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 ($):	*494.7*	**$ 851**	**$ 978**	**$ (25)**	**$ 37**	**$ (10)**	**$ -**	**$ (76)**		**$ (5)**	**$ -**
Benefit to cost ratio:	*1.58*	2.64	3.92	0.03	2.90	0.00	0.00	0.00		0.00	0.00
Number of participants or units delivered:	*22221*	*22,221*	21,372	36	813						
Lifecycle (kWh) Savings:	*27,191,661*	27,191,661	23,518,863	19,347	3,653,451	0	0	0		0	0
Report Year Total kWh saved (kWh):	*2903706*	2,903,706	2,668,923	645	146,138	88,000	0	0		0	0
Total peak demand saved (kW):	*1064*	1,064	1,028	0	36	0	0	0		0	0
Total kWh saved as a percentage of total kWh delivered (%):	100%	100%	92%	0%	5%	3%	0%				
Peak kW saved as a percentage of LDC peak kW load (%):		100%	97%	0%	3%	0%	0%				
[1] *Report Year Gross C&DM expenditures ($):*	*834*	$ 391	$ 221	$ 26	$ 5	$ 10	$ -	$ 76	$ -	$ 5	$ -
[2] *Expenditures per KWh saved ($/kWh):*	*0.29*	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ -	$ -	$ -		$ -	$ -
[3] *Expenditures per KW saved ($/kW):*	*783.83*	$ 0.37	$ 0.22	$ 91.07	$ 0.14	$ -	$ -	$ -		$ -	$ -

Utility discount rate (%):	8.13%

[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:** Library Watt Reader Program - CFL GiveAway CDM-108D

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

Please see 2006 CDM Report (page 6) for additional description of this Program. Loan a 60 watt reader to customer through library program. Anticipate customer to understand their electrical consumption patterns and to adjust accordingly to allow conservation. Each customer receives lightbulb, book mark, and printed material for borrowing reader.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	60W Incandescent		
Efficient technology:	CFL Screw-In 15W		
Number of participants or units delivered for reporting year:	140		
Measure life (years):	4		
Number of Participants or units delivered life to date	140		

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*	*$ 3.11*	$ 3.11
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	*$ 0.02*	$ 0.02
Incremental Measure Costs (Equipment Costs)	$ 0.03	$ 0.03
Total TRC costs:	$ 0.03	$ 0.03
Net TRC (in year CDN $):	$ 3.11	$ 3.11
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	$ 103.55	$ 103.55

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

Conservation Programs:

			Cumulative Results:	
Demand savings (kW):	*Summer*	0		
	Winter	3		
	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):	*52617.6*	13,154	52617.6	13,154
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:

[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:** Retrofit Non-profit Housing CDM-103

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

Please see 2006 CDM Report (page 9) for additional description of this Program. Retrofit no profit housing (The Cornerstone Community) buildings in Oshawa. Buildings retrofitted with energy efficient T-8 bulbs, reflectors, all exit lights with LED technology, and all rooms lighting replaced with compact fluorescents lightbulbs.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	2 - 15W (30W) Incandescent EXIT Sign	60W Incandescent	60W Incandescent
Efficient technology:	3W LED EXIT sign	15W Screw-In CFL	13W CFL fixture w/EM ballast
Number of participants or units delivered for reporting year:	60	610	56
Measure life (years):	25	2	3
Number of Partipants or unites delievered lfe to date	60	610	56
Base case technology:	4 - T12 34W (156W) 4' Lamps w	2 - T12 75W (184W) 8' HO Lamp	
Efficient technology:	2 - T8 32W (58 W) reflectorized	4 - T8 32W (112W) 4' Lamps w/E	
Number of participants or units delivered for reporting year:	140	3	
Measure life (years):	5	5	
Number of Partipants or unites delievered lfe to date	140	3	

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*	*$ 56.43*	$ 56.43
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	$ 4.97	$ 4.97
Incremental Measure Costs (Equipment Costs)	$ 14.47	14.47
Total TRC costs:	$ 19.44	$ 19.44
Net TRC (in year CDN $):	$ 37.00	$ - $ 37.00
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	$ 2.90	2.90

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

Cumulative Results:

Conservation Programs:

Demand savings (kW): *Summer* 34.11678285; *Winter* 35.912403

	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):	*3653451*	146138.04	3653451	146138.04
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:	$ 4.97	$ 4.97
	Incentive:		
	Total:		
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:		

E. Assumptions & Comments:

We will be working with local government and social agencies to identify opportunities to reduce energy costs for non-profit housing and low income earners.
It is very important that OPUCN take a lead in working with social agencies to ensure that residents in non-profit housing can participate in conservation.
Target users: Non profit and fixed income i.e. pensioner
Evaluation: Possible lighting retro fits, appliance upgrade, and water heater optimizations are being considered as saving measures at this time.

[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 B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** Christmas Light Retro Fit OPUC CDM-300A

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

Please see 2006 CDM Report (page 14) for additional description of this Program. Retrofitted the Christmas lighting on front of OPUC building. Old load 900 times 7 watts replacing with .5 watts LED lights.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	5 WATT Christmas lights C-7(64 lights)		
Efficient technology:	LED Christmas Lights (indoor or outdoor)		
Number of participants or units delivered for reporting year:	36		
Measure life (years):	30		
Number of Partipants or unites delievered lfe to date	36		

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*	$ 0.68	$ 0.68
[2] *TRC Costs ($):*	$ 3.87	$ 3.87
Utility program cost (excluding incentives):		
Incremental Measure Costs (Equipment Costs)	$ 0.01	0.01
Total TRC costs:	$ 3.88	$ 3.88
Net TRC (in year CDN $):	-$ 3.18	-$ 3.18
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	$ 0.18	0.18

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

Cumulative Results:

Conservation Programs:

Demand savings (kW): *Summer* 0

Winter 0

	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):	*19347.0768*	645	19347.0768	645
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:*	$ 3.80	$ 3.80

	Incremental O&M:		
	Incentive:		
	Total:	$ 3.80	$ 3.80
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 B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** Every Kilowatt Counts (Spring) CDM-108a

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

Please see 2006 CDM Report (page 6 and 7) for additional description of this Program. Campaign associated with OPA to provide customers coupons to purchase energy saving products CFLs light bulbs, Programable Thermostats, Motion Sensors,Seasonal LED Lights, and Dimmers. A popular program with customers in that amount of coupons used to purchase energy saving products by Oshawa residents.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	**60W Incandescent**	**Average existing stock**	
Efficient technology:	**CFL Screw-In 15W**	**Programmable Thermostat (sp**	**Timers**
Number of participants or units delivered for reporting year:	5436	315	416
Measure life (years):	4	18	20
Number of Participants or units delivered life to date	5436	315	416

Measure(s):

	Measure 4	Measure 5 (if applicable)	Measure 6 (if applicable)
Base case technology:			
Efficient technology:	**Ceiling Fans**		
Number of participants or units delivered for reporting year:	226		
Measure life (years):	20		
Number of Participants or units delivered life to date	226		

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*	$ *257.73*	$ 257.73
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):		
Incremental Measure Costs (Equipment Costs)	$ 39.35	39.35
Total TRC costs:	$ 39.35	$ 39.35
Net TRC (in year CDN $):	$ *218.38*	218.38
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	$ 6.55	6.55

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

Cumulative Results:

Conservation Programs:

Demand savings (kW):	*Summer*	17	0
	Winter	0	

	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):	*5087264*	667,795	5087264	667,795
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:	$ 0.15	data conversation ETS
	Incentive:		
	Total:	$ 0.15	$ 0.15
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:** Every Kilowatt Counts (Fall/ Winter) CDM-108b

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

Please see 2006 CDM Report (page 6 and 7) for additional description of this Program. Campaign associated with OPA to provide customers coupons to purchase energy saving products CFLs light bulbs, Programable Thermostats, Motion Sensors,Seasonal LED Lights, and Dimmers. A popular program with customers in that amount of coupons used to purchase energy saving products by Oshawa residents.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	**60W Incandescent**		**5 watt Christmas lights**
Efficient technology:	**CFL Screw-In 15W**	**Dimmer switch**	**LED Christmas Lights**
Number of participants or units delivered for reporting year:	8247	326	5197
Measure life (years):	4	10	30
Number of Participants or units delivered life to date	8247	326	5197

Measure(s):

	Measure 4	Measure 5 (if applicable)	Measure 6 (if applicable)
Base case technology:	**Average existing stock**	**Average existing stock**	**3 100 Watt incandescent bulbs**
Efficient technology:	**Programmable Thermostat**	**Programmable Thermostat (sp**	**Motion Sensor**
Number of participants or units delivered for reporting year:	709	83	101
Measure life (years):	18	18	10
Number of Participants or units delivered life to date	709	83	101

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*	$ *1,043.93*	$ 1,043.93
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):		
Incremental Measure Costs (Equipment Costs)	$ 71.30	71.3
Total TRC costs:	$ 71.30	$ 71.30
Net TRC (in year CDN $):	$ 972.63	972.63
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	$ 14.64	14.64

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

Conservation Programs:

Demand savings (kW):	*Summer*	6	0
	Winter	1,003	

	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):		1,881,634		
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:	$ 0.15	data conversation ETS
	Incentive:		
	Total:	$ 0.15	$ 0.15
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:** Residential - Establish Baselines and Measuring Impacts | CDM-100

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

Please see 2006 CDM Report (page 5 and 6) for additional description of this Program. To establish baselines to benchmark the measurement and analysis of future results that are to be submitted to the regulators. Baselines may apply to specific customer groups or they may be based on the penetration of identified energy efficient technologies.
Data capture is taking place through 55 "Smart meters" and will be analyzed based on connected loads, workings lifestyles, family size and several other categories.
This data has undergone a preliminary review and will be reviewed more in depth in conjunction with The University of Ontario Institute of Technology. There was a partnership with an outside technology supplier to assist in the meter installation.
Evaluation of the project continues as we test meter readings and accuracy. A baseline will continue to be developed throughout 2006.

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 Partipants or unites delievered lfe to date			

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*		
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	$ 20.52	$ 150.22
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	$ 20.52	$ 150.22
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):	*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 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:	$ 10.76	$ 150.22
	Incentive:		
	Total:	$ 10.76	$ 150.22
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 B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** Residential 155 Colbourne Replace Bulk with Individual Meters CDM-100A

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

Please see 2006 CDM Report (page 13 and 14) for additional description of this Program. Switch bulk meter to individual meters (Residential Housing)

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	Existing Inventory		
Efficient technology:	Individual Meter		
Number of participants or units delivered for reporting year:	8		
Measure life (years):	20		
Number of Partipants or unites delievered lfe to date	8		

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*	$ 4.90	$ 4.90
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):		
Incremental Measure Costs (Equipment Costs)	$ 3.20	3.2
Total TRC costs:	$ 3.20	$ 3.20
Net TRC (in year CDN $):	$ 1.70	$ 1.70
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	$ 1.53	$ 1.53

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

Cumulative Results:

Conservation Programs:

Demand savings (kW): *Summer* 2; *Winter* 2

	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):	*864000*	43200	864000	43200
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 ($):	*Incremental capital:*		
	Incremental O&M:		
	Incentive:		
	Total:		
Utility indirect costs ($):	*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 B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** AMR/ DTM Pilot Project — CDM-100B and CDM-500

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

Please see 2006 CDM Report (page 11) for additional description of this Program. A five and Fifty Points Pilot Project (installing a special reader on meter at residential homes). Automatic meter reading and digital time meter install.

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 Partipants or unites delievered lfe to date			

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*		
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	$ 4.51	$ 28.80
Incremental Measure Costs (Equipment Costs)		0
Total TRC costs:	$ 4.51	$ -
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):	*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 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:	$ 4.51	$ 28.80
	Incentive:		
	Total:		
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 B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** Residental System Prototype and Pilot CDM-100C

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

Please see 2006 CDM Report (page 5) for additional description of this Program. A Residential baseline measurement. System protype and pilot testing.

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 Partipants or unites delievered lfe to date			

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*		0
[2] *TRC Costs ($):*	$ -	$ 16.20
Utility program cost (excluding incentives):		
Incremental Measure Costs (Equipment Costs)	$ -	0
Total TRC costs:	$ -	$ 16.20
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):	*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 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:	$ -	$	16.20
	Incentive:			
	Total:	$ -		$ -
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 B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** Residential Customer Satisfaction Survey CDM-100D

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

Please see 2006 CDM Report (page 5) for additional description of this Program. Customer satisfaction survey. A observation of 400 residential customers for 2006 customer satisfaction survey for electric utilities. Data to include analyzing and reporting.

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 Partipants or unites delievered lfe to date			

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*		
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	$ 15.70	$ 15.70
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	$ 15.70	$ 15.70
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):	*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 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:	$ 15.70	$ 15.70
	Incentive:		
	Total:	$ 15.70	$ 15.70
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 B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** Residential DSM Indentification -Water Heater Data CDM-101

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

Water Heater Extraction and update of information for Residential Load Control

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 Partipants or unites delievered lfe to date			

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*		
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	$ 0.65	$ 0.65
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	$ 0.65	0.65
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):	*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 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:	$ 0.65	$ 0.65
	Incentive:		
	Total:	$ 0.65	$ 0.65
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 B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** Smart Meter Pilot (Residential- Tantalus Systems) CDM-106

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

Please see 2006 CDM Report (page 11) for additional description of this Program. Residential 500 Point Smart Meter Pilot. Testing of Tantalus meter system (wireless).

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 Partipants or unites delievered lfe to date			

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*		
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	$ 40.78	$ 172.80
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	$ 40.78	$ 172.80
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): *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 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:*	$ 40.78	$ 172.80
	Incremental O&M:		
	Incentive:		
	Total:		
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:		

E. Assumptions & Comments:

A pilot program for 200 residential SMART meters was deployed to enable the assessment of metering, communications, settlement, load control and other technologies that may be used to accommodate the universal application of SMART meters in the future. Although the formal definition of a SMART meter has not been decided the Board the Utility felt it prudent to perform a technological assessment of systems available today.
This program supports the Minister of Energy's commitment to the installation of 800,000 SMART meters across Ontario by 2007. It will provide OPUCN with the experience and knowledge needed to efficiently expand the use of SMART meters over the next several years. On the commercial side we have purchased a product that we are testing called power view. It is a web based system that can allow customers to look at their interval meter data, profile their usage and see the results.
Target users: Eventually 500 residential customers throughout the City.
Benefits: Proof that certain forms of technology will perform satisfactory and that customers can match their usage to less expensive off peak hours when rate structures send the correct price signals.

[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 B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** Smart Meter - Residential (Operation Group Fee)

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

Please see 2006 CDM Report (page 11) for additional description of this Program. Smart Meter - Residential. Operations 2006 Working Group membership fee

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 Partipants or unites delievered lfe to date			

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*		
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	$ 10.01	$ 13.51
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	$ 10.01	$ 13.51
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): *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 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:	$ 10.01	$ 13.51
	Incentive:		
	Total:		
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 B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** Customer Awareness Education CDM-108

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

Please see 2006 CDM Report (page 6) for additional description of this Program. Customer awareness and education are key factors in achieving a heightened change in energy efficiency. Programs will be targeted at home and business These programs will illustrate the principal areas of consumption and demonstrate the savings impact available through changing consumption patterns and conservation. These programs could
· An internet portal where customers can create custom profiles of their home or business and understand where they are consuming electricity
· Self registered programs that allow customers to track their savings through changing behavior or adopting more energy efficient appliances
· Implementation of tools that illustrate the affect of weather, seasonality, and additional occupants on energy consumption for each individual consumer
· Implementation of campaigns to build both general and targeted awareness and measure the impact of direct marketing on consumption
Target users: All businesses and residents in the City of Oshawa. Benefits: Helping to kept energy efficient use top of mind.
Evaluation : Radio advertisements and a school energy efficiency program are currently underway through a customer survey and spot visits of presentations.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	**60W Incandescent**		
Efficient technology:	**CFL Screw-In 15W**		
Number of participants or units delivered for reporting year:	168		
Measure life (years):	4		
Number of Partipants or unites delievered lfe to date	168		

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*	$ -	3.74767
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	$ 75.08	$ 81.55
Incremental Measure Costs (Equipment Costs)	$ 0.30	0.3
Total TRC costs:	$ 75.38	$ 81.85
Net TRC (in year CDN $):	-$ 75.38	-78.09833
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		0.046

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

Conservation Programs:

Demand savings (kW): *Summer* 0
Winter 3

	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):	*0*	0	63140	15785
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:	$ 75.08	$ 81.55
	Incentive:		
	Total:		
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 B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** Generation Conservation CDM-109

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

Please see 2006 CDM Report (page 6) for additional description of this Program. Develop and deploy Conservation Projects for Grade Five Students.

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 Partipants or unites delievered lfe to date			

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*		
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	$ 53.82	$ 53.82
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	$ 53.82	$ 53.82
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):	*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 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:	$ 53.82	$ 53.82
	Incentive:		$ -
	Total:		
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:		

E. Assumptions & Comments:

Powerwise has recently been adopted as the mass market programming approach to foster the conservation culture in Ontario. This alliance will hopefully maximize economies of scale, and will continue to include incentives to the consumer such as Christmas lights, school based education and other programs aimed at customers to encourage their reduction of energy usage. We are currently investigating the costs to join the Powerwise branding process. We also delivered the cold water wash campaign flyer in our bills to promote the use of cold water washing.
Target users: All customers in the Oshawa service area.
Benefits: The benefits of this program will include increased awareness, improved product supply, culture shift and reduction of energy usage. It will also educate the customer on valuing the commodity.
Evaluation: None at this time

[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 B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** Commercial and Industrial System Protype and Pilot CDM-300A

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

System Protoype and pilot for Commercial/ Industrial class customers

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 Partipants or unites delievered lfe to date			

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*		
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	$ 21.81	$ 27.34
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	$ 21.81	$ 27.34
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): *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 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:	$ 20.64	$ 36.84
	Incentive:		
	Total:	$ -	$ 36.84
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 B - Discussion of the Program

A. **Name of the Program:** Independent Market Operator Demand Response Pilot Project CDM-303

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

Please see 2006 CDM Report (page 12) for additional description of this Program. This program is a two year pilot that is assisting the Independent Electricity System Operator to enroll and work with customers to shed load.
The program identifies customers who can shed load on short notice. The notification is driven by a price spike and delivered to them by e-mail.
Target users Customers who have the ability to drop load
Benefits: To the IESO to see how much load can be dropped in an emergency and customer to curtail energy costs. Evaluation: We are currently evaluating the cost benefit of continuing this program.

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 Partipants or unites delievered lfe to date			

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*		
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	$ 9.82	$ 21.99
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	$ 9.82	$ 21.99
Net TRC (in year CDN $):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		

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

Conservation Programs:

			Cumulative Results:	
Demand savings (kW):	*Summer*			
	Winter			
	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):		88000		
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:	$ 9.82	$ 21.99
	Incentive:		
	Total:	$ -	$ 21.99
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 B - Discussion of the Program

A. **Name of the Program:** System Optimization CDM-400

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

Please see 2006 CDM Report (page 15) for additional description of this Program. The objective of this portion of OPUCN's plan is to be able to identify the major causes of losses on OPUCN's distribution feeders. This first involves a high level analysis of losses from distribution lines and transformers, and estimation of the percentage contribution of each to the total system losses. This information will be used to develop a loss reduction strategy. A further objective would be to identify specific opportunities for loss mitigation on the distribution systems. Detailed feeder modeling would be required to assess the financial impact of particular mitigation techniques on individual feeders. This work would establish areas where implementation of loss reduction techniques could be cost justified.
The overall intent of the study would be to illustrate where cost savings would be available and the methodology by which savings could be achieved. The loss reduction techniques that
could be applied most easily by the utility to achieve the greatest return with the least investment in time or equipment would be determined.
Target users: The Distribution system
Benefits: A reduction is energy losses within the distribution system. Evaluation: To soon to do so.

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 Partipants or unites delievered lfe to date			

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*		
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	$ 5.00	$ 5.00
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	$ 5.00	$ 5.00
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):	*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 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:	$ 5.00	$ 5.00
	Incentive:		
	Total:	$ -	$ 5.00
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 B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** CDM Web Infrastructure CDM-401&CDM-402

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

Set up of CDM Web infrastructure (one time fee). Software Design.

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 Partipants or unites delievered lfe to date			

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*		
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	$ 70.80	$ 141.43
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	$ 70.80	$ 141.43
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):	*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 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:*	$ 70.80	$ 141.43
	Incremental O&M:	$ -	
	Incentive:		
	Total:	$ 70.80	$ 141.43
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 B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** Total Resource Cost Tool for OEB Reporting CDM-403

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

TRC tool for calculation of data to appease OEB reporting for CDM projects

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 Partipants or unites delievered lfe to date			

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*		
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	$ 4.75	$ 4.75
Incremental Measure Costs (Equipment Costs)		
Total TRC costs:	$ 4.75	$ 4.75
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):	*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 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:*	$ 4.75	$ 4.75
	Incremental O&M:		
	Incentive:		
	Total:	$ 4.75	$ 4.75
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.