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2007 Annual Report, CDM Third Tranche Funding

Expanding the Culture of Conservation Mandate

Conservation and Demand Management Annual Report 2007

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Essex Powerlines Corporation

ESSEX POWER LINES CORPORATION

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Introduction & Overview of Reported Programs

Essex Powerlines Corporation is proud to present you with their 2007 Annual Conservation & Demand Management Report. Our slogans; "***Your Power, our Priority***", and "***Doing the Right Thing, Leading by Example***" have been further reinforced this year and they certainly hold true. We are continually leading by example and attempting to represent the epitome of energy conservation in Essex County and southwestern Ontario.

Essex Powerlines' CDM Plan consists of 5 primary categories:

i) Energy Awareness
ii) Residential Conservation <50 kW
iii) General Service Conservation > 50 kW
iv) Municipal Green Project
v) 4 kV Conservation

With approximately three years of intense conservation related focus behind us, there is no doubt that **Essex Powerlines Corporation's Conservation and Demand Management (CDM)** program is expanding the reach and message of a culture of conservation in Ontario through a variety of innovative and resourceful programs. These CDM programs are available to residents, businesses as well as the municipalities that Essex Powerlines is proud to service.

Throughout 2007, many of the programs outlined in earlier reports continued to thrive and educate the many electricity customers within our service territory. This report will outline the 3 primary programs that were spearheaded this year that represent exciting and respectable demand and usage related savings.

By partnering with industry-specific service partners, Essex Powerlines is providing *best-in-class* energy conservation and education solutions to all of their electricity customers.

Essex Powerlines has had great success as it pertains to energy conservation and demand side management and we are proud to report the results within. We look forward to working with our customers as well as all appropriate entities to ensure that conservation is constantly in the mind of all Ontarians.

Kristopher W. A. Taylor
Conservation & Special Projects Manager
Essex Powerlines Corporation

EnerGuide Home Audit Incentive Program

Teaming up with a reputable and professional home inspection service has enabled Essex Powerlines to promote the federal **EnerGuide for Houses Grants for Homeowners** program. By offering our customers $75 off the price of a professional home energy audit along with a box of LED Christmas as an added incentive, we are able to assist homeowners in identifying areas for improvement and increased energy efficiency. The overall effect includes customer education, lower energy bills and reduced peak demand.

The Home energy program has been promoted through the Essex Powerlines website, bill inserts, magazine ads and local newspaper articles.

Since the programs inception in early 2005 161 homes within the Essex Powerlines service territory have taken advantage of the Home Energy audit program resulting in incalculable savings.

Christmas Light Exchange Program

Essex Powerlines once again, sponsored a Christmas light exchange program for each of our 4 municipalities. The replacement LED lights consume on average 90% less energy than standard 5W Christmas bulbs.

In only one day, 2200 boxes of 60 bulb LED Christmas lights were exchanged for their energy wasting incandescent counterparts which greatly exceeded our expectations! This program is a perfect example of how easy it really is to make a small change but contribute towards a significantly larger result. Customers are already inquiring about a 2008 program and we will be working diligently to ensure that we can bring this beloved program to our customer base once again.

Results
Each municipality was provided 20 - 70 bulb strings. The total savings between this program and the xmas light exchange with customers is 151,200 kwh/yr

Wholesale Embedded Generation Incentive Program

Essex Powerlines is a firm believer that excellent opportunities exist within the standby generation market. There are programs that currently exist that would allow small standby generators, typically used for emergency "back-up" power, to provide stability to Ontario electrical grid via means of wholesale embedded generator aggregation. This aggregation of smaller generators (typically no smaller than 500 kW and no larger than 1 MW) is seen by the Independent Electricity System Operator (IESO) as one large, dispatchable generator. This aggregation is necessary to avoid the many costs of having multiple connection points.

Since this concept is relatively new, the cost structure for the connection of these small generators is, in many cases, identical to the costs associated with connecting their much larger counterparts. This would normally mean these projects could not be economically viable. This is why Essex Powerlines has sponsored the connection of 2 1MW units within our service territory with a $75,000 incentive! These two units will be able to provide 2000 kW of electricity to our system at anytime the IESO deems them economically viable! Historically, units similar to these in this program typically run 200 hours per year and provide roughly 400,000 kWh to grid each year!

Results
Having these two dispatchable units within our distribution system will help provide approximately 400,000 kWh to the system as well as maintain the integrity of the electrical grid.

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 2007	Residential	Commercial	Institutional	Industrial	Agricultural	LDC System	[4] Smart Meters	Other #1	Other #2
Net TRC value ($):	***$ 4,005,140***	**$ 245,945**	**$ (43,877)**	**$ (26,163)**	**$ (41,782)**	**$ 368,591**	**$ -**	**$ (10,823)**		**$ -**	**$ -**
Benefit to cost ratio:	*5.99*	2.00	0.44	-	-	5.18	-	-	-	-	-
Number of participants or units delivered:	*22,681*	*2,286*	2,284	-	-	2	-	-	-	-	-
Lifecycle (kWh) Savings:	*101,502,656*	14,022,800	6,022,800	-	-	8,000,000	-	-	-	-	-
Report Year Total kWh saved (kWh):	*5,828,515*	301,140	301,140	-	-	-	-	-	-	-	-
Total peak demand saved (kW):	*3,206*	2,029	29	-	-	2,000	-	-	-	-	-
Total kWh saved as a percentage of total kWh delivered (%):	*1.09%*	0.06%	0.06%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Peak kW saved as a percentage of LDC peak kW load (%):	*2.26%*	1.43%	0.02%	0.00%	0.00%	1.41%	0.00%	0.00%	0.00%	0.00%	0.00%
[1] *Report Year Gross C&DM expenditures ($):*	*668,489.16*	$ 144,066	$ 52,188	$ 26,163	$ 41,782	$ 13,109	$ -	$ 10,823	$ -	$ -	$ -
[2] *Expenditures per KWh saved ($/kWh):*	*$ 0.01*	$ 0.01	$ 0.01	$ -	$ -	$ 0.00	$ -	$ -		$ -	$ -
[3] *Expenditures per KW saved ($/kW):*	*$ 208.51*	$ 71.00	$ 1,799.59	$ -	$ -	$ 6.55	$ -	$ -		$ -	$ -

Utility discount rate (%):	7.73

[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, 2007 CDM Annual report for third tranche will include 2006, 2005 and 2004 numbers, if any.

Appendix C - Program and Portfolio Totals

Report Year: 2007

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 ($)
Christmas Light Exchange	$ 9,600	$ 37,478	-$ 27,878	0.26	277,200	5,544,000	27	$ 10,689.02
Energuide Home Audit	$ 25,500	$ 6,300	$ 19,200	4.05	23,940	478,800	2	$ 6,300
Name of Program C			$ -	0.00				
Name of Program D			$ -	0.00				
Name of Program E			$ -	0.00				
Name of Program F			$ -	0.00				
Name of Program G			$ -	0.00				
Name of Program H			$ -	0.00				
Name of Program I			$ -	0.00				
Name of Program J			$ -	0.00				
***Totals App. B - Residential**	$ 35,100	$ 43,778	-$ 8,678	0.80	301,140	6,022,800	29	$ 52,188.20
Residential Indirect Costs not attributable to any specific program	→	$ 35,199						
Total Residential TRC Costs		$ 78,977						
****Totals TRC - Residential**	**$ 35,100**	**$ 78,977**	**-$ 43,877**	**0.44**				

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	$ 26,163

Commercial Indirect Costs not attributable to any specific program →		26,163		
Total TRC Costs		$ 26,163		
****Totals TRC - Commercial**	**$ -**	**$ 26,163**	**-$ 26,163**	**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	$ 41,782
Institutional Indirect Costs not attributable to any specific program →		41,782						
Total TRC Costs		$ 41,782						
****Totals TRC - Institutional**	**$ -**	**$ 41,782**	**-$ 41,782**	**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 ($)
Wholesale EG Incentive Program	$ 456,700	$ 88,108.75	$ 368,591	5.18	0	8,000,000	2,000	$ 13,108.75
Name of Program C			$ -	0.00				
Name of Program C			$ -	0.00				
Name of Program D			$ -	0.00				
Name of Program E			$ -	0.00				
Name of Program F			$ -	0.00				
Name of Program G			$ -	0.00				
Name of Program H			$ -	0.00				

Name of Program I			$ -	0.00				
Name of Program J			$ -	0.00				
***Totals App. B - Industrial**	$ 456,700	$ 88,109	$ 368,591	5.18	0	8,000,000	2,000	$ 13,109
Industrial Indirect Costs not attributable to any specific program →								
Total TRC Costs		$ 88,109						
****Totals TRC - Industrial**	**$ 456,700**	**$ 88,109**	**$ 368,591**	**5.18**				

5. Agricultural Programs

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

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

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

6. LDC System Programs

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

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

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

Name of Program C			$ -	0.00				
Name of Program D			$ -	0.00				
Name of Program E			$ -	0.00				
Name of Program F			$ -	0.00				
Name of Program G			$ -	0.00				
Name of Program H			$ -	0.00				
Name of Program I			$ -	0.00				
Name of Program C			$ -	0.00				
***Totals App. B - LDC System**	$ -	$ -	$ -	0.00	0	0	0	$ 10,823
LDC System Indirect Costs not attributable to any specific program →		10,823						
Total TRC Costs		$ 10,823						
****Totals TRC - LDC System**	**$ -**	**$ 10,823**	**-$ 10,823**	**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**	$ 491,800	$ 245,855	$ 245,945	2.00	$ 301,140	$ 14,022,800	$ 2,029	$ 144,066
*Any **other** Indirect Costs not attributable to any specific program* →								
TOTAL ALL LDC COSTS		$ 245,855						
****LDC' PORTFOLIO TRC**	$ 491,800	$ 245,855	$ 245,945	2.00				

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

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

Discussion of Programs

Appendix B

1- Xmas light LED exchange Program

2- Energuide Home Audit Program

3- Wholesale EG Incentive Program

Appendix B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** Christmas Light Exchange Progam

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

Essex Powerlines electricity customers were able to exchange strands of incandescant christmas lights for their LED counterparts at no cost. Kiosks were setup in each municipality (4) and lights were exchanged for a prescribed amount of time. All old lights were recycled by a local group which converts a large percentage of the existing wire into useful electronics such as laptops, for less fortunate children.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	6	158760	
Efficient technology:	1	7560	
Number of participants or units delivered for reporting year:	2200		
Measure life (years):	20		
Number of Participants or units delivered life to date	3400		

B. **TRC Results:**

		Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*		*$ 9,600.00*	11,000
[2] *TRC Costs ($):*			
Utility program cost (excluding incentives):		*$ 10,689.02*	32,689
Incremental Measure Costs (Equipment Costs)		$ -	25,000
Total TRC costs:		$ 10,689.02	57,689
Net TRC (in year CDN $):			
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		0.90	0.19

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

Cumulative Results:

Conservation Programs:

Demand savings (kW):	*Summer*	0		0
	Winter	22		27
	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):	*2,507,954*	50,159	5,531,954	201,359
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:

	lifecycle	in year	
Peak load savings (kW):			
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:*	$ -	$ 3,000.00
	Incremental O&M:	$ 10,689.02	$ 32,689.02
	Incentive:	$ -	$ -
	Total:	$ 10,689.02	$ 35,689.02
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:		

E. Assumptions & Comments:

Please note that additional expenditures occurred in early 2008 for this program which will be outlined in the 2008 annual report. The additional costs were modeled in order to determined NPV of TRC benefits. The response for this program was exceptional and we have never seen better turnouts. Customers have already called to inquire as to whether or not this program will be available in the future.

[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:** EnerGuide Home Audit Program

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

Administered through Amerispec for all residential Essex Powerlines electricity customers, the EnerGuide Home Audit Program allows customers to identify potential energy deficiencies that their home may have.

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:	84		
Measure life (years):	20		
Number of Participants or units delivered life to date			

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*	*$ 25,500.00*	$ 23,100.00
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	*$ 6,300.00*	$ 12,300.00
Incremental Measure Costs (Equipment Costs)	$ -	$ 5,000.00
Total TRC costs:	$ 6,300.00	$ 17,300.00
Net TRC (in year CDN $):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	4.05	4.05

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

Cumulative Results:

Conservation Programs:

Demand savings (kW):	*Summer*	0	1
	Winter	1	2

	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):	*478,800*	23,940	652,560	29,732
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:

	lifecycle	in year	
Peak load savings (kW):			
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:*	$ -	$ 5,000.00
	Incremental O&M:	$ 6,300.00	$ 12,300.00
	Incentive:	$ -	$ -
	Total:	$ 6,300.00	$ 17,300.00
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:		

E. Assumptions & Comments:

Results of this program are difficult to quantify since not all home owners implement the recommendations determined by the audit. Additional costs will be incurred until April 30th, 2008 or when 100 audits are completed and will be reflected in the 2008 annual report.

[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:** Wholesale Embedded Generation Incentive Program

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

There are many barriers to market entry for small-scale generators. In order to alleviate these barriers, Essex Powerlines partnered with GenSet Resource Management, a wholesale market participant that aggregates small scale for the IESO, and provided rebates to customers in our distribution territory to make generation projects economically viable.

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:	2		
Measure life (years):	20		
Number of Participants or units delivered life to date	2		

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*		
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	$ 13,108.75	$ 13,108.75
Incremental Measure Costs (Equipment Costs)	$ -	$ -
Total TRC costs:	$ 13,108.75	$ 13,108.75
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*	2000	2000
	Winter	2000	2000

	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):	*8,000,000.00*	-	8,000,000.00	-
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:

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

Distributed Generation and Load Displacement Programs:

Amount of DG installed (kW):	2000	2000
Energy generated (kWh):	0	0
Peak energy generated (kWh):	0	0
Fuel type:	Diesel	Diesel

Other Programs (specify):

Metric (specify):		

D. **Actual Program Costs:**

		Reporting Year	Cumulative Life to Date
Utility direct costs ($):	*Incremental capital:*	$ -	$ -
	Incremental O&M:	$ 13,108.75	$ 13,108.75
	Incentive:	$ -	$ -
	Total:	$ 13,108.75	$ 13,108.75
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:		

E. Assumptions & Comments:

Please note that the incentive has not yet been paid to the customer as of December 31st, 2007 since the units have not received all necessary approvals to export. It is anticipated that both units will be fully commissioned by Q2 2008. Units were initially intended to be fully commissioned by September 2007, however several delays have arisen that were not initially anticipated. Demand savings attributed to 2007 since units are installed and capable of reducing demand if necessary, however typical participation in normal wholesale generation market not possible until all approvals granted; therefore no kWh's should be claimed. Lifecycle kWh calculated at 200 run hours per year @ 2000 kW.

[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.

Lessons Learned

Maintaining constant visibility is the key to conservation in Southwestern Ontario. Our customer base, if kept properly informed, is always excited and motivated to help contribute to the province's mandate of creating a "Culture of Conservation".

Whether you consider targeting our residential, commercial, or industrial customers is irrelevant; they *all* want to know how to conserve, and need help doing it. This requires face to face activity with customers; not just flyers sent in the mail. We have received, and continue to receive compliments from customers who are surprised by the fact that we take a passion in helping them conserve electricity.

The following programs have been well received, successful, and will be part of our ongoing activities:

Public Awareness and Trade Show Representation

Increasing public awareness and educating our customers has been a focus for Essex Powerlines. We have developed promotional and educational materials, as well created interactive and static displays to help deliver the message of demand management. We have participated in home shows, industry specific tradeshows and displayed materials at each municipal office within our service territory.

EnerGuide Home Audit Program

Essex Powerlines contributes $75 to all residential customers looking for a home electrical audit. Through a very reputable, reliable and professional company, our incentive payment has generated an incalculable savings for customers as well as for the province. This program has been extended by the OEB until April 30th, 2008.

OPA Every Kilowatt Counts Campaign

Essex Powerlines has continued to support the Ontario Power Authority's "Every Kilowatt Counts" campaign by cross promoting it with all other conservation initiatives that we embark on. The EKC program has experienced great success in Southwestern Ontario as a result.

Christmas Light Exchange Program and Energy Innovators Program

Essex Powerlines once again, sponsored a Christmas light exchange program for each of our 4 municipalities. The replacement LED lights consume on average 90% less energy than standard 5W Christmas bulbs.

In only one day, 2200 boxes of 60 bulb LED Christmas lights were exchanged for their energy wasting incandescent counterparts which greatly exceeded our expectations! This program is a perfect example of how easy it really is to make a small change but contribute

towards a significantly larger result. Customers are already inquiring about a 2008 program and we will be working diligently to ensure that we can bring this beloved program to our customer base once again.

Energy Conservation and Kid's Energy Conservation Portal

Essex Powerlines knows that it doesn't take a lot to conserve energy and strives to provide our customers with simple and affordable power saving solutions through their "Energy Conservation Web portal".

Through web sites and interactive media, Essex Powerlines is helping to create the culture of conservation at home and in businesses by offering home efficiency and renovation tips, and hands on solutions to improve profits and productivity, including our utilismart software, which can help you master the energy market from your desktop.

Kids Energy

Essex Powerlines knows that getting the next generation of power consumers thinking about energy conservation today is a major step towards solving future power crises.

The Kids Energy Web portal puts this knowledge into action! Young minds absorb information like powerful batteries storing energy. Kids Energy uses games, experiments and a Home Energy Audit project to provide a playful, interactive learning environment where young minds are exposed to energy, its uses, and how it's distributed.

A culture of conservation and demand management must include and embrace the up-coming generations, the people who will be making the energy decisions of the future. Essex Powerlines is already there, guiding them towards energy savings and greater efficiency.

Essex Powerlines Sponsored Utilismart Monitoring for Interval Metered Customers

Utilismart currently provides a wide range of services to Local Utilities, Industrial and Large Use consumers in the Ontario Electricity Marketplace. Utilismart Corporation operates a web-based service that provides customers with the information needed to make informed business decisions about electricity usage.

Utilismart enables a company to visualize how it uses power. Organizations could be operating under the impression that their business is a paragon of efficiency; meanwhile, they have been squandering and mismanaging their energy concerns for years.

The Utilismart software monitors efficiency by identifying and avoiding the high peak demand charges that appear on monthly utility bills due to out-of-control energy use. The lower the peak demands, the more a company can reduce the energy bill.

Utilismart also offers a Cost Prediction model for the Ontario Market. To assist end users of electricity in reducing their consumption and demand, utilismart now has the capability of predicting what your electricity will cost tomorrow! Now a company will have the information to make decisions on whether or not to shift or reduce the load.

utilismart™ CORPORATION

Good information is the key to making good decisions and Essex Powerlines has always been at the forefront, providing customers with the information needed to make these decisions.

Wholesale Embedded Generation Incentive Program

Essex Powerlines is a firm believer that excellent opportunities exist within the standby generation market. There are programs that currently exist that would allow small standby generators, typically used for emergency "back-up" power, to provide stability to Ontario electrical grid via means of wholesale embedded generator aggregation. This aggregation of smaller generators (typically no smaller than 500 kW and no larger than 1 MW) is seen by the Independent Electricity System Operator (IESO) as one large, dispatchable generator. This aggregation is necessary to avoid the many costs of having multiple connection points.

Since this concept is relatively new, the cost structure for the connection of these small generators is, in many cases, identical to the costs associated with connecting their much larger counterparts. This would normally mean these projects could not be economically viable. This is why Essex Powerlines has sponsored the connection of 2 1MW units within our service territory with a $75,000 incentive! These two units will be able to provide 2000 kW of electricity to our system at anytime the IESO deems them economically viable! Historically, units similar to these in this program typically run 200 hours per year and provide roughly 400,000 kWh to grid each year!

Due to unforeseen circumstances, several barriers have not allowed the generators to operate in the wholesale market at this point in time. The units have been installed and currently function as standby generators and also possess the communication technology required for remote control and can therefore be used for demand response. The 2007 CDM Annual report acknowledges demand reduction as a result of this program but no kWh's will be attributed to its numbers until all details are finalized. This is expected to take place during the 2nd quarter of 2008 and the rebate of $75,000 will be paid at that time.

Essex Powerlines Energy Conservation Web Sites

From our web site www.essexpowerlines.ca, you have access to powerful, very informative websites, which have received very positive feedback. We will continue to update these

web sites as we continue forward. We have put on presentations at 10 grade schools show casing these sites with great response.

Kids Energy knows that getting the next generation of power consumers thinking about energy conservation today is a major step towards solving future power crises. The Kids Energy Web portal at www.essexpowerlines.ca puts this knowledge into action! Young minds absorb information like powerful batteries storing energy. Kids Energy uses games, experiments and a Home Energy Audit project to provide a playful, interactive learning environment where young minds are exposed to energy, its uses, and how it's distributed.

A culture of conservation and demand management Energy conservation Essex Powerlines knows that it doesn't take a lot of energy to conserve energy and strives to provide our customers with simple and affordable power saving solutions through the Energy Conservation Web portal at www.essexpowerlines.ca. Through Web sites and interactive media, Essex Powerlines is helping to create the culture of conservation at home and in businesses by offering home efficiency and renovation tips, and hands on solutions to improve profits and productivity.

Conclusion

Our CDM programs for 2007 were once again classified as great successes! With programs targeting both the residential and C&I sectors, Essex Powerlines has strengthened their role as a utility, and has provided our local community with tangible benefits. The following table summarizes all expenditures since 2004 and directly shows that we are on target to great achievements in conservation while still remaining within our approved budget!

	2007 acc. CDM Expenditures	Total approved CDM
1. Energy Awareness Program	c – 28,808.00 o – 75,602.12	c – 20,000 o – 30,000
2. Residential Conservation <50 kW	c – 0 o – 133,172.08	c – 25,000 o – 55,000
3. General Service Conservation >50 kW	c – 0.00 o – 85,834.37	c – 60,000 o – 85,000
4. Large User – Standby & Co-Generation	c – 0.00 o – 83,031.75	c – 15,000 o – 135,000
5. Municipal Green Project – "Lead by Example" and "Doing the Right Thing"	c – 0.00 o – 110,704.39	c – 20,000 o – 80,000
6. 4kV Conversion	c – 114,607.15 o – 36,729.30	c – 139,904 o – 35,000
7. Incremental Approved Funding		$56,400
Total	$668,489.16	$756,304.00

EnerGuide Home Audit Program

Since the programs inception in early 2005, more than 160 residential Essex Powerlines electricity customers have taken advantage of our Home Audit incentive program! The savings for these types of programs are vast since participating customers learn all about how and where to conserve electricity and many even implement significant energy efficient changes in their homes.

Public Awareness and Trade Show Representation

In 2007, Essex Powerlines attended several energy conservation related events with the intention of educating and promoting conservation in Southwestern Ontario.

Christmas Light Exchange Program

Essex Powerlines hosted a xmas light exchange program with all 4 municipalities. The turnout was incredible as we gave away 2200 boxes of Christmas lights in only one day! Estimated savings have calculated to be more than 50,000 kWh's last year alone!

Essex Powerlines Energy Conservation Web Sites

In 2007, our conservation websites continued to receive acclaim as many of our customers called us to tell us how much they appreciate the information. Essex Powerlines will continue to sponsor these websites to better educate the general public about the roles they can play every day for the conservation cause.

Utilismart Program

Utilismart offers invaluable day to day operational information for our C&I customers. Being able to monitor load and accurately estimate month to month energy costs has provided businesses with the opportunity to be energy champions and lead the way in savings and conversation.

Wholesale Embedded Generation Incentive Program

While it was somewhat disappointing that these two units have yet to be approved for wholesale export, we are still very excited about bringing them into full commercial operation. Once wholesale export may begin, the asset owners will be able to generate revenue from an asset that costs most businesses considerable dollars. The demand response capabilities of these units is an excellent start for these units and we look forward to having them participating in the wholesale market in Q2 2008.