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

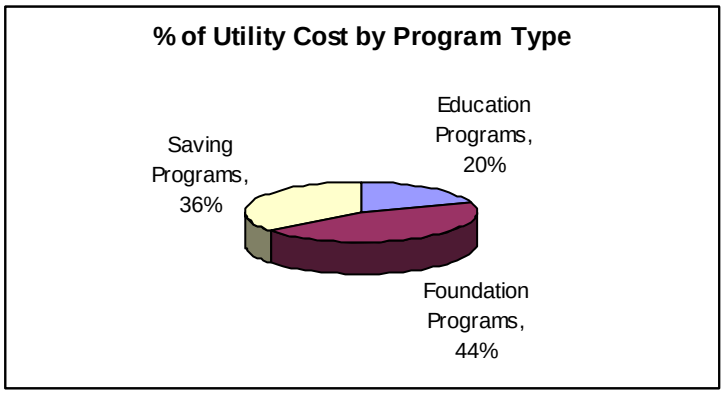
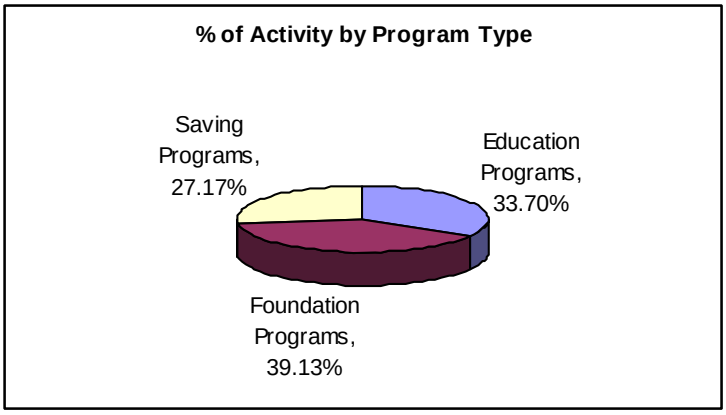


Figure 2



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										

WELLINGTON NORTH POWER INC.
RP-2004-0203\EB-2005-0523
CONSERVATION AND DEMAND
ANNUAL REPORT
FOR THE YEAR ENDED DECEMBER 31, 2005

Introduction

Wellington North Power Inc. is pleased to submit its Annual Report on the progress made in applying the third tranche monies to Conservation and Demand Management programs. Attached to this report is Appendix A – Evaluation of the CDM Plan, along with Appendix B – Discussion of the Program for the individual programs. Wellington North Power Inc. submitted its C&DM plan with the CHEC Group and received a final order approving spending on the programs as discussed in this report.

Eight C&DM programs have been initiated, which included a CFL Light Bulb Giveaway, a Brochure Mailing, Customer Web Site (not yet complete), CHEC Web Design, Interval Load/PF Audit and System Optimization (3 projects). Throughout the C&DM initiative, administrative costs were also incurred and have been reported in the TRC as a separate project. This approach was adopted because the administration costs were not directly attributable to a single project.

In an effort to ensure maximum conservation benefit from the investment, Wellington North Power Inc. reviewed the effectiveness and the costs of the initiatives on an ongoing basis. In Q4, budgeted funds were moved from the Operating Program to complete the Capital Program which proved to be a valuable investment.

Although many of the identified projects did not have any directly measurable benefits, it is felt that the specific C&DM initiatives can be viewed as foundation projects, used to educate both consumers and staff on key conservation issues and programs.

Evaluation of the CDM Plan

Overall, Wellington North Power Inc.'s third tranche C&DM plan was a success. Some conservation benefits will be realized as indicated in Appendix A, and possibly more importantly, public awareness has been generated as a result of C&DM efforts.

The successful System Optimization project will be used as a benchmarking project to identify other potential upgrades and to calculate the benefits of undertaking these projects. The educational and customer conservation programs although resulting in negative TRCs, can be viewed as wise investments in creating an active conservation culture in Wellington North.

There were few challenges faced with the implementation of the C&DM programs. The most notable challenge was the requirement to record and report only incremental labour pertaining to the projects. Wellington North Power Inc. had a very limited budget for C&DM and often shifted employees to accommodate implementation of C&DM projects, leaving other lower priority projects unfinished. It is felt that although the time spent on these projects was not necessarily incremental, it will eventually result in incremental labour on other projects, leaving the true cost of the C&DM initiative somewhat understated.

Another barrier that distributors faced was the third party intervention, which added incremental time and costs that was not necessarily reported nor expected.

Discussion of Programs

Administration

Staff training on C&DM activities and benefits is an integral part of a successful C&DM program. The level of knowledge the staff has on the benefits of the various programs can significantly affect the success level of any program. Because the benefits of staff training can not be directly attributed to a single project, all administrative costs were included in a separate TRC as an individual program.

The information attained through educational and administrative meetings lays the groundwork for effective CDM projects and although savings cannot be quantitatively measured, it is through this education that staff can promote and drive the conservation culture.

CFL Light Bulb Giveaway

The CFL giveaway was a residential, small commercial program targeting increased awareness and use of CFLs in these markets. In selecting the type of bulb to give away, key considerations were taken in selecting a lamp that would ensure quality and maximize life expectancy. This program was monitored by the number of CFLs delivered. The giveaway package also included a “Conservation Culture” flyer and other marketing material aimed at energy conservation and public awareness. The packages were bagged and delivered by a contract student to all residential and small commercial buildings within the area.

The benefit to cost ratio of this program was 8.33. In evaluating this program, we have to consider that the benefits not only include the kWh savings over the life of the bulb, but also the increased public awareness generated through the distribution of the packages.

CHEC Brochure Delivery

One of the fundamentals of the CHEC group's program is to create a conservation culture within each of the communities through common or shared marketing efforts. One such effort involved working directly with the Minister of Energy's office to reprint 174,000 Conservation Energy and Save Money brochures the group delivered to all customers. The Ministry of Energy brochure offered conservation tips and identified many valuable energy and consumption facts.

Although potential savings and benefits can not be directly measured for this program it is believed the program was a valuable tool for promoting education and conservation awareness.

Customer Web Audit

The Customer Web tool has been initiated to assist customers with identifying and making C&DM decisions. Wellington North Power Inc.'s Website will offer consumers the chance to conduct an online home energy audit, peruse energy saving tips or link to the Ministry of Energy or the OEB. This program targets all customers, residential or commercial and offers valuable conservation information for all.

Although potential savings and benefits can not be directly measured for this program it is believed the program is a valuable tool for promoting education and conservation awareness.

Future monitoring of the program will be measured on up-take of programs, message penetration analysis and reports on the number of hits and website traffic.

Further, please note that the full budgeted cost for the Web Audit has been included in this report.

CHEC Web Design

The CHEC Web Design is a project in addition to Wellington North Power Inc.'s corporate website. This is a common website to the CHEC group, offering savings on development and maintenance costs, as all costs are shared throughout the group. The site is somewhat robust and interactive, including links to contributing LDC's websites, government websites, broadcast information, energy saving calculators, conservation articles, tips etc.

Although potential savings and benefits can not be directly measured for this program it is believed the program is a valuable tool for promoting education and conservation awareness.

Future monitoring of this program will be measured on up-take of programs, message penetration analysis and reports on the number of hits and website traffic.

Interval Load/Power Factor Audit

The Power Factor Audit program was targeted at large Interval customers and focused on identifying opportunities to improve their power factor. Users were supplied with copies of their kW and kWh usage by Wellington North Power staff who visited onsite to discuss various conservation and demand management strategies.

Although no benefit to cost ratio was realized this year, this project can be viewed as the initial foundation for building an educational relationship with the customer. With effective follow up and support of complimentary programs, it is believed that the implementation of suggested strategies will eventually achieve results in total energy and consumption savings.

System Optimization

Office Consumption Optimization

This initiative was developed to implement changes to the current office equipment to promote energy conservation. 4 CRT monitors were replaced with LCD and the office thermostat was changed to an energy efficient programmable thermostat. The concept of this project was to “lead by example” and allow the office staff hands on experience that will assist them in promoting conservation to all customers. One monitor was strategically placed on the customer service counter to promote customer awareness and generate conservation conversation.

Although potential savings and benefits can not be directly measured for this program it is believed the program is a valuable tool for promoting education and conservation awareness.

Mapping Project

Wellington North Power Inc. conducted a thermographic inspection as well as a detailed mapping project to identify all areas where system optimization could be recognized. These studies provide the framework for system optimization projects, targeted at reductions in distribution system losses. The studies identified areas of inefficient conductor and overloaded equipment. The infrared study in particular investigated the integrity of the overhead and underground distribution systems for areas of hot spots which once repaired, will reduce line losses and improve system reliability.

Further indications were made where improvements may be recognized through the implementation of proper feeder balancing. The studies recommended system changes which will improve line losses and system reliability.

No immediate quantifiable benefits can be measured from the mapping and infrared studies resulting in a negative TRC for this project. The information obtained from these

studies however, is invaluable and has already been used to identify an upgrade completed within this reporting period. The benefits of this information will be realized as well, as Wellington North Power Inc. goes forward with other System Optimization programs in the future.

Ayrshire Upgrade

After reviewing the results of Wellington North Power Inc.'s mapping project and infrared scan, the Ayrshire locale was chosen as a priority area in need of upgrading. The initiative was taken to upgrade the existing location within the distribution system, which included a voltage conversion as well as an upgrade of conductor size.

A unique measures cost was calculated for this project including specific line loss reduction calculations as well as all direct costs for the project. Incidentally, the incremental cost for the project resulted in a negative value. The primary determinant for the negative value is the cost of installing two transformers rather than five. The impacts of reduced labour and material costs for the energy efficient option results in a cost below that of implementing the base case.

The upgrade also proved to have significant loss savings that were factored into the project's TRC. Reconductoring and the installation of new transformers will significantly reduce losses, a benefit that will be realized over the new technology life of 30 years.

The loss savings for this project were calculated as follows:

1) Voltage Conversion - base case loss wattage - 300, EE loss Wattage - 80 for a loss savings of 9636 kWh per year for 5 transformers
2) Conductor (900 meters) - base case loss wattage 4920, EE loss wattage 880 for a savings of 35390.4 kWh per year.

Because the conservation benefits of this program are positive and the incremental costs are negative the project ended up having a negative Benefit to Cost Ratio. Although this appears to be an odd result, it is consistent with the concept of "discounted measure's cost" which compares the energy efficient action against the base case.

The success of this project is clear. The corrective action taken to upgrade this locale will result in conservation and savings that will benefit on both a local and a system wide basis.

Lessons Learned

Overall Wellington North Power Inc. is pleased with the results of the C&DM plan. It is felt that 2005 must be viewed as a foundation year for future C&DM initiatives, used for educating consumers as well as employees and promoting awareness community wide.

The Ayrshire upgrade project is considered a great success and will be used when considering future optimization projects. Evaluation of the upgrade has proven considerable loss savings and the Mapping and Infrared studies will assist in identifying priority locations for future optimization.

The CFL giveaway project was successful both in creating public awareness, as well as proving to generate conservation benefits. It is felt that this initial give away program will support a coupon program in the future.

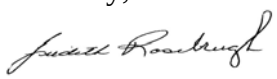
It is difficult at this point in time to evaluate the effectiveness of the above remaining projects. There are no methods to quantify conservation results for educational programs. It is understood however, that expansion of the C&DM programs throughout the province is a must for all. It is believed that each utility is still evaluating what works for them and what can work in general for all customers regardless of location.

In the future Wellington North Power Inc. will narrow in on specific quantifiable projects, where energy and demand conservation can be measured. With the OPA's upcoming province wide project, along with LDC's third tranche expenditures, it is believed that public awareness and knowledge should now be great enough that our focus can be rerouted to measurable projects.

Conclusion

In conclusion it is noted that this past year of Conservation and Demand Management have been a learning curve for all. It would be nice for LDCs to have more direction on programs and reporting requirements. Perhaps an information sharing process across the province would also benefit all electrical distributors and more importantly, the customers we serve. Finally, to understand the true costs and benefits, it is suggested that all costs to the utility be included when evaluating these programs in the future.

Sincerely,



Judith Rosebrugh,
Secretary-Treasurer/Administrator

Appendix A - Evaluation of the CDM Plan

Total	Total	Residential	Commercial	Institutional	Industrial	Agricultural	LDC System	Other 1	Other 2	Other 3	Other 4
Net TRC value ($):	*66232.79*	$25,310	$1,738				$39,184				
Benefit to cost ratio:	*2.646*										
Number of participants or units delivered:	*19855*	16919	2930				6				
Total KWh to be saved over the lifecycle of the plan (kWh):	*2427228.07*	1070820.00	115344.00				1241063.80				
Total in year kWh saved (kWh):	*348265.01*	248430.00	57672.00				42162.76				
Total peak demand saved (kW):	*0*										
Total kWh saved as a percentage of total kWh delivered (%): (IESO 2005 99177534.7)	*0.003511531*	0.002505	0.000582				0.000425				
Peak kW saved as a percentage of LDC peak kW load (%):	*0*										
Gross in year C&DM expenditures ($):	*60579.02*	$36,074	$6,218				$16,178				
Expenditures per KWh saved ($/kWh):*	*$0.024958*	$0.009411	$0.011418				$0.013036				
*Expenditures per KW saved ($/kW)**:*	*0*	$0	$0								

Utility discount rate (%):	8.56

*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:** Administration

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

This project includes all administration costs. These costs were deemed necessary to ensure efficient and knowledgable implementation o CDM projects. The costs pertain to all projects and though there are no directly attributable savings, the information attained through the educational and administrative meetings lays the groundwork for effective CDM projects.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	n/a		
Efficient technology:	n/a		
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):	$	2,276.96	Includes Discounted Measures Cost
Participant cost:	$	-	0
Total TRC costs:	$	2,276.96	
Net TRC (in year CDN $):		-$2,276.96	
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:*	$ -	
	Incremental O&M:	$ -	Includes Measure's Cost - ensure full cost of measure entered in TRC!L15
	Incentive:	$ -	
	Total:	$ -	
Utility indirect costs ($):	*Incremental capital:*	$ 711.92	
	Incremental O&M:	$ 405.07	
	Total:	$ 1,116.99	
Total Utility Cost of Program		$ 1,116.99	
Participant costs ($):	*Incremental equipment:*	$ -	
	Incremental O&M:	$ -	0
	Total:	$ -	
Grand Total Program Cost		$ 1,116.99	

E. Comments:

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

Appendix B - Discussion of the Program

(complete this section for each program)

A. **Name of the Program:** System Optimization - Ayrshire Upgrade

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

This project was a voltage conversion involving transformer change outs and upgrade of conductor sizing to accommodate reduced losses. The locale of the upgrade was primarily residential, however, the project will ultimately benefit all customers.

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 (years):	30.00		

B. **TRC Results:**

TRC Benefits ($):	*$*	*34,914.80*	
Measure's Costs ($):			
Utility program cost (less incentives):	-$	4,081.67	Includes Discounted Measures Cost
Participant cost:	$	-	0
Total TRC costs:	-$	4,081.67	
Net TRC (in year CDN $):		$38,996.47	
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		-8.55	

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

Conservation Programs:

		lifecycle	in year
Demand savings (kW):	*Summer*		3.83
	Winter		3.83
Energy saved (kWh):		*1,215,712.80*	40,523.76
Other resources saved :			
Natural Gas (m3):		0	0
Water (l)		0	0

Expenditures per kWh Saved ($/kWh)	$	0.0121
Expenditures per kW Saved ($/kW)		3833.328117

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):	1215712.8	40523.76

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:	$ 14,696.98	Includes Measure's Cost - ensure full cost of measure entered in TRC!L15
	Incentive:	$ -	
	Total:	$ 14,696.98	
Utility indirect costs ($):	*Incremental capital:*	$ -	
	Incremental O&M:	$ -	
	Total:	$ -	
Total Utility Cost of Program		$ 14,696.98	
Participant costs ($):	*Incremental equipment:*	$ -	
	Incremental O&M:	$ -	0
	Total:	$ -	
Grand Total Program Cost		$ 14,696.98	

E. **Comments:**

Voltage Conversion - base case loss wattage - 300, EE loss Wattage - 80 for a loss savings of 9636 kWh per year for 5 transformers, Conductor (900 meters) - base case loss wattage 4920, EE loss wattage 880 for a savings of 35390.4 kWh per year. **Note: the total costs for this project exceeded what was budgeted for C&DM System Optimization and WNP has taken on the expense of the difference . The Grand Total Program Cost has been reported as the cost excluding incremental labour. See attached calculation sheet for information on calculation of measures costs and loss 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:** CFL Giveaway Program

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

This was an energy conservation program aimed at providing a 15W CFL to every residential and many small general customers. The CFLs were purchased by utility and delivered by a contract student. Programs were monitored by the number of CFLs delivered. Cost per bulb $3.24. Brochures and other marketing material aimed at energy conservation were provided in the package.

Measure(s):

	Measure 1	Measure 2	Measure 3
Base case technology:	60 W Incandescent	60 Watt Incandescant	0.00
Efficient technology:	15W CFL Screw-In	15 W Screw-In CFL	0.00
Number of participants or units delivered:	2,644.00	356.00	0.00
Measure life (years):	4.31	2.00	0.00

B. **TRC Results:**

TRC Benefits ($):		*$ 70,503.74*	
Measure's Costs ($):			
	Utility program cost (less incentives):	$ 8,464.25	Error Choose Measures Cost Paid by on TRC3
	Participant cost:	$ -	Error Choose Measures Cost Paid by on TRC3
	Total TRC costs:	$ 8,464.25	
Net TRC (in year CDN $):		$62,039.49	

Benefit to Cost Ratio (TRC Benefits/TRC Costs): 8.33

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

Conservation Programs:

Demand savings (kW):	*Summer*	11.71	
	Winter	65.87	
	lifecycle	*in year*	
Energy saved (kWh):	*1,186,164.00*	306,102.24	
Other resources saved :			
Natural Gas (m3):	0	0	
Water (l)	0	0	
Expenditures per kWh Saved ($/kWh)	$ 0.0096		
Expenditures per kW Saved ($/kW)	973.0356121		

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:	$ 11,395.24	Error Choose Measures Cost Paid by on TRC3
	Incentive:	$ -	
	Total:	$ 11,395.24	
Utility indirect costs ($):	*Incremental capital:*	$ -	
	Incremental O&M:	$ -	
	Total:	$ -	
Total Utility Cost of Program		$ 11,395.24	
Participant costs ($):	*Incremental equipment:*	$ -	
	Incremental O&M:	$ -	Error Choose Measures Cost Paid by on TRC3
	Total:	$ -	
Grand Total Program Cost		$ 11,395.24	

E. **Comments:**

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

Appendix B - Discussion of the Program

(complete this section for each program)

A. **Name of the Program:** CHEC Brochure Delivery

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

This project was aimed at all customers. The brochure was aimed at reducing energy use by promoting specific energy efficient technologies and energy conservation. The brochures were delivered via bulk mailing from the post office.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	n/a		
Efficient technology:	n/a		
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):	$	3,385.57	Includes Discounted Measures Cost
Participant cost:	$	-	0
Total TRC costs:	$	3,385.57	
Net TRC (in year CDN $):		-$3,385.57	
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:*	$ -	
	Incremental O&M:	$ 2,560.10	Includes Measure's Cost - ensure full cost of measure entered in TRC!L15
	Incentive:	$ -	
	Total:	$ 2,560.10	
Utility indirect costs ($):	*Incremental capital:*	$ -	
	Incremental O&M:	$ -	
	Total:	$ -	
Total Utility Cost of Program		$ 2,560.10	
Participant costs ($):	*Incremental equipment:*	$ -	
	Incremental O&M:	$ -	0
	Total:	$ -	
Grand Total Program Cost		$ 2,560.10	

E. Comments:

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

Appendix B - Discussion of the Program

(complete this section for each program)

A. **Name of the Program:** CHEC Web Design

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

This project includes the development of a web page available to all customers. The web page will include links to the OEB and MOE and identify various energy conservation tips and suggestions.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	n/a		
Efficient technology:	n/a		
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):	$ 1,856.45	Includes Discounted Measures Cost
	Participant cost:	$ -	0
	Total TRC costs:	$ 1,856.45	
Net TRC (in year CDN $):		-$1,856.45	
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:	$ 1,856.45	Includes Measure's Cost - ensure full cost of measure entered in TRC!L15
	Incentive:	$ -	
	Total:	$ 1,856.45	
Utility indirect costs ($):	*Incremental capital:*	$ -	
	Incremental O&M:	$ -	
	Total:	$ -	
Total Utility Cost of Program		$ 1,856.45	
Participant costs ($):	*Incremental equipment:*	$ -	
	Incremental O&M:	$ -	0
	Total:	$ -	
Grand Total Program Cost		$ 1,856.45	

E. Comments:

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

Appendix B - Discussion of the Program

(complete this section for each program)

A. **Name of the Program:** Customer Web Audit

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

This project will ultimately benefit all customers. The web page offers the ability to conduct a home energy audit, view energy conservation tips, link to the MOE/OEB and view WNP information and Rates. Benefits can not be measured directly, however, the intention is that by educating the consumer, we are able to set a good foundation for any additional CDM projects.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	n/a		
Efficient technology:	n/a		
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):	$	3,083.29	Includes Discounted Measures Cost
Participant cost:	$	-	0
Total TRC costs:	$	3,083.29	
Net TRC (in year CDN $):		-$3,083.29	
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:	$ 3,083.29	Includes Measure's Cost - ensure full cost of measure entered in TRC!L15
	Incentive:	$ -	
	Total:	$ 3,083.29	
Utility indirect costs ($):	*Incremental capital:*	$ -	
	Incremental O&M:	$ -	
	Total:	$ -	
Total Utility Cost of Program		$ 3,083.29	
Participant costs ($):	*Incremental equipment:*	$ -	
	Incremental O&M:	$ -	0
	Total:	$ -	
Grand Total Program Cost		$ 3,083.29	

E. Comments:

Please note, the Utility direct costs for this project include the total budgeted costs. $2,108.29 of these costs have been incurred in 2006, and as a result were not included in the December quarterly filing.

*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:** Interval Load/Power Factor Audit

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

This project was conducted for various interval customers and consisted of running detailed demand reports and visiting the customers to discuss how to improve their power factor. Although the benefits can not be directly measured, educating the customer on power factor and conservation methods will assist the customer in making positive energy conservation choices.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	n/a		
Efficient technology:	n/a		
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):	$	234.00	Includes Discounted Measures Cost
Participant cost:	$	-	0
Total TRC costs:	$	234.00	
Net TRC (in year CDN $):		-$234.00	
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:*	$ -	
	Incremental O&M:	$ 234.00	Includes Measure's Cost - ensure full cost of measure entered in TRC!L15
	Incentive:	$ -	
	Total:	$ 234.00	
Utility indirect costs ($):	*Incremental capital:*	$ -	
	Incremental O&M:	$ -	
	Total:	$ -	
Total Utility Cost of Program		$ 234.00	
Participant costs ($):	*Incremental equipment:*	$ -	
	Incremental O&M:	$ -	0
	Total:	$ -	
Grand Total Program Cost		$ 234.00	

E. **Comments:**

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

Appendix B - Discussion of the Program

(complete this section for each program)

A. **Name of the Program:** Office Consumption Management

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

The purpose of this project was to make changes to current office equipment to promote energy conservation. 4 CRT monitors were replaced with LCD monitors. The office thermostat was also changed to a programable. The idea of this project was to "lead by example" and allow the office staff hands on experience, assisting them in promoting conservation to all customers.

Measure(s):

	Measure 1	Measure 2	Measure 3	Measure 4	Measure 5	Measure 6
Base case technology:	CRT 17 Inch Monitors	Old manual thermostat	0.00	0.00	0.00	0.00
Efficient technology:	LCD 17 Inch Monitors	oneywell Programmable Thermos	0.00	0.00	0.00	0.00
Number of participants or units delivered:	4.00	1.00	0.00	0.00	0.00	0.00
Measure life (years):	5.00	18.00	0.00	0.00	0.00	0.00

B. **TRC Results:**

TRC Benefits ($):		*$ 1,051.36*	
Measure's Costs ($):			
	Utility program cost (less incentives):	$ 863.00	Error Choose Measures Cost Paid by on TRC3
	Participant cost:	$ -	Error Choose Measures Cost Paid by on TRC3
	Total TRC costs:	$ 863.00	
Net TRC (in year CDN $):		$188.36	

Benefit to Cost Ratio (TRC Benefits/TRC Costs): 1.22

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

Conservation Programs:

Demand savings (kW):	*Summer*	0.10	
	Winter	1.15	
	lifecycle	*in year*	
Energy saved (kWh):	*25,351.27*	1,639.01	
Other resources saved :			
Natural Gas (m3):	0	0	
Water (l)	0	0	

Expenditures per kWh Saved ($/kWh)	$	0.0584
Expenditures per kW Saved ($/kW)		15234.0535

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:	$ 1,480.75	Error Choose Measures Cost Paid by on TRC3
	Incentive:	$ -	
	Total:	$ 1,480.75	
Utility indirect costs ($):	*Incremental capital:*	$ -	
	Incremental O&M:	$ -	
	Total:	$ -	
Total Utility Cost of Program		$ 1,480.75	
Participant costs ($):	*Incremental equipment:*	$ -	
	Incremental O&M:	$ -	Error Choose Measures Cost Paid by on TRC3
	Total:	$ -	
Grand Total Program Cost		$ 1,480.75	

E. Comments:

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

Appendix B - Discussion of the Program

(complete this section for each program)

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

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

Wellington North Power undertook a thermographic inspection as well as a detailed mapping project to identify all areas where system optimization should be recognized. Although direct benefits can not be measured, all customers will eventually reap the benefits through reduced line losses once system upgrades are in place.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	n/a		
Efficient technology:	Mapping/Infared Inspection		
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):	$ 24,155.22	Error:Make Selection in L14
	Participant cost:	$ -	Error:Make Selection in L14
	Total TRC costs:	$ 24,155.22	
Net TRC (in year CDN $):		-$24,155.22	
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:*	$ 24,155.22	
	Incremental O&M:	$ -	Error: Choose Measure's cost paid by:
	Incentive:	$ -	
	Total:	$ 24,155.22	
Utility indirect costs ($):	*Incremental capital:*	$ -	
	Incremental O&M:	$ -	
	Total:	$ -	
Total Utility Cost of Program		$ 24,155.22	
Participant costs ($):	*Incremental equipment:*	$ -	
	Incremental O&M:	$ -	Error: Choose Measure's cost paid by:
	Total:	$ -	
Grand Total Program Cost		$ 24,155.22	

E. Comments:

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

On Peak and Off Peak Times

Season	Winter (December to March)			Summer (June to September)			Shoulder (April, May, Oct., Nov.)		
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 am 5 pm to 10 pm	10 pm to 7 am All weekend hrs.	7am to 10 pm	10 pm to 7 am All weekend hrs.	
# of Hours	602	688	1614	534	801	1593	1593	1335	8760
% of Annual Hours	6.87%	7.85%	18.42%	6.10%	9.14%	18.18%	18.18%	15.24%	100.00%

Load Evenly Split **9636**	662.20	756.80	1775.40	587.40	881.10	1752.30	1752.30	1468.50	9636.00

Base Case Wattage	**300**
EE Wattage	**80**
Number of Hours	**8760**
Number of Units	**5**

Transformers - 5 New

Base Case Energy	**13140**	**Demand (Kw)**	**0.3**
EE Tech Energy	**3504**	**Demand (Kw)**	**0.08**
kWh Savings/Year	**9636**	**Demand Savings**	**0.22**

Season	Winter (December to March)			Summer (June to September)			Shoulder (April, May, Oct., Nov.)		
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 am 5 pm to 10 pm	10 pm to 7 am All weekend hrs.	7am to 10 pm	10 pm to 7 am All weekend hrs.	
# of Hours	602	688	1614	534	801	1593	1593	1335	8760
% of Annual Hours	6.87%	7.85%	18.42%	6.10%	9.14%	18.18%	18.18%	15.24%	100.00%

Load Evenly Split **35390.4**	2432.08	2779.52	6520.56	2157.36	3236.04	6435.72	6435.72	5393.40	35390.40

Base Case Wattage	**4920**
EE Wattage	**880**
Number of Hours	**8760**
Number of Units	**1**

Conductor

Base Case Energy	**43099.2**	**Demand (Kw)**	**4.92**
EE Tech Energy	**7708.8**	**Demand (Kw)**	**0.88**
kWh Savings/Year	**35390.4**	**Demand Savings**	**4.04**

Total Load Reduction

Season	**Winter (December to March)**			**Summer (June to September)**			**Shoulder (April, May, Oct., Nov.)**		
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 am 5 pm to 10 pm	10 pm to 7 am All weekend hrs.	7am to 10 pm	10 pm to 7 am All weekend hrs.	
# of Hours	602	688	1614	534	801	1593	1593	1335	8760
% of Annual Hours	6.87%	7.85%	18.42%	6.10%	9.14%	18.18%	18.18%	15.24%	100.00%

Load Evenly Split **45026.4**	3094.28	3536.32	8295.96	2744.76	4117.14	8188.02	8188.02	6861.90	45026.40

Ayrshire Upgrade

Lakeport Power- O/H Conductors & Devices	$5,003.68	$799.19	$85.87	$5,888.74	Direct Cost
Grafton Utility Supply	$1,519.56	$0.00	$0.00	$1,519.56	Direct Cost

	Grafton Utility Limited	$5,644.68	$0.00	$0.00	$5,644.68 Direct Cost
	David Hawkins Line Service	$1,350.00	$0.00	$0.00	$1,350.00 Incremental Labour
	Nick Langdon-Labour	$0.00	$0.00	$294.00	$294.00 Incremental Labour
Cost Excluding Non-Incremental Labour					**$14,696.98**
	H Hutchison-Labour	$866.42	$15.88	$703.70	$1,586.00 Non- Incremental Labour
	P Meyer-Labour	$892.42	$15.88	$755.70	$1,664.00 Non- Incremental Labour
	J Schmidt-Labour	$352.13	$0.00	$244.96	$597.09 Non- Incremental Labour
	W.Ghent-Labour	$208.00	$0.00	$208.00	$416.00 Non- Incremental Labour
Total Costs		**$15,836.89**	**$830.95**	**$2,292.23**	**$18,960.07**

LCD Monitors

On Peak and Off Peak Times

Season	Winter (December to March)			Summer (June to September)			Shoulder (April, May, Oct., Nov.)		
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 only from 8-11	11 am to 5 pm 8 pm to 10 pm only from 11 - 5	10 pm to 7 am none, off	11pm to 5 pm from 11 - 5	7 am to 11 am 5 pm to 10 pm only from 8 - 11	10 pm to 7 am none, off	7am to 10 pm only 8-5	10 pm to 7 am All weekend hrs.	
# of Hours	363	726	0	732	366	0	1098	0	3285
% of Annual Hours	11.05%	22.10%	0.00%	22.28%	11.14%	0.00%	33.42%	0.00%	100.00%

Load Evenly Split									
88.695	9.80	19.60	0.00	19.76	9.88	0.00	29.65	0.00	88.70

Base Case Wattage	**72**
EE Wattage	**45**
Number of Hours	**3285**
Number of Units	**1**

Base Case Energy	**236.52**	**Demand (Kw)**	**0.072**
EE Tech Energy	**147.825**	**Demand (Kw)**	**0.045**
Energy Savings	**88.695**	**Demand Savings**	**0.027**