2008 Annual Report
CDM Third Tranche Funding
Norfolk Power Distribution Inc.

For:

Board Secretary

Ontario Energy Board

PO Box 2319, 2300 Yonge St. Suite 2700

Toronto, ON M4P 1E4

Prepared By:

Jennifer Batista

Energy Advisor & Program Coordinator

Norfolk Power Distribution Inc.

Tel: 519-426-4440

Fax: 519-426-6509

Email: jbatista@norfolkpower.on.ca

Norfolk Power

IN BUSINESS TO SERVE.

Norfolk Power

IN BUSINESS TO SERVE.

March 31, 2009

Board Secretary
Ontario Energy Board
PO Box 2319,
2300 Yonge St., Suite 2700
Toronto, ON M4P 1E4

2008 Annual Report, CDM Third Tranche Funding, Norfolk Power Distribution Inc.

On December 9, 2004 Niagara Erie Power Alliance (NEPA) Coalition[1] members filed their plans to implement a conservation and demand management program. During plan preparations there was a concerted effort amongst the group to organize and share initiatives whenever possible and to share costs and improve the overall consistency of programming.

Some key joint initiatives have included

1. Conserver Joe – Family Education Package
    a. Handbook
    b. Bill Inserts
    c. Newsletters
    d. Print Ads
    e. Website
2. Training and Development
3. Bulk purchasing of product such as CFL's

How Did We Do?

Collectively our NEPA members contributed to significant annual energy and demand savings.

Energy reductions occurred from a variety of programming both through joint initiatives and localized community programming.

Opportunities

[1] NEPA comprising Canadian Niagara Power Inc. Grimsby Power Inc., Haldimand County Hydro Inc. Niagara Peninsula Energy Inc., Niagara On The Lake Hydro Inc. , Norfolk Power Distribution Inc., Horizon Utilities Corp., Welland Hydro Corp., Brant County Power, and Brantford Power

P.O. Box 588 ~ 70 Victoria Street ~ Simcoe, Ontario ~ N3Y 4N6
Tel 519 426-4440 ~ Fax 519 426-4514 ~ 1-800-465-0291

As we develop a conservation culture in Ontario we must continue to balance the need for short-term results while fostering a long-term conservation attitude among the citizens and businesses in the province. The industry must continue to coordinate its efforts to ensure that program delivery is efficient and available to all customers. Our goal should be rapid program deployment and using the LDC's clear channel to market. Clarity regarding the roles of the LDC's, OPA, IESO, etc. would be beneficial in this regard.

Further, clarity on the topics of LDC cost recovery, lost revenues, and criteria for assessing prudence of CDM spending is critical. At all times, we must strive to minimize bureaucracy wherever possible. For example, the opportunity to determine and agree on effective conservation programs up front should minimize the measurement and verification efforts required to substantiate these same programs at their conclusion.

Our commitment remains firm of remaining an active participant and advocacy of developing and promoting a conservation culture in Ontario.

Regards,

Tim D. Roberts
Manager of Energy Services
Norfolk Power Distribution Inc.

Table of Contents

1. Introduction

On December 9, 2004 the Ontario Energy Board ("Board") issued its Notice of Application and Written Hearing in the RP-2004-0203 proceeding, with respect to Niagara Erie Power Alliance (NEPA) Coalition nine (9) applications filed by NEPA comprising Canadian Niagara Power Inc. Grimsby Power Inc., Haldimand County Hydro Inc. Niagara Falls Hydro Inc., Niagara On The Lake Hydro Inc. , Norfolk Power Distribution Inc., Peninsula West Utilities Limited Inc., Horizon Utilities Inc., and Welland Hydro-Electric System Corp. This report is a requirement of that decision. In respect of the application filed by Norfolk Power Distribution Inc. the Board issued its Final Order under docket number RP-2004-0203 / EB 2005-0056.

The Board's decision indicated that annual reporting "should be done on a calendar year and should be filed with the Board no later than March 31st of the following year" and would be subject to a public review. On December 21, 2005 the Board issued a Guideline for Annual Reporting of CDM Initiatives that explained more fully the requirements. This report has been prepared in accordance with those guidelines and subsequent revisions. Schedule 6 of the plan documents the NPDI projects and customers associated with the various initiatives.

The following report is the Norfolk Power Distribution Inc. (NPDI) results and activities relating to Conservation and Demand Management (CDM) during the calendar year 2008. In this introductory section we will provide some of the approval background for the plan and then an overview of the activities and results of those activities.

The following table shows the approved plan expenditures by project as well as actual expenditures to December 31, 2008.[1] For 2008, funding from programs that did not make a significant impact with Norfolk Power customers were moved over to other more successful programs.

Project	Target Customers	Approved Expenditures	Actual Expenditures 2008
Co-branded Mass Market Program	All Users	$110,000	$51,444
Smart Metering / Prepaid Metering Program	Residential and small commercial (<50 KW)	$90,000	$0
Energy Audits / Feasibility Audits/Seminars	Large user, Industrial/General Service & Institution Facilities	$50,000	$0
Load Management Programs/Load Control Programs	Residential	$221,000	$0
Distribution Loss Reduction	All Users	$100,000	$0
Distributed Generation	All Users	$10,000	$0
Total		**$581,000**	**$51,444**

As shown in the table, some of the planned projects have been completed and others have been implemented in a significant way and further some funding from projects that were not successful have been used for other more successful programs.

To make our initiatives as cost effective and beneficial for our customers as possible, we have shared in programs with other utilities as well as implementing local programs specifically designed for our customers and their needs. In the following information we provide an overview of each of these shared and local programs.

Program final results as shown in Appendices B for each program have been verified with the best information currently available.

[1] In Section 3 – Discussion of Programs we include the appropriate Appendices (A & C for all programs and B for each program). Appendix B for each program includes the actual results for the program and the cumulative results to date where applicable. In order to accurately reflect expenditures compared to results we have included total program costs in the Gross C&DM expenditures of Appendix A.

Shared Provincial Initiatives

NPDI took part in the Spring and Fall 2008 Every Kilowatt Counts (EKC) coupon program in partnership with the Ontario Power Authority (OPA). The changes to the program were well received by our customers.

NPDI also supported the Ontario Power Authority (OPA) in delivering the Great Refrigerator Roundup, Electricity Retrofit Incentive Program, Summer Sweepstakes Program, Peaksaver Program and new for 2008 the Commercial Direct Install Program. All programs were well received by our customers. Targets were difficult to meet contrasting 2007 where targets were exceeded due to the overwhelming response by our customers.

NPDI is a member of the Ontario Utility Smart Metering working group (OUSM) and have shared costs and the results of that group initiative.

Shared NEPA Activities

As an active participant with the NEPA group we helped to develop the "Conserver Family" customer education and information program. This program includes (at this time) an introductory booklet, energy saving bill inserts, radio scripts and a web site for "Conserver Family" energy saving tips (http://www.conserverjoe.com/np/). NPDI has distributed the booklets at customer events including trade shows and fairs and has participated in maintaining and updating the web site.

NPDI/Local Activities

The following is a listing and an overview of local programs initiated by NPDI specifically for our customers:

- Environmental Action Kit – CFL Giveaway Program:
    - NPDI instituted a program where Environmental Action Kits including compact fluorescent lights, toilette testing dye tablets, water flow measurement bag, and conservation material were given away to customers in our service territory for various reasons, in conjunction with community events or in relation to other CDM programs.

- Staff training:
    - Continued presenting training sessions for all customer contact office staff on energy efficiency information and current programs.

- Measure the Energy - Watt Reader Program
    - In partnership with the Norfolk County Public Library, Norfolk Power was able to introduce a customer education program to increase knowledge on appliance energy consumption. The watt readers enable customer to monitor the consumption of indoor appliances.

- Energy Star Appliance Rebate Program
    - Norfolk Power took advantage of the point of sale PST rebate offered by the Province of Ontario to introduce the Energy Star appliance rebate program which gave customers an additional 10% off the purchase of their Energy Star appliances.

- Earth Hour
    - Norfolk Power was involved in promoting Earth Hour 2008 to local customers. This involved working in conjunction with Norfolk County, local small businesses, and the local media to collectively promote energy conservation.

2. Evaluation of the CDM Plan

As shown in Appendix A, the NPDI overall plan has some very effective components with program results being very positive. Examples of this type of program include:

- Energy Audits for Large Customers,
- LED Seasonal Lights Exchange and
- Environmental Action Kits - CFL Giveaways

Some programs are not designed to have specific quantifiable energy savings but are nevertheless effective and important in our view. Examples of this second category of program include:

- Educational components like the "Conserver Family" information and
- Residential Education Program.
- Measure the Energy - Watt Reader Program
- Energy Star Appliance Rebate Program

Execution of our 2008 plan shows a NPV based on the Total Resource Cost analysis of the individual programs of $16,593. Total costs to achieve this energy saving were $28,456. The increased cost was due to the programs only running for three months ending March 31st which was the end of the extended funding period.

3. Discussion of Programs

Detailed information about our CDM plan is attached to this report in the Appendix B for each program. In the following information we provide an overview of each of the various programs executed in the life of the CDM plan (including the appropriate Appendix B for the program), current status and information about projections for savings etc that are a part of each Appendix B. Summary data for all program components is found in Appendix A and D following this brief introduction in this section.

Energy Audits for Major Customers

Combined with the Electricity Retrofit Incentive Program, this program turned out to be a big success with our large customers. This program includes all costs relating to activities to promote and accomplish energy audits for major customers. In 2008 zero audits were completed for a total of 15 for the program with total electrical savings identified of 267 kW and 918,457 kWh. In addition 143,008 cubic metres of natural gas saving opportunities were identified for these 15 customers.

Total expenditures for the life of the program were $68,268. The original budget in the NPDI plan was $50,000. Budget money from other less successful programs was moved over to this program due to its customer satisfaction and cost effectiveness.

Assumptions used for program analysis:

- Saving estimates for 2006/2007 are based on an implementation rate for audit recommendations of 10% and implemented opportunities were assumed to be in maintenance related recommendations with no/low capital costs. We believe this to be conservative since there is little or no additional investment needed to implement significant savings.
- We have completed 15 audits in total to year end 2007.
- Natural gas savings were not calculated in our TRC for the program.

NPV based on the TRC calculation for the updated program YTD numbers is $276,849.

Appendix B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** Energy Audits for Major Customers

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

This program includes all costs relating to activities to promote and accomplish energy audits for major customers. In 2007 three audits were completed with total electrical savings identified of 39,784 kWh. In addition 20,200 cubic metres of natural gas saving opportunities were identified for these 3 customers.

There were no audits performed in 2008. Total expenditures in 2006 for this program were $43,578. Total expenditures for 2007 for this program were $24,689 for a total 2005 - 2007 period expenditure of $93,460. The original budget in the NPDI plan was $50,000. Budget money from other loess successful programs was moved over to this program due to it's high profile and cost effectiveness.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	No changes to plant operations		
Efficient technology:	Various changes based on audit recommendations.		
Number of participants or units delivered for reporting year:			
Measure life (years):			
Number of Partipants or unites delievered lfe to date	15		

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*		$ 178,048.70
[2] *TRC Costs ($):*		*$ 93,958.99*
Utility program cost (excluding incentives):		
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:		$ 93,958.99
Net TRC (in year CDN $):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		$ 1.89

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

Cumulative Results:

Conservation Programs:

Demand savings (kW):	*Summer*	7
	Winter	26

	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):	*994600*	39784	5387975	298584
Other resources saved :				
Natural Gas (m3):	*505000*	20200		
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 begining of year (%):	
Distribution system power factor at end of year (%):	

Line Loss Reduction Programs:

Peak load savings (kW):		
	lifecycle	*in year*
Energy savngs (kWh):		

Distributed Generation and Load Displacement Programs:

Amount of DG installed (kW):	
Energy generated (kWh):	
Peak energy generated (kWh):	
Fuel type:	

Other Programs (specify):

Metric (specify):	

D. **Actual Program Costs:**

		Reporting Year	Cumlative Life to Date
Utility direct costs ($):	*Incremental capital:*		
	Incremental O&M:	$ -	
	Incentive:	$ -	
	Total:	$ -	$ 93,958.99
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:		

E. Assumptions & Comments:

As noted in the program description, natural gas savings identified through the audit program (and shown in the Conservation Results section of part C) were not used in the TRC calculation. The results are actual for 2007.

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

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

Smart Meter Pilot Program

This program includes all costs expended to date on Smart Metering. Norfolk Power does not have a smart metering pilot program in place. Costs are of an administrative nature relating to smart metering activities including the costs of participation/membership in the OUSM group initiative.

Norfolk Power has been working collectively with the NEPA members and Util-Assist on their Smart Meter Initiative. The goals of this concerted effort are to cost effectively plan for this deployment, and ensure due diligence is accommodated. We are examining the benefits of a collaborative approach to planning, as well as procurement of AMI and Installation services

At this point we have not completed a TRC analysis for Smart Metering. Total costs for this program are $45,617.

Appendix B - Discussion of the Program

(complete this Appendix for each program)

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

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

This program includes all costs expended to date on Smart metering. No costs were incurred in 2008 for the Smart Meter Pilot Program. Norfolk Power does not have a smart metering pilot program in place. Costs are of an administrative nature relating to smart metering activities including the costs of participation/membership in the OUSM group initiative.

Norfolk Power has been working collectively with the NEPA members and Util-Assist on their Smart Meter Initiative. The goals of this concerted effort are to cost effectively plan for this deployment, and ensure due diligence is accommodated. We are examining the benefits of a collaborative approach to planning, as well as procurement of AMI and Installation services.

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 Partipants or unites delievered lfe to date			

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*		
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):		52174.05
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	$ -	$ 52,174.05
Net TRC (in year CDN $):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		

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

Cumulative Results:

Conservation Programs:

		lifecycle	in year	*Cumulative Lifecycle*	Cumulative Annual Savings
Demand savings (kW):	*Summer*				
	Winter				
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 Mid-peak to Off-peak (kWh):	

Demand Response Programs:

Dispatchable load (kW):	
Peak hours dispatched in year (hours):	

Power Factor Correction Programs:

Amount of KVar installed (KVar):	

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

Line Loss Reduction Programs:

Peak load savings (kW):

	lifecycle	*in year*
Energy savngs (kWh):		

Distributed Generation and Load Displacement Programs:

Amount of DG installed (kW):
Energy generated (kWh):
Peak energy generated (kWh):
Fuel type:

Other Programs (specify):

Metric (specify):

D. **Actual Program Costs:**

		Reporting Year	**Cumlative Life to Date**
Utility direct costs ($):	*Incremental capital:*		
	Incremental O&M:		$ 52,174.05
	Incentive:		
	Total:		
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:	$ -	$ 52,174.05

E. Assumptions & Comments:

No Costs were incurred for the Smart Meter Pilot Program in 2008.

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

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

Water Heater Replacement Program

This program includes all costs expended to date on replacement of older (more than 10 years) water heaters. These water heaters are electric tanks rented by the Norfolk Power Distribution Inc. affiliate company, Norfolk Energy Inc. During 2008 no water heaters were replaced under this program.

NPV based on TRC calculations, for the life of this program was ($58,033) at a cost of $109,748.

Water heater loss reduction analysis

Current tanks purchased from John Wood					Demand component (assumes 24 hour operation)		
	For a 40 gallon tank maximum standby losses =		71				
	For a 60 gallon tank maximum standby losses =			91	**40 gallon**	**60 gallon**	
		Daily losses (in kWh)	1.704	2.184	0.071	0.091	
		Annual losses (in kWh)	621.96	797.16			
Old tanks (pre 1996)							
	For a 40 gallon tank maximum standby losses =		96				
	For a 60 gallon tank maximum standby losses =			115			
		Daily losses (in kWh)	2.304	2.76	0.096	0.115	
		Annual losses (in kWh)	840.96	1007.4			
Annual kWh savings between pre 1996 tank and new energy efficient tank =			**219**	**210.24**			

OEB Reporting information							
Reporting Date	**Tank size**	**Number of tanks in report period**	**kWh per tank**	**Total annual kWh reported**	**Demand saving per tank**		**Total demand saved**
31-Dec-07	40	84	219	18,396	0.025		2.1
31-Dec-07	60	19	210.24	3,995		0.024	0.456
			Totals	**22,391**			**2.56**

Appendix B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** Water Heater Replacement Program

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

This program includes all costs expended to date on replacement of older (more than 10 years) water heaters. These water heaters are electric tanks rented by the Norfolk Power Distribution Inc. affiliate company, Norfolk Energy Inc. No Costs were incurred for this program in 2008. During 2007, we worked with our customer database for water heaters and contractors to identify potential candidates and promte program through contractors to reduce promotion costs. This program although it provides a negative TRC, is in the right direction for energy conservation and long lasting sustainablility. When coupled with a load control/response program the results will have an even greater impact.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	Leave old tanks in place		
Efficient technology:	Install new energy efficient tanks		
Number of participants or units delivered for reporting year:			
Measure life (years):			
Number of Participants or unites delivered life to date	231		

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*		-$ 58,032.60
[2] *TRC Costs ($):*		109747.96
Utility program cost (excluding incentives):		77779.96
Incremental Measure Costs (Equipment Costs)		31968
Total TRC costs:	$ -	$ 109,747.96
Net TRC (in year CDN $):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		-0.53

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

Cumulative Results:

Conservation Programs:

		lifecycle	in year	Cumulative Lifecycle	Cumulative Annual Savings
Demand savings (kW):	*Summer*				
	Winter				
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 Mid-peak to Off-peak (kWh):	

Demand Response Programs:

Dispatchable load (kW):	
Peak hours dispatched in year (hours):	

Power Factor Correction Programs:

Amount of KVar installed (KVar):	

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

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

Line Loss Reduction Programs:

	lifecycle	in year
Peak load savings (kW):		
Energy savngs (kWh):		

Distributed Generation and Load Displacement Programs:

Amount of DG installed (kW):
Energy generated (kWh):
Peak energy generated (kWh):
Fuel type:

Other Programs (specify):

Metric (specify):

D. **Actual Program Costs:**

		Reporting Year	Cumlative Life to Date
Utility direct costs ($):	*Incremental capital:*		$ 31,968.00
	Incremental O&M:		$ 77,780.00
	Incentive:		
	Total:		
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:	$ -	$ 109,748.00

E. Assumptions & Comments:

No Costs were incurred for the Smart Meter Pilot Program in 2008.

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

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

Norfolk Power Facility Lighting Retrofit Program

This program includes an upgrade to the lighting systems in entire facility at the Norfolk Power facility in Simcoe, Ontario. T12 fluorescent lighting fixtures were replaced with more energy efficient T8 fixtures.

NPV based on TRC calculations, for the life of this program was $4,403 at a cost of $25,385.

Appendix B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** Norfolk Power Facility Lighting Retrofit.

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

Update lighting at the Norfolk Power facility in the entire facility to more efficient technology, T12's to T8's.

Total expenditures for 2007 for this program were $25, 385.02.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	T12 Fluorescent Lights		
Efficient technology:	T8 Surface Mount Lights		
Number of participants or units delivered for reporting year:			
Measure life (years):			
Number of Partipants or unites delievered lfe to date	260		

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*		4402.81
[2] *TRC Costs ($):*		25385.02
Utility program cost (excluding incentives):		1820.01
Incremental Measure Costs (Equipment Costs)		23565.01
Total TRC costs:		25385.02
Net TRC (in year CDN $):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		0.17

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

Cumulative Results:

Conservation Programs:

Demand savings (kW):	*Summer*	17		
	Winter	18		
	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):			650520	130104
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 begining of year (%):	

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

Line Loss Reduction Programs:

Peak load savings (kW):

	lifecycle	*in year*
Energy savngs (kWh):		

Distributed Generation and Load Displacement Programs:

Amount of DG installed (kW):
Energy generated (kWh):
Peak energy generated (kWh):
Fuel type:

Other Programs (specify):

Metric (specify):

D. **Actual Program Costs:**

		Reporting Year	Cumlative Life to Date
Utility direct costs ($):	*Incremental capital:*		$ 23,565.01
	Incremental O&M:		$ 1,820.01
	Incentive:		
	Total:		$ 25,385.02
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:		

E. Assumptions & Comments:

No costs incurred for this program in 2008.

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

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

Distribution Loss Reduction

This program has been terminated in favour of more effective, applicable programs. Funds will be redirected at a future date.

Environmental Action Kits – CFL Education Giveaway

In cooperation with London Hydro, Norfolk Power was able to utilize the existing development and marketing material from this program to reduce costs. This program was designed to promote the awareness and understanding of compact fluorescent lights within the NPDI community. As we all know, compact fluorescent lighting is a fantastic method of providing energy efficient lighting within the home. However, a misapplied CFL can become problematic for the customer and leave a bad taste in their mouth for this highly efficient source of lighting.

Using Fairs, trade shows and other conservation events, NPDI gave away to the public within Norfolk, kits containing high quality CFL's, toilette testing dye tablets, water flow measurement bags and provided educational pieces to help the customer understand what to buy and where to use them.

NPV based on TRC calculations, for 2008 was $49,424 at a cost of $14,879. For the life of this program, the NPV was $205,721 at a cost of $49,658.
.

Appendix B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** Environmental Action Kits - CFL Education and Giveaway

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

This program was designed to promote the awareness and understanding of compact fluorescent lights within the NPDI community. As we all know, compact fluorescent lighting is a fantastic method of providing energy efficient lighting within the home. However, a misapplied CFL can become problematic for the customer and leave a bad taste in their mouth for this highly efficient source of lighting.

Using Fairs, trade shows and other conservation events, in 2007 NPDI in cooperation with London Hydro, launched the Environmental Action Kit Education and Giveaway which included 4 high quality CFL's, toilette testing dye tablets, water flow measurement bags, and provided educational pieces to help the customer understand what to buy and were to use them. The initiative was continure din 2008.

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:	3000		
Measure life (years):	4		
Number of Partipants or unites delievered lfe to date	11919		

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*	*$ 49,423.55*	$ 205,721.10
[2] *TRC Costs ($):*	*$ 14,879.39*	49658.18
Utility program cost (excluding incentives):	$ 9,655.20	38774.89
Incremental Measure Costs (Equipment Costs)	$ 5,224.19	10883.29
Total TRC costs:	$ 14,879.39	$ 49,658.18
Net TRC (in year CDN $):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	$ 3.32	$ 4.14

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

Cumulative Results:

Conservation Programs:

		lifecycle	in year	Cumulative Lifecycle	Cumulative Annual Savings
Demand savings (kW):	*Summer*				
	Winter		61		
Energy saved (kWh):		*1127520*	281880	4479260	1119815
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 begining of year (%):

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

Line Loss Reduction Programs:

Peak load savings (kW):

	lifecycle	*in year*
Energy savngs (kWh):		

Distributed Generation and Load Displacement Programs:

Amount of DG installed (kW):
Energy generated (kWh):
Peak energy generated (kWh):
Fuel type:

Other Programs (specify):

Metric (specify):

D. **Actual Program Costs:**

		Reporting Year	**Cumlative Life to Date**
Utility direct costs ($):	*Incremental capital:*	$ 9,655.20	$ 38,774.89
	Incremental O&M:	$ 5,224.19	$ 10,883.29
	Incentive:		
	Total:	$ 14,879.39	$ 49,658.18
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 numebr of units times the net present value per unit b

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

Net Present Value$_{TRC}$

Utility

Name of Utility:	Norfolk Power Distribution Inc.
Number of years in study:	4

Project Description

Name of Project:	Environmental Action Kits - CFL Education and Giveaway
Description:	Educate and provide CFL information and produce to customers

(•) OEB Residential Table
( ) OEB Commercial Table
( ) OEB Industrial Table
( ) Direct Input

( ) k$
(•) $

User Inputs

Discount rate	6.51%	
Unit Annual Energy Savings	0	kW/unit
Number of Units Delivered	3000	
Free Ridership Rate	10%	

Output

NPV ($)	49,423.55

LDC Avoided Costs		Present	2008	2009	2010	2011
Avoided Energy			20,266.38	19,404.73	19,599.49	19,543.00
Avoided Generation Capacity			-	-	-	-
Avoided Transmission Capacity			-	-	-	-
Avoided Distribution Capacity			-	-	-	-
Avoided Distribution Losses			-	-	-	-
Other Avoided Costs						
Other Benefits						
Total (undiscounted) Avoided Costs		-	20,266.38	19,404.73	19,599.49	19,543.00
LDC Program Costs						
LDC OM&A Costs		- 5,224.19				
LDC Capital Costs		- 9,655.20				
Incremental Equipment Costs	(5.4)	- 5,400.00				
Participant Costs						
Total Program Costs		- 20,279.39	-	-	-	-
Total Avoided Costs less Program Costs		- 20,279.39	20,266.38	19,404.73	19,599.49	19,543.00

			2008	2009	2010	2011
Present value factor	6.5%	1.000	0.969	0.910	0.854	0.802
Present value of cash flows		- 20,279.39	19,637.27	17,653.14	16,740.52	15,672.01
Accumulated present value of cash flows		- 20,279.39	- 642.12	17,011.02	33,751.54	49,423.55

NPV TRC **49,423.55**

LED Seasonal Light Exchange Program

During the months of November and December of 2007, NPDI gave out one string of LED seasonal lights for every conventional string that was turned in for destruction and recycling. The program was even more successful than first anticipated. Not only were all 2500 strings exchanged but we received 5000 strings of old style lights in exchange that were then decommissioned and recycled. Program did not run in 2008.

NPV based on TRC calculations, for the life of the program was $147,530 at a cost of $76,504.

Appendix B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** LED Seasonl Lights Exchange

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

Program did not run in 2008. During the months of November and December of 2007, NPDI gave out one string of LED seasonal lights for every conventional string that was turned in for destruction and recycling. The program was even more successful than the 2006 program. Not only were all 2500 strings exchanged but we received 5000 strings of old style lights in exchange that were then decommissioned and recycled.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	5 WATT Christmas lights C-7(64 lights)		
Efficient technology:	LED Christmas Lights (indoor or outdoor)		
Number of participants or units delivered for reporting year:			
Measure life (years):			
Number of Partipants or unites delievered lfe to date	5000		

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*		$ 147,530.12
[2] *TRC Costs ($):*		$ 75,508.98
Utility program cost (excluding incentives):		$ 60,497.54
Incremental Measure Costs (Equipment Costs)		$ 75,390.10
Total TRC costs:		$ 76,503.66
Net TRC (in year CDN $):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		1.95

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

Cumulative Results:

Conservation Programs:

Demand savings (kW): *Summer* / *Winter*

	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):			1961580	65386
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 begining of year (%):
Distribution system power factor at end of year (%):

Line Loss Reduction Programs:

Peak load savings (kW):		
	lifecycle	*in year*
Energy savngs (kWh):		

Distributed Generation and Load Displacement Programs:

Amount of DG installed (kW):	
Energy generated (kWh):	
Peak energy generated (kWh):	
Fuel type:	

Other Programs (specify):

Metric (specify):	

D. **Actual Program Costs:**

		Reporting Year	Cumlative Life to Date
Utility direct costs ($):	*Incremental capital:*		
	Incremental O&M:		$ 75,390.10
	Incentive:		
	Total:		$ 75,390.10
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:		

E. Assumptions & Comments:

TRC was based on number of old style lights taken out of service. Concept being that they will be avoided energy.

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

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

Every Kilowatt Counts Coupon Program

NPDI participated in 2008 Every Kilowatt Counts (EKC) coupon program run by the OPA. Although our direct monetary investment was minimal, the time spent with customers and advertising was significant. The program structure was changed in 2008 and well received by Norfolk Power customers.

Energy Star Qualified Appliance Rebate Program

To encourage customers to purchase Energy Star Qualified appliances, a 10% rebate was offered on the purchase of washing machines, refrigerators, dishwashers, and freezers. Customers were limited to a maximum rebate of $200 per household. Norfolk Power took advantage of the point of sale PST rebate offered by the Province of Ontario to increase participation and retailer involvement. Minimal marketing was done for this program keeping costs down as this was meant to be a retailer driven program.

NPV based on TRC calculations, for this program for 2008 was ($4,374) at a cost of $4,300 (not including rebates). For the life of this program, NPV was ($6,158) at a cost of $6,653.

Appendix B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** Energy Star Appliance Rebate Program

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

This Program was designed to coincide with the Provincial Governments PST exemption on energy star qualified appliances. During the months December 2007 to February 2008, NPDI gave a 10% rebate to customers who purchased an energy star qualified appliance. The program was even more successful than first anticipated. Over 200 rebates were credited to customers. The OPA Great Refrigerator Roundup program was an additional incentive for customers who were replacing their old refrigerator.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	Less efficient appliances		
Efficient technology:	Energy Star Qualified Appliances		
Number of participants or units delivered for reporting year:	219		
Measure life (years):	18		
Number of Partipants or unites delievered lfe to date	232		

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*	-$ *4,373.88*	-$ 6,157.51
[2] *TRC Costs ($):*	$ *4,299.50*	$ 6,653.34
Utility program cost (excluding incentives):	$ 4,299.50	$ 6,653.34
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	$ 4,299.50	$ 6,653.34
Net TRC (in year CDN $):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	-$ 1.02	-$ 0.93

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

Cumulative Results:

Conservation Programs:

Demand savings (kW):	*Summer*	3
	Winter	3

	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):	*848423*	59551	936833	62498
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 begining of year (%):	

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

Line Loss Reduction Programs:

Peak load savings (kW):

	lifecycle	*in year*
Energy savngs (kWh):		

Distributed Generation and Load Displacement Programs:

Amount of DG installed (kW):
Energy generated (kWh):
Peak energy generated (kWh):
Fuel type:

Other Programs (specify):

Metric (specify):

D. **Actual Program Costs:**

		Reporting Year	**Cumlative Life to Date**
Utility direct costs ($):	*Incremental capital:*		
	Incremental O&M:	$ 2,356.84	$ 6,653.34
	Incentive:	$ 22,987.91	$ 22,987.91
	Total:	$ 25,344.75	$ 29,641.25
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:		

E. Assumptions & Comments:

TRC was calculated using average number of years for combined appliances.

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

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

Net Present Value$_{TRC}$

Utility

Name of Utility:	Norfolk Power Distribution Inc.
Number of years in study:	18

Project Description

Name of Project:	Energy Star Appliance Rebates
Description:	10% rebate for Energy Star qualified appliance purchases

(•) OEB Residential Table
( ) OEB Commercial Table
( ) OEB Industrial Table
( ) Direct Input

( ) k$
(•) $

User Inputs

Discount rate	6.51%	
Unit Annual Energy Savings	0	kW/unit
Number of Units Delivered	219	
Free Ridership Rate	10%	

Output

NPV ($) - 4,373.88

LDC Avoided Costs		Present	2008	2009	2010	2011	2012
Avoided Energy			4,102.39	3,914.29	3,957.76	3,946.25	4,142.91
Avoided Generation Capacity			189.42	212.05	181.40	216.74	206.04
Avoided Transmission Capacity			14.26	14.62	14.97	15.35	15.73
Avoided Distribution Capacity			-	18.21	18.66	19.13	19.60
Avoided Distribution Losses			-	-	-	-	-
Other Avoided Costs							
Other Benefits							
Total (undiscounted) Avoided Costs		-	4,306.07	4,159.16	4,172.79	4,197.47	4,384.28
LDC Program Costs							
LDC OM&A Costs		- 27,287.41					
LDC Capital Costs							
Incremental Equipment Costs	(30.9)	- 30,900.00					
Participant Costs							
Total Program Costs		- 58,187.41	-	-	-	-	-
Total Avoided Costs less Program Costs		- 58,187.41	4,306.07	4,159.16	4,172.79	4,197.47	4,384.28

			2008	2009	2010	2011	2012
Present value factor	6.5%	1.000	0.969	0.910	0.854	0.802	0.753
Present value of cash flows		- 58,187.41	4,172.40	3,783.73	3,564.10	3,366.06	3,300.97
Accumulated present value of cash flows		- 58,187.41	- 54,015.01	- 50,231.29	- 46,667.19	- 43,301.13	- 40,000.16

NPV TRC - **4,373.88**

Net Present Value

Utility

Project Description

- OEB
- OEB
- OEB
- Direc

User Inputs

LDC Avoided Costs	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Avoided Energy	4,463.55	4,707.94	5,096.34	5,198.09	5,298.45	5,402.66	5,502.67	5,604.71	5,742.31	5,877.51
Avoided Generatio	156.30	118.32	58.77	68.20	75.97	80.33	82.24	80.82	97.11	106.49
Avoided Transmiss	16.14	16.54	16.95	17.38	17.81	18.24	18.70	19.18	19.64	20.15
Avoided Distributio	20.10	20.60	21.11	21.64	22.18	22.74	23.30	23.89	24.48	25.10
Avoided Distributio	-	-	-	-	-	-	-	-	-	-
Other Avoided Cos										
Other Benefits										
Total (undiscounte	4,656.09	4,863.40	5,193.17	5,305.31	5,414.42	5,523.97	5,626.91	5,728.59	5,883.53	6,029.25
LDC Program Cost										
LDC OM&A Costs										
LDC Capital Costs										
Incremental Equipr										
Participant Costs										
Total Program Cos	-	-	-	-	-	-	-	-	-	-
Total Avoided Cost	4,656.09	4,863.40	5,193.17	5,305.31	5,414.42	5,523.97	5,626.91	5,728.59	5,883.53	6,029.25

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Present value factor	0.707	0.664	0.623	0.585	0.549	0.516	0.484	0.455	0.427	0.401
Present value of cash fl	3,291.35	3,227.77	3,235.97	3,103.79	2,974.01	2,848.74	2,724.46	2,604.16	2,511.12	2,416.03
Accumulated present v	- 36,708.81	- 33,481.04	- 30,245.07	- 27,141.27	- 24,167.26	- 21,318.52	- 18,594.06	- 15,989.90	- 13,478.78	- 11,062.74

NPV TRC

Net Present Value

Utility

Project Description

- OEB
- OEB
- OEB
- Direc

User Inputs

LDC Avoided Costs	2023	2024
Avoided Energy	6,014.76	6,151.06
Avoided Generatio	112.20	113.07
Avoided Transmiss	20.65	21.16
Avoided Distributio	25.72	26.37
Avoided Distributio	-	-
Other Avoided Cos		
Other Benefits		
Total (undiscounte	6,173.34	6,311.66
LDC Program Cost		
LDC OM&A Costs		
LDC Capital Costs		
Incremental Equipr		
Participant Costs		
Total Program Cos	-	-
Total Avoided Cost	6,173.34	6,311.66

	2023	2024
Present value factor	0.376	0.353
Present value of cash fl	2,322.57	2,229.47
Accumulated present v.	- 8,740.17	- 6,510.70

NPV TRC

Conserver Family

In 2008 we participated again with the NEPA utility group in maintaining of the "Conserver Family" energy information website and literature. Development costs were shared among the NEPA group during 2005. The Conserver Family is used to promote energy conservation and environmental awareness in ads, presentations to community groups and many other standard media.

As an educational program, the TRC value of this program has not been calculated. Program total costs in 2008 and for the life of the program were $ 1,300 and $28,869 respectively.

Appendix B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** Conserver Family

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

In 2008 we participated again with the NEPA utility group in maintaining of the "Conserver Family" energy information website and literature. Development costs were shared among the NEPA group during 2005. The Conserver Family is used to promote energy conservation and environmental awareness in ads, presentations to community groups and many other standard media.

As an educational program, the TRC value of this program has not been calculated. Program total costs in 2008 were $ 1,299.50

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:	25000		
Measure life (years):			
Number of Partipants or unites delievered lfe to date	81435		

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*		
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	$ 1,299.50	$ 28,869.45
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	$ 1,299.50	$ 28,869.45
Net TRC (in year CDN $):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		

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

Conservation Programs:

			Cumulative Results:	
		lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Demand savings (kW):	*Summer*				
	Winter				
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 Mid-peak to Off-peak (kWh):	

Demand Response Programs:

Dispatchable load (kW):	
Peak hours dispatched in year (hours):	

Power Factor Correction Programs:

Amount of KVar installed (KVar):	
Distribution system power factor at begining of year (%):	

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

Line Loss Reduction Programs:

Peak load savings (kW):

	lifecycle	*in year*
Energy savngs (kWh):		

Distributed Generation and Load Displacement Programs:

Amount of DG installed (kW):
Energy generated (kWh):
Peak energy generated (kWh):
Fuel type:

Other Programs (specify):

Metric (specify):

D. **Actual Program Costs:**

		Reporting Year	**Cumlative Life to Date**
Utility direct costs ($):	*Incremental capital:*		
	Incremental O&M:	$ 1,299.50	$ 28,869.45
	Incentive:		
	Total:	$ 1,299.50	$ 28,869.45
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:		

E. Assumptions & Comments:

Expenses incurred in 2008 are for web hosting.

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

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

Residential Customer Educational

We continue to further the cause of energy conservation for our residential customers through advocacy, participation in local events and fairs, training sessions and participation in the OPA's Every Kilowatt Counts programs. In 2008 NPDI promoted energy conservation at the Norfolk Farmers Market, Norfolk County Conservation Day, Earth Hour, the Haldimand Norfolk home Builders Association and through periodic newspaper advertisements. Also, as noted above, the Conserver Joe web site continues to be a useful tool of reference for residential customers wishing to learn more about energy conservation.

Because this is an education component and difficult to quantify, the TRC was not calculated. Expenditures for this program in 2008 and life to date were $4,679 and $106,386 respectively.

Appendix B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** Residential Education

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

We continue to further the cause of energy conservation for out residential customers through advocacy, participation in local events and fairs, training sessions and participation in the OPA's Every Kilowatt Counts programs. In 2008 NPDI promoted energy conservation during Earth Hour, Norfolk County Farmers Market, the Haldimand Norfolk home Builders Association and through periodic newspaper advertisements. Also, as noted above, the Conserver Joe web site continues to be a useful tool of reference for residential customers wishing to learn more about energy conservation.
The TRC was not calculated for this program because this is an education component and difficult to quantify. Expenditures for this program in 2008 were $4678.52

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:	25000		
Measure life (years):			
Number of Partipants or unites delievered lfe to date	63000		

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*		
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	$ 4,678.52	106385.57
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	$ 4,678.52	$ 106,385.57
Net TRC (in year CDN $):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		

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

Cumulative Results:

Conservation Programs:

		lifecycle	in year	*Cumulative Lifecycle*	Cumulative Annual Savings
Demand savings (kW):	*Summer*				
	Winter				
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 Mid-peak to Off-peak (kWh):	

Demand Response Programs:

Dispatchable load (kW):	
Peak hours dispatched in year (hours):	

Power Factor Correction Programs:

Amount of KVar installed (KVar):		
Distribution system power factor at begining of year (%):		
Distribution system power factor at end of year (%):		

Line Loss Reduction Programs:

Peak load savings (kW):		
	lifecycle	*in year*
Energy savngs (kWh):		

Distributed Generation and Load Displacement Programs:

Amount of DG installed (kW):	
Energy generated (kWh):	
Peak energy generated (kWh):	
Fuel type:	

Other Programs (specify):

Metric (specify):	

D. **Actual Program Costs:**

		Reporting Year	Cumlative Life to Date
Utility direct costs ($):	*Incremental capital:*		
	Incremental O&M:	$ 4,678.52	$ 106,385.57
	Incentive:		
	Total:		
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:	$ 4,678.52	$ 106,385.57

E. Assumptions & Comments:

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

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

Measure the Energy - Watt Reader Awareness Program

In partnership with the Norfolk County Libraries, 10 watt readers were made available to the public for a loan period of three weeks. The watt readers would enable customers to monitor the consumption of indoor appliances. In addition, the first 50 individuals who took advantage of the program received a CFL bulb as a bonus.

TRC was not calculated for this program as it was included under the Customer Residential Education and being an educational component, difficult to quantify. Expenditures for this program for 2008 were a minimal portion of the $4,679 needed for the Customer Residential Education program.

Training

Training in 2008 included the continuation of work to train customer service staff on energy efficient equipment and programs.

Costs for this work in 2008 was $3,300 and $22,700 for the life to date. Some training carried out was for commercial/industrial energy efficiency as well as residential.

Appendix B - Discussion of the Program

(complete this Appendix for each program)

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

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

Training in 2008 included the continuation of work to train customer service staff on energy efficient equipment and programs.

Costs for this work in 2008 were $3,299.50. Some training carried out was for commercial/industrial energy efficiency as well as residential.

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:	50		
Measure life (years):			
Number of Partipants or unites delievered lfe to date	200		

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*		
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	$ 3,299.50	$ 22,700.32
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	$ 3,299.50	$ 22,700.32
Net TRC (in year CDN $):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		

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

Cumulative 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):				

Demand Management Programs:

Controlled load (kW)
Energy shifted On-peak to Mid-peak (kWh):
Energy shifted On-peak to Off-peak (kWh):
Energy shifted Mid-peak to Off-peak (kWh):

Demand Response Programs:

Dispatchable load (kW):
Peak hours dispatched in year (hours):

Power Factor Correction Programs:

Amount of KVar installed (KVar):
Distribution system power factor at begining of year (%):
Distribution system power factor at end of year (%):

Line Loss Reduction Programs:

Peak load savings (kW):		
	lifecycle	*in year*
Energy savngs (kWh):		

Distributed Generation and Load Displacement Programs:

Amount of DG installed (kW):	
Energy generated (kWh):	
Peak energy generated (kWh):	
Fuel type:	

Other Programs (specify):

Metric (specify):	

D. **Actual Program Costs:**

		Reporting Year	Cumlative Life to Date
Utility direct costs ($):	*Incremental capital:*		
	Incremental O&M:	$ 3,299.50	$ 22,700.32
	Incentive:		
	Total:	$ 3,299.50	$ 22,700.32
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 numebr of units times the net present value per unit b

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

4. Lessons Learned

Utility Size Challenges

As a relatively small utility (approximately 20,000 customers) we face challenges that larger utilities do not share. Costs to initiate and operate CDM programs are generally not dependent on utility size. This makes program development and administration cost control difficult. In addition, meeting regulatory and reporting requirements, while important, become a high cost when compared to the overall program budget. These regulatory costs are typically independent of utility size. A regulatory cost of $20,000 may be a relatively insignificant in a budget of $2.5 million but significantly reduces the funds available for customer programs when a total CDM budget is $580,000.

Shared Initiatives

Without question shared initiatives reduce the administrative cost component in delivery of CDM programs. Where they apply to our customer groups, they are a very effective way of implementing CDM.

- Some examples of this type of effective initiative were the "Smart Meter Pilot Program", "Environmental Action Kit Giveaways", "LED Seasonal Light Exchange" program and the "Conserver Family" customer education and information program.

Local Initiatives

Our own local programs can be effective as long as we can minimize administration (i.e. keep them simple and partner with others who are willing/able to provide administrative support and management of the initiative).

- **Environmental Action Kit CFL Giveaway** is a good example of this type of program. Compact Fluorescent lights were given out directly to the public but also given out indirectly by the use of other organizations. For instance, Norfolk County gave away CFL's on our behalf in conjunction with their own conservation education initiative as well as the local library gave away CFL's lights on our behalf in conjunction with some of their own conservation education initiatives. This lends further credibility to the compact fluorescent as the 'good news' is coming from more than one trusted source.

- **Our large customer audit program** has been successful as a result of the OPA's Electricity Retrofit Incentive Program (ERIP). Based on past experience an audit alone does not produce the type of results we want to see. It is critical to make it really easy for the customer to implement change. Audit recommendations need to come with an offer to provide turn key implementation of energy efficiency improvements and firm pricing for those changes. "Partnered" firms that can implement the changes for the customer need to be

easily available. Make it simple to do it and not take the customer's resources away from the customer's core business. Combining ERIP with the customer audit program allows for customers to implement the changes recommended in the audits provided by Norfolk Power.

Customer Education Programs

Customer education is important. It helps ensure that energy efficiency becomes more of a focus for future consumers of electricity. One of the lessons learned during this period is that, while education is important, it is very difficult and can be expensive to quantify the results of customer education. Statistically accurate survey information is expensive and this expense is of particular concern when the CDM budget is relatively small. To be successful in delivering conservation programs, it is important to educate our customers. Education is key to program success.

5. Conclusion

In 2008 CDM programs from NPDI were well received by all our customers. The customers understand that we want to help. This includes both LDC initiated and OPA initiated programs.

Norfolk Power Distribution Inc. is committed to CDM and working hard to bring our customers into a conservation culture. It makes sense for everyone and we will continue to offer programs that benefit our customers (in both the short and long term).

Sharing costs and ideas only makes sense where it is possible, and we will continue to look for those types of opportunities.

6. 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 2008	Residential	[5] Low Income	Commercial	Institutional	Industrial	Agricultural	LDC System	[4] Smart Meters	Other #1
Net TRC value ($):	*$ 534,744*	**$ 16,593**	**$ 16,593**	**$**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**		**$ -**
Benefit to cost ratio:	*2.61*	1.58	1.58		0.00	0.00	0.00	0.00	0.00		0.00
Number of participants or units delivered:	*185,399*	*53,050*	53,000				50				
Lifecycle (kWh) Savings:	*20,361,319*	2,970,543	1,975,943		0	0	994,600	0	0		0
Report Year Total kWh saved (kWh):	*2,013,376*	381,215	341,431		0	0	39,784	0	0		0
Total peak demand saved (kW):		132	64		0	0	68	0	0		0
Total kWh saved as a percentage of total kWh delivered (%):	0.13%	0.09%	0.21%				0.02%				
Peak kW saved as a percentage of LDC peak kW load (%):		0.17%	0.08%				0.09%				
[1] *Report Year Gross C&DM expenditures ($):*	*$ 590,880*	$ 28,456	$ 28,456	$	$ -	$ -	$ -	$ -	$ -	$ -	$ -
[2] *Expenditures per KWh saved ($/kWh):*	*$ 0.29*	$ 0.07	$ 0.08	$	$ -	$ -	$ -	$ -	$ -		$ -
[3] *Expenditures per KW saved ($/kW):*		$ 215.58	$ 444.63	$	$ -	$ -	$ -	$ -	$ -		$ -

Utility discount rate (%):	6.51

[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.

7. Appendix B

Appendix B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** Energy Audits for Major Customers

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

This program includes all costs relating to activities to promote and accomplish energy audits for major customers. In 2007 three audits were completed with total electrical savings identified of 39,784 kWh. In addition 20,200 cubic metres of natural gas saving opportunities were identified for these 3 customers.

There were no audits performed in 2008. Total expenditures in 2006 for this program were $43,578. Total expenditures for 2007 for this program were $24,689 for a total 2005 - 2007 period expenditure of $93,460. The original budget in the NPDI plan was $50,000. Budget money from other loess successful programs was moved over to this program due to it's high profile and cost effectiveness.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	No changes to plant operations		
Efficient technology:	Various changes based on audit recommendations.		
Number of participants or units delivered for reporting year:			
Measure life (years):			
Number of Partipants or unites delievered lfe to date	15		

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*		$ 178,048.70
[2] *TRC Costs ($):*		*$ 93,958.99*
Utility program cost (excluding incentives):		
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:		$ 93,958.99
Net TRC (in year CDN $):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		$ 1.89

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

Cumulative Results:

Conservation Programs:

Demand savings (kW):	*Summer*	7
	Winter	26

	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):	*994600*	39784	5387975	298584
Other resources saved :				
Natural Gas (m3):	*505000*	20200		
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 begining of year (%):	
Distribution system power factor at end of year (%):	

Line Loss Reduction Programs:

Peak load savings (kW):		
	lifecycle	*in year*
Energy savngs (kWh):		

Distributed Generation and Load Displacement Programs:

Amount of DG installed (kW):	
Energy generated (kWh):	
Peak energy generated (kWh):	
Fuel type:	

Other Programs (specify):

Metric (specify):	

D. **Actual Program Costs:**

		Reporting Year	Cumlative Life to Date
Utility direct costs ($):	*Incremental capital:*		
	Incremental O&M:	$ -	
	Incentive:	$ -	
	Total:	$ -	$ 93,958.99
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:		

E. Assumptions & Comments:

As noted in the program description, natural gas savings identified through the audit program (and shown in the Conservation Results section of part C) were not used in the TRC calculation. The results are actual for 2007.

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

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

Appendix B - Discussion of the Program

(complete this Appendix for each program)

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

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

This program includes all costs expended to date on Smart metering. No costs were incurred in 2008 for the Smart Meter Pilot Program. Norfolk Power does not have a smart metering pilot program in place. Costs are of an administrative nature relating to smart metering activities including the costs of participation/membership in the OUSM group initiative.

Norfolk Power has been working collectively with the NEPA members and Util-Assist on their Smart Meter Initiative. The goals of this concerted effort are to cost effectively plan for this deployment, and ensure due diligence is accommodated. We are examining the benefits of a collaborative approach to planning, as well as procurement of AMI and Installation services.

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 Partipants or unites delievered lfe to date			

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*		
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):		52174.05
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	$ -	$ 52,174.05
Net TRC (in year CDN $):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		

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

Cumulative Results:

Conservation Programs:

		lifecycle	in year	*Cumulative Lifecycle*	Cumulative Annual Savings
Demand savings (kW):	*Summer*				
	Winter				
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 Mid-peak to Off-peak (kWh):	

Demand Response Programs:

Dispatchable load (kW):	
Peak hours dispatched in year (hours):	

Power Factor Correction Programs:

Amount of KVar installed (KVar):	

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

Line Loss Reduction Programs:

Peak load savings (kW):

	lifecycle	*in year*
Energy savngs (kWh):		

Distributed Generation and Load Displacement Programs:

Amount of DG installed (kW):
Energy generated (kWh):
Peak energy generated (kWh):
Fuel type:

Other Programs (specify):

Metric (specify):

D. **Actual Program Costs:**

		Reporting Year	**Cumlative Life to Date**
Utility direct costs ($):	*Incremental capital:*		
	Incremental O&M:		$ 52,174.05
	Incentive:		
	Total:		
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:	$ -	$ 52,174.05

E. Assumptions & Comments:

No Costs were incurred for the Smart Meter Pilot Program in 2008.

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

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

Appendix B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** Water Heater Replacement Program

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

This program includes all costs expended to date on replacement of older (more than 10 years) water heaters. These water heaters are electric tanks rented by the Norfolk Power Distribution Inc. affiliate company, Norfolk Energy Inc. No Costs were incurred for this program in 2008. During 2007, we worked with our customer database for water heaters and contractors to identify potential candidates and promte program through contractors to reduce promotion costs. This program although it provides a negative TRC, is in the right direction for energy conservation and long lasting sustainablility. When coupled with a load control/response program the results will have an even greater impact.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	Leave old tanks in place		
Efficient technology:	Install new energy efficient tanks		
Number of participants or units delivered for reporting year:			
Measure life (years):			
Number of Participants or unites delivered life to date	231		

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*		-$ 58,032.60
[2] *TRC Costs ($):*		109747.96
Utility program cost (excluding incentives):		77779.96
Incremental Measure Costs (Equipment Costs)		31968
Total TRC costs:	$ -	$ 109,747.96
Net TRC (in year CDN $):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		-0.53

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

Cumulative Results:

Conservation Programs:

		lifecycle	in year	Cumulative Lifecycle	Cumulative Annual Savings
Demand savings (kW):	*Summer*				
	Winter				
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 Mid-peak to Off-peak (kWh):	

Demand Response Programs:

Dispatchable load (kW):	
Peak hours dispatched in year (hours):	

Power Factor Correction Programs:

Amount of KVar installed (KVar):	

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

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

Line Loss Reduction Programs:

	lifecycle	in year
Peak load savings (kW):		
Energy savngs (kWh):		

Distributed Generation and Load Displacement Programs:

Amount of DG installed (kW):
Energy generated (kWh):
Peak energy generated (kWh):
Fuel type:

Other Programs (specify):

Metric (specify):

D. **Actual Program Costs:**

		Reporting Year	Cumlative Life to Date
Utility direct costs ($):	*Incremental capital:*		$ 31,968.00
	Incremental O&M:		$ 77,780.00
	Incentive:		
	Total:		
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:	$ -	$ 109,748.00

E. Assumptions & Comments:

No Costs were incurred for the Smart Meter Pilot Program in 2008.

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

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

Appendix B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** Norfolk Power Facility Lighting Retrofit.

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

Update lighting at the Norfolk Power facility in the entire facility to more efficient technology, T12's to T8's.

Total expenditures for 2007 for this program were $25, 385.02.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	T12 Fluorescent Lights		
Efficient technology:	T8 Surface Mount Lights		
Number of participants or units delivered for reporting year:			
Measure life (years):			
Number of Partipants or unites delievered lfe to date	260		

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*		4402.81
[2] *TRC Costs ($):*		25385.02
Utility program cost (excluding incentives):		1820.01
Incremental Measure Costs (Equipment Costs)		23565.01
Total TRC costs:		25385.02
Net TRC (in year CDN $):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		0.17

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

Cumulative Results:

Conservation Programs:

Demand savings (kW):	*Summer*	17		
	Winter	18		
	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):			650520	130104
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 begining of year (%):	

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

Line Loss Reduction Programs:

Peak load savings (kW):

	lifecycle	*in year*
Energy savngs (kWh):		

Distributed Generation and Load Displacement Programs:

Amount of DG installed (kW):
Energy generated (kWh):
Peak energy generated (kWh):
Fuel type:

Other Programs (specify):

Metric (specify):

D. **Actual Program Costs:**

		Reporting Year	Cumlative Life to Date
Utility direct costs ($):	*Incremental capital:*		$ 23,565.01
	Incremental O&M:		$ 1,820.01
	Incentive:		
	Total:		$ 25,385.02
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:		

E. Assumptions & Comments:

No costs incurred for this program in 2008.

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

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

Appendix B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** Environmental Action Kits - CFL Education and Giveaway

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

This program was designed to promote the awareness and understanding of compact fluorescent lights within the NPDI community. As we all know, compact fluorescent lighting is a fantastic method of providing energy efficient lighting within the home. However, a misapplied CFL can become problematic for the customer and leave a bad taste in their mouth for this highly efficient source of lighting.

Using Fairs, trade shows and other conservation events, in 2007 NPDI in cooperation with London Hydro, launched the Environmental Action Kit Education and Giveaway which included 4 high quality CFL's, toilette testing dye tablets, water flow measurement bags, and provided educational pieces to help the customer understand what to buy and were to use them. The initiative was continure din 2008.

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:	3000		
Measure life (years):	4		
Number of Partipants or unites delievered lfe to date	11919		

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*	*$ 49,423.55*	$ 205,721.10
[2] *TRC Costs ($):*	*$ 14,879.39*	49658.18
Utility program cost (excluding incentives):	$ 9,655.20	38774.89
Incremental Measure Costs (Equipment Costs)	$ 5,224.19	10883.29
Total TRC costs:	$ 14,879.39	$ 49,658.18
Net TRC (in year CDN $):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	$ 3.32	$ 4.14

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

Cumulative Results:

Conservation Programs:

		lifecycle	in year	Cumulative Lifecycle	Cumulative Annual Savings
Demand savings (kW):	*Summer*				
	Winter		61		
Energy saved (kWh):		*1127520*	281880	4479260	1119815
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 begining of year (%):

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

Line Loss Reduction Programs:

Peak load savings (kW):

	lifecycle	*in year*
Energy savngs (kWh):		

Distributed Generation and Load Displacement Programs:

Amount of DG installed (kW):
Energy generated (kWh):
Peak energy generated (kWh):
Fuel type:

Other Programs (specify):

Metric (specify):

D. **Actual Program Costs:**

		Reporting Year	**Cumlative Life to Date**
Utility direct costs ($):	*Incremental capital:*	$ 9,655.20	$ 38,774.89
	Incremental O&M:	$ 5,224.19	$ 10,883.29
	Incentive:		
	Total:	$ 14,879.39	$ 49,658.18
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 numebr of units times the net present value per unit b

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

Appendix B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** LED Seasonl Lights Exchange

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

Program did not run in 2008. During the months of November and December of 2007, NPDI gave out one string of LED seasonal lights for every conventional string that was turned in for destruction and recycling. The program was even more successful than the 2006 program. Not only were all 2500 strings exchanged but we received 5000 strings of old style lights in exchange that were then decommissioned and recycled.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	5 WATT Christmas lights C-7(64 lights)		
Efficient technology:	LED Christmas Lights (indoor or outdoor)		
Number of participants or units delivered for reporting year:			
Measure life (years):			
Number of Partipants or unites delievered lfe to date	5000		

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*		$ 147,530.12
[2] *TRC Costs ($):*		$ 75,508.98
Utility program cost (excluding incentives):		$ 60,497.54
Incremental Measure Costs (Equipment Costs)		$ 75,390.10
Total TRC costs:		$ 76,503.66
Net TRC (in year CDN $):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		1.95

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

Cumulative Results:

Conservation Programs:

Demand savings (kW): *Summer* / *Winter*

	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):			1961580	65386
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 begining of year (%):
Distribution system power factor at end of year (%):

Line Loss Reduction Programs:

Peak load savings (kW):		
	lifecycle	*in year*
Energy savngs (kWh):		

Distributed Generation and Load Displacement Programs:

Amount of DG installed (kW):	
Energy generated (kWh):	
Peak energy generated (kWh):	
Fuel type:	

Other Programs (specify):

Metric (specify):	

D. **Actual Program Costs:**

		Reporting Year	Cumlative Life to Date
Utility direct costs ($):	*Incremental capital:*		
	Incremental O&M:		$ 75,390.10
	Incentive:		
	Total:		$ 75,390.10
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:		

E. Assumptions & Comments:

TRC was based on number of old style lights taken out of service. Concept being that they will be avoided energy.

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

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

Appendix B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** Energy Star Appliance Rebate Program

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

This Program was designed to coincide with the Provincial Governments PST exemption on energy star qualified appliances. During the months December 2007 to February 2008, NPDI gave a 10% rebate to customers who purchased an energy star qualified appliance. The program was even more successful than first anticipated. Over 200 rebates were credited to customers. The OPA Great Refrigerator Roundup program was an additional incentive for customers who were replacing their old refrigerator.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	Less efficient appliances		
Efficient technology:	Energy Star Qualified Appliances		
Number of participants or units delivered for reporting year:	219		
Measure life (years):	18		
Number of Partipants or unites delievered lfe to date	232		

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*	-$ *4,373.88*	-$ 6,157.51
[2] *TRC Costs ($):*	$ *4,299.50*	$ 6,653.34
Utility program cost (excluding incentives):	$ 4,299.50	$ 6,653.34
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	$ 4,299.50	$ 6,653.34
Net TRC (in year CDN $):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	-$ 1.02	-$ 0.93

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

Cumulative Results:

Conservation Programs:

Demand savings (kW):	*Summer*	3
	Winter	3

	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):	*848423*	59551	936833	62498
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 begining of year (%):	

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

Line Loss Reduction Programs:

Peak load savings (kW):

	lifecycle	*in year*
Energy savngs (kWh):		

Distributed Generation and Load Displacement Programs:

Amount of DG installed (kW):
Energy generated (kWh):
Peak energy generated (kWh):
Fuel type:

Other Programs (specify):

Metric (specify):

D. **Actual Program Costs:**

		Reporting Year	**Cumlative Life to Date**
Utility direct costs ($):	*Incremental capital:*		
	Incremental O&M:	$ 2,356.84	$ 6,653.34
	Incentive:	$ 22,987.91	$ 22,987.91
	Total:	$ 25,344.75	$ 29,641.25
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:		

E. Assumptions & Comments:

TRC was calculated using average number of years for combined appliances.

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

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

Appendix B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** Conserver Family

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

In 2008 we participated again with the NEPA utility group in maintaining of the "Conserver Family" energy information website and literature. Development costs were shared among the NEPA group during 2005. The Conserver Family is used to promote energy conservation and environmental awareness in ads, presentations to community groups and many other standard media.

As an educational program, the TRC value of this program has not been calculated. Program total costs in 2008 were $ 1,299.50

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:	25000		
Measure life (years):			
Number of Partipants or unites delievered lfe to date	81435		

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*		
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	$ 1,299.50	$ 28,869.45
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	$ 1,299.50	$ 28,869.45
Net TRC (in year CDN $):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		

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

Conservation Programs:

			Cumulative Results:	
		lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Demand savings (kW):	*Summer*				
	Winter				
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 Mid-peak to Off-peak (kWh):	

Demand Response Programs:

Dispatchable load (kW):	
Peak hours dispatched in year (hours):	

Power Factor Correction Programs:

Amount of KVar installed (KVar):	
Distribution system power factor at begining of year (%):	

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

Line Loss Reduction Programs:

Peak load savings (kW):

	lifecycle	*in year*
Energy savngs (kWh):		

Distributed Generation and Load Displacement Programs:

Amount of DG installed (kW):
Energy generated (kWh):
Peak energy generated (kWh):
Fuel type:

Other Programs (specify):

Metric (specify):

D. **Actual Program Costs:**

		Reporting Year	**Cumlative Life to Date**
Utility direct costs ($):	*Incremental capital:*		
	Incremental O&M:	$ 1,299.50	$ 28,869.45
	Incentive:		
	Total:	$ 1,299.50	$ 28,869.45
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:		

E. Assumptions & Comments:

Expenses incurred in 2008 are for web hosting.

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

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

Appendix B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** Residential Education

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

We continue to further the cause of energy conservation for out residential customers through advocacy, participation in local events and fairs, training sessions and participation in the OPA's Every Kilowatt Counts programs. In 2008 NPDI promoted energy conservation during Earth Hour, Norfolk County Farmers Market, the Haldimand Norfolk home Builders Association and through periodic newspaper advertisements. Also, as noted above, the Conserver Joe web site continues to be a useful tool of reference for residential customers wishing to learn more about energy conservation.
The TRC was not calculated for this program because this is an education component and difficult to quantify. Expenditures for this program in 2008 were $4678.52

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:	25000		
Measure life (years):			
Number of Partipants or unites delievered lfe to date	63000		

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*		
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	$ 4,678.52	106385.57
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	$ 4,678.52	$ 106,385.57
Net TRC (in year CDN $):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		

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

Cumulative Results:

Conservation Programs:

		lifecycle	in year	*Cumulative Lifecycle*	Cumulative Annual Savings
Demand savings (kW):	*Summer*				
	Winter				
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 Mid-peak to Off-peak (kWh):	

Demand Response Programs:

Dispatchable load (kW):	
Peak hours dispatched in year (hours):	

Power Factor Correction Programs:

Amount of KVar installed (KVar):		
Distribution system power factor at begining of year (%):		
Distribution system power factor at end of year (%):		

Line Loss Reduction Programs:

Peak load savings (kW):		
	lifecycle	*in year*
Energy savngs (kWh):		

Distributed Generation and Load Displacement Programs:

Amount of DG installed (kW):	
Energy generated (kWh):	
Peak energy generated (kWh):	
Fuel type:	

Other Programs (specify):

Metric (specify):	

D. **Actual Program Costs:**

		Reporting Year	Cumlative Life to Date
Utility direct costs ($):	*Incremental capital:*		
	Incremental O&M:	$ 4,678.52	$ 106,385.57
	Incentive:		
	Total:		
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:	$ 4,678.52	$ 106,385.57

E. Assumptions & Comments:

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

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

Appendix B - Discussion of the Program

(complete this Appendix for each program)

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

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

Training in 2008 included the continuation of work to train customer service staff on energy efficient equipment and programs.

Costs for this work in 2008 were $3,299.50. Some training carried out was for commercial/industrial energy efficiency as well as residential.

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:	50		
Measure life (years):			
Number of Partipants or unites delievered lfe to date	200		

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*		
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	$ 3,299.50	$ 22,700.32
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	$ 3,299.50	$ 22,700.32
Net TRC (in year CDN $):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		

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

Cumulative 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):				

Demand Management Programs:

Controlled load (kW)
Energy shifted On-peak to Mid-peak (kWh):
Energy shifted On-peak to Off-peak (kWh):
Energy shifted Mid-peak to Off-peak (kWh):

Demand Response Programs:

Dispatchable load (kW):
Peak hours dispatched in year (hours):

Power Factor Correction Programs:

Amount of KVar installed (KVar):
Distribution system power factor at begining of year (%):
Distribution system power factor at end of year (%):

Line Loss Reduction Programs:

Peak load savings (kW):		
	lifecycle	*in year*
Energy savngs (kWh):		

Distributed Generation and Load Displacement Programs:

Amount of DG installed (kW):	
Energy generated (kWh):	
Peak energy generated (kWh):	
Fuel type:	

Other Programs (specify):

Metric (specify):	

D. **Actual Program Costs:**

		Reporting Year	Cumlative Life to Date
Utility direct costs ($):	*Incremental capital:*		
	Incremental O&M:	$ 3,299.50	$ 22,700.32
	Incentive:		
	Total:	$ 3,299.50	$ 22,700.32
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 numebr of units times the net present value per unit b

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

8. Appendix C

Appendix C - Program and Portfolio Totals

Report Year: 2007

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 ($)
Environmental Action Kits	$ 49,424	$ 14,879		3.32	281,880	1,127,520	61	$ 14,879
LED Seasonl Lights Exchange	$ -	$ -		0.00	0	0	0	$ -
Water Heater Replacement Program	$ -	$ -		0.00	0	0	0	$ -
ES Appliance Rebate	-$ 4,374	$ 4,300		-1.02	59,551	848,423	3	$ 4,300
Conserver Family	$ -	$ 1,300		0.00	0	0		$ 1,300
Residential Education	$ -	$ 4,679		0.00	0	0		$ 4,679
Training	$ -	$ 3,300		0.00	0	0		$ 3,300
Name of Program H			$ -	0.00				
Name of Program I			$ -	0.00				
Name of Program J			$ -	0.00				
***Totals App. B - Residential**	$ 45,050	$ 28,456	$ 16,593	1.58	341,431	1,975,943	64	$ 28,456
Residential Indirect Costs not attributable to any specific program	→							
Total Residential TRC Costs		$ 28,456						
****Totals TRC - Residential**	**$ 45,050**	**$ 28,456**	**$ 16,593**	**1.58**				

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 ($)
Energy Audits for Major Customers	$ -	$ -		0.00	39,784	994,600	33	$ -
NP Facility Lighting	$ -	$ -	$ -	0.00	0	0	35	$ -
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	39,784	994,600	68	$ -
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 ($)
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 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 - 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**	$ 45,050	$ 28,456	$ 16,593	1.58	$ 381,215	$ 2,970,543	$ 132	$ 28,456
*Any **other** Indirect Costs not attributable to any specific program* →								
TOTAL ALL LDC COSTS		$ 28,456						
****LDC' PORTFOLIO TRC**	$ 45,050	$ 28,456	$ 16,593	1.58				

* 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.

9. Appendix D

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	Other #1	Other #2
Net TRC value ($):	$534,744	**$300,936.40**	**$**	**$**	**$**	**$233,707.50**	**$**	**$**		**$**	**$**
Benefit to cost ratio:	*2.61*	2.78				1.98					
Number of participants or units delivered:	*185399*	$184,707				$673					
Lifecycle (kWh) Savings:	*20361319*	11251599				9109720					
Total kWh saved (kWh):	*2013376*	1544904				468472					
Total peak demand saved (kW):	*445.5*	268				178					
Total kWh saved as a percentage of total kWh delivered (%):	*0.13%*	0.25%				0.07%					
Peak kW saved as a percentage of LDC peak kW load (%):	*0.15%*	*0.09%*				*0.06%*					
[1] *Gross C&DM expenditures ($):*	$590,880	$272,380.60	$	$	$	$119,344	$	$30,000	$45,616.96	$	$
[2] *Expenditures per KWh saved ($/kWh):*	$0.29	$1.09	$	$	$	$0.56	$	$		$	$
[3] *Expenditures per KW saved ($/kW):*	$8,470.80	$4,407.67	$	$	$	$4,063.13	$	$		$	$

Utility discount rate (%):	6.51

[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.