



**2006 Annual Report, CDM Funded through Rates,
Halton Hills Hydro**

RP-2004-0203\EB-2005-0374

Submitted: April 27, 2007



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1. Introduction

HHH developed a multi-pronged plan for CDM that expected energy savings from residential, commercial and industrial customer classes as well as from HHH's system operations. Halton Hills Hydro (HHH) submitted our Demand Side Management Program on December 7, 2004. Education was given a priority in HHH's CDM plan in order to encourage and foster a conservation culture among customers.

With the majority of the customer base being residential historically, HHH expects a significant impact to the utility as new commercial/industrial properties move into Halton Hills. Finding innovative solutions to the new demands that will be placed on HHH's distribution system will be key.

The learning around the cost effectiveness of various energy conservation and demand management initiatives will assist HHH in achieving our goal of a 5% reduction in energy usage.

It became apparent to HHH that the third tranche funds would not be sufficient for all the CDM programs, so HHH applied and received approval for incremental CDM funding totaling \$179,669 to be recovered through rates (RP-2005-0020/EB-2005-0374).

2. Evaluation of the CDM Plan

The incremental CDM funds were projected to be required to supplement third tranche funding for existing CDM programs. However, these incremental funds were not required during 2006 since the CDM funding available to HHH through third tranche had not yet been depleted. HHH expects to require these incremental funds during 2007. The required Appendices A, B and C have been completed showing no expenditures or savings for 2006. These Appendices have been provided in Sections 6.1, 6.2 and 6.3, respectively.

2.1. 2006 TRC Results at the Portfolio Level

The required CDM results at the Portfolio level have been reported in Appendix A, attached as Section 6.1 to this report. However, as noted above, there were no expenditures related to incremental CDM funding reported for 2006.



3. Discussions of Programs

An overview of HHH's 2006 CDM initiatives funded through rates has been provided below. The required summary of the TRC results by initiative can also be found in Sections 6.2, Appendix B – Discussion of the Program and 6.3, Appendix C – Program and Portfolio Totals. An overview of each initiative has been provided below.

3.1. Residential

3.1.1. Water Heater Load Control

Overview

The HHH Water Heater Load Control (WHLC) program is implemented on new water heaters as well as replacement water heaters. During 2006, the WHLC program continued to be funded entirely by third tranche funding. The WHLC program continues to prove successful as demonstrated by the positive TRC obtained in 2006 under third tranche funding as well as for the program life-to-date.

Description of Actions Taken

There were no expenditures from incremental CDM funding in 2006. HHH expects to have expenditures for 2007 from this funding source.

2006 TRC Results

Not applicable.

3.2. Commercial

3.2.1. Commercial Industrial Audits

Overview

HHH applied for incremental CDM funding to expand the residential home energy audits provided in partnership with Elora Environmental to provide an incentive to customers to have their home assessed for energy savings opportunities. HHH planned to provide an incentive of \$25 toward the cost of an energy audit.



Description of Actions Taken

After receiving approval for funding for the extension of this program, the federal government terminated the NRC funding assistance for home audits. The residential audit program could not succeed without this integral component of funding. Therefore, HHH plans to use the incremental CDM funding during 2007 to expand commercial and industrial energy efficiency audits rather than residential audits.

TRC Results

Not applicable.

4. Lessons Learned

Not applicable for 2006.

5. Conclusion

As of the end of 2006, none of the incremental CDM funding totaling \$179,669 has been spent. This is due to the fact that HHH applied for these funds with the expectation of spending them after third tranche funding had been depleted. HHH expects to utilize these incremental CDM funds during 2007.



6. Appendices

6.1. Appendix A: Evaluation of the HHH 2006 CDM Plan

Appendix A - Evaluation of the HHH 2006 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 (\$):	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		\$ -	\$ -
Benefit to cost ratio:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00
Number of participants or units delivered:	5	5	0	5							
Lifecycle (kWh) Savings:	0	0	0	0	0	0	0	0		0	0
Report Year Total kWh saved (kWh)	0	0	0	0	0	0	0	0		0	0
Total peak demand saved (kW)	0	0	0	0	0	0	0	0		0	0
Total kWh saved as a percentage of total kWh delivered (%):	0.00%	0.00%	0.00%	0.00%							
Peak kW saved as a percentage of LDC peak kW load (%):		0.00%	0.00%	0.00%							
¹ Report Year Gross C&DM expenditures (\$)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
² Expenditures per kWh saved (\$/kWh)	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		\$ -	\$ -
³ Expenditures per kW saved (\$/kW)	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		\$ -	\$ -
Utility discount rate (%):	7.94										



6.2. Appendix B: Discussion of the Programs

6.2.1. Residential

6.2.1.1. Water Heater Load Control (2 pages)

Appendix B - Discussion of the Program

Water Heater Load Control

A. **Name of the Program:** RESIDENTIAL - Water Heater Load Control

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

The HHH Water Heater Load Control (WHLC) program is implemented on new water heaters as well as replacement water heaters. There were no expenditures or savings in this program due to incremental CDM funding. However, the program (as funded through third tranche) continues to be successful.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	Existing Water Heater	No Load Control	
Efficient technology:	New Water Heater	Utility Load Control	
Number of participants or units delivered for reporting year:	0	0	
Measure life (years):	12	12	
Number of Participants or units delivered life to date	0	0	

B. **TRC Results:**

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

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

Conservation Programs:

	Demand savings (kW):		Cumulative Lifecycle	Cumulative Annual Savings
	Summer	Winter		
Energy saved (kWh):	0	0	0	0
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):	109.56	180.11
Peak hours dispatched in year (hours):		



Appendix B: Water Heater Load Control (page 2)

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):		
lifecycle	in year	
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:		Reporting Year	Cumulative Life to Date
Utility direct costs (\$):	Incremental capital:	\$ -	\$ -
	Incremental O&M:	\$ -	\$ -
	Incentive:	\$ -	\$ -
	Total:	\$ -	\$ -
Utility indirect costs (\$):	Incremental capital:	\$ -	\$ -
	Incremental O&M:	\$ -	\$ -
	Total:	\$ -	\$ -

E. Assumptions & Comments:



6.2.2. Commercial

6.2.2.1. Commercial Industrial Audits (2 pages)

Appendix B - Discussion of the Program

Commercial Industrial Audits

A. **Name of the Program:** COMMERCIAL - Commercial Industrial Audits

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

The Residential Home Audits program was not able to proceed due to the termination of complimentary federal funding. However, HHH plans to utilize the incremental CDM funding to complete Commercial and Industrial energy audits.

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):	10		
Number of Participants or units delivered life to date	1		

B. TRC Results:	Reporting Year	Life-to-date TRC Results:
¹ TRC Benefits (\$):		\$ -
² TRC Costs (\$):		
Utility program cost (excluding incentives):		\$ -
Incremental Measure Costs (Equipment Costs)	\$ -	\$ -
Total TRC costs:	\$ -	\$ -
Net TRC (in year CDN \$):	\$ -	\$ -
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	N/A	#DIV/0!

C. Results: (one or more category may apply)	Cumulative Results:			
Conservation Programs:				
Demand savings (kW):	Summer	0	0	
	Winter			
	lifecycle	in year	Cumulative Lifecycle	Cumulative Annual Savings
Energy saved (kWh):	0	0	0	0
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):				



Appendix B: Commercial Industrial Audits (page 2)

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):		
lifecycle	in year	
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. <u>Actual Program Costs:</u>		<u>Reporting Year</u>	<u>Cumulative Life to Date</u>
Utility direct costs (\$):	Incremental capital:	\$ -	\$ -
	Incremental O&M:	-	-
	Incentive:	\$ -	\$ -
	Total:	\$ -	\$ -
Utility indirect costs (\$):	Incremental capital:	\$ -	\$ -
	Incremental O&M:	\$ -	\$ -
	Total:	\$ -	\$ -

E. Assumptions & Comments:



6.3. Appendix C: HHH Program and Portfolio Totals (3 pages)

Appendix C - HHH 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 (\$)
Water Heater Load Control	\$ -	\$ -	\$ -	0.00	0	0	0	\$ -
Name of Program B	\$ -	\$ -	\$ -	0.00	0	0	0	\$ -
Name of Program C	\$ -	\$ -	\$ -	0.00	0	0	0	\$ -
Name of Program D	\$ -	\$ -	\$ -	0.00	0	0	0	\$ -
Name of Program E	\$ -	\$ -	\$ -	0.00	0	0	0	\$ -
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	\$ -	\$ -	\$ -	0.00	0	0	0	\$ -
Residential Indirect Costs not attributable to any specific program								
Total Residential TRC Costs		\$ -						
**Totals TRC - Residential	\$ -	\$ -	\$ -	0.00				



Appendix C: HHH Program and Portfolio Totals (page 2)

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 (\$)
Commercial Industrial Audits	\$ -	\$ -	\$ -	0.00	0	0	0	\$ -
Name of Program B	\$ -	\$ -	\$ -	0.00	0	0	0	\$ -
Name of Program C	\$ -	\$ -	\$ -	0.00	0	0	0	\$ -
Name of Program D	\$ -	\$ -	\$ -	0.00	0	0	0	\$ -
Name of Program E	\$ -	\$ -	\$ -	0.00	0	0	0	\$ -
Name of Program F			\$ -	0.00				
Name of Program G			\$ -	0.00				
Name of Program H			\$ -	0.00				
Name of Program I			\$ -	0.00				
*Totals App. B - Commercial	\$ -	\$ -	\$ -	0.00	0	0	0	\$ -
Commercial Indirect Costs not attributable to any specific program								
Total TRC Costs		\$ -						
**Totals TRC - Commercial	\$ -	\$ -	\$ -	0.00				



Appendix C: HHH Program and Portfolio Totals (page 3)

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	\$ -	\$ -	\$ -	0.00	0	0	0	\$ -
<i>Any other Indirect Costs not attributable to any specific program</i>								
TOTAL ALL LDC COSTS	\$ -	\$ -	\$ -	0.00				
**LDC' PORTFOLIO TRC	\$ -	\$ -	\$ -	0.00				

* 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.