Cornerstone Hydro Electric Concepts Association Inc.

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

Conservation and Demand Management
2006 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 2006. 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. In 2006 the CHEC group worked both individually and collectively to delivery CD&M programs. The individual reports from each utility provides to the reader a better understanding of the activity and focus of each utility while this summary report provides an overview of the impact of this combined effort.

In 2006 the level of activity varied significantly from member to member dependent on their remaining funds, resources and opportunities. Individual LDC activity level ranged from only being involved in "provincially led" initiatives to the development and delivery of a wide variety of programs. From a review of the programs it is interesting to note how opportunities, partnerships and delivery have matured at different rates in the different service territories.

Within the 16 utilities there have been a total of 104 initiatives worked on in 2006. As in the first year the initiatives represent projects specific to individual utilities and projects that are cooperative efforts between utilities or agencies (the OPA EKC Programs for example). While there were 104 initiatives included in the reporting many of the reports contained a number of separate activities joined in one Appendix B.

After the initial year where much of the ground work for future programs was started, one would expect that the majority of programs would be driving a positive TRC. On the population of 104 initiatives, 43% had a positive TRC. This low percentage of initiatives with a positive TRC indicates that many initiatives continued to focus on education, studies to prepare customers for

continued energy conservation and partnership building in the second year of the CDM program.

With the activity and experience gained in 2006 the CDM industry is moving towards the final year of third tranche funding and towards the new funding model. While the funding method will change the fundamental knowledge gained in delivering two years of CDM programming has proven and will continue to prove invaluable as programs continue to be offered to residential, commercial and industrial customers across the province.

This combined report, in addition to meeting the regulatory requirement, provides a comprehensive summary to CHEC members of the impact of their combined effort.

2.0 CHEC Members:

The 2006 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 undertook a total of 104 initiatives. These programs fell within three categories:

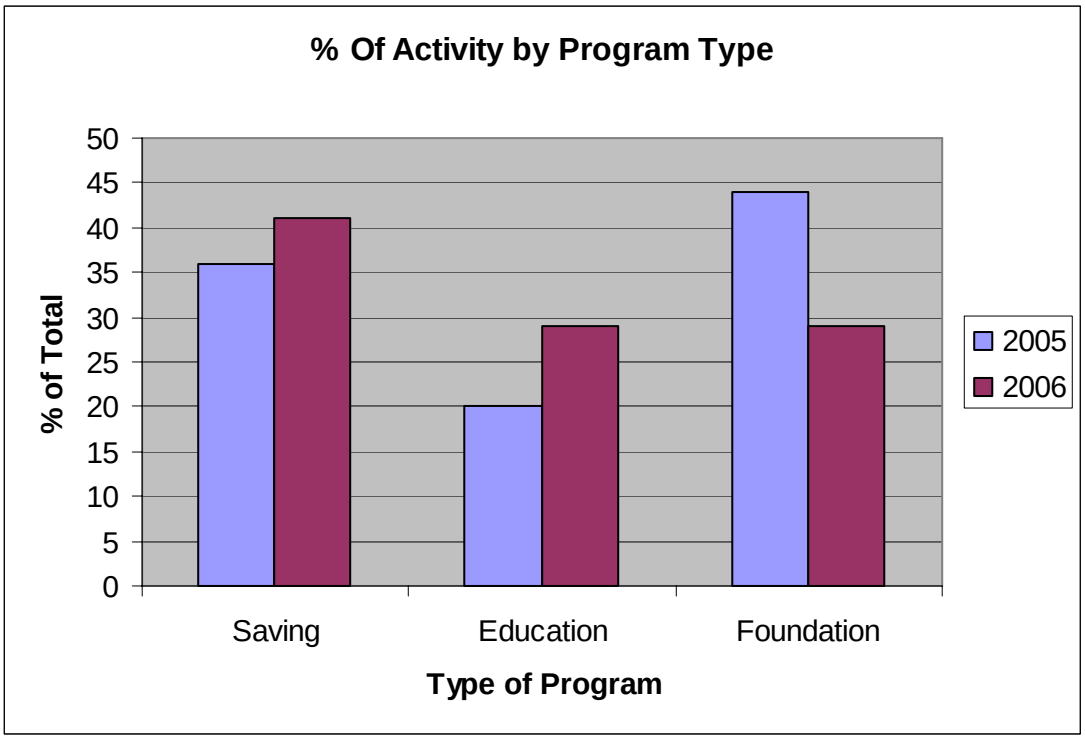
- Savings: Delivery of energy saving products or processes: coupons, rebates, free products, etc.
- Education: Providing general energy management information through such activities as: website development, workshops, brochures, etc,
- Foundation: Preparatory work for future programs that include: program research and development, energy audits, system studies, demonstration projects, partnerships, etc. This is a category that one might have expected to see reduced activity however it continues to be a major component.

The 2006 initiatives represent a total energy savings (lifecycle) of 129,330,000 kWh at a combined “Utility Cost” of $1,185,000 or approximately 1 c/kWh. This low cost of energy saved was achieved while continuing the education and foundation building programs. To put the energy savings in perspective the 129 Million kWh represent the annual energy required by 10,700 homes (at 1000

kWh/month). Comparing this to incandescent bulbs the energy saved is equivalent to removing approximately 1.5 Million, 60 W incandescent bulbs operating 4 hours per day for a year.

Figure 1 illustrates the change in program makeup from 2005 to 2006. The percentage of programs focused on "saving" and "education" have increased while the number of foundation" programs have decreased. The reduced focus on "foundation" programs in the second year is to be expected as the program mature and initiatives move from planning to delivery thereby increasing the number of "savings" and 'education' initiatives. Many "foundation" programs continue into the third year and will form the basis for conservation activities beyond third tranche by both utilities and their partners.

Figure 1



While the Figure provides a general breakdown it should be noted that there are many education programs that are now incorporating savings into the deliverables. The ability to incorporate savings and education provides an immediate conservation benefit, a positive TRC for the program and sets the stage for continued customer interest in conservation in the future.

Savings Programs: Programs were initiated both at the local and provincial level. Key to the 2006 results was the active participation of CHEC members in the OPA Every Kilowatt Counts programs. These programs in many instances provided a "savings" and "education" program that members could support without depleting their third tranche funding.

On the local level savings programs focused on local partnerships and delivery channels. Projects like municipal traffic light conversion built on the existing relationship with the municipality, provided benefits to the entire community and once installed ensured that the technology would remain in place once the benefits of lower cost and maintenance were recognized.

The use of product incentives and give-a-ways continued to play a significant role in the local programming. Capitalizing on the ability to participate in local events the provision of energy efficient product was a direct method of demonstrating the technology to the customer.

System optimization projects continue to be included in the portfolio. Nine initiatives focused on either completing the studies associated with system optimization or the implementation of field changes. System optimization continues to be an area for potential savings.

Education Programs: LDC's started to see opportunities to partner with others to provide programs into the education system. CHEC members along with other utilities in the service territory of Boards of Education are funding the development of programs for delivery in the schools. During 2006 third party providers (in many instances not-for-profits) made approaches to members for support and delivery of programs. As the conservation culture continues to develop the resources to provide this type of education will most likely continue to increase. The third tranche funding and the LDCs interest in partnering have helped this process.

Members have also been active in supporting education programs for the commercial and industrial sector. The challenge to date has been evaluating the results of this training. In most cases the proof of success is mostly anecdotal where mention is made of actions taken as a result of the training without any firm data. For this reason most education initiatives in this sector do not show a positive TRC.

Foundation Program: Many of the "foundation" type programs underway during 2006 were aimed at providing information to partners for further action. The CHEC members have actively supported alternate energy initiatives with a number of projects specific to these types of initiatives. The support provided at this stage, on the local level, can be pivotal on the success of future activities by community based groups.

In 2005 the "foundation" programs included initiatives such as: system optimization studies, smart meter preparation, customer audits and demonstration projects. In 2006 the increase in "education" and "savings" programs in some instances were the results of the 2005 foundation work. 2005 work on system optimization was a critical precursor to the project implementation in 2006 (and

2007). In some instances the full studies will only be completed in 2007 with the impact of implementation only being taken beyond the third tranche time frame.

Net TRC Results: The net TRC result of the combined CHEC CDM activity for 2006 is $3,800,000 up from $500,000 in 2005. The increase in TRC indicates the development of the industry over the first year resulting in deliverables in the second year.

Part of the development of the CDM industry was the provincial EKC programs – a program that built on the experience gained from the 2005 program coordinated by Energyshop.com and subscribed by a number of CHEC members. The involvement of CHEC members in the EKC programs resulted in 86% of the TRC results for member LDCs. The benefits of combining local support in wider based programs are clearly demonstrated by the success of these programs.

4.0 Discussion of Programs:

The individual program discussions from each utility are included in the following sections of this report. 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.

5.0 Lessons Learned:

Application of TRC: 2005 was the introduction to the TRC tool. While the tool can be used to evaluate programs to ensure a positive TRC result in many instances the 2006 programs were set prior to experience with the tool.

The principles of TRC are generally easy to understand: energy efficiency case vs base case. However the mechanics of determining the details of the evaluation can be quite complex depending on the application. CHEC members spent considerable time ensuring the assumptions and discounted costs were properly applied. In many instances the experience of one member was utilized to assist others within the group.

One of the greatest challenges with TRC remains the carryover of familiarity with its use. While the second year of applying the TRC was a bit more familiar the application is still a challenge as the use of the tool tends to occur in discreet measures (ie to do the Annual Report).

Funding: CHEC members in general have funds for continued programs in 2007 (with a few exceptions). With the advent of provincial programs the ability to stretch the third tranche funding has occurred. Hence the need for additional funding based on the LDCs plan can, to a large extent, be avoided until the LDCs Funding through the OPA is available.

Partnerships and Sharing: The ability to partner has increased in year two of the CDM Funding. Not-for-Profit Agencies, municipalities, local groups etc. have become aware of potential for partnering and have either approached members or have been very positive to LDC initiatives. It is anticipated that the ability to partner with a wide variety of groups within our communities should continue to grow. As such, it will be an important aspect of program delivery that the LDC community will need to broach with the OPA through 2008 and beyond.

The sharing of experience and insights by CHEC members is on-going. In 2006 CHEC members had the opportunity to participate in the development of the CDM industry structure for moving forward. The perspective brought by smaller participants helps to ensure the success of program delivery across the entire province in both large and small communities.

Customer Readiness: The results of the 2006 programs highlights that the conservation message is starting to be understood and that residential customers will take action.

In 2007 and beyond programs will need to reach beyond the compact fluorescent light to clearly demonstrate to customers that they have a wide variety of opportunities. There may be additional challenges to overcome to move these messages forward as the cost to implement and the payback may not be as favourable.

While programs have been successful with residential customers more work is required to make inroads into the commercial and industrial sector. These sectors continue to be difficult to get actively engaged. Future programs will need to take into account the customer's limited resources, long lead times, and provide demonstrated value of conservation to their business. Experience is showing that in this sector, the progression from initial discussion, to decision, to action is slow and methodical.

Utility Resources: Utilities continue to utilize internal resources for much of the CDM work as it is integrated into the systems of the LDC. CDM calls received, the manager's time to promote CDM, the accountant's time to record and report, are all functions immersed in the activities of existing positions. The ability to manage these requirements as the industry moves forward will need to be addressed by LDCs.

6.0 Conclusion:

The second year of CDM delivered a significant increase in the kWhs saved and continues to set the stage for on-going development of the CDM industry.

LDCs continue to support CDM and the involvement at the local level. CHEC members through their local programs, involvement in provincial programs and participation in the design of the industry continue to demonstrate their support for CDM, for the provincial initiative and their customers.

7.0 Appendices:

ORILLIA POWER DISTRIBUTION CORPORATION

ANNUAL REPORT ON CDM ACTIVITIES

FOR THE YEAR ENDING DECEMBER 31, 2006

INTRODUCTION:

Orillia Power Distribution Corporation (OPDC) is pleased to present its annual report on the activities and progress made in applying the conservation and demand management programs that we have set out to do in 2006. Attached to this report is Appendix A - Evaluation of 2005- 2006 CDM Plan and Appendix C- Program and Portfolio total.

OPDC has submitted its Conservation and Demand Management Plan with the CHEC Group of LDC companies. The following programs and services were conducted for 2006 with a CDM program cost of $111,416. Having committed to delivering the most effective conservation programs we have about $45,000 left to spend in 2007. The following are the summary of programs rolled out in 2006.

SYSTEM OPTIMIZATION PROGRAM

The intent of this program is to improve system reliability and reduce distribution system losses. Initially distribution system design and load studies were conducted and a new substation was constructed at a strategic location to optimize load flows, power quality, load switching capability and reduce line losses.
The substation was completed in 2006 and the power quality and reliability have improved in considerable part of the city with calculated benefits in line loss reduction. The incremental costs incurred include consultation fees, project design and procurement of energy efficient equipment. The total cost of the project is about $695,000 and 10% of this cost was considered as part of the CDM expenditure.

TOTAL PROGRAM FUNDS: $ 99,000.00
COSTS INCURRED IN 2005: $ 18,363.00
COSTS INCURRED IN 2006: $ 85,100.00
TOTAL COSTS INCURRED TO DECEMBER 31, 2006: $103,463.00

SMARTMETER INITIATIVES

As a member of the CHEC group, OPDC has joined the OUSM group of CLD and LDC in monitoring the pilot implementation of smart meter technologies and will proceed with meter procurement strategies for 2007. With OUSM group efforts, all the essential processes of smart meter deployment were identified and

put light on activities such as customer presentment, meter data repository requirements and back office integration work.

TOTAL PROGRAM FUNDS:	$ 50,000.00
TRANSFER TO OTHER PROGRAMS	$ 30,000.00
COSTS INCURRED IN 2005:	$ 5,158.00
COSTS INCURRED IN 2006:	$ 6,521.00
TOTAL COSTS INCURRED TO DECEMBER 31, 2006:	$ 11,678.00

PARTNERSHIP/SPONSORSHIP PROGRAMS

The intent of this program is to provide special incentive and discount programs in energy conservation for residential customers in partnership with federal and provincial government agencies, local municipalities and retailers.

(1) LED Traffic Lights
In partnership with our local municipality, city traffic lights were changed from incandescent bulbs to LED lights as part of the energy conservation program. Anticipated results include savings in consumption over conventional lights and savings in maintenance costs as the life expectancy of the new LED bulbs are 3 to 4 times that of conventional light bulbs. The difference in energy consumption is 1037 kWh per month for conventional lights compared to 200 kWh per month for LED lights for each traffic intersection. Ten traffic intersections were converted in 2006 and more will be converted in 2007.

(2) EKC Discount coupon program
OPA had sponsored and organized a discount coupon program during Spring and Fall months of 2006, inviting all utilities to participate in promoting the program in their community. The residential customers were able to buy energy efficient products such as CFL lights, programmable thermostats, sensor light switches, fans, etc. Orillia Power participated and helped to monitor the distribution and roll out of the program. The labour costs incurred for program coordination, retail inspection and report writing are not included in the calculation of program cost.

TOTAL PROGRAM FUNDS:	$10,000.00
TRANSFERRED FROM INTERVAL METER	$30,000.00
TOTAL COSTS INCURRED FOR 2005:	$10,986.00
LED TRAFFIC LIGHTS PROGRAM, 2006:	$13,580.00
OPA DISCOUNT COUPON PROGRAM	$ 0.00
TOTAL COSTS INCURRED TO DECEMBER 31, 2006:	$ 24,566.00

CUSTOMER EDUCATION PROGRAM

Blackout Day Challenge
The background of this challenge was rolled out to give awareness to consumers of the major blackout of August 14, 2003 and to conserve energy

during summer peak demand season. Woodstock Hydro had done a voluntary blackout day in their community in 2004 and had achieved a 4% reduction in energy usage. For 2006 they sent invitations to all LDC's to challenge their 4% reduction on a set date, which was August 15, 2006. The cost incurred for this program was newspaper and radio advertisement to organize and inform the public.

TOTAL ALLOTTED FUNDS:	$ 7,000.00
TOTAL COSTS INCURRED FOR 2005:	$ 4,627.00
TOTAL COSTS INCURRED FOR 2006:	$ 5,378.00
TOTAL COSTS INCURRED TO DECEMBER 31, 2006:	$ 10,005.00

EVALUATION OF CDM PLAN:

LESSONS LEARNED/CONCLUSIONS/ GENERAL COMMENTS:

1. For 2006, the year to date total for net TRC is a positive value of $774,223 mainly due to the delivery of LDC system optimization program, LED traffic lights Program and the Discount Coupon program sponsored by OPA. The life to date total net TRC is $842,920.

2. Overall expenditure to save one kWh is $.0075, which is quite an efficient number compare to 2005 number of $0.0202. It shows that we have done a good selection of conservation programs and producing good results.

3. The system optimization study and implementation of energy efficient distribution design was carried out in 2005 and 2006. To reduce the confusion of numbers, the results were calculated as a 2006 project. Reduction of system losses was the main intend but it also improves the system reliability and power quality.

4. The Black out day challenge was a success in reducing energy consumption for a day but compare to previous year consumption we have reduced only 1% of total consumption. The most important results come in the form of learning how to conserve and give awareness of the issues affecting our power supply. It creates a Culture of Conservation among all energy consumers, businesses and utilities alike in implementing the necessary shift in behaviours and attitudes towards less energy usage.

5. The Partnership and Sponsorship EKC discount coupon program creates awareness of energy conservation and in turn fosters a conservation culture. There were significant energy savings made with this program and we are preparing for another program for this spring with similar energy conserving tools for residential customers.

Sincerely submitted by,

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Appendix A - Evaluation of the CDM Plan

Highlighted boxes are to be completed manually, white boxes are linked to Appendix C and will be brought forward automatically.

	[5] Cumulative Totals Life-to-date	Total for 2006	Residential Coupon Prog	Commercial	Institutional LED Traffic Lights	Industrial	Agricultural	LDC System Optimization	[4] Smart Meters	Other #1 Blackout Day	Other #2
Net TRC value ($):	*828414.21*	**$ 796,720**	**$ 50,621**	**$ -**	**$ 135,617**	**$ -**	**$ -**	**$ 545,329**		**$ 68,034**	**$ (2,393)**
Benefit to cost ratio:	*4.47*	5.21	4.77	0.00	3.04	0.00	0.00	6.27		23.79	0.00
Number of participants or units delivered:	*13,247*	*2,503*	2,260	0	240	0	0	1		1	1
Lifecycle (kWh) Savings:	*24325608.82*	21,878,706	1,874,161	0	1,807,920	0	0	18,156,570		40,055	0
Report Year Total kWh saved (kWh):	*1233917.89*	920,387	216,760	1	90,396	0	0	605,219		8,011	0
Total peak demand saved (kW):		479	63	0	1	0	0	77		338	0
Total kWh saved as a percentage of total kWh delivered (%):	*0.19%*	0%	0%	#DIV/0!	40%	0%	#DIV/0!	4%		#DIV/0!	#DIV/0!
Peak kW saved as a percentage of LDC peak kW load (%):	*0.00%*	1%	0%	#DIV/0!	0%	0%	#DIV/0!	0%		#DIV/0!	#DIV/0!
[1] *Report Year Gross C&DM expenditures ($):*	*170348.95*	$ 136,110	$ 9,709	$ -	$ 11,002	$ -	$ -	$ 103,500	$ 6,521	$ 2,985	$ 2,393
[2] *Expenditures per KWh saved ($/kWh):*	0.0070	$ 0.01	$ 0.01	$ -	$ 0.01	$ -	$ -	$ 0.01		$ 0.07	$ -
[3] *Expenditures per KW saved ($/kW):*		$ 284.02	$ 154.11	$ -	$ 13,290.17	$ -	$ -	$ 1,344.16		$ 8.82	$ -

Utility discount rate (%):	7.625

[1] Expenditures are reported on accrual basis.
[2] Expenditures include all utility program costs (direct and indirect) for all programs which primarily generate energy savings.
[3] Expenditures include all utility program costs (direct and indirect) for all programs which primarily generate capacity savings.
[4] Please report spending related to 3rd tranche of MARR funding only. TRC calculations are not required for Smart Meters. Only actual expenditures for the year need to be reported.
[5] Includes total for the reporting year, plus prior year, if any (for example, 2006 CDM Annual report for third tranche will include 2005 and 2004 numbers, if any.

Appendix C - Program and Portfolio Totals

Report Year: 2006

1. Residential Coupon Prog Programs

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

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

	TRC Benefits (PV)	TRC Costs (PV)	$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures ($)
Prog A Spring & Fall CFL	$ 37,701	$ 3,861	$ 33,840	9.77	146,421	631,125	31	$ 1,108
Prog B Spring Timer	$ 2,740	$ 214	$ 2,526	12.82	3,121	62,415	3	
Prog C Spring & Fall pStat	$ 10,713	$ 6,584	$ 4,129	1.63	26,216	471,891	10	
Prog D Spring Ceiling Fan	$ -	-$ 405	-$ 405	0.00	0	0	0	
Prog E Fall Base Board pStat	$ 3,188	$ 432	$ 2,756	7.38	10,557	190,038	1	$ 8,601
Prog F Fall Dimmer	$ 4,665	$ 540	$ 4,125	8.64	15,034	150,336	10	
Prog G Fall Motion Sensor Switch	$ 1,458	$ 563	$ 896	2.59	4,698	46,980	3	
Prog H Fall Seasonal LED	$ 3,570	$ 1,136	$ 2,434	3.14	10,713	321,376	5	
Prog I	$ -	$ -	$ -	0.00	0	0	0	
Prog J	$ -	$ -	$ -	0.00	0	0	0	$ -
*Totals App. B - Residential Coupo	$ 64,034	$ 12,923	$ 51,110	4.95	216,760	1,874,161	63	$ 9,709
Residential Coupon Prog Indirect Costs not attributable to any specific program →		$ 489			*Total Residential kWh Delivered in 2006*	108,206,000		
Total Residential Coupon Prog TRC Costs		$ 13,412			Residential Peak in 2006 in kW	66,306		
**Totals TRC - Residential Coupon	**$ 64,034**	**$ 13,412**	**$ 50,621**	**4.77**				

2. Commercial Programs

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

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

	TRC Benefits (PV)	TRC Costs (PV)	$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures ($)
Name of Program A			$ -	0.00				
Name of Program B			$ -	0.00				
Name of Program C			$ -	0.00				
Name of Program D			$ -	0.00				
Name of Program E			$ -	0.00				
Name of Program F			$ -	0.00				
Name of Program G			$ -	0.00				
Name of Program H			$ -	0.00				
Name of Program I			$ -	0.00				
Name of Program J			$ -	0.00	1			
*Totals App. B -	$ -	$ -	$ -	0.00	1	0	0	$ -
Commercial Indirect Costs not attributable to any specific program →					*Total Commercial kWh Delivered in 2006*			
Total TRC Costs		$ -			Commercial Peak in 2006 in kW			
**Totals TRC - Commercial	**$ -**	**$ -**	**$ -**	**0.00**				

3. Institutional LED Traffic Lights Programs

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

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

	TRC Benefits (PV)	TRC Costs (PV)	$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures ($)
Prog A Institutional LED Traffic Lt	$ 202,217	$ 66,599	$ 135,617	3.04	90,396	1,807,920	1	$ 11,002
Christmas Tree Lighting at City Centr	$ -	$ -	$ -	0.00	0	0	0	$ -
Name of Program C			$ -	0.00				
Name of Program D			$ -	0.00				
Name of Program E			$ -	0.00				
Name of Program F			$ -	0.00				
Name of Program G			$ -	0.00				
Name of Program H			$ -	0.00				
Name of Program I			$ -	0.00				
Name of Program J			$ -	0.00				
*Totals App. B -	$ 202,217	$ 66,599	$ 135,617	3.04	90,396	1,807,920	1	$ 11,002
Institutional LED Traffic Lights Indirect Costs not attributable to any specific program →					*Total Institutional kWh Delivered in 2006*	224992		
Total TRC Costs		$ 66,599			Institutional Peak in 2006 in kW	66,306		
**Totals TRC - Institutional LED Tr	**$ 202,217**	**$ 66,599**	**$ 135,617**	**3.04**				

4. Industrial Programs

List each Appendix B in the cells below; Insert additional rows as required.
Note: To ensure the integrity of the formulas, please insert the additional rows in the middle of the list below.

	TRC Benefits (PV)	TRC Costs (PV)	$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures ($)
Prog A Dollar to $ense Workshop	$ -	$ -	$ -	0.00	0	0		
Name of Prorgam B			$ -	0.00				
Name of Program C			$ -	0.00				
Name of Program D			$ -	0.00				
Name of Program E			$ -	0.00				
Name of Program F			$ -	0.00				
Name of Program G			$ -	0.00				
Name of Program H			$ -	0.00				
Name of Program I			$ -	0.00				
Name of Program J			$ -	0.00				
***Totals App. B -**	$ -	$ -	$ -	0.00	0	0	0	$ -
Industrial Indirect Costs not attributable to any specific program →				*Total Industrial kWh Delivered in 2006*		158,258,000		
Total TRC Costs		$ -			Industrial Peak in 2006 in kW		66,306	
****Totals TRC - Industrial**	**$ -**	**$ -**	**$ -**	**0.00**				

5. Agricultural Programs

List each Appendix B in the cells below; Insert additional rows as required.
Note: To ensure the integrity of the formulas, please insert the additional rows in the middle of the list below.

	TRC Benefits (PV)	TRC Costs (PV)	$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures ($)
Name of Program A			$ -	0.00				
Name of Program B			$ -	0.00				
Name of Program C			$ -	0.00				
Name of Program D			$ -	0.00				
Name of Program E			$ -	0.00				
Name of Program F			$ -	0.00				
Name of Program G			$ -	0.00				
Name of Program H			$ -	0.00				
Name of Program I			$ -	0.00				
Name of Program J			$ -	0.00				
***Totals App. B -**	$ -	$ -	$ -	0.00	0	0	0	$ -
Agricultural Indirect Costs not attributable to any specific program →				*Total Agricultural kWh Delivered in 2006*				
Total TRC Costs		$ -			Agricultural Peak in 2006 in kW			
****Totals TRC - Agricultural**	**$ -**	**$ -**	**$ -**	**0.00**				

6. LDC System Optimization Programs

List each Appendix B in the cells below; Insert additional rows as required.
Note: To ensure the integrity of the formulas, please insert the additional rows in the middle of the list below.

	TRC Benefits (PV)	TRC Costs (PV)	$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures ($)
Prog A System Optimization	$ 648,829	$ 103,500	$ 545,329	6.27	605,219	18,156,570	77	$ 103,500
Name of Program B			$ -	0.00				
Name of Program C			$ -	0.00				
Name of Program D			$ -	0.00				
Name of Program E			$ -	0.00				
Name of Program F			$ -	0.00				
Name of Program G			$ -	0.00				
Name of Program H			$ -	0.00				
Name of Program I			$ -	0.00				
Name of Program J			$ -	0.00				
***Totals App. B -**	$ 648,829	$ 103,500	$ 545,329	6.27	605,219	18,156,570	77	$ 103,500
LDC System Optimization Indirect Costs not attributable to any specific program →				*Total Losses kWh Delivered in 2006*		16,934,208		
Total TRC Costs		$ 103,500			LDC Peak in 2006 in kW		66,306	
****Totals TRC - LDC System Optimi**	**$ 648,829**	**$ 103,500**	**$ 545,329**	**6.27**				

7. Smart Meters Program

Only spending information that was authorized under the 3rd tranche of MARR is required to be reported for Smart Meters.

Report Year Gross C&DM Expenditures ($)	$6,521
Previous Year C&DM Expenditures ($)	$5,158

8. Other #1 Blackout Day Programs

List each Appendix B in the cells below; Insert additional rows as required.
Note: To ensure the integrity of the formulas, please insert the additional rows in the middle of the list below.

	TRC Benefits (PV)	TRC Costs (PV)	$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures ($)
Prog A Blackout Challenge	$ 71,019	$ 2,985	$ 68,034	23.79	8,011	40,055	338	$ 2,985
Name of Program B			$ -	0.00				
Name of Program C			$ -	0.00				
Name of Program D			$ -	0.00				
Name of Program E			$ -	0.00				
Name of Program F			$ -	0.00				
Name of Program G			$ -	0.00				
Name of Program H			$ -	0.00				
Name of Program I			$ -	0.00				
Name of Program J			$ -	0.00				
Totals App. B -	$ 71,019	$ 2,985	$ 68,034	23.79	8,011	40,055	338	$ 2,985
Other #1 Blackout Day Indirect Costs not attributable to any specific program		-		*Total Other kWh Delivered in 2006*				
Total TRC Costs		$ 2,985			"Other" Peak in 2006 in kW			
****Totals TRC - Other #1 Blackout D**	**$ 71,019**	**$ 2,985**	**$ 68,034**	**23.79**				

9. Other #2 Programs

List each Appendix B in the cells below; Insert additional rows as required.
Note: To ensure the integrity of the formulas, please insert the additional rows in the middle of the list below.

	TRC Benefits (PV)	TRC Costs (PV)	$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures ($)
Advertising & delivery of conservatior	$ -	$ 2,393	-$ 2,393	0.00	0	0	0	$ 2,393
Website for Conservation	$ -	$ -	$ -	0.00	0	0	0	$ -
Name of Program C			$ -	0.00				
Name of Program D			$ -	0.00				
Name of Program E			$ -	0.00				
Name of Program F			$ -	0.00				
Name of Program G			$ -	0.00				
Name of Program H			$ -	0.00				
Name of Program I			$ -	0.00				
Name of Program J			$ -	0.00				
Totals App. B -	$ -	$ 2,393	-$ 2,393	0.00	0	0	0	$ 2,393
Other #2 Indirect Costs not attributable to any specific program		-		*Total Other kWh Delivered in 2006*				
Total TRC Costs		$ 2,393			"Other" Peak in 2006 in kW			
****Totals TRC - Other #2**	**$ -**	**$ 2,393**	**-$ 2,393**	**0.00**				

LDC's CDM PORTFOLIO TOTALS

	TRC Benefits (PV)	TRC Costs (PV)	$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures ($)
***TOTALS FOR ALL APPENDIX B**	$ 986,098	$ 188,890	$ 797,209	5.22	$ 920,387	$ 21,878,706	$ 479	$ 136,110
****Any **other** Indirect Costs not attributable to any specific program*		$ 489		*Total kWh Delivered in 2006*		317,425,000		
TOTAL ALL LDC COSTS		$ 189,379			Total Peak in 2006 in kW		66,306	
****LDC' PORTFOLIO TRC**	$ 986,098	$ 189,379	$ 796,720	5.21				
				Total kWh Delivered in 2005		320,063,261		

* The savings and spending information from this row is to be carried forward to Appendix A.
** The TRC information from this row is to be carried forward to Appendix A.
***The other indirect costs are from previous year not included in 2006.

Appendix B - Discussion of the Program

(complete this section for each program)

A. **Name of the Program:** Spring Every Kilowatt Counts (EKC) Program

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

In partnership with the OPA provided customer incentives for energy efficient technologies. Involved both direct mail and in-store promotion along with local advertising and support.

Measure(s):

	Measure 1	Measure 2	Measure 3	Measure 4	Measure 5	Measure 6
Base case technology:	0	0.00	0.00	0.00	0.00	0.00
Efficient technology:	CFLs	Ceiling Fan	Timers	Progr. Thermostats	Seasonal LED lights	0.00
Number of participants or units delivered:	173.00	9.00	19.00	11.00	0.00	0.00
Measure life (years):	4.00	20.00	20.00	18.00	0.00	0.00
Number of participants or units 2005	224	12	33	59	181	
Number of Participants or units delivered life-to-date	397.00	21.00	52.00	70.00	181.00	0.00

B. **TRC Results:**

	Reporting Year	2005 TRC Results	Life-to-date TRC Results:
TRC Benefits ($):	*$ 9,695.30*	$ 24,577.00	$ 34,272.30
Measure's Costs ($):			
Utility program cost (less incentives):	$ -	$ 4,527.10	$ 4,527.10
Incremental Measure Costs (Equipment Costs)	$ 1,449.00	$ 4,210.16	$ 5,659.16
Total TRC costs:	$ 1,449.00	$ 8,737.26	$ 10,186.26
Net TRC (in year CDN $):	$8,246.30	$ 15,839.74	$ 24,086.04
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	6.69	$ 2.81	$ 3.36

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

Cumulative Results:

Conservation Programs:

			Report Winter Demand (kW)	
Demand savings (kW):	*Summer*	0.61		
	Winter	0.00	0.61	
	lifecycle	*in year*	*Cumulative Lifecycle*	*Cumulative Annual Savings*
Energy saved (kWh):	*188,861.58*	22,619.47	642309.93	62027.196
			2005 Lifecycle	*2005 Annual*
			453448.35	39407.73

Other resources saved :

Natural Gas (m3):	0	0
Water (l)	0	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*:**

			2005 Costs	**Cumlative Life to Date**
Utility direct costs ($):	*Incremental capital:*	$ -		$ -
Error Choose Measures Cost Paid By on TRC1	*Incremental O&M:*	$ -	$ 4,210.16	$ 4,210.16
	Incentive:	$ -	$ -	$ -
	Total:	$ -	$ 4,210.16	$ 4,210.16
Utility indirect costs ($):	*Incremental capital:*	$ -		$ -
	Incremental O&M:	$ -		$ -
	Total:	$ -	$ -	$ -
Total Utility Cost of Program		$ -	4,210.16	4,210.16

E. **Assumptions & Comments:**

[1] Benefits should be estimated if costs have been incurred and the technology has been deployed. Benefits reflect the present value of the measure for the number of units deployed in the year, i.e. the numebr of units times the net present value per unit benefit specified in the TRC Guide.

[2] For technologies which have not been deployed but for which the LDC has incurred costs, report only the TRC costs on a present value basis. Incentives (e.g. rebates) from the LDC to a customer are not a component of the TRC costs. However, payments made to a third party service provider to run an incentives program are program costs, and are to be included as TRC costs under the "Utility Program Costs" line.

Appendix B - Discussion of the Program

(complete this section for each program)

A. **Name of the Program:** Fall EKC coupon program

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

Residential Baseboard pStats, Dimmers, Energy Star CFL,Motion Sensor, Programmable Thermostats and Seasonal LEDs discount coupon program organized by OPA during Fall of 2006. Discount coupons were sent out to 11,000 customer addresses and Orillia Power monitor the process.

Measure(s):

	Measure 1	Measure 2	Measure 3	Measure 4	Measure 5	Measure 6
Base case technology:	Manual Thermostat	normal switch	Incandesent bulb	Manual light switch	Manual adjust thermostat	Seasonal lights
Efficient technology:	Base Board pStat	Dimmer	Energy Star CFL	Motion sensor switch	Programmable thermostat	Seasonal LED lights
Number of participants or units delivered:	8.00	120.00	1,102.00	25.00	110.00	598.00
Measure life (months):	216.00	120.00	51.72	120.00	216.00	360.00
Number of participants or units 2005						
Number of Participants or units delivered life-to-date	8.00	120.00	1,102.00	25.00	110.00	598.00

B.

TRC Results:	**Reporting Year**	**2005 TRC Results**	**Life-to-date TRC Results:**
[1] *TRC Benefits ($):*	$ 55,206.95		$ 55,206.95
[2] *Measure's Costs ($):*			
Utility program cost (less incentives):	$ -		$ -
Incremental Measure Costs (Equipment Costs)	$ 12,082.00		$ 12,082.00
Total TRC costs:	$ 12,082.00	$ -	$ 12,082.00
Net TRC (in year CDN $):	$43,124.95	$ -	$ 43,124.95
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	4.57	#DIV/0!	$ 4.57

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

Conservation Programs:

			Cumulative Results:	
Demand savings (kW):	*Summer*	8.24	Report Winter Demand (kW)	
	Winter	62.77	62.77	
	lifecycle	*in year*	*Cumulative Lifecycle*	*Cumulative Annual Savings*
Energy saved (kWh):	*1,687,246.50*	191,612.50	1687246.495	191612.4977
			2005 Lifecycle	*2005 Annual*

Other resources saved :

Natural Gas (m3):	0	0
Water (l)	0	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*:**

			2005 Costs	Cumlative Life to Date
Utility direct costs ($):	*Incremental capital:*	$ -		$ -
	0 *Incremental O&M:*	$ -		$ -
	Incentive:	$ -		$ -
	Total:	$ -	$ -	$ -
Utility indirect costs ($):	*Incremental capital:*	$ -		$ -
	Incremental O&M:	$ -		$ -
	Total:	$ -	$ -	$ -
Total Utility Cost of Program		$ -	-	-

E. Assumptins & Comments:

1 Benefits should be estimated if costs have been incurred and the technology has been deployed. Benefits reflect the present value of the measure for the number of units deployed in the year, i.e. the numebr of units times the net present value per unit benefit specified in the TRC Guide.

2 For technologies which have not been deployed but for which the LDC has incurred costs, report only the TRC costs on a present value basis. Incentives (e.g. rebates) from the LDC to a customer are not a component of the TRC costs. However, payments made to a third party service provider to run an incentives program are program costs, and are to be included as TRC costs under the "Utility Program Costs" line.

Appendix B - Discussion of the Program

(complete this section for each program)

A. **Name of the Program:** Institutional LED Traffic Lights

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

Energy conservation program by replacing existing incandescent traffic lights to LED traffic lights. Requires bulb replacement only performed by contractor. Orillia Power paid $1000 per traffic intersection to the municipality. 240 LED bulbs were changed at 10 intersections. Estimated cost to convert was $7500 per intersection. Base case allowed for annual relamping.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	L037 kWh/mth per intersection		
Efficient technology:	ED 200 kwh/mth per intersection		
Number of participants or units delivered:	240.00	N/A	N/A
Measure life (years):	20.00		
Number of participants or units 2005	96		
Number of Participants or units delivered life-to-date	336.00		

B.

TRC Results:	**Reporting Year**	**2005 TRC Results**	**Life-to-date TRC Results:**
[1] *TRC Benefits ($):*	$ 202,216.61	$ 25,867.50	$ 228,084.11
[2] *TRC Costs ($):*			
Utility program cost (less incentives):	$ -		$ -
Incremental Measure Costs (Equipment Costs)	$ 66,599.28	$ 3,360.29	$ 69,959.57
Total TRC costs:	$ 66,599.28	$ 3,360.29	$ 69,959.57
Net TRC (in year CDN $):	$ 135,617.33	$ 22,507.21	$ 158,124.54
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	3.04	$ 7.70	$ 3.26

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

Cumulative Results:

Conservation Programs:

Demand savings (kW):	*Summer*	202.18	Report Winter Demand (kW)	
	Winter	202.18	202.18	
	lifecycle	*in year*	*Cumulative Lifecycle*	*Cumulative Annual Savings*
Energy saved (kWh):	*1,807,920.00*	90,396.00	2531088	126554.4
			2005 Lifecycle	*2005 Annual*
			723168	36158.4
Other resources saved :				
Natural Gas (m3):	0	0		
Water (l)	0	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*:		**Reporting Year**	**2005 Costs**	**Cumlative Life to Date**
Utility direct costs ($):	*Incremental capital:*	$ -		$ -
Includes Measure's Cost - ensure full cost of measure entered in TRC!L15	*Incremental O&M:*	$ -		$ -
	Incentive:	$ 10,000.80	$ 4,000.32	$ 14,001.12
	Total:	$ 10,000.80	$ 4,000.32	$ 14,001.12
Utility indirect costs ($):	*Incremental capital:*	$ -		$ -

	Incremental O&M:	$ -		$ -
	Total:	$ -	$ -	$ -
Total Utility Cost of Program		$ 10,000.80	4,000.32	14,001.12

E. Assumptions & Comments:

Out of 24 bulbs per inter section there will be 8 bulbs lit at any given time. Each LED bulb saves about 100 kWh per year. For 8 bulbs x 10 intersections it will be 8000kWh/year savings converted to 0.936kW demand savings.

[1] Benefits should be estimated if costs have been incurred and the technology has been deployed. Benefits reflect the present value of the measure for the number of units deployed in the year, i.e. the numebr of units times the net present value per unit b

[2] For technologies which have not been deployed but for which the LDC has incurred costs, report only the TRC costs on a present value basis. Incentives (e.g. rebates) from the LDC to a customer are not a component of the TRC costs. However, payments made

Orillia Traffic Light Program

Incandescent bulbs replaced with LED lights. 96

Base Case — Assuming 8 bulbs are lit at any given time at an intersection

	Wattage	Monthly kWh	Annual kWh
With Incandescent Bulbs	129.63	1037	12444
With LED Bulbs	25	200	2400
Load Savings per intersection			10044
Load Savings per bulb	24 bulbs per intersection		418.5

Cost to convert:	(Participant Equipment Cost)
Per Intersection	$ 7,500.00
# of Intersections	10
Cost	$ 75,000.00

On Measure's table the intersection savings was put in
Need to change to per bulb

Incandescent Annual k	518.5
LED Annual kWh/bulb	100
Annual Savings kWh/b	418.5

Relamping Assumptions

	Years to Relamp	Cost of Bulb	Labour to relamp
Incandescent	1	$ 5.00	$ 1,000.00
LED	20	$ 10.00	$ 1,000.00

Relamping of the LED will be done less. For the lifetime of the technology can take 20 years. In other words the LED bulbs will be used for the next 20 years. With the above assumption the Incandescents would be relamped 20 times while no relamping is required for LED's for 20 years.

Cost of Relamping

	# of Relampings	Labour Cost/Time	Cost of Bulbs(Total)	Total
Incandescent	20	1000	$ 480.00	$ 29,600.00
LED	0	1000	$ 960.00	$ -

Savings in Maintenance $ 29,600.00

Discounted Unit Cost

	Maintenance Cost
Base Case Incandscent	$ 29,600.00
EE Case - LEDs	$ -
Discounted Measure's Cost	-$ 29,600.00
Discounted Measures CostPer Unit for # of Bulbs	-$ 308.33

Above data goes to Measures table

Season	**Winter (December to March)**			**Summer (June to September)**			**ulder (April, May, Oct., I**		
Price Period	On Peak	Mid Peak	Off Peak	On Peak	Mid Peak	Off Peak	Mid Peak	Off Peak	
Time of Day	7 am to 11 am 5 pm to 8 pm	11 am to 5 pm 8 pm to 10 pm	10 pm to 7 am All weekend hrs.	11pm to 5 pm	7 am to 11 5 pm to 10 pm	10 pm to 7 All weekend hrs.	7am to 10	10 pm to 7 am All weekend hrs.	
# of Hours	602	688	1614	522	783	1623	1305	1623	8760
% of Annual Hours	6.87%	7.85%	18.42%	5.96%	8.94%	18.53%	14.90%	18.53%	100.00%
Consistent Load **418.5**	28.76	32.87	77.11	24.94	37.41	77.54	62.35	77.54	418.50

Appendix B - Discussion of the Program

(complete this section for each program)

A. **Name of the Program:** Industrial Dollar to Sense workshop

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

2005 Project - Energy Conservation Workshop co-sponsored by NRCan.

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:	0.00	N/A	N/A
Measure life (years):	0.00		
Number of participants or units 2005	1		
Number of Participants or units delivered life-to-date	1.00		

B.

TRC Results:	**Reporting Year**	**2005 TRC Results**	**Life-to-date TRC Results:**
[1] *TRC Benefits ($):*	$ -	$ 72,550.75	$ 72,550.75
[2] *TRC Costs ($):*			
Utility program cost (less incentives):	$ -	$ 2,337.00	$ 2,337.00
Incremental Measure Costs (Equipment Costs)	$ -	$ 7,200.00	$ 7,200.00
Total TRC costs:	$ -	$ 9,537.00	$ 9,537.00
Net TRC (in year CDN $):	$ -	$ 63,013.75	$ 63,013.75
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	#DIV/0!	$ 7.61	$ 7.61

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

Cumulative Results:

Conservation Programs:

Demand savings (kW):	*Summer*	0.00	Report Winter Demand (kW)	
	Winter	0.00	0.00	
	lifecycle	*in year*	*Cumulative Lifecycle*	*Cumulative Annual Savings*
Energy saved (kWh):	*0.00*	0.00	1275430	255086
			2005 Lifecycle	*2005 Annual*
			1275430	255086

Other resources saved :		
Natural Gas (m3):	0	0
Water (l)	0	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*:**

		Reporting Year	2005 Costs	Cumlative Life to Date
Utility direct costs ($):	*Incremental capital:*	$ -	$ 2,337.00	$ 2,337.00
Includes Measure's Cost - ensure full cost of measure entered in TRC!L15	*Incremental O&M:*	$ -		$ -
	Incentive:	$ -		$ -
	Total:	$ -	$ 2,337.00	$ 2,337.00
Utility indirect costs ($):	*Incremental capital:*	$ -		$ -
	Incremental O&M:	$ -		$ -
	Total:	$ -	$ -	$ -
Total Utility Cost of Program		$ -	2,337.00	2,337.00

E. **Assumptions & Comments:**

[1] Benefits should be estimated if costs have been incurred and the technology has been deployed. Benefits reflect the present value of the measure for the number of units deployed in the year, i.e. the numebr of units times the net present value per unit b

[2] For technologies which have not been deployed but for which the LDC has incurred costs, report only the TRC costs on a present value basis. Incentives (e.g. rebates) from the LDC to a customer are not a component of the TRC costs. However, payments made

Appendix B - Discussion of the Program

(complete this section for each program)

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

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

Load flows and voltage drop studies were performed to reduce losses and increase power quality. A new substation was constructed and located strategically where it would give the minimum line losses and voltage drop. An inefficient old station will be taken out of service. We can omit the calculation of operating cost as number of substations is not changed. Energy savings due to reduce losses are calculated with the comparison between the old system setup versus the new setup. Other benefits such as system reliability and power quality improvement were realized. Measured life is conservatively kept at 30 years. Free rider rate is assumed as 0% as it is a one of project.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	Old distribution system		
Efficient technology:	Dist. system with new substn		
Number of participants or units delivered:	1.00		
Measure life (years):	30.00		
Number of participants or units 2005			
Number of Participants or units delivered life-to-date	1.00		

B.

TRC Results:	**Reporting Year**	**2005 TRC Results**	**Life-to-date TRC Results:**
[1] *TRC Benefits ($):*	$ 648,828.71		$ 648,828.71
[2] *TRC Costs ($):*			
Utility program cost (less incentives):	$ -		$ -
Incremental Measure Costs (Equipment Costs)	$ 103,500.00		$ 103,500.00
Total TRC costs:	$ 103,500.00	$ -	$ 103,500.00
Net TRC (in year CDN $):	$ 545,328.71	$ -	$ 545,328.71
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	6.27	#DIV/0!	$ 6.27

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

Cumulative Results:

Conservation Programs:

Demand savings (kW):	*Summer*	0.00	Report Summer Demand (kW)	
	Winter	0.00	0.00	
	lifecycle	*in year*	*Cumulative Lifecycle*	*Cumulative Annual Savings*
Energy saved (kWh):	*18,156,570.00*	605,219.00	18156570	605219
			2005 Lifecycle	*2005 Annual*

Other resources saved :

Natural Gas (m3):	0	0
Water (l)	0	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:

	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):

D. **Program Costs*:**

		Reporting Year	2005 Costs	Cumlative Life to Date
Utility direct costs ($):	*Incremental capital:*	$ -		$ -
Includes Measure's Cost - ensure full cost of measure entered in TRC!L15	*Incremental O&M:*	$ 103,500.00		$ 103,500.00
	Incentive:	$ -		$ -
	Total:	$ 103,500.00	$ -	$ 103,500.00
Utility indirect costs ($):	*Incremental capital:*	$ -		$ -
	Incremental O&M:	$ -		$ -
	Total:	$ -	$ -	$ -
Total Utility Cost of Program		$ 103,500.00	-	103,500.00

E. Assumptions & Comments:

[1] Benefits should be estimated if costs have been incurred and the technology has been deployed. Benefits reflect the present value of the measure for the number of units deployed in the year, i.e. the numebr of units times the net present value per unit b

[2] For technologies which have not been deployed but for which the LDC has incurred costs, report only the TRC costs on a present value basis. Incentives (e.g. rebates) from the LDC to a customer are not a component of the TRC costs. However, payments made

Appendix B - Discussion of the Program

(complete this section for each program)

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

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

The cost incurred is solely for Smart meter initiatives and monitor the pilot projects of other utilities. Installation and implementation will be coordinated with other utilities.

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:	0.00	N/A	N/A
Measure life (years):	0.00		
Number of participants or units 2005	0		
Number of Participants or units delivered life-to-date	0.00		

B.

TRC Results:	**Reporting Year**	**2005 TRC Results**	**Life-to-date TRC Results:**
[1] *TRC Benefits ($):*	$ -		$ -
[2] *TRC Costs ($):*			
Utility program cost (less incentives):	$ 6,521.00	$ 5,158.00	$ 11,679.00
Incremental Measure Costs (Equipment Costs)	$ -		$ -
Total TRC costs:	$ 6,521.00	$ 5,158.00	$ 11,679.00
Net TRC (in year CDN $):	-$ 6,521.00	-$ 5,158.00	-$ 11,679.00
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	Report Winter Demand (kW)	
	Winter	0.00	0.00	
	lifecycle	*in year*	*Cumulative Lifecycle*	*Cumulative Annual Savings*
Energy saved (kWh):	*0.00*	0.00	0	0
			2005 Lifecycle	*2005 Annual*

Other resources saved :		
Natural Gas (m3):	0	0
Water (l)	0	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*:**

		Reporting Year	2005 Costs	Cumlative Life to Date
Utility direct costs ($):	*Incremental capital:*	$ 6,521.00	$ 5,158.00	$ 11,679.00
Includes Measure's Cost - ensure full cost of measure entered in TRC!L15	*Incremental O&M:*	$ -		$ -
	Incentive:	$ -		$ -
	Total:	$ 6,521.00	$ 5,158.00	$ 11,679.00
Utility indirect costs ($):	*Incremental capital:*	$ -		$ -
	Incremental O&M:	$ -		$ -
	Total:	$ -	$ -	$ -
Total Utility Cost of Program		$ 6,521.00	5,158.00	11,679.00

E. Assumptions & Comments:

[1] Benefits should be estimated if costs have been incurred and the technology has been deployed. Benefits reflect the present value of the measure for the number of units deployed in the year, i.e. the numebr of units times the net present value per unit b

[2] For technologies which have not been deployed but for which the LDC has incurred costs, report only the TRC costs on a present value basis. Incentives (e.g. rebates) from the LDC to a customer are not a component of the TRC costs. However, payments made

Appendix B - Discussion of the Program

(complete this section for each program)

A. **Name of the Program:** Blackout day challenge

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

Blackout Day Challenge is to give awareness to consumers of the major blackout of August 14, 2003 and to conserve energy during summer peak demand season. Woodstock Hydro has done a voluntary blackout day for their community in 2004 and had achieved a 4% reduction in energy usage. For 2006 they sent invitations to all LDC's to challenge their 4% reduction on a set date, which is August 15, 2006. The cost incurred for this program was newspaper and radio advertisement to organize and inform the public.

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:	1.00	N/A	N/A
Measure life (years):	5.00		
Number of participants or units 2005			
Number of Participants or units delivered life-to-date	1.00		

B.

TRC Results:	**Reporting Year**	**2005 TRC Results**	**Life-to-date TRC Results:**
[1] *TRC Benefits ($):*	$ 71,018.84		$ 71,018.84
[2] *TRC Costs ($):*			
Utility program cost (less incentives):	$ 2,985.00		$ 2,985.00
Incremental Measure Costs (Equipment Costs)	$ -		$ -
Total TRC costs:	$ 2,985.00	$ -	$ 2,985.00
Net TRC (in year CDN $):	$ 68,033.84	$ -	$ 68,033.84
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	23.79	#DIV/0!	$ 23.79

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

Conservation Programs:

			Cumulative Results:	
Demand savings (kW):	*Summer*	338.40	Report Winter Demand (kW)	
	Winter	0.00	0.00	
	lifecycle	*in year*	*Cumulative Lifecycle*	*Cumulative Annual Savings*
Energy saved (kWh):	*40,054.50*	8,010.90	40054.5	8010.9
			2005 Lifecycle	*2005 Annual*

Other resources saved :

Natural Gas (m3):	0	0
Water (l)	0	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*:**

		Reporting Year	2005 Costs	Cumlative Life to Date
Utility direct costs ($):	*Incremental capital:*	$ -		$ -
Includes Measure's Cost - ensure full cost of measure entered in TRC!L15	*Incremental O&M:*	$ 2,985.00		$ 2,985.00
	Incentive:	$ -		$ -
	Total:	$ 2,985.00	$ -	$ 2,985.00
Utility indirect costs ($):	*Incremental capital:*	$ -		$ -
	Incremental O&M:	$ -		$ -
	Total:	$ -	$ -	$ -
Total Utility Cost of Program		$ 2,985.00	-	2,985.00

E. **Assumptions & Comments:**

[1] Benefits should be estimated if costs have been incurred and the technology has been deployed. Benefits reflect the present value of the measure for the number of units deployed in the year, i.e. the numebr of units times the net present value per unit b

[2] For technologies which have not been deployed but for which the LDC has incurred costs, report only the TRC costs on a present value basis. Incentives (e.g. rebates) from the LDC to a customer are not a component of the TRC costs. However, payments made

Appendix B - Discussion of the Program

(complete this section for each program)

A. **Name of the Program:** Advertising & delivery of conservation message

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

To convey educational materials, safety messages and update of government regulation changes through billing stuffers and advertising.

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:	1.00		
Measure life (months):	0.00		
Number of participants or units 2005	10000		
Number of Participants or units delivered life-to-date	10,001.00		

B.

TRC Results:	**Reporting Year**	**2005 TRC Results**	**Life-to-date TRC Results:**
[1] *TRC Benefits ($):*	$ -		$ -
[2] *TRC Costs ($):*			
Utility program cost (less incentives):	$ 2,393.00	$ 4,627.20	$ 7,020.20
Incremental Measure Costs (Equipment Costs)	$ -		$ -
Total TRC costs:	$ 2,393.00	$ 4,627.20	$ 7,020.20
Net TRC (in year CDN $):	-$ 2,393.00	-$ 4,627.20	-$ 7,020.20
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	0.00	$ -	$ -

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

Conservation Programs:

			Cumulative Results:	
Demand savings (kW):	*Summer*	0.00	Report Summer Demand (kW)	
	Winter	0.00	0.00	
	lifecycle	*in year*	*Cumulative Lifecycle*	*Cumulative Annual Savings*
Energy saved (kWh):	*0.00*	0.00	0	0
			2005 Lifecycle	*2005 Annual*

Other resources saved :		
Natural Gas (m3):	0	0
Water (l)	0	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:

	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):	

D. **Program Costs*:**

		Reporting Year	2005 Costs	Cumlative Life to Date
Utility direct costs ($):	*Incremental capital:*	$ -		$ -
Error: Choose Measure's cost paid by:	*Incremental O&M:*	$ 2,393.00	$ 4,627.20	$ 7,020.20
	Incentive:	$ -		$ -
	Total:	$ 2,393.00	$ 4,627.20	$ 7,020.20
Utility indirect costs ($):	*Incremental capital:*	$ -		$ -
	Incremental O&M:	$ -		$ -
	Total:	$ -	$ -	$ -
Total Utility Cost of Program		$ 2,393.00	4,627.20	7,020.20

E. Assumptions & Comments:

Now is the time for all good men

[1] Benefits should be estimated if costs have been incurred since the technology was deployed. Benefits reflect the present value of the measure for the number of units deployed in the year, i.e. the number of units times the net present value per unit benefit specified in the TRC Guide.

[2] For technologies which have not been deployed but for which the LDC has incurred costs, report only the TRC costs on a present value basis. Incentives (e.g. rebates) from the LDC to a customer are not a component of the TRC costs. However, payments made to a third party service provider to run an incentives program are program costs, and are to be included as TRC costs under the "Utility Program Costs" line.

Appendix B - Discussion of the Program

(complete this section for each program)

A. **Name of the Program:** Website for Conservation

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

To host website on energy conservation along with other CHEC members - on line in 2006.

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:	0.00		
Measure life (months):	0.00		
Number of participants or units 2005			
Number of Participants or units delivered life-to-date	0.00		

B.

TRC Results:	**Reporting Year**	**2005 TRC Results**	**Life-to-date TRC Results:**
[1] *TRC Benefits ($):*	$ -		$ -
[2] *TRC Costs ($):*			
Utility program cost (less incentives):	$ -	$ 6,619.13	$ 6,619.13
Incremental Measure Costs (Equipment Costs)	$ -		$ -
Total TRC costs:	$ -	$ 6,619.13	$ 6,619.13
Net TRC (in year CDN $):	$ -	-$ 6,619.13	-$ 6,619.13
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	#DIV/0!	$ -	$ -

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

Cumulative Results:

Conservation Programs:

Demand savings (kW):	*Summer*	0.00	Report Summer Demand (kW)	
	Winter	0.00	0.00	
	lifecycle	*in year*	*Cumulative Lifecycle*	*Cumulative Annual Savings*
Energy saved (kWh):	*0.00*	0.00	0	0
			2005 Lifecycle	*2005 Annual*

Other resources saved :

Natural Gas (m3):	0	0
Water (l)	0	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:

	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):	

D. **Program Costs*:**

		Reporting Year	2005 Costs	Cumlative Life to Date
Utility direct costs ($):	*Incremental capital:*	$ -		$ -
Error: Choose Measure's cost paid by:	*Incremental O&M:*	$ -	$ 6,619.13	$ 6,619.13
	Incentive:	$ -		$ -
	Total:	$ -	$ 6,619.13	$ 6,619.13
Utility indirect costs ($):	*Incremental capital:*	$ -		$ -
	Incremental O&M:	$ -		$ -
	Total:	$ -	$ -	$ -
Total Utility Cost of Program		$ -	6,619.13	6,619.13

E. Assumptions & Comments:

Now is the time for all good men

[1] Benefits should be estimated if costs have been incurred since the technology was been deployed. Benefits reflect the present value of the measure for the number of units deployed in the year, i.e. the number of units times the net present value per unit benefit specified in the TRC Guide.

[2] For technologies which have not been deployed but for which the LDC has incurred costs, report only the TRC costs on a present value basis. "Incentives (e.g. rebates) from the LDC to a customer are not a component of the TRC costs. However, payments made to a third party service provider to run an incentives program are program costs, and are to be included as TRC costs under the "Utility Program Costs" line.

Appendix B - Discussion of the Program

(complete this section for each program)

A. **Name of the Program:** Christmas Tree Lighting at City Centre

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

2005 project

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	0		
Efficient technology:	Seasonal LEDs		
Number of participants or units delivered:	0.00		
Measure life (months):	0.00		
Number of participants or units 2005	150		
Number of Participants or units delivered life-to-date	150.00		

B.

TRC Results:	**Reporting Year**	**2005 TRC Results**	**Life-to-date TRC Results:**
[1] *TRC Benefits ($):*	$ -	$ 2,439.10	$ 2,439.10
[2] *TRC Costs ($):*			
Utility program cost (less incentives):	$ -	$ 3,306.00	$ 3,306.00
Incremental Measure Costs (Equipment Costs)	$ -		$ -
Total TRC costs:	$ -	$ 3,306.00	$ 3,306.00
Net TRC (in year CDN $):	$ -	-$ 866.90	-$ 866.90
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	#DIV/0!	$ 0.74	$ 0.74

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

Cumulative Results:

Conservation Programs:

Demand savings (kW):	*Summer*	0.00	Report Summer Demand (kW)
	Winter	0.00	0.00

	lifecycle	*in year*	*Cumulative Lifecycle*	*Cumulative Annual Savings*
Energy saved (kWh):	*0.00*	0.00	80612.82	2687.09
			2005 Lifecycle	*2005 Annual*
			80612.82	2687.09

Other resources saved :		
Natural Gas (m3):	0	0
Water (l)	0	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:

	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):

D. **Program Costs*:**

		Reporting Year	2005 Costs	Cumlative Life to Date
Utility direct costs ($):	*Incremental capital:*	$ -		$ -
Error: Choose Measure's cost paid by:	*Incremental O&M:*	$ -	$ 5,449.50	$ 5,449.50
	Incentive:	$ -		$ -
	Total:	$ -	$ 5,449.50	$ 5,449.50
Utility indirect costs ($):	*Incremental capital:*	$ -		$ -
	Incremental O&M:	$ -		$ -
	Total:	$ -	$ -	$ -
Total Utility Cost of Program		$ -	5,449.50	5,449.50

E. Assumptions & Comments:

Now is the time for all good men

1 Benefits should be estimated if costs have been incurred and the technology has been deployed. Benefits reflect the present value of the measure for the number of units deployed in the year, i.e. the numebr of units times the net present value per unit benefit specified in the TRC Guide.

2 For technologies which have not been deployed but for which the LDC has incurred costs, report only the TRC costs on a present value basis. Incentives (e.g. rebates) from the LDC to a customer are not a component of the TRC costs. However, payments made to a third party service provider to run an incentives program are program costs, and are to be included as TRC costs under the "Utility Program Costs" line.