March 29th 2007

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

Re: HAWKESBURY HYDRO INC.
RP-2004-0203
2006 ANNUAL REPORT CDM THIRD TRANCHE FUNDING

As directed by the Board, please find enclosed our Annual report on CDM initiatives for 2006.

Pease find enclosed:

1) Introduction
2) Evaluation of our CDM Plan
3) Discussion of our CDM Program
4) Lessons Learned
5) Conclusion

Respectfully Yours,

Michel Poulin
Manager
613-632-6689

1) INTRODUCTION

Under RP-2004-0203, The Board is also prepared to give approval of planned conservation and demand management activities prior to these costs actually being incurred.

PROGRAM CONTENT

INDUSTRIAL CUSTOMER PROGRAM

Hawkesbury Hydro Inc. intends to give incentives to industries who will purchase energy efficient equipments identified as ENERGUIDE PRODUCT FOR INDUSTRY. Hawkesbury Hydro Inc. strongly believes that this incentive program will encourage major industries in our community to improve their energy management and consequently contribute to the reduction of electricity generation and reduce the greenhouse gases that contribute to climate change.

INTERVAL METERING

In order to respond to some initiatives from the Ontario Government, Hawkesbury Hydro Inc. would like to promote the installation of interval (smart meters). Hydro Hawkesbury Inc. strongly believe that this will help load shifting.

COMMERCIAL AND RESIDENTIAL CUSTOMER PROGRAM

Hawkesbury Hydro Inc. will honor the ENERGY STAR high efficiency product on the market.

The industrial customer program along with the commercial and residential customer program are part of our main objectives. We want our customers to benefit immediately of all incentives available to reduce their consumption and our efforts will be deployed towards the incentives to our customers.

COMMUNICATION & AWARENESS

Hawkesbury Hydro Inc. would like to play a role in energy conservation by enlightening its customers. Hawkesbury Hydro Inc. would like to offer its customers helpful tips by means of a monthly newspaper publication. (Tip of the month)

POWER SYSTEM AND LOAD STUDY

Our next program will consist of a power system and load flow analysis to determine future betterments to improve our line loss.
Hawkesbury Hydro Inc. would like to perform this study to reach the optimization of its distribution system and emergency operations, reduce generation and GHG.

Please note that Appendix A,B,C are all part of the same report.
Appendix B was done for each individual program

2) EVALUATION OF THE CDM PLAN

Appendix A.

3) DISCUSSION OF THE PROGRAM

Appendix B: Air conditioning

Appendix B: Appliances.

Appendix B: Clothes Washer

Appendix B: Dishwasher

Appendix B: Freezers

Appendix B: Interval (smart) Meters

Appendix B: Line Loss and Optimization Study

Appendix B: Refrigerators.

Appendix B: Programmable Thermostat

Appendix B: Water Coolers

4) LESSON LEARNED

In 2006, the continuity of our program did better that 2005. We feel that retailers did more promotion. Our goal to promote and inform the customer did go well. A line loss and optimization study was performed in order to help us reduce our high line loss %. Late in 2006 the final report from our consultant was received by the board. We will implement some of the recommendation in 2007.

5) CONCLUSION

We are satisfied with the response from our customers in 2006. We feel that the customers did benefit from our program appreciated the incentive and we also think that our program accelerated the appliance replacement in several households. As for our system optimization program, we truly believe that this study will make us more efficient. Major betterments activities will result from this report and line losses will improve.

Respectfully Yours,

Michel Poulin
Manager

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 ($):	*-$ 53,146*	**-$ 47,252**	**$ (3,714)**	**$ -**	**$ -**	**$ (6,000)**	**$ -**	**$ (37,538)**		**$ -**	**$ -**
Benefit to cost ratio:	*0.37*	0.12	0.63	0.00	0.00	0.00	0.00	0.00		0.00	0.00
Number of participants or units delivered:	*123*	*107*	101	-	-	6	-	-			
Lifecycle (kWh) Savings:	*151,057*	123,200	123,200	0	0	0	0	0		0	0
Report Year Total kWh saved (kWh):	*9,555*	8,100	8,100	0	0	0	0	0		0	0
Total peak demand saved (kW):		0	0	0	0	0	0	0		0	0
Total kWh saved as a percentage of total kWh delivered (%):	*0.0088%*	0.015%	0.015%	0.000%	0.000%	0.000%	0.000%	0.000%		0.000%	0.000%
Peak kW saved as a percentage of LDC peak kW load (%):		n/a	n/a	n/a	n/a	n/a	n/a	n/a		n/a	n/a
[1] *Report Year Gross C&DM expenditures ($):*	*19433*	$ 14,172	$ 14,172	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
[2] *Expenditures per KWh saved ($/kWh):*	*$ 2.03*	$ 0.12	$ 0.12	$ -	$ -	$ -	$ -	$ -		$ -	$ -
[3] *Expenditures per KW saved ($/kW):*	*n/a*	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -

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:** ENERGYSTAR- AIR CONDITIONNING replacement

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

Hawkesbury Hydro will remit incentive for air conditionning replacement .
These products must meet EnergyStar recognition in order to be eligible for the incentive amounts.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	Current standard for air conditionning		
Efficient technology:	Energystar air conditionning		
Number of participants or units delivered for reporting year:	3		
Measure life (years):	20		
Number of Participants or units delivered life to date	3		

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*	*$ 342.26*	342.26
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	*$ 250.00*	250
Incremental Measure Costs (Equipment Costs)	$ 100.00	100
Total TRC costs:	$ 350.00	350
Net TRC (in year CDN $):	-$ 7.74	$ 7.74
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	$ 0.98	0.98

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

Conservation Programs:

Demand savings (kW):	*Summer*			
	Winter			

	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):	*4760*	238	4760	238
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):		

	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):

D. **Actual Program Costs:**

		Reporting Year	Cumulative Life to Date
Utility direct costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Incentive:	$ 142.47	$ 142.47
	Total:	$ 142.47	$ 142.47
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:		

E. Assumptions & Comments:

No action in 2005

[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 number 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 B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** ENERGYSTAR- APPLIANCES replacement

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

Hawkesbury Hydro will remit incentive for appliance replacement .
These products must meet EnergyStar recognition in order to be eligible for the incentive amounts.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	Current standard for apliances		
Efficient technology:	Energystar appliances		
Number of participants or units delivered for reporting year:	3		
Measure life (years):	10		
Number of Participants or units delivered life to date	3		

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*	*$ 344.25*	344.25
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	*$ 250.00*	250
Incremental Measure Costs (Equipment Costs)	$ 200.00	200
Total TRC costs:	$ 450.00	450
Net TRC (in year CDN $):	-$ 105.75	$ 105.75
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	$ 0.77	0.77

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

Conservation Programs:

Demand savings (kW):		*Summer*			
		Winter			
		lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):		*6180*	618	6180	618
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):			
	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):

D. **Actual Program Costs:**

		Reporting Year	Cumulative Life to Date
Utility direct costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Incentive:	$ 432.27	$ 432.27
	Total:	$ 432.27	$ 432.27
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:		

E. Assumptions & Comments:

no action in 2005

[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 number 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 B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** ENERGYSTAR-CLOTHES WASHER replacement

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

Hawkesbury Hydro will remit incentive for CLOTHES WASHER replacement .
These products must meet EnergyStar recognition in order to be eligible for the incentive amounts.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	Current standard for Clothes washer		
Efficient technology:	Energystar clothes washers		
Number of participants or units delivered for reporting year:	31		
Measure life (years):	14		
Number of Participants or units delivered life to date	31		

B. **TRC Results:**

		Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*		$ 1,461.00	1552.88
[2] *TRC Costs ($):*			
Utility program cost (excluding incentives):		$ 250.00	534.89
Incremental Measure Costs (Equipment Costs)		$ 2,790.00	2990
Total TRC costs:		$ 3,040.00	3524.89
Net TRC (in year CDN $):		-$ 1,579.00	-$ 1,972.01
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		$ 0.48	0.44

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

Cumulative Results:

Conservation Programs:

Demand savings (kW):	*Summer*		
	Winter		

	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):	*30436*	2174	2314	32306
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):			
	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):		

D. **Actual Program Costs:**

		Reporting Year	Cumulative Life to Date
Utility direct costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Incentive:	$ 4,486.38	$ 4,747.37
	Total:	$ 4,486.38	$ 4,747.37
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 number 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 B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** ENERGYSTAR-DISHWASHER replacement

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

Hawkesbury Hydro will remit incentive for DISWASHER replacement .
These products must meet EnergyStar recognition in order to be eligible for the incentive amounts.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	Current standard for diswasher		
Efficient technology:	Energystar dishwasher		
Number of participants or units delivered for reporting year:	23		
Measure life (years):	13		
Number of Participants or units delivered life to date	23		

B. **TRC Results:**

		Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*		$ 1,283.72	1501.79
[2] *TRC Costs ($):*			
Utility program cost (excluding incentives):		$ 250.00	534.89
Incremental Measure Costs (Equipment Costs)		$ 2,100.00	2500
Total TRC costs:		$ 2,350.00	3034.89
Net TRC (in year CDN $):		-$ 1,066.28	-$ 1,533.10
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		$ 0.55	0.49

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

Cumulative Results:

Conservation Programs:

Demand savings (kW):	*Summer*		
	Winter		

	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):	*26910*	2070	31590	2430
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):			
	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):		

D. **Actual Program Costs:**

		Reporting Year	Cumulative Life to Date
Utility direct costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Incentive:	$ 2,307.36	$ 2,737.51
	Total:	$ 2,307.36	$ 2,737.51
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 number 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 B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** ENERGYSTAR-FREEZER replacement

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

Hawkesbury Hydro will remit incentive for freezer replacement .
These products must meet EnergyStar recognition in order to be eligible for the incentive amounts.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	Current standard for freezer		
Efficient technology:	Energystar freezer		
Number of participants or units delivered for reporting year:	3		
Measure life (years):	21		
Number of Participants or units delivered life to date	3		

B. **TRC Results:**

		Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*		*$ 99.46*	163.64
[2] *TRC Costs ($):*			
Utility program cost (excluding incentives):		*$ 250.00*	534.86
Incremental Measure Costs (Equipment Costs)		$ 500.00	900
Total TRC costs:		$ 750.00	1434.86
Net TRC (in year CDN $):		-$ 650.54	-$ 1,271.22
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		$ 0.13	0.11

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

Cumulative Results:

Conservation Programs:

Demand savings (kW):	*Summer*		
	Winter		

	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):	*2079*	99	3471	165
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):			
	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):		

D. **Actual Program Costs:**

		Reporting Year	Cumulative Life to Date
Utility direct costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Incentive:	$ 263.99	$ 452.23
	Total:	$ 263.99	$ 452.23
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 number 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 B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** INTERVAL METERS

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

Hawkesbury Hydro will remit incentive to industrial customers ON INTERVAL METERS, SWITCHING TO INTERVAL METERS OR NEW CONSTRUCTION OPTING FOR INTERVAL METERS.
This is to support the OEB initiative on Smart meters

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	Standard Meter		
Efficient technology:	Interval meters		
Number of participants or units delivered for reporting year:	6		
Measure life (years):	15		
Number of Participants or units delivered life to date	6		

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*		
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	$ 6,000.00	7000
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	$ 6,000.00	7000
Net TRC (in year CDN $):	$ 6,000.00	$ 7,000.00
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		

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

Cumulative Results:

Conservation Programs:

Demand savings (kW):	*Summer*		
	Winter		

	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
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 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):		

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:

Please recognize that 6 actual customers were given a $1000 incentive amount since they already had the interval meters on their service.
Extremelly difficult to analyse the economies, but this is to support Smart metering initiative.

[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 number 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 B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** LINE LOSS AND OPTIMIZATION STUDY

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

Hawkesbury Hydro did bring to an end its line loss study late in 2006. High line loss reported in 2005 was a major incentive to perform this important study. At the present time Hawkesbury Hydro is planning on some recommendations in order to lower the LDC's line loss %.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:			
Efficient technology:	line loss & optimization study		
Number of participants or units delivered for reporting year:			
Measure life (years):	15		
Number of Participants or units delivered life to date			

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*		
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	$ *37,538.00*	37538
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	$ 37,538.00	37538
Net TRC (in year CDN $):	$ 37,538.00	$ 37,538.00
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		

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

Cumulative Results:

Conservation Programs:

Demand savings (kW):	*Summer*		
	Winter		

	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
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 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):		

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:

Study was completed in December 2006. Implamentation of some recommendations will be performed in 2007. Impossible at this time to quantify the results.

[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 number 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 B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** ENERGYSTAR-REFRIDGERATOR replacement

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

Hawkesbury Hydro will remit incentive for refrigerator replacement .
These products must meet EnergyStar recognition in order to be eligible for the incentive amounts.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	Current standard for refridgerator		
Efficient technology:	Energystar refridgerator		
Number of participants or units delivered for reporting year:	34		
Measure life (years):	19		
Number of Participants or units delivered life to date	34		

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*	$ 2,144.79	2510.49
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	$ 250.00	534.86
Incremental Measure Costs (Equipment Costs)	$ 2,100.00	2500
Total TRC costs:	$ 2,350.00	3034.86
Net TRC (in year CDN $):	-$ 205.21	-$ 524.37
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	$ 0.91	0.83

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

Cumulative Results:

Conservation Programs:

Demand savings (kW):	*Summer*		
	Winter		

	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):	*43035*	2265	50631	2265
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):			
	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):			

D. **Actual Program Costs:**

		Reporting Year	**Cumulative Life to Date**
Utility direct costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Incentive:	$ 6,439.58	$ 8,159.27
	Total:	$ 6,439.58	$ 8,159.27
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 number 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 B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** ENERGYSTAR THERMOSTAT (PROGRAMMABLE) replacement

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

Hawkesbury Hydro will remit incentive for programmable thermostat replacement .
These products must meet EnergyStar recognition in order to be eligible for the incentive amounts.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	Current standard for Thermostat		
Efficient technology:	Energystar programmable thermostat		
Number of participants or units delivered for reporting year:	3		
Measure life (years):	18		
Number of Participants or units delivered life to date	3		

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*	$ 585.73	583.73
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	$ 250.00	250
Incremental Measure Costs (Equipment Costs)	$ 200.00	200
Total TRC costs:	$ 450.00	450
Net TRC (in year CDN $):	$ 135.73	$ 135.73
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	$ 1.30	1.3

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

Cumulative Results:

Conservation Programs:

Demand savings (kW):	*Summer*		
	Winter		

	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):	*7740*	430	7740	430
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):			
	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):			

D. **Actual Program Costs:**

		Reporting Year	Cumulative Life to Date
Utility direct costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Incentive:	$ 73.41	$ 73.41
	Total:	$ 73.41	$ 73.41
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:		

E. Assumptions & Comments:

no action in 2005

[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 number 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 B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** ENERGYSTAR- WATER COOLER replacement

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

Hawkesbury Hydro will remit incentive for water cooler replacement .
These products must meet EnergyStar recognition in order to be eligible for the incentive amounts.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	Current standard for water cooler		
Efficient technology:	Energystar water cooler		
Number of participants or units delivered for reporting year:	1		
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 ($):*	$ 114.75	114.75
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	$ 250.00	250
Incremental Measure Costs (Equipment Costs)	$ 100.00	100
Total TRC costs:	$ 350.00	350
Net TRC (in year CDN $):	-$ 235.25	$ 235.25
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	$ 0.33	0.33

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

Cumulative Results:

Conservation Programs:

Demand savings (kW):	*Summer*		
	Winter		

	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):	*2060*	206	2060	206
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):			
	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):			

D. **Actual Program Costs:**

		Reporting Year	**Cumulative Life to Date**
Utility direct costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Incentive:	$ 27.00	$ 27.00
	Total:	$ 27.00	$ 27.00
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:		

E. Assumptions & Comments:

no action in 2005

[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 number 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 ($)
Air conditionning	$ 342	$ 350	-$ 8	0.98	238	4,760	0	$ 142
Appliances	$ 344	$ 450	-$ 106	0.77	618	6,180	0	$ 432
Clothes washer	$ 1,461	$ 3,040	-$ 1,579	0.48	2,174	30,436	0	$ 4,486
Dishwasher	$ 1,284	$ 2,350	-$ 1,066	0.55	2,070	26,910	0	$ 2,307
Freezers	$ 99	$ 750	-$ 651	0.13	99	2,079	0	$ 264
Refridgerator	$ 2,145	$ 2,350	-$ 205	0.91	2,265	43,035	0	$ 6,440
Thermostat	$ 586	$ 450	$ 136	1.30	430	7,740	0	$ 73
Water	$ 115	$ 350	-$ 235	0.33	206	2,060	0	$ 27
***Totals App. B - Residential**	$ 6,376	$ 10,090	-$ 3,714	0.63	8,100	123,200	0	$ 14,172
Residential Indirect Costs not attributable to any specific program	→							
Total Residential TRC Costs		$ 10,090						
****Totals TRC - Residential**	**$ 6,376**	**$ 10,090**	**-$ 3,714**	**0.63**				

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 ($)
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 - Commercial**	$ -	$ -	$ -	0.00	0	0	0	$ -
Commercial Indirect Costs not attributable to any specific program	→							
Total TRC Costs		$ -						

**Totals TRC - Commercial	$ -	$ -	$ -	0.00

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 ($)
Interval meters	$ -	$ 6,000	-$ 6,000	0.00	0	0	0	$ -
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	$ -	$ 6,000	-$ 6,000	0.00	0	0	0	$ -
Industrial Indirect Costs not attributable to any specific program →								

Total TRC Costs		$ 6,000		
****Totals TRC - Industrial**	**$ -**	**$ 6,000**	**-$ 6,000**	**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 ($)
Line loss Study	$ -	$ 37,538	-$ 37,538	0.00	0	0	0	$ -
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**	$ -	$ 37,538	-$ 37,538	0.00	0	0	0	$ -
LDC System Indirect Costs not attributable to any specific program →								
Total TRC Costs		$ 37,538						
****Totals TRC - LDC System**	**$ -**	**$ 37,538**	**-$ 37,538**	**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**	$ 6,376	$ 53,628	-$ 47,252	0.12	$ 8,100	$ 123,200	$ -	$ 14,172
*Any **other** Indirect Costs not attributable to any specific program* →								
TOTAL ALL LDC COSTS		$ 53,628						
****LDC' PORTFOLIO TRC**	$ 6,376	$ 53,628	-$ 47,252	0.12				

* 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.