CHEC-RP-2004-0203/EB-2004-0502

Conservation and Demand Annual Report

1.0 Introduction:

This report summarizes the activity and successes of the Cornerstone Hydro Electric Concepts (CHEC) Group with respect to conservation and demand management undertaken in 2005. Included in this document are the sixteen (16) individual reports from the CHEC members that discuss their specific program activities and the associated insights of the members.

Consistent with CHEC members' cooperative effort to seek approval of their CDM plans as a combined group, the Annual Report reflects their commitment to work together to provide cost effective programs and to share and learn from each other's experience. Although this report is submitted as one document it is clear from the individual reports that each utility brings its own perspective and goals to the CDM activities.

Within the 16 utilities there have been a total of ninety-two (92) initiatives. These initiatives represent projects specific to individual utilities and others that are similar or a cooperative effort between utilities (Conservation Website, EnergyShop.com). Some utilities have focused on promoting and providing energy efficient technology to their customers with the associated kWh savings, while others have been more focused on laying the foundation for future programs. To achieve the "conservation culture", the overriding goal in Ontario, both types play an important role.

CHEC with its dynamic relationship, positions members well to learn from and leverage the experience of others. The combined report as well as meeting the regulatory requirement, provides a comprehensive summary to CHEC members. This report will help to provide additional insights, as utility staff plan and implement the 2006 and 2007 programs.

The experiences gained in 2005 will be invaluable for the continued development of CDM and the ability to move forward programs that save energy and develop the conservation culture. The experiences gained over 2005 add to the collective knowledge of the industry and sets the stage for on-going improvement in the development, delivery, monitoring and reporting of CDM initiatives.

2.0 CHEC Members:

The 2005 Annual Report on Conservation and Demand Management Activities of the following utilities are included in this report:

Centre Wellington Hydro Ltd.	Collus Power Corp
Grand Valley Energy Inc.	Innisfil Hydro
Lakefront Utilities Inc.	Lakeland Power Distribution
Midland Power Utility Corp.	Orangeville Hydro Ltd
Orillia Power Distribution Corp.	Parry Sound Power
Rideau St. Lawrence	Wasaga Distribution Inc.
Wellington North Power Inc.	West Coast Huron Energy Inc.
Westario Power	Woodstock Hydro Services

3.0 Evaluation of the CDM Plan:

Total Portfolio: The 16 CHEC members collectively ran a total of 92 programs. These programs fell within three categories:

- Savings: Delivery of energy saving products or processes: coupons, rebates, free products, etc.
- Education: Providing general energy management information through such activities as: website development, workshops, brochures, etc,
- Foundation: Preparatory work for future programs that include: program research and development, energy audits, system studies, demonstration projects, partnerships, etc.

The program results represent a total energy savings of 29,760,749 kWh at a combined "Utility Cost" of $908,387 or approximately 3c/kWh. This low cost of energy saved was achieved while providing both education and foundation building programs in addition to the specific initiatives aimed at savings kWh. To put the energy savings in perspective the 29.7 Million kWh represent the annual energy required by 2,400 homes (at 1000 kWh/month).

Figure 1 and Figure 2 illustrates the breakdown of the programs into the three types. From the figure it can be seen that cost and activity generally correlate. Programs aimed at immediate kWh savings represent 36% of the cost while they represent 27% of the programs delivered during the year. Education and Foundation programs, that are expected to return improved kWh savings in the future, represent 64% of the cost and 73% of the activity. **From the spending and activity level in the different categories it can be seen that 2005 while providing energy savings has focused on preparing for year two and three of CDM delivery.**

Figure 1

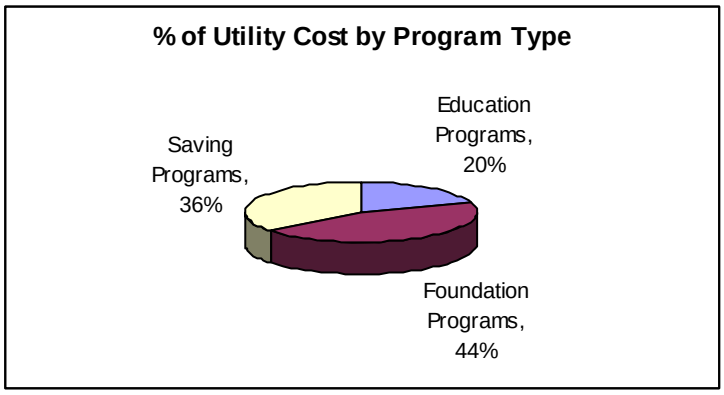
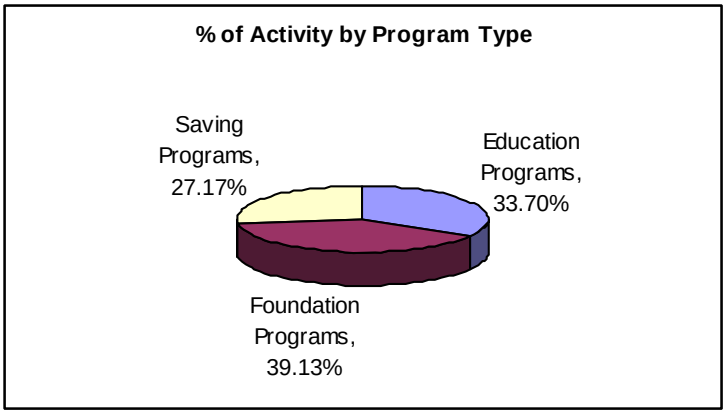


Figure 2



Savings Programs: The programs aimed at immediate results focused on energy savings rather than peak demand. The average cost of energy saved through the "Energy Savings" programs was 1.1c/kWh.

The use of product incentives and give-a-ways contributed significantly to achieving immediate energy savings. Programs such as the "Lighten Your Electricity Bill" and local product incentives such as CFL distribution programs resulted in energy savings throughout the membership. The wide scale programs provided an economy of scale while the local programs built on relationships and resources within the community. The product focused programs represented a utility cost of $163,400 and a lifetime energy savings of 15,692,800 kWh or 1.1c/kWh.

Four system optimization projects (out of a total of twelve) involved field changes completed in 2005 that captured energy savings. The four field projects represent a utility cost of $163,300 and a lifetime energy savings of 12,793,000 kWh or 1.3c/kWh (note: one program pending review to confirm savings).

Education Programs: These programs while not generating any immediate savings represent the future of CDM within the Province. Incentive programs while providing immediate savings cannot on their own change behaviour within the customer group. Programs aimed at increasing the customer's knowledge of energy use is required if long term savings are desired. As the saying goes – If you give a person a CFL you provide energy savings for 4 years. If you provide a person with the knowledge to save energy you provide energy savings for a lifetime. This is the role of the education programs.

Twenty percent of the total utility cost was spent on providing education to the customers. The activities within this classification vary from providing brochures to detailed customer workshops. Although the results of these programs are not immediate it is believed that they will impact positively on customer participation in future programs and prepare customers to make informed decisions with regards to energy use.

CHEC is in the process of developing a website focused on energy conservation. The website in addition to providing energy management knowledge to the customers will also allow the effective exchange of CDM information between CHEC members. The website funding includes dollars to allow the CHEC membership to engage external resources to assist in developing the site and also assist members with CDM issues of common interest.

It is interesting to note in the "Education" section the experience of one CHEC member (Orillia) with success from an industrial workshop. As a direct result of a "Dollar to Sense" workshop changes were made in an industrial setting that resulted in quantifiable savings. These results were captured because the customer communicated the action and potential energy savings to the utility. The savings of 255,000 kWh annually, clearly illustrates the role "education" can play in obtaining significant energy savings.

Foundation Program: These programs are those initiatives aimed at developing programs that will provide savings in the future. Thirty nine percent of the programs (44% of utility cost) focused on research and development of programs that will be delivered in year two and three of the CDM Plan. At the end of the reporting period however the programs have not been rolled out or have not generated any savings to date. For the purpose of reporting, projected savings have generally not been utilized.

Foundation Programs include initiatives such as: system optimization studies, smart meter preparation, customer audits, demonstration projects and relationship building, to name a few. Unlike education, where the activity is geared to the customer, these programs are aimed at ensuring the appropriate information and processes for the CDM activity of future years. Approaching the end of the first quarter of 2006 it is apparent that there are a number of programs that are moving

forward as a direct result of the foundation work completed in 2005 (e.g. Woodstock finance plan, Orangeville Reduce the Juice)

Net TRC Results: The net TRC result of the combined CHEC CDM activity for 2005 is $499,756. Although a large number, it is difficult to determine if this represents good success of the overall portfolio. While net TRC measures the dollar benefits of avoided electrical energy cost it does not measure the education and development work that is associated with an on-going CDM program.

Reviewing the individual reports of the CHEC members indicates that ten of the members had positive Net TRCs while six had negative Net TRCs. In isolation one may conclude that anything but a positive TRC is undesirable. However it is proposed that the TRC for the first year of a multi-year program does not reflect the overall value of the effort undertaken and that the overall activity of the utility should be taken into account.

As noted above there has been a significant amount of education and foundation work undertaken by CHEC members. The individual reports indicate a mix of approaches with some focusing on preparatory work, others on immediate deliverables and others on a mix of programs. Depending on the success of programs aimed at delivering immediate savings and the cost of education and foundation programs the Net TRC will vary**. Through the sharing of program information and outcomes CHEC members will be able to learn from each others' experiences to continue to deliver effective CDM programs in the future.**

4.0 Discussion of Programs:

The individual program discussions from each utility should be examined. These discussions provide the individual utility perspective on the programs as offered in their service territory. The complete Annual CDM Report for each utility is included in the appendices. One copy of the SeeLine Total Resource Cost Test Assessment of the '2005 Lighten Your Electricity Bill' Program is also included in the appendices as a sample of the program evaluation process for the coupon program as reported in CHEC members' reports.

5.0 Lessons Learned:

Each utility report included in the attached appendices includes lessons learned from the 2005 CDM experience for each utility. Although a flavour of the "lessons learned" is summarized in this section the reader is encouraged to review the individual reports for additional insights.

Application of TRC: This report represents the first large scale application of TRC for the evaluation of CD&M programs in Ontario. The TRC model, while forming a base, is seen to encourage "quick return" programs and does not provide any measure of foundation or education programs that are so critical to developing a "conservation culture". It is believed that for future year evaluation of CDM activities the TRC tool needs to be expanded to take into account education and foundation type programs.

Familiarity has been gained with the TRC tool over the past reporting year. The OEB's initiative to provide a set of assumptions assisted with the evaluation of programs and reporting. The need to continue to refine and add to the list of assumptions for cost effective evaluation is evident. The evaluation process for programs also fails to capture additional activities of customers that are driven through exposure to programs where consumers are not directly taking advantage of a particular coupon or rebate.

Experience gained in reporting the activities of 2005 also indicates the need to ensure that measures of programs are understood at the program design stage. For education programs, in addition to some modification of the TRC model to better recognize the benefits of these programs, mechanisms for obtaining feedback from customers is required. These mechanisms however must be cost effective.

Funding: There remains significant third tranche dollars for the continued delivery of CDM programs in 2006 and potentially 2007. However, if CDM is to continue members will be required to submit applications for additional CDM expenditures. A simplified approval process is required to allow utilities to obtain appropriate CDM funding without being encumbered with a full rate hearing on these items. In addition, as noted above, the TRC tool requires modification to provide value to education and foundation programs. A continued lack of recognition of the value of these types of programs will focus utilities on programs that deliver immediate positive TRC result, a condition that will not foster a "conservation culture".

Partnerships and Sharing: CHEC by its' very existence is about partnerships and sharing. CHEC members are working together to move forward CDM in their service territories. In addition CHEC members have been active participants in local and provincial wide initiatives to build relationships and take advantage of scale. It is believed through these types of endeavours, the "best bang for the buck" can be achieved for the customer.

Province wide initiatives are generally supported by CHEC members as a good way to enter into partnerships with the OPA, manufacturers, contractors, and retail outlets in order to deliver cost effective programming. Within these programs the ability to provide local support and branding is important to allow the existing positive relationship that the local utility enjoys with its customers to be leveraged.

Foundation Year: Many of the CHEC members note in their report the "foundation building" nature of 2005. The ability of the industry to come up to speed is noted as well as the development of programs and guidelines associated with CDM. All CDM participants have been learning over 2005.

Much of the work completed in 2005 sets the stage for the next two years. With a mix of delivered savings, education and investigation of programs CHEC and the industry have prepared for continued CDM over the next two years and beyond.

Customer Readiness: The success of the residential programs offered to customers indicates the readiness of customers to take action to control their energy use and costs. Obtaining resources for utilities to design and deliver commercial and industrial programs requires further attention. The energy savings within these sectors can be extensive, however the lead time for design, delivery and customer implementation is much longer. Members recognize that much of the issue with this sector is the limited resources (time and money) the customers have to put on energy management. Successfully meeting the needs of this sector will require further effort and sharing of projects that have proved successful.

Utility Resources: To-date utilities have not generally increased internal resources to address the CDM portfolio. Utilities have worked the additional CDM demands into existing work loads by placing other issues at a lower priority. Continuation of this arrangement is not sustainable over the long term. Recognition of the impact that continued CDM programming has on resources is required in both the funding and reporting requirements. As noted above under "Funding" a simplified method for accessing CDM funding is required to ensure the appropriate resources are put in place to support the appropriate level of CDM activity.

6.0 Conclusion:

The first year of CDM has been a learning or foundation year. The CHEC members look back on their projects to date and recognize there has been significant learning. As the individual reports indicate there continues to be a commitment to CDM with utilities looking to capture future benefits from the work done in 2005.

CHEC members have delivered energy savings while increasing the collective knowledge of the CDM industry. CHEC members have demonstrated a willingness to be fully engaged in the process. Through the continued sharing of information and programs between members and other organizations, CHEC will continue to play an important role in the design, delivery and reporting of CDM for the benefit of their customers.

7.0 Appendices:

Appendix A - Evaluation of the CDM Plan

	Total	Residential	Commercial	Institutional	Industrial	Agricultural	LDC System				
Net TRC value ($):	*$499,756*										
Benefit to cost ratio:	*1.582*										
Number of participants or units delivered:	*115,815.00*		**Summary of CHEC Appendices A**								
Total KWh to be saved over the lifecycle of the plan (kWh):	*29,760,746.70*		Detailed A's follow for all CHEC Utilities								
Total in year kWh saved (kWh):	*3,048,702.30*		Utilities arranged alphabetically								
Total peak demand saved (kW):	*329.19*										
Total kWh saved as a percentage of total kWh delivered (%):											
Peak kW saved as a percentage of LDC peak kW load (%):											
Gross in year C&DM expenditures ($):	*$908,385.27*										
Expenditures per KWh saved ($/kWh):*	$0.0305										
*Expenditures per KW saved ($/kW)**:*	$2,759.4849										

Appendix B - Discussion of the Program

(complete this section for each program)

A. **Name of the Program:** Website Conservation/Administration

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

The intent of this program is to create a conservation website to educate, inform, advertise and reach out to energy consumers. Using economies of scale the website costs are shared with other members of the CHEC group. The administration costs of the CHEC group Coordinator for the CHEC group has been included within this program.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	0		
Efficient technology:	0		
Number of participants or units delivered:	13,500.00		
Measure life (years):	0.00		

B. **TRC Results:**

TRC Benefits ($):		$ -	
Measure's Costs ($):			
	Utility program cost (less incentives):	$ 7,243.34	Includes Discounted Measures Cost
	Participant cost:	$ -	0
	Total TRC costs:	$ 7,243.34	
Net TRC (in year CDN $):		-$7,243.34	
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		0.00	

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

Conservation Programs:

Demand savings (kW):	*Summer*		0.00
	Winter		0.00
		lifecycle	*in year*
Energy saved (kWh):		*0.00*	0.00
Other resources saved :			
	Natural Gas (m3):	0	0
	Water (l)	0	0
Expenditures per kWh Saved ($/kWh)		#DIV/0!	
Expenditures per kW Saved ($/kW)		#DIV/0!	

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:	$ 7,243.34	Includes Measure's Cost - ensure full cost of measure entered in TRC!L15
	Incentive:	$ -	
	Total:	$ 7,243.34	
Utility indirect costs ($):	*Incremental capital:*	$ -	
	Incremental O&M:	$ -	
	Total:	$ -	
Total Utility Cost of Program		$ 7,243.34	
Participant costs ($):	*Incremental equipment:*	$ -	
	Incremental O&M:	$ -	0
	Total:	$ -	
Grand Total Program Cost		$ 7,243.34	

E. **Comments:**

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

LAKEFRONT UTILITIES INC.

CDM PLAN

ANNUAL REPORT

FOR THE YEAR ENDED DECEMBER 31, 2005

INTRODUCTION:

Lakefront Utilities Inc. ("LUI") is pleased to submit its CDM Annual Report on the progress of the third tranche ($170,000) monies to conservation and demand management programs. Attached to this report is Appendix A – Evaluation of the CDM Plan.
LUI submitted its conservation and demand management plan with the CHEC Group, and has received a final order dated February 8, 2006 approving spending on the following programs:

INTENT:

The intent of the programs is to create an active conservation culture in our service territory. Engaging the community as a whole and fostering the conservation culture are the expected yield from the programs. In some cases, using economies of scale, the costs are shared with other members of the CHEC group and the increased buying power of the group will leverage more value to customers and shareholders.

DISCUSSION OF PROGRAMS:

#1. NAME OF PROGRAM: CONSERVATION WEBSITE

DESCRIPTION OF PROGRAM:(design, delivery, partnerships and evaluation)
A conservation website provides a significant opportunity to educate, inform, advertise and reach out to energy consumers. Development and maintenance costs will be shared, as would contribution requirements, resulting in a more robust and interactive website. This website would also be linked to LUI's main website, which would be enhanced by the availability of the combined resources. Components of the website would range from energy savings concepts to various industries and load profile services.

Savings could be measured on up-take of programs, message penetration analysis and reports on the number of hits and website traffic.

TOTAL PROGRAM COST:	**$9,000.00**
COSTS INCURRED	**$4,941.15**
Balance At December 31, 2005:	**$4,941.15**

#2. NAME OF PROGRAM: EDUCATION/PROMOTION

DESCRIPTION OF PROGRAM:(design, delivery, partnerships and evaluation)
Advancing the understanding and importance of conservation to customers in all market sectors and in turn facilitating the programs to permit customers acting on the energy saving opportunities requires significant effort and consistent marketing. Common messages and approaches are implemented to achieve greatest possible penetration. It is also very important that LDC staff understand how the various activities included in the CDM plan will not only help the consumer but the LDC as well. The level of knowledge the staff has on the benefits of various programs can significantly affect the success level of any program.

Although savings cannot be quantitatively measured, it is inherent through the knowledge, education and promotion activities that the consumers pursue in the conservation culture.

In 2005 the brochures produced by the Ministry of Energy – "Conserve Energy and Save Money" were purchased and were provided to all residential and general service customers. In addition, LUI also provided advertisement of "conservation tips" in the local Northumberland newspaper.

TOTAL PROGRAM COST:	**$10,000.00**
COSTS INCURRED	**$ 1,791.25**
Balance At December 31, 2005:	**$ 1,791.25**

#3. NAME OF PROGRAM: LIGHT BULB GIVEAWAY

DESCRIPTION OF PROGRAM:(intent, design, delivery, partnerships and evaluation)
Compact Fluorescent Lamps (CFLs) have for the past 15 years been proven energy saving devices over their conventional incandescent light bulbs. This is a residential consumer and small business program, targeting increased awareness and use of CFLs in the market. CFLs achieve up to 75% electricity savings over conventional incandescent bulbs and last up to 10 times longer. Typical paybacks range from .7 to 3 years.

LUI provided a CFL to each attendee at it's Town Hall meeting in November 2005 to advance and promote the conservation culture. Future program design will include lighting specifications, procurement, distributions, etc. Key considerations will include lamp selection to ensure light quality and life expectancy is achieved.

TOTAL PROGRAM COST:	**$20,000.00**
COSTS INCURRED	**$ 1,006.05**
At December 31, 2005:	**$ 1,006.05**

#4. NAME OF PROGRAM: System Optimization Study & Implementation

DESCRIPTION OF PROGRAM:(intent, design, delivery, partnerships and evaluation)
The intent of this program is to target reductions in distribution system losses. The overall benefits of this program is to identify and implement projects that will improve/reduce distribution system losses and improve system efficiency. Supporting corrective action either by taking direct control over an upgrade or support customer action will result in system demand reductions and relieve network capacity, on both a local and system wide basis.

Program #1: Distribution System Loss Assessment: Study
LUI obtained the services of an outside consultant, EnerSpectrum Group, in January 2005 to investigate the integrity of the overhead and underground distribution systems for areas where once upgraded, will reduce line losses and result in system demand reductions.

The study investigated and identified the benefits of optimizing the distribution system. It indicated areas of losses resulting from undersized conductors and undersized transformers. It further indicated where improvements may be made to the system through the implementation of proper feeder balancing. The study recommended system changes that will improve line losses and system reliability.

Program #2: Transformers and conductors upgrade: Implementation
Base on the results of the study conducted by the EnerSpectrum Group and their recommendations, LUI pursued a line loss mitigation project in Cobourg that resulted in system optimization and line loss reduction in the range of 3% to 5% in the areas of voltage conversions.

TOTAL PROGRAM COST:	**$105,000.00**
COSTS INCURRED	**$ 70,024.00**
At December 31, 2005:	**$ 70,024.00**

LESSONS LEARNED/CONCLUSIONS/ GENERAL COMMENTS:

1. Administration and program costs have been allocated on the gross amount as indicated in LUI's application in the year. LUI believes that more administrative type costing will be incurred on larger programs. Once the program has been completed no future administration costs will be allocated to the program.

2. For the year 2005, the net TRC is a positive value of $254,204, mainly due to the system optimization program initiative.

3. Overall expenditures per kWh saved is $.20. Lakefront has reached over 9101users of electricity in the Town of Cobourg. We will continue to foster a conservation culture as we build programs in the future.

4. As smart metering implementation becomes reality, LUI believes that the combined focus of the UtilAssist OUSM Group has provided great economies of scale for smaller LDCs. Through this group we are able to test various technologies and develop standards as a group.

5. The bulk of LUI's programs are in the development stage and 2005 set the foundation for future program development.

Sincerely,

Original signed

Dereck C. Paul
Manager; Regulatory Compliance and Finance

Appendix A - Evaluation of the CDM Plan

	Total	Residential	Commercial	Institutional	Industrial	Agricultural	System Optimization	Other 2 Sys Optimization Study	Other 1 Education & Promotion	Other 3	Other 4
Net TRC value ($):	*$ 254,203.68*	$12,703					$257,233	-$9,000	-$6,732		
Benefit to cost ratio:	*8.70*	9.83					17.33	$0.00	$0.00		
Number of participants or units delivered:	*9101*	600					1.00		8500		
Total KWh to be saved over the lifecycle of the plan (kWh):	*6,807,060*	243,000					6,564,060				
Total in year kWh saved (kWh):	*384,579*	56,376					328,203				
Total peak demand saved (kW):	*23*	12					10.35				
Total kWh saved as a percentage of total kWh delivered (%):99177534.7 (IESO 2005)	*0.388%*	0.0568%					0.33000				
Peak kW saved as a percentage of LDC peak kW load (%):195889.5 (Hydro One 2005)	*0.011%*	0.006%					0.0053%				
Gross in year C&DM expenditures ($):	*$ 67,782.45*	$ 1,006.05					$51,044	$9,000	$6,732		
Expenditures per KWh saved ($/kWh):*	*0.0100*	*0.0041*					*$ 0.0078*				
*Expenditures per KW saved ($/kW)**:*	*$ 3,012.55*	*$ 82.80*					*$ 4,931.79*				

Utility discount rate (%):	8.13

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

Appendix B - Discussion of the Program

(complete this section for each program)

A. **Name of the Program:** CFL Rebate Program

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

An energy conservation program aimed at providing residential customers with 15W CFLs and educating them on the cost saving advantages of conservation. Value of the two-pack CFLs is $5.99, but with a coupon discount of $2.00, its reduced to $3.99 for two-pack.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	60 W Incandescent		
Efficient technology:	15 W CFL		
Number of participants or units delivered:	600.00		
Measure life (years):	4.31		

B. **TRC Results:**

TRC Benefits ($):	$	*14,141.37*	
Measure's Costs ($):			
Utility program cost (less incentives):	$	1,438.05	Includes Discounted Measures Cost
Participant cost:	$	-	0
Total TRC costs:	$	1,438.05	
Net TRC (in year CDN $):		$12,703.32	
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		9.83	

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

Conservation Programs:

		lifecycle	in year
Demand savings (kW):	*Summer*		0.00
	Winter		12.15
Energy saved (kWh):		*243,000.00*	56,376.00
Other resources saved :			
Natural Gas (m3):		0	0
Water (l)		0	0

Expenditures per kWh Saved ($/kWh)	$	0.0041
Expenditures per kW Saved ($/kW)	$	82.80

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:	$ 1,006.05	Includes Measure's Cost - ensure full cost of measure entered in TRC!L15
	Incentive:	$ -	
	Total:	$ 1,006.05	
Utility indirect costs ($):	*Incremental capital:*	$ -	
	Incremental O&M:	$ -	
	Total:	$ -	
Total Utility Cost of Program		$ 1,006.05	
Participant costs ($):	*Incremental equipment:*	$ -	
	Incremental O&M:	$ -	0
	Total:	$ -	
Grand Total Program Cost		$ 1,006.05	

E. **Comments:**

A CFL Light bulb giveaway program at the Town Hall, targeting residential customers, providing information on conservation savings.

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

Appendix B - Discussion of the Program

(complete this section for each program)

A. **Name of the Program:** Education and Promotion

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

Utilized local newspaper advertisement and billing inserts to promote conservation culture in service community and developing conservation website jointly with a number of utilities in the CHEC group.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	vs advertisement, brochures, website		
Efficient technology:			
Number of participants or units delivered:	0.00		
Measure life (years):	0.00		

B. **TRC Results:**

TRC Benefits ($):	*$*	-	
Measure's Costs ($):			
Utility program cost (less incentives):	$	6,732.40	Includes Discounted Measures Cost
Participant cost:	$	-	0
Total TRC costs:	$	6,732.40	
Net TRC (in year CDN $):		-$6,732.40	
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		0.00	

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

Conservation Programs:

		lifecycle	in year
Demand savings (kW):	*Summer*		0.00
	Winter		0.00
Energy saved (kWh):		*0.00*	0.00
Other resources saved :			
Natural Gas (m3):		0	0
Water (l)		0	0
Expenditures per kWh Saved ($/kWh)		#DIV/0!	
Expenditures per kW Saved ($/kW)		#DIV/0!	

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:*	$ 6,732.40	
	Incremental O&M:	$ -	Includes Measure's Cost - ensure full cost of measure entered in TRC!L15
	Incentive:	$ -	
	Total:	$ 6,732.40	
Utility indirect costs ($):	*Incremental capital:*	$ -	
	Incremental O&M:	$ -	
	Total:	$ -	
Total Utility Cost of Program		$ 6,732.40	
Participant costs ($):	*Incremental equipment:*	$ -	
	Incremental O&M:	$ -	0
	Total:	$ -	
Grand Total Program Cost		$ 6,732.40	

E. **Comments:**

An educational program targeting all customers in LUI's service territory, providing information on benefits of conservation.

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

Appendix B - Discussion of the Program

(complete this section for each program)

A. **Name of the Program:** System Optimization

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

Study and work on distribution losses of a feeder voltage conversion. The feeder operated at 4,160 Volts, post-conversion the feeder now operates at 27,000 Volts. Some work was done by Lakefront staff and the utility paid full cost of change. Estimated cost to convert was $55,000.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	4,160 V supply transformer		
Efficient technology:	27,600 V supply transformer		
Number of participants or units delivered:	1.00		
Measure life (years):	20.00		

B. **TRC Results:**

TRC Benefits ($):		*$ 272,982.81*	
Measure's Costs ($):			
	Utility program cost (less incentives):	$ 15,750.05	Includes Discounted Measures Cost
	Participant cost:	$ -	0
	Total TRC costs:	$ 15,750.05	
Net TRC (in year CDN $):		$257,232.76	
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		17.33	

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

Conservation Programs:

		lifecycle	in year
Demand savings (kW):	*Summer*		0.00
	Winter		0.00
Energy saved (kWh):		*6,564,060.00*	328,203.00
Other resources saved :			
Natural Gas (m3):		0	0
Water (l)		0	0

Expenditures per kWh Saved ($/kWh)	$	0.0078
Expenditures per kW Saved ($/kW)		#DIV/0!

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):		10.35	
	lifecycle	*in year*	
Energy savngs (kWh):	6564060	328203	
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:	$ 51,044.14	Includes Measure's Cost - ensure full cost of measure entered in TRC!L15
	Incentive:	$ -	
	Total:	$ 51,044.14	
Utility indirect costs ($):	*Incremental capital:*	$ -	
	Incremental O&M:	$ -	
	Total:	$ -	
Total Utility Cost of Program		$ 51,044.14	
Participant costs ($):	*Incremental equipment:*	$ -	
	Incremental O&M:	$ -	0
	Total:	$ -	
Grand Total Program Cost		$ 51,044.14	

E. **Comments:**

Only partial costs reported on Quarterly Filing, invoices came in early 2006

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

Appendix B - Discussion of the Program

(complete this section for each program)

A. **Name of the Program:** System Optimization Study

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

Study on distribution losses of a feeder voltage conversion. The feeder operated at 4,160 Volts, post-conversion the feeder now operates a 27,000 Volts. Estimated cost of study was $10,000.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	4,160 V supply transformer		
Efficient technology:	27,600 V supply transformer		
Number of participants or units delivered:	0.00		
Measure life (years):	0.00		

B. **TRC Results:**

TRC Benefits ($):		$ -	
Measure's Costs ($):			
	Utility program cost (less incentives):	$ 9,000.00	Includes Discounted Measures Cost
	Participant cost:	$ -	0
	Total TRC costs:	$ 9,000.00	
Net TRC (in year CDN $):		-$9,000.00	
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		0.00	

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

Conservation Programs:

		lifecycle	in year
Demand savings (kW):	*Summer*		0.00
	Winter		0.00
Energy saved (kWh):		*0.00*	0.00
Other resources saved :			
Natural Gas (m3):		0	0
Water (l)		0	0
Expenditures per kWh Saved ($/kWh)		#DIV/0!	
Expenditures per kW Saved ($/kW)		#DIV/0!	

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:*	$ 9,000.00	
	Incremental O&M:	$ -	Includes Measure's Cost - ensure full cost of measure entered in TRC!L15
	Incentive:	$ -	
	Total:	$ 9,000.00	
Utility indirect costs ($):	*Incremental capital:*	$ -	
	Incremental O&M:	$ -	
	Total:	$ -	
Total Utility Cost of Program		$ 9,000.00	
Participant costs ($):	*Incremental equipment:*	$ -	
	Incremental O&M:	$ -	0
	Total:	$ -	
Grand Total Program Cost		$ 9,000.00	

E. **Comments:**

A distribution system loss assessment and study that provided information on benefits of system conversion.

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