2006 ANNUAL REPORT
CDM Third Tranche Funding
KENORA HYDRO

ED – 2003-0030

- Janice Robertson
- Manager of Finance
  & Regulatory Affairs
- jrobertson@kenora.ca
- Phone (807) 467-2014
- Fax (807) 467-2068

Box 2680-215 Mellick Avenue, Kenora, Ontario P9N 3X8 Phone (807) 467-2075 Fax (807) 467-2068

INTRODUCTION

Kenora Hydro Electric Corporation Ltd began its implementation of the approved CDM Plan late in 2005. To date, two components of the plan have been completed, the conversion of the City of Kenora's traffic lights to LED's and a Conservation Kit giveaway. These two programs are analyzed in this report.

EVALUATION OF THE CDM PLAN

See Appendix A, evaluation of the CDM Plan for the LED Traffic light program and the Conservation Kit giveaway.

LESSONS LEARNED

Traffic Light Conversion

Kenora Hydro concentrated efforts on the completion of the traffic light conversion in 2006, with 9 traffic lights converted from incandescent to LED technology, which will prove to be a conservation success story, providing a benefit to cost ratio of 1.99. There are no more intersections to be converted in the future, this part of the CDM program is now complete.

Energy Conservation Kits

This program was also completed in 2006, as Kenora Hydro gave away 100 energy Conservation Kits. There is anticipated to be a 9.43 cost to benefit ratio on these kits, as the items inside accrued a measurable cost savings for those who have received them, assuming proper installation and use of the products.

CONCLUSION

Kenora Hydro has completed one major program, the LED traffic light conversion, as was originally filed under the CDM plan. Recent announcements regarding future programs to be administered by the OPA has resulted in a review of our CDM plans, to ensure they do not duplicate the OPA programs, but rather, compliment them in some manner. The OPA has announced the refrigerator buyback program, and Kenora Hydro would like to compliment this with an appliance purchase rebate to customers taking advantage of that program. In addition, there were programs originally identified in our CDM plan that now appear to duplicate the OPA's programs, the refrigerator buyback program as an example.

In light of these recent OPA announcements, and a review of our CDM plans, as of the date of this report, Kenora Hydro has applied to the Ontario Energy Board to reallocate funding within our existing CDM plan, and to extend the deadline for completion of our CDM spending to spring of 2008. This will allow further co-ordination and planning to create programs resulting in the greatest benefit for Kenora Hydro customers.

Appendix A - Evaluation of the CDM Plan

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

	[5] Cumulative Totals Life-to-date	Total for 2006	Residential	Commercial	Institutional	Industrial	Agricultural	LDC System	[4] Smart Meters	Other #1	Other #2
Net TRC value ($):	*44,409*	**$ 44,409**	**$ 18,789**	**$ 25,620**	**$ -**	**$ -**	**$ -**	**$ -**		**$ -**	**$ -**
Benefit to cost ratio:	*2.57*	2.57	9.43	1.99	0.00	0.00	0.00	0.00		0.00	0.00
Number of participants or units delivered:	*101*	101	100	1							
Lifecycle (kWh) Savings:	*1,358,876*	1,358,876	302,988	1,055,888	0	0	0	0		0	0
Report Year Total kWh saved (kWh):	*202,185*	202,185	100,996	101,189	0	0	0	0		0	0
Total peak demand saved (kW):		60	48	12	0	0	0	0		0	0
Total kWh saved as a percentage of total kWh delivered (%):	*0.200*	0.200	0.100	0.100							
Peak kW saved as a percentage of LDC peak kW load (%):		0.290	0.230	0.060							
[1] *Report Year Gross C&DM expenditures ($):*	*30,184*	$ 16,377	$ 4,185	$ 12,192	$ -	$ -	$ -	$ -	$ -	$ -	$ -
[2] *Expenditures per KWh saved ($/kWh):*	*0.14*	$ 0.08	$ 0.04	$ 0.12	$ -	$ -	$ -	$ -		$ -	$ -
[3] *Expenditures per KW saved ($/kW):*		$ 273.63	$ 86.64	$ 1,055.61	$ -	$ -	$ -	$ -		$ -	$ -

Utility discount rate (%):	7.75

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

(complete this Appendix for each program)

A. **Name of the Program:** Energy Conservation Kits

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

100 Energy Conservation Kits given away

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	Existing Stock		
Efficient technology:	Energy Efficient Products		
Number of participants or units delivered for reporting year:	100		
Measure life (years):	3		
Number of Partipants or unites delievered lfe to date	100		

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*	*$ 21,017.62*	
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	$ 2,228.35	
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	$ 2,228.35	
Net TRC (in year CDN $):	$ 18,789.27	
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	$ 9.43	

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

Cumulative Results:

Conservation Programs:

Demand savings (kW): *Summer* 0; *Winter* 48.3

	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):	*302988*	100996		
Other resources saved :				
Natural Gas (m3):				
Other (specify):				

Demand Management Programs:

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

Demand Response Programs:

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

Power Factor Correction Programs:

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

Line Loss Reduction Programs:

Peak load savings (kW):

	lifecycle	*in year*
Energy savngs (kWh):		

Distributed Generation and Load Displacement Programs:

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

Other Programs (specify):

Metric (specify):	

D. **Actual Program Costs:**

		Reporting Year	Cumlative Life to Date
Utility direct costs ($):	*Incremental capital:*		
	Incremental O&M:	$ 2,228.35	
	Incentive:		
	Total:	$ 2,228.35	
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:		

E. Assumptions & Comments:

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

[2] 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

Appendix B - Discussion of the Program

(complete this Appendix for each program)

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 involved replacing 9 incandecsent traffic lights with LED technology. Expenditures of $26,000 in

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	Existing Stock		
Efficient technology:	LED Traffic Signals		
Number of participants or units delivered for reporting year:			
Measure life (years):	10		
Number of Partipants or unites delievered lfe to date			

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*	*$ 51,619.87*	
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):		
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	$ 25,999.86	
Net TRC (in year CDN $):	$ 25,620.01	
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	$ 1.99	

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

Cumulative Results:

Conservation Programs:

Demand savings (kW):	*Summer*	11.55		
	Winter	11.55		
	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):	*1055888*	101189		
Other resources saved :				
Natural Gas (m3):				
Other (specify):				

Demand Management Programs:

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

Demand Response Programs:

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

Power Factor Correction Programs:

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

Line Loss Reduction Programs:

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

Distributed Generation and Load Displacement Programs:

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

Other Programs (specify):

Metric (specify):	

D. **Actual Program Costs:**

		Reporting Year	Cumlative Life to Date
Utility direct costs ($):	*Incremental capital:*	$ 25,999.86	
	Incremental O&M:		
	Incentive:		
	Total:	$ 25,999.86	
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:		

E. Assumptions & Comments:

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

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

Appendix C - Program and Portfolio Totals

Report Year:

1. Residential Programs

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

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

	TRC Benefits (PV)	TRC Costs (PV)	$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures ($)
Energy Conservation Kits	$ 21,018	$ 2,228	$ 18,789	9.43	100,996	302,988	48	$ 2,228
Enerspectrum Software			$ -	0.00				$ 1,956
Name of Program C			$ -	0.00				
Name of Program D			$ -	0.00				
Name of Program E			$ -	0.00				
Name of Program F			$ -	0.00				
Name of Program G			$ -	0.00				
Name of Program H			$ -	0.00				
Name of Program I			$ -	0.00				
Name of Program J			$ -	0.00				
***Totals App. B - Residential**	$ 21,018	$ 2,228	$ 18,789	9.43	100,996	302,988	48	$ 4,185
Residential Indirect Costs not attributable to any specific program →								
Total Residential TRC Costs		$ 2,228						
****Totals TRC - Residential**	**$ 21,018**	**$ 2,228**	**$ 18,789**	**9.43**				

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	$ 51,620	$ 26,000	$ 25,620	1.99	101,189	1,055,888	12	$ 12,192
Name of Program B			$ -	0.00				
Name of Program C			$ -	0.00				
Name of Program D			$ -	0.00				
Name of Program E			$ -	0.00				
Name of Program F			$ -	0.00				
Name of Program G			$ -	0.00				
Name of Program H			$ -	0.00				
Name of Program I			$ -	0.00				
Name of Program J			$ -	0.00				
***Totals App. B - Commercial**	$ 51,620	$ 26,000	$ 25,620	1.99	101,189	1,055,888	12	$ 12,192

Commercial Indirect Costs not attributable to any specific program →				
Total TRC Costs		$ 26,000		
****Totals TRC - Commercial**	**$ 51,620**	**$ 26,000**	**$ 25,620**	**1.99**

3. Institutional Programs

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

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

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

4. Industrial Programs

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

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

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

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

5. Agricultural Programs

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

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

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

6. LDC System Programs

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

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

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

Name of Program C			$ -	0.00					
Name of Program D			$ -	0.00					
Name of Program E			$ -	0.00					
Name of Program F			$ -	0.00					
Name of Program G			$ -	0.00					
Name of Program H			$ -	0.00					
Name of Program I			$ -	0.00					
Name of Program C			$ -	0.00					
***Totals App. B - LDC System**	$ -	$ -	$ -	0.00	0	0	0	$ -	
LDC System Indirect Costs not attributable to any specific program →									
Total TRC Costs		$ -							
****Totals TRC - LDC System**	**$ -**	**$ -**	**$ -**	**0.00**					

7. Smart Meters Program

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

Report Year Gross C&DM Expenditures ($) →

8. Other #1 Programs

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

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

	TRC Benefits (PV)	TRC Costs (PV)	$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures ($)
Name of Program A			$ -	0.00				
Name of Program B			$ -	0.00				
Name of Program C			$ -	0.00				
Name of Program D			$ -	0.00				
Name of Program E			$ -	0.00				
Name of Program F			$ -	0.00				
Name of Program G			$ -	0.00				
Name of Program H			$ -	0.00				
Name of Program I			$ -	0.00				
Name of Program J			$ -	0.00				
***Totals App. B - Other #1**	$ -	$ -	$ -	0.00	0	0	0	$ -
Other #1 Indirect Costs not attributable to any specific program →								
Total TRC Costs		$ -						
****Totals TRC - Other #1**	**$ -**	**$ -**	**$ -**	**0.00**				

9. Other #2 Programs

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

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

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

LDC's CDM PORTFOLIO TOTALS

	TRC Benefits (PV)	TRC Costs (PV)	$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures ($)
***TOTALS FOR ALL APPENDIX B**	$ 72,637	$ 28,228	$ 44,409	2.57	$ 202,185	$ 1,358,876	$ 60	$ 16,377
*Any **other** Indirect Costs not attributable to any specific program* →								
TOTAL ALL LDC COSTS		$ 28,228						
****LDC' PORTFOLIO TRC**	$ 72,637	$ 28,228	$ 44,409	2.57				

* 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.