade meters that are coming due for recalibration to smart meters. Measurement Canada requires that meters used by general service customers be recalibrated every six years to ensure accuracy of recording use. It is prudent to replace non-interval meters coming up for recalibration in the near term with interval meters, since much of the cost of meter replacement is associated with labour, making the incremental cost of upgrading these meters to intervals meters substantially lower. Depending on budget available, this program will also involve replacing the non-interval meters of ten customers with the largest demand greater than 200kW with interval meters.

Measure(s):

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

B. **TRC Results:**

TRC Benefits ($):		*na*
TRC Costs ($):		
	Utility program cost (less incentives):	
	Participant cost:	
	Total TRC costs:	
Net TRC (in year CDN $):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		

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):		
	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):		
Letters to customers for recallibration:		28
Letters to customers who may be targeted:		56

D. **Program Costs*:**

Utility direct costs ($):	*Incremental capital:*	$-
	Incremental O&M:	$-
	Incentive:	$-
	Total:	$-
Utility indirect costs ($):	*Incremental capital:*	$-
	Incremental O&M:	$1,795.00
	Total:	$1,795.00
Participant costs ($):	*Incremental equipment:*	$-
	Incremental O&M:	$-
	Total:	$-

E. Comments:

BHI has delayed implementation of the project pending more clarification on the specification of smart meters. BHI has done preliminary analysis on meters to be targeted in this program. In addition, BHI has identified specific customers to be targeted for recallibration early in 2006 and has completed letters to these customers to prepare for this project. The meter replacements will proceed in 2006.

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

Appendix B - Discussion of the Program

(Project #3 - Smart Meter Pilots)

A. **Name of the Program:** Smart Meter Pilots

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

Smart meter pilot, residential - Burlington Hydro intends to conduct one or more pilot studies of smart metering technology.

Smart meter pilot, submetering – Burlington Hydro has completed the installation of a submetering system in a bulk metered condominium development.

Measure(s):

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

B. **TRC Results:**

TRC Benefits ($):		*na*
TRC Costs ($):		
	Utility program cost (less incentives):	
	Participant cost:	
	Total TRC costs:	
Net TRC (in year CDN $):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		

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):		
	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):		
Submetering - new metering points		101
Submetering - new individual bills		84

D. **Program Costs*:**

Utility direct costs ($):	*Incremental capital:*	$95,272.00
	Incremental O&M:	$5,128.00
	Incentive:	$-
	Total:	$100,400.00
Utility indirect costs ($):	*Incremental capital:*	$-
	Incremental O&M:	$6,225.00
	Total:	$-
Participant costs ($):	*Incremental equipment:*	$-
	Incremental O&M:	$-
	Total:	$-

E. Comments:

Smart meter pilot, residential - Burlington Hydro has continued to monitor developments in the industry with respect to smart metering technology. BHI has joined the OUSM working group in order to gain knowlege of other pilot studies that are on going in Ontario and learn from those experiences. BHI has delayed launch of our own residential pilot due to the ongoing uncertainty in the marketplace, but expects to proceed with some form of pilot early in 2006.

Smart meter pilot, submetering – Burlington Hydro has completed the installation of a submetering system in a bulk metered condominium development. BHI worked with the condo management group to understand their expectations and allow the dresidents an opportunity to discuss the project. After installation of the submetering technology, BHI monitored the metering for a two months to ensure accurate metering. All 84 customers are now on individual billing. The condo management group has been able to access their own consumption through the internet and we continue to work together to improve the internet screens that are currently available to general service customers to meet the needs of residential customers. BHI has had to make a number of changes to validation and verification checks and processes used in large customers in order to deal with the different use pattern of the residential customer. BHI and the customer have both learned a great deal, and continue to learn, through this collaberative effort. This group of individually metered customers will also be one of the test groups when the TOU RPP pricing plan is ready to implement.

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

Appendix B - Discussion of the Program

(Project #4 - BHI Lighting Retrofit)

A. **Name of the Program:** BHI Lighting Retrofit

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

BHI has completed a lighting retrofit of the office area, training centre and garage area of its own facilities.

Measure(s):

	Measure 1	Measure 2	Measure 3
Base case technology:	4 Lamp T12 (156W)	3 Lamp T12 (128W)	2 Lamp T12 (78W)
Efficient technology:	2 lamp T8 (58W)	2 lamp T8 (58W)	2 lamp T8 (51W)
Number of participants or units delive	121	181	146
Measure life (years):	7.69	7.69	7.69

	Measure 4	Measure 5	Measure 6
Base case technology:	2 Lamp T12 (78W)	1 Lamp T12 (47W)	Incandescent (100W)
Efficient technology:	2 lamp T8 (51W)	1 lamp T8 (31W)	Incandescent (23W)
Number of participants or units delive	48	6	23
Measure life (years):	2.28	7.69	5.5

	Measure 7	Measure 8	Measure 9
Base case technology:	Incandescent (60W)	Std.Metal Halide (460W)	Std.Metal Halide (295W)
Efficient technology:	Incandescent (16W)	6 lamp fluorescent (226W)	6 lamp fluorescent (174W)
Number of participants or units delive	17	52	28
Measure life (years):	5.5	2.85	2.85

B. **TRC Results:**

TRC Benefits ($):	$70,532.27
TRC Costs ($):	
Utility program cost (less incentives):	$2,325.00
Participant cost:	$60,121.05
Total TRC costs:	$62,446.05
Net TRC (in year CDN $):	$8,086.22
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	1.13

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

Conservation Programs:

Demand savings (kW):	*Summer*	31.921
	Winter	
	lifecycle	*in year*
Energy saved (kWh):	1,251,907.0	226,479.7
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:	$-
	Incentive:	$-
	Total:	$-
Utility indirect costs ($):	*Incremental capital:*	$-

	Incremental O&M:	$2,325.00
	Total:	$2,325.00
Participant costs ($):	*Incremental equipment:*	$60,121.05
	Incremental O&M:	$-
	Total:	$60,121.05

E. Comments:

BHI has had success in the completion of this project. Not only have there been tangible results as far as reduced consumption and expenses, but the lighting quality is significantly improved. This project has also been the catalyst for the establishment of a new program, to be rolled out in 2006, that will assist our customers in completing their own lighting retrofit projects. This project has allowed BHI to learn, firsthand, the process of reviewing existing lighting, measurement, the installation process, and remeasuring. This ensures that we are knowlegeable in providing this information to our customers.

The TRC calculation for the lighting retrofit program is based on the inputs in the TRC Guide and are very conservative, especially for certain lighting measures lives. BHI reserves the right to provide and justify improved data inputs to the calculation of the TRC for this program in the future.

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

Appendix B - Discussion of the Program

(Project #8 - Public Eduction and Outreach)

A. **Name of the Program:** Public Education and Outreach

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

Burlington Hydro has launched a collaborative public education and outreach program with the City of Burlington. As part of this program, bill inserts with energy saving tips were mailed to BHI customers in July/August 2005. As well, the Lighten Your Electricity Coupon Program was launched as part of this initiative.

Measure(s):

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

B. **TRC Results:**

TRC Benefits ($):		*$229,907.00*
TRC Costs ($):		
	Utility program cost (less incentives):	$39,486.00
	Participant cost:	$26,601.00
	Total TRC costs:	$66,087.00
Net TRC (in year CDN $):		$163,820.00
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		$3.48

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

Conservation Programs:

Demand savings (kW):	*Summer*		33.23
	Winter		
		lifecycle	*in year*
Energy saved (kWh):		*5,098,092*	485,473
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):		
Bill inserts distributed (approximately):		59,000

D. **Program Costs*:**

Utility direct costs ($):	*Incremental capital:*	$-
	Incremental O&M:	$20,165.00
	Incentive:	$16,857.00
	Total:	$37,022.00
Utility indirect costs ($):	*Incremental capital:*	$-
	Incremental O&M:	$2,464.00
	Total:	$2,464.00
Participant costs ($):	*Incremental equipment:*	$26,601.00
	Incremental O&M:	$-
	Total:	$26,601.00

E. Comments:

These costs are related to the Enerconnect directed program related to consumer coupons that was completed in the Fall of 2005. This program provided customers with coupons for LED Christmas lights, CFLs, programmable thermostats, ceiling fans, and timers, through a partnership with Canadian Tire. All customers in the BHI distribution area recieved coupons as a mail insert, and in our area 3,175 coupons were redeemed. Ennerconnect, through its agreements with Energyshop.com and and SeeLine Group Inc. have provided TRC calculations in the attached report. Should BHI determine in the future that it is appropriate to apply for an SSM and/or LRAM, BHI will recalculate these figures to ensure all assumptions are appropriate for this utility. The differences between the SeeLine calculations and the summary on this sheet are related only to the inclusion of additional costs the BHI incurred related to this project.

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

Appendix B - Discussion of the Program

(Project #9 - Home Developers Program)

A. **Name of the Program:** Home Developers Program

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

This program provides an incentive up to $100/unit for home developers in Burlington to install energy efficient lighting in single family and multi-residential units (includes common areas). The program launched in January 2006.

Measure(s):

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

B. **TRC Results:**

TRC Benefits ($):		*tbd*
TRC Costs ($):		
	Utility program cost (less incentives):	
	Participant cost:	
	Total TRC costs:	
Net TRC (in year CDN $):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		

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):

	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:	$31,387.00
	Incentive:	$-
	Total:	$31,387.00
Utility indirect costs ($):	*Incremental capital:*	$-
	Incremental O&M:	$5,989.00
	Total:	$5,989.00
Participant costs ($):	*Incremental equipment:*	$-
	Incremental O&M:	$-
	Total:	$-

E. Comments:

BHI sees a great potential in partnering with the builder community in order to provide the residents in Burlington with some energy savings tools when they move into their new homes. BHI has spent a signifiant amount of time working with the City of Burlington on designing a program that we believe that the builders will find valuable to our mutual customers, as well as simple to administer and track. BHI has consulted with various builders to seek feedback on the setup on this program.

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

Appendix B - Discussion of the Program

(Project #10 - Eduction and Outreach - General Service)

A. **Name of the Program:** Education and Outreach - General Service

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

Burlington Hydro has launched an education and outreach program for its general service customers. To date this has involved a number of initiatives including: energy conservation tips in the Burlington Post local newspaper; participation in the mailout of IESO information brochure that had a focus on conservation initiatives for business; participation in May in a BEDC tradeshow sponsored by the Burlington Economic Development Corporation.

Measure(s):

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

B. **TRC Results:**

TRC Benefits ($):		*na*
TRC Costs ($):		
	Utility program cost (less incentives):	
	Participant cost:	
	Total TRC costs:	
Net TRC (in year CDN $):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		

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):		
	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):		
Number of IESO mailouts:		1,057
Tradebooth Handouts:		50

D. **Program Costs*:**

Utility direct costs ($):	*Incremental capital:*	$-
	Incremental O&M:	$4,755.00
	Incentive:	$-
	Total:	$4,755.00
Utility indirect costs ($):	*Incremental capital:*	$-
	Incremental O&M:	$3,198.00
	Total:	$3,198.00
Participant costs ($):	*Incremental equipment:*	$-
	Incremental O&M:	$-
	Total:	$-

E. Comments:

BHI is working with the City of Burlington, the Burlington Economic Development Corp., and other local organizations in order to share information on conservation initiatives that would be of interest to our General Service Customers. BHI published an overview of the CDM initiatives in the local paper. The Burlington Post has a circulation of approximately 49,000 customers. The IESO initiated program included a direct mailout to all general service customers. The trade show that was attended included a computer hook-up such that customers could see the information available regarding hourly use and price through internet capabilities. There were a number of customers that took advantage of this opportunity to see what was available to them at the current time.

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

Appendix B - Discussion of the Program

(Project #11 - CCIW Showcase)

A. **Name of the Program:** CCIW Showcase

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

This program is a partnership with Environment Canada, Canada Centre for Inland Waters (CCIW), City of Burlington and BHI to showcase CCIW's energy efficiency measures to BHI's general service customers.

Measure(s):

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

B. **TRC Results:**

TRC Benefits ($):		*na*
TRC Costs ($):		
	Utility program cost (less incentives):	
	Participant cost:	
	Total TRC costs:	
Net TRC (in year CDN $):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		

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):			
	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):			
Breakfast Invitations:		1,000	
Breakfast Attendees (approximately):		100	
Media Coverage:		2 papers plus television	

D. **Program Costs*:**

Utility direct costs ($):	*Incremental capital:*	$-
	Incremental O&M:	$11,581.00
	Incentive:	$-
	Total:	$11,581.00
Utility indirect costs ($):	*Incremental capital:*	$-
	Incremental O&M:	$1,656.00
	Total:	$1,656.00
Participant costs ($):	*Incremental equipment:*	$-
	Incremental O&M:	$-
	Total:	$-

E. Comments:

The facility at Canada Centre for Inland Waters (CCIW) has a number of excellent conservation programs in place, and BHI is working with CCIW in order to show other customers in Burlington what is available and how it can work for them. The initial partnership announcement in January 2005 included a tour of the CCIW facilities which included the solar panels, cogeneration facilities, the 'living wall' and so on. A breakfast seminar in April, hosted by the Burlington Economic Development Corporation (BEDC) and held at the CCIW facilities, described BHI's CDM plan, voluntary demand response program, and e-metered data. BHI extended invitations to the largest 1000 companies in Burlington to attend this breakfast. The installation of an interval meter to measure the output of the 10kW rooftop solar panels has been completed and early in 2006 BHI will complete this with a lobby display in CCIW of the savings. This savings, and also the matered savings created by the cogeneration facility will in turn will be available for viewing both at City Hall and via the internet.

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

Appendix B - Discussion of the Program

(Project #12 - Voluntary Demand Response)

A. **Name of the Program:** Voluntary Demand Response

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

Burlington Hydro is in the process of setting up a voluntary demand response program targeted to its general service customers (residential customers will be permitted to participate). When the spot market price reaches a prescribed threshold, or there is a regional smog day, participants will receive notification to initiate their demand response programs.

Measure(s):

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

B. **TRC Results:**

TRC Benefits ($):		*tbd*
TRC Costs ($):		
	Utility program cost (less incentives):	
	Participant cost:	
	Total TRC costs:	
Net TRC (in year CDN $):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		

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):		
	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):		
Customers set up in system:		100

D. **Program Costs*:**

Utility direct costs ($):	*Incremental capital:*	$48,000.00
	Incremental O&M:	$9,000.00
	Incentive:	$-
	Total:	$57,000.00
Utility indirect costs ($):	*Incremental capital:*	$-
	Incremental O&M:	$2,801.00
	Total:	$2,801.00
Participant costs ($):	*Incremental equipment:*	$-
	Incremental O&M:	$-
	Total:	$-

E. Comments:

Initial setup for this project has been completed. This has included additional computer software and programming in order to make this application work in conjunction with the SCADA system and other internal applications. BHI included a test sample of customers at the end of the 2005 heating season for testing purposes. BHI's largest 100 customers have been notified of this project and are all included to receive notification in the 2006 heating season. BHI will also review the systems to develop a reporting mechanism to determine the level of response during the 2006 year.

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

Appendix B - Discussion of the Program

(Project #13 - Staff Development Program)

A. **Name of the Program:** Staff Development Program

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

BHI is encouraging staff to participate in training that will proved additional knowledge of CDM activities.

Measure(s):

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

B. **TRC Results:**

TRC Benefits ($):		*na*
TRC Costs ($):		
	Utility program cost (less incentives):	
	Participant cost:	
	Total TRC costs:	
Net TRC (in year CDN $):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		

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):

	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:	$1,014.00
	Incentive:	$-
	Total:	$1,014.00
Utility indirect costs ($):	*Incremental capital:*	$-
	Incremental O&M:	$482.00
	Total:	$482.00
Participant costs ($):	*Incremental equipment:*	$-
	Incremental O&M:	$-
	Total:	$-

E. Comments:

As the CDM program develops province-wide, there are more opportunities for staff to participate in meaningful training sessions. It is anticipated that there will be significantly more training in 2006.

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

Appendix B - Discussion of the Program

(Project #14 - Planning, Adminstration and Monitoring)

A. **Name of the Program:** Planning, Administration and Monitoring

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

This category of expenses include the costs that are related to the completion of the origina plan, quarterly and annual reporting, general CDM tracking and administration, ongoing reconciliation to accounting records, etc..

Measure(s):

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

B. **TRC Results:**

TRC Benefits ($):		*na*
TRC Costs ($):		
	Utility program cost (less incentives):	
	Participant cost:	
	Total TRC costs:	
Net TRC (in year CDN $):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		

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

Conservation Programs:

		lifecycle	*in year*
Demand savings (kW):	*Summer*		
	Winter		
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):

	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:	$55,342.00
	Incentive:	$-
	Total:	$55,342.00
Utility indirect costs ($):	*Incremental capital:*	$-
	Incremental O&M:	$14,270.00
	Total:	$14,270.00
Participant costs ($):	*Incremental equipment:*	$-
	Incremental O&M:	$-
	Total:	$-

E. Comments:

Also included in the category are the costs associated with the program design and setup of the Lighting Retrofit Program for General Service Customers. This program provides an incentive up to $5000 for <50kW general service customers and up to $20,000 for >50kW customers for the installation of more energy efficient lighting and controls. Burlington Hydro will pay participants $150/kW. The program is to be launched in January 2006. BHI will be moving these costs from this category to a new project category that will be identifed in upcoming quarterly reporting. The costs included to date are $23,125 direct incremental O&M and $2,664 of indirect incremental O&M. This program was one that BHI customers had specifically expressed an interest in. Should shifting of dollars exceed the 20% threshold identified by the OEB, BHI will apply for modification as stipulated in the Final Order for RP-2004-0203/EB-2004-0525, dated February 17, 2005.

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