

Wayne Sunohara Supervisor Conservation & Energy Services Phone (807) 343-1125



Thunder Bay Hydro

2006 Annual Report CDM Third Tranche Funding, Thunder Bay Hydro

Distributor Conservation Demand Management Plan Report for Ontario's Energy **Culture of Conservation**

March 2007



Introduction

The Ontario government is committed to getting Ontarians to conserve electricity by a total of 5% by the end of 2007. The government believes that local distribution utilities need to play a leading role in this 3-year initiative, which began May 1st, 2005. As such, the Ministry of Energy through the Ontario Energy Board has strongly encouraged utility involvement.

To this end, Thunder Bay Hydro Electricity Distribution Inc. has begun implementing its own plan for encouraging customers to conserve electricity. The main focus on the implementation of Thunder Bay Hydro's CDM Plan for 2006 was targeted at Energy Efficiency Projects.

It is our desire to be a conservation leader in our community through partnering with our own local conservation agencies to help this government and the province achieve the targeted 5% reduction. Our plan is intended to cover all areas of conservation and demand management while allowing full participation from all of our customer classes.



Our Unique Circumstance

Since the introduction of Market Based Rate of Return to Ontario distribution utilities, Thunder Bay Hydro has been operating under a 'Rate Minimization' model. The model was mandated by the utility's shareholder, the City of Thunder Bay. The essence of this model is that the City of Thunder Bay has decided that it will forego any financial return from its ownership of Thunder Bay Hydro. The shareholder made this decision in anticipation that avoiding the distribution rate increases associated with a financial return to the City would serve as an economic stimulant in a weak local economy.

In accordance with the 'Rate Minimization' model, Thunder Bay Hydro did not previously apply for the distribution rate increases required to fund a financial rate of return. The utility is essentially operating under a breakeven scenario, where the small return earned is used to fund the capital expenditure program. At this time, the City of Thunder Bay is not considering abandoning the 'Rate Minimization' model.



Evaluation of the CDM Plan

Thunder Bay Hydro Electricity Distribution Inc. main focus on the implementation of the CDM Plan was targeted at Energy Efficiency Projects. These projects included the following.

- 1. Compact Fluorescent Lamp (CFL) Promotion,
- 2. Refrigerator Buy-Back Program,
- 3. Energy Star Appliance Incentive Program,
- 4. Christmas L.E.D. Light Exchange Program,
- 5. City of Thunder Bay L.E.D. Traffic Light Conversion Program,
- 6. Load Control Program,
- 7. Public Outreach Program,
- 8. Low Income Program,
- 9. Fuel Switching Program,
- 10. Thunder Bay Hydro Distribution System Upgrades,
- 11. Feasibility Study of Landfill Gas Utilization Project
- 12. Residential Customer Survey
- 13. Key Account Seminars

See Appendix A, B, and C Evaluation of the CDM Plan.



The customer response to the implementation of the CDM Plan has been very encouraging. The level of customer awareness for conservation and demand management is very high. This was confirmed by the participation levels of the various programs. Thunder Bay Hydro partnered with Eco-Superior Programs to promote the CFL Promotion, Refrigerator Buy Back Program, and the Star Appliance Incentive Program.

Compact Fluorescent Lamp (CFL) Promotion

As part of the Community Outreach Campaign, 3,000 Compact Fluorescent Lamps were purchased in April 2005. Distribution of the CFL's was through various customer contacts (i.e. shows, home visits, etc.). By the end of 2005, 1,800 had been circulated to customers. The remaining 1,200 CFL's were distributed through the same manner in 2006. As more retailers handle the product, the more likely it is that customers will purchase the CFL's. Programs such as this as well as through the efforts of the Ontario Power Authority help bring awareness to the fore front. Energy savings and long lamp life need to be promoted.

Refrigerator Buy-Back Program

The Refrigerator Buy-Back Program was aimed at 3 target areas. The first target was the removal of the "second" refrigerator from the household. The second target was to incent customers to remove an "older" refrigerator and purchase a new Energy Star rated refrigerator. The third target was to safely recycle not only the harmful refrigerants, but also recycle the metallic components to help our environment. Thunder Bay Hydro's original target of 100 units was met in less than 2 months time. The program is seen as a success as found in 2005.

Energy Star Appliance Incentive Program

The Energy Star Appliance Incentive Program was aimed at customers who were considering upgrading their refrigerator, freezer, dishwasher, and clothes washer. As with the Refrigerator Buy Back Program, the Energy Star Appliance Incentive Program also sold-out within 2 months. The program was again well received by our customers.



Christmas L.E.D. Light Exchange Program

The Christmas L.E.D. Light Exchange Program was not included in the original CDM Plan. This program was dawned from the closure of Thunder Bay Hydro's Holiday Home Decorating Contest which had been existence for 10 years. The program was aimed at bringing energy conservation and safety awareness to holiday lighting of a home's interior and exterior. Thunder Bay Hydro offered direct exchange of 2 incandescent light sets for 2 energy saving L.E.D. light sets. Each customer was limited to 2 sets. The program was promoted at 2 different sites with the same level of participation. Each site exchanged over 200 sets of L.E.D. Christmas lights in less than one hour. There is high demand for this type of program.

City of Thunder Bay L.E.D. Traffic Light Conversion Program

The L.E.D. Traffic Light Conversion Program is a partnership with the City of Thunder Bay. The program is seen as a huge success. The energy savings received from the conversion work is over 80%. Savings were calculated based on actual pre-conversion and post conversion measurements. Partnering with the City of Thunder Bay proved to be a positive experience with the benefits going towards the municipal tax base. Thunder Bay Hydro looks forward to help the City of Thunder Bay find and implement other energy conservation solutions.

There were 49 intersections converted in 2006. The remaining 25 intersections will be converted from incandescent traffic lights to L.E.D. technology in spring of 2007.

Load Control Program

This program targeted uncontrolled parking lot vehicle receptacles (engine block heaters). The control devices controlled the electricity usage based on ambient temperature. The control devices were designed to provide power at -5 degrees C for a timed duration. As the ambient temperature decreases, the timed cycles increased. At -25 degrees C, the vehicle block heaters would have full power. This program is ideal for LDC's that do not have a demand response program.



Public Outreach Program

This program is designed to raise awareness of the need to reduce electricity consumption and to provide customers with simple energy efficiency tips. It will also continue to provide customers with access to Thunder Bay Hydro conservation programs. This program benefits all rate classes. The program will continue to utilize the TBH website, EcoNews and This City tabloids, television and print campaigns, school programs, community presentations, display shows, advisories and Public Service announcements as promotional opportunities.

Low Income Program

This program originally consisted of electrical consumption reduction through the development of the EnerGuide for Homes for low income households. The EnerGuide for Houses program was discontinued by the federal government. Initiatives through Green Communities have not started. Thunder Bay Hydro will continue to support this program when details of Green Communities plan are made available.

Fuel Switching Program

This program will continue in 2007. This program is aimed at customers who have an electric domestic water heater. On-site assessments were conducted to determine if conversions to natural gas-fired units were possible/feasible. In some cases conversion work was not possible due combustion air and venting requirements of natural gas water heaters. Customers would benefit from the removal of the electric water heater to a new natural gas unit at no-charge to them. Most electric water heaters are a minimum of 3 kW of load.



Commercial Lighting Program

This Program will be available to specific General Service customers who are our largest customers or their combined portfolios have significant loads. These customers have a peak load of 1 MW or larger, or are part of the "MUSH" sector, or are a property management firm, or a government housing provider. These customers will not only benefit from the incentives, but also the result of more efficient lighting systems. The incentives for energy efficient lighting conversions included T-5 and T-8 fluorescent lighting, L.E.D. exit signs, and high pressure sodium lighting.

Thunder Bay Hydro Distribution System Upgrades

The purpose of this program is to identify "hi-loss" transformers on existing 4kV distribution system lines as well identifying 4kV distribution that is nearing the end of their useful life. Then, on a feeder-by-feeder basis a voltage conversion program would include new transformers on the distribution system to gain efficiencies. This program benefits all rate classes by incorporating transformer upgrades during line upgrades.

It is our experience and that of the industry that area voltage conversions result in line loss savings that benefits all rate classes. This voltage conversion project will upgrade a portion TBH's 4kV distribution to 25kV. This will also allow an existing 4kV substation to be decommissioned.

Feasibility Study of Landfill Gas Utilization Project

This program was aimed at new technology research and development. Thunder Bay Hydro contributed to the feasibility study that was prepared for the proposed "landfill gas utilization" project at the City of Thunder Bay's John Street Landfill Site. Initial assessments indicate a potential of 3.2 MW of electricity generation at this site.



Residential Customer Survey

The Customer Appliance Saturation Survey was part of the survey conducted across the province. This survey was originally developed by Hydro One. Marcom Group Inc. coordinated the data from participating LDC's. The survey was held from March 13, 2006 to June 12, 2006. There were over 2,400 Thunder Bay Hydro customers participating in the survey which represents approximately 6% of our residential customer base. The survey results provide valuable information for future programs and feedback for our existing programs.

Key Account Seminars

Key Account Seminars will be focused on continuing to educate customers on the Minister's goal of a 5% reduction in electricity consumption. Thunder Bay Hydro held 2 Key Account Seminars in 2006. The first session was in April and the second session was in October. The October session was jointly hosted by Union Gas. The presentations were "The Bottom line on Energy Management" from the "Dollars to Sense" workshops. The presenters of the workshops were from Tds Dixon Inc. The workshops were also sponsored by Natural Resources Canada and the Independent Electricity System Operator. Key Account Seminars are a very good venue to promote energy conservation to our larger customers. The "Dollars to Sense" workshops provide excellent format for our customers.



Conclusions

The Energy Efficiency Programs Thunder Bay Hydro implemented has all proven to be successful. There have been many positive results from the CDM Plan. The Refrigerator Buy Back and Energy Star Appliance Incentive Programs were the most popular.

Partnerships formed with the City of Thunder Bay and Eco-Superior Programs were both positive experiences. The reduction of electricity usage had and continues to have positive results on the environment.

A revised budget will be submitted. The revised budget will reallocate funds within the existing CDM Plan. Reallocation will not exceed 20% of the original OEB approved CDM Plan.

Distribution Efficiency Program Upgrade - Transformer Upgrades Name of the Program: Description of the program (including intent, design, delivery, partnerships and evaluation): The purpose of this program is to identify "hi-loss" transformers on existing 4kV distribution system lines as well identifying 4kV distribution that is nearing the end of their useful life. Then, on a feeder-by-feeder basis a voltage conversion program would include new transformers on the distribution system to gain efficiencies. This program benefits all rate classes by incorporating transformer upgrades during line upgrades. Measure(s): Measure 2 (if applicable) Measure 3 (if applicable) Measure 1 Base case technology: None Efficient technology: Transformer Upgrade Number of participants or units delivered for reporting year: 220 Measure life (years): 20 Number of Participants or units delivered life to date 220 TRC Results: Reporting Year Life-to-date TRC Results: ¹ TRC Benefits (\$): \$ 133.462.86 \$ 133,462.86 ² TRC Costs (\$): Utility program cost (excluding incentives): 339,147.36 \$ 339,147.36 Incremental Measure Costs (Equipment Costs) Total TRC costs: \$ 339,147.36 \$ 339,147.36 Net TRC (in year CDN \$): (205,684.51)\$ (205,684.51) \$ Benefit to Cost Ratio (TRC Benefits/TRC Costs): \$ 0.39 Results: (one or more category may apply) **Cumulative Results: Conservation Programs:** Demand savings (kW): Summer 11.3 11.3 Winter 11.3 11.3 Cumulative Cumulative Lifecycle **Annual Savings** lifecycle in year Energy saved (kWh): 2,474,700 98,988 2,474,700 98,988 Other resources saved: Natural Gas (m3): Other (specify): **Demand Management Programs:** Controlled load (kW) Energy shifted On-peak to Mid-peak (kWh): Energy shifted On-peak to Off-peak (kWh): Energy shifted Mid-peak to Off-peak (kWh): **Demand Response Programs:** Dispatchable load (kW): Peak hours dispatched in year (hours):

<u>Power Factor Correction Programs:</u> *Amount of KVar installed (KVar):*

Distribution system power factor at beginning of year (%): Distribution system power factor at end of year (%):

| Line | Loss | Reduction | Programs: |
|------|------|-----------|------------------|
|------|------|-----------|------------------|

| Line Loss Reduction i rogianis. | | | |
|--|----------------------|---------|---------|
| Peak load savings (kW): | | 11.3 | 11.3 |
| | lifecycle | in year | |
| Energy savings (kWh): | 2,494,809 | 124,740 | 124,740 |
| Distributed Generation and Load Distributed Generation and Load Distributed (https://doi.org/10.1016/1 | splacement Programs: | | |
| Other Programs (specify): Metric (specify): | | | |

| D. | Actual Program Costs: | | Reporting Year | Cumulative Life to Date |
|----|------------------------------|----------------------|------------------|-------------------------|
| | Utility direct costs (\$): | Incremental capital: | \$ 309,000.00 | \$ 309,000.00 |
| | | Incremental O&M: | \$ 30,147.36 | \$ 30,147.36 |
| | | Incentive: | | |
| | | Total: | \$ 339,147.36 | \$ 339,147.36 |
| | | | | |
| | Utility indirect costs (\$): | Incremental capital: | | |
| | | Incremental O&M: | | |
| | | Total: | | |

E. Assumptions & Comments:

This project impacts 220 residential customers.

Benefits should be estimated if costs have been incurred <u>and</u> 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 b

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

| A. | Name of the Program: Distribution Efficiency Program Upgrade - Voltage Conversion Project | | | | | | | | |
|----|--|---|----|---------------------------|-----------------|-----------------|--|--|--|
| | Description of the program (including intent, design, delivery, partnerships and evaluation): | | | | | | | | |
| | It is our experience and that of the in voltage conversion project will upgradecommissioned. | | | | | | | | |
| | Measure(s): | Measure 1 | | Measure 2 (if applicable) | Measure 3 | (if applicable) | | | |
| | Base case technology: | None | | | | | | | |
| | Efficient technology: | Conversion from 4 kV to 25 kV | | | | | | | |
| | Number of participants or units | | | | | | | | |
| | delivered for reporting year: | 220 | | | | | | | |
| | Measure life (years): | 25 | | | | | | | |
| | Number of Participants or units | | | | | | | | |
| | Number of Participants or units delivered life to date | 220 | | | | | | | |
| | delivered life to date | 220 | | | | | | | |
| B. | TRC Results: | | | Reporting Year | Life-to-date | TRC Results: | | | |
| | ¹ TRC Benefits (\$): ² TRC Costs (\$): | | \$ | 17,716.31 | \$ | 17,716.31 | | | |
| | Utility _i | program cost (excluding incentives): | \$ | 263,415.43 | \$ | 263,415.43 | | | |
| | Incrementa | al Measure Costs (Equipment Costs) | | | | | | | |
| | | Total TRC costs: | | 263,415.43 | \$ | 263,415.43 | | | |
| | Net TRC (in year CDN \$): | | \$ | (245,699.12) | | \$ (245,699.12) | | | |
| | Benefit to Cost Ratio (TRC Benefits/ | TRC Costs): | \$ | 0.07 | \$ | 0.07 | | | |
| C. | Results: (one or more category may apply) | | | | | | | | |
| | Results: (one or more category may | / apply) | | | <u>Cumulati</u> | ve Results: | | | |
| | | / apply) | | | Cumulati | ve Results: | | | |
| | Conservation Programs: | | | | <u>Cumulati</u> | ve Results: | | | |
| | | Summer | | | Cumulati | ve Results: | | | |
| | Conservation Programs: | | | | Cumulati | ve Results: | | | |
| | Conservation Programs: | Summer | | | | | | | |
| | Conservation Programs: | Summer Winter | | in vear | Cumulative | Cumulative | | | |
| | Conservation Programs: Demand savings (kW): | Summer | | in year | | | | | |
| | Conservation Programs: | Summer Winter | | in year | Cumulative | Cumulative | | | |
| | Conservation Programs: Demand savings (kW): Energy saved (kWh): Other resources saved: | Summer Winter lifecycle | | in year | Cumulative | Cumulative | | | |
| | Conservation Programs: Demand savings (kW): Energy saved (kWh): Other resources saved: Natural Gas (m3): | Summer Winter lifecycle | | in year | Cumulative | Cumulative | | | |
| | Conservation Programs: Demand savings (kW): Energy saved (kWh): Other resources saved : Natural Gas (m3): Other (specify): | Summer Winter lifecycle | | in year | Cumulative | Cumulative | | | |
| | Conservation Programs: Demand savings (kW): Energy saved (kWh): Other resources saved: Natural Gas (m3): Other (specify): Demand Management Programs: | Summer Winter lifecycle | | in year | Cumulative | Cumulative | | | |
| | Conservation Programs: Demand savings (kW): Energy saved (kWh): Other resources saved: Natural Gas (m3): Other (specify): Demand Management Programs: Controlled load (kW) | Summer Winter lifecycle | | in year | Cumulative | Cumulative | | | |
| | Conservation Programs: Demand savings (kW): Energy saved (kWh): Other resources saved: Natural Gas (m3): Other (specify): Demand Management Programs: Controlled load (kW) Energy shifted On-peak to Mid-peak | Summer Winter lifecycle | | in year | Cumulative | Cumulative | | | |
| | Conservation Programs: Demand savings (kW): Energy saved (kWh): Other resources saved: Natural Gas (m3): Other (specify): Demand Management Programs: Controlled load (kW) | Summer Winter lifecycle : (kWh): (kWh): | | in year | Cumulative | Cumulative | | | |
| | Conservation Programs: Demand savings (kW): Energy saved (kWh): Other resources saved : Natural Gas (m3): Other (specify): Demand Management Programs: Controlled load (kW) Energy shifted On-peak to Mid-peak Energy shifted Mid-peak to Off-peak Energy shifted Mid-peak to Off-peak | Summer Winter lifecycle : (kWh): (kWh): | | in year | Cumulative | Cumulative | | | |
| | Conservation Programs: Demand savings (kW): Energy saved (kWh): Other resources saved : Natural Gas (m3): Other (specify): Demand Management Programs: Controlled load (kW) Energy shifted On-peak to Mid-peak Energy shifted Mid-peak to Off-peak Energy shifted Mid-peak to Off-peak Energy shifted Mid-peak to Off-peak | Summer Winter lifecycle : (kWh): (kWh): | | in year | Cumulative | Cumulative | | | |
| | Conservation Programs: Demand savings (kW): Energy saved (kWh): Other resources saved : Natural Gas (m3): Other (specify): Demand Management Programs: Controlled load (kW) Energy shifted On-peak to Mid-peak Energy shifted On-peak to Off-peak Energy shifted Mid-peak to Off-peak | Summer Winter lifecycle | | in year | Cumulative | Cumulative | | | |
| | Conservation Programs: Demand savings (kW): Energy saved (kWh): Other resources saved : Natural Gas (m3): Other (specify): Demand Management Programs: Controlled load (kW) Energy shifted On-peak to Mid-peak Energy shifted Mid-peak to Off-peak | Summer Winter lifecycle (kWh): (kWh): (kWh): | | in year | Cumulative | Cumulative | | | |
| | Conservation Programs: Demand savings (kW): Energy saved (kWh): Other resources saved : Natural Gas (m3): Other (specify): Demand Management Programs: Controlled load (kW) Energy shifted On-peak to Mid-peak Energy shifted On-peak to Off-peak Energy shifted Mid-peak to Off-peak Energy shifted On-peak to Off-peak E | Summer Winter lifecycle (kWh): (kWh): (kWh): | | in year | Cumulative | Cumulative | | | |
| | Conservation Programs: Demand savings (kW): Energy saved (kWh): Other resources saved : Natural Gas (m3): Other (specify): Demand Management Programs: Controlled load (kW) Energy shifted On-peak to Mid-peak Energy shifted Mid-peak to Off-peak Energy shifted On-peak to Off-peak | Summer Winter lifecycle (kWh): (kWh): (kWh): | | in year | Cumulative | Cumulative | | | |
| | Conservation Programs: Demand savings (kW): Energy saved (kWh): Other resources saved : Natural Gas (m3): Other (specify): Demand Management Programs: Controlled load (kW) Energy shifted On-peak to Mid-peak Energy shifted On-peak to Off-peak Energy shifted Mid-peak to Off-peak Energy shifted On-peak to Off-peak E | Summer Winter lifecycle (kWh): (kWh): (kWh): | | in year | Cumulative | Cumulative | | | |

| Line | Loss | Reduction | Programs: |
|------|------|-----------|------------------|
|------|------|-----------|------------------|

| Peak load savings (kW): | | 1.5 | |
|-------------------------|-----------|---------|--|
| | lifecycle | in year | |
| Energy savings (kWh): | 413,962 | 16,558 | |

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. | Actual Program Costs: | | Reporting Year | <u>C</u> | umulative Life to Date |
|----|------------------------------|----------------------|------------------|----------|------------------------|
| | Utility direct costs (\$): | Incremental capital: | \$ 240,000.00 | \$ | 240,000.00 |
| | | Incremental O&M: | \$ 23,415.43 | \$ | 23,415.43 |
| | | Incentive: | | | |
| | | Total: | \$ 263,415.43 | \$ | 263,415.43 |
| | | | | | |
| | Utility indirect costs (\$): | Incremental capital: | | | |
| | | Incremental O&M: | | | |
| | | Total: | | | |

E. Assumptions & Comments:

This project impacts 220 residential customers.

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 b

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

| A. | Name of the Program: | L.E.D. Traffic Light Conversion | | | | | | |
|----|---|--------------------------------------|----|---------------------------|-------------------------|---------------------------|--|--|
| | Description of the program (including intent, design, delivery, partnerships and evaluation): | | | | | | | |
| | The Traffic Light LED Conversion Prosummer of 2005 and continued throu 2007. | | | | | | | |
| | Measure(s): | Measure 1 | N | leggure 2 (if applicable) | Mogguro 2 | (if applicable) | | |
| | Base case technology: | Incandescent Lights | IV | leasure 2 (if applicable) | ivieasure 3 | (if applicable) | | |
| | Efficient technology: | L.E.D. Lights | | | | | | |
| | Number of participants or units | | | | | | | |
| | delivered for reporting year: | 48 | | | | | | |
| | Measure life (years): | 10 | | | | | | |
| | Number of Participants or units delivered life to date | 83 | | | | | | |
| В. | TRC Results: | | | Reporting Year | l ife-to-date | TRC Results: | | |
| | ¹ TRC Benefits (\$): | | \$ | 176,794.29 | Elle to date | 523.644.49 | | |
| | ² TRC Costs (\$): | | , | ., | | , | | |
| | Utility p | program cost (excluding incentives): | \$ | 16,244.45 | \$ | 61,757.29 | | |
| | Incrementa | I Measure Costs (Equipment Costs) | | | | | | |
| | | Total TRC costs: | \$ | 16,244.45 | \$ | 61,757.29 | | |
| | Net TRC (in year CDN \$): | | \$ | 160,549.83 | | 461,887.19 | | |
| | Benefit to Cost Ratio (TRC Benefits/ | TRC Costs): | \$ | 10.88 | | 8.48 | | |
| C. | Results: (one or more category may | apply) | | | Cumulati | ve Results: | | |
| | Conservation Programs: | | | | | | | |
| | Demand savings (kW): | Summer | | 40.74 | 53.60 |) | | |
| | 3-() | Winter | | 40.74 | 53.60 |) | | |
| | | | | | | | | |
| | | Pr I | | to | Cumulative Lifecycle | Cumulative Annual Savings | | |
| | Energy sound (MMh): | lifecycle 3,597,824 | | in year | | • | | |
| | Energy saved (kWh): Other resources saved : | 3,397,824 | | 449,728 | 7,354,112 | 919,264 | | |
| | Natural Gas (m3): | | | | | | | |
| | Other (specify): | | | | | | | |
| | | | | | | | | |
| | Demand Management Programs: | | | | | | | |
| | Controlled load (kW) | (144) | | | | | | |
| | Energy shifted On-peak to Mid-peak | | | | | | | |
| | Energy shifted On-peak to Off-peak (Energy shifted Mid-peak to Off-peak | • | | | | | | |
| | Demand Response Programs: | | | | | | | |
| | Dispatchable load (kW): | | | | | | | |
| | Peak hours dispatched in year (hours | s): | | | | | | |
| | | | | | | | | |
| | Power Factor Correction Programs | <u>s:</u> | | | | | | |
| | Amount of KVar installed (KVar): | | | | | | | |

Distribution system power factor at beginning of year (%): Distribution system power factor at end of year (%):

| | Line Loss Reduction Programs: | | | | |
|----|--------------------------------------|------------------------|----|----------------|-------------------------|
| | Peak load savings (kW): | | | | |
| | | lifecycle | | in year | |
| | Energy savings (kWh): | | | | |
| | Distributed Generation and Load D | Displacement Programs: | | | |
| | Amount of DG installed (kW): | | | | |
| | Energy generated (kWh): | | | | |
| | Peak energy generated (kWh): | | | | |
| | Fuel type: | | | | |
| | Other Programs (specify): | | | | |
| | Metric (specify): | | | | |
| | meane (opeeny). | | | | |
| D. | Actual Program Costs: | | | Reporting Year | Cumulative Life to Date |
| | Utility direct costs (\$): | Incremental capital: | | | |
| | | Incremental O&M: | \$ | 16,244.45 | \$ 61,757.29 |
| | | Incentive: | \$ | 166,500.00 | \$ 407,527.28 |
| | | Total: | \$ | 182,744.45 | \$ 469,284.57 |
| | | | | | |
| | Utility indirect costs (\$): | Incremental capital: | | | |
| | | Incremental O&M: | | - | - |
| | | Total: | | - | - |
| | | | | | |
| _ | | | | | |
| E. | Assumptions & Comments: | | | | |
| | | | | | |
| | | | | | |

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 b

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

A. Name of the Program:

Energy Efficiency Programs - Community Outreach Campaign - Seasonal L.E.D. Light Exchange

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

As part of the Community Outreach Program, Thunder Bay Hydro offered our customers a limited number L.E.D. christmas lights. In order to qualify, customers were required to exchange 2 sets of incandescent christmas lights for L.E.D. christmas lights. This program was limited to the first 270 customers. Eligible customers were required to produce a valid Thunder Bay Hydro bill.

| Measure(s): | Marana | Manage of O. C. and Paul In. | M | (*f P b l -) |
|---------------------------------------|--------------------------------------|------------------------------|--------------|---|
| Dana anna tankanalan ii | Measure 1 | Measure 2 (if applicable) | Measure 3 | (if applicable) |
| Base case technology: | 5 W Christmas Lights | | | |
| Efficient technology: | C-7 SLED | | | |
| Number of participants or units | 5.40 | | | |
| delivered for reporting year: | 540 | | | |
| Measure life (years): | 30 | | | |
| Number of Participants or units | | | | |
| delivered life to date | 940 | | | |
| delivered life to date | 940 | | | |
| TRC Results: | | Reporting Year | Life-to-date | TRC Results: |
| ¹ TRC Benefits (\$): | | 15,959.39 | | 27,781.1 |
| ² TRC Costs (\$): | | -, | | _,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |
| • / | program cost (excluding incentives): | 5,622.94 | | 9,825.9 |
| - | al Measure Costs (Equipment Costs) | 0,022.0 | | 0,020.0 |
| | Total TRC costs: | 5,622.94 | | 9,825.9 |
| Net TRC (in year CDN \$): | Total TNO costs. | 10,336.45 | | 17,955.2 |
| | | 10,000.10 | | 17,000.2 |
| Benefit to Cost Ratio (TRC Benefits, | /TRC Costs): | 2.84 | | 2.8 |
| Results: (one or more category mag | y apply) | | Cumulat | ve Results: |
| Conservation Programs: | | | | |
| Demand savings (kW): | Summer | 0.00 | (| 0.00 |
| Domana davingo (KVV). | Winter | 4.44 | | 7.73 |
| | Wille | 7.77 | , | .70 |
| | | | Cumulative | Cumulative |
| | lifecycle | in year | Lifecycle | Annual Saving |
| Energy saved (kWh): | 203,653 | 10,183 | 354,508 | 17,725 |
| Other resources saved : | 200,000 | 10,100 | 334,300 | 11,720 |
| | | | | |
| Natural Gas (m3). | | | | |
| Other (specify). | | | | |
| Demand Management Programs: | | | | |
| Controlled load (kW) | | | | |
| Energy shifted On-peak to Mid-peak | c(kWh): | | | |
| Energy shifted On-peak to Off-peak | | | | |
| Energy shifted Mid-peak to Off-peak | • | | | |
| Energy shinted wild-peak to On-peak | A (AVVII). | | | |
| Demand Response Programs: | | | | |
| Dispatchable load (kW): | | | | |
| Peak hours dispatched in year (hou | rs): | | | |
| Power Factor Correction Program | IS: | | | |
| Amount of KVar installed (KVar): | _ | | | |
| Distribution system power factor at I | beginning of year (%). | | | |
| Distribution system power factor at a | | | | |
| וואוטונוטו aysterri power factor at t | enu or year (70). | | | |

|--|

| Line Loss Reduction Programs: | | | |
|---|------------------------|---------|--|
| Peak load savings (kW): | | | |
| | lifecycle | in year | |
| Energy savings (kWh): | | | |
| <u>Distributed Generation and Load D</u> Amount of DG installed (kW): Energy generated (kWh): Peak energy generated (kWh): Fuel type: | bisplacement Programs: | | |
| | | | |

Other Programs (specify):

Metric (specify):

| D. | Actual Program Costs: | | Reporting Year | Cumulative Life | to Date |
|----|------------------------------|----------------------|-----------------|-----------------|-----------|
| | Utility direct costs (\$): | Incremental capital: | | | |
| | | Incremental O&M: | \$ 4,501.80 | \$ | 4,952.69 |
| | | Incentive: | \$ 5,879.71 | \$ | 8,906.74 |
| | | Total: | \$ 10,381.51 | \$ | 13,859.43 |
| | | | | | |
| | Utility indirect costs (\$): | Incremental capital: | | | |
| | | Incremental O&M: | \$ 1,121.13 | \$ | 1,846.22 |
| | | Total: | \$ 1,121.13 | \$ | 1,846.22 |

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 b

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

Energy Efficiency Programs: Community Outreach Campaign - Energy Star Clothes Washer Rebate

A. Name of the Program:

Promotion

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

The Energy Star Appliance Rebate program consisted of incentives for the purchase of Energy Star Rated appliances. Rebates were based on the type of appliance purchased and amount of energy consumed. Indirect costs to Thunder Bay Hydro were to Eco-Superior Programs who were the program delivery agent.

| Measure (s): Measure 1 Measure 2 (if applicable) Measure 3 (if applicable) Measure 1 Measure 1 Measure 1 Measure 2 (if applicable) Measure 1 Measure 1 Measure 1 Measure 2 (if applicable) Measure 1 Measure 1 Measure 1 Measure 2 (if applicable) Measure 1 Measure 1 Measure 2 (if applicable) Measure 1 Measure 1 Measure 2 (if applicable) Measure 3 (if applicable) Measure 14 (if applicable) Measure 15 (if applicable) Measure 15 (if applicable) Measure 14 (if applicable) | | | | | | |
|---|---------------------------------------|--|------|---------------------------|--------------|-----------------|
| Base case technology: Efficient technology: Number of participants or units delivered for reporting year: Measure III (years): 14 Number of Participants or units delivered life to date 145 IRC Results: 1 Reporting Year 1 Utility program cost (excluding incentives): 1 Trocal TRC Costs (\$): 2 Trocal TRC Costs (\$): 3 Total TRC costs: 3 S, 263.17 Net TRC (in year CDN \$): 5 S, 263.17 Net TRC Cost (TRC Benefits TRC Costs): 5 S, 263.17 Net TRC Cost (TRC Benefits TRC Costs): 5 S, 263.17 Net TRC (in year CDN \$): 5 S, 263.17 Net TRC (in year CDN \$): 6 Results: Conservation Programs: Demand savings (kW): 1 | Measure(s): | | | | | |
| Efficient technology: Number of participants or units delivered for reporting year: Measure life (years): Number of Participants or units delivered life to date 145 IRC Results: TRC Benefits (\$): TRC Benefits (\$): TRC Costs (\$): Utility program cost (excluding incentives): Incremental Measure Costs (Equipment Costs) Total TRC costs: Total TRC costs: Total TRC Costs: Total | | Measure 1 | | Measure 2 (if applicable) | Measure 3 | (if applicable) |
| Number of participants or units delivered for reporting year: Measure life (years): 14 Number of Participants or units delivered life to date 145 165 176C Results: 176C Benefits (\$): 176C Benefits (\$): 176C Osts (\$): 176D ITCC Costs: 176D ITCC | 9, | | | | | |
| delivered for reporting year: Measure life (years): 14 Number of Participants or units delivered life to date 145 17C Results: 17C Benefits (\$): 17C Costs (\$): 17RC Costs (\$): 17 Total TRC costs: 18 \$ 40,817.56 19 \$ 42,331.43 Net TRC (in year CDN \$): 19 \$ 35,554.39 11,731.43 Net TRC (in year CDN \$): 19 \$ 7.76 10 \$ 6,84 Conservation Programs: Demand savings (kW): 10 \$ Summer | | Energy Star Front Loading Clothe | es W | asher asher | | |
| Measure life (years): Number of Participants or units delivered life to date 145 | | | | | | |
| Number of Participants or units delivered life to date 145 TRC Results: TRC Results: TRC Benefits (\$): Utility program cost (excluding incentives): Incremental Measure Costs (Equipment Costs) Total TRC costs: Total TRC costs: Total TRC costs: Total TRC costs: Results: Outer TRC (in year CDN \$): Results: Conservation Programs: Demand savings (kW): Uility program cost (excluding incentives): Incremental Measure Costs (Equipment Costs) Total TRC costs: \$ 5,263.17 | · · · · · · · · · · · · · · · · · · · | | | | | |
| Demand Management Programs: Controlled load (kWh): Controlled Management Programs: Demand Response Programs: Dispatchable load (kWh): Peak hours dispatched in year (hours): Power Factor Correction Programs: Amount of KVar installed (KVar): Distribution system power factor at beginning of year (%): | Measure life (years): | 14 | | | | |
| Demand Management Programs: Controlled load (kWh): Controlled Management Programs: Demand Response Programs: Dispatchable load (kWh): Peak hours dispatched in year (hours): Power Factor Correction Programs: Amount of KVar installed (KVar): Distribution system power factor at beginning of year (%): | | | | | | |
| TRC Results: TRC Benefits (\$): TRC Costs (\$): Utility program cost (excluding incentives): Incremental Measure Costs (Equipment Costs) Incremental Measure Costs (Equipment Costs) Total TRC costs: Total TRC costs: Total TRC costs: Total TRC costs: Results: (one or more category may apply) Cumulative Results: Conservation Programs: Demand savings (kW): Summer 1.09 2.32 Cumulative Results: Cumulative Lifecycle In year Life-to-date TRC Results: 87,034,344,345,345,345,347 12,731.43 Net TRC (in year CDN \$): Senefit to Cost Ratio (TRC Benefits/TRC Costs): Results: Conservation Programs: Demand savings (kW): Summer 1.09 2.32 Cumulative Lifecycle In year Lifecycle In year Lifecycle Annual Savings Cumulative Lifecycle Annual Savings Cother resources saved: Natural Gas (m3): Other (specify): Demand Management Programs: Controlled load (kW) Energy shifted On-peak to Mid-peak (kWh): Energy shifted On-peak to Off-peak (kWh): Energy shifted Mid-peak to Off-peak (kWh): Demand Response Programs: Dispatchable load (kW): Peak hours dispatched in year (hours): Power Factor Correction Programs: Amount of KVar installed (KVar): Distribution system power factor at beginning of year (%): | · | | | | | |
| \$ 40,817.56 87,037.44 TRC Costs (\$): Utility program cost (excluding incentives): Incremental Measure Costs (Equipment Costs) Total TRC costs: \$ 5,263.17 12,731.43 Net TRC (in year CDN \$): Benefit to Cost Ratio (TRC Benefits/TRC Costs): \$ 7.76 6.84 Conservation Programs: Demand savings (kW): Summer 1.09 2.32 Winter 1.27 2.71 Iffecycle in year Lifecycle Lifecycle Lifecycle Annual Savings | delivered life to date | 145 | | | | |
| \$ 40,817.56 87,037.44 TRC Costs (\$): Utility program cost (excluding incentives): Incremental Measure Costs (Equipment Costs) Total TRC costs: \$ 5,263.17 12,731.43 Net TRC (in year CDN \$): Benefit to Cost Ratio (TRC Benefits/TRC Costs): \$ 7.76 6.84 Conservation Programs: Demand savings (kW): Summer 1.09 2.32 Winter 1.27 2.71 Iffecycle in year Lifecycle Lifecycle Lifecycle Annual Savings | TRC Results: | | | Reporting Year | Life-to-date | TRC Results: |
| 2 TRC Costs (§): Utility program cost (excluding incentives): \$ 5,263.17 | | | \$ | | | |
| Utility program cost (excluding incentives): Incremental Measure Costs (Equipment Costs) Total TRC costs: Total TRC costs: \$ 5,263.17 | | | Ψ | 10,011100 | | 01,001.11 |
| Incremental Measure Costs (Equipment Costs) Total TRC costs: \$ 5,263.17 12,731.43 Net TRC (in year CDN \$): \$ 35,554.39 74,306.01 Benefit to Cost Ratio (TRC Benefits/TRC Costs): \$ 7.76 6,84 C. Results: (one or more category may apply) Conservation Programs: Demand savings (kW): Summer 1.09 2.32 Winter 1.27 2.71 Cumulative Cumulative Liflecycle in year Liflecycle Annual Savings Energy saved (kWh): 456,960 32,640 974,400 69,600 Other resources saved: Natural Gas (m3): Other (specify): Demand Management Programs: Controlled load (kW) Energy shifted On-peak to Off-peak (kWh): Energy shifted On-peak to Off-peak (kWh): Energy shifted Mid-peak to Off-peak (kWh): Energy shifted Mid-peak to Off-peak (kWh): Peak hours dispatched in year (hours): Power Factor Correction Programs: Amount of KVar installed (KVar): Distribution system power factor at beginning of year (%): | • , | y program cost (excluding incentives): | ¢ | 5 263 17 | | 12 721 //2 |
| Total TRC costs: \$ 5,263.17 12,731.43 Net TRC (in year CDN \$): \$ 35,554.39 74,306.01 Benefit to Cost Ratio (TRC Benefits/TRC Costs): \$ 7.76 6.84 Cumulative Results: (one or more category may apply) Conservation Programs: Demand savings (kW): Summer 1.09 2.32 Winter 1.27 2.71 Winter 1.27 2.71 Cumulative Lifecycle in year Cumulative Lifecycle Annual Savings (kW): Other resources saved : Natural Gas (m3): Other (specify): Demand Management Programs: Controlled load (kW) Energy shifted On-peak to Mid-peak (kWh): Energy shifted On-peak to Off-peak (kWh): Energy shifted Mid-peak to Off-peak (kWh): Demand Response Programs: Dispatchable load (kW): Peak hours dispatched in year (hours): Power Factor Correction Programs: Amount of KVar installed (KVar): Distribution system power factor at beginning of year (%): Distribution system power factor at beginning of year (%): Distribution system power factor at beginning of year (%): Distribution system power factor at beginning of year (%): Distribution system power factor at beginning of year (%): Distribution system power factor at beginning of year (%): Distribution system power factor at beginning of year (%): Distribution system power factor at beginning of year (%): Distribution system power factor at beginning of year (%): Distribution system power factor at beginning of year (%): Distribution system power factor at beginning of year (%): Distribution system power factor at beginning of year (%): Distribution system power factor at beginning of year (%): Distribution system power factor at beginning of year (%): Distribution system power factor at beginning of year (%): Distribution system power factor at beginning of year (%): Distribution system power fac | | | Ψ | 3,203.17 | | 12,731.43 |
| Net TRC (in year CDN \$): \$ 35,554.39 | meremer | | ot . | E 202 47 | | 40.704.40 |
| Benefit to Cost Ratio (TRC Benefits/TRC Costs): \$ 7,76 | Not TPC (in year CDN \$): | Total TRC costs: | | | | |
| Conservation Programs: Demand savings (kW): Summer Winter 1.09 2.32 Winter 1.27 Cumulative Cumulative Cumulative Lifecycle in year Annual Savings Other resources saved : Natural Gas (m3): Other (specify): Demand Management Programs: Controlled load (kW) Energy shifted On-peak to Mid-peak (kWh): Energy shifted On-peak to Off-peak (kWh): Energy shifted On-peak to Off-peak (kWh): Energy shifted On-peak to Off-peak (kWh): Energy shifted Independ (kW): Peak hours dispatched in year (hours): Power Factor Correction Programs: Amount of KVar installed (KVar): Distribution system power factor at beginning of year (%): | Net TRC (III year CDN φ). | | Ф | 35,554.39 | | 74,300.01 |
| Conservation Programs: Demand savings (kW): Summer Winter 1.09 2.32 Winter 1.27 2.71 Cumulative Lifecycle In year Lifecycle Annual Savings Energy saved (kWh): Other resources saved: Natural Gas (m3): Other (specify): Demand Management Programs: Controlled load (kW) Energy shifted On-peak to Mid-peak (kWh): Energy shifted On-peak to Off-peak (kWh): Energy shifted On-peak to Off-peak (kWh): Energy shifted Mid-peak to Off-peak (kWh): Peak hours dispatched in year (hours): Power Factor Correction Programs: Amount of KVar installed (KVar): Distribution system power factor at beginning of year (%): | Benefit to Cost Ratio (TRC Benefit | s/TRC Costs): | \$ | 7.76 | | 6.84 |
| Demand savings (kW): Summer 1.09 2.32 Winter 1.27 2.71 Iffecycle In year Lifecycle | . Results: (one or more category m | ay apply) | | | Cumulati | ve Results: |
| Demand savings (kW): Summer 1.09 2.32 Winter 1.27 2.71 Iffecycle In year Lifecycle | Conservation Programs: | | | | | |
| Winter 1.27 2.71 Cumulative Lifecycle in year Lifecycle Annual Savings Energy saved (kWh): 456,960 32,640 974,400 69,600 Other resources saved: Natural Gas (m3): Other (specify): Demand Management Programs: Controlled load (kW) Energy shifted On-peak to Mid-peak (kWh): Energy shifted On-peak to Off-peak (kWh): Energy shifted Mid-peak to Off-peak (kWh): Demand Response Programs: Dispatchable load (kW): Peak hours dispatched in year (hours): Power Factor Correction Programs: Amount of KVar installed (KVar): Distribution system power factor at beginning of year (%): | | Summor | | 1.00 | 2 33 |) |
| Energy saved (kWh): 456,960 32,640 974,400 69,600 Other resources saved : Natural Gas (m3): Other (specify): Demand Management Programs: Controlled load (kW) Energy shifted On-peak to Mid-peak (kWh): Energy shifted On-peak to Off-peak (kWh): Energy shifted Mid-peak to Off-peak (kWh): Energy shifted Mid-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 beginning of year (%): | Demand Savings (KW). | | | | | |
| lifecycle in year Lifecycle Annual Savings Energy saved (kWh): 456,960 32,640 974,400 69,600 Other resources saved: Natural Gas (m3): Other (specify): Demand Management Programs: Controlled load (kW) Energy shifted On-peak to Mid-peak (kWh): Energy shifted On-peak to Off-peak (kWh): Energy shifted Mid-peak to Off-peak (kWh): Energy shifted Mid-peak to Off-peak (kWh): Pemand 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 beginning of year (%): | | wirter | | 1.27 | 2.1 | |
| lifecycle in year Lifecycle Annual Savings Energy saved (kWh): 456,960 32,640 974,400 69,600 Other resources saved: Natural Gas (m3): Other (specify): Demand Management Programs: Controlled load (kW) Energy shifted On-peak to Mid-peak (kWh): Energy shifted On-peak to Off-peak (kWh): Energy shifted Mid-peak to Off-peak (kWh): Energy shifted Mid-peak to Off-peak (kWh): Pemand 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 beginning of year (%): | | | | | Cumulative | Cumulative |
| Energy saved (kWh): 456,960 32,640 974,400 69,600 Other resources saved: Natural Gas (m3): Other (specify): Demand Management Programs: Controlled load (kW) Energy shifted On-peak to Mid-peak (kWh): Energy shifted On-peak to Off-peak (kWh): Energy shifted Mid-peak to Off-peak (kWh): Demand Response Programs: Dispatchable load (kW): Peak hours dispatched in year (hours): Power Factor Correction Programs: Amount of KVar installed (KVar): Distribution system power factor at beginning of year (%): | | lifecycle | | in vear | | |
| Other resources saved : Natural Gas (m3): Other (specify): Demand Management Programs: Controlled load (kW) Energy shifted On-peak to Mid-peak (kWh): Energy shifted On-peak to Off-peak (kWh): Energy shifted Mid-peak to Off-peak (kWh): Demand Response Programs: Dispatchable load (kW): Peak hours dispatched in year (hours): Power Factor Correction Programs: Amount of KVar installed (KVar): Distribution system power factor at beginning of year (%): | Energy sayed (kM/h): | | | • | | = |
| Natural Gas (m3): Other (specify): Demand Management Programs: Controlled load (kW) Energy shifted On-peak to Mid-peak (kWh): Energy shifted On-peak to Off-peak (kWh): Energy shifted Mid-peak to Off-peak (kWh): Demand Response Programs: Dispatchable load (kW): Peak hours dispatched in year (hours): Power Factor Correction Programs: Amount of KVar installed (KVar): Distribution system power factor at beginning of year (%): | , , | 430,900 | | 32,040 | 974,400 | 09,000 |
| 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 beginning of year (%): | | | | | | |
| 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 beginning of year (%): | • | | | | | |
| 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 beginning of year (%): | Other (specify | y): | | | | |
| 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 beginning of year (%): | Demand Management Programs | : | | | | |
| 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 beginning of year (%): | | - | | | | |
| 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 beginning of year (%): | | ak (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 beginning of year (%): | | | | | | |
| 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 beginning of year (%): | | | | | | |
| Dispatchable load (kW): Peak hours dispatched in year (hours): Power Factor Correction Programs: Amount of KVar installed (KVar): Distribution system power factor at beginning of year (%): | Energy stilled wild peak to on pee | an (nvvii). | | | | |
| Peak hours dispatched in year (hours): Power Factor Correction Programs: Amount of KVar installed (KVar): Distribution system power factor at beginning of year (%): | Demand Response Programs: | | | | | |
| Power Factor Correction Programs: Amount of KVar installed (KVar): Distribution system power factor at beginning of year (%): | Dispatchable load (kW): | | | | | |
| Amount of KVar installed (KVar): Distribution system power factor at beginning of year (%): | | urs): | | | | |
| Distribution system power factor at beginning of year (%): | Power Factor Correction Progra | ms: | | | | |
| | Amount of KVar installed (KVar): | | | | | |
| | Distribution system power factor a | t beginning of year (%): | | | | |
| | | | | | | |

| Line Loss Reduction Programs |
|------------------------------|
|------------------------------|

| Line Loss Reduction i rogianis. | | | |
|--|------------------------|---------|--|
| Peak load savings (kW): | | | |
| | lifecycle | in year | |
| Energy savings (kWh): | | | |
| <u>Distributed Generation and Load E</u> Amount of DG installed (kW): | Displacement Programs: | | |
| Energy generated (kWh): | | | |
| Peak energy generated (kWh): | | | |
| Fuel type: | | | |
| Other Programs (specify): | | | |

Metric (specify):

| D. | Actual Program Costs: | | <u>R</u> | eporting Year | Cur | nulative Life to Date |
|----|------------------------------|----------------------|----------|---------------|-----|-----------------------|
| | Utility direct costs (\$): | Incremental capital: | | | | |
| | | Incremental O&M: | \$ | 3,361.21 | \$ | 4,094.05 |
| | | Incentive: | \$ | 4,390.00 | \$ | 9,310.00 |
| | | Total: | \$ | 7,751.21 | \$ | 13,404.05 |
| | | | | | | |
| | Utility indirect costs (\$): | Incremental capital: | | | | |
| | | Incremental O&M: | \$ | 1,901.97 | \$ | 3,717.38 |
| | | Total: | \$ | 1,901.97 | \$ | 3,717.38 |

E. Assumptions & Comments:

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 b

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

Energy Efficiency Programs: Community Outreach Campaign - Energy Star Dishwasher Rebate Promotion

A. Name of the Program:

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

The Energy Star Appliance Rebate program consisted of incentives for the purchase of Energy Star Rated appliances. Rebates were based on the type of appliance purchased and amount of energy consumed. Indirect costs to Thunder Bay Hydro were to Eco-Superior Programs who were the program delivery agent.

| | Measure(s): | | | | | |
|----|---|--------------------------------------|----|---------------------------|---------------|-----------------|
| | weasure(s). | Measure 1 | | Measure 2 (if applicable) | Measure 3 | (if applicable) |
| | Base case technology: | Current standard dishwasher | | meacure = (ii applicable) | | (appcab.c) |
| | Efficient technology: | Energy Star Dishwasher | | | | |
| | Number of participants or units | | | | | |
| | delivered for reporting year: | 56 | | | | |
| | Measure life (years): | 13 | | | | |
| | | | | | | |
| | Number of Participants or units | | | | | |
| | delivered life to date | 125 | | | | |
| В. | TRC Results: | | | Reporting Year | l ife-to-date | TRC Results: |
| | TRC Benefits (\$): | | \$ | 4,490.25 | | 10,022.88 |
| | ² TRC Costs (\$): | | Ψ | 4,430.20 | Ψ | 10,022.00 |
| | • • | program cost (excluding incentives): | \$ | 4,003.20 | | 4,854.92 |
| | | al Measure Costs (Equipment Costs) | Ψ | 7,003.20 | | 7,004.32 |
| | moremente | Total TRC costs: | \$ | 4,003.20 | | 4,854.92 |
| | Net TRC (in year CDN \$): | Total TNC costs. | \$ | 487.04 | | 5,167.96 |
| | | | | 407.04 | | 0,101100 |
| | Benefit to Cost Ratio (TRC Benefits/TRC Costs): | | \$ | 1.12 | | 2.06 |
| C. | Results: (one or more category may apply) | | | | Cumulati | ve Results: |
| | Concentration Browns | | | | | |
| | Conservation Programs: Demand savings (kW): | 0 | | 0.00 | 0.00 | <u> </u> |
| | Demand Savings (KVV). | Summer Winter | | 0.00 0.13 | 0.00 | |
| | | vviriter | | 0.13 | 0.28 | 9 |
| | | | | | Cumulative | Cumulative |
| | | lifecycle | | in year | Lifecycle | Annual Savings |
| | Energy saved (kWh): | 72,800 | | 5,600 | 162,500 | 12,500 |
| | Other resources saved : | 72,000 | | 0,000 | 102,000 | 12,000 |
| | Natural Gas (m3): | | | | | |
| | Other (specify): | | | | | |
| | Other (Speeny). | | | | | |
| | 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 | | | | | |
| | <u>Demand Response Programs:</u> Dispatchable load (kW): | | | | | |
| | | m). | | | | |
| | Peak hours dispatched in year (hour | s <i>)</i> . | | | | |
| | Power Factor Correction Program | <u>s:</u> | | | | |
| | Amount of KVar installed (KVar): | | | | | |
| | Distribution system power factor at b | peginning of year (%): | | | | |
| | Distribution system power factor at e | end of year (%): | | | | |
| | | | | | | |

| Line Loss Reduction Programs |
|------------------------------|
|------------------------------|

| Line Loss Reduction i rogianis. | | | |
|--|------------------------|---------|--|
| Peak load savings (kW): | | | |
| | lifecycle | in year | |
| Energy savings (kWh): | | | |
| Distributed Generation and Load E Amount of DG installed (kW): Energy generated (kWh): Peak energy generated (kWh): Fuel type: | Displacement Programs: | | |
| Other Programs (specify): | | | |

Metric (specify):

| D. | Actual Program Costs: | | Reporting Year | Cumu | lative Life to Date |
|----|------------------------------|----------------------|----------------|------|---------------------|
| | Utility direct costs (\$): | Incremental capital: | | | |
| | | Incremental O&M: | \$ 2,051.94 | \$ | 2,524.12 |
| | | Incentive: | \$ 2,680.00 | \$ | 5,850.00 |
| | | Total: | \$ 4,731.94 | \$ | 8,374.12 |
| | | | | | |
| | Utility indirect costs (\$): | Incremental capital: | | | |
| | | Incremental O&M: | \$ 1,161.11 | \$ | 2,330.80 |
| | | Total: | \$ 1,161.11 | \$ | 2,330.80 |

E. Assumptions & Comments:

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 b

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

Energy Efficiency Programs: Community Outreach Campaign - Energy Star Freezer Rebate

Name of the Program:

Promotion

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

The Energy Star Appliance Rebate program consisted of incentives for the purchase of Energy Star Rated appliances. Rebates were based on the type of appliance purchased and amount of energy consumed. Indirect costs to Thunder Bay Hydro were to Eco-Superior Programs who were the program delivery agent.

| Measure(s): | | | | | |
|------------------------------------|---|----|---------------------------|-----------------|-----------------|
| weasure(s). | Measure 1 | | Measure 2 (if applicable) | Measure 3 | (if applicable) |
| Base case technology: | Current standard for freezer | | Weddard 2 (ii applicable) | Wicadare 6 | (п аррпоавіо) |
| Efficient technology: | Energy Star Freezer | | | | |
| Number of participants or units | o.g, c.aoo_o. | | | | |
| delivered for reporting year: | 27 | | | | |
| Measure life (years): | 21 | | | | |
| , | | | | | |
| Number of Participants or units | | | | | |
| delivered life to date | 44 | | | | |
| | • | | | | |
| TRC Results: | | | Reporting Year | | TRC Results: |
| ¹ TRC Benefits (\$): | | \$ | 1,492.31 | \$ | 2,431.91 |
| ² TRC Costs (\$): | | | | | |
| Utili | ty program cost (excluding incentives): | \$ | 1,949.32 | | 1,965.97 |
| Increme | ntal Measure Costs (Equipment Costs) | | | | |
| | Total TRC costs: | \$ | 1,949.32 | | 1,965.97 |
| Net TRC (in year CDN \$): | | | -457.01 | | 465.95 |
| Benefit to Cost Ratio (TRC Benefi | to/TDC Contol: | Φ | 0.77 | | 4.04 |
| · | , | \$ | 0.77 | | 1.24 |
| Results: (one or more category m | ay apply) | | | <u>Cumulati</u> | ve Results: |
| Conservation Programs: | | | | | |
| Demand savings (kW): | Summer | | 0.23 | 0.37 | 7 |
| Bemana savings (NV). | Winter | | 0.24 | 0.39 | |
| | ······································ | | 3.2 . | 0.00 | |
| | | | | Cumulative | Cumulative |
| | lifecycle | | in year | Lifecycle | Annual Savings |
| Energy saved (kWh): | 19,872 | | 994 | 32,384 | 1,619 |
| Other resources saved : | . 6,6.1 | | 33. | 02,00 | 1,010 |
| Natural Gas (m | 2). | | | | |
| Other (specif | | | | | |
| Other (specin | /). | | | | |
| Demand Management Programs | <u>:</u> | | | | |
| Controlled load (kW) | | | | | |
| Energy shifted On-peak to Mid-pe | ak (kWh): | | | | |
| Energy shifted On-peak to Off-pea | | | | | |
| Energy shifted Mid-peak to Off-pe | | | | | |
| | • | | | | |
| Demand Response Programs: | | | | | |
| Dispatchable load (kW): | | | | | |
| Peak hours dispatched in year (ho | urs): | | | | |
| Power Factor Correction Progra | ms: | | | | |
| Amount of KVar installed (KVar): | | | | | |
| Distribution system power factor a | t beginning of year (%): | | | | |
| Distribution system power factor a | | | | | |
| Distribution system power idelor d | Cond or year (70). | | | | |

| Line Loss | Reduction | Programs: |
|-----------|-----------|--------------|
| | Neudolion | i iogiailis. |

| Line Loss Neduction Frograms. | | | |
|-----------------------------------|-----------------------|---------|--|
| Peak load savings (kW): | | | |
| | lifecycle | in year | |
| Energy savings (kWh): | | | |
| Distributed Generation and Load D | isplacement Programs: | | |
| Amount of DG installed (kW): | | | |
| Energy generated (kWh): | | | |
| Peak energy generated (kWh): | | | |
| Fuel type: | | | |
| Other Brearams (appoints). | | | |

Other Programs (specify):

Metric (specify):

| D. | Actual Program Costs: | | <u> </u> | Reporting Year | Cur | nulative Life to Date |
|----|------------------------------|----------------------|----------|----------------|-----|-----------------------|
| | Utility direct costs (\$): | Incremental capital: | | | | |
| | | Incremental O&M: | \$ | 999.17 | \$ | 1,114.61 |
| | | Incentive: | \$ | 1,305.00 | \$ | 2,080.00 |
| | | Total: | \$ | 2,304.17 | \$ | 3,194.61 |
| | | | | | | |
| | Utility indirect costs (\$): | Incremental capital: | | | | |
| | | Incremental O&M: | \$ | 565.39 | \$ | 851.36 |
| | | Total: | \$ | 565.39 | \$ | 851.36 |

E. Assumptions & Comments:

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 b

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

Energy Efficiency Programs: Community Outreach Campaign - Energy Star Refrigerator Rebate Promotion

A. Name of the Program:

FIGHIOLIOIT

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

The Energy Star Appliance Rebate program consisted of incentives for the purchase of Energy Star Rated appliances. Rebates were based on the type of appliance purchased and amount of energy consumed. Indirect costs to Thunder Bay Hydro were to Eco-Superior Programs who were the program delivery agent.

| Measure(s): | | | | | | |
|--|--------------------------------------|----------|---------------------------|------------------|-----------------|--|
| | Measure 1 | | Measure 2 (if applicable) | Measure 3 | (if applicable) | |
| Base case technology: | Current standard for refridgerator | r | | | | |
| Efficient technology: | Energy Star Refrigerators | | | | | |
| Number of participants or units | | | | | | |
| delivered for reporting year: | 94 | | | | | |
| Measure life (years): | 19 | | | | | |
| Number of Participants or units | | | | | | |
| delivered life to date | 198 | | | | | |
| TRC Results: | | | Reporting Year | Life-to-date | TRC Results: | |
| ¹ TRC Benefits (\$): | | \$ | 9,879.88 | | 20,810.8 | |
| ² TRC Costs (\$): | | Ψ | 0,070.00 | | 20,010.0 | |
| • / | program cost (excluding incentives): | \$ | 8,954.93 | | 12,056.1 | |
| | al Measure Costs (Equipment Costs) | * | 3,0000 | | ,000. | |
| | Total TRC costs: | \$ | 8,954.93 | | 12,056.1 | |
| Net TRC (in year CDN \$): | | \$ | 924.95 | | 8,754.6 | |
| Benefit to Cost Ratio (TRC Benefits/ | TRC Costs): | \$ | 1.10 | | 1. | |
| Results: (one or more category may | • | | | Cumulati | ive Results: | |
| · | , «PP-)) | | | <u> Odmalati</u> | ive results. | |
| Conservation Programs: | | | | | _ | |
| Demand savings (kW): | Summer | | 1.58 | 3.32 | | |
| | Winter | | 1.67 | 3.5 | 1 | |
| | | | | Cumulative | Cumulative | |
| | lifecycle | | in year | Lifecycle | Annual Saving | |
| Energy saved (kWh): | 132,164 | | 6,956 | 278,388 | 14,652 | |
| Other resources saved : | , | | , | , | | |
| Natural Gas (m3): | | | | | | |
| Other (specify): | | | | | | |
| Demand Management Programs: | | | | | | |
| Controlled load (kW) | | | | | | |
| Energy shifted On-peak to Mid-peak | · (kWh)· | | | | | |
| Energy shifted On-peak to Off-peak | | | | | | |
| Energy shifted Mid-peak to Off-peak | | | | | | |
| Demand Response Programs: | | | | | | |
| Dispatchable load (kW): | | | | | | |
| Peak hours dispatched in year (hour | rs): | | | | | |
| | | | | | | |
| Power Factor Correction Program | <u>s:</u> | | | | | |
| Power Factor Correction Program Amount of KVar installed (KVar): | <u>s:</u> | | | | | |
| Power Factor Correction Program Amount of KVar installed (KVar): Distribution system power factor at the | | | | | | |

| Line | Loss | Reduction | Programs : |
|------|------|-----------|-------------------|
| | | | |

| Line Loss Reduction Programs: | | | |
|--|-----------------------|---------|--|
| Peak load savings (kW): | | | |
| | lifecycle | in year | |
| Energy savings (kWh): | | | |
| <u>Distributed Generation and Load D</u> Amount of DG installed (kW): | isplacement Programs: | | |
| Energy generated (kWh): | | | |
| Peak energy generated (kWh): | | | |
| Fuel type: | | | |
| | | | |

Other Programs (specify):

Metric (specify):

| D. | Actual Program Costs: | | Reporting Year | <u>C</u> | umulative Life to Date |
|----|------------------------------|----------------------|-----------------|----------|------------------------|
| | Utility direct costs (\$): | Incremental capital: | | | |
| | | Incremental O&M: | \$ 4,590.08 | \$ | 5,570.93 |
| | | Incentive: | \$ 5,995.00 | \$ | 12,580.00 |
| | | Total: | \$ 10,585.08 | \$ | 18,150.93 |
| | | | | | |
| | Utility indirect costs (\$): | Incremental capital: | | | |
| | | Incremental O&M: | \$ 2,597.33 | \$ | 6,485.26 |
| | | Total: | \$ 2,597.33 | \$ | 6,485.26 |

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 b

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

Name of the Program: Residential Refrigerator Buy-Back Program

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

The Refrigerator Buy Back program is aimed at customers that have a second "vintage" refrigerator and have not recycled the old unit.

| Under this program, Thunder Bay Hydro covers the costs of pick-up, disposal, and refrigerant recycling costs up to a maximum \$59/unit. Indirect costs to Thunder Bay Hydro were to Eco-Superior Programs who were the program delivery agent. | | | | | | |
|--|--|-------------------------------------|----|---------------------------|-----------------|-------------------------|
| | | | | | | |
| | Magazina(a) | | | | | |
| | Measure(s): | Measure 1 | | Measure 2 (if applicable) | Measure 3 | (if applicable) |
| | Base case technology: | Average existing stock | | modelio 2 (ii applicable) | Widdedie e | (ii applicable) |
| | Efficient technology: | Recycling Program | | | | |
| | Number of participants or units | | | | | |
| | delivered for reporting year: | 123 | | | | |
| | Measure life (years): | 6 | | | | |
| | Number of Participants or units | | | | | |
| | delivered life to date | 350 | | | | |
| | denvered me to date | 330 | | | | |
| B. | TRC Results: | | | Reporting Year | Life-to-date | TRC Results: |
| | TRC Benefits (\$): | | \$ | 61,505.00 | | 175,014.23 |
| | ² TRC Costs (\$): | | _ | | | |
| | | rogram cost (excluding incentives): | \$ | 9,324.54 | \$ | 12,941.48 |
| | incremental | Measure Costs (Equipment Costs) | ¢. | 0.224.54 | Φ. | 10.044.40 |
| | Net TRC (in year CDN \$): | Total TRC costs: | \$ | 9,324.54 52,180.46 | \$ | 12,941.48 162,072.75 |
| | Net The (III year obly 4). | | | 32,100.40 | | 102,072.73 |
| | Benefit to Cost Ratio (TRC Benefits/T | TRC Costs): | \$ | 6.60 | | 13.52 |
| C. | Results: (one or more category may | apply) | | | Cumulati | ve Results: |
| | | | | | | _ |
| | Conservation Programs: | 0 | | 00.40 | 05.00 | ` |
| | Demand savings (kW): | Summer | | 33.49 35.38 | 95.29 100.68 | |
| | | Winter | | 33.30 | 100.00 | 0 |
| | | | | | Cumulative | Cumulative |
| | | lifecycle | | in year | Lifecycle | Annual Savings |
| | Energy saved (kWh): | 885,600 | | 147,600 | 2,520,000 | 420,000 |
| | Other resources saved : | | | | | |
| | Natural Gas (m3): | | | | | |
| | Other (specify): | | | | | |
| | Demand Management Programs: | | | | | |
| | Controlled load (kW) | | | | | |
| | Energy shifted On-peak to Mid-peak | (kWh): | | | | |
| | Energy shifted On-peak to Off-peak (| | | | | |
| | Energy shifted Mid-peak to Off-peak | | | | | |
| | Demand Response Programs: | | | | | |
| | Dispatchable load (kW): | | | | | |
| | Peak hours dispatched in year (hours | 3): | | | | |
| | | | | | | |
| | Power Factor Correction Programs | <u>s:</u> | | | | |
| | Amount of KVar installed (KVar): | | | | | |
| | Distribution system power factor at be | | | | | |
| | Distribution system power factor at ea | na or year (%): | | | | |

| Line Loss Reduction Programs |
|------------------------------|
|------------------------------|

| Line Loss Reduction i rogianis. | | | |
|--|------------------------|---------|--|
| Peak load savings (kW): | | | |
| | lifecycle | in year | |
| Energy savings (kWh): | | | |
| Distributed Generation and Load I Amount of DG installed (kW): Energy generated (kWh): Peak energy generated (kWh): Fuel type: | Displacement Programs: | | |
| Other Programs (specify): | | | |

Metric (specify):

| D. | Actual Program Costs: | | Reporting Year | <u>Cu</u> | mulative Life to Date |
|----|------------------------------|----------------------|-----------------|-----------|-----------------------|
| | Utility direct costs (\$): | Incremental capital: | | | |
| | | Incremental O&M: | \$ 4,779.53 | \$ | 6,349.01 |
| | | Incentive: | \$ 6,242.44 | \$ | 16,779.23 |
| | | Total: | \$ 11,021.97 | \$ | 23,128.24 |
| | | | | | |
| | Utility indirect costs (\$): | Incremental capital: | | | |
| | | Incremental O&M: | \$ 2,704.54 | \$ | 6,592.47 |
| | | Total: | \$ 2,704.54 | \$ | 6,592.47 |

E. Assumptions & Comments:

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 b

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

| A. Name of the Program: | Fuel Switching Programs - Water | Ноз | tor Conversion Program | | | | | |
|--|---|-----|---------------------------|----------|--------------------|---------|-------------------------|--|
| | | | | | | | | |
| Description of the program (include | Description of the program (including intent, design, delivery, partnerships and evaluation): | | | | | | | |
| This program is aimed at customers conversions to a natural gas-fired univenting requirements of natural gas v | its were possible/feasible. In some | | | | | | | |
| Measure(s): | | | | | | | | |
| December (asker) | Measure 1 | | Measure 2 (if applicable) | M | easure 3 | (if app | olicable) | |
| Base case technology: Efficient technology: | Current standard electrical water Fuel Switching - Gas Water Heat | | er | | | | | |
| Number of participants or units | Tuel Switching - Gas water Heat | Ci | | | | | | |
| delivered for reporting year: | 8.00 | | | | | | | |
| Measure life (years): | 18 | | | | | | | |
| | | | | | | | | |
| Number of Participants or units delivered life to date | 8.00 | | | | | | | |
| B. TRC Results: | | | Reporting Year | Life | e-to-date | TRC | Results: | |
| ¹ TRC Benefits (\$): | | \$ | 54,170.78 | \$ | | | 54,170.78 | |
| ² TRC Costs (\$): | | | | | | | | |
| | • , • , | \$ | 6,183.79 | \$ | | | 7,338.83 | |
| Incrementa | I Measure Costs (Equipment Costs) | | | | | | | |
| Not TDC (in come CDN ft) | Total TRC costs: | | 6,183.79 | \$ | | Φ. | 7,338.83 | |
| Net TRC (in year CDN \$): | | \$ | 47,986.99 | | | \$ | 46,831.94 | |
| Benefit to Cost Ratio (TRC Benefits/ | TRC Costs): | \$ | 8.76 | \$ | | | 7.38 | |
| C. Results: (one or more category may | apply) | | | <u>(</u> | Cumulati | ve Re | sults: | |
| Conservation Programs: | | | | | | | | |
| Demand savings (kW): | Summer | | 2.86 | | 2 | 2.86 | | |
| | Winter | | 7.01 | | 7 | '.01 | | |
| | lifecycle | | in year | | nulative ecycle | | nulative ual Savings | |
| Energy saved (kWh): | 720,000 | | 40,000 | | 0,000 | | 40,000 | |
| Other resources saved : | -7 | | -, | | -, | | ., | |
| Natural Gas (m3): | | | | | | | | |
| Other (specify): | | | | | | | | |
| Demand Management Programs: Controlled load (kW) Energy shifted On-peak to Mid-peak Energy shifted On-peak to Off-peak (Energy shifted Mid-peak to Off-peak | (kWh): | | | | | | | |
| <u>Demand Response Programs:</u> Dispatchable load (kW): | | | | | | | | |
| Peak hours dispatched in year (hours | s): | | | | | | | |
| Power Factor Correction Programs Amount of KVar installed (KVar): | <u>s:</u> | | | | | | | |

Distribution system power factor at beginning of year (%): Distribution system power factor at end of year (%):

| Line Loss Reduction Programs: | | | | | | | |
|-------------------------------|-----------|---------|--|--|--|--|--|
| Peak load savings (kW): | | | | | | | |
| | lifecycle | in year | | | | | |
| Energy savings (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. | Actual Program Costs: | | Reporting Year | (| Cumulative Life to Date |
|----|------------------------------|----------------------|----------------|----|-------------------------|
| | Utility direct costs (\$): | Incremental capital: | | | |
| | | Incremental O&M: | \$ 5,634.10 | \$ | 5,634.10 |
| | | Incentive: | \$ - | | |
| | | Total: | \$ 5,634.10 | \$ | 5,634.10 |
| | | | | | |
| | Utility indirect costs (\$): | Incremental capital: | | | |
| | | Incremental O&M: | \$ 549.69 | \$ | 1,704.73 |
| | | Total: | \$ 549.69 | \$ | 1,704.73 |

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 b

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

| A. | Name of the Program: | Low Income Program | | | | | | |
|----|---|--------------------------------------|-----|---------------------------|----|-------------|---------|-------------|
| | Description of the program (include | ling intent, design, delivery, par | tne | rships and evaluation): | | | | |
| | This program originally consisted of a program was cancelled in 2006. Ene in 2007 when the Green Communitie | rgy evaluations through Green Co | | | | | | |
| | Measure(s): | | | | | | | |
| | | Measure 1 | | Measure 2 (if applicable) | | Measure 3 | (if apı | olicable) |
| | Base case technology: | 60W Incandescent | | | | | | |
| | Efficient technology: | CFL Screw-In 15W | | | | | | |
| | Number of participants or units delivered for reporting year: | 2000 | | | | | | |
| | Measure life (years): | 2000 4 | | | | | | |
| | wedsure me (years). | 4 | | | | | | |
| | Number of Participants or units | | | | | | | |
| | delivered life to date | 2000 | | | | | | |
| В. | TRC Results: | | | Reporting Year | _ | ife-to-date | TRC | Results |
| | ¹ TRC Benefits (\$): | | \$ | 51,691.55 | | ino to dato | | 51,691.55 |
| | ² TRC Costs (\$): | | 7 | 0.,0000 | Ψ | | | 0.,0000 |
| | • • | program cost (excluding incentives): | \$ | 9,102.06 | \$ | | | 10,802.20 |
| | Incrementa | I Measure Costs (Equipment Costs) | | | | | | , |
| | | Total TRC costs: | \$ | 9,102.06 | \$ | | | 10,802.20 |
| | Net TRC (in year CDN \$): | | \$ | 42,589.49 | | | \$ | 40,889.35 |
| | Benefit to Cost Ratio (TRC Benefits/ | TRC Costs): | \$ | 5.68 | | | | 4.79 |
| C. | Results: (one or more category may | apply) | | | | Cumulativ | ve Re | esults: |
| | Conservation Programs: | | | | | | | |
| | Demand savings (kW): | Summer | | 0.00 | | 0.00 |) | |
| | 3 () | Winter | | 45.00 | | 45.00 | | |
| | | | | · | _ | umulative | | nulative |
| | - (4.14) | lifecycle | | in year | | Lifecycle | Ann | ual Savings |
| | Energy saved (kWh): Other resources saved: | 835,200 | | 208,800 | | 835,200 | | 208,800 |
| | | | | | | | | |
| | Natural Gas (m3): | | | | | | | |
| | Other (specify): | | | | | | | |
| | <u>Demand Management Programs:</u> Controlled load (kW) | | | | | | | |
| | Energy shifted On-peak to Mid-peak | (kWh): | | | | | | |
| | Energy shifted On-peak to Off-peak | | | | | | | |
| | Energy shifted Mid-peak to Off-peak | (kWh): | | | | | | |
| | Demand Response Programs: | | | | | | | |
| | Dispatchable load (kW): | -1. | | | | | | |
| | Peak hours dispatched in year (hour | S). | | | | | | |
| | Power Factor Correction Programs Amount of KVar installed (KVar): | <u>s:</u> | | | | | | |
| | Amount of KVar installed (KVar): | aginning of year (0/): | | | | | | |

Distribution system power factor at beginning of year (%): Distribution system power factor at end of year (%):

| Actual Program Costs: | | Reporting Year | Cumulative Life to Date |
|---|----------------------|----------------|-------------------------|
| Metric (specify): | | | |
| Other Programs (specify): | | | |
| Fuel type: | | | |
| Peak energy generated (kWh): | | | |
| Energy generated (kWh): | | | |
| Amount of DG installed (kW): | | | |
| Distributed Generation and Load Di | splacement Programs: | | |
| Energy savings (kWh): | | | |
| 3.() | lifecycle | in year | |
| Peak load savings (kW): | | | |
| Line Loss Reduction Programs: | | | |
| | | | |

| D. | Actual Program Costs: | | Reporting Year | Cumulative Life to Date |
|----|------------------------------|----------------------|----------------|-------------------------|
| | Utility direct costs (\$): | Incremental capital: | | |
| | | Incremental O&M: | \$ 8,292.96 | \$ 8,292.96 |
| | | Incentive: | - | |
| | | Total: | \$ 8,292.96 | \$ 8,292.96 |
| | | | | |
| | Utility indirect costs (\$): | Incremental capital: | | |
| | | Incremental O&M: | \$ 809.10 | \$ 2,509.24 |
| | | Total: | \$ 809.10 | \$ 2,509.24 |

E. Assumptions & Comments:

Benefits should be estimated if costs have been incurred <u>and</u> 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 b

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

A. Name of the Program:

Energy Efficiency Programs: Community Outreach Campaign - Compact Fluorescent Lamp Promotic

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

This program is part of the Community Outreach campaign. This consists of giveaways of 1,200 (from original 3,000 started in 2005) bulbs at local trade shows and community presentations. The program benefits customers in the residential rate class. The derived wattage benefit is calculated based on a 15W bulb replacing a 60W bulb. Although we can't be certain that individuals will continue using CFLs, we are confident that this program combined with our education efforts will instill a conservation culture shift

| Measure(s): | | | | | |
|---|-------------------------------------|----|---------------------------|--|--|
| | Measure 1 | | Measure 2 (if applicable) | Measure 3 | (if applicable) |
| Base case technology: | 60W Incandescent | | | | |
| Efficient technology: | CFL Screw-In 15W | | | | |
| Number of participants or units | | | | | |
| delivered for reporting year: | 1200 | | | | |
| Measure life (years): | 4 | | | | |
| Number of Participants or units | | | | | |
| delivered life to date | 3000 | | | | |
| TRC Results: | | | Reporting Year | Life-to-date | TRC Results |
| TRC Benefits (\$): | | \$ | 31,014.93 | \$ | 77,537 |
| TRC Costs (\$): | | | | · | ŕ |
| • • | rogram cost (excluding incentives): | \$ | - | | 5 570 |
| | Measure Costs (Equipment Costs) | Ψ | | | 5,570 |
| moremen | Total TRC costs: | \$ | | | E E70 |
| Net TRC (in year CDN \$): | TOTAL TRU COSTS. | \$ | 31,014.93 | | 71,966 |
| | TPC Contol: | | | | |
| Benefit to Cost Ratio (TRC Benefits/T | RC Cosis): | \$ | 31,014.93 | | |
| results. (One of more category may | арріу) | | | Cumulati | 77,537. 5,570. 5,570. 71,966. 13. ulative Results: 0.00 67.50 ive Cumulative de Annual Savir |
| Conservation Programs: | | | | | |
| Demand savings (kW): | Summer | | 0 | | |
| | Winter | | 27.00 | 5,5 71,5 Cumulative Results 0.00 67.50 Cumulative Cumulative Lifecycle Annual S |) |
| | | | | Cumulative | Cumulative |
| | lifecycle | | in year | Lifecycle | Annual Savir |
| Energy saved (kWh): | 501,120 | | 125,280 | 1.252.800 | 187,920 |
| Other resources saved : | , | | , | , , | |
| esults: (one or more category may onservation Programs: emand savings (kW): hergy saved (kWh): ther resources saved : Natural Gas (m3): Other (specify): | | | | | |
| rvaturar das (1110). | | | | | |
| Other (specify): | | | | | |
| | | | | | |
| Demand Management Programs: | | | | | |
| Demand Management Programs: Controlled load (kW) | (IAV6): | | | | |
| Demand Management Programs: Controlled load (kW) Energy shifted On-peak to Mid-peak (| | | | | |
| Demand Management Programs: Controlled load (kW) Energy shifted On-peak to Mid-peak (Energy shifted On-peak to Off-peak (I | kWh): | | | | |
| Demand Management Programs: Controlled load (kW) Energy shifted On-peak to Mid-peak (| kWh): | | | | |
| Demand Management Programs: Controlled load (kW) Energy shifted On-peak to Mid-peak (Energy shifted On-peak to Off-peak (Energy shifted Mid-peak to Off-peak (Demand Response Programs: | kWh): | | | | |
| Demand Management Programs: Controlled load (kW) Energy shifted On-peak to Mid-peak (Energy shifted On-peak to Off-peak (Energy shifted Mid-peak to Off-peak (| kWh): | | | | |
| Demand Management Programs: Controlled load (kW) Energy shifted On-peak to Mid-peak (Energy shifted On-peak to Off-peak (Energy shifted Mid-peak to Off-peak (Demand Response Programs: | kWh): (kWh): | | | | |
| Demand Management Programs: Controlled load (kW) Energy shifted On-peak to Mid-peak (Energy shifted On-peak to Off-peak (Energy shifted Mid-peak to Off-peak (Energy shifted Mid-peak to Off-peak (Demand Response Programs: Dispatchable load (kW): | kWh): (kWh): | | | | |
| Demand Management Programs: Controlled load (kW) Energy shifted On-peak to Mid-peak (Energy shifted On-peak to Off-peak (Energy shifted Mid-peak to Off-peak (Energy shifted Mid-peak to Off-peak (Demand Response Programs: Dispatchable load (kW): Peak hours dispatched in year (hours | kWh): (kWh): | | | | |

| Line Loss Reduction Programs: | | | |
|--|------------------------|---------|--|
| Peak load savings (kW): | | | |
| | lifecycle | in year | |
| Energy savings (kWh): | | | |
| <u>Distributed Generation and Load D</u> Amount of DG installed (kW): | Displacement Programs: | | |
| Energy generated (kWh): | | | |
| Peak energy generated (kWh): | | | |
| Fuel type: | | | |
| | | | |

Other Programs (specify):

Metric (specify):

| D. | Actual Program Costs: | | Reporting Year | Cum | ulative Life to Date |
|----|------------------------------|----------------------|----------------|-----|----------------------|
| | Utility direct costs (\$): | Incremental capital: | | | |
| | | Incremental O&M: | \$ - | \$ | 1,602.14 |
| | | Incentive: | | \$ | 10,756.00 |
| | | Total: | \$ - | \$ | 12,358.14 |
| | | | | | |
| | Utility indirect costs (\$): | Incremental capital: | | | |
| | | Incremental O&M: | \$ - | \$ | 3,968.81 |
| | | Total: | \$ - | \$ | 3,968.81 |

E. Assumptions & Comments:

Administration and utility costs were claimed in 2005 Annual CDM Report.

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 b

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

| A. | Name of the Program: | Load Control Program | | | | |
|----|---|--------------------------------------|-------|-------------------------------|-------------------|------------------|
| | Description of the program (include | ling intent, design, delivery, par | tner | ships and evaluation): | | |
| | This program targeted uncontrolled pusage based on ambient temperature ambient temperature decreases, the | e. The control devices were design | ned t | to provide power at -5 degree | s C for a timed d | luration. As the |
| | Measure(s): | | | | | |
| | | Measure 1 | | Measure 2 (if applicable) | Measure 3 | (if applicable) |
| | Base case technology: | None | | | | |
| | Efficient technology: | Load Controls | | | | |
| | Number of participants or units | | | | | |
| | delivered for reporting year: | 53 | | | | |
| | Measure life (years): | 10 | | | | |
| | | | | | | |
| | Number of Participants or units | | | | | |
| | delivered life to date | 53 | | | | |
| В. | TRC Results: | | | Reporting Year | l ife-to-date | TRC Results: |
| | ¹ TRC Benefits (\$): | | \$ | 13,845.34 | | 13,845.34 |
| | ² TRC Costs (\$): | | Ψ | 13,043.34 | Ψ | 13,043.34 |
| | V-7 | program cost (excluding incentives): | \$ | 614.30 | ¢ | 614.20 |
| | | I Measure Costs (Equipment Costs) | φ | 014.30 | Φ | 614.30 |
| | mcrementa | (| Φ | 044.00 | • | 01100 |
| | Net TRC (in year CDN \$): | Total TRC costs: | \$ | 614.30 | \$ | \$ 13,231.04 |
| | Net TRC (III year CDN \$). | | \$ | 13,231.04 | | φ 13,231.04 |
| | Benefit to Cost Ratio (TRC Benefits/ | TRC Costs): | \$ | 22.54 | \$ | 22.54 |
| C. | Results: (one or more category may | apply) | | | Cumulati | ve Results: |
| | Conservation Programs: | | | | | |
| | Demand savings (kW): | Summer | | 0.00 | 0.00 | |
| | | Winter | | 23.85 | 23.85 | |
| | | | | | Cumulative | Cumulative |
| | | lifecycle | | in year | Lifecycle | Annual Savings |
| | Energy saved (kWh): | 173,628 | | 17,363 | 173,628 | 17,363 |
| | Other resources saved : | | | | | |
| | Natural Gas (m3): | | | | | |
| | Other (specify): | | | | | |

Demand Management Programs:

Controlled load (kW)

Energy shifted On-peak to Mid-peak (kWh):

Energy shifted On-peak to Off-peak (kWh):

Energy shifted Mid-peak to Off-peak (kWh):

Demand Response Programs:

Dispatchable load (kW):

Peak hours dispatched in year (hours):

Power Factor Correction Programs:

Amount of KVar installed (KVar):

Distribution system power factor at beginning of year (%):

Distribution system power factor at end of year (%):

| | Line Loss Reduction Programs: | | | | |
|-----------|--|--|--------------------------|--------------------------------|--------------|
| | Peak load savings (kW): | | | | |
| | | lifecycle | in year | | |
| | Energy savings (kWh): | | | | |
| | Distributed Generation and Load I Amount of DG installed (kW): Energy generated (kWh): Peak energy generated (kWh): | Displacement Programs: | | | |
| | Fuel type: | | | | |
| | Other Programs (specify): | | | | |
| | Metric (specify): | | | | |
| D. | Actual Drawrow Coots | | Danastina Vasa | Ourseletters Life to Dete | |
| υ. | Actual Program Costs: | | Reporting Year | Cumulative Life to Date | 2 |
| υ. | Utility direct costs (\$): | Incremental capital: | Reporting Year | Cumulative Life to Date | <u>}</u> |
| υ. | | Incremental capital: Incremental O&M: | \$ 614.30 | | 4.30 |
| υ. | | • | | \$ 614 | 1.30 |
| υ. | | Incremental O&M: | \$ 614.30 | \$ 61 ² \$ 6,296 | 4.30 6.40 |
| υ. | Utility direct costs (\$): | Incremental O&M: Incentive: Total: | \$ 614.30 \$ 6,296.40 | \$ 61 ² \$ 6,296 | 4.30 6.40 |
| υ. | | Incremental O&M: Incentive: | \$ 614.30 \$ 6,296.40 | \$ 61 ² \$ 6,296 | 4.30 6.40 |
| υ. | Utility direct costs (\$): | Incremental O&M: Incentive: Total: | \$ 614.30 \$ 6,296.40 | \$ 61 ² \$ 6,296 | 4.30 6.40 |
| υ. | Utility direct costs (\$): | Incremental O&M: Incentive: Total: Incremental capital: | \$ 614.30 \$ 6,296.40 | \$ 61 ² \$ 6,296 | 4.30 6.40 |
| υ. | Utility direct costs (\$): | Incremental O&M: Incentive: Total: Incremental capital: Incremental O&M: | \$ 614.30 \$ 6,296.40 | \$ 61 ² \$ 6,296 | 4.30 6.40 |
| Б. | Utility direct costs (\$): | Incremental O&M: Incentive: Total: Incremental capital: Incremental O&M: | \$ 614.30 \$ 6,296.40 | \$ 61 ² \$ 6,296 | 4.30 6.40 |

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 b

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

| A. | Name of the Program: Customer Appliance Saturation Survey | | | | | | | |
|----|--|--------------------------------------|------|---------------------------|-------------------------|------------------------------|--|--|
| | Description of the program (include | ling intent, design, delivery, par | tner | ships and evaluation): | | | | |
| | The Customer Appliance Saturation by Hydro One. Marcom Group Inc. co 2006. | | | | | | | |
| | Measure(s): | Measure 1 | | Measure 2 (if applicable) | Measure 3 | (if applicable) | | |
| | Base case technology: | None | | | | | | |
| | Efficient technology: | None | | | | | | |
| | Number of participants or units | | | | | | | |
| | delivered for reporting year: | 2463 | | | | | | |
| | Measure life (years): | - | | | | | | |
| | Number of Participants or units delivered life to date | 2463 | | | | | | |
| В. | TRC Results: | | | Reporting Year | l ife-to-date | TRC Results: | | |
| | TRC Benefits (\$): | | | <u>Reporting Teal</u> | <u>Life-to-date</u> | TICO Results. | | |
| | ² TRC Costs (\$): | | | | | | | |
| | () / | program cost (excluding incentives): | ¢ | 6.185.63 | | | | |
| | Incremental Measure Costs (Equipment Costs) | | φ | 0,180.03 | | | | |
| | · · · | | Ф | 6,185.63 | | | | |
| | Net TRC (in year CDN \$): | Total TRC costs: | φ | 0,185.05 | | | | |
| | Net The (iii year σείν φ). | | | | | | | |
| | Benefit to Cost Ratio (TRC Benefits/ | TRC Costs): | | | | | | |
| C. | Results: (one or more category may | apply) | | | <u>Cumulati</u> | ve Results: | | |
| | Concernation Programs | | | | | | | |
| | Conservation Programs: | 0 | | | | | | |
| | Demand savings (kW): | Summer | | | | | | |
| | | Winter | | | | | | |
| | | lifecycle | | in year | Cumulative Lifecycle | Cumulative Annual Savings | | |
| | Energy saved (kWh): | | | | | | | |
| | Other resources saved : | | | | | | | |
| | Natural Gas (m3): | | | | | | | |
| | Other (specify): | | | | | | | |
| | Demand Management Programs: Controlled load (kW) Energy shifted On-peak to Mid-peak Energy shifted On-peak to Off-peak (Energy shifted Mid-peak to Off-peak | (kWh): | | | | | | |
| | Demand Response Programs: | | | | | | | |
| | Dispatchable load (kW): | | | | | | | |
| | | -1. | | | | | | |
| | Peak hours dispatched in year (hour | | | | | | | |
| | Power Factor Correction Programs | <u>s:</u> | | | | | | |
| | Amount of KVar installed (KVar): | | | | | | | |
| | Distribution system power factor at b | eginning of year (%): | | | | | | |
| | Distribution system power factor at e | | | | | | | |

| | Line Loss Reduction Programs: | | | |
|------------|--|--|----------------|--------------------------|
| | Peak load savings (kW): | | | |
| | | lifecycle | in year | |
| | Energy savings (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. | Actual Program Costs: | | Reporting Year | Cumulative Life to Date |
| υ. | - | | Reporting rear | Culturative Life to Date |
| | | | | |
| | Utility direct costs (\$): | Incremental capital: | Φ | 10.05 |
| | Utility direct costs (\$): | Incremental O&M: | \$ 5 | 549.85 |
| | Utility direct costs (\$): | Incremental O&M: Incentive: | | |
| | Utility direct costs (\$): | Incremental O&M: | | 549.85 549.85 |
| | | Incremental O&M: Incentive: Total: | | |
| | Utility direct costs (\$): Utility indirect costs (\$): | Incremental O&M: Incentive: Total: Incremental capital: | \$ 5 | 549.85 |
| | | Incremental O&M: Incentive: Total: Incremental capital: Incremental O&M: | \$ 5, | 635.78 |
| | | Incremental O&M: Incentive: Total: Incremental capital: | \$ 5, | 549.85 |
| | | Incremental O&M: Incentive: Total: Incremental capital: Incremental O&M: | \$ 5, | 635.78 |
| E. | | Incremental O&M: Incentive: Total: Incremental capital: Incremental O&M: | \$ 5, | 635.78 |
| E. | Utility indirect costs (\$): | Incremental O&M: Incentive: Total: Incremental capital: Incremental O&M: | \$ 5, | 635.78 |
| <u>E</u> . | Utility indirect costs (\$): | Incremental O&M: Incentive: Total: Incremental capital: Incremental O&M: | \$ 5, | 635.78 |

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 b

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

| Α. | Name of the Program: | Research & Development - New | Tec | hnology | | | | | |
|----|--|---------------------------------------|-----|--|-------------------------|------------------------------|--|--|--|
| | Description of the program (including intent, design, delivery, partnerships and evaluation): | | | | | | | | |
| | This program was aimed at new tech prepared for the proposed "landfill gaindicate a potential of 3.2 MW of electrons of the proposed of the pr | s utilization" project at the City of | | | | | | | |
| | Measure(s): | Measure 1 | | Measure 2 (if applicable) | Measure 3 | (if applicable) | | | |
| | Base case technology: | None | | appap | | (appeas.e) | | | |
| | Efficient technology: | None | | | | | | | |
| | Number of participants or units | | | | | | | | |
| | delivered for reporting year: | | | | | | | | |
| | Measure life (years): | | | | | | | | |
| | Number of Participants or units delivered life to date | | | | | | | | |
| | | | | | | | | | |
| В. | TRC Results: | | | Reporting Year | Life-to-date | TRC Results: | | | |
| | TRC Benefits (\$): TRC Costs (\$): | | | | | | | | |
| | | program cost (excluding incentives): | ¢ | 21,951.29 | | | | | |
| | • • | Measure Costs (Equipment Costs) | φ | 21,931.29 | | | | | |
| | moromena | Total TRC costs: | \$ | 21,951.29 | | | | | |
| | Net TRC (in year CDN \$): | Total TNO costs. | Ψ | 21,001.20 | | | | | |
| | Benefit to Cost Ratio (TRC Benefits/ | TRC Costs): | | | | | | | |
| С. | Results: (one or more category may | apply) | | | Cumulati | ve Results: | | | |
| | | | | | <u> </u> | | | | |
| | Conservation Programs: | | | | | | | | |
| | Demand savings (kW): | Summer | | | | | | | |
| | | Winter | | | | | | | |
| | | lifecycle | | in year | Cumulative Lifecycle | Cumulative Annual Savings | | | |
| | Energy saved (kWh): | esy e.e | | yea. | , | | | | |
| | Other resources saved : | | | | | | | | |
| | Natural Gas (m3): | | | | | | | | |
| | Other (specify): | | | | | | | | |
| | Demand Management Programs: | | | | | | | | |
| | Controlled load (kW) | //-14//-). | | | | | | | |
| | Energy shifted On-peak to Mid-peak Energy shifted On-peak to Off-peak (| | | | | | | | |
| | Energy shifted Mid-peak to Off-peak | | | | | | | | |
| | Lifergy Stiffled Wild-peak to Off-peak | (8771). | | | | | | | |
| | Demand Response Programs: | | | | | | | | |
| | Dispatchable load (kW): | | | | | | | | |
| | Peak hours dispatched in year (hours | 3): | | | | | | | |
| | Power Factor Correction Programs | s : | | | | | | | |
| | Amount of KVar installed (KVar): | | | | | | | | |
| | Distribution system power factor at be | eginning of year (%): | | | | | | | |
| | Distribution system power factor at ea | | | | | | | | |

| | <u>Line Loss Reduction Programs:</u> Peak load savings (kW): | lifecycle | in year | |
|----|--|--|-----------------|-------------------------|
| | Energy savings (kWh): | modydio | iii youi | |
| | Distributed Generation and Load D Amount of DG installed (kW): Energy generated (kWh): Peak energy generated (kWh): Fuel type: | Displacement Programs: | | |
| | Other Programs (specify): Metric (specify): | | | |
| D. | Actual Program Costs: | | Reporting Year | Cumulative Life to Date |
| | Utility direct costs (\$): | Incremental capital: Incremental O&M: Incentive: | \$ 21,951.29 | |
| | | Total: | \$ 21,951.29 | |
| | * *** | 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 b

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

| A. | Name of the Program: | Key Accounts Seminars | | | | |
|----|---|------------------------------------|-------|------------------------------|-----------------|------------------|
| | Description of the program (include | ling intent, design, delivery, par | tner | ships and evaluation): | | |
| | Thunder Bay Hydro held 2 Key Acco October sesion was jointly hosted by Sense Workshops. The workshops w | Union Gas. The presentations we | ere " | The Bottom line on Energy Ma | anagement" fron | n the Dollars to |
| | Measure(s): | Measure 1 | | Measure 2 (if applicable) | Measure 3 | (if applicable) |
| | Base case technology: | None | | Wedger 2 (ii applicable) | Wicadare C | (ii applicable) |
| | Efficient technology: | None | | | | |
| | Number of participants or units | | | | | |
| | delivered for reporting year: | 49 | | | | |
| | Measure life (years): | | | | | |
| | Number of Participants or units | | | | | |
| | delivered life to date | 49 | | | | |
| B. | TRC Results: | | | Reporting Year | Life-to-date | TRC Results: |
| 1 | TRC Benefits (\$): | | | | | |
| 2 | ² TRC Costs (\$): | | | | | |
| | Utility program cost (excluding incentives): | | \$ | 4,390.89 | | |
| | Incremental Measure Costs (Equipment Costs) | | | | | |
| | Net TRC (in year CDN \$): | Total TRC costs: | \$ | 4,390.89 | | |
| | Net TNC (III year CDN φ). | | | | | |
| | Benefit to Cost Ratio (TRC Benefits/ | TRC Costs): | | | | |
| C. | Results: (one or more category may | apply) | | | <u>Cumulati</u> | ve Results: |
| | Conservation Programs: | | | | | |
| | Demand savings (kW): | Summer | | | | |
| | Domana cavinge (NVV). | Winter | | | | |
| | | | | | | |
| | | | | | Cumulative | Cumulative |
| | _ | lifecycle | | in year | Lifecycle | Annual Savings |
| | Energy saved (kWh): | | | | | |
| | Other resources saved : | | | | | |
| | Natural Gas (m3): Other (specify): | | | | | |
| | | | | | | |
| | Demand Management Programs: | | | | | |
| | Controlled load (kW) | //.la//\. | | | | |
| | Energy shifted On-peak to Mid-peak Energy shifted On-peak to Off-peak | | | | | |
| | Energy shifted Mid-peak to Off-peak | • | | | | |
| | Energy stimed wild peak to on peak | (NVII). | | | | |
| | <u>Demand Response Programs:</u> | | | | | |
| | Dispatchable load (kW): | | | | | |
| | Peak hours dispatched in year (hour | s): | | | | |
| | Power Factor Correction Programs | <u>s:</u> | | | | |
| | Amount of KVar installed (KVar): | | | | | |
| | Distribution system power factor at b | | | | | |
| | Distribution system power factor at e | nd of year (%): | | | | |

| | Line Loss Reduction Programs: | | | | |
|------------|---|---|----|----------------|--------------------------------|
| | Peak load savings (kW): | | | | |
| | | lifecycle | | in year | |
| | Energy savings (kWh): | | | | |
| | Distributed Generation and Load I | Displacement Programs: | | | |
| | Amount of DG installed (kW): | <u> </u> | | | |
| | Energy generated (kWh): | | | | |
| | Peak energy generated (kWh): | | | | |
| | Fuel type: | | | | |
| | Other Programs (specify): | | | | |
| | Metric (specify): | | | | |
| | wethe (specify). | | | | |
| D. | Actual Program Costs: | | | Reporting Year | Cumulative Life to Date |
| | Utility direct costs (\$): | Incremental capital: | | | |
| | | 1 | Φ | 4 000 00 | |
| | | Incremental O&M: | \$ | 4,390.89 | |
| | | Incremental O&M: Incentive: | Ф | 4,390.89 | |
| | | | \$ | 4,390.89 | |
| | | Incentive: | | | |
| | Utility indirect costs (\$): | Incentive: | | | |
| | Utility indirect costs (\$): | Incentive: Total: | | | |
| | Utility indirect costs (\$): | Incentive: Total: Incremental capital: | | | |
| | Utility indirect costs (\$): | Incentive: Total: Incremental capital: Incremental O&M: | | | |
| F | | Incentive: Total: Incremental capital: Incremental O&M: | | | |
| <u>E.</u> | Utility indirect costs (\$): Assumptions & Comments: | Incentive: Total: Incremental capital: Incremental O&M: | | | |
| <u>E</u> . | | Incentive: Total: Incremental capital: Incremental O&M: | | | |
| <u>E</u> . | | Incentive: Total: Incremental capital: Incremental O&M: | | | |

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 b

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

| A. | Name of the Program: | Energy Efficiency Programs - Pu | blic (| Outreach | | |
|----|--|--|--------------|--|-----------------------------------|----------------------|
| | Description of the program (include | ling intent, design, delivery, par | tner | ships and evaluation): | | |
| | This program is designed to raise aw efficiency tips. It will also continue to benefits all rate classes. The prograr campaigns, school programs, commopportunities. | provide customers with access to m will continue to utilize the TBH v | Thu vebsi | nder Bay Hydro conservation ite, EcoNews and This City tal | programs. This ploids, television | program and print |
| | Measure(s): | Measure 1 | | Measure 2 (if applicable) | Measure 3 (if applicable) | |
| | Base case technology: | Wedsare 1 | | Wododio Z (ii applicable) | Wicadare 6 | (ii applicable) |
| | Efficient technology: | | | | | |
| | Number of participants or units | | | | | |
| | delivered for reporting year: | | | | | |
| | Measure life (years): | | | | | |
| | Number of Participants or units delivered life to date | | | | | |
| В. | TRC Results: | | | Reporting Year | l ife-to-date | TRC Results: |
| | ¹ TRC Benefits (\$): | | | <u>Reporting real</u> | Life-to-date | TIVO Nesulis. |
| | ² TRC Costs (\$): | | | | | |
| | | | \$ | 1,646.35 | | |
| | Incremental Measure Costs (Equipment Costs) | | | | | |
| | Total TRC costs: | | \$ | 1,646.35 | | |
| | Net TRC (in year CDN \$): | | -\$ | 1,646.35 | | |
| | Benefit to Cost Ratio (TRC Benefits/TRC Costs): | | \$ | - | | |
| C. | Results: (one or more category may apply) | | | | Cumulati | ve Results: |
| | Conservation Programs: | | | | | |
| | Demand savings (kW): | Summer | | | | |
| | | Winter | | | | |
| | | | | | Cumulative | Cumulative |
| | | lifecycle | | in year | Lifecycle | Annual Savings |
| | Energy saved (kWh): Other resources saved : | | | | | |
| | Natural Gas (m3): | | | | | |
| | Other (specify): | | | | | |
| | <u>Demand Management Programs:</u> Controlled load (kW) | | | | | |
| | Energy shifted On-peak to Mid-peak | (kWh): | | | | |
| | Energy shifted On-peak to Off-peak | | | | | |
| | Energy shifted Mid-peak to Off-peak (kWh): | | | | | |
| | Demand Response Programs: | | | | | |
| | Dispatchable load (kW): | | | | | |
| | Peak hours dispatched in year (hour | s): | | | | |
| | Power Factor Correction Programs | <u>s:</u> | | | | |
| | Amount of KVar installed (KVar): | | | | | |
| | Distribution system power factor at b | | | | | |
| | Distribution system power factor at e | nd of year (%): | | | | |

| | Line Loss Reduction Programs: | | | | |
|----|--|------------------------|----|----------------|-------------------------|
| | Peak load savings (kW): | lifecycle | | in year | |
| | Energy savings (kWh): | mecycle | | iii yeai | |
| | Distributed Generation and Load I Amount of DG installed (kW): Energy generated (kWh): Peak energy generated (kWh): Fuel type: Other Programs (specify): Metric (specify): | Displacement Programs: | | | |
| D. | Actual Program Costs: | | | Reporting Year | Cumulative Life to Date |
| | Utility direct costs (\$): | Incremental capital: | | | <u> </u> |
| | , | Incremental O&M: | \$ | 1,646.35 | |
| | | Incentive: | | | |
| | | Total: | \$ | 1,646.35 | |
| | 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 b

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

A. Name of the Program: Energy Efficiency Programs: Commercial Lighting Incentive-Summary

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

This Program was available to specific General Service customers who are our largest customers or their combined portfolios have significant loads. These customers have a peak load of 1 MW or larger, or are part of the "MUSH" sector, or are a property management firm, or a government housing provider. These customers will not only benefit from the incentives, but also the result of more efficient lighting systems. Long term energy savings are expected to last 10 to 15 years.

| Measure(s): | | | | | |
|--|-------------------------------------|----|---------------------------|--------------|------------------|
| | Measure 1 | | Measure 2 (if applicable) | Measure 3 | (if applicable) |
| Base case technology: | Varies | | | | |
| Efficient technology: | See Comments | | | | |
| Number of participants or units | | | | | |
| delivered for reporting year: | 7 | | | | |
| Measure life (years): | Varies | | | | |
| Number of Participants or units | | | | | |
| delivered life to date | 7 | | | | |
| TRC Results: | | | Reporting Year | Life-to-date | TRC Results |
| TRC Benefits (\$): | | \$ | 67,036.88 | | 67,036 |
| TRC Costs (\$): | | , | 21,223.00 | | 0.,000 |
| • • | rogram cost (excluding incentives): | \$ | 475.72 | \$ | 475 |
| | Measure Costs (Equipment Costs) | Ψ | 710.12 | Ψ | 773 |
| moromental | Total TRC costs: | \$ | 475.72 | ¢ | 175 |
| Net TRC (in year CDN \$): | Total TNC COSts. | \$ | 66,561.16 | Ψ | 475 \$ 66,561 |
| | FDC Coots): | | · | Φ. | |
| Benefit to Cost Ratio (TRC Benefits/ | (RC Costs): | \$ | 140.92 | \$ | 140 |
| Results: (one or more category may | -11 37 | | | | ve Results: |
| Conservation Programs: Demand savings (kW): | Summer | | 21.23 | | 21 |
| 3 () | Winter | | 22.34 | | 22 |
| | | | | | |
| | | | | Cumulative | Cumulative |
| | lifecycle | | in year | Lifecycle | Annual Savi |
| Energy saved (kWh): | 839,966 | | 109,616 | 839,966 | 109,616 |
| Other resources saved : | | | | | |
| Natural Gas (m3): | | | | | |
| Other (specify): | | | | | |
| | | | | | |
| Demand Management Programs: | | | | | |
| <u>Demand Management Programs:</u> Controlled load (kW) | | | | | |
| | (kWh): | | | | |
| Controlled load (kW) | | | | | |
| Controlled load (kW) Energy shifted On-peak to Mid-peak | kWh): | | | | |
| Controlled load (kW) Energy shifted On-peak to Mid-peak Energy shifted On-peak to Off-peak (Energy shifted Mid-peak to Off-peak | kWh): | | | | |
| Controlled load (kW) Energy shifted On-peak to Mid-peak Energy shifted On-peak to Off-peak (Energy shifted Mid-peak to Off-peak Demand Response Programs: | kWh): | | | | |
| Controlled load (kW) Energy shifted On-peak to Mid-peak Energy shifted On-peak to Off-peak (Energy shifted Mid-peak to Off-peak | kWh): (kWh): | | | | |
| Controlled load (kW) Energy shifted On-peak to Mid-peak Energy shifted On-peak to Off-peak (Energy shifted Mid-peak to Off-peak Demand Response Programs: Dispatchable load (kW): Peak hours dispatched in year (hours | kWh): (kWh): s): | | | | |
| Controlled load (kW) Energy shifted On-peak to Mid-peak Energy shifted On-peak to Off-peak (Energy shifted Mid-peak to Off-peak Demand Response Programs: Dispatchable load (kW): Peak hours dispatched in year (hours Power Factor Correction Programs | kWh): (kWh): s): | | | | |
| Controlled load (kW) Energy shifted On-peak to Mid-peak Energy shifted On-peak to Off-peak (Energy shifted Mid-peak to Off-peak Demand Response Programs: Dispatchable load (kW): Peak hours dispatched in year (hours | kWh): (kWh): s): | | | | |

| Line Loss Reduction Programs: | | | |
|-----------------------------------|-----------------------|---------|--|
| Peak load savings (kW): | | | |
| | lifecycle | in year | |
| Energy savings (kWh): | | | |
| Distributed Generation and Load D | isplacement Programs: | | |
| Amount of DG installed (kW): | | | |
| Energy generated (kWh): | | | |
| Peak energy generated (kWh): | | | |
| Fuel type: | | | |

Other Programs (specify):

Metric (specify):

| D. | Actual Program Costs: | | Reporting Year | Cum | ulative Life to Date |
|----|------------------------------|----------------------|----------------|-----|----------------------|
| | Utility direct costs (\$): | Incremental capital: | | | |
| | | Incremental O&M: | \$ 475.72 | \$ | 475.72 |
| | | Incentive: | \$ 4,876.00 | \$ | 4,876.00 |
| | | Total: | \$ 5,351.72 | \$ | 5,351.72 |
| | | | | | |
| | Utility indirect costs (\$): | Incremental capital: | | | |
| | | Incremental O&M: | | | |
| | | Total: | | | |

E. Assumptions & Comments:

This program was targetted at our 35 largest customers. At year end 7 Customers had participated in 2006. This program extends in to 2007. There were 177 fluorescent 2 lamp ballast/lamp, 56 LED exit signs, and 26 HPS lamp/fixtures converted.

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 b

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

(complete this Appendix for each program)

| A. | Name of the Program: | | | | |
|----|--|------------------------------------|----------------------------|-------------------------|------------------------------|
| | Description of the program (include | ling intent, design, delivery, par | tnerships and evaluation): | | |
| | | | | | |
| | 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): Incremental Measure Costs (Equipment Costs) | | | | |
| | Total TRC costs: | | | | |
| | Net TRC (in year CDN \$): | 7 510.1 77.10 500.107 | | | |
| | Benefit to Cost Ratio (TRC Benefits/TRC Costs): | | | | |
| C. | Results: (one or more category may apply) | | | <u>Cumulat</u> | ive Results: |
| | Conservation Programs: | | | | |
| | Demand savings (kW): | Summer | | | |
| | | Winter | | | |
| | | lifecycle | in year | Cumulative Lifecycle | Cumulative Annual Savings |
| | Energy saved (kWh): Other resources saved : | | | | |
| | Natural Gas (m3): | | | | |
| | Other (specify): | | | | |
| | <u>Demand Management Programs:</u> Controlled load (kW) | | | | |
| | Energy shifted On-peak to Mid-peak | (kWh): | | | |
| | Energy shifted On-peak to Off-peak | | | | |
| | Energy shifted Mid-peak to Off-peak | | | | |
| | Demand Response Programs: | | | | |
| | Dispatchable load (kW): | | | | |
| | Peak hours dispatched in year (hour | s): | | | |
| | Power Factor Correction Programs | <u>s:</u> | | | |
| | Amount of KVar installed (KVar): | | | | |
| | Distribution system power factor at b | | | | |
| | Distribution system power factor at e | | | | |

| | Line Loss Reduction Programs: | | | |
|----|--|---|---|--|
| | Peak load savings (kW): | | | |
| | | lifecycle | in year | |
| | Energy savings (kWh): | | | |
| | Distributed Generation and Load | 1 Displacement Programs: | | |
| | Amount of DG installed (kW): | d Displacement i Tograms. | | |
| | Energy generated (kWh): | | | |
| | Peak energy generated (kWh): | | | |
| | Fuel type: | | | |
| | Other Programs (specify): | | | |
| | Metric (specify): | | | |
| _ | | | | |
| D. | Actual Program Costs: | | Reporting Year | Cumulative Life to Date |
| | Utility direct costs (\$): | Incremental capital: | | |
| | | Incremental O&M: | | |
| | | Incentive: | | |
| | | Total: | | |
| | 11/2/2012 12 12 12 12 12 14 16 16 16 | | | |
| | Utility indirect costs (\$): | Incremental capital: | | |
| | | Incremental O&M: | | |
| | | Total: | | |
| | | | | |
| E. | Assumptions & Comments: | | | |
| | | | | |
| | | | | |
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| | | | | |
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| | | | | |
| | | | | |
| | | | | |
| | 1 Benefits should be estimated if costs have been in | ncurred and the technology has been deployed. F | senefits reflect the present value of the measure for | or the number of units deployed in the year i.e. |

Designation 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

Total Peak

Report Year

Report Year: 2006

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.

| | TF | C Benefits | | | | | Benefit/Cost | Report Year Total | Lifecycle (kWh) | Demand (kW) | | Gross C&DM |
|--|----|------------|-----|------------|------|-----------------|--------------|-------------------|-----------------|-------------|----|-----------------|
| | | (PV) | TRO | Costs (PV) | \$ N | et TRC Benefits | Ratio | kWh Saved | Savings | Saved | Ex | penditures (\$) |
| Seasonal LED Light Exchange | \$ | 15,959 | \$ | 5,623 | \$ | 10,336 | 2.84 | 10,183 | 203,653 | 4.44 | \$ | 11,503 |
| Energy Star-Clothes Washer Incent | \$ | 40,818 | \$ | 5,263 | \$ | 35,554 | 7.76 | 32,640 | 456,960 | 1.27 | \$ | 9,653 |
| Energy Star-Dishwasher Incentive | \$ | 4,490 | \$ | 4,003 | \$ | 487 | 1.12 | 5,600 | 72,800 | 0.13 | \$ | 5,893 |
| Energy Star-Freezer Incentive | \$ | 1,492 | \$ | 1,949 | -\$ | 457 | 0.77 | 994 | 19,872 | 0.24 | \$ | 2,870 |
| Energy Star-Refrigerator Incentive | \$ | 9,880 | \$ | 8,955 | \$ | 925 | 1.10 | 6,956 | 132,164 | 1.67 | \$ | 13,182 |
| Refrigerator Buy-back | \$ | 61,505 | \$ | 9,325 | \$ | 52,180 | 6.60 | 147,600 | 885,600 | 35.38 | \$ | 13,727 |
| Public Outreach | | | \$ | 1,646 | | | | | | | \$ | 1,646 |
| Water Heater Conversion Program | \$ | 54,171 | \$ | 6,184 | \$ | 47,987 | 8.76 | 40,000 | 720,000 | 7.01 | \$ | 6,184 |
| Low Income Program | \$ | 51,692 | \$ | 9,102 | \$ | 42,589 | 5.68 | 208,800 | 835,200 | 0.00 | \$ | 9,102 |
| Compact Fluorescent Lamp Promo | \$ | 31,015 | \$ | - | \$ | 31,015 | 0.00 | 125,280 | 501,120 | 0.00 | \$ | - |
| Customer Saturation Survey | | | \$ | 6,186 | -\$ | 6,186 | 0.00 | | | | \$ | 6,186 |
| *Totals App. B - Residential | \$ | 271,022 | \$ | 58,236 | \$ | 212,786 | 4.65 | 578,052 | 3,827,369 | 50.14 | \$ | 79,945 |
| Residential Indirect Costs not attributable to any specific program | | | | | | | | | | | | |
| Total Residential TRC Costs | | | \$ | 58,236 | | | | | | | | |
| **Totals TRC - Residential | \$ | 271,022 | \$ | 58,236 | \$ | 212,786 | 4.65 | | | | | |

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.

| | TR | C Benefits | | | | | Benefit/Cost | Report Year Total | Lifecycle (kWh) | Total Peak Demand (kW) | | eport Year oss C&DM |
|------------------------------|----|------------|-----|--------------|-------|-----------------|--------------|-------------------|-----------------|---------------------------|-----|------------------------|
| | | (PV) | TRO | C Costs (PV) | \$ Ne | et TRC Benefits | Ratio | kWh Saved | Savings | Saved | Exp | enditures (\$) |
| LED Traffic Light Conversion | \$ | 176,794 | \$ | 16,244 | \$ | 160,550 | 10.88 | 449,728 | 3,597,824 | 40.74 | \$ | 182,744 |
| Load Control Program | \$ | 13,845 | \$ | 614 | \$ | 13,231 | 22.54 | 17,363 | 173,628 | 23.85 | \$ | 6,911 |
| Commercial Lighting | \$ | 67,037 | \$ | 476 | \$ | 66,561 | 140.92 | 109,616 | 839,966 | 22.34 | \$ | 5,352 |
| Name of Program D | | | | | \$ | - | 0.00 | | | | | |
| Name of Program E | | | | | \$ | - | 0.00 | | | | | |
| Name of Program F | | | | | \$ | - | 0.00 | | | | | |
| Name of Program G | | | | | \$ | - | 0.00 | | | | | |
| Name of Program H | | | | | \$ | - | 0.00 | | | | | |
| Name of Program I | | | | | \$ | - | 0.00 | | | | | |
| Name of Program J | | | | | \$ | - | 0.00 | | | | | |
| *Totals App. B - Commercial | \$ | 257,677 | \$ | 17,334 | \$ | 240,342 | 14.86 | 576,706 | 4,611,418 | 87 | \$ | 195,007 |

| Commercial Indirect Costs not attributable to any specific program | | | | |
|--|---------------|--------------|---------------|-------|
| Total TRC Costs | | \$ 17,334 | | |
| **Totals TRC - Commercial | \$ 257,677 | \$ 17,334 | \$ 240,342 | 14.86 |

3. Institutional Programs

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

| Note: To ensure the integrity of the | TRC Benefits (PV) | | \$ Net TRC Benefits | Benefit/Cost | Report Year Total kWh Saved | Lifecycle (kWh) Savings | Total Peak Demand (kW) Saved | Report Year Gross C&DM Expenditures (\$) |
|---|----------------------|------|---------------------|--------------|--------------------------------|----------------------------|------------------------------------|--|
| Name of Program A | | | \$ - | 0.00 | | | | |
| Name of Program B | | | \$ - | 0.00 | | | | |
| Name of Program C | | | \$ - | 0.00 | | | | |
| Name of Program D | | | \$ - | 0.00 | | | | |
| Name of Program E | | | \$ - | 0.00 | | | | |
| Name of Program C | | | \$ - | 0.00 | | | | |
| Name of Program G | | | \$ - | 0.00 | | | | |
| Name of Program H | | | \$ - | 0.00 | | | | |
| Name of Program I | | | \$ - | 0.00 | | | | |
| Name of Program J | | | \$ - | 0.00 | | | | |
| *Totals App. B - Institutional | \$ - | \$ - | \$ - | 0.00 | 0 | 0 | 0 | \$ - |
| Institutional Indirect Costs not attributable to any specific program | | | | | | | | |
| Total TRC Costs | | \$ - | | | | | | |
| **Totals TRC - Institutional | \$ - | \$ - | \$ - | 0.00 | | | | |

4. Industrial Programs

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

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

| | TRC Benefits (PV) | TRC (| Costs (PV) | \$ Ne | t TRC Benefits | Benefit/Cost Ratio | Report Year Total kWh Saved | Lifecycle (kWh) Savings | Total Peak Demand (kW) Saved | Gro | oort Year ss C&DM nditures (\$) |
|-----------------------------------|-------------------|-------|------------|-------|----------------|-----------------------|-----------------------------|----------------------------|------------------------------------|-----|---------------------------------------|
| Key Account Seminars | | \$ | 4,391 | -\$ | 4,391 | 0.00 | | | | \$ | 4,391 |
| Research & Development-Technology | | \$ | 21,951 | -\$ | 21,951 | 0.00 | | | | \$ | 21,951 |
| Name of Program C | | | | \$ | - | 0.00 | | | | | |
| Name of Program D | | | | \$ | - | 0.00 | | | | | |
| Name of Program E | | | | \$ | - | 0.00 | | | | | |
| Name of Program F | | | | \$ | - | 0.00 | | | | | |
| Name of Program G | | | | \$ | - | 0.00 | | | | | |
| Name of Program H | | | | \$ | - | 0.00 | | | | | |

| **Totals TRC - Industrial | \$ - | \$ 26,342 | -\$ | 26,342 | 0.00 | | | | |
|---|-------------|--------------|-----|--------|------|---|---|---|--------------|
| Total TRC Costs | | \$ 26,342 | | | | _ | | | |
| Industrial Indirect Costs not attributable to any specific program | | | | | | | | | |
| *Totals App. B - Industrial | \$ - | \$ 26,342 | -\$ | 26,342 | 0.00 | 0 | 0 | 0 | \$ 26,342 |
| Name of Program J | | | \$ | | 0.00 | | | | |
| Name of Program I | | | \$ | - | 0.00 | | | | |

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

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

6. LDC System Programs

Total TRC Costs

**Totals TRC - Agricultural

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.

| | | • | | | | | | | Total Peak | Report Year |
|---------------------|-----|----------|----------------|--------|--------------|--------------|-------------------|-----------------|-------------|-------------------|
| | TRO | Benefits | | | | Benefit/Cost | Report Year Total | Lifecycle (kWh) | Demand (kW) | Gross C&DM |
| | | (PV) | TRC Costs (PV) | \$ Net | TRC Benefits | Ratio | kWh Saved | Savings | Saved | Expenditures (\$) |
| Voltage Conversion | \$ | 17,716 | \$ 263,415 | -\$ | 245,699 | 0.07 | 16,558 | 413,962 | 1.50 | \$ 263,415 |
| Transformer Upgrade | \$ | 133,463 | \$ 339,147 | -\$ | 205,685 | 0.39 | 98,988 | 2,474,700 | 11.30 | \$ 339,147 |

0.00

| Name of Program C | | | \$ | - | 0.00 | | | | |
|--|---------------|---------------|-----|---------|------|---------|-----------|----|---------------|
| Name of Program D | | | \$ | - | 0.00 | | | | |
| Name of Program E | | | \$ | - | 0.00 | | | | |
| Name of Program F | | | \$ | - | 0.00 | | | | |
| Name of Program G | | | \$ | - | 0.00 | | | | |
| Name of Program H | | | \$ | - | 0.00 | | | | |
| Name of Program I | | | \$ | - | 0.00 | | | | |
| Name of Program C | | | \$ | - | 0.00 | | | | |
| *Totals App. B - LDC System | \$ 151,179 | \$ 602,563 | -\$ | 451,384 | 0.25 | 115,546 | 2,888,662 | 13 | \$ 602,563 |
| LDC System Indirect Costs not attributable to any specific program | | | | | | | | | |
| Total TRC Costs | | \$ 602,563 | | | | _ | | | |
| **Totals TRC - LDC System | \$ 151,179 | \$ 602,563 | -\$ | 451,384 | 0.25 | | | | |

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 (\$)

8. Other #1 Programs

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

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

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

9. Other #2 Programs
List each Appendix B in the cells below; Insert additional rows as required.

| Note: To ensure the integrity of the | | insert the addition | iai rows in the illidai | | | | Total Peak | Report Year |
|--|--------------|---------------------|-------------------------|--------------|-----------|-----------------|-------------|-------------------|
| | TRC Benefits | | | Benefit/Cost | • | Lifecycle (kWh) | Demand (kW) | Gross C&DM |
| | (PV) | TRC Costs (PV) | \$ Net TRC Benefits | Ratio | kWh Saved | Savings | Saved | Expenditures (\$) |
| Name of Program A | | | \$ - | 0.00 | | | | |
| Name of Program B | | | \$ - | 0.00 | | | | |
| Name of Program C | | | \$ - | 0.00 | | | | |
| Name of Program D | | | \$ - | 0.00 | | | | |
| Name of Program E | | | \$ - | 0.00 | | | | |
| Name of Program C | | | \$ - | 0.00 | | | | |
| Name of Program G | | | \$ - | 0.00 | | | | |
| Name of Program H | | | \$ - | 0.00 | | | | |
| Name of Program I | | | \$ - | 0.00 | | | | |
| Name of Program J | | | \$ - | 0.00 | | | | |
| *Totals App. B - Other #2 | \$ - | \$ - | \$ - | 0.00 | 0 | 0 | 0 | \$ - |
| Other #2 Indirect Costs not attributable to any specific program | | | | | | | | |
| Total TRC Costs | | \$ - | | | | | | |
| **Totals TRC - Other #2 | \$ - | \$ - | \$ - | 0.00 | | | | |

LDC's CDM PORTFOLIO TOTALS

| | TF | RC Benefits (PV) | | | | et TRC Benefits | • | | port Year Total Lifecycle (kWh) kWh Saved Savings | | [| Total Peak Demand (kW) Saved | Report Year Gross C&DM Expenditures (\$) | | |
|---|----|---------------------|----|---------|-----|-----------------|------|----|--|----|------------|------------------------------------|--|----|---------|
| *TOTALS FOR ALL APPENDIX B | \$ | 679,877 | \$ | 704,475 | -\$ | 24,598 | 0.97 | \$ | 1,270,305 | \$ | 11,327,450 | \$ | 150 | \$ | 903,857 |
| Any <u>other</u> Indirect Costs not attributable to any specific program | | | | | | | | | | | | | | | |
| TOTAL ALL LDC COSTS | | | \$ | 704,475 | | | | | | | | | | | |
| **LDC' PORTFOLIO TRC | \$ | 679,877 | \$ | 704,475 | -\$ | 24,598 | 0.97 | | | | | | | | |

^{*} 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.

Appendix A - Evaluation of the CDM Plan

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

| | ₅ Cumulative Totals Life-to- date | Total for 2006 | Residential | Commercial | Institutional | Industrial | Agricultural | LDC System | 4 Smart Meters | Other #1 | Other #2 |
|--|---|----------------|-------------|-------------|---------------|-------------|--------------|--------------|----------------|----------|----------|
| Net TRC value (\$): | \$ 309,622 | -\$ 24,598 | \$ 212,786 | \$ 240,342 | \$ - | \$ (26,342) | \$ - | \$ (451,384) | | \$ - | \$ - |
| Benefit to cost ratio: | 1.40 | 0.97 | 4.65 | 14.86 | 0.00 | 0.00 | 0.00 | 0.25 | | 0.00 | 0.00 |
| Number of participants or units delivered: | 2,830 | 101 | 0 | 101 | | | | | | | |
| Lifecycle (kWh) Savings: | 17,973,222 | 11,327,450 | 3,827,369 | 4,611,418 | 0 | 0 | 0 | 2,888,662 | | 0 | 0 |
| Report Year Total kWh saved (kWh): | 3,146,134 | 1,270,305 | 578,052 | 576,706 | 0 | 0 | 0 | 115,546 | | 0 | 0 |
| Total peak demand saved (kW): | 310.27 | 150 | 50 | 87 | 0 | 0 | 0 | 13 | | 0 | 0 |
| Total kWh saved as a percentage of total kWh delivered (%): | | 0.12% | 0.17% | 0.40% | - | - | - | 0.01% | | | |
| Peak kW saved as a percentage of LDC peak kW load (%): | | 0.08% | - | - | - | - | - | 0.01% | | | |
| Report Year Gross C&DM expenditures (\$): | \$ 1,250,373 | \$ 903,857 | \$ 79,945 | \$ 195,007 | \$ - | \$ 26,342 | \$ - | \$ 602,563 | \$ - | \$ - | \$ - |
| ² Expenditures per KWh saved (\$/kWh): | \$ 0.40 | \$ 0.08 | \$ 0.02 | \$ 0.04 | \$ - | \$ - | \$ - | \$ 0.21 | | \$ - | \$ - |
| з Expenditures per KW saved (\$/kW): | \$ 4,029.98 | \$ 6,030.59 | \$ 1,594.30 | \$ 2,243.15 | \$ - | \$ - | \$ - | \$ 47,075.22 | | \$ - | \$ - |

Utility discount rate (%):

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.

s Includes total for the reporting year, plus prior year, if any (for example, 2006 CDM Annual report for third tranche will include 2005 and 2004 numbers, if any.

UTILITY PROGRAM COSTS

| w/o | Ca | pital |
|-----|----|-------|
|-----|----|-------|

| | | , | |
|--------------------------------|------------|------------|--------|
| Total CDM Reported-Capital | 549,000.00 | check | |
| Total CDM Reported Non-Capital | 274,511.70 | | \$0.00 |
| Admin Costs to Be Allocated | 80,345.33 | | |
| Total CDM Inc. Admin | 903,857.03 | 354,857.03 | |
| | | | |

| | Free Rider | | | admin alloc | Total | Admin Alloc | C | Com Outreach | |
|---------------------------|------------|------------|---|-------------|------------|-------------|-------|--------------|-----------------------|
| Distibution Upgrade-25kV | 30% | 240,000.00 | | 23,415.43 | 263,415.43 | 29.14% | | | |
| Distibution Upgrade-XFMRS | 30% | 309,000.00 | | 30,147.36 | 339,147.36 | 37.52% | | | |
| LED Traffic Lights | 30% | 166,500.00 | | 16,244.45 | 182,744.45 | 20.22% | | | Common Outreach Costs |
| Community Outreach | 10% | 51,775.88 | | 5,051.48 | 56,827.36 | 6.29% | | | 20,283.73 |
| Key Accounts | 10% | 4,000.58 | | 390.31 | 4,390.89 | 0.49% | | 1,442.97 | |
| Commercial Lighting | 10% | 4,876.00 | | 475.72 | 5,351.72 | 0.59% | | | |
| Load Control | 10% | 6,296.40 | | 614.30 | 6,910.70 | 0.76% | | 2,271.05 | |
| Low Income | 10% | 8,292.96 | | 809.10 | 9,102.06 | 1.01% | | 2,991.19 | |
| Public Outreach | 10% | 1,500.00 | | 146.35 | 1,646.35 | 0.18% | | 541.04 | |
| Research | 10% | 20,000.00 | | 1,951.29 | 21,951.29 | 2.43% | | 7,213.81 | |
| Customer Survey | 10% | 5,635.78 | | 549.85 | 6,185.63 | 0.68% | | 2,032.77 | |
| Water Heater Conversion | 10% | 5,634.10 | _ | 549.69 | 6,183.79 | 0.68% | | 2,032.17 | |
| | | 823,511.70 | | 80,345.33 | 903,857.03 | 100.00% | 6.83% | 18,525.00 | |

Community Outreach Costs: Segregated by Program

| Refrigerator Buy Back | 10% | Participant Cost \$6,242.44 | Adj for Free Rider \$5,618.20 | Alloc Common \$4,779.53 | Total Direct \$11,021.97 | Eco Share \$1,514.24 | Admin Alloc \$1,190.30 | Total Indirect \$2,704.54 | Total Utility Costs \$13,726.51 | Utility Prog Cost \$4,455.58 | Participants 123 |
|-----------------------|-----|-----------------------------------|-------------------------------------|-------------------------------|-----------------------------|-------------------------|---------------------------|------------------------------|--|------------------------------------|---------------------|
| Refrigerators | 10% | \$5,995.00 | \$5,395.50 | \$4,590.08 | \$10,585.08 | \$1,454.22 | \$1,143.12 | \$2,597.33 | \$13,182.41 | \$4,278.97 | 94 |
| Freezers | 10% | \$1,305.00 | \$1,174.50 | \$999.17 | \$2,304.17 | \$316.56 | \$248.84 | \$565.39 | \$2,869.57 | \$931.45 | 27 |
| Dishwashers | 10% | \$2,680.00 | \$2,412.00 | \$2,051.94 | \$4,731.94 | \$650.09 | \$511.02 | \$1,161.11 | \$5,893.05 | \$1,912.87 | 56 |
| | | | | | | | | | | | |

| Total | | \$26,492.15 | \$24,136.92 | \$20,283.73 | \$46,775.88 | \$5,000.00 | \$5,051.48 | \$10,051.48 | \$56,827.36 | \$20,335.21 | |
|----------------------------|-----|-------------|-------------|-------------|-------------|------------|------------|-------------|-------------|-------------|------|
| Compact Fluorescent Lights | 10% | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | 1200 |
| Christmas LED | 5% | \$5,879.71 | \$5,585.72 | \$4,501.80 | \$10,381.51 | \$0.00 | \$1,121.13 | \$1,121.13 | \$11,502.65 | \$5,622.94 | 540 |
| Clothes Washers | 10% | \$4,390.00 | \$3,951.00 | \$3,361.21 | \$7,751.21 | \$1,064.89 | \$837.08 | \$1,901.97 | \$9,653.17 | \$3,133.39 | 68 |

LED Traffic Lights
Key Accounts
Commercial Lighting
Load Control
Low Income
Research
Customer Survey
Water Heater Conversion

Total 4166