WEST PERTH POWER INC.

# Conservation and Demand Side Management
# 2008 Annual Report

## Ontario Energy Board File No. RP 2004-0203
**Docket Number RP-2004-0203 / EB-2004-0548**

**March 31, 2009**

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## BACKGROUND

On February 17th, 2005, West Perth Power Inc. ("West Perth") was granted final approval for its Conservation and Demand Management ("CDM") Plan as filed with the Ontario Energy Board ("Board") under docket number RP-2004-0203 / EB-2004-0548. The Board's decision indicated that annual reporting "should be done on a calendar year and should be filed with the Board no later than March 31st of the following year" and would be subject to public review.

West Perth did apply for an extension of funding under the Third Tranche of Market Adjustment Revenue Requirement (MARR) in a letter to the Board Secretary dated October 3, 3008.

On February 2nd, 2009 the Board issued "Requirements for Annual Reporting of Conservation and Demand Management ("CDM") Initiatives" that explained more fully the requirements for the 2008 reporting year. This report has been prepared in accordance with those guidelines.

## INTRODUCTION

West Perth provides safe and efficient distribution of electricity to 2,176 customers in Mitchell and Dublin, Ontario. Over the past year, West Perth spent over and above the $27,000 that was granted as conservation is an important component of an LDC's portfolio of service offerings and a great opportunity to build and develop relationships with customers and stakeholders.

Although West Perth did not deliver a large portfolio of conservation programs, the programs delivered provided incentive and value for customers, demonstrated leadership in conservation and the lessons learned will be and have been leveraged to improve conservation program offerings now and in the future.

## EVALUATION

West Perth's conservation portfolio consisted of promoting LED seasonal lighting products. The two programs implemented included a Seasonal Light LED exchange and a Seasonal Display Lighting Upgrade which resulted in a significant consumption reduction but minimal peak demand reduction. Table 1 provides a summary of the CDM program savings.

***Table 1 – Conservation Program Savings Summary***

| Year | Annual Savings | Life Cycle Savings | Cost Per kWh | Peak Demand Savings | Cost Per kW |
|---|---|---|---|---|---|
| **Total** | ***28,560 kWh*** | ***856,800 kWh*** | ***0.0339 kWh*** | ***0.043 kW*** | ***$ 674,537.74 kW*** |

Please refer to Appendix A through D for a full quantitative analysis of West Perth's conservation programs.

# DISCUSSION OF PROGRAMS

## Seasonal Light Exchange

The seasonal light exchange was undertaken to build customer awareness around the energy used by inefficient seasonal lighting and provide an incentive to encourage customer to replace all of their old, inefficient seasonal lighting. The program was similar in nature to seasonal light exchanges held by other LDC's with customers receiving a new string of LED seasonal lights upon the exchange of an old set of seasonal lights and the presentment of a LDC bill.

West Perth partnered with the Mitchell Home Hardware to provide and distribute the lights. By doing so, West Perth was able to secure a better price on the lights and therefore maximize the funds spent. In exchange, Home Hardware managed the seasonal light exchange by allowing customers to exchange the lights at their store over a specified period of time, with the hope that customers would purchase additional lights or other products. The event was marketed via local print media and word of mouth.

In total, West Perth exchanged and retired 600 strings of inefficient seasonal lights which translates into reaching over 25% of West Perth's customer base. In summary, the program had a net TRC of $ 7,226.93, a Benefit to Cost Ratio of 2.21, realized annual energy savings of 11,400 kWh, lifecycle savings of 342,000 kWh at a cost of $0.0139 per kWh which is far below the blended rate. Unfortunately the LED seasonal lighting does not provide a significant peak demand reduction.

## Seasonal Display Lighting Upgrade

The Seasonal Display Lighting Upgrade consisted of acquiring new pole mounted seasonal lighting fixtures equipped with LED lighting that are mounted during the holiday season through Mitchell and Dublin. The program further demonstrated West Perth's leadership in conservation to customers as well as provided further promotion of LED seasonal lighting technology.

The new seasonal fixtures have an expected lifespan of 30 years and provide an annual savings of 17,160 kWh's and a lifecycle savings of 514,800 kWh's but provide little peak demand savings. Unfortunately, due to the age of the existing fixtures, new fixtures were purchased as opposed to retrofitting the existing fixtures. The cost of the new fixtures significantly contributed to the poor Net TRC of -$ 8,400.82 and a Benefit to Cost Ratio of 0.56 although a retrofit program would provide a favorable Net TRC and Benefit to Cost Ratio.

## Comments on Program Success

West Perth feels that the programs implemented have had a positive impact on customer education levels, uptake and engagement and will continue to build on the momentum that has been achieved. Table 2 summarizes the programs.

**Table 2 – Program Summary**

| Program | Success (High, Medium, Low) | Continue (Yes / No) | Notes |
|---|---|---|---|
| LED Seasonal Light Exchange | High | Yes | Exchange incentive provides necessary motivation to customer to convert all seasonal lighting to low energy LED. |
| LED Seasonal Light Incentive Program | High | Yes | Program demonstrated West Perth's commitment to conservation and further supported the seasonal LED exchange. The program would be worth continuing in other distribution territories as a retrofit program. |

# LESSONS LEARNED

Several lessons were learned over the entire Third Tranche CDM Program period with regards to conservation, designing and delivering programs. West Perth realizes that conservation is not a passing fad and is an instrumental component of and LDC's portfolio of services. Some lessons that West Perth has learned from and has built upon in their delivery of the Ontario Power Authority (OPA) CDM programs include:

## Partnering

Partnering not only leverage's West Perth's funds to the greatest extent but provides increased program exposure and customer uptake. Partners include customers, stakeholders, service providers, other LDC's, etc. all of which provide economies of scale for program design, funding and exposure.

## CDM and Relationship Building

Utilizing the conservation programs to build and develop long term relationships with customers, stakeholders and partners increases program exposure and success rate. By embracing CDM West Perth has been able to build new relationships and increase the strength of existing relationships with customers. In addition, these relationships can be utilized to research and pilot new programs, thereby increasing program uptake and success.

## Program Success

Program success must be measured by more than the TRC test as there is significant value that is achieved through customer education which is difficult at best to quantify but a necessary component to building the conservation culture and can be substantial in cost.

## CONCLUSIONS

Although West Perth's Third Tranche CDM portfolio was limited, the market penetration was significant and customer satisfaction was considerable. AS a result of the lessons West Perth learned from not only their first hand experiences but also the lessons learned by other LDC's, West Perth has achieved great success in the delivery of the OPA Programs such as the Summer Sweepstakes, The Great Refrigerator Round Up and the most successful to date Power Savings Blitz Program. Significant results can be achieved with the correct approach, the appropriate partnerships and the proper customer engagement.

Given the Third Tranche CDM program results coupled with the recent OPA program results, West Perth feels that LDC's can not only effectively deliver conservation programs but they can excel at doing so.

# 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.**

| | Total for 2008 | Residential | [5] Low Income | Commercial | Institutional | Industrial | Agricultural | LDC System | [4] Smart Meters | Other #1 | Other #2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| *Net TRC value ($):* | **-$ 6,174** | **$ 7,227** | **$ -** | **$ -** | **$ -** | **$ -** | **$ -** | **$ -** | **$ -** | **$ (8,401)** | **$ -** |
| *Benefit to cost ratio:* | 0.80 | 2.21 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - | 0.56 | 0.00 |
| *Number of participants or units delivered:* | *644* | 600 | - | - | - | - | - | - | - | 44 | - |
| *Lifecycle (kWh) Savings:* | 856,800 | 342,000 | 0 | - | - | - | - | - | - | 514,800 | - |
| *Report Year Total kWh saved (kWh):* | 28,560 | 11,400 | | - | - | - | - | - | - | 17,160 | - |
| *Total peak demand saved (kW):* | 0.043 | 0.003 | | - | - | - | - | - | - | 0.04 | - |
| *Total kWh saved as a percentage of total kWh delivered (%):* | 0.46% | - | - | - | - | - | - | - | - | - | - |
| *Peak kW saved as a percentage of LDC peak kW load (%):* | 0.00076% | 0.70% | - | - | - | - | - | - | - | - | - |
| [1] *Report Year Gross C&DM expenditures ($):* | $ 29,005 | $ 4,755 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 19,250 | $ - |
| [2] *Expenditures per KWh saved ($/kWh):* | $ 0.0339 | $ 0.0139 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 0.04 | $ - |
| [3] *Expenditures per KW saved ($/kW):* | $ 674,536.74 | $ 1,585,026.67 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 481,250.00 | $ - |

| | |
|---|---|
| *Utility discount rate (%):* | 8% |

[1] Expenditures are reported on accrual basis.
[2] Expenditures include all utility program costs (direct and indirect) for all programs which primarily generate energy savings.
[3] Expenditures include all utility program costs (direct and indirect) for all programs which primarily generate capacity savings.
[4] Please report spending related to 3rd tranche of MARR funding only. TRC calculations are not required for Smart Meters. Only actual expenditures for the year need to be reported.
[5] Includes totals from Low Income programs that fall under both commerical and residential.

# Appendix B - Discussion of the Program

**(complete this Appendix for each program)**

A. **Name of the Program:** Residential LED Seasonal Light Exchange

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

The intent of the program was to encouragWest Perth Power delivered a seasonal light exchange in cooperation with the Mitchell Home Hardware . Customers received a free string of LED seasonal lights when the presented a copy of their West Perth Power bill and an old set of seasonal lights.

**Measure(s):**

| | Measure 1 | Measure 2 (if applicable) | Measure 3 (if applicable) |
|---|---|---|---|
| *Base case technology:* | 5 watt C-7 Seasonal Lights | | |
| *Efficient technology:* | LED Seasonal Lights | | |
| *Number of participants or units delivered for reporting year:* | 600 | | |
| *Measure life (years):* | 20 | | |
| *Number of Participants or units delivered life to date* | 600 | | |

B. **TRC Results:**

| | Reporting Year | TRC Results: |
|---|---|---|
| [1] *TRC Benefits ($):* | $ 13,182.01 | $ 13,182.01 |
| [2] *TRC Costs ($):* | | |
| *Utility program cost (excluding incentives):* | $ 4,755.08 | $ 4,755.48 |
| *Incremental Measure Costs (Equipment Costs)* | $ 1,200.00 | $ 1,200.00 |
| *Total TRC costs:* | $ 5,955.08 | $ 5,955.48 |
| *Net TRC (in year CDN $):* | $ 7,226.93 | $ 7,226.53 |
| *Benefit to Cost Ratio (TRC Benefits/TRC Costs):* | $ 2.21 | $ 2.21 |

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

| | | | Cumulative Results: |
|---|---|---|---|
| **Conservation Programs:** | | | |
| *Demand savings (kW):* | *Summer* | 0.000 | 0.000 |
| | *Winter* | 0.003 | 0.003 |
| | *lifecycle* | *in year* | |
| *Energy saved (kWh):* | *342,000.00* | 11,400.00 | |
| *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 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:* | $ 4,755.08 | $ 4,755.08 |
| | *Incentive:* | $ - | $ - |
| | *Total:* | $ 4,755.08 | $ 4,755.08 |
| *Utility indirect costs ($):* | *Incremental capital:* | $ - | $ - |
| | *Incremental O&M:* | $ - | $ - |
| | *Total:* | $ - | $ - |

**E. Assumptions & Comments:**

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

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

# Appendix B - Discussion of the Program

**(complete this Appendix for each program)**

A. **Name of the Program:** Seasonal Lighting Upgrade

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

The program covered the entire cost of new seasonal pole mounted fixtures equiped with LED lighting. The estematied life of the equipment is 30 years and will provide an annual reduction of 17,400 kWh per year.

**Measure(s):**

| | Measure 1 | Measure 2 (if applicable) | Measure 3 (if applicable) |
|---|---|---|---|
| *Base case technology:* | 5 watt C-7 Seasonal Lights | | |
| *Efficient technology:* | LED Seasonal Lights | | |
| *Number of participants or units delivered for reporting year:* | 44 | | |
| *Measure life (years):* | 30 | | |
| *Number of Participants or units delivered life to date* | 44 | | |

B. **TRC Results:**

| | Reporting Year | TRC Results: |
|---|---|---|
| [1] *TRC Benefits ($):* | $ 10,849.18 | $ 10,849.18 |
| [2] *TRC Costs ($):* | | |
| *Utility program cost (excluding incentives):* | $ - | $ - |
| *Incremental Measure Costs (Equipment Costs)* | $ 19,250.00 | $ 19,250.00 |
| *Total TRC costs:* | $ 19,250.00 | $ 19,250.00 |
| *Net TRC (in year CDN $):* | -$ 8,400.82 | -$ 8,400.82 |
| *Benefit to Cost Ratio (TRC Benefits/TRC Costs):* | $ 0.56 | $ 0.56 |

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

| | | | Cumulative Results: |
|---|---|---|---|
| **Conservation Programs:** | | | |
| *Demand savings (kW):* | *Summer* | - | - |
| | *Winter* | 0.04 | 0.04 |
| | *lifecycle* | *in year* | |
| *Energy saved (kWh):* | *514,800.00* | 17,160.00 | |
| *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 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:* | $ 19,250.00 | $ 19,250.00 |
| | *Incentive:* | $ - | $ - |
| | *Total:* | $ 19,250.00 | $ 19,250.00 |
| *Utility indirect costs ($):* | *Incremental capital:* | $ - | $ - |
| | *Incremental O&M:* | $ - | $ - |
| | *Total:* | $ - | $ - |

**E. Assumptions & Comments:**

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

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

# Appendix C - Program and Portfolio Totals

**Report Year:**

## 1. Residential Programs

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

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

| | TRC Benefits (PV) | TRC Costs (PV) | $ Net TRC Benefits | Benefit/Cost Ratio | Report Year Total kWh Saved | Lifecycle (kWh) Savings | Total Peak Demand (kW) Saved | Report Year Gross C&DM Expenditures ($) |
|---|---|---|---|---|---|---|---|---|
| *LED Seasonal Light Exchange 2008* | $ 13,182 | $ 5,955 | $ 7,227 | 2.21 | 11,400 | 342,000 | 0.003 | $ 4,755 |
| *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 - Residential** | $ 13,182 | $ 5,955 | $ 7,227 | 2.21 | 11,400 | 342,000 | 0.003 | $ 4,755 |
| *Residential Indirect Costs not attributable to any specific program* | | | | | | | | |
| **Total Residential TRC Costs** | | $ 5,955 | | | | | | |
| ****Totals TRC - Residential** | **$ 13,182** | **$ 5,955** | **$ 7,227** | **2.21** | | | | |

## 2. Commercial Programs

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

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

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

## 3. Institutional 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 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) | $ 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 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 - Industrial** | $ - | $ - | $ - | 0.00 | 0 | 0 | 0 | $ - |
| *Industrial Indirect Costs not attributable to any specific program* | | | | | | | | |
| **Total TRC Costs** | | $ - | | | | | | |
| ****Totals TRC - Industrial** | **$ -** | **$ -** | **$ -** | **0.00** | | | | |

## 5. Agricultural Programs

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

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

| | TRC Benefits (PV) | TRC Costs (PV) | $ Net TRC Benefits | Benefit/Cost Ratio | Report Year Total kWh Saved | Lifecycle (kWh) Savings | Total Peak Demand (kW) Saved | Report Year Gross C&DM Expenditures ($) |
|---|---|---|---|---|---|---|---|---|
| *Name of Program A* | | | $ - | 0.00 | | | | |
| *Name of Program 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 | 0 | $ - |
| *Agricultural Indirect Costs not attributable to any specific program* | | | | | | | | |
| **Total TRC Costs** | | $ - | | | | | | |
| ****Totals TRC - Agricultural** → | **$ -** | **$ -** | **$ -** | **0.00** | | | | |

## 6. LDC System 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 C* | | | $ - | 0.00 | | | | |
| ***Totals App. B - LDC System** | $ - | $ - | $ - | 0.00 | 0 | 0 | 0 | $ - |
| *LDC System Indirect Costs not attributable to any specific program* | | | | | | | | |
| **Total TRC Costs** | | $ - | | | | | | |
| ****Totals TRC - LDC System** | **$ -** | **$ -** | **$ -** | **0.00** | | | | |

## 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 ($) |
|---|---|---|---|---|---|---|---|---|
| *Seasonal Lighting Municpal Upgrade* | $ 10,849 | $ 19,250 | -$ 8,401 | 0.56 | 17,160 | 514,800 | 0 | $ 19,250 |
| *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** | $ 10,849 | $ 19,250 | -$ 8,401 | 0.56 | 17,160 | 514,800 | 0 | $ 19,250 |
| *Other #1 Indirect Costs not attributable to any specific program* | | | | | | | | |
| **Total TRC Costs** | | $ 19,250 | | | | | | |
| ****Totals TRC - Other #1** | **$ 10,849** | **$ 19,250** | **-$ 8,401** | **0.56** | | | | |

## 9. Other #2 Programs

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

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

| | TRC Benefits (PV) | TRC Costs (PV) | $ Net TRC Benefits | Benefit/Cost Ratio | Report Year Total kWh Saved | Lifecycle (kWh) Savings | Total Peak Demand (kW) Saved | Report Year Gross C&DM Expenditures ($) |
|---|---|---|---|---|---|---|---|---|
| *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 #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

| | TRC Benefits (PV) | TRC Costs (PV) | $ Net TRC Benefits | Benefit/Cost Ratio | Report Year Total kWh Saved | Lifecycle (kWh) Savings | Total Peak Demand (kW) Saved | Report Year Gross C&DM Expenditures ($) |
|---|---|---|---|---|---|---|---|---|
| ***TOTALS FOR ALL APPENDIX B** | $ 24,031 | $ 25,205 | -$ 1,174 | 0.95 | $ 28,560 | $ 856,800 | $ 0 | $ 29,005 |
| *Any **other** Indirect Costs not attributable to any specific program* | | $ 5,000 | | | | | | |
| **TOTAL ALL LDC COSTS** | | $ 30,205 | | | | | | |
| ****LDC' PORTFOLIO TRC** | $ 24,031 | $ 30,205 | -$ 6,174 | 0.80 | | | | |

* 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 D - Total Life Evaluation of the CDM Plan

**Table is to be completed manually by totalling the information from each year of activity**

| | [5] Cumulative Totals Life-to-date | Residential | [6] Low Income | Commercial | Institutional | Industrial | Agricultural | LDC System | [4] Smart Meters | Municipal - Seasonal Lighting | Other 2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| *Net TRC value ($):* | -$ 6,174 | **$ 7,226.93** | **$ -** | **$ -** | **$ -** | **$ -** | **$** | **$ -** | **$ -** | **-$ 8,400.82** | **$ -** |
| *Benefit to cost ratio:* | *0.80* | 2.21 | - | - | - | - | - | - | - | 0.56 | - |
| *Number of participants or units delivered:* | *644* | 600 | - | - | - | - | - | - | - | 44 | - |
| *Lifecycle (kWh) Savings:* | *856,800* | 342,000 | - | - | - | - | - | - | - | 514,800 | - |
| *Total kWh saved (kWh):* | *28,560* | 11,400 | - | - | - | - | - | - | - | 17,160 | - |
| *Total peak demand saved (kW):* | *0.043* | 0.003 | - | - | - | - | - | - | - | 0.040 | - |
| *Total kWh saved as a percentage of total kWh delivered (%):* | *0.4559%* | NA | 0% | 0% | 0% | 0% | 0% | 0% | 0% | NA | 0% |
| *Peak kW saved as a percentage of LDC peak kW load (%):* | *0.00076%* | 0.70% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | NA | 0% |
| [1] *Gross C&DM expenditures ($):* | $ 30,205.08 | $ 4,755.08 | $ - | $ - | $ - | $ - | $ | $ - | $ - | $ 19,250.00 | $ - |
| [2] *Expenditures per KWh saved ($/kWh):* | $ 0.04 | $ | $ | $ | $ | $ | $ | $ | $ - | $ | $ |
| [3] *Expenditures per KW saved ($/kW):* | $ 702,443.72 | $ | $ | $ | $ | $ | $ | $ | $ - | $ | $ |
| *Utility discount rate (%):* | 8.00 | | | | | | | | | | |

[1] Expenditures are reported on cumulative 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. Actual expenditures for the total third tranche period need to be reported.
[5] Includes total for the reporting year, plus prior years, if any (for example, 2008 CDM Annual report for third tranche will include 2007, 2006, 2005 and 2004 numbers, if any).
[6] Includes totals from Low Income programs that fall under both commerical and residential.