Fort Frances Power Corporation

Conservation & Demand Management Plan

Annual Report for the Year 2005

Ontario Energy Board File
(RP-2004-0203/EB-2005-0194)

Table of Contents

1. Introduction

The Fort Frances Power Corporation is a local distribution company serving the Town of Fort Frances in Northwestern Ontario with a customer base of approximately 3,900 utility customers. The Fort Frances Power Corporation recognizes and supports the Ontario government's priority towards creating a conservation culture. The Corporation is committed to developing and implementing conservation initiatives to promote energy efficiency and energy conservation amongst all electricity customers. The Fort Frances Power Corporation intends to be a conservation leader in the local community.

The Fort Frances Power Corporation has taken the approach to educate and create customer awareness towards energy conservation. As a smaller local distribution company, the intent has been to focus the limited resources on a mix of conservation and demand management initiatives that will provide the most benefit to customers in all rate classes.

2. Evaluation of Conservation & Demand Management Plan

In 2005, the Fort Frances Power Corporation actively committed to and implemented several conservation initiatives to promote energy conservation amongst all customers. To-date, the following programs have been initiated **(Refer to Appendix A)**;

- October 2005 – Switch to Cold Water Laundry Promotion Program
- November 2005 – Compact Fluorescent Light Promotion Program
- November 2005 – LED Christmas Lighting Conversion Program
- December 2005 – Energy Conservation Seminar for Business Customers
- December 2005 – Energy Conservation Seminar for Residential Customers

3. Discussion of Conservation & Demand Management Programs

3.1 Switch to Cold Water Laundry Promotion Program

Switch to Cold is a national consumer awareness campaign through the Canadian Energy Efficiency Alliance to educate consumers about saving energy and money by switching to cold water laundry washing. The Fort Frances Power Corporation is amongst the 26 utilities supporting the program in Ontario. Through billing inserts, the program distributes money savings coupons to customers to encourage the use of cold water laundry detergent. A total of 4,000 coupons have been distributed to utility customers and are valid for redemption through to February 28, 2006. Once coupon redemption is complete, TRC Guide calculations will be performed and reported in 2006.
(Refer to Appendix B-1)

3.2 Compact Fluorescent Light Promotion Program

A program was implemented to promote energy savings benefits through the use of compact fluorescent light bulbs amongst all customers in the residential rate class. The program included the purchase of a total quantity of 1,000 compact fluorescent light bulbs, 15-watt bulb to replace a 60-watt incandescent bulb and distribution directly to customers. Included with the distribution of the bulbs were printed brochures containing information to educate customers on the benefits of using the compact fluorescent light bulbs.
(**Refer to Appendix B-2)**

3.3 LED Christmas Lighting Conversion Program

A program was implemented to promote energy savings benefits through the use of light-emitting diode (LED) Christmas light strings amongst all customers. The program required customers to make a direct exchange of incandescent Christmas light strings for coupons for the purchase of new LED Christmas light strings. In coordination with the local Canadian Tire Store, a total quantity of 345 strings were exchanged for coupons and redeemed by customers. Included with the distribution of the coupons were printed brochures containing information to educate customers on the benefits of using the LED Christmas light strings.
(**Refer to Appendix B-3)**

3.4 Public Communications & Leveraging Existing Energy Conservation Programs

A public communications program was launched to raise awareness for the need to reduce electricity consumption and to provide customers with energy conservation tips. The program was designed to get the right information to the right people in each rate class. Customers were also made aware of existing energy conservation programs that are already established within the government program framework and were encouraged to participate in these programs, such as energy audit services and retrofit opportunities.

The following energy conservation education seminars were organized and held in 2005;

a) Energy Conservation Seminar for Business Customers – a seminar was conducted for all general service rate class customers to provide information on Ontario's electricity conservation efforts and details on specific energy conservation ideas and programs to be pursued. The seminar included an energy conservation presentation specifically for general service customers by a Conservation and Energy Services Advisor, a question and answer period, product demonstrations and energy conservation product information.

b) Energy Conservation Seminar for Residential Customers – a seminar was conducted for all residential rate class customers to provide information on Ontario's electricity conservation efforts and details on specific energy conservation ideas and programs to be pursued. The seminar included a residential energy conservation presentation by a Conservation and Energy Services Advisor, a question and answer period, product demonstrations and energy conservation product information.
(Refer to Appendix B-4)

4. Lesson Learned

Upon review of conservation and demand management programs that were implemented in 2005, the Fort Frances Power Corporation has determined the following “Lessons Learned”;

a) As a small distributor with limited resources, it is not in a position to “re-invent the wheel” on energy conservation. It is beneficial to access common template programs and to promote existing energy conservation programs that are already well-established and proven effective.

b) Hands-on demonstrations that show the benefit and impact of the program or a product resulted in increased customer impact and responses.

c) Information brochures and literature containing visual depictions such as graphs and data charts resulted in increased customer impact and responses.

d) Programs requiring direct customer interaction and participation resulted in increased customer impact and responses.

e) After initiation of a program, customer follow-up on a timely basis is essential to show distributor commitment to the program and also to ensure customer commitment.

5. Conclusion

The Fort Frances Power Corporation has concluded that the programs initiated and implemented in 2005 as part of it’s Conservation and Demand Management Plan did meet their intended purpose to successfully promote energy conservation to customers and best achieved the energy conservation and demand management goals.

The Fort Frances Power Corporation has focused on initiatives that are effective by providing a mix of different programs to benefit all utility customers and is committed to continue to move forward in 2006 to implement it’s Conservation and Demand Management Plan.

Appendix A - Evaluation of the CDM Plan

(Fort Frances Power Corporation: RP-2004-0203/EB-2005-0194)

	Total	Residential	Commercial	Institutional	Industrial	Agricultural	LDC System	Other 1	Other 2	Other 3	Other 4
Net TRC value ($):	$24,915	$24,915									
Benefit to cost ratio:	2.51	2.51									
Number of participants or units delivered:	3,864	3,400	464								
Total KWh to be saved over the lifecycle of the plan (kWh):	612,650	612,650									
Total in year kWh saved (kWh):	110,555	110,555									
Total peak demand saved (kW):	25.76	25.76									
Total kWh saved as a percentage of total kWh delivered (%):	1.34	1.34									
Peak kW saved as a percentage of LDC peak kW load (%):	0.14	0.14									
Gross in year C&DM expenditures ($):	$15,021	$13,107	$1,914								
Expenditures per KWh saved ($/kWh):*	$0.0214	$0.0214									
*Expenditures per KW saved ($/kW)**:*	$508.80	$508.80									

Utility discount rate (%):	3.13%

*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.

Appendix B-1 - Discussion of the Program

(Fort Frances Power Corporation: RP-2004-0203/EB-2005-0194)

A. **Name of the Program:** **Switch to Cold Program Water Laundry Promotion Program**

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

Switch to Cold is a national consumer awareness campaign through the Canadian Energy Efficiency Alliance to educate consumers about saving energy and money by switching to cold water laundry washing. The program is promoted using coupons through direct billing inserts. The program was initiated in October 2005 and coupons can be redeemed until February 2006.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:			
Efficient technology:			
Number of participants or units delive	4,000		
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):		#DIV/0!

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:

	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:	$ 250.00
	Incentive:	
	Total:	$ 250.00
Utility indirect costs ($):	*Incremental capital:*	
	Incremental O&M:	0
	Total:	0
Participant costs ($):	*Incremental equipment:*	0
	Incremental O&M:	
	Total:	0

E. Comments:

Once coupon redemption is complete in 2006, TRC calculations will be performed and reported in the 2006 Annual CDM Plan Report.

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

Appendix B-2 - Discussion of the Program

(Fort Frances Power Corporation: RP-2004-0203/EB-2005-0194)

A. **Name of the Program:** **Compact Fluorescent Light Promotion Program**

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

The program was implemented to promote energy savings benefits through the use of compact fluorescent light bulbs and involved the direct distribution of 15-watt compact fluorescent light bulbs to customers to replace 60-watt incandescent light bulbs, along with appropriate information brochures.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	60 W Incandescent Bulb		
Efficient technology:	15 W CFL Screw-In		
Number of participants or units delive	1000		
Measure life (years):	4		

B. **TRC Results:**

TRC Benefits ($):	*$*	*31,344.03*
TRC Costs ($):		
Utility program cost (less incentives):	$	3,888.95
Participant cost:	$	-
Total TRC costs:	$	3,888.95
Net TRC (in year CDN $):	$	27,455.08
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	$	8.06

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

Conservation Programs:

Demand savings (kW):	*Summer*		0
	Winter		23
		lifecycle	*in year*
Energy saved (kWh):		416,000	104,000
Other resources saved :			
Natural Gas (m3):			
Other (specify):			

Demand Management Programs:

Controlled load (kW)	
Energy shifted On-peak to Mid-peak (kWh):	
Energy shifted On-peak to Off-peak (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:	$ 3,888.95
	Incentive:	
	Total:	$ 3,888.95
Utility indirect costs ($):	*Incremental capital:*	
	Incremental O&M:	$0.00
	Total:	$0.00
Participant costs ($):	*Incremental equipment:*	$0.00
	Incremental O&M:	*$0.00*
	Total:	$0.00

E. Comments:

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

Appendix B-3 - Discussion of the Program

(Fort Frances Power Corporation: RP-2004-0203/EB-2005-0194)

A. **Name of the Program:** **LED Christmas Lighting Conversion Program**

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

The program was implemented to promote energy savings benefits through the use of LED Christmas light strings and involved the direct exchange of incandescent Christmas light strings for coupons to be redeemed for LED Christmas light strings, coordinated through a local retailer.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	25-STRING, 5W LIGHTS C-7		
Efficient technology:	LED 70 STRING CHRISTMAS		
Number of participants or units delive	345		
Measure life (years):	30		

B. **TRC Results:**

TRC Benefits ($):	*$*	*10,104.85*
TRC Costs ($):		
Utility program cost (less incentives):	$	7,227.03
Participant cost:	$	-
Total TRC costs:	$	7,227.03
Net TRC (in year CDN $):	$	2,877.82
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	$	1.40

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

Conservation Programs:

Demand savings (kW):	*Summer*		0
	Winter		2.76
		lifecycle	*in year*
Energy saved (kWh):		196,650	6,555
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:	$ 7,227.03
	Incentive:	
	Total:	$ 7,227.03
Utility indirect costs ($):	*Incremental capital:*	
	Incremental O&M:	$ -
	Total:	$ -
Participant costs ($):	*Incremental equipment:*	0
	Incremental O&M:	
	Total:	0

E. Comments:

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

Appendix B-4 - Discussion of the Program

(Fort Frances Power Corporation: RP-2004-0203/EB-2005-0194)

A. **Name of the Program:** **Public Communications & Leveraging Existing Programs**

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

A public communications program was launched to raise awareness for the need to reduce electricity consumption and to provide customers with energy saving ideas and encouragement to participate in existing energy conservation programs. Also, seperate energy conservation education seminars were organized and held for General Service Customers and Residential Customers.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:			
Efficient technology:			
Number of participants or units delive	3,864		
Measure life (years):			

B. **TRC Results:**

TRC Benefits ($):		*$* -
TRC Costs ($):		
	Utility program cost (less incentives):	$ 5,167.83
	Participant cost:	$ -
	Total TRC costs:	$ 5,167.83
Net TRC (in year CDN $):		-$ 5,167.83
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:	$ 5,167.83
	Incentive:	
	Total:	$ 5,167.83
Utility indirect costs ($):	*Incremental capital:*	
	Incremental O&M:	0
	Total:	0
Participant costs ($):	*Incremental equipment:*	0
	Incremental O&M:	
	Total:	0

E. Comments:

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