toronto hydro electric system

Toronto Hydro-Electric System Limited

Conservation and Demand Management

2007 Annual Report

Ontario Energy Board File No. RP-2004-0203/EB-2004-0485

March 31, 2008

TABLE OF CONTENTS

1. Introduction

On December 10, 2004 the Ontario Energy Board ("Board") issued its Decision in the RP-2004-0203 proceeding, with respect to six (6) applications filed by the Coalition of Large Distributors ("CLD") comprising Enersource Hydro Mississauga, Horizon Utilities Corporation, Hydro Ottawa Limited, PowerStream Inc., Toronto Hydro-Electric System Limited and Veridian Connections. This report is a requirement of that Decision. In respect of the application filed by Toronto Hydro-Electric System Limited ("Toronto Hydro"), the Board issued its Final Order on February 3, 2005 under docket number RP-2004-0203 / EB-2004-0485.

The Board's Decision indicated that annual reporting "should be done on a calendar year and should be filed with the Board no later than March 31st of the following year" and would be subject to a public review. On December 21, 2005 the Board issued a Guideline for Annual Reporting of CDM Initiatives that explained more fully the requirements. On March 8, 2008 the Board issued the "Requirements for Annual Reporting of CDM Initiatives". This report has been prepared in accordance with those guidelines and requirements.

The third year (2007) of Conservation and Demand Management was a transition year for Toronto Hydro, as funding from the Third Tranche budget was almost exhausted by the end of 2006. Many projects originally signed under the OEB's Third Tranche were transitioned to Ontario Power Authority (OPA) funding. Programs and initiatives were developed to engage employees, stakeholders, and all customer classes of electricity users within Toronto Hydro's boundaries. The key thrusts of the program were to reduce the summer peak demand and help promote a conservation culture in Ontario. Highlights from 2007 include the following:

- Achieved peak demand reductions of 6,161 kW and energy savings of 15,027,576 kWh.
- By the end of February 2007, enrolled more than 38,000 customers and installed more than 27,000 load control switches in the peaksaver program (cumulative).
- Received the 2007 Environment Achievement Award from the City of Toronto for the Summer Challenge program run in 2006.
- Won the 2007 Platts Global Energy Award in the Energy Efficiency category for the peaksaver program.

These programs and many others are described further in this report.

2. Evaluation of the CDM Plan

Refer to Appendix A, B and C for an evaluation of Toronto Hydro's CDM activities during 2007.

Some components of Toronto Hydro's CDM plan relate to the deployment of SMART meters, which was undertaken to support Provincial government policy direction. The impact of SMART meters on kWh consumption or kW demand has not yet been assessed.

3. Discussion of the Programs

Residential and Small Commercial (< 50 kW)

Residential Load Control Initiative

Description
Load control uses a real time communications link to enable or disable customer loads at the discretion of the utility. These controls are usually engaged during system peak periods or when required to relieve pressure on the system grid and may include such "dispatchable" loads as electric hot water tanks, pool pumps, lighting, air conditioners, etc.

Target users
Direct load control applies to all market segments. Though the control systems and technologies may vary by market segment, the methodology remains the same.

Benefits
Load control allows customers to respond quickly to external price signals. This also provides a mechanism for utilities to relieve pressure on constrained areas within the distribution grid and reduces the need to bring on large peaking generators.

Description of 2007 Activities

Direct Load Control – peaksaver Program Residential

Action

- Enrolled more than 35,000 residential customers and installed more than 26,000 load control switches by the end of February 2007 (cumulative). The remainder of the year was under OPA funding.
- Performed M&V study for the peaksaver program.
- Activated load control on one occasion during the summer of 2007 along with commercial peaksaver program, resulting in peak demand reductions of approximately 26 MW.

Results to Date

- Installed demand response capacity of more than 29 MW (at 35 degrees C) under the OEB's Third Tranche.
- peaksaver was selected by the Government for roll out throughout the rest of Ontario in the middle of 2007.

Next Steps

- Continue with deployment in 2008 under OPA funding.
- Extend dispatch operation service to other Local Distribution Companies (LDCs) in the CLD group to facilitate the roll out of peaksaver program in Ontario.

TAPS Program

Description
This initiative is a partnership with Enbridge in their highly successful TAPS program. Enbridge is distributing CFLs and installing energy savings measures in homes that they would not normally consider (i.e. homes with electric water heaters and electric heating).
Target users
Residential customers
Benefits
This program is simple in concept and highly effective, since CFLs use 75% less energy than incandescent bulbs and fit into standard sockets. Although a single change-out makes a very small difference, wide-scale use of CFLs has a significant impact.

Description of 2007 Activities

Enbridge - TAPS

Action

- Partnering with Enbridge Gas Distribution Inc., Toronto Hydro continued the project in 2007 that delivered efficient showerheads and CFL bulbs to Toronto Hydro customers.
- The sub-contractors of Enbridge visited customers' residences and performed the following services:
  - Install pipe wrap on water heater lines
  - Conduct a test to determine if showerheads are already low-flow
  - Replace up to two showerheads
  - Provide the home owner with two faucet aerators
  - Drop off four CFL bulbs
  - Install a programmable thermostat (for low income customer only)
  - Provide literature containing energy efficiency tips

Results to Date

- 446 efficient showerheads and 41 programmable thermostats were installed.
- 33,944 CFL bulbs and 838 aerators were delivered.
- 399 pipe wraps and 447 bag tests were performed
- Peak demand reductions of 16 kW and energy savings of 3,621,438 kWh were achieved in 2007.

Social Housing Program

Description
Due to aging housing stock, financial constraints and high incidences of electric heating, the Social Housing Sector is a prime candidate for CDM incentives.
Target users
Local social housing corporations, non-profit homes and co-operative housing.
Benefits
Synergies can be created through the combined initiatives of various agencies.

Description of 2007 Activities

Toronto Community Housing Corporation (TCHC)

Action

- Old, inefficient refrigerators and stoves were replaced with new Energy Star appliances.
- Monthly results were sent to Toronto Hydro for verification and incentive payment.

Results to Date

- 3,350 old refrigerators and 4,501 old stoves were removed and replaced with new Energy Star appliances in 2007.
- Peak demand reductions of 56 kW and energy savings of 490,500 kWh were achieved in 2007.

Social Housing Services Corporation (SHSC)

Action

- Social Housing Services Corporation is the provincial umbrella agency representing social and low income housing.
- Lighting retrofit was done at seven SHSC locations.

Results to Date

- Peak demand reductions of 66 kW and energy savings of 943,927 kWh were achieved in 2007.

Leveraging Energy Conservation and/or Load Management Programs

Description
Existing energy conservation and/or load management programs such as NRCan's Energy Innovators initiative, Enbridge initiatives etc. will be promoted and incentives may be provided to advance market uptake of these programs and implementation of their recommendations. The LDCs are well positioned to introduce such programs to their customer base. Work will be conducted with the existing program providers to maximize leverage opportunities. Promotion will potentially include face-to-face meetings, conferences and seminars.

Target users
Large consumers over 50 kW including schools, large commercial, institutional, industrial, and municipal facilities.

Benefits
Customer awareness and additional incentives will help advance market uptake of audit services, feasibility studies and retrofit opportunities already established within the government program framework.

Description of 2007 Activities

West Park Healthcare Centre

Action
- An energy saving device (PowerKure) was installed in 2007.
- Post-implementation audit was performed after project completion.

Results to Date
- Peak demand reductions of 48 kW and energy savings of 295,871 kWh were achieved in 2007.

Irving Tissue

Action
- The major initiative at 1551 Weston Road consisted of changing existing lighting from T12 fluorescent with magnetic ballast, metal halide fixtures and incandescent lamps to new and more efficient T8 lighting and CFL technology.
- The installation began in January 2007 and was completed in March 2007.

Results to Date
- 2,669 fixtures were converted.
- Peak demand reductions of 233 kW and energy savings of 1,945,092 kWh were achieved in 2007.

U of T Scarborough Campus – Student Residences

Action
- The program included conversion of the interior incandescent lighting to compact fluorescents, conversion of the outdoor lighting to a new form of compact

fluorescent technology, and the conversion of electric domestic hot water heating to natural gas.

Results to Date

- 19 water heaters have been converted from electricity to natural gas.
- Peak demand reductions of 7 kW and energy savings of 95,000 kWh were achieved in 2007.

The Indigo – 50 Lombard Street

Action

- This major initiative consisted of: (1) Modernizing the Ice Storage System which was designed to work in conjunction with the Chiller, this system has never been utilized due to a design flaw; (2) Lighting retrofit for garage, elevator valence, stairwell and exit signs from existing T8 lamps or CFL's to higher efficiency lighting.

Results to Date

- The Ice Storage System is still not operational as further complications have been encountered.
- The lighting retrofit is complete and has resulted in a peak demand reduction of 5 kW and energy savings of 44,208 kWh for 2007.

Atria Complex

Action

- The project included a lighting retrofit at Atria I, Atria II, and Atria III located at 2255, 2235 and 2225 Sheppard Avenue East respectively.
- This retrofit involved the replacement of 14,937 fixtures among the 3 buildings. The majority of the replacements were from T12 to the more energy efficient T8 lighting fixtures.

Results to Date

- The project was completed in January, February and April of 2007 for the order of buildings listed above.
- The peak demand reduction associated with this project is 271 kW and an energy savings of 1,083,600 kWh.

Toronto Hydro Energy Service Inc. (THESI)

Action

- THESI completed a lighting retrofit project at MTCC No. 661 (85 Skymark).
- This project involved the replacement of lighting fixtures from Strip, Wrap, Lay-in and incandescent to T8 and CFL lighting.

Results to Date

- There was a peak demand reduction of 9 kW and energy savings of 63,240 kWh in 2007.

Toronto District School Board

Action

- The project consisted of lighting retrofits at 45 Toronto District School Board locations. Various energy efficient lighting measures were targeted.

Results to Date

- The various locations had completion dates throughout 2007.
- The project resulted in an energy savings of 2,423,129 kWh.

PowerWise Business Incentive Program (PBIP)

Action

- The project consisted of lighting retrofits at 7 business locations. Various energy efficient lighting measures were targeted.

Results to Date

- The aggregate peak demand reduction associated with this project is 392 kW and an energy savings of 1,717,958 kWh.

Commercial Industrial & Institutional (CI&I) Load Control Initiative

Description
Load control uses a real time communications link to enable or disable customer loads at the discretion of the utility. These controls are usually engaged during system peak periods or when required to relieve pressure on the system grid.
Target Users
Larger commercial, industrial and institutional customers.
Benefit
Demand control provides lower costs and increased stability for customers and utilities.

Description of 2007 Activities

Direct Load Control – peaksaver Program Small Commercial

Action

- Enrolled more than 2,700 small commercial customers and installed more than 1,200 load control switches by the end of February 2007. The rest of the year was under OPA funding.
- Performed M&V study for the peaksaver program.
- Operated the demand response dispatch control center with the necessary systems and processes to respond to the ELRP dispatch notification.
- Activated load control on one occasion in the summer of 2007 along with residential peaksaver program, resulting in peak demand reductions of about 26 MW.

Results to Date

- By the end of February 2007, more than 2,700 small commercial customers were enrolled and more than 1,200 participants were installed with the load control switches (cumulative).
- Installed demand response capacity of more than 29 MW (at 35 degrees C) by the end of February 2007 including residential customers.
- peaksaver was selected by the Government for rolling out to the rest of Ontario.

Next Steps

- Continue with deployment in 2008 under OPA funding.
- Extend dispatch operation service to other LDCs in the CLD group to facilitate the rolling out of peaksaver program in Ontario.

Design Advisory Program

Description
This initiative helps to create an integrated approach to the design process for new buildings, and involves architects, engineers, building owners and Toronto Hydro design advisors, with the goal of creating more energy efficient buildings.

Target users
Commercial, industrial and institutional customers.

Benefits
This program results in cost effective improvements to the energy efficiency of a building without adversely affecting other performance requirements stipulated by the owner. More specifically, the Advisor can develop an energy performance model to demonstrate achievable energy savings and provide a breakdown of energy end uses. Through the installation of energy efficient equipment during construction, the customer benefits by avoiding stranded costs incurred with equipment upgrades.

Description of 2007 Activities

Design Advisory Program – Enbridge

Action

- The initiative focused on New Building Construction Program (NBCP). NBCP offers incentives to an owner of a building to build a more energy efficient building. In this turnkey project, on a monthly basis in 2007, Enbridge Gas Distribution (EGD) submitted to Toronto Hydro a list of potential projects in the City of Toronto, with their expected completion dates. Upon completion of the design of the building/project, EGD forwarded to Toronto Hydro, a summary report showing kW and kWh savings. Energy savings were determined by an Approved Energy Simulation Program, which could be any of the following: EE4-CBIP, EE4-Code, or CBIP 33-Wizard.

Results to Date

- Peak demand reductions of 500 kW and energy savings of 2,298,149 kWh were achieved in 2007.

Distributed Energy

Load Displacement

Description

Distributed generation behind the customer's meter provides an excellent opportunity to displace load from the local distribution system's grid in a very effective manner. Load displacement technology, such as combined heat and power systems, provides increased power efficiency and thermal systems. Combined with an existing or new district heating distribution system this technology contributes to the development of sustainable energy networks within Ontario's communities.

Other technologies such as micro-turbine, wind, biomass fuels and solar provide additional options to meet the customer's needs. This initiative will facilitate the development and implementation of these opportunities. Financial incentives will be considered based on the project's viability.

Development of educational and technology programs in conjunction with local colleges and universities may be considered. Small pilots or demonstration projects to promote alternative and renewable energy sources may also be considered.

Target users

Commercial, industrial, and residential, schools, colleges and universities.

Benefits

Benefits include additional capacity within the grid. Cleaner technologies result in reductions in green house gas (GHG) emissions. Other benefits include improved system reliability, reduced harmonics, backup power possibilities, education and skills development.

Description of 2007 Activities

1 Avondale – Baghai Developments

Action

- The project consisted of the installation of two renewable forms of energy (wind turbine and solar photo-voltaic panels) to supplement power requirements for common areas.

Results to Date

- The peak demand reduction associated with this project is 3 kW and an energy savings of 5,463 kWh for 2007.

Overall Program Support

Description
Project review, approval, tracking and results verification as well as development of contracts with CDM Partners.
Target Users
All customer classes.
Benefits
Supports existing programs and drives energy conservation awareness that will facilitate the culture change in Ontario.

Description of 2007 Activities

Regulatory Reporting and Program Support

Action

- Successfully filed 2006 CDM Annual Report to the OEB.
- Filed SSM & LRAM application to the OEB for 2005 & 2006 projects
- Worked with business units and kept track of project status and results.

Next Steps

- Conclude all program projects and report funding expenditures under the OEB's Third Tranche.
- All but $200,000 from the $39.7 million budget has been utilized and the remainder of these funds will be used to close trailing projects, as well as outstanding reporting costs.

4. Lessons Learned

Working Together

In 2007 the members of the CLD continued working together on the execution of their individual CDM plans. A Steering Committee provided oversight and coordinated joint actions, and program-specific working committees promoted the sharing of ideas, experiences and costs. The benefits of this joint action are numerous and over the past three years have provided the following advantages:

Purchasing power:

- Together, the CLD group represents about 40% of the Province's electricity load. Accordingly, the group commands the attention of the marketplace when seeking vendors to support its CDM programs. The joint purchasing power of the CLD has provided it with access to the most innovative products and services available, at very competitive costs.

Consistent messaging:

- The adoption and promotion of the powerWISE brand by the CLD members has provided significant benefits. The development of this single brand that is recognized by consumers and synonymous with energy efficiency was leveraged to maximize the reach and penetration of CDM initiatives, in a way that could not be achieved by each member LDC on its own. Consistency of branding and messaging contributed to program credibility and consumer's willingness to engage in conservation and demand management programs.

Cost Sharing:

- While local electricity markets and customer contacts often deserve and demand customized treatment, other aspects of CDM programs are common and lend themselves to cost sharing. The CLD members agreed early on to a standard cost sharing formula to ensure that benefits were fairly allocated. Sharing costs has enabled individual CLD members to help minimize program costs through the life of the project to the end of 2007.

Exchange of Ideas/Approaches:

- Customers' attitudes towards energy use are not homogeneous. Achieving a conservation culture in Ontario required experimentation with varied and diverse approaches. Working in partnership, the CLD members have learned from each other's successes and setbacks. For example, Toronto Hydro's launch of its peaksaver program in late 2005 offered proof that many customers were willing to participate in an air conditioner load control program for a nominal financial reward. This success translated into a broader scale program across all CLD service areas in 2006 and continued into 2007.

Market Conditions

The lessons learned about market conditions, and reported in 2006, continued into 2007 as the program achieved its maximum potential under the Third Tranche funding and transitioned into an OPA funding model. One of the key findings for all market segments is the need for LDCs to continue to communicate, educate and engage customers and be a provider of information to their local market. Emerging technologies and an increase in service providers have created the need and opportunity for LDC's to work with and assist customers in understanding the technologies and the impact and value these technologies can have on their businesses. As reported previously the following lessons were reaffirmed and expanded in 2007:

- It was evident, particularly from the Home Depot and Fridge Unplugged programs that residential customers are eager to learn about, and install, more energy efficient measures. It is important to educate residential customers on the financial impact and quick return provided by conservation solutions. Future use of real time, in home, energy monitors will offer customers an effective tool to better understand and manage their energy consumption, particularly when time of use pricing comes into effect.

- In the commercial, industrial and institutional sectors it was surprising to learn that many companies have not installed energy savings measures in order to reduce power costs. It was found that capital investment decisions must have a very fast payback, typically less than two years. The CDM incentive made energy efficiency projects viable for a significant number of customers.

- A key lesson learned from the powerWISE Business Incentive Program (now the Business Incentive Program) is that it takes significant and direct interaction with commercial customers for this type of program to flourish.

- There are a number of larger customers that have generators used for back-up power requirements. Working with these customers we were able to retrofit these installations to make the generators available for dispatch on peak. This capability can significantly reduce summer peak loads.

- We were able to design and install the peaksaver load management system whereby customers' air conditioning units can be managed to reduce summer peak demand. Effective promotion of the program resulted in approximately 20 per cent implementation of this program in the marketplace.

- In the Social Housing Program, it became very evident that the needs of low income housing tenants must be addressed. Social and low income housing customers are typically spending a greater percentage of their income on utilities or rent and can least afford to retrofit their unit or purchase efficient appliances. Education in this sector is critical. Fortunately we were able to commit CDM incentives to Toronto Community Housing Corporation & Social Housing Service Corporation in order specifically address these issues, but there is much more that can be done.

- CDM program development does take time. In particular, legal and environmental issues must be thoroughly addressed up front in order to ensure long-term sustainable conservation success.

- Public education is a critical element as we build a culture of conservation. We must continue to balance the need for short-term results while fostering a long-term conservation attitude.

Regulatory Environment

The regulatory environment in 2007, compared to 2006, was a period of transition.

It is clear that CDM programs require and will benefit from continuity and consistency of funding. The funding transition that occurred in 2007 created a period of uncertainty which disrupted programs at the beginning of the year followed by a ramping up in mid year. The result was a loss of momentum in conservation programs savings and customer confusion.

The energy industry must coordinate the individual efforts of its many organizations to ensure that program delivery is efficient, readily available and understood by all customers. Most customers don't understand the relationship among the various organizations within the hydro industry. Any attempt to deliver programs to the end customer by different groups only confuses the customer and suggests a lack of industry coordination. Clarity regarding the roles of the LDCs, Electricity Distributors Association (EDA), The Board, OPA and the Independent Electricity System Operator (IESO) would be beneficial in this regard.

Total Resource Cost (TRC) analysis has become more complicated with the introduction of new TRC Analysis tools and measures lists. There are two sets of standards, one from the OEB and one from the OPA. We recommend the use of a single financial standard set by the OEB.

OEB's new proposed CDM regulatory structure dealing with pilot programs is supported. In addition to pilot programs, consideration should be given to R&D funding to support program development. This would encourage development of new ideas and control any potential risks involving new technologies.

5. Conclusions

Toronto Hydro-Electric System Limited developed and ramped up an effective conservation and demand management program and generated impressive results using Third Tranche of MARR funding. In addition, the experience provided considerable amount of learning which led to process and program design improvements which in turn contributed to the conservation achievements.

Results for 2007 are significantly lower than in previous years as programs originally launched in 2005 were wound down as the Third Tranche funding was exhausted.

Toronto Hydro was able to maximize results by working with the CLD, which provided a significant advantage in knowledge and resource sharing, efficiency and cost effectiveness. As we gained market experience, we were able to fine-tune our individual CDM plans for mutual benefit.

Toronto Hydro enjoyed highly recognized successes with two particular programs developed by Toronto Hydro. The peaksaver program and the Summer Challenge program both proved to be very popular with our customers and were since adopted by other LDCs and the OPA for implementation across the Province in 2007.

The constraints facing the Provincial electricity distribution system are well known and have created a heightened sense of urgency for all users to contribute to better management of our electricity demand. Our customers are recognizing the value of conserving electricity and Toronto Hydro's role in delivering CDM programs locally is well established. Toronto Hydro is committed to helping lead the evolution to a culture of conservation in this Province and will work with the regulator, the OPA and other members of the CLD to make this happen.

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 2007	Residential	Commercial	Distributed Energy	[4] Smart Meters	Overall Program Support
Net TRC value ($):	*$ 98,432,860*	**$ 11,720,212**	**$ 6,472,120**	**$ 5,859,383**	**$ (33,138)**		**$ (578,153)**
Benefit to cost ratio:	*2.44*	3.04	3.61	3.21	0.21		0.00
Number of participants or units delivered:	*n/a*	*n/a*	667,760-number of residential & small commercial customers	269	2		n/a
Lifecycle (kWh) Savings:	*1,670,986,691*	136,658,037	29,158,570	107,398,616	100,851		0
Report Year Total kWh saved (kWh):	*262,371,278*	15,027,576	5,055,865	9,966,248	5,463		0
Total peak demand saved (kW):	*68,520*	6,161	3,942	2,216	3		0
Total kWh saved as a percentage of total kWh delivered (%):	*0.51%*	0.06%	0.02%	0.04%	0.00%		n/a
Peak kW saved as a percentage of LDC peak kW load (%):	*n/a*	0.13%	0.08%	0.05%	0.00%		n/a
[1] *Report Year Gross C&DM expenditures ($):*	*$ 39,983,087*	$ 3,009,622	$ 1,841,803	$ 589,018	$ 648	$ -	$ 578,153
[2] *Expenditures per KWh saved ($/kWh):*	*$ 0.02*	$ 0.02	$ 0.06	$ 0.01	$ 0.01		$ -
[3] *Expenditures per KW saved ($/kW):*	*583.53*	$ 488.47	$ 467.18	$ 265.84	$ 197.80		$ -

Utility discount rate (%):	5.36%

[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, 2007 CDM Annual report for third tranche will include 2006, 2005 and 2004 numbers, if any.

Appendix B - Discussion of the Program

A. **Name of the Program:** **Residential Load Control Initiative**

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

Load control uses a real time communications link to enable or disable customer loads at the discretion of the utility. These controls are usually engaged during system peak periods or when required to relieve pressure on the system grid and may include such "dispatchable" loads as electric hot water tanks, pool pumps, lighting, air conditioners, etc.

Target Users

Direct load control applies to all market segments. Though the control systems and technologies may vary by market segment, the methodology remains the same.

Benefits

Load control allows customers to respond quickly to external price signals. This also provides a mechanism for utilities to relieve pressure on constrained areas within the distribution grid and also reduces the need to bring on large peaking generators.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	none		
Efficient technology:	load control switch		
Number of participants or units delivered for reporting year:	3,459		
Measure life (years):	15		
Number of Participants or units delivered life to date	26,421		

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*	$ 6,889,628	$ 47,941,761
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	$ 169,920	$ 3,466,568
Incremental Measure Costs (Equipment Costs)	$ 1,283,998	$ 10,902,376
Total TRC costs:	$ 1,453,918	$ 14,368,943
Net TRC (in year CDN $):	$ 5,435,710	$ 33,572,818
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	$ 4.74	3.34

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

	Reporting Year	Cumulative Results:
Demand Response Programs:		
Dispatchable load (kW):	3,805	29,063
Peak hours dispatched in year (hours):		

D. **Actual Program Costs:**

		Reporting Year	Cumulative Life to Date
Utility direct costs ($):	*Incremental capital:*	$ 1,283,998	$ 11,680,807
	Incremental O&M:	$ 169,920	$ 2,688,137
	Incentive:		
	Total:	$ 1,453,918	$ 14,368,943
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:		

E. Assumptions & Comments:

1. Average peak demand reduction per participant is 1.1 kW according to a consulting study from U.S.
2. Zero percent of free ridership is used as the program is technology driven and enrollment based.
3. No kWh savings have been recognized as the program is one of the Demand Response programs.

[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 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

A. **Name of the Program:** **TAPS Program**

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

This initiative is a partnership with Enbridge in their highly successful TAPS program. Enbridge is distributing CFLs and installing energy savings measures in homes that they would not normally consider (i.e. homes with electric water heaters and electric heating).

Target Users

Residential customers

Benefits

This program is simple in concept and highly effective, since CFL's use 75% less energy than incandescent bulbs and fit into standard sockets. Although a single change-out makes a very small difference, wide-scale use of CFL's could have a significant impact.

Measure(s):

	Measure 1	Measure 2	Measure 3	Measure 4	Measure 5
Base case technology:	average existing stock	average existing stock	average existing stock	average existing stock	average existing stock
Efficient technology:	Efficient Shower Heads	Pipe Wrap	CFL's 14W & 23W	Aerators	Prog. Thermostats
Number of participants or units delivered for reporting year:	446	399	33,944	838	41
Measure life (years):	12	6	4	12	18
Number of Participants or units delivered life to date	2,004	1,863	114,652	3,916	103

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*	$ 1,306,152.30	4,395,839.96
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	$ 43,771	$ 623,473
Incremental Measure Costs (Equipment Costs)	$ 102,272	$ 257,148
Total TRC costs:	$ 146,043	$ 880,620
Net TRC (in year CDN $):	$ 1,160,109	$ 3,515,220
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	8.94	4.99

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

Conservation Programs:

		Cumulative Results:
Demand savings (kW):	*Summer*	16	84
	Winter		

	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):	*17,252,360*	3,621,438	61,482,912	12,626,599
Other resources saved :				
Natural Gas (m3):				
Water (m3):	158,676	13,223	718,305	59,859

D. **Actual Program Costs:**

		Reporting Year	Cumulative Life to Date
Utility direct costs ($):	*Incremental capital:*	$ 112,504	$ 284,588
	Incremental O&M:	$ 43,771	$ 623,473
	Incentive:		
	Total:	$ 156,275	$ 908,061
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:		

E. Assumptions & Comments:

Actual equipment costs are used in TRC calculation.

[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 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

A. **Name of the Program:** **Social Housing Program**

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

Due to aging housing stock, financial constraints and high incidences of electric heating, the Social Housing Sector is a prime candidate for CDM incentives.

Target Users

Local social housing corporations, non-profit homes and co-operative housing.

Benefits

Synergies will be created though the combined initiatives of the various agencies.

Measure(s):

	Measure 1	Measure 2	Measure 3
Base case technology:	Current standard for refridgerator	Current standard stove	Current standard lighting
Efficient technology:	Energy Star Refrigerators	Energy Star Stoves	Various EE Lighting Measures
Number of participants or units delivered for reporting year:	3,350	4,501	7
Measure life (years):	19	18	3
Number of Participants or units delivered life to date	27,381	29,330	7

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*	$ 757,611	$ 4,117,187
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	$ 44,528	$ 245,813
Incremental Measure Costs (Equipment Costs)	$ 836,782	$ 4,265,472
Total TRC costs:	$ 881,309	$ 4,511,285
Net TRC (in year CDN $):	($123,698)	($394,098)
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	$ 0.86	0.91

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

Cumulative Results:

Conservation Programs:

Demand savings (kW):	*Summer*	122	525
	Winter		

	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):	*11,906,210*	1,434,427	70,274,506	4,578,316
Other resources saved :				
Natural Gas (m3):				
Other (specify):				

D. **Actual Program Costs:**

		Reporting Year	Cumulative Life to Date
Utility direct costs ($):	*Incremental capital:*		
	Incremental O&M:	$ 44,528	$ 245,813
	Incentive:	$ 187,082	$ 1,155,170
	Total:	$ 231,609	$ 1,400,983
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:		

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 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

A. **Name of the Program:** **Leveraging Energy Conservation**

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

Existing energy conservation and/or load management programs such as NRCan's Energy Innovators initiative, Enbridge initiatives etc. will be promoted and incentives may be provided to advance market uptake of these programs and implementation of the recommendations. The LDC's are well positioned to introduce such programs to their customer base. Work will be conducted with the existing program providers to maximize leverage opportunities. Promotion will potentially include face-to-face meetings, conferences and seminars.

Target Users

Large consumers over 50 kW including schools, large commercial facilities, institutional facilities, industrial, and municipal facilities.

Benefits

Customer awareness and additional incentives will help advance market uptake of audit services, feasibility studies and retrofit opportunities already established within the government program framework.

Measure(s):

	Measure 1	Measure 2	Measure 3
Base case technology:	Old lighting measures	n/a	Electric Water Heater
Efficient technology:	Energy efficient lighting	PowerKure	Gas Water Heater
Number of participants or units delivered for reporting year:	56	1	19
Measure life (years):	Varies with project	20	18
Number of Participants or units delivered life to date	65	1	30

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*	*$ 2,859,460*	6,298,773
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	*$ 19,568*	$ 865,902
Incremental Measure Costs (Equipment Costs)	$ 2,045,760	$ 4,669,969
Total TRC costs:	$ 2,065,327	$ 5,535,871
Net TRC (in year CDN $):	$794,132	$762,902
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	$ 1.38	1.14

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

Conservation Programs:

		Reporting Year	Cumulative Results:
Demand savings (kW):	*Summer*	966	2,473
	Winter		

	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):	*38,454,146*	7,668,099	85,875,479	15,634,132
Other resources saved :				
Natural Gas (m3):	(232,560.00)	(12,920.00)	(232,560.00)	(12,920.00)
Water (m3):				

D. **Actual Program Costs:**

		Reporting Year	Cumulative Life to Date
Utility direct costs ($):	*Incremental capital:*		$ 282,355
	Incremental O&M:	$ 19,568	$ 472,971
	Incentive:	$ 447,305	$ 769,835
	Total:	$ 466,873	$ 1,525,161
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:		

E. Assumptions & Comments:

1. There are 8 projects included in this program that delivered kW savings in 2007: Westpark Healthcare Centre, Powerwise Business Incentive Program (7 Participants), Irving Tissue, U of T Scarborough (Residence), The Indigo-50 Lombard St., THESI, Atria Complex and Toronto District School Board (45 Participants).
2. PowerKure is an energy saving device.

[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 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

A. **Name of the Program:** **Commercial, Industrial & Institutional (CI&I) Load Control Initiative**

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

Load control uses a real time communications link to enable or disable customer loads at the discretion of the utility. These controls are usually engaged during system peak periods or when required to relieve pressure on the system grid.

Target Users

Larger commercial, industrial and institutional customers.

Benefits

Demand control provides lower costs and increased stability for customers and utilities.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	none		
Efficient technology:	load control switch		
Number of participants or units delivered for reporting year:	183		
Measure life (years):	15		
Number of Participants or units delivered life to date	1,227		

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*	$ 1,358,587	$ 8,315,518
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	$ 8,990	$ 110,427
Incremental Measure Costs (Equipment Costs)	$ 67,931	$ 74,297
Total TRC costs:	$ 76,920	$ 184,724
Net TRC (in year CDN $):	$ 1,281,667	$ 8,130,793
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	17.66	45.02

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

	Reporting Year	Cumulative Results:
Demand Response Programs:		
Dispatchable load (kW):	750	5,031
Peak hours dispatched in year (hours):		

D. **Actual Program Costs:**

		Reporting Year	Cumulative Life to Date
Utility direct costs ($):	*Incremental capital:*	$ 67,931	$ 74,297
	Incremental O&M:	$ 8,990	$ 110,427
	Incentive:		
	Total:	$ 76,920	$ 184,724
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:		

E. Assumptions & Comments:

1. Average peak demand reduction per participant is 4.1 kW according to a consulting study from U.S.
2. Zero percent of free ridership is used as the program is technology driven and enrollment based.
3. No kWh savings have been recognized as the program is one of the Demand Response programs.

[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 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

A. **Name of the Program:** **Design Advisory Program**

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

This initiative helps to create an integrated approach to the design process for new buildings, and involves architects, engineers, building owners and Toronto Hydro design advisors, with the goal of creating more energy efficient buildings.

Target Users

Commercial, Industrial and Institutional customers.

Benefits

This program results in cost effective improvements to the energy efficiency of a building without adversely affecting other performance requirements stipulated by the owner. An energy performance model can be created to demonstrate achievable energy savings and can provide a breakdown of energy use. Through the installation of energy efficient equipment during construction, the customer benefits by avoiding the stranded costs incurred with equipment upgrades.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	Conventional building design		
Efficient technology:	Integrated design		
Number of participants or units delivered for reporting year:	10		
Measure life (years):	30		
Number of Participants or units delivered life to date	17		

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*	$ 4,295,915	$ 4,989,596
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):		$ 23,467
Incremental Measure Costs (Equipment Costs)	$ 512,331	$ 562,978
Total TRC costs:	$ 512,331	$ 586,445
Net TRC (in year CDN $):	$ 3,783,584	$ 4,403,151
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	$ 8.39	8.51

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

Conservation Programs:

		Cumulative Results:
Demand savings (kW):	*Summer*	500	697
	Winter		

	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):	*68,944,470*	2,298,149	81,434,108	2,714,470
Other resources saved :				
Natural Gas (m3):				
Other (specify):				

D. **Actual Program Costs:**

		Reporting Year	Cumulative Life to Date
Utility direct costs ($):	*Incremental capital:*		
	Incremental O&M:		$ 23,467
	Incentive:	$ 45,225	$ 117,577
	Total:	$ 45,225	$ 141,044
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:		

E. Assumptions & Comments:

1. The program includes 10 locations that obtained an occupancy permit by the end of 2007.
2. A 30% free ridership rate has been used in the TRC calculation, consistent with what's been used in the gas industry.
3. kW and kWh savings are based on model results provided by CDM partner.

[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 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

A. **Name of the Program:** **Load Displacement**

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

Distributed generation behind the customer's meter provides an excellent opportunity to displace load from the local distribution system's grid in a very effective manner. Load displacement technology, such as combined heat and power systems, provides increased power efficiency and thermal systems.
Other technologies such as micro-turbines, wind, biomass fuels and solar provide additional options to meet the customer's needs. This initiative will facilitate the development and implementation of these opportunities. Financial incentives will be considered based on the project's viability.
Development of educational and technology programs in conjunction with local colleges and universities may be considered. Small pilots or demonstration projects to promote alternative and renewable energy sources may also be considered.

Target Users:

Commercial, industrial, and residential, schools, colleges and universities.

Benefits

Benefits include additional capacity within the grid. Cleaner technologies result in reductions in green house gas (GHG) emissions. Other benefits include improved system reliability, reduced harmonics, backup power possibilities, education

Measure(s):

	Measure 1	Measure 2	Measure 3
Base case technology:	Electrical load from LDC's grid	Electrical load from LDC's grid	Previous year (Enwave)
Efficient technology:	Solar Panels	Wind Turbine	Deep Lake Water Cooling
Number of participants or units delivered for reporting year:	1	1	
Measure life (years):	20	15	
Number of Participants or units delivered life to date	1	1	7

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*	$ 8,862	$ 39,536,294
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):		$ 202,983
Incremental Measure Costs (Equipment Costs)	$ 42,000	$ 10,135,819
Total TRC costs:	$ 42,000	$ 10,338,803
Net TRC (in year CDN $):	-$ 33,138	$ 29,197,492
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	$ 0.21	3.82

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

Conservation Programs:

		Reporting Year	Cumulative Results:
Demand savings (kW):	*Summer*	3	11,520
	Winter		

	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):	*100,851*	5,463	563,499,881	22,541,424
Other resources saved :				
Natural Gas (m3):				
Other (specify):				

D. **Actual Program Costs:**

		Reporting Year	Cumulative Life to Date
Utility direct costs ($):	*Incremental capital:*		$ -
	Incremental O&M:	$ -	$ 202,983
	Incentive:	$ 648	$ 1,837,948
	Total:	$ 648	$ 2,040,931
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:		

E. Assumptions & Comments:

1. The program contains one location with solar panels and a wind turbine.

[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 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

A. **Name of the Program:** **Regulatory Reporting and Program Support**

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

Project review, approval, tracking and results verification. Development of contracts with CDM Partners.

Target Users

All customer classes.

Benefits

Supports existing programs and drives energy conservation awareness that will facilitate the culture change in Ontario.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:			
Efficient technology:			
Number of participants or units delivered for reporting year:			
Measure life (years):			
Number of Participants or units delivered life to date			

B. **TRC Results:**		**Reporting Year**	**Life-to-date TRC Results:**
[1] *TRC Benefits ($):*			
[2] *TRC Costs ($):*			
	Utility program cost (excluding incentives):	$ *578,153*	$ 1,787,754
	Incremental Measure Costs (Equipment Costs)		
	Total TRC costs:	$ 578,153	$ 1,787,754
Net TRC (in year CDN $):		$ (578,153)	$ (1,787,754)
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		n/a	n/a

D. **Actual Program Costs:**		**Reporting Year**	**Cumulative Life to Date**
Utility direct costs ($):	*Incremental capital:*		
	Incremental O&M:	$ 578,153	$ 1,787,754
	Incentive:		
	Total:	$ 578,153	$ 1,787,754
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:		

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 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 C - Program and Portfolio Totals

Report Year:

1. Residential 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 ($)
Resdential Load Control Initiative	$ 6,889,628	$ 1,453,918	$ 5,435,710	4.74			3,805	$ 1,453,918
TAPS Program	$ 1,306,152	$ 146,043	$ 1,160,109	8.94	3,621,438	17,252,360	16	$ 156,275
Social Housing Program	$ 757,611	$ 881,309	-$ 123,698	0.86	1,434,427	11,906,210	122	$ 231,609
Totals App. B - Residential	$ 8,953,391	$ 2,481,270	$ 6,472,120	3.61	5,055,865	29,158,570	3,942	$ 1,841,803
Residential Indirect Costs not attributable to any specific program	→							
Total Residential TRC Costs		$ 2,481,270						
****Totals TRC - Residential**	**$ 8,953,391**	**$ 2,481,270**	**$ 6,472,120**	**3.61**				

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 ($)
Leveraging Energy Conservation & Load Control Management	$ 2,859,460	$ 2,065,327	$ 794,132	1.38	7,668,099	38,454,146	966	$ 466,873
Institutional Load Control Initiative	$ 1,358,587	$ 76,920	$ 1,281,667	17.66			750	$ 76,920
Design Advisory Program	$ 4,295,915	$ 512,331	$ 3,783,584	8.39	2,298,149	68,944,470	500	$ 45,225
Totals App. B - Commercial	$ 8,513,962	$ 2,654,579	$ 5,859,383	3.21	9,966,248	107,398,616	2,216	$ 589,018
Commercial Indirect Costs not attributable to any specific program	→							
Total TRC Costs		$ 2,654,579						
****Totals TRC - Commercial**	**$ 8,513,962**	**$ 2,654,579**	**$ 5,859,383**	**3.21**				

3. Distributed Energy 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 ($)
Load Displacement	$ 8,862	$ 42,000	-$ 33,138	0.21	5,463	100,851	3	$ 648
Totals App. B - Distributed Energy	$ 8,862	$ 42,000	-$ 33,138	0.21	5,463	100,851	3	$ 648
Distributed Energy Indirect Costs not attributable to any specific program	→							
Total TRC Costs		$ 42,000						
****Totals TRC - Distributed Energy**	**$ 8,862**	**$ 42,000**	**-$ 33,138**	**0.21**				

→

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 ($)	

9. Overall Program Support

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 ($)
Regulatory Reporting & Program Support		$ 578,153	-$ 578,153	0.00				$ 578,153
***Totals App. B - Overall Program Support**	$ -	$ 578,153	-$ 578,153	0.00	0	0	0	$ 578,153
Overall Program Support Indirect Costs not attributable to any specific program								
Total TRC Costs		$ 578,153						
****Totals TRC - Overall Program Support**	**$ -**	**$ 578,153**	**-$ 578,153**	**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**	$ 17,476,214	$ 5,756,002	$ 11,720,212	3.04	$ 15,027,576	$ 136,658,037	$ 6,161	$ 3,009,622
*Any **other** Indirect Costs not attributable to any specific program*								
TOTAL ALL LDC COSTS		$ 5,756,002						
****LDC' PORTFOLIO TRC**	$ 17,476,214	$ 5,756,002	$ 11,720,212	3.04				

* 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.