



**2006 Annual Report**  
**CDM Third Tranche Funding**  
**Fort Frances Power Corporation**

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

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## **1. Introduction**

The Fort Frances Power Corporation is a local distribution company providing service to a customer base of approximately 3,900 customers within the municipal boundaries of the Town of Fort Frances in Northwestern Ontario. The Fort Frances Power Corporation recognizes and supports the Ontario government's priority towards creating a conservation culture. The Corporation is committed to develop and implement conservation initiatives that promote energy efficiency and energy conservation amongst all electricity customers. The Fort Frances Power Corporation continued to be a conservation leader within the local Fort Frances community in 2006.

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 continued to be to focus the limited resources on an appropriate mix of conservation and demand management initiatives that will provide the most benefit to all customers.

## **2. Evaluation of Current Year 2006 CDM Plan**

In 2006, the Fort Frances Power Corporation continued to actively commit to and implemented several conservation initiatives to promote energy conservation to customers.

The following conservation and demand management program initiatives were worked on in the 2006 calendar year;

- Energy Conservation Public Communications Sessions
- OPA Spring & Fall 2006 "Every Kilowatt Counts" Campaign
- Compact Fluorescent Light Promotion Program
- LED Traffic Light Conversion Program
- Outdoor Rink Light Conversion Program
- Distribution System Improvements Program

**(Refer to Appendices A & C)**

### **3. Discussion of Conservation & Demand Management Programs**

#### **3.1 Public Communications Programs**

The Public Communications Programs continued in 2006 to raise awareness for the need to reduce electricity consumption and to educate all 3,900 customers with ongoing energy conservation information. The programs were designed to get the right information to the customers. This included participation at the 2006 Fort Frances Home & Leisure Show, which allowed for product demonstrations, question and answer sessions and distribution of a variety of energy conservation information directly to approximately 1,600 customers. 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.

The Fort Frances Power Corporation actively participated in the OPA Conservation Bureau's Spring and Fall 2006 "Every Kilowatt Counts" Campaign. The co-branding allowed for common province-wide messages on energy conservation to be communicated by both parties through the delivery of approximately 8,000 program coupon books directly to customers in Fort Frances. Both the spring and fall programs experienced very good customer coupon redemption rates.

**(Refer to Appendix B-1)**

#### **3.2 Compact Fluorescent Light Promotion Program**

The Compact Fluorescent Light Program continued in 2006 to promote the energy savings benefits that can be easily realized through the use of compact fluorescent light bulbs amongst all customers in the residential rate class. To-date, the program has included the distribution of approximately 3,000 compact fluorescent 15-watt light bulbs to replace 60-watt incandescent bulbs directly to customers. Included with the distribution of the bulbs were printed brochures containing information to directly educate customers on the benefits of using the compact fluorescent light bulbs.

**(Refer to Appendix B-2)**

#### **3.3 Switch to Cold Water Laundry Promotion Program**

The Switch to Cold Program was 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 was amongst the 26 utilities supporting the program in Ontario. Through billing inserts, the program distributed approximately 4,000 coupons money saving coupons directly to customers to encourage the use of cold water laundry detergent.

**(Refer to Appendix B-3)**

### **3.4 LED Christmas Lighting Conversion Program**

The LED Christmas Lighting Conversion Program was implemented to promote energy savings benefits through the use of light-emitting diode (LED) Christmas lights 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 retailer, a total 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-4)**

### **3.5 LED Traffic Light Conversion Program**

The LED Traffic Light Conversion Program was initiated in 2006 to replace all traffic control and pedestrian control incandescent signal lights with energy efficient LED lamps at all intersections throughout the Town of Fort Frances. In 2006, the replacement of all 336 traffic control incandescent signal lights with LED lamps was completed at all intersections and the pedestrian signal lights are scheduled for completion in 2007. The LED conversion program directly benefits the Town of Fort Frances through significant energy savings, improved safety by brighter display and less on-going maintenance cost by longer bulb life.

**(Refer to Appendix B-5)**

### **3.6 Outdoor Rink Light Conversion Program**

The Outdoor Rink Light Conversion Program was initiated in 2006 as a demonstration program to educate commercial customers and create awareness on energy savings to be achieved by the replacement of 8 outdoor 1500W halogen lights with 400W metal halide lights. The program application at an outdoor hockey rink in the Town of Fort Frances provided the venue to directly demonstrated to customers the benefits of significant energy savings, brighter light display and longer bulb life by conversions and upgrades of outdoor lights at commercial establishments.

**(Refer to Appendix B-6)**

### **3.7 Distribution System Improvements Program**

The Distribution System Improvements Program was initiated in 2006 to obtain greater efficiencies within the utility distribution system grid by focusing on distribution system losses and improving energy efficiency on the utility side of the meter. Work began in 2006 on system optimization studies to identify and prioritize opportunities for enhancements within the distribution system. Once the studies and analysis are completed, recommended system improvements will be planned for implementation in 2007.

**(Refer to Appendix B-7)**

## **4. Lesson Learned**

Upon review of conservation and demand management programs that have been implemented, the Fort Frances Power Corporation has determined the following “Lessons Learned” continued to be relevant in 2006;

- 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 direct 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 Conservation and Demand Management Plan programs initiated and implemented to-date have met their intended purpose and expectations to successfully promote energy conservation to customers and have achieved their planned energy conservation and demand management goals.

In 2006, the Fort Frances Power Corporation continued to develop strong brand equity towards energy conservation and demand management amongst all customers in the Town of Fort Frances.

The Fort Frances Power Corporation continued to be focused on initiatives that are effective by providing a good mix of different programs to benefit customers and is committed to continue to move forward to completion of its Conservation and Demand Management Plan in 2007.

## Appendix A - Evaluation of the CDM Plan

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

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

	<sup>5</sup> Cumulative Totals Life-to-date	Total for 2006	Residential	Commercial	Institutional	Industrial	Agricultural	LDC System	<sup>4</sup> Smart Meters	Other #1	Other #2
Net TRC value (\$):	\$356,890	\$ 154,463	\$ 189,376	\$ (11,257)	\$ -	\$ -	\$ -	\$ (23,656)		\$ -	\$ -
Benefit to cost ratio:	164	3.91	46.10	0.55	0.00	0.00	0.00	0.00		0.00	0.00
Number of participants or units delivered:	19,689										
Lifecycle (kWh) Savings:	1,362,564	801,324	764,000	37,324	0	0	0	0		0	0
Report Year Total kWh saved (kWh):	298,007	197,867	188,536	9,331	0	0	0	0		0	0
Total peak demand saved (kW):	155	43	42	1	0	0	0	0		0	0
Total kWh saved as a percentage of total kWh delivered (%):	1.65%										
Peak kW saved as a percentage of LDC peak kW load (%):											
<sup>1</sup> Report Year Gross C&DM expenditures (\$):	\$72,764.00	\$ 57,612	\$ 7,799	\$ 26,157	\$ -	\$ -	\$ -	\$ 23,656	\$ -	\$ -	\$ -
<sup>2</sup> Expenditures per kWh saved (\$/kWh):	\$0.29	\$ 0.07	\$ 0.01	\$ 0.70	\$ -	\$ -	\$ -	\$ -		\$ -	\$ -
<sup>3</sup> Expenditures per kW saved (\$/kW):	\$14.19	\$ 1,355.52	\$ 187.79	\$ 26,910.72	\$ -	\$ -	\$ -	\$ -		\$ -	\$ -
Utility discount rate (%):	3.13%										

<sup>1</sup> Expenditures are reported on accrual basis.

<sup>2</sup> Expenditures include all utility program costs (direct and indirect) for all programs which primarily generate energy savings.

<sup>3</sup> Expenditures include all utility program costs (direct and indirect) for all programs which primarily generate capacity savings.

<sup>4</sup> Please report spending related to 3rd tranche of MARR funding only. TRC calculations are not required for Smart Meters. Only actual expenditures for the year need to be reported.

<sup>5</sup> Includes total for the reporting year, plus prior year, if any (for example, 2006 CDM Annual report for third tranche will include 2005 and 2004 numbers, if any).

# Appendix B1 - 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, separate energy conservation education seminars were organized and held for General Service Customers and Residential Customers. The Fort Frances Power Corporation actively participated in the Ontario Conservation Bureau's Spring and Fall 2006 "Every Kilowatt Hour Counts" Campaign. The co-branding allowed for a common message on energy conservation to be communicated by both parties through the programs.

**Measure(s):**

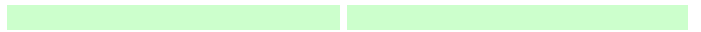
	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:			
Efficient technology:			
Number of participants or units delivered for reporting year:	12,000		
Measure life (years):			
Number of Participants or units delivered life to date	12,000		

B. <b>TRC Results:</b>	Reporting Year	Life-to-date TRC Results:
<sup>1</sup> TRC Benefits (\$):		
<sup>2</sup> TRC Costs (\$):		
Utility program cost (excluding incentives):	\$ 1,355.16	\$6,903.99
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	\$ 1,355.16	\$6,903.99
<b>Net TRC (in year CDN \$):</b>	<b>-\$ 1,355.16</b>	<b>-\$6,903.99</b>
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		

C. <b>Results:</b> (one or more category may apply)	<b>Cumulative Results:</b>			
<b>Conservation Programs:</b>				
Demand savings (kW):	Summer			
	Winter			
	lifecycle	in year	Cumulative Lifecycle	Cumulative Annual Savings
Energy saved (kWh):				
Other resources saved :				
Natural Gas (m3):				
Other (specify):				
<b>Demand Management Programs:</b>				
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):				
<b>Demand Response Programs:</b>				
Dispatchable load (kW):				
Peak hours dispatched in year (hours):				
<b>Power Factor Correction Programs:</b>				
Amount of KVar installed (KVar):				
Distribution system power factor at beginning of year (%):				



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



**Line Loss Reduction Programs:**

Peak load savings (kW):			
	<i>lifecycle</i>	<i>in year</i>	
Energy savings (kWh):			

**Distributed Generation and Load Displacement Programs:**

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

**Other Programs (specify):**

Metric (specify):		
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**D. Actual Program Costs:**

		<u>Reporting Year</u>	<u>Cumulative Life to Date</u>
Utility direct costs (\$):	Incremental capital:		
	Incremental O&M:	\$ 1,355.16	\$6,903.99
	Incentive:		
	Total:	\$ 1,355.16	\$ 6,903.99
Utility indirect costs (\$):	Incremental capital:		
	Incremental O&M:		
	Total:		

**E. Assumptions & Comments:**

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

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

# Appendix B2 - 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 delivered for reporting year:	2000		
Measure life (years):	4		
Number of Participants or units delivered life to date	3000		

B. TRC Results:	Reporting Year	Life-to-date TRC Results:
<sup>1</sup> TRC Benefits (\$):	\$ 179,700.00	\$269,800.00
<sup>2</sup> TRC Costs (\$):		
Utility program cost (excluding incentives):	\$6,193.80	\$9,464.85
Incremental Measure Costs (Equipment Costs)	-\$3,600.00	-\$5,400.00
Total TRC costs:	\$ 2,593.80	\$4,064.85
<b>Net TRC (in year CDN \$):</b>	<b>\$ 177,106.20</b>	<b>\$265,735.15</b>
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	\$ 69.28	66.37

C. Results: (one or more category may apply)	Cumulative Results:			
<b>Conservation Programs:</b>				
Demand savings (kW):	Summer			
	Winter	41		61
	lifecycle	in year	Cumulative Lifecycle	Cumulative Annual Savings
Energy saved (kWh):	751,680	187,920	1,127,520	281,880
Other resources saved :				
Natural Gas (m3):				
Other (specify):				
<b>Demand Management Programs:</b>				
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):				
<b>Demand Response Programs:</b>				
Dispatchable load (kW):				
Peak hours dispatched in year (hours):				
<b>Power Factor Correction Programs:</b>				
Amount of KVar installed (KVar):				
Distribution system power factor at beginning of year (%):				
Distribution system power factor at end of year (%):				

**Line Loss Reduction Programs:**

Peak load savings (kW):			
	<i>lifecycle</i>	<i>in year</i>	
Energy savings (kWh):			

**Distributed Generation and Load Displacement Programs:**

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

**Other Programs (specify):**

Metric (specify):		
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<b><u>Actual Program Costs:</u></b>		<b><u>Reporting Year</u></b>	<b><u>Cumulative Life to Date</u></b>
Utility direct costs (\$):	<i>Incremental capital:</i>		
	<i>Incremental O&amp;M:</i>	\$ 6,193.80	\$ 9,464.85
	<i>Incentive:</i>		
	<i>Total:</i>	\$ 6,193.80	\$ 9,464.85
Utility indirect costs (\$):	<i>Incremental capital:</i>		
	<i>Incremental O&amp;M:</i>		
	<i>Total:</i>		

**E. Assumptions & Comments:**

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

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

# Appendix B3 - 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:	HOT WASH/RINSE WATER		
Efficient technology:	COLD WASH/RINSE WATER		
Number of participants or units delivered for reporting year:	4,000		
Measure life (years):	20		
Number of Participants or units delivered life to date	4000		

B. TRC Results:	Reporting Year	Life-to-date TRC Results:
<sup>1</sup> TRC Benefits (\$):	\$ 13,875.00	\$13,875.00
<sup>2</sup> TRC Costs (\$):		
Utility program cost (excluding incentives):	\$ 250.00	\$250.00
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	\$ 250.00	\$250.00
<b>Net TRC (in year CDN \$):</b>	<b>\$ 13,625.00</b>	<b>\$13,625.00</b>
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	\$ 55.50	55.5

C. Results: (one or more category may apply)	Cumulative Results:			
<b>Conservation Programs:</b>				
Demand savings (kW):	Summer			
	Winter	0.53		0.53
	lifecycle	in year	Cumulative Lifecycle	Cumulative Annual Savings
Energy saved (kWh):	12320	616	12,320	1232
Other resources saved :				
Natural Gas (m3):				
Other (specify):				
<b>Demand Management Programs:</b>				
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):				
<b>Demand Response Programs:</b>				
Dispatchable load (kW):				
Peak hours dispatched in year (hours):				
<b>Power Factor Correction Programs:</b>				
Amount of KVar installed (KVar):				
Distribution system power factor at beginning of year (%):				
Distribution system power factor at end of year (%):				

**Line Loss Reduction Programs:**

Peak load savings (kW):			
	<i>lifecycle</i>	<i>in year</i>	
Energy savings (kWh):			

**Distributed Generation and Load Displacement Programs:**

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

**Other Programs (specify):**

Metric (specify):		
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<b><u>Actual Program Costs:</u></b>		<b><u>Reporting Year</u></b>	<b><u>Cumulative Life to Date</u></b>
Utility direct costs (\$):	Incremental capital:		
	Incremental O&M:	\$ 250.00	\$ 250.00
	Incentive:		
	Total:	\$ 250.00	\$ 250.00
Utility indirect costs (\$):	Incremental capital:		
	Incremental O&M:		
	Total:		

**E. Assumptions & Comments:**

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

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

# Appendix B4 - 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 delivered for reporting year:	0		
Measure life (years):	30		
Number of Participants or units delivered life to date	345		

B. <b>TRC Results:</b>	Reporting Year	Life-to-date TRC Results:
<sup>1</sup> TRC Benefits (\$):		\$125,000
<sup>2</sup> TRC Costs (\$):		
Utility program cost (excluding incentives):	\$ -	\$6,332.53
Incremental Measure Costs (Equipment Costs)		-700
Total TRC costs:	\$ -	\$5,632.53
<b>Net TRC (in year CDN \$):</b>		<b>\$119,367</b>
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		22.19

C. <b>Results:</b> (one or more category may apply)	<b>Cumulative Results:</b>			
<b>Conservation Programs:</b>				
Demand savings (kW):	Summer			
	Winter			90
	lifecycle	in year	Cumulative Lifecycle	Cumulative Annual Savings
Energy saved (kWh):			185,400	6,180
Other resources saved :				
Natural Gas (m3):				
Other (specify):				
<b>Demand Management Programs:</b>				
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):				
<b>Demand Response Programs:</b>				
Dispatchable load (kW):				
Peak hours dispatched in year (hours):				
<b>Power Factor Correction Programs:</b>				
Amount of KVar installed (KVar):				
Distribution system power factor at beginning of year (%):				
Distribution system power factor at end of year (%):				

**Line Loss Reduction Programs:**

Peak load savings (kW):			
	<i>lifecycle</i>	<i>in year</i>	
Energy savings (kWh):			

**Distributed Generation and Load Displacement Programs:**

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

**Other Programs (specify):**

Metric (specify):		
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**D. Actual Program Costs:**

		<u>Reporting Year</u>	<u>Cumulative Life to Date</u>
Utility direct costs (\$):	<i>Incremental capital:</i>		
	<i>Incremental O&amp;M:</i>		\$ 6,332.53
	<i>Incentive:</i>		
	<i>Total:</i>		\$ 6,332.53
Utility indirect costs (\$):	<i>Incremental capital:</i>		
	<i>Incremental O&amp;M:</i>		
	<i>Total:</i>		

**E. Assumptions & Comments:**

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

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



# Appendix B5 - Discussion of the Program

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

A. **Name of the Program:** **LED Traffic Light Conversion**

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

The LED Traffic Light Conversion Program was initiated in 2006 to replace all traffic control and pedestrian control incandescent signal lights at all intersections throughout the Town of Fort Frances with energy efficient LED lamps. In 2006, the replacement of all traffic control incandescent signal lights with the installation of LED lamps at all intersections was completed. The LED conversion program directly benefits the Town of Fort Frances through significant energy savings, improved safety, improved safety by brighter display and less on-going maintenance cost by longer bulb life. Energy Savings to be determined upon completion of program in 2007.

**Measure(s):**

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:			
Efficient technology:			
Number of participants or units delivered for reporting year:	336		
Measure life (years):			
Number of Participants or units delivered life to date	336		

B. <b>TRC Results:</b>	Reporting Year	Life-to-date TRC Results:
<sup>1</sup> TRC Benefits (\$):		
<sup>2</sup> TRC Costs (\$):		
Utility program cost (excluding incentives):	\$ 24,566.98	\$24,566.98
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	\$ 24,566.98	\$24,566.98
<b>Net TRC (in year CDN \$):</b>	<b>-\$ 24,566.98</b>	<b>-\$24,566.98</b>
<b>Benefit to Cost Ratio (TRC Benefits/TRC Costs):</b>	<b>\$ -</b>	<b>\$0.00</b>

C. <b>Results:</b> (one or more category may apply)	<b>Cumulative Results:</b>			
<b>Conservation Programs:</b>				
Demand savings (kW):	Summer			
	Winter			
	lifecycle	in year	Cumulative Lifecycle	Cumulative Annual Savings
Energy saved (kWh):				
Other resources saved :				
Natural Gas (m3):				
Other (specify):				
<b>Demand Management Programs:</b>				
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):				
<b>Demand Response Programs:</b>				
Dispatchable load (kW):				
Peak hours dispatched in year (hours):				
<b>Power Factor Correction Programs:</b>				
Amount of KVar installed (KVar):				
Distribution system power factor at beginning of year (%):				
Distribution system power factor at end of year (%):				

**Line Loss Reduction Programs:**

Peak load savings (kW):			
	<i>lifecycle</i>	<i>in year</i>	
Energy savings (kWh):			

**Distributed Generation and Load Displacement Programs:**

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

**Other Programs (specify):**

Metric (specify):		
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<b><u>Actual Program Costs:</u></b>		<b><u>Reporting Year</u></b>	<b><u>Cumulative Life to Date</u></b>
Utility direct costs (\$):	Incremental capital:		
	Incremental O&M:	\$ 24,566.98	\$ 24,566.98
	Incentive:		
	Total:	\$ 24,566.98	\$ 24,566.98
Utility indirect costs (\$):	Incremental capital:		
	Incremental O&M:		
	Total:		

**E. Assumptions & Comments:**

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

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

# Appendix B6 - Discussion of the Program

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

A. Name of the Program: **Outdoor Rink Light Conversion Program**

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

The program was initiated in 2006 as a demonstration program to educate the public and create awareness on energy savings by the replacement of outdoor 1500W halogen incandescent lights with 400W metal halide lights at an outdoor rink in the Town of Fort Frances. The program directly demonstrated to the public the benefits that can be achieved of significant energy savings, brighter light display and longer bulb life by light conversions and upgrades.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	1500 W Halogen Bulb		
Efficient technology:	400 W Metal Halide Bulb		
Number of participants or units delivered for reporting year:		8	
Measure life (years):		4	
Number of Participants or units delivered life to date		8	

B. TRC Results:	Reporting Year	Life-to-date TRC Results:
<sup>1</sup> TRC Benefits (\$):	\$ 14,000.00	\$14,000
<sup>2</sup> TRC Costs (\$):		
Utility program cost (excluding incentives):	\$ 1,590.24	\$1,590.24
Incremental Measure Costs (Equipment Costs)	-\$ 900.00	-900
Total TRC costs:	\$ 690.24	\$690.24
<b>Net TRC (in year CDN \$):</b>	<b>\$ 13,309.76</b>	<b>\$ 13,309.76</b>
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	\$ 20.28	\$ 20.28

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

Cumulative Results:

**Conservation Programs:**

Demand savings (kW):	Summer	Winter	Cumulative Lifecycle	Cumulative Annual Savings
		0.972	37,324	9,331
Energy saved (kWh):	lifecycle 37,324	in year 9,331	37,324	9,331
Other resources saved :				
Natural Gas (m3):				
Other (specify):				

**Demand Management Programs:**

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

**Demand Response Programs:**

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

**Power Factor Correction Programs:**

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

**Line Loss Reduction Programs:**

Peak load savings (kW):			
	<i>lifecycle</i>	<i>in year</i>	
Energy savings (kWh):			

**Distributed Generation and Load Displacement Programs:**

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

**Other Programs (specify):**

Metric (specify):		
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**D. Actual Program Costs:**

		<b><u>Reporting Year</u></b>	<b><u>Cumulative Life to Date</u></b>
Utility direct costs (\$):	Incremental capital:		
	Incremental O&M:	\$ 1,590.24	\$ 1,590.24
	Incentive:		
	Total:	\$ 1,590.24	\$ 1,590.24
Utility indirect costs (\$):	Incremental capital:		
	Incremental O&M:		
	Total:		

**E. Assumptions & Comments:**

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

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

# Appendix B7 - Discussion of the Program

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

A. **Name of the Program:** Distribution System Optimization Program

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

The Distribution System Improvements was initiated in 2006 to obtain greater efficiencies within the utility distribution system grid by focusing on distribution system losses and improving energy efficiency on the utility side of the meter. Once studies and analysis are completed in 2007, planned system enhancements to be pursued may include such initiatives as power system load balancing, the replacement of overloaded distribution equipment and line loss reductions.

**Measure(s):**

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:			
Efficient technology:			
Number of participants or units delivered for reporting year:			
Measure life (years):			
Number of Participants or units delivered life to date			

<b>B. TRC Results:</b>	<b>Reporting Year</b>	<b>Life-to-date TRC Results:</b>
<sup>1</sup> TRC Benefits (\$):		
<sup>2</sup> TRC Costs (\$):		
Utility program cost (excluding incentives):	\$ 23,655.59	\$23,655.59
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	\$ 23,655.59	\$23,655.59
<b>Net TRC (in year CDN \$):</b>	<b>-\$ 23,655.59</b>	<b>-\$23,655.59</b>
<b>Benefit to Cost Ratio (TRC Benefits/TRC Costs):</b>	<b>\$ -</b>	<b>\$0.00</b>

<b>C. Results:</b> (one or more category may apply)	<b>Cumulative Results:</b>	
<b>Conservation Programs:</b>		
Demand savings (kW):	Summer	
	Winter	
	lifecycle	in year
Energy saved (kWh):		Cumulative Lifecycle
Other resources saved :		Cumulative Annual Savings
Natural Gas (m3):		
Other (specify):		
<b>Demand Management Programs:</b>		
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):		
<b>Demand Response Programs:</b>		
Dispatchable load (kW):		
Peak hours dispatched in year (hours):		
<b>Power Factor Correction Programs:</b>		
Amount of KVar installed (KVar):		
Distribution system power factor at beginning of year (%):		
Distribution system power factor at end of year (%):		

**Line Loss Reduction Programs:**

Peak load savings (kW):			
	<i>lifecycle</i>	<i>in year</i>	
Energy savings (kWh):			

**Distributed Generation and Load Displacement Programs:**

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

**Other Programs (specify):**

Metric (specify):		
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<b><u>Actual Program Costs:</u></b>		<b><u>Reporting Year</u></b>	<b><u>Cumulative Life to Date</u></b>
Utility direct costs (\$):	Incremental capital:		
	Incremental O&M:	\$23,655.59	\$ 23,655.59
	Incentive:		
	Total:	\$ 23,655.59	\$ 23,655.59
Utility indirect costs (\$):	Incremental capital:		
	Incremental O&M:		
	Total:		

**E. Assumptions & Comments:**

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

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

# Appendix C - Program and Portfolio Totals

Report Year: 2006

## 1. Residential Programs

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

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

	TRC Benefits (PV)	TRC Costs (PV)	\$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures (\$)
Public Communications - B1		\$ 1,355	-\$ 1,355	0.00				\$ 1,355
Compact Fluorescent Lights - B2	\$ 179,700	\$ 2,594	\$ 177,106	69.28	187,920	751,680	41	\$ 6,194
Switch to Cold Program - B3	\$ 13,875	\$ 250	\$ 13,625	55.50	616	12,320	1	\$ 250
Name of Program D			\$ -	0.00				
Name of Program E			\$ -	0.00				
Name of Program F			\$ -	0.00				
Name of Program G			\$ -	0.00				
Name of Program H			\$ -	0.00				
Name of Program I			\$ -	0.00				
Name of Program J			\$ -	0.00				
<b>*Totals App. B - Residential</b>	<b>\$ 193,575</b>	<b>\$ 4,199</b>	<b>\$ 189,376</b>	<b>46.10</b>	<b>188,536</b>	<b>764,000</b>	<b>42</b>	<b>\$ 7,799</b>
Residential Indirect Costs not attributable to any specific program								
<b>Total Residential TRC Costs</b>		<b>\$ 4,199</b>						
<b>**Totals TRC - Residential</b>	<b>\$ 193,575</b>	<b>\$ 4,199</b>	<b>\$ 189,376</b>	<b>46.10</b>				

## 2. Commercial Programs

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

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

	TRC Benefits (PV)	TRC Costs (PV)	\$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures (\$)
LED Traffic Light Conversion - B5		\$ 24,567	-\$ 24,567	0.00				\$ 24,567
Outdoor Rink Light Conversion - B6	\$ 14,000	\$ 690	\$ 13,310	20.28	9,331	37,324	1	\$ 1,590
Name of Program C			\$ -	0.00				
Name of Program D			\$ -	0.00				
Name of Program E			\$ -	0.00				
Name of Program F			\$ -	0.00				
Name of Program G			\$ -	0.00				
Name of Program H			\$ -	0.00				
Name of Program I			\$ -	0.00				
Name of Program J			\$ -	0.00				
<b>*Totals App. B - Commercial</b>	<b>\$ 14,000</b>	<b>\$ 25,257</b>	<b>\$ 11,257</b>	<b>0.55</b>	<b>9,331</b>	<b>37,324</b>	<b>1</b>	<b>\$ 26,157</b>

Commercial Indirect Costs not attributable to any specific program



<b>Total TRC Costs</b>		\$	25,257				
<b>**Totals TRC - Commercial</b>	\$	14,000	\$	25,257	-\$	11,257	0.55

### 3. Institutional Programs

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

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

	TRC Benefits (PV)	TRC Costs (PV)	\$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures (\$)
Name of Program A			\$ -	0.00				
Name of Program B			\$ -	0.00				
Name of Program C			\$ -	0.00				
Name of Program D			\$ -	0.00				
Name of Program E			\$ -	0.00				
Name of Program C			\$ -	0.00				
Name of Program G			\$ -	0.00				
Name of Program H			\$ -	0.00				
Name of Program I			\$ -	0.00				
Name of Program J			\$ -	0.00				
<b>*Totals App. B - Institutional</b>	\$ -	\$ -	\$ -	0.00	0	0	0	\$ -

Institutional Indirect Costs not attributable to any specific program



<b>Total TRC Costs</b>		\$	-		
<b>**Totals TRC - Institutional</b>	\$	-	\$	-	0.00

### 4. Industrial Programs

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

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

	TRC Benefits (PV)	TRC Costs (PV)	\$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures (\$)
Name of Program A			\$ -	0.00				
Name of Program C			\$ -	0.00				
Name of Program C			\$ -	0.00				
Name of Program D			\$ -	0.00				
Name of Program E			\$ -	0.00				
Name of Program F			\$ -	0.00				
Name of Program G			\$ -	0.00				
Name of Program H			\$ -	0.00				



Name of Program I			\$	-	0.00							
Name of Program J			\$	-	0.00							
<b>*Totals App. B - Industrial</b>	\$	-	\$	-	\$	-	0.00	0	0	0	\$	-
Industrial Indirect Costs not attributable to any specific program	→											
<b>Total TRC Costs</b>			\$	-								
<b>**Totals TRC - Industrial</b>	\$	-	\$	-	\$	-	<b>0.00</b>					

## 5. Agricultural Programs

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

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

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

## 6. LDC System Programs

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

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

	TRC Benefits (PV)	TRC Costs (PV)	\$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures (\$)
Distribution System Optimization-B7		\$ 23,656	-\$ 23,656	0.00				\$ 23,656
Name of Program B			\$	-	0.00			

Name of Program C			\$	-	0.00							
Name of Program D			\$	-	0.00							
Name of Program E			\$	-	0.00							
Name of Program F			\$	-	0.00							
Name of Program G			\$	-	0.00							
Name of Program H			\$	-	0.00							
Name of Program I			\$	-	0.00							
Name of Program C			\$	-	0.00							
<b>*Totals App. B - LDC System</b>	\$	-	\$	23,656	-\$	23,656	0.00	0	0	0	\$	23,656

LDC System Indirect Costs not attributable to any specific program



<b>Total TRC Costs</b>		\$	23,656									
<b>**Totals TRC - LDC System</b>	\$	-	\$	23,656	-\$	23,656	0.00					

## 7. Smart Meters Program

Only spending information that was authorized under the 3rd tranche of MARR is required to be reported for Smart Meters.

Report Year Gross C&DM Expenditures (\$)




## 8. Other #1 Programs

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

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

	TRC Benefits (PV)	TRC Costs (PV)	\$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures (\$)		
Name of Program A			\$	-	0.00					
Name of Program B			\$	-	0.00					
Name of Program C			\$	-	0.00					
Name of Program D			\$	-	0.00					
Name of Program E			\$	-	0.00					
Name of Program F			\$	-	0.00					
Name of Program G			\$	-	0.00					
Name of Program H			\$	-	0.00					
Name of Program I			\$	-	0.00					
Name of Program J			\$	-	0.00					
<b>*Totals App. B - Other #1</b>	\$	-	\$	-	0.00	0	0	0	\$	-

Other #1 Indirect Costs not attributable to any specific program




<b>Total TRC Costs</b>		\$	-									
<b>**Totals TRC - Other #1</b>	\$	-	\$	-	0.00							


## 9. Other #2 Programs

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

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

	TRC Benefits (PV)	TRC Costs (PV)	\$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures (\$)
Name of Program A			\$ -	0.00				
Name of Program B			\$ -	0.00				
Name of Program C			\$ -	0.00				
Name of Program D			\$ -	0.00				
Name of Program E			\$ -	0.00				
Name of Program C			\$ -	0.00				
Name of Program G			\$ -	0.00				
Name of Program H			\$ -	0.00				
Name of Program I			\$ -	0.00				
Name of Program J			\$ -	0.00				
<b>*Totals App. B - Other #2</b>	\$ -	\$ -	\$ -	0.00	0	0	0	\$ -
<i>Other #2 Indirect Costs not attributable to any specific program</i>								
<b>Total TRC Costs</b>		\$ -						
<b>**Totals TRC - Other #2</b>	\$ -	\$ -	\$ -	0.00				

## LDC's CDM PORTFOLIO TOTALS

	TRC Benefits (PV)	TRC Costs (PV)	\$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures (\$)
<b>*TOTALS FOR ALL APPENDIX B</b>	\$ 207,575	\$ 53,112	\$ 154,463	3.91	\$ 197,867	\$ 801,324	\$ 43	\$ 57,612
<i>Any other Indirect Costs not attributable to any specific program</i>								
<b>TOTAL ALL LDC COSTS</b>		\$ 53,112						
<b>**LDC' PORTFOLIO TRC</b>	\$ 207,575	\$ 53,112	\$ 154,463	3.91				

\* The savings and spending information from this row is to be carried forward to Appendix A.

\*\* The TRC information from this row is to be carried forward to Appendix A.