BARRIE HYDRO DISTRIBUTION INC. – RP–2004-0203\EB–2004–0532-
CONSERVATION AND DEMAND ANNUAL REPORT
2005 ANNUAL CDM REPORT

INTRODUCTION

Barrie Hydro Distribution Inc. (BHDI) is pleased to submit this first annual CDM report. BHDI's CDM programs and spending in 2005 all relate to the "third traunche" programs, which were approved by the OEB in February of 2005. The dollars represented in these programs totals $1,907,855. BHDI's approved CDM Plan encompassed 10 separate programs, they are:

1. Building – Control of Lighting & Equipment, Lighting Retrofit, & Building Sealing

2. Building – Peak Shaving/Demand Response Generator Pilot

3. Building – Solar HWT Demonstration Project

4. Distribution – System Optimization

5. Business – Power Factor Penalty Awareness

6. Municipal – LED Traffic Lights Pilot

7. Municipal Non- Profit Housing – Electrical Conservation Pilot

8. Residential/Small Business – Electrical Appliance Rebate Pilot

9. Consumer Education & Training

10. Conservation & Demand Management Research

BHDI's CDM plan focused on three areas; our customers, our municipal partners, and our plant.

This annual report will concentrate on those programs started and completed in 2005 as well as those started and still in progress at the end of 2005. The programs that fall into the first area; started and completed are:

1. Building – Peak Shaving/Demand Response Generator Pilot

2. Residential/Small Business – Electrical Appliance Rebate Pilot

3. Consumer Education & Training

The programs that fall into the second area; started and still in progress are:

1. Building – Control of Lighting & Equipment, Lighting Retrofit, & Building Sealing

2. Distribution – System Optimization

3. Business – Power Factor Penalty Awareness

4. Municipal Non- Profit Housing – Electrical Conservation Pilot

The remaining three programs, Building – Solar HWT Demonstration Project, Municipal – LED Traffic Lights Pilot, and Conservation & Demand Management Research are to be started in 2006, and thus are not detailed in this report.

The total amount of actual spending in 2005 was $601,534. Please note that this amount is $20,834 higher than that filed in our 4th quarter CDM report. This was due to a late year-end invoice for CDM activities.

LESSONS LEARNED

We have learned many lessons from this first year of implementing CDM projects. One of these was that programs directly administered by the LDC as compared to those programs involving other partners had a much quicker implementation timeline. Another lesson learned was that Residential customers seemed to have the quickest uptake in participating in programs targeted directly to customers.

This was borne out in our experience with the Residential/Small Business – Electrical Appliance Rebate Pilot program. This program enabled residential and small general service customers that purchased Energy Star qualified appliances to receive an 8% rebate on the cost of those appliances to a maximum of $200 per account from BHDI. This program was initiated in April 2005 and closed in November 2005 as all funds allocated to this program were expended. Participation by residential customers exceeded all expectations, and customers are already inquiring whether this program will be introduced again in the near future. This program would definitely be considered a success and if additional funds become available should be continued. If this program were to be continued, one possible refinement would be to target appliances with high TRC values.

The Business – Power Factor Penalty Awareness program while still in progress would be termed successful to date. This program involved an education session for some of our larger customers with poor power factors. This education included understanding power factors and what can be done to improve power factors. These sessions were well attended but may require follow up and bill tracking to determine if these customers' power factors improve. The next stages of this program will be training for BHDI staff,

so as to be able to provide ongoing support to customers concerning power factors and also to provide seminars to additional customers.

Our Distribution – System Optimization program is mainly concentrating on voltage conversions to minimize line losses. Some sections of the total program have been converted and we would expect to see reductions in our actual losses in future years. One lesson learned on this program is that different conversion projects can provide very different results from a conservation aspect. Any evaluation of future conservation programs involving conversion projects should examine this aspect.

The Building – Peak Shaving/Demand Response Generator Pilot program was completed in late 2005. The intent of this program was to provide load displacement of approximately 281 kW during critical peak times identified by the IESO. Due to the mild winter there has not been occasion on which we have run the generator during critical peak demand times. BHDI's service area is a summer peaking area; therefore depending on the demands in the summer of 2006 we will have actual data on the usage of this program.

The Consumer Education & Training program has encompassed advertising concerning BHDI's CDM plan, and support of programs encouraging conservation and challenging customers to conserve (Mayor's Megawatt Challenge). As well we participated with our local food bank in the distribution of compact fluorescent light bulbs to those individuals using the food bank over the Christmas season. It was thought that this program would reach customers who might not be contacted through other means. From these aspects we would term it a success. Again if additional funds become available this program should be continued. A key factor to gaining participation in conservation measures is to keep awareness of consumers high, this program has accomplished that.

The Municipal Non-Profit Housing – Electrical Conservation Pilot is currently a program still in progress. The focus of this program is to review low-income housing units for potential conservation measures. To date an energy audit has been completed identifying areas where energy conservation can be realized in the buildings. The first project undertaken and completed from this audit was the retrofitting of light fixtures to energy efficient fixtures. Additional projects within this program will be undertaken in 2006.

The Building – Control of lighting & equipment, Lighting Retrofit, & Building Sealing program focuses on BHDI's administration & operations building at 55 Patterson Road in Barrie. This building was built in the late 1980's and while some energy efficient methods were designed in the building, new & improved conservation methods and equipment now exist. This program is still in progress but the two projects initiated in 2005 were automated controls of building lighting and HVAC fans and resealing (caulking) of the building exterior. The final project within this program will be a review and possible retrofit of current lighting fixtures within the building. The automated control project within this program realized a significant TRC value.

CONCLUSION

BHDI feels that we have had a very successful first year implementation of our third traunche CDM Plan initiatives. Spending of approximately $600,000 represents 1/3 of our total CDM Plan amount. Through our programs we have raised customer awareness, strengthened the efficiency of our plant, provided emergency load displacement, and educated customers on conservation measures they can affect. These programs and those to be implemented in 2006 have given us a better understanding of what programs work and the best vehicles by which to deliver them. From the knowledge gained from this initial CDM Plan we feel that we are in a stronger position to deliver and implement potential conservation programs and initiatives in the future.

Appendix A - Evaluation of the CDM Plan

BARRIE HYDRO DISTRIBUTION INC. - RP-2004-0203\EB-2004-0532 - CONSERVATION AND DEMAND ANNUAL REPORT

	Total	Residential	Commercial	Institutional	Industrial	Agricultural	LDC System	All	LDC ADMIN & OPS CENTER	LOAD DISPLACE GENERATOR	Other 4
Net TRC value ($):	*$558,294*	$182,772			-		-$192,089	$76,407	$177,858	$313,346	
Benefit to cost ratio:	*1.50*	1.73					0.70	13.17	5.74	2.93	
Number of participants or units delivered:	*71,509*	2,190			52			69,263	3	1	
Total KWh to be saved over the lifecycle of the plan (kWh):	*22,838,328*	6,940,507			-		10,368,075	1,442,806	4,086,940	-	
Total in year kWh saved (kWh):	*1,717,155*	541,370			-		414,723	354,574	406,488	-	
Total peak demand saved (kW):	*287.653*	0.636			-		73.00	0.017	-	214.00	
Total kWh saved as a percentage of total kWh delivered (%):	0.12%	0.04%			0.00%		0.03%	0.02%	0.03%	0.00%	
Peak kW saved as a percentage of LDC peak kW load (%):	0.09185%	0.00020%			0.00000%		0.02331%	0.00001%	0.00000%	0.06833%	
Gross in year C&DM expenditures ($):	*$601,534*	$206,838			$23,025		$190,597	$25,775	$37,534	$117,765	
Expenditures per KWh saved ($/kWh):*	$0.02	$0.03					$0.02	$0.02	$0.01		
*Expenditures per KW saved ($/kW)**:*	$50.51						$104.44			$27.52	

Utility discount rate (%):	7.72%

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

Appendix B - Discussion of the Program

(complete this section for each program)

BARRIE HYDRO DISTRIBUTION INC. - RP-2004-0203\EB-2004-0532 - CONSERVATION AND DEMAND ANNUAL REPORT

A. **Name of the Program:** Residential/ Small Business Electrical Appliance Rebate Program

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

This program focused on rebates as an incentive to customers to purchase Energy Star rated appliances. The amount of the rebate was 8% of the purchase price. The customers submitted an application to BHDI and a credit for the 8% was entered on their utility bill. The response to the program was greater than expected and significant TRC savings were realized as indicated below. If this program was to be offered again in the future specific appliances might only be targeted based on the highest TRC values.

Measure(s):

	Refrigerator	Air Conditioner	Central Air	Clothes Washer	Dishwasher	Freezer	Stove/Range/Furnace
Base case technology:	514 kWh	880 kWh	1403 kWh	779 kWh	592 kWh	368 kWh	550 kWh
Efficient technology:	440 kWh	792 kWh	1052 kWh	299 kWh	492 kWh	331 kWh	495 kWh
Number of participants or units delivered:	612	20	50	656	486	40	36
Measure life (years):	19	12	14	14	13	21	18

B. **TRC Results:**

TRC Benefits ($):	$	*394,775.00*
TRC Costs ($):		
Utility program cost (less incentives):	$	5,792.00
Participant cost:	$	231,768.00
Total TRC costs:	$	237,560.00
Net TRC (in year CDN $):	$	157,215.00
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	$	1.66

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

Conservation Programs:

		lifecycle	in year
Demand savings (kW):	*Summer*		0.49
	Winter		
Energy saved (kWh):		*6391347*	431538
Other resources saved :			
Natural Gas (m3):			
Water /litre		280000	20000

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):	

Appendix B - Discussion of the Program

(complete this section for each program)

BARRIE HYDRO DISTRIBUTION INC. - RP-2004-0203\EB-2004-0532 - CONSERVATION AND DEMAND ANNUAL REPORT

A. **Name of the Program:** Residential/ Small Business Electrical Appliance Rebate Program

Power Factor Correction Programs:

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

Line Loss Reduction Programs:

Peak load savings (kW):		
	lifecycle	*in year*
Energy savngs (kWh):		

Distributed Generation and Load Displacement Programs:

Amount of DG installed (kW):	
Energy generated (kWh):	
Peak energy generated (kWh):	
Fuel type:	

Other Programs (specify):

Metric (specify):	

D. **Program Costs*:**

Utility direct costs ($):	*Incremental capital:*	$	-
	Incremental O&M:	$	5,792.00
	Incentive:	$	164,134.00
	Total:	$	169,926.00
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:		
Participant costs ($):	*Incremental equipment:*	$	231,768
	Incremental O&M:	$	-
	Total:	$	231,768

E. Comments:

Some Energy Star appliances were rebated which did not have information provided in the Assumptions and Measures sheets provided, these appliances were not included in the calculations. They included such things as dehumidifiers, entertainment centers, etc. These appliances in total equated to 10 or less purchased. The incremental O&M cost of $5792 represents promotional costs such as bill inserts and staff training.

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

Appendix B - Discussion of the Program

(complete this section for each program)

BARRIE HYDRO DISTRIBUTION INC. - RP-2004-0203\EB-2004-0532 - CONSERVATION AND DEMAND ANNUAL REPORT

A. **Name of the Program:** Business - Power Factor Penalty Awareness

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

This program focused on educating our larger customers about power factor. The delivery of this program was through inviting 198 of our larger customers with poor power factors to attend a seminar. This seminar dealt with issues such as; defining power factors, identifying the costs of a poor power factor and suggesting ways in which power factors can be improved. Of the 198 customers invited 52 attended approximately a 26% participation rate. Future projects within this program will concentrate on training for BHDI staff, so that they will be able to provide support to customers in this area, as well as a further seminar for those customers not attending the first seminar presented.

Measure(s):

Base case technology:			
Efficient technology:			
Number of participants or units delivered:			
Measure life (years):			

B. **TRC Results:**

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

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):			
Water /litre			

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):	

Appendix B - Discussion of the Program

(complete this section for each program)

BARRIE HYDRO DISTRIBUTION INC. - RP-2004-0203\EB-2004-0532 - CONSERVATION AND DEMAND ANNUAL REPORT

A. **Name of the Program:** Business - Power Factor Penalty Awareness

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):	Participation Rate	26%

D. **Program Costs*:**

Utility direct costs ($):	*Incremental capital:*	$	-
	Incremental O&M:	$	23,025.00
	Incentive:	$	-
	Total:	$	23,025.00
Utility indirect costs ($):	*Incremental capital:*	$	-
	Incremental O&M:	$	-
	Total:	$	-
Participant costs ($):	*Incremental equipment:*	$	-
	Incremental O&M:	$	-
	Total:	$	-

E. Comments:

Incremental O&M costs of $23,025 represents the vendor costs to facilitate the seminars.

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

Appendix B - Discussion of the Program

(complete this section for each program)

BARRIE HYDRO DISTRIBUTION INC. - RP-2004-0203\EB-2004-0532 - CONSERVATION AND DEMAND ANNUAL REPORT

A. **Name of the Program:** DISTRIBUTION - SYSTEM OPTIMIZATION

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

This program encompassed two aspects; voltage conversion projects for selected areas of our plant and a capacitor study to determine the viability of placing capacitors on some of our feeders. The capacitor study was completed in 2005 by a consulting firm at a cost of $5,500. After review of the results it was determined not to proceed with capacitors. The voltage conversion projects commenced in 2005 with one conversion being completed and two other conversions to be completed in 2006. The TRC results encompass both the one completed and those forecasted for 2006. As can be seen below these projects resulted in a low TRC value. Upon closer review of the individual projects there was a wide variance in the TRC values of the projects. It would appear from this that when evaluating conversion projects from the view point of conservation that not all conversion projects will be justified by purely the conservation savings.

Measure(s):

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

B. **TRC Results:**

TRC Benefits ($):		*$ 456,508.00*
TRC Costs ($):		
	Utility program cost (less incentives):	$ 648,597.00
	Participant cost:	$ -
	Total TRC costs:	$ 648,597.00
Net TRC (in year CDN $):		$ (192,089.00)
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		0.70

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):	

Appendix B - Discussion of the Program

(complete this section for each program)

BARRIE HYDRO DISTRIBUTION INC. - RP-2004-0203\EB-2004-0532 - CONSERVATION AND DEMAND ANNUAL REPORT

A. **Name of the Program:** DISTRIBUTION - SYSTEM OPTIMIZATION

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):		73 kw
	lifecycle	*in year*
Energy savngs (kWh):	10368075 kwh	414723 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:*	$	643,097.00
	Incremental O&M:	$	5,500.00
	Incentive:	$	-
	Total:	$	648,597.00
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:		
Participant costs ($):	*Incremental equipment:*	$	-
	Incremental O&M:	$	-
	Total:	$	-

E. Comments:

Incremental O&M costs of $5500 represents capacitor study. Incremental capital costs of $643597 represents actual and forecasted costs of conversion projects. Life of conversion projects is 25 years.

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

Appendix B - Discussion of the Program

(complete this section for each program)

BARRIE HYDRO DISTRIBUTION INC. - RP-2004-0203\EB-2004-0532 - CONSERVATION AND DEMAND ANNUAL REPORT

A. **Name of the Program:** Building - Peak Shaving / Demand Response Generator Pilot

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

This generator will be used for peak demand response during critical peak days. The IESO in 2005 issued 12 critical peak days, these last for 24 hours. Assuming 2005 as the base year we plan to use our generator to displace 281kW of demand during these critical peak days and the associated kWh. The calculation is based on 12 days @ 12 hours = 144 hours/yr of critical peak time. The demand response generator will be used during these times to reduce peak demand by 281kW less 67kW (this was the capacity of our former generator which was replaced) equating to 214kW. Utility program costs of $162264 is comprised of $44499 of natural gas costs to operate the generator and $117765 of capital costs for the purchase of the generator.

Measure(s):

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

B. **TRC Results:**

TRC Benefits ($):	$	*475,610.00*
TRC Costs ($):		
Utility program cost (less incentives):	$	162,264.00
Participant cost:	$	-
Total TRC costs:	$	162,264.00
Net TRC (in year CDN $):	$	313,346.00
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		2.93

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):	

Appendix B - Discussion of the Program

(complete this section for each program)

BARRIE HYDRO DISTRIBUTION INC. - RP-2004-0203\EB-2004-0532 - CONSERVATION AND DEMAND ANNUAL REPORT

A. **Name of the Program:** Building - Peak Shaving / Demand Response Generator Pilot

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):	375 kw
Energy generated (kWh):	30816 kwh
Peak energy generated (kWh):	30816 kwh
Fuel type:	Natural Gas

Other Programs (specify):

Metric (specify):	

D. **Program Costs*:**

Utility direct costs ($):	*Incremental capital:*	$	117,765.00
	Incremental O&M:	$	44,499.00
	Incentive:	$	-
	Total:	$	162,264.00
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:		
Participant costs ($):	*Incremental equipment:*	$	-
	Incremental O&M:	$	-
	Total:	$	-

E. Comments:

Natural gas costs were calculated at December 2005 rate of $.3543/cumt., future years rates increased 2.5%. Equipment life estimated at 20 years. The average monthly 2005 summer demand of the building at 55 Patterson Road was 282 kW.

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

Appendix B - Discussion of the Program

(complete this section for each program)

BARRIE HYDRO DISTRIBUTION INC. - RP-2004-0203\EB-2004-0532 - CONSERVATION AND DEMAND ANNUAL REPORT

A. **Name of the Program:** Consumer Education & Training

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

This program focused on consumer education and training. The components of this program were; 1/ Advertisements notifying customers in our service area of conservation, 2/ providing CFL's to be distributed to users of a local food bank within our service area, providing LED Christmas lights to our municipality, internal upgrade of a Energy Star appliance, 3/ A participant in the Mayor's Megawatt Challenge which the City of Barrie is a participant in. While the TRC benefits are high an additional benefit of this program was the advertising in our local newspaper, as well as having our logo on the Mayor's Megawatt Challenge website.

Measure(s):

	15 W CFL	LED CHRISTMAS LIGHTS	REFRIGERATOR
Base case technology:	139 kWh	19 kWh	514 kWh
Efficient technology:	35 kWh	1 kWh	440 kWh
Number of participants or units delivered:	3400	50	1
Measure life (years):	4	30	19

B. **TRC Results:**

TRC Benefits ($):	$	*82,685.00*
TRC Costs ($):		
Utility program cost (less incentives):	$	-
Participant cost:	$	6,278.00
Total TRC costs:	$	6,278.00
Net TRC (in year CDN $):	$	76,407.00
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		13.17

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

Conservation Programs:

		lifecycle	in year
Demand savings (kW):	*Summer*	0.017	
	Winter		
Energy saved (kWh):		*1442806*	354574
Other resources saved :			
Natural Gas (m3):			
Water /litre			

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 (%):	

Appendix B - Discussion of the Program

(complete this section for each program)

BARRIE HYDRO DISTRIBUTION INC. - RP-2004-0203\EB-2004-0532 - CONSERVATION AND DEMAND ANNUAL REPORT

A. **Name of the Program:** Consumer Education & Training

Line Loss Reduction Programs:

		lifecycle	in year
Peak load savings (kW):			
Energy savngs (kWh):			

Distributed Generation and Load Displacement Programs:

Amount of DG installed (kW):	
Energy generated (kWh):	
Peak energy generated (kWh):	
Fuel type:	

Other Programs (specify):

Metric (specify):	Advertising - Customers reached	65,812

D. **Program Costs*:**

Utility direct costs ($):	*Incremental capital:*	$	-
	Incremental O&M:	$	9,157.00
	Incentive:	$	16,619.00
	Total:	$	25,776.00
Utility indirect costs ($):	*Incremental capital:*	$	-
	Incremental O&M:	$	-
	Total:	$	-
Participant costs ($):	*Incremental equipment:*	$	6,278
	Incremental O&M:	$	-
	Total:	$	6,278

E. Comments:

Advertising and Mayor's Megawatt Challenge costs equals $9,157.

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

Appendix B - Discussion of the Program

(complete this section for each program)

BARRIE HYDRO DISTRIBUTION INC. - RP-2004-0203\EB-2004-0532 - CONSERVATION AND DEMAND ANNUAL REPORT

A. **Name of the Program:** Municipal Non-Profit Housing - Electrical Conservation Pilot

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

This program focused on conservation areas for low income customers. As part of this program, funding for the Barrie Municipal Non Profit Housing Corporation was provided to ; 1/ conduct an energy audit of their properties and 2/ implement conservation initiatives that were identified in the audit. The audit was completed in the summer of 2005 and the first initiative implemented from that audit was a retrofit of T12 fluorescent light fixtures to T8 fixtures. At this point only 50% of those costs have been funded by the CDM program as funds are also being applied for from other agencies. As well only 50% of the TRC benefits have been claimed. This is a program in progress and at this time these are the only components of the overall program that have been identified.

Measure(s):

	T12 4 ft to T8	T12 8 ft to T8	
Base case technology:	624 kWh	736 kWh	
Efficient technology:	232 kWh	448 kWh	
Number of participants or units delivered:	253	37	
Measure life (years):	5	5	

B. **TRC Results:**

TRC Benefits ($):		*$ 39,790.00*
TRC Costs ($):		
	Utility program cost (less incentives):	$ -
	Participant cost:	$ 14,233.00
	Total TRC costs:	$ 14,233.00
Net TRC (in year CDN $):		$ 25,557.00
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		2.80

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

Conservation Programs:

Demand savings (kW):	*Summer*		0.146 kW
	Winter		
		lifecycle	*in year*
Energy saved (kWh):		*549160*	109832
Other resources saved :			
	Natural Gas (m3):		
	Water /litre		

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):	

Appendix B - Discussion of the Program

(complete this section for each program)

BARRIE HYDRO DISTRIBUTION INC. - RP-2004-0203\EB-2004-0532 - CONSERVATION AND DEMAND ANNUAL REPORT

A. **Name of the Program:** Municipal Non-Profit Housing - Electrical Conservation Pilot

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:	$	36,912.00
	Total:	$	36,912.00
Utility indirect costs ($):	*Incremental capital:*	$	-
	Incremental O&M:	$	-
	Total:	$	-
Participant costs ($):	*Incremental equipment:*	$	14,233
	Incremental O&M:	$	-
	Total:	$	14,233

E. Comments:

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

Appendix B - Discussion of the Program

(complete this section for each program)

BARRIE HYDRO DISTRIBUTION INC. - RP-2004-0203\EB-2004-0532 - CONSERVATION AND DEMAND ANNUAL REPORT

A. **Name of the Program:** Building - Control of Lighting Equipment, Lighting Retrofit, & Building Sealing

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

This program focused on Conservation projects associated with BHDI's administration & operations building at 55 Patterson Road. This total program is still in progress but the projects completed in 2005 were; 1/ automated light controls, 2/ automated control of building fans, 3/ recaulking of windows and doors. The automated light control concentrated on installing a link to our current building automation system so that lights would automatically be turned off between 12 and 18 hours a day. Four buildings fans have also been tied in to the building automation system resulting in a reduction in running time of 108 hours per week. The recaulking of the building will result in lower air loss in the summer months, thereby reducing air conditioning use. As can be seen below this has a very positive TRC value.

Measure(s):

	Lighting Control	Fan Control	Building Caulking
Base case technology:	376972 kwh	39050 kwh	88229 kwh
Efficient technology:	0 kwh	13946 kwh	83817 kwh
Number of participants or units delivered:	1	1	1
Measure life (years):	10	10	15

B. **TRC Results:**

TRC Benefits ($):	*$*	*215,392.00*
TRC Costs ($):		
Utility program cost (less incentives):	$	37,534.00
Participant cost:	$	-
Total TRC costs:	$	37,534.00
Net TRC (in year CDN $):	$	177,858.00
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		5.74

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

Conservation Programs:

Demand savings (kW):	*Summer*		
	Winter		
	lifecycle	*in year*	
Energy saved (kWh):	*4086940*	406488	
Other resources saved :			
Natural Gas (m3):			
Water /litre			

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 (%):	

Appendix B - Discussion of the Program

(complete this section for each program)

BARRIE HYDRO DISTRIBUTION INC. - RP-2004-0203\EB-2004-0532 - CONSERVATION AND DEMAND ANNUAL REPORT

A. **Name of the Program:** Building - Control of Lighting Equipment, Lighting Retrofit, & Building Sealing

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:*	$	16,700.00
	Incremental O&M:	$	20,834.00
	Incentive:	$	-
	Total:	$	37,534.00
Utility indirect costs ($):	*Incremental capital:*	$	-
	Incremental O&M:	$	-
	Total:	$	-
Participant costs ($):	*Incremental equipment:*	$	-
	Incremental O&M:	$	-
	Total:	$	-

E. Comments:

Additional spending of $20,834 has been included in this report that was not included in our 4th quarter report filed for January 31., 2006. This was due to a late yearend accrual. Savings for lighting and fan control based on internal study. Savings for caulking based on measures and assumptions data for commercial sealing section. Assumed housing unit 1000 sq ft, 55 Patterson road building 40000 sq ft, extrapolated usage and savings to 40000 sqft. Only included kwh savings in summer months for caulking, as building is heated with natural gas.

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