Norfolk Power

IN BUSINESS TO SERVE.

March 31, 2006

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

2005 Annual Conservation and Demand Management Report
RP-2004-0203 / EB 2005-0056

On December 9, 2004 Niagara Erie Public Power Alliance (NEPPA) 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. RFP process to select qualified commercial/agricultural and industrial auditors
3. Participation is provincial coupon campaigns.
    a. Lighten Your Electricity Bill
    b. Cold Water Wash
4. Training and Development
5. LED Traffic Lights

[1] NEPPA 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., St. Catharines Hydro Utility Services Inc., and Welland Hydro-Electric System Corp., Brant County Power, 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

How Did We Do?

Collectively our NEPPA 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

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 would also be helpful. This will lead to more aggressive applications for second generation funding. 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,

J.F. Druyf
President & CEO
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 Public Power Alliance (NEPPA) Coalition nine (9) applications filed by NEPPA 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., St. Catharines Hydro Utility Services 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. 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 2005. 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, 2005.[1]

Project	Target Customers	Approved Expenditures	Actual Expenditures to Dec. 31, 2005
Co-branded Mass Market Program	All Users	$110,000	$87,351
Smart Metering / Prepaid Metering Program	Residential and small commercial (<50 KW)	$90,000	$6,557
Energy Audits / Feasibility Audits	Large user, Industrial/General Service & Institution Facilities	$50,000	$25,192
Load Management Programs/Load Control Programs	Residential	$221,000	$26,329
Distribution Loss Reduction	All Users	$100,000	$30,000
Distributed Generation	All Users	$10,000	$11,968
Total		**$581,000**	**$187,397**

As shown in the table, some of the planned projects are well underway and others have yet to be implemented in a significant way.

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 projected (or final) results as shown in Appendices B for each program have been forecasted with the best information currently available[2].

[1] In Section 3 – Discussion of Programs we include the appropriate Appendices (A for all programs and B for each program). Appendix B for each program includes the anticipated results when the program has been completed. In order to accurately reflect expenditures compared to results we have included total planned program costs in the Gross C&DM expenditures of Appendix A. These expenditure totals will not be the same as the actual expenditures shown for 2005 in the table.

[2] In one case the results may not totally coincide with the quarterly reports previously submitted. This concerns the educational pieces we inserted in the local daily newspaper. Initial quarterly reports had estimated savings based on those articles. At the time we made the assumption that the educational articles would impact residential energy consumption by a total of 1% when the article series was completed. However, this assumption is difficult and/or very expensive to verify. Therefore we have shown the costs for this educational program as educational only and have not quantified the result in this annual report.

Shared Provincial Initiatives

NPDI took part in the "Lighten Your Electricity Bill" coupon program. It was well accepted by our customers with an 8% participation rate.

In addition we participated in the Proctor and Gamble cold water wash coupon program.

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 NEPPA Activities

As an active participant with the NEPPA 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 to all customers and has an ongoing program with the energy saving inserts.

NEPPA utilities also developed and distributed a Request For Proposals from energy audit firms and, based on the responses and follow up presentations, produced a list of "approved" firms to recommend to larger customers (>50 KW) interested in energy audits of their facilities.

NPDI/Local Activities

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

- Educational programs:
  - A series of 28 newspaper articles in the local Simcoe Reformer concerning energy efficiency and saving money on energy bills.
  - Along with the Ministry of Economic Development and Trade we hosted a ½ day seminar concerning the need for and steps to implement energy efficiency.
- Energy Star Window Incentive Program
  - Working with two manufacturers/distributors we offered a $50 rebate per window for customers upgrading windows to upgrade to Energy Star qualified windows rather than "standard" thermo pane windows.
- Staff training
  - Presented training sessions for all customer contact office staff on energy efficiency information and current programs.
- Energy Audits for large customers.
  - In 2005 we completed 3 energy audits for large customers. Those audits identified a total of 147 KW demand and 830,647 kWh in customer savings opportunities in electricity requirements.

- Load Control
    - We have completed some initial financial analysis of the opportunity for load control of our competitive subsidiary's (Norfolk Energy Inc.) rental water heaters. More work including implementation is expected throughout 2006 and into 2007.
- Electrical Distribution System Loss Reduction and system improvements.
    - In 2005 preliminary work was completed to analyse opportunities and plan for distribution system efficiency improvements.
- Wind Power Study
    - The initial analysis and report regarding wind power; the opportunities for funding, financial evaluation and information for customers has been completed and shared with numerous interested customers in our service area.

2. Evaluation of the CDM Plan

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

- Energy audits for major customers and
- Distribution loss reduction.

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
- The series of energy efficiency newspaper articles published during 2005.

A third category of programs is those programs that show a negative NPV of the TRC analysis but are worth doing in any event. An example of this type of program is:

- The water heater replacement program. Although this program has a negative NPV based on the TRC analysis, early replacement of water heaters and the associated energy savings is a good thing to do.

Our overall plan shows a NPV based on the Total Resource Cost analysis of the individual programs of $2,739,328. Total costs to achieve this energy saving are expected to be $482,436.

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 (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 following this brief introduction in this section.

Appendix A - Evaluation of the CDM Plan

	Total	Residential	General Service	LDC System	Other 1	Other 2	Other 3	Other 4
Net TRC value ($):	*$2,739,328*	$200,228	$ 144,500	$2,394,600				
Benefit to cost ratio:	24.81	1.16	2.89	24.63				
Number of participants or units delivered:	*60,140*	41,425	260	18,435				
Total KWh to be saved over the lifecycle of the plan (kWh):	*69,100,906*	3,087,062	4,075,126	61,938,718				
Total in year kWh saved (kWh):	*2,524,710*	297,081	163,005	2,064,624				
Total peak demand saved (kW):	*1,347.4*	961.4	18	368				
Total kWh saved as a percentage of total kWh delivered (%):	0.70%	0.20%	0.08%	0.57%				
Peak kW saved as a percentage of LDC peak kW load (%):	1.83%	1.31%	0.09%	0.50%				
Gross C&DM expenditures ($):	*$482,436*	$271,252	$ 50,000	$97,235				
Expenditures per KWh saved ($/kWh):*	$0.191	$0.913	$ 0.012	$0.047				
*Expenditures per KW saved ($/kW)**:*	$358.05	$282.14	$ 2,777.78	$264.23				

Utility discount rate (%):	6.51%

*Expenditures include all utility program costs (direct and indirect) for all programs which primarily generate energy savings.
**Expenditures include all utility program costs (direct and indirect) for all programs which primarily generate capacity savings.

Energy Audits for Major Customers

This program includes all costs relating to activities to promote and accomplish energy audits for major customers. In 2005 three audits were completed with total electrical savings identified of 147 kW and 830,647 kWh. In addition 186,196 cubic metres of natural gas saving opportunities were identified for these three customers.

Total expenditures in 2005 for this program are $25,192. By the end of 2006 we expect to have completed the planned 10 total audits with expenditure of $50,000 in total for the program.

Assumptions used for program analysis:

- Saving estimates for 2005 are based on an implementation rate for audit recommendations of 10% and implemented opportunities were assumed to be in maintenance related recommendations with no capital costs. We believe this to be conservative since there is no additional investment needed to implement significant savings.
- We expect to complete 10 audits in total with smaller customers involved in the final 7 audits. The TRC for the program was calculated based on a forecast of a total of twice the energy saving opportunities identified in the 2005 audits.
- Natural gas savings were not calculated in our TRC for the program.
- Our utility costs include the costs for technology seminars for these customers where we educate them on energy efficient technology opportunities and promote our audit program. Attendance at seminars has averaged 25 customers with 10 seminars planned (all seminars to be completed in 2006).

NPV based on the TRC calculation for the forecasted results of this program component is $144,500.00

Appendix B - Discussion of the Program

(complete this section for each program)

A. **Name of the Program:** Energy Audits, Energy Seminars 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 2005 three audits were completed with total annual electrical savings identified of 147 kW and 830,647 kWh. In addition 186,196 cubic metres of natural gas saving opportunities were identified for these three customers. The TRC for the program was calculated based on a forecast of twice the energy saving opportunities since we expect to complete 10 audits in total with smaller customers involved in the final 7 audits. The implementation rate for audit recommendations has been assumed to be 10% and implemented opportunities were assumed to be in maintenance related recommendations with no capital costs. Natural gas savings were not calculated in our TRC for the program. Our utility costs include the costs for technology seminars for these customers where we educate them on energy efficient technology opportunities and promote our audit program. Attendance at seminars has averaged 25 customers with 10 seminars planned.

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 delive	260		
Measure life (years):	25		

B. **TRC Results:**

TRC Benefits ($):		*$ 194,500.00*
TRC Costs ($):		
	Utility program cost (less incentives):	$ 50,000.00
	Participant cost:	$ -
	Total TRC costs:	$ 50,000.00
Net TRC (in year CDN $):		$ 144,500.00
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		3.89

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

Conservation Programs:

Demand savings (kW):	*Summer*		
	Winter		18
		lifecycle	*in year*
Energy saved (kWh):		*4,075,126*	163,005
Other resources saved :			
	Natural Gas (m3):	930,975	37,239
	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. **Program Costs*:**

Utility direct costs ($):	*Incremental capital:*	
	Incremental O&M:	$ 50,000.00
	Incentive:	$ -
	Total:	$ 50,000.00
Utility indirect costs ($):	*Incremental capital:*	
	Incremental O&M:	
	Total:	$ -
Participant costs ($):	*Incremental equipment:*	$ -
	Incremental O&M:	
	Total:	$ -

E. 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 shown in this report are forecasted results and costs once the program has been completed.

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

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.

At this point we have not completed a TRC analysis for Smart Metering. Costs are shown on Appendix A in the Gross C&DM expenditures total. For this item, only the current year's expenditure (2005) has been included since there may be no need for a "pilot" depending on the results of the various pilots currently taking place. The planned expenditure for this initiative may be reallocated to another program subsequent to OEB approval of the funds being transferred.

Appendix B - Discussion of the Program

(complete this section 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. 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 membership in the OUSM group initiative.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:			
Efficient technology:			
Number of participants or units delivered:			
Measure life (years):			

B. **TRC Results:**

TRC Benefits ($):	
TRC Costs ($):	
Utility program cost (less incentives):	
Participant cost:	
Total TRC costs:	
Net TRC (in year CDN $):	$ -
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	

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

Conservation Programs:

Demand savings (kW):	*Summer*		
	Winter		
		lifecycle	*in year*
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. **Program Costs*:**

Utility direct costs ($):	*Incremental capital:*		
	Incremental O&M:	$	6,557.09
	Incentive:	$	-
	Total:	$	6,557.09
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:	$	-
Participant costs ($):	*Incremental equipment:*	$	-
	Incremental O&M:		
	Total:	$	-

E. Comments:

Mainly OUSM group and admin costs. No TRC calculated at this time. Costs are shown on Appendix A in the Gross C&DM expenditures total. This cost is current year only. Total program cost by the end of 2007 was expected to be $70,000 in our approved plan. However, with the number of "pilots" currently running in Ontario, we expect to be proceeding to full implementation of smart metering. Thus, there may be no need for a pilot program. In that case we will be asking for approval to reallocate the approved funds to another C&DM program (subject to OEB approval).

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

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.

At this point we have not completed a TRC analysis for Smart Metering. Costs are shown on Appendix A in the Gross C&DM expenditures total. For this item, only the current year's expenditure (2005) has been included since there may be no need for a "pilot" depending on the results of the various pilots currently taking place. The planned expenditure for this initiative may be reallocated to another program subsequent to OEB approval of the funds being transferred.

Appendix B - Discussion of the Program

(complete this section for each program)

A. **Name of the Program:** Energy Star Window Program

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

This program includes all costs relating to a local program to encourage our customers planning to upgrade their home's windows to upgrade t Energy Star qualified windows. In this program we partnered with Centennial Windows and with Stevens Aluminum (Gentec Windows). Each of our partners offered a $50 per window rebate for every window replaced with an Energy Star qualified window through the program that ran from August 1st until year end.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	Average existing stock		
Efficient technology:	Energy Star windows		
Number of participants or units delivered:	185		
Measure life (years):	25		

B. **TRC Results:**

TRC Benefits ($):		*$ 15,576.34*
TRC Costs ($):		
	Utility program cost (less incentives):	$ 3,726.97
	Participant cost:	$ 6,049.37
	Total TRC costs:	$ 9,776.34
Net TRC (in year CDN $):		$ 5,800.00
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		1.59

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

Conservation Programs:

Demand savings (kW):	*Summer*		2
	Winter		5
		lifecycle	*in year*
Energy saved (kWh):		*138,533*	5,541
Other resources saved :			
	Natural Gas (m3):	50,125	2,005
	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. **Program Costs*:**

Utility direct costs ($):	*Incremental capital:*		
	Incremental O&M:	$	3,726.97
	Incentive:	$	-
	Total:	$	3,726.97
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:	$	-
Participant costs ($):	*Incremental equipment:*	$	6,636.69
	Incremental O&M:		
	Total:	$	6,636.69

E. Comments:

Utility costs were for initial program set up, printing and distributing inserts promoting the program and a small amount for ongoing administration of the program. The Calculated TRC values were not done using the TRC tables but rather with the data and information contained within a report titled "Potential Savings for Energy Star Windows, Doors and Skylights" completed on behalf of Natural Resources Canada by Enermodal Engineering in 2005 (copy attached). Manufacturer/distributor rebates of $50 per window were included as an incentive in this program. They are not shown since they are neither utility or customer costs. Natural gas savings are calculated based on future gas pricing supplied by Union Gas and using the NPDI discount rate for the NPV calculation of those savings

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

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 2005 individually addressed letters were sent to the rental customers in Haldimand County and a bill insert promotion was done for the customers in Norfolk County.

Total number of water heaters replaced through this program is expected to be 300 (two hundred and fifty 40 gallon and fifty 60 gallon). Program completion is planned for 2007.

NPV based on the TRC calculation for the forecasted results of this program component is ($88,500.00).

Appendix B - Discussion of the Program

(complete this section 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. During 2005 individually addressed letters were sent to the rental customers in Haldimand County and a bill insert promotion was done for the customers in Norfolk County.

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:	300		
Measure life (years):	18		

B. **TRC Results:**

TRC Benefits ($):	*$*	*61,700.00*
TRC Costs ($):		
Utility program cost (less incentives):	$	150,000.00
Participant cost:	$	-
Total TRC costs:	$	150,000.00
Net TRC (in year CDN $):	$	(88,300.00)
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		

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

Conservation Programs:

Demand savings (kW):	*Summer*	7.45
	Winter	7.45
	lifecycle	*in year*
Energy saved (kWh):	*1,174,716*	65,262
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. **Program Costs*:**

Utility direct costs ($):	*Incremental capital:*	$	150,000.00
	Incremental O&M:		
	Incentive:	$	-
	Total:	$	150,000.00
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:	$	-
Participant costs ($):	*Incremental equipment:*	$	-
	Incremental O&M:		
	Total:	$	-

E. Comments:

Total loss and savings calculations were completed in order to do the TRC analysis of this program. The calculations and the quantification of the numbers are attached on a separate sheet. This analysis has been completed based on the completed program anticipated results. The program is planned to be completed in 2007.

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

Distributed Generation, Wind Power Study

This program includes all costs expended to date on analysis and investigation of the wind power opportunity for Norfolk Power and for our customer's information. Information for customers on various technologies in this area as well as incentives available has been gathered and is available. In addition a business case model has been developed to assist customers with their decision making concerning the viability of a small wind generation project.

Gross expenditures for this program are included in the Gross C&DM expenditures total in Appendix A.

Appendix B - Discussion of the Program

(complete this section for each program)

A. **Name of the Program:** Distributed Generation, Wind Power Study

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

This program includes all costs expended to date on analysis and investigation of the wind power opportunity for Norfolk Power and for our customer's information. Information for customers on various technologies in this area as well as incentives available has been gathered and is available. In addition a business case model has been developed to assist customers with their decision making concerning the viability of a small wind generation project.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	Do Nothing		
Efficient technology:	Wind power installations and information		
Number of participants or units delivered:			
Measure life (years):			

B. **TRC Results:**

TRC Benefits ($):	
TRC Costs ($):	
Utility program cost (less incentives):	
Participant cost:	
Total TRC costs:	
Net TRC (in year CDN $):	$ -
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	

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

Conservation Programs:

		lifecycle	in year
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. **Program Costs*:**

Utility direct costs ($):	*Incremental capital:*		
	Incremental O&M:	$	11,968.36
	Incentive:	$	-
	Total:	$	11,968.36
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:	$	-
Participant costs ($):	*Incremental equipment:*	$	-
	Incremental O&M:		
	Total:	$	-

E. Comments:

Gross expenditures for this program are included in the Gross C&DM expenditures total in Appendix A.

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

Load Control Pilot Program

These expenses relate to research and analysis of the load control opportunity for electric water heater load control. The Norfolk Power affiliate firm, Norfolk Energy has approximately 4,000 rental electric water heaters and this program component is to purchase, install and analyse results of a load control pilot to be completed by the end of 2007.

NPV based on the TRC calculation for the forecasted results of this program component is $204,000.00.

Appendix B - Discussion of the Program

(complete this section for each program)

A. **Name of the Program:** Load Control Pilot Program

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

These expenses relate to research and analysis of the load control opportunity for electric water heater load control. The Norfolk Power affiliate firm, Norfolk Energy has approximately 4,000 rental electric water heaters and this program component is to purchase, install and analyse results of a load control pilot to be completed by the end of 2007.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	Existing uncontrolled water heaters		
Efficient technology:	Controlled tanks		
Number of participants or units delivered:	300		
Measure life (years):	12		

B. **TRC Results:**

TRC Benefits ($):	*$*	*290,000.00*
TRC Costs ($):		
Utility program cost (less incentives):	$	71,000.00
Participant cost:	$	15,000.00
Total TRC costs:	$	86,000.00
Net TRC (in year CDN $):	$	204,000.00
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		3.37

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

Conservation Programs:

Demand savings (kW):	*Summer*		
	Winter		
		lifecycle	*in year*
Energy saved (kWh):			
Other resources saved :			
Natural Gas (m3):			
Other (specify):			

Demand Management Programs:

Controlled load (kW)	868
Energy shifted On-peak to Mid-peak (kWh):	468,561
Energy shifted On-peak to Off-peak (kWh):	66,278
Energy shifted Mid-peak to Off-peak (kWh):	

Demand Response Programs:

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

Power Factor Correction Programs:

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

Line Loss Reduction Programs:

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

Distributed Generation and Load Displacement Programs:

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

Fuel type:			
Other Programs (specify):			
Metric (specify):			

D. **Program Costs*:**

Utility direct costs ($):	*Incremental capital:*	$	71,000.00
	Incremental O&M:		
	Incentive:	$	-
	Total:	$	71,000.00
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:	$	-
Participant costs ($):	*Incremental equipment:*	$	-
	Incremental O&M:		
	Total:	$	-

E. Comments:

Estimated TRC analysis for 300 pilot water heaters under load control.

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

Distribution Loss Reduction

This program component was started in 2005 although the majority of the work involved and expenditures will be completed in 2006 and 2007. Total planned expenditures for the program component are $100,000 with a NPV of the expenditures of $97,235. System loss reduction is variable depending on system loading and customer growth. Therefore system loss calculations and expected results are calculated as an average during a "normal" year. Over time the results are expected to meet or exceed the calculated outcome.

Assumptions made to estimate the benefits of this program were:

- All customers benefit through reduced Distribution System costs.
- Total system loss reduction will be ½ of 1 percent.
- Loss reduction will apply to all load periods.

NPV based on the TRC calculation for the forecasted results of this program component is $2,394,600.00

Appendix B - Discussion of the Program

(complete this section for each program)

A. **Name of the Program:** SCADA Development and Load Flow Studies/Improvements

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

LDC System program to reduce system losses through SCADA monitoring and feeder load balancing and feeder studies/improvements

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	Current System Arrangement		
Efficient technology:	Monitored and improved system		
Number of participants or units delivered:	18435		
Measure life (years):	30		

B. **TRC Results:**

TRC Benefits ($):	*$*	*2,491,835.00*
TRC Costs ($):		
Utility program cost (less incentives):	$	97,235.00
Participant cost:	$	-
Total TRC costs:	$	97,235.00
Net TRC (in year CDN $):	$	2,394,600.00
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		25.63

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

Conservation Programs:

Demand savings (kW):	*Summer*		
	Winter		
		lifecycle	*in year*
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):		368
	lifecycle	*in year*
Energy savngs (kWh):	61,938,718	2,064,624

Distributed Generation and Load Displacement Programs:

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

Other Programs (specify):

Metric (specify):

D. **Program Costs*:**

Utility direct costs ($):	*Incremental capital:*	$	97,235.00
	Incremental O&M:		
	Incentive:		
	Total:	$	97,235.00
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:	$	-
Participant costs ($):	*Incremental equipment:*	$	-
	Incremental O&M:		
	Total:	$	-

E. Comments:

Utility capital costs are NPV of utility expenditures planned through 2007. System loss reductions are expected to exceed a 0.5 % reduction. All calculations for loss reduction in the TRC model are based on this 1/2 of 1 percent reduction.

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

2005 Lighten Your Electricity Bill, Residential

This Residential Coupon Program ran from October 1st to December 31, 2005. Norfolk Power Distribution Inc. partnered with Energyshop and Canadian Tire to deliver this residential program that offered energy efficient products at a discounted rate. We joined 32 other LDC's across the province to launch a provincial campaign. Included discounts for the following products - ceiling fans, LED Lights, CFL, Programmable Thermostats, Indoor and Outdoor Timers. The following information is an overview of the various program components. Costs shown are the final, complete costs for the program. All Appendix B documentation for the various components of the program is found at the end of this subsection.

CFL Component

The 2005 program provided customers with a $3 coupon on any pack of compact fluorescent bulbs. Using store data provided by Energyshop.com, the number of bulbs sold by wattage was used to develop the average wattage of bulb sold. Based on this information, it was assumed that the average wattage sold during this program was 15 watts. Additionally the average number of bulbs per package/coupon was 2.65.

Using the above information and the fact that Norfolk Power customers used 504 coupons, the actual number of CFL bulbs purchased by customers was 1336 (504 X 2.65).

NPV based on the TRC calculation for this program component is $25,700.00

LED Christmas light Component

Like the CFLs, customers were provided with a $5 coupon for the purchase of any package of LED seasonal lights. Using store data provided by Energyshop.com, average size of LED light string sold during the campaign was determined. Based on this information, it was assumed that the average string sold had 59 bulbs.

With guidance from Energyshop.com, it was also assumed that 50% of the LED lights sold were those replacing a 5 watt Christmas string and the remaining 50% were used to replace mini lights which yields a slightly lower savings.

Using the above information and the fact that Norfolk Power customers used 483 coupons, the actual number of LED lights sold to customers was 1140 (483 X 59 / 25). 50% of these would be used to replace 5 watt bulb strings and the other 50% would replace mini lights.

NPV based on the TRC calculation for this program component is $13,600.00.

Programmable Thermostat Component

The savings estimate outlined in the TRC Guide were used for programmable thermostat savings calculations. Participant rates were adjusted to account for market share. Using

data provided by Energyshop.com and other studies, the following province wide fuel share assumptions were used:

- Electrical Space Heating 17.3%
- Electrical Space Cooling (central air) 45.0%

We expect that the provincial average numbers for the saving calculations that we did will be somewhat conservative, they still yield a positive NPV for this program component. Norfolk customers purchased 115 programmable thermostats using the coupons.

NPV based on the TRC calculation for this program component is $28,800.00.

Indoor Timer Component

In the absence of OEB savings estimates for indoor timers, The SeeLine Group developed savings estimates for timers used on indoor lighting and air conditioners.

The savings estimate for timers for indoor lighting is considered to be small. It assumes that the timer is used on a 60 W bulb and provides savings during the winter peak, winter mid peak and summer peak periods. In total, the timer is expected to provide approximately 98 kWh savings.

The savings estimate developed for timers used on unit air conditioners is based on the owner setting the timer to bring the air conditioner on a few hours before he or she arrives home. Based on this assumption, a timer used for a unit air conditioner would provide approximately 108 kWh in annual savings.

Based on discussions with EnergyShop.com it was assumed that 50% of the timers would be used for lighting and the remaining 50% would be used for air conditioners. SLG made an additional assumption and assumed that it was unlikely that all of the timers would be used appropriately; participation rates were reduced by 30%

Using the above information and the fact that Norfolk Power customers used 22 coupons, the actual number of indoor timers used for the TRC calculations was 15 (30% less than the number of coupons used).

NPV based on the TRC calculation that was completed by the SeeLine Group for this program component is $1,728.00.

Outdoor Timer Component

The savings estimate for the outdoor timer is based on information from the TRC Guide.

Norfolk Power customers used 32 coupons for outdoor timers.

NPV based on the TRC calculation for this program component is $7,100.00.

Ceiling Fan Component

At the time of this analysis, SLG felt there was not enough significant evidence to support a savings estimate for ceiling fans. Norfolk Power customers purchased 45 ceiling fans with the coupons provided.

LDC direct costs were determined based on the assumption that costs were shared as a percentage of overall sales. Incentive dollars are specific to coupon product. The TRC savings calculation was not completed based on insufficient information to calculate savings. Costs for this program component have been included in the gross in year C&DM expenditures in the residential customer class.

Appendix B - Discussion of the Program

(complete this section for each program)

A. **Name of the Program:** 2005 Lighten Your Electricity Bill, CFL Component.

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

Residential Coupon Program running from October 1st to December 31, 2005. Norfolk Power Distribution Inc. partnered with Energyshop and Canadian Tire to deliver the a residential program that offered energy efficient products at a discounted rate. We joined 32 other LDC's across the province to launch a provincial campaign. Included discounts for the following products - ceiling fans, LED Lights, CFL, Programmable Thermostats, Indoor and Outdoor Timers. This Appendix is for the CFL component of the program.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	60 watt incandescent light bulb		
Efficient technology:	15 watt CFL		
Number of participants or units delive	1336		
Measure life (years):	4		

B. **TRC Results:**

TRC Benefits ($):		*$ 29,864.00*
TRC Costs ($):		
Utility program cost (less incentives):		$ 1,764.00
Participant cost:		$ 2,400.00
Total TRC costs:		$ 4,164.00
Net TRC (in year CDN $):		$ 25,700.00
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		7.17

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

Conservation Programs:

Demand savings (kW):	*Summer*		
	Winter		27
		lifecycle	*in year*
Energy saved (kWh):		*502,122*	125,531
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. **Program Costs*:**

Utility direct costs ($):	*Incremental capital:*	
	Incremental O&M:	$ 1,763.71
	Incentive:	$ 1,512.00
	Total:	$ 3,275.71
Utility indirect costs ($):	*Incremental capital:*	
	Incremental O&M:	
	Total:	$ -
Participant costs ($):	*Incremental equipment:*	$ 2,400.00
	Incremental O&M:	
	Total:	$ 2,400.00

E. Comments:

LDC direct costs were determined based on the assumption that costs were shared as a percentage of overall sales. Incentive dollars are specific to coupon product. The number of CFL bulbs sold through the program was calculated based on an average package size of 2.65 bulbs per coupon (and Norfolk Power customers redeemed 504 coupons).

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

Appendix B - Discussion of the Program

(complete this section for each program)

A. **Name of the Program:** 2005 Lighten Your Electricity Bill, LED christmas light Component.

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

Residential Coupon Program running from October 1st to December 31, 2005. Norfolk Power Distribution Inc. partnered with Energyshop and Canadian Tire to deliver the a residential program that offered energy efficient products at a discounted rate. We joined 32 other LDC's across the province to launch a provincial campaign. Included discounts for the following products - ceiling fans, LED Lights, CFL, Programmable Thermostats, Indoor and Outdoor Timers. This Appendix is for the LED Christmas light component of the program.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	5 watt incandescent bulb christmas light string (25 bulbs)	mini light incandescent bulb christmas light string (25 bulbs)	
Efficient technology:	LED christmas lights	LED christmas lights	
Number of participants or units delive	570	570	
Measure life (years):	30	30	

B. **TRC Results:**

TRC Benefits ($):	*$*	*17,490.00*
TRC Costs ($):		
Utility program cost (less incentives):	$	1,690.00
Participant cost:	$	2,200.00
Total TRC costs:	$	3,890.00
Net TRC (in year CDN $):	$	13,600.00
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		4.50

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

Conservation Programs:

Demand savings (kW):	*Summer*		
	Winter		6
		lifecycle	*in year*
Energy saved (kWh):		*423,566*	14,119
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. **Program Costs*:**

Utility direct costs ($):	*Incremental capital:*		
	Incremental O&M:	$	1,690.00
	Incentive:	$	2,415.00
	Total:	$	4,105.00
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:	$	-
Participant costs ($):	*Incremental equipment:*	$	2,200.00
	Incremental O&M:		
	Total:	$	2,200.00

E. Comments:

LDC direct costs were determined based on the assumption that costs were shared as a percentage of overall sales. Incentive dollars are specific to coupon product. The number of LED strings sold through the program was calculated based on an average purchase of a string length of 59 bulbs. The TRC table used a string length of 25 bulbs. Therefore the coupons redeemed was adjusted based on the average sale. (Norfolk Power customers redeemed 483 coupons (483 X 59 / 25 = 1140 strings of lights). According to the Energy Shop analysis after program completion, 1/2 of the lights purchased replaced 5 watt bulb strings and the other 1/2 replaced mini light strings.

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

Appendix B - Discussion of the Program

(complete this section for each program)

A. **Name of the Program:** 2005 Lighten Your Electricity Bill, Programmable Thermostat component of the program

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

Residential Coupon Program running from October 1st to December 31, 2005. Norfolk Power Distribution Inc. partnered with Energyshop and Canadian Tire to deliver the a residential program that offered energy efficient products at a discounted rate. We joined 32 other LDC's across the province to launch a provincial campaign. Included discounts for the following products - ceiling fans, LED Lights, CFL, Programmable Thermostats, Indoor and Outdoor Timers. This Appendix is for the programmable thermostat component of the program.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	Standard Thermostat		
Efficient technology:	Programmable thermostat		
Number of participants or units delivered:	115		
Measure life (years):	18		

B. **TRC Results:**

TRC Benefits ($):	*$*	*33,102.00*
TRC Costs ($):		
Utility program cost (less incentives):	$	402.00
Participant cost:	$	3,900.00
Total TRC costs:	$	4,302.00
Net TRC (in year CDN $):	$	28,800.00
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		7.69

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

Conservation Programs:

		lifecycle	in year
Demand savings (kW):	*Summer*		8
	Winter		21
Energy saved (kWh):		*609,115*	33,840
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. **Program Costs*:**

Utility direct costs ($):	*Incremental capital:*		
	Incremental O&M:	$	402.00
	Incentive:	$	1,725.00
	Total:	$	2,127.00
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:	$	-
Participant costs ($):	*Incremental equipment:*	$	3,900.00
	Incremental O&M:		
	Total:	$	3,900.00

E. Comments:

LDC direct costs were determined based on the assumption that costs were shared as a percentage of overall sales. Incentive dollars are specific to coupon product. The number of programmable thermostats purchased was used to determine the energy savings both winter and summer. The provincial average use of these thermostats was 17.3% for electrical space heating and 45.0% for air conditioning. These percentages were used to determine the number of thermostats used for each period based on the total number sold (115) to Norfolk Power customers.

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

Appendix B - Discussion of the Program

(complete this section for each program)

A. **Name of the Program:** 2005 Lighten Your Electricity Bill, indoor timer component of the program

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

Residential Coupon Program running from October 1st to December 31, 2005. Norfolk Power Distribution Inc. partnered with Energyshop and Canadian Tire to deliver the a residential program that offered energy efficient products at a discounted rate. We joined 32 other LDC's across the province to launch a provincial campaign. Included discounts for the following products - ceiling fans, LED Lights, CFL, Programmable Thermostats, Indoor and Outdoor Timers. This Appendix is for the indoor timer component of the program.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	No timer used		
Efficient technology:	Indoor timer used		
Number of participants or units delivered:	15		
Measure life (years):	20		

B. **TRC Results:**

TRC Benefits ($):	*$*	*1,849.00*
TRC Costs ($):		
Utility program cost (less incentives):	$	77.00
Participant cost:	$	44.00
Total TRC costs:	$	121.00
Net TRC (in year CDN $):	$	1,728.00
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		15.28

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

Conservation Programs:

Demand savings (kW):	*Summer*		1.5
	Winter		
		lifecycle	*in year*
Energy saved (kWh):		*27,831*	1,392
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. **Program Costs*:**

Utility direct costs ($):	*Incremental capital:*		
	Incremental O&M:	$	77.00
	Incentive:	$	22.00
	Total:	$	99.00
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:	$	-
Participant costs ($):	*Incremental equipment:*	$	44.00
	Incremental O&M:		
	Total:	$	44.00

E. Comments:

LDC direct costs were determined based on the assumption that costs were shared as a percentage of overall sales. Incentive dollars are specific to coupon product. The TRC savings calculation was completed by SeeLine based on the timers purchased by Norfolk Power Customers and their analysis.

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

Appendix B - Discussion of the Program

(complete this section for each program)

A. **Name of the Program:** 2005 Lighten Your Electricity Bill, Outdoor timer component of the program

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

Residential Coupon Program running from October 1st to December 31, 2005. Norfolk Power Distribution Inc. partnered with Energyshop and Canadian Tire to deliver the a residential program that offered energy efficient products at a discounted rate. We joined 32 other LDC's across the province to launch a provincial campaign. Included discounts for the following products - ceiling fans, LED Lights, CFL, Programmable Thermostats, Indoor and Outdoor Timers. This Appendix is for the outdoor timer component of the program.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	2 Flood Lights, 75W Incandescent, on 50% time		
Efficient technology:	Outdoor timer used		
Number of participants or units delivered:	32		
Measure life (years):	20		

B. **TRC Results:**

TRC Benefits ($):		*$ 7,812.00*
TRC Costs ($):		
	Utility program cost (less incentives):	$ 112.00
	Participant cost:	$ 600.00
	Total TRC costs:	$ 712.00
Net TRC (in year CDN $):		$ 7,100.00
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		10.97

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

Conservation Programs:

Demand savings (kW):	*Summer*		0
	Winter		5
		lifecycle	*in year*
Energy saved (kWh):		*168,192*	8,410
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. **Program Costs*:**

Utility direct costs ($):	*Incremental capital:*	
	Incremental O&M:	$ 112.00
	Incentive:	$ 128.00
	Total:	$ 240.00
Utility indirect costs ($):	*Incremental capital:*	
	Incremental O&M:	
	Total:	$ -
Participant costs ($):	*Incremental equipment:*	$ 600.00
	Incremental O&M:	
	Total:	$ 600.00

E. Comments:

LDC direct costs were determined based on the assumption that costs were shared as a percentage of overall sales. Incentive dollars are specific to coupon product. The TRC savings calculation was completed based on the number of timer coupons redeemed and the tables for TRC values.

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

Appendix B - Discussion of the Program

(complete this section for each program)

A. **Name of the Program:** 2005 Lighten Your Electricity Bill, Ceiling fan component of the program

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

Residential Coupon Program running from October 1st to December 31, 2005. Norfolk Power Distribution Inc. partnered with Energyshop and Canadian Tire to deliver the a residential program that offered energy efficient products at a discounted rate. We joined 32 other LDC's across the province to launch a provincial campaign. Included discounts for the following products - ceiling fans, LED Lights, CFL, Programmable Thermostats, Indoor and Outdoor Timers. This Appendix is for the ceiling fan component of the program.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	No fan		
Efficient technology:	Ceiling fan		
Number of participants or units delivered:	45		
Measure life (years):	20		

B. **TRC Results:**

TRC Benefits ($):		
TRC Costs ($):		
Utility program cost (less incentives):	$	157.47
Participant cost:	$	-
Total TRC costs:	$	157.47
Net TRC (in year CDN $):	-$	157.47
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		-

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

Conservation Programs:

		lifecycle	in year
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. **Program Costs*:**

Utility direct costs ($):	*Incremental capital:*	
	Incremental O&M:	$ 157.47
	Incentive:	$ 225.00
	Total:	$ 382.47
Utility indirect costs ($):	*Incremental capital:*	
	Incremental O&M:	
	Total:	$ -
Participant costs ($):	*Incremental equipment:*	
	Incremental O&M:	
	Total:	$ -

E. Comments:

LDC direct costs were determined based on the assumption that costs were shared as a percentage of overall sales. Incentive dollars are specific to coupon product. The TRC savings calculation was not completed based on insufficient information to calculate savings. Costs for this program component have been included in the gross C&DM expenditures in the residential customer class.

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

Cold Water Wash

This Residential Coupon Program runs from October 1st, 2005 until February 28, 2006. Norfolk Power Distribution Inc. We joined with several other LDC's across the province to take part in this coupon program to promote cold water wash detergent in partnership with Proctor and Gamble.

The assumptions used in the TRC projection for this program are:

- The coupons went to all of our customers (18,435).
- We have assumed a redemption rate of ½ of 1 percent (a total of 69 coupons redeemed) by the time the program ended at the end of February, 2006.
- Energy savings based on the TRC charts.

NPV based on the TRC calculation for the forecasted results of this program component is $1,800.00.

Appendix B - Discussion of the Program

(complete this section for each program)

A. **Name of the Program:** 2005 Residential Customer Program, Cold Water Wash coupon mailing

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

Participated in the Provincial Cold Water Wash Coupon insertion program sponsored by Proctor and Gamble

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	Average Existing Stock		
Efficient technology:	Cold Water Wash Detergent		
Number of participants or units delivered:	92		
Measure life (years):	1		

B. **TRC Results:**

TRC Benefits ($):		*$ 2,750.00*
TRC Costs ($):		
	Utility program cost (less incentives):	$ 250.00
	Participant cost:	$ 700.00
	Total TRC costs:	$ 950.00
Net TRC (in year CDN $):		$ 1,800.00
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		2.89

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

Conservation Programs:

Demand savings (kW):	*Summer*		1
	Winter		2
		lifecycle	*in year*
Energy saved (kWh):		*42,987*	42,987
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. **Program Costs*:**

Utility direct costs ($):	*Incremental capital:*		
	Incremental O&M:	$	250.00
	Incentive:		
	Total:	$	250.00
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:	$	-
Participant costs ($):	*Incremental equipment:*	$	700.00
	Incremental O&M:		
	Total:	$	700.00

E. Comments:

Participated in the Provincial Cold Water Wash Coupon insertion program sponsored by Proctor and Gamble. The program is not complete but the TRC has been calculated based on 1/2 of 1 percent of Norfolk Power customers taking advantage of the coupon redemption. (a total of 92 customers and a net (after free riders) of 69 customers)

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

Conserver Family

In 2005 we participated with the NEPPA utility group in development and distribution of the "Conserver Family" energy information and literature. Development costs were shared among the NEPPA group. In addition we did an addressed mailing to all of our customers of the "Conserver Family" booklet and have a monthly program to insert "Conserver Family" tips to our customers.

As an educational program, the TRC value of this program has not been calculated. Program total costs in 2005 were $ 23,714.20

Appendix B - Discussion of the Program

(complete this section for each program)

A. **Name of the Program:** 2005 Residential Customer Educational Program, "Conserver Family"

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

In 2005 we participated with the NEPPA utility group in development and distribution of the "Conserver Family" energy information and literature. Development costs were shared among the NEPPA group. In addition we did an addressed mailing to all of our customers of the "Conserver Family" booklet and have a monthly program to insert "Conserver Family" tips to our customers.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	No energy efficiency education		
Efficient technology:	Do educational program		
Number of participants or units delive	18435		
Measure life (years):			

B. **TRC Results:**

TRC Benefits ($):		
TRC Costs ($):		
Utility program cost (less incentives):		
Participant cost:		
Total TRC costs:		
Net TRC (in year CDN $):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		

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

Conservation Programs:

Demand savings (kW):	*Summer*		
	Winter		
		lifecycle	*in year*
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. **Program Costs*:**

Utility direct costs ($):	*Incremental capital:*	
	Incremental O&M:	$ 23,714.20
	Incentive:	
	Total:	$ 23,714.20
Utility indirect costs ($):	*Incremental capital:*	
	Incremental O&M:	
	Total:	$ -
Participant costs ($):	*Incremental equipment:*	
	Incremental O&M:	
	Total:	$ -

E. Comments:

Costs for this work include: The Norfolk Power Distribution Inc. portion of shared development costs (shared with the NEPPA utilities) as well as production/printing costs and mailing costs for the direct mail piece.

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

Residential Customer Educational Program, Local Newspaper

In 2005 we authored a series of 28 newspaper articles with energy efficiency topics that were inserted in the local (Simcoe Reformer) paper with distribution to approximately 20,000 residents of Norfolk County including all of our customers.

As an educational program, the TRC value of this program has not been calculated. Program total costs in 2005 were $ 12,332.00

Appendix B - Discussion of the Program

(complete this section for each program)

A. **Name of the Program:** 2005 Residential Customer Educational Program, Local Newspaper

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

In 2005 we authored a series of 28 newspaper articles with energy efficiency topics that were inserted in the local (Simcoe Reformer) paper with distribution to approximately 20,000 residents of Norfolk County.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	No energy efficiency education		
Efficient technology:	Do newspaper program		
Number of participants or units delivered:	20000		
Measure life (years):			

B. **TRC Results:**

TRC Benefits ($):		
TRC Costs ($):		
Utility program cost (less incentives):		
Participant cost:		
Total TRC costs:		
Net TRC (in year CDN $):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		

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

Conservation Programs:

Demand savings (kW):	*Summer*		
	Winter		
		lifecycle	*in year*
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. **Program Costs*:**

Utility direct costs ($):	*Incremental capital:*		
	Incremental O&M:	$	12,332.00
	Incentive:		
	Total:	$	12,332.00
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:	$	-
Participant costs ($):	*Incremental equipment:*		
	Incremental O&M:		
	Total:	$	-

E. Comments:

Costs for this work include: The Norfolk Power Distribution Inc. costs for research and composition of the newspaper articles as well as the cost of the space for 28 weeks in the local daily paper.

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

Training

Training in 2005 included the work to train customer service staff on energy efficient equipment and programs.

Costs for this work appear in Gross C&DM expenditures total on Appendix A. Some training carried out was for commercial/industrial energy efficiency as well as residential.

Appendix B - Discussion of the Program

(complete this section for each program)

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

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

Training in 2005 included the work to train customer service staff on energy efficient equipment and programs.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	No energy efficiency education		
Efficient technology:	Do training of staff		
Number of participants or units delivered:	20		
Measure life (years):			

B. **TRC Results:**

TRC Benefits ($):		
TRC Costs ($):		
Utility program cost (less incentives):		
Participant cost:		
Total TRC costs:		
Net TRC (in year CDN $):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		

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

Conservation Programs:

		lifecycle	in year
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. **Program Costs*:**

Utility direct costs ($):	*Incremental capital:*		
	Incremental O&M:	$	4,283.89
	Incentive:		
	Total:	$	4,283.89
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:	$	-
Participant costs ($):	*Incremental equipment:*		
	Incremental O&M:		
	Total:	$	-

E. Comments:

Costs for this work appear in Gross C&DM expenditures total on Appendix A. Some training carried out was for commercial/industrial energy efficiency as well as residential.

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

C&DM General Administration Costs

Costs identified in this area are common costs that are not specific to particular activities. Examples of these types of costs are the costs for regulatory compliance, reports and general administration.

Total general admin costs for 2005 were $41,139.57. These costs are shown in the Gross C&DM expenditures total.

Appendix B - Discussion of the Program

(complete this section for each program)

A. **Name of the Program:** 2005 C&DM General Administration Costs

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

Costs identified in this appendix are common costs that are not specific to particular activities. Examples of these types of costs are the costs for regulatory compliance, reports and general administration.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:			
Efficient technology:			
Number of participants or units delivered:			
Measure life (years):			

B. **TRC Results:**

TRC Benefits ($):		
TRC Costs ($):		
Utility program cost (less incentives):		
Participant cost:		
Total TRC costs:		
Net TRC (in year CDN $):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		

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

Conservation Programs:

Demand savings (kW):	*Summer*		
	Winter		
		lifecycle	*in year*
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. **Program Costs*:**

Utility direct costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Incentive:		
	Total:	$	-
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:	$	41,139.57
	Total:	$	41,139.57
Participant costs ($):	*Incremental equipment:*		
	Incremental O&M:		
	Total:	$	-

E. Comments:

General admin, not program specific. These costs include the general program costs allocated to Norfolk Power Distribution Inc. for the "2005 Lighten Your Electricity Bill" program. Costs for this component are shown in the Gross C&DM expenditures total of Appendix A.

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

4. Lessons Learned

Utility Size Challenges

As a relatively small utility (approximately 18,000 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.

- Two examples of this type of effective initiative in 2005 were the "Lighten Your Electricity Bill" coupon 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).

- **Our Energy Star window incentive** is a good example of this type of program in Norfolk during 2005. Our partners in the program provided administration and support functions and we received reporting from them on results. Our costs were limited to administration during the program set up and the costs of preparing and inserting the billing stuffer that went to our customers.
- **Our large customer audit program** has been successful to some extent and will continue to improve in 2006. Based on past experience (from the DSM days of the 1980's) 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. .

Customer Education Programs

Customer education is important. It helps ensure that energy efficiency becomes more of a focus for future consumers of electricity. Certainly one of the lessons learned during 2005 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. (See the first paragraph in this section). The result of this issue with customer education and the validation of results is that this type of CDM component may be stopped in future unless some type of reduction in the requirements for TRC analysis is made for customer educational initiatives.

5. Conclusion

In 2005 CDM was initiated and the programs NPDI was involved with were well received by our customers. The customers understand that we want to help.

Norfolk Power Distribution Inc. is committed to CDM. 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.