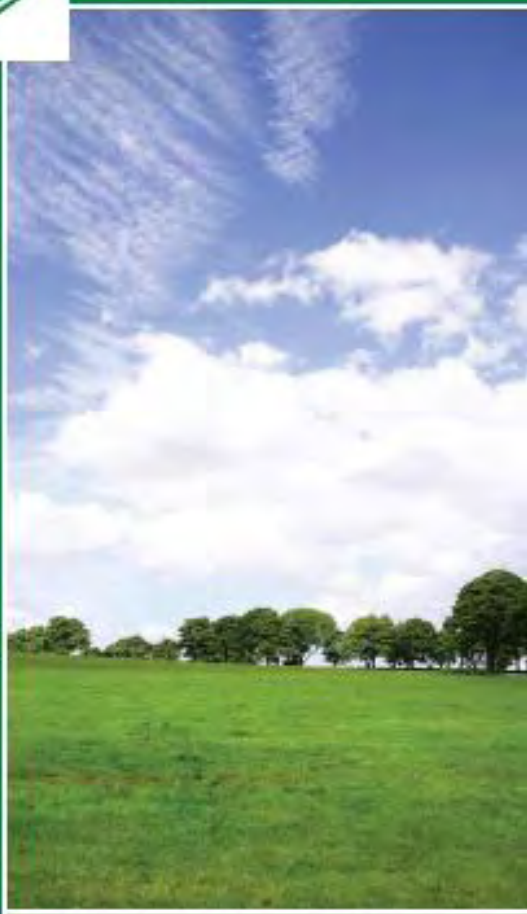
Essex Powerlines Corporation | RP-2004-0203
EB# 2004-0499

2006 Annual Report, CDM Third Tranche Funding



Expanding the Culture of Conservation Mandate

Conservation and Demand Annual Report 2006

Lawrence Musyj
CDM Coordinator
Essex Powerlines Corporation

ESSEX POWER LINES CORPORATION

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Introduction

We are proud of Conservation Demand Management Program and our accomplishments to date. At Essex Powerlines we have the following slogans "***Your Power, our Priority***", and "***Doing the Right Thing, Leading by Example***". We continually are thriving to be a leader of energy conservation in Essex County.

Understanding energy use is the crucial first step in an effective energy conservation and demand management program.

Essex Powerlines Corporation Conservation and Demand Management (CDM) program is expanding the reach and accessibility of the culture of conservation through a group of innovative and resourceful programs that put the drive to learn and power to conserve in the hands of the energy consumers.

These CDM programs are available to residents, companies and the municipalities within Essex Powerlines service territory. We've removed the challenge of determining what the first step should be by providing entire programs and learning modules.

By partnering with industry-specific service partners, Essex Powerlines is providing best-in-class energy conservation and education solutions.

Essex Powerlines has become a leader in energy conservation and demand side management. We are proud of our results and look forward to working with our customers to lead the way in changing to a culture of conservation.

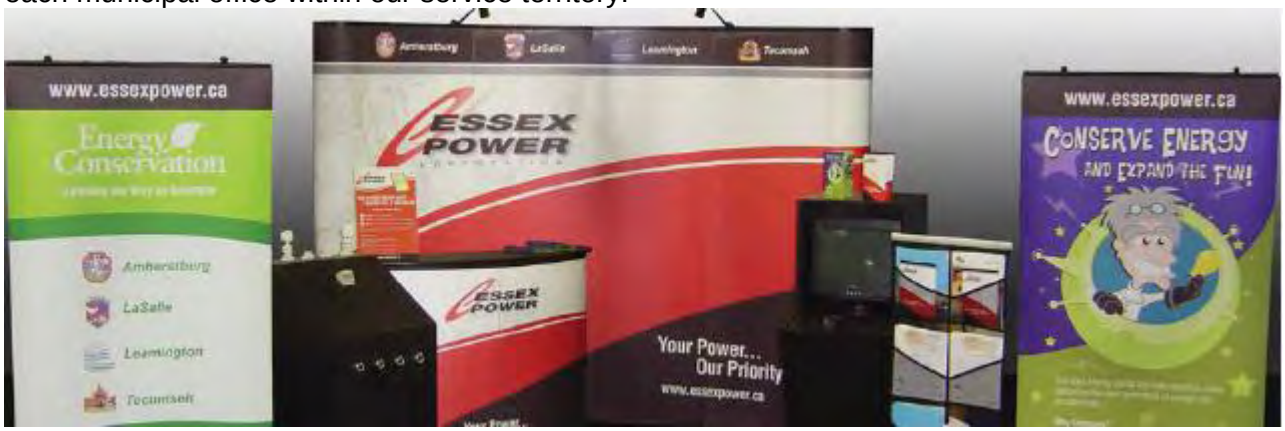
Essex Powerlines CDM Plan consists of 6 categories:
Energy Awareness
Residential Conservation < 50 kW
General Service Conservation > 50 kW
Municipal Green Project
4 kV Conservation

We have had success in all categories of our program, excellent customer feedback and continue to expand as we go forward.

Lawrence Musyj
CDM Coordinator
Essex Powerlines Corporation

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.

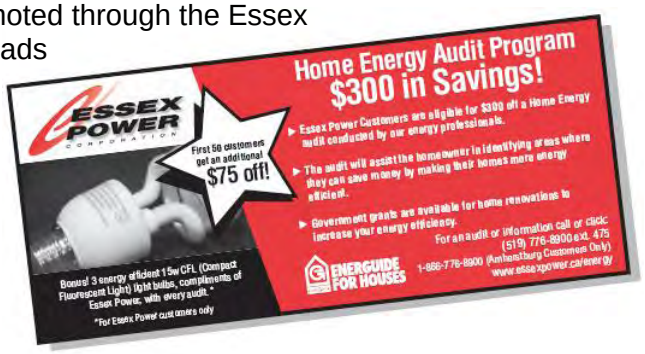


Featured Event and Results
In 2006 we attended the Leamington Home show, and the OSUM conference held in Leamington, hosting a light bulb give away of 300 CFL's , with a reported savings of 29,565 kwh/yr.

Home Audits

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 $375 off the price of a professional home energy audit along with three compact fluorescent lights as an add incentive, we are able to assist homeowners in identifying areas for improvement and increased energy efficiency. The overall effect is educating the customers, lowering their bills, and lowering peak demand on the entire power system.

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 seventy nine homes within the Essex Powerlines service territory have taken advantage of the Home Energy audit program resulting in an estimated 6,000 kwh/yr reduction.

Electrical Home Audit Program

Teaming up with a reputable Electrical company enabled us to offer Electrical Home Audits for a limited Time. The electrician would walk around the house with the home owner and conduct an audit of the existing electricity usage. He would then propose recommendations on opportunities to reduce there usage, and save $$$ on there electricity bills. The electrician was equipped to make changes on the spot at a contracted price. The customer received a written report for the electrician when completed.

Estimated savings = 14,500 kwh/yr

Audit helps homeowners see energy saving moves

By PAT BAILEY
of Leamington Post

When Terry and Cheryl Fysh were given an opportunity to save energy and money — they jumped at the chance.

Cheryl said she saw a notice in her Essex Power hydro bill, offering free -in-home electrical audits, and called to set up an appointment.

"I thought it was perfect," she said of the pilot project.

"We'd do anything we can to save hydro and money," added the Leamington woman.

Dan Nantais of Neighbourhood Electric visited her home recently and made several recommendations.

The couple decided to implement his suggestions and he completed the work two weeks ago. While the audit was free the homeowner paid the cost for the bulbs and the completed work.

At the Fysh home, Nantais replaced 21 incandescent bulbs with compact flourescents and converted 13 of their existing T12, 40-watt fluorescent tubes and ballasts to new T8 Technology tubes with electronic ballasts.

The in-home audit idea was that of Lawrence Musyj, Conservation Demand Management co-ordinator for Essex Powerlines. Always looking at ways to save hydro, money and benefit the environment, Musyj said the changes made by the Fyshs will pay for themselves in about 11 months.

Nantais said there is an added benefit, the bulbs will have a much greater life expectancy, which will save them money on replacement bulbs.

Musyj said about 50 appointments were booked during the residential pilot project — which is now over in Leamington.

He said Nantais visited about 25 homes. While not all homeowners called back for his assistance in implementing those recommendations, Musyj said he's quite certain that the great majority of those have taken it upon themselves to make at least some of those changes.

Musyj said he is pleased with the response and encouraged by the results.

In addition to the residential audits, Musyj said they have also launched a commercial lighting audit program, with great response in this area.

He said 10 audits have been completed, with five projects confirmed and two completed.

Musyj said Leamington Towers East recently converted to compact fluorescents and T8 Technology. He said they should see a lighting reduction of 66,000 kilowatt hours a year — an estimated savings of $6,700 in operating costs.

He said he will continue with his efforts to conserve energy. His next undertaking is a Christmas light exchange program in conjunction with Canadian Tire for customers of Essex Powerlines.

Musyj said EPL customers can bring in a string of the 75 or more old style bulbs and receive a new string of 75 LED Christmas free.

He said there will be 300 boxes available locally and it will be limited to one per customer on a first come first serve basis.

Musyj said they will also have coupons available for those customers who wish to purchase additional lights.

He said LED lights have a much longer life and save up to 90 per cent of the energy used by the old-style bulb.

A date for the light exchange will be announced at a later date.

Overall, Musyj said he is quite impressed with Leamington's efforts to conserve energy.

In addition to replacing 5,500 Christmas lights last year with LED lights, Musyj said they are also planning to replace 70 wreaths, with those using LED lights.

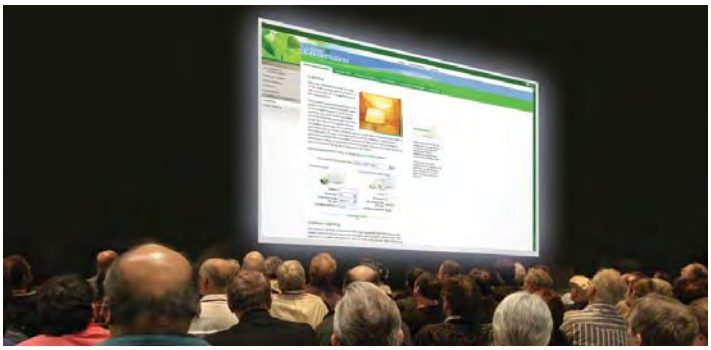
Mayor John Adams said the municipality's efforts have also extended to the Leamington Kinsmen Recreation Complex. He said they spent $80,000 to retrofit the complex.

Mayor John Adams looks on as Dan Nantais checks the new lights with homeowners Cheryl and Terry Fysh, and Lawrence Musyj of Essex Powerlines. *(Leamington Post photo)*

OPA Every Kilowatt Counts Campaign

Essex Powerlines participated in the OPA in store, and mail coupon campaign. Customers were given coupons to use towards Energy Savings devices to retrofit in their homes. As a result of the Spring/Fall coupons Essex Powerlines customers saved 1,770,293 kwh/yr.

Seminars for Commercial and Industrial User



Organizations are realizing the importance of managing energy costs. But in order to manage these costs organizations need to understand their facility's energy consumption patterns, the pricing structure in their particular electricity marketplace and how this information can be used to improve their bottom line.

Essex Powerlines has developed seminars for large commercial and industrial users, focusing on the competitive value of **metering, monitoring and management**. Participants learn about market conditions in Ontario and how to develop an electricity monitoring and management program that will provide results-oriented insight into the benefits and cost savings that come with energy conservation—simple, industry-savvy steps that will give large users a competitive advantage.

Offering efficiency seminars to large users has been great way for Essex Powerlines to increase visibility in the communities we serve and promote conservation in business operations.

Results
Essex Powerlines participated in the Ministry of Economic Development and Trade forum to provide Local manufacturing and Industrial customers with energy saving opportunities. Essex Powerlines sponsored an Energy Savings Seminar for commercial and industrial customers. Sponsored and presented at an Ontario Greenhouse Growers seminar. In 2006 co-sponsored the "bottom line on energy management" seminar for our large users Hosted a smart meter seminar for our 4 shareholders

Industrial and Commercial Audits and Load Reduction Incentives

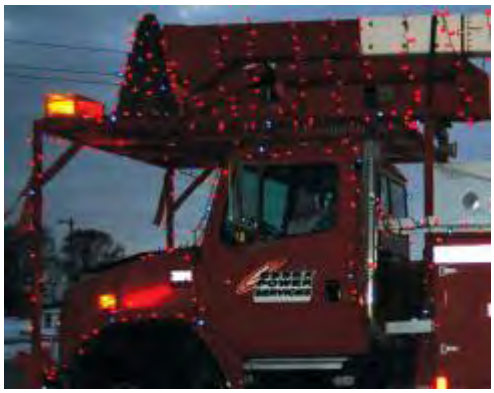
Helping our largest energy users better manage their energy consumption means understanding their needs as large users, and what is required of our programs, so we can recommend a specific and effective course of action when it comes to auditing their business operations.

Essex Powerlines has worked in cooperation with service providers in specific energy industry sectors to provide an audit and 'best business case' energy efficiency solution. Together, we establish a utility baseline, identify energy saving opportunities, and determine the best means to move forward.

Essex Powerlines has established a load reduction Incentive program providing funding to assist companies in Load Reduction projects discovered during the audit process.

Results
In 2005 Family Traditions Foods in Tecumseh is the first recipient of two programs resulting in ***2,671,351 kWh/yr savings***.

Christmas Light Exchange Program and Energy Innovators Program



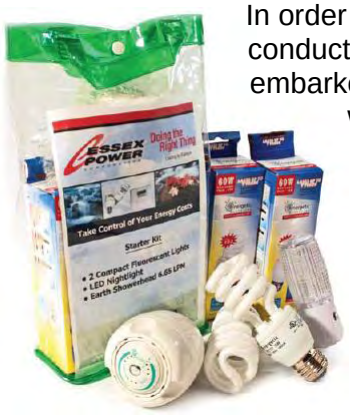
Essex Powerlines sponsored a Christmas light exchange program for each municipality. The replacement LED lights consume on average 90% less energy than standard 5W Christmas bulbs.

Essex Powerlines is helping Industry and Municipalities cut costs and become leaders in corporate citizenry. Essex Powerlines has local companies and each Municipality registered as Industrial Energy Innovators. In becoming an Innovator the financial bottom line will benefit as well as helping to reduce greenhouse gas emissions and help create a healthier environment. The Innovator program is part of the Canadian Industry Program for Energy Conservation (CIPEC), a joint industry-government program sponsored by Natural Resources Canada's Office of Energy Efficiency.

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

Essex Powerlines hosted a xmas light exchange program with all 4 municipalities. 300 customers from each community could exchange 1 box of old style lights for 1 box of 70 new led lights.

Employee Energy Savings Pilot Project



In order to test market an energy savings project that potentially can be conducted within an entire municipality, Essex Powerlines employees embarked upon an energy savings pilot project in their own homes. Armed with energy savings kits provided by Essex Powerlines each employee was challenged to reduce energy consumption in their own homes.

Each employee was required to complete a home energy audit survey as well make low or no cost home energy saving improvements. The pilot project saved an estimated 381,577 kwh/yr

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 ($):	***$3,759,195***	**$ 1,417,795**	**$ 972,200**	**$ 61,700**	**$ -**	**$ -**	**$ -**	**$ -**		**$ 383,895**	**$ -**
Benefit to cost ratio:	*4.25*	4.36	5.84	1.93	0.00	0.00	0.00	0.00		3.48	0.00
Number of participants or units delivered:	*20395*	15843	1234	1232						13377	
Lifecycle (kWh) Savings:	*87,479,856*	47,692,351	3,220,260	33,700,010	0	0	0	0		10,772,081	0
Report Year Total kWh saved (kWh):	*5,527,375*	2,452,780	171,492	481,430	0	0	0	0		1,799,858	0
Total peak demand saved (kW):	*1177*	586	7	82	0	0	0	0		497	0
Total kWh saved as a percentage of total kWh delivered (%):	*0.45%*	0.40%									
Peak kW saved as a percentage of LDC peak kW load (%):	*0.50%*	0.40%									
[1] *Report Year Gross C&DM expenditures ($):*	*$792,162*	$ 483,700	$ 201,000	$ 127,700	$ -	$ -	$ -	$ -	$ -	$ 155,000	$ -
[2] *Expenditures per KWh saved ($/kWh):*	*0.14*	$ 0.20	$ 1.17	$ 0.27	$ -	$ -	$ -	$ -		$ 0.09	$ -
[3] *Expenditures per KW saved ($/kW):*	*$673*	$ 825.43	$ 28,714.29	$ 1,557.32	$ -	$ -	$ -	$ -		$ 311.87	$ -

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

Appendix C - Program and Portfolio Totals

Report Year: **2006**

1. Residential Programs

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

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

	TRC Benefits (PV)	TRC Costs (PV)	$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures ($)
xmas light exchange program	$ 1,400	$ 25,000	-$ 23,600	0.06	151,200	3,024,000	5	$ 25,000
Home electrical audit	$ 1,600	$ 8,000	-$ 6,400	0.20	14,500	22,500	1	$ 8,000
Energuide Home Audit Program	-$ 2,400	$ 11,000	-$ 13,400	-0.22	5,792	173,760	1	$ 11,000
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**	$ 600	$ 44,000	-$ 43,400	0.01	171,492	3,220,260	7	$ 44,000
Residential Indirect Costs not attributable to any specific program	→							
Total Residential TRC Costs		$ 44,000						
****Totals TRC - Residential**	**$ 600**	**$ 44,000**	**-$ 43,400**	**0.01**				

2. Commercial Programs

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

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

	TRC Benefits (PV)	TRC Costs (PV)	$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures ($)
Commercial Lighting Program	$ 127,700	$ 66,000	$ 61,700	1.93	481,430	33,700,010	82	$ 127,700
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**	$ 127,700	$ 66,000	$ 61,700	1.93	481,430	33,700,010	82	$ 127,700

Commercial Indirect Costs not attributable to any specific program →				
Total TRC Costs		$ 66,000		
****Totals TRC - Commercial**	**$ 127,700**	**$ 66,000**	**$ 61,700**	**1.93**

3. Institutional Programs

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

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

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

4. Industrial Programs

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

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

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

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

5. Agricultural Programs

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

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

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

6. LDC System Programs

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

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

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

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

7. Smart Meters Program

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

Report Year Gross C&DM Expenditures ($) →

8. Other #1 Programs

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

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

	TRC Benefits (PV)	TRC Costs (PV)	$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures ($)
Trade Show's Energy Awareness	$ 1,300	$ 4,300	-$ 3,000	0.30	29,565	147,825	6	$ 4,300
Spring EKC Campaign	$ 179,700	$ 23,000	$ 156,700	7.81	711,000	3,555,000	241	$ 23,000
Fall EKC Program	$ 357,895	$ 127,700	$ 230,195	2.80	1,059,293	7,069,256	250	$ 127,700
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**	$ 538,895	$ 155,000	$ 383,895	3.48	1,799,858	10,772,081	497	$ 155,000
Other #1 Indirect Costs not attributable to any specific program →								
Total TRC Costs		$ 155,000						
****Totals TRC - Other #1**	**$ 538,895**	**$ 155,000**	**$ 383,895**	**3.48**				

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**	$ 667,195	$ 265,000	$ 402,195	2.52	$ 2,452,780	$ 47,692,351	$ 586	$ 326,700
*Any **other** Indirect Costs not attributable to any specific program* →								
TOTAL ALL LDC COSTS		$ 265,000						
****LDC' PORTFOLIO TRC**	$ 667,195	$ 265,000	$ 402,195	2.52				

* 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- Energy Awareness - Light Bulb Giveaway

2- Xmas light LED exchange Program

3- Municipal in Home Electrical Audit Program

4- Energuide Home Audit Program

5 - OPA Every Kilowatt Counts spring campaign

6 - OPA Every Kilowatt Counts Fall campaign

7 - Essex Powerlines Staff Conservation Challenge

8 - Energy Efficient Lighting Incentive Program

Appendix B - Discussion of the Program

(complete this section for each program)

A. **Name of the Program:** Energy Awareness - Light Bulb Giveaway

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

Intent was 2 fold. To educate the public and energy conservation. Distributed through homeshows, raffles, employee participation and home audit program. Additionally we built a light bulb display equipped with a Watt meter to demonstrate the energy savings from CFL's.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	18 kW	39420 kwh	
Efficient technology:	4.5 kW	9855 kwh	
Number of participants or units delive	300		
Measure life (years):	5		

B. **TRC Results:**

TRC Benefits ($):	*$*	*1,300.00*
TRC Costs ($):		
Utility program cost (less incentives):	$	2,000.00
Participant cost:	$	1,000.00
Total TRC costs:	$	3,000.00
Net TRC (in year CDN $):	$	4,300.00
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	$	0.43

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

Conservation Programs:

Demand savings (kW):	*Summer*	6	
	Winter	6	
	lifecycle	*in year*	
Energy saved (kWh):	*147,825*	29,565	
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. **Program Costs*:**

Utility direct costs ($):	*Incremental capital:*	$	-
	Incremental O&M:	$	2,000.00
	Incentive:	$	-
	Total:	$	2,000.00
Utility indirect costs ($):	*Incremental capital:*		0
	Incremental O&M:		0
	Total:		0
Participant costs ($):	*Incremental equipment:*		
	Incremental O&M:		
	Total:		0

E. Comments:

Before most participants received a bulb; they used our light bulb display to visually see the difference between bulbs. Great energy awareness.

*Please refer to the TRC Guide for the treatment of equipment cost in the TRC Test.

Net Present Value$_{TRC}$

Utility

Name of Utility:	Essex Powerlines Corp.
Number of years in study:	4

Project Description

Name of Project:	Light Bulb Giveaway
Description:	Energy Awareness

(•) OEB Residential Table
( ) OEB Commercial Table
( ) OEB Industrial Table
( ) Direct Input

(•) k$
( ) $

User Inputs

Discount rate	7.73%	
Unit Annual Energy Savings	0	kW/unit
Number of Units Delivered	300	
Free Ridership Rate	10%	

Output

NPV ($k)	4.3

$k LDC Avoided Costs		Present	2007	2008	2009	2010
Avoided Energy			2	2	2	2
Avoided Generation Capacity			-	-	-	-
Avoided Transmission Capacity			-	-	-	-
Avoided Distribution Capacity			-	-	-	-
Avoided Distribution Losses			-	-	-	-
Other Avoided Costs						
Other Benefits						
Total (undiscounted) Avoided Costs		-	2	2	2	2
$k LDC Program Costs						
LDC OM&A Costs		(2)				
LDC Capital Costs						
Incremental Equipment Costs	(0.5)	(1)				
Participant Costs						
Total Program Costs		(3)	-	-	-	-
Total Avoided Costs less Program Costs		(3)	2	2	2	2

			2007	2008	2009	2010
Present value factor	7.7%	1.000	0.963	0.894	0.830	0.771
Present value of cash flows		(2.5)	1.9	1.8	1.6	1.5
Accumulated present value of cash flows		(2.5)	(0.6)	1.2	2.8	4.3

$k NPV TRC	4.3

Appendix B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** Essex Powerlines Xmas Light Exchange Program

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

Administered through Essex Powerlines we set up a booth at all 4 municipalities and exchanged 300 boxes of new LED lights for the sam

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:	1200		
Measure life (years):	20		
Number of Partipants or unites delievered lfe to date			

B. **TRC Results:**

		Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*		$ 1,400.00	
[2] *TRC Costs ($):*			
Utility program cost (excluding incentives):		$ 22,000.00	
Incremental Measure Costs (Equipment Costs)		$ 25,000.00	
Total TRC costs:		47,000	
Net TRC (in year CDN $):			
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		$ 6.45	

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

Cumulative Results:

Conservation Programs:

Demand savings (kW):	*Summer*	0			
	Winter	656			
		lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):		*3,024,000*	151,200		
Other resources saved :					
Natural Gas (m3):					
Other (specify):					

Demand Management Programs:

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

Demand Response Programs:

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

Power Factor Correction Programs:

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

Line Loss Reduction Programs:

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

Distributed Generation and Load Displacement Programs:

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

Other Programs (specify):

Metric (specify):	

D. **Actual Program Costs:**

		Reporting Year	Cumlative Life to Date
Utility direct costs ($):	*Incremental capital:*	$ 3,000.00	
	Incremental O&M:	$ 22,000.00	
	Incentive:	$ -	
	Total:	$ 25,000.00	
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:	0	

E. Assumptions & Comments:

Excellent Program, great energy awareness, excellent savings.

[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.

Net Present Value$_{TRC}$

Utility

Name of Utility:	**Essex Powerlines Corp.**
Number of years in study:	**20**

Project Description

Name of Project:	Xmas Light Exchange Program
Description:	**xmas Light exchange with Municipalities and Customers**

- (•) **OEB Residential Table**
- ( ) **OEB Commercial Table**
- ( ) **OEB Industrial Table**
- ( ) **Direct Input**

- (•) **k$**
- ( ) **$**

User Inputs

Discount rate	**7.73%**	
Unit Annual Energy Savings	**0**	kW/unit
Number of Units Delivered	**1600**	
Free Ridership Rate	**5%**	

Output

NPV ($k)	**1.4**

$k LDC Avoided Costs		**Present**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
Avoided Energy			2	2	2	2	2	2	2
Avoided Generation Capacity			-	-	-	-	-	-	-
Avoided Transmission Capacity			-	-	-	-	-	-	-
Avoided Distribution Capacity			-	-	-	-	-	-	-
Avoided Distribution Losses			-	-	-	-	-	-	-
Other Avoided Costs									
Other Benefits									
Total (undiscounted) Avoided Costs		-	2	2	2	2	2	2	2
$k LDC Program Costs									
LDC OM&A Costs		(22)							
LDC Capital Costs									
Incremental Equipment Costs	(3.0)	(3)							
Participant Costs									
Total Program Costs		(25)	-	-	-	-	-	-	-
Total Avoided Costs less Program Costs		(25)	2	2	2	2	2	2	2

			2007	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
Present value factor	7.7%	1.000	0.963	0.894	0.830	0.771	0.715	0.664	0.616
Present value of cash flows		(25.0)	2.1	2.0	1.7	1.7	1.5	1.4	1.5
Accumulated present value of cash flows		(25.0)	(22.9)	(20.9)	(19.2)	(17.5)	(16.0)	(14.5)	(13.0)

$k NPV TRC	**1.4**

Net Present Value$_{TRC}$

Utility

Name of Utility:	
Number of years in study:	

Project Description

Name of Project:	
Description:	

- (•) OEB Residential Table
- ( ) OEB Commercial Table
- ( ) OEB Industrial Table
- ( ) Direct Input

User Inputs

Discount rate	
Unit Annual Energy Savings	
Number of Units Delivered	
Free Ridership Rate	

$k LDC Avoided Costs	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
Avoided Energy	3	3	3	3	3	3	3	3	3	3
Avoided Generation Capacity	-	-	-	-	-	-	-	-	-	-
Avoided Transmission Capacity	-	-	-	-	-	-	-	-	-	-
Avoided Distribution Capacity	-	-	-	-	-	-	-	-	-	-
Avoided Distribution Losses	-	-	-	-	-	-	-	-	-	-
Other Avoided Costs										
Other Benefits										
Total (undiscounted) Avoided Costs	3	3	3	3	3	3	3	3	3	3
$k LDC Program Costs										
LDC OM&A Costs										
LDC Capital Costs										
Incremental Equipment Costs										
Participant Costs										
Total Program Costs	-	-	-	-	-	-	-	-	-	-
Total Avoided Costs less Program Costs	3	3	3	3	3	3	3	3	3	3

	2014	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
Present value factor	0.572	0.531	0.493	0.458	0.425	0.394	0.366	0.340	0.315	0.293
Present value of cash flows	1.4	1.4	1.3	1.3	1.2	1.1	1.1	1.0	1.0	0.9
Accumulated present value of cash flows	(11.6)	(10.2)	(8.9)	(7.6)	(6.4)	(5.2)	(4.1)	(3.1)	(2.1)	(1.2)

$k NPV TRC	

Appendix B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** Essex Powerlines In Home Electrical Audit Program

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

Administered through Essex Powerlines with Neighborhood Electric. Electrician would enter the home, conduct a walkthrough audit with the customer, identifying their current energy usage, and recommending EE improvements. The electrician would quote a price, and was equipped to make changes on the spot.

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:	34		
Measure life (years):	5		
Number of Partipants or unites delievered lfe to date			

B. **TRC Results:**

		Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*		-$ 1,600.00	
[2] *TRC Costs ($):*			
	Utility program cost (excluding incentives):	$ 7,000.00	
	Incremental Measure Costs (Equipment Costs)	$ 1,000.00	
	Total TRC costs:	8,000	
Net TRC (in year CDN $):			
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		-$ 0.20	

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

Cumulative Results:

Conservation Programs:

Demand savings (kW):	*Summer*	5		
	Winter	1		
	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):	*72,500*	14,500		
Other resources saved :				
Natural Gas (m3):				
Other (specify):				

Demand Management Programs:

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

Demand Response Programs:

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

Power Factor Correction Programs:

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

Line Loss Reduction Programs:

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

Distributed Generation and Load Displacement Programs:

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

Other Programs (specify):

Metric (specify):	

D. **Actual Program Costs:**

		Reporting Year	Cumlative Life to Date
Utility direct costs ($):	*Incremental capital:*	$ 1,000.00	
	Incremental O&M:	$ 7,000.00	
	Incentive:	$ 3,000.00	
	Total:	$ 11,000.00	
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:	0	

E. Assumptions & Comments:

Excellent Program, great energy awareness. Most customers decide to make changes themselves, but EE benefits are their.

[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.

Net Present Value$_{TRC}$

Utility

Name of Utility:	**Essex Powerlines Corp.**
Number of years in study:	**5**

Project Description

Name of Project:	In Home Electrical Audit
Description:	**Electrician provided an in home electrical audit to its customers**

- (•) **OEB Residential Table**
- ( ) **OEB Commercial Table**
- ( ) **OEB Industrial Table**
- ( ) **Direct Input**

- (•) **k$**
- ( ) **$**

User Inputs

Discount rate	**7.73%**	
Unit Annual Energy Savings	**0**	kW/unit
Number of Units Delivered	**251**	
Free Ridership Rate	**10%**	

Output

NPV ($k)	**(1.6)**

$k LDC Avoided Costs		**Present**	**2007**	**2008**	**2009**	**2010**	**2011**
Avoided Energy			2	2	2	2	2
Avoided Generation Capacity			-	-	-	-	-
Avoided Transmission Capacity			-	-	-	-	-
Avoided Distribution Capacity			-	-	-	-	-
Avoided Distribution Losses			-	-	-	-	-
Other Avoided Costs							
Other Benefits							
Total (undiscounted) Avoided Costs		-	2	2	2	2	2
$k LDC Program Costs							
LDC OM&A Costs		(7)					
LDC Capital Costs							
Incremental Equipment Costs	(0.5)	(1)					
Participant Costs		(1)					
Total Program Costs		(9)	-	-	-	-	-
Total Avoided Costs less Program Costs		(9)	2	2	2	2	2

			2007	**2008**	**2009**	**2010**	**2011**
Present value factor	7.7%	1.000	0.963	0.894	0.830	0.771	0.715
Present value of cash flows		(8.5)	1.6	1.5	1.3	1.3	1.2
Accumulated present value of cash flows		(8.5)	(6.9)	(5.4)	(4.1)	(2.8)	(1.6)

$k NPV TRC	**(1.6)**

February 27, 2007

In Home Electrical Audit 2006 OEB Reporting Results

Pilot project. Neighborhood electric would visit customers residential home, complete an audit of the existing electrical usage, and propose to retrofit to an updated technology, explain the benefits to the customer, and propose a price to complete the retrofits on the spot, and explain the savings to the customer. The customer would then decide weather or not they wanted to proceed, or take all the Energy Efficiency Information a make changes on their own.

Retrofits

5 Houses x avg 2200 kwhr/yr savings = 11,000 kwhr. These customers had the electrician make changes on the spot, at an agreed price to the customer.

Influence – Follow up call determined that each house hold replaced and average of 6 incandescent bulbs to CFL's after the electrician explained the savings.

Existing

(6) 60 w bulbs * 6 hrs/day * 365 / days per year/ 1000 = 131.4 kwhr/yr

Retrofitted

(6) 13 w * 6 hrs/day * 365 / days per year/ 1000 = 28.47 kwhr/yr

Pilot savings

131.4 – 28.47 = 102.93 kwhr/yr per household

102.93 kwhr/yr * 34 households = 3500 kwhrs/yr + 11,000 kwhrs/yr = **14,500 kwhr/yr**

Total costs = Neighborhood Electric = $3000.00
Advertising = $600.00
Exomedia set up = $500.00 for billing inserts
Essex Powerlines time = $3500.00
Total = $7100.00

Results

Customers were impressed with the amount of information the electrician could provide, and every customer visited, retrofitted at least 6 incandescent bulbs to CFL's, and aware of more EE opportunities for the future. Very successful!

ENERGY CONSERVATION

AT HOME TIPS - YES, YOU CAN MAKE A DIFFERENCE!

HERE ARE SOME NO - OR LOW - COST IDEAS THAT CAN HELP YOU SAVE ENERGY!

* Replace incandescent bulbs with compact flourescents.

* Air dry dishes instead of using your dishwasher's drying cycle.

* Scrape, don't rinse off large food pieces and bones.

* Don't use the "rinse hold" on your machine for just a few soiled dishes. It uses 3 to 7 gallons of hot water each time you use it.

* Wash only full loads of dishes and clothes.

* Wash your clothes in cold water using cold water detergents whenever possible.

* Don't overdry clothes. If your machine has a moisture sensor, use it.

* Clean the lint filter in the dryer after every load to improve air circulation.

* Consider air drying clothes on clothes lines or drying racks.

* Take showers instead of baths to reduce hot water use.

* Lower the thermostat on your hot water heater, 115 degrees is comfortable for most uses.

* Be sure to place the faucet lever in the cold position when using small amounts of water, placing the lever in the hot position uses energy to heat the water even though it may never reach the faucet.

* Don't keep your refrigerator or freezer too cold. Recommended temperatures are 37 degrees to 40 degrees F for refrigerator section and 5 degrees F for the freezer.

* Regularly defrost manual-defrost refrigerators and freezers; frost build-up decreases the energy efficiency of the unit.

* Cover liquids and wrap food stored in the refrigerator. Uncovered foods release moisture and make the compressor work harder.

* Use your microwave instead of a conventional electric range or oven.

* Keep range top burners clean, they will reflect the heat better and you will save energy.

* Use small electric pans or toaster ovens for small meals rather than your large stove or oven.

* Turn off your computer and monitor when not in use.

* To maximize savings with a laptop, put the AC adaptor on a power strip that can be truned off.

* Plug home electronics into power strips and turn power strips off when equipment not in use.

* Unplug battery chargers when the batteries are fully charged or the chargers are not in use.

* Reduce the temperature of your home a few degrees at night and when you're away.

* Keep blinds, shades and drapes closed during the hottest part of the day.

* If you feel cool, put on a sweater rather than simply turning up the thermostat.

* Turn off the lights in any room you are not using.

REMEMBER - EVERY LITTLE BIT HELPS!!!!

CUSTOMER NAME: _____

ADDRESS: _____

TELEPHONE: _____

EXISTING BULBS			**PROPOSED CFL'S**		
20W	**x**	_____	20W	**x**	_____
40W	**x**	_____	40W	**x**	_____
60W	**x**	_____	60W	**x**	_____
100W	**x**	_____	100W	**x**	_____
TOTAL WATTS:			**TOTAL WATTS:**		

TOTAL SAVINGS = Total existing minus total proposed = _____ **W**

(OR) _____ **KW**

_____ KW x .06 cents/kwhr x 6 hrs/day x 365 days/year = _____

(ENERGY SAVINGS)

PAYBACK = _____

OTHER EXISTING DEVICES:

timer	_____
dimmer switch	_____
motion detector	_____
electrical fire alarm	_____
carbon monoxide detector	_____
other	_____

RECOMMENDATIONS

QUOTE: _____

Audit helps homeowners see energy saving moves

By PAT BAILEY
of Leamington Post

When Terry and Cheryl Fysh were given an opportunity to save energy and money — they jumped at the chance.

Cheryl said she saw a notice in her Essex Power hydro bill, offering free -in-home electrical audits, and called to set up an appointment.

"I thought it was perfect," she said of the pilot project.

"We'd do anything we can to save hydro and money," added the Leamington woman.

Dan Nantais of Neighbourhood Electric visited her home recently and made several recommendations.

The couple decided to implement his suggestions and he completed the work two weeks ago. While the audit was free the homeowner paid the cost for the bulbs and the completed work.

At the Fysh home, Nantais replaced 21 incandescent bulbs with compact flourescents and converted 13 of their existing T12, 40-watt fluorescent tubes and ballasts to new T8 Technology tubes with electronic ballasts.

The in-home audit idea was that of Lawrence Musyj, Conservation Demand Management co-ordinator for Essex Powerlines. Always looking at ways to save hydro, money and benefit the environment, Musyj said the changes made by the Fyshs will pay for themselves in about 11 months.

Nantais said there is an added benefit, the bulbs will have a much greater life expectancy, which will save them money on replacement bulbs.

Musyj said about 50 appointments were booked during the residential pilot project — which is now over in Leamington.

He said Nantais visited about 25 homes. While not all homeowners called back for his assistance in implementing those recommendations, Musyj said he's quite certain that the great majority of those have taken it upon themselves to make at least some of those changes.

Musyj said he is pleased with the response and encouraged by the results.

In addition to the residential audits, Musyj said they have also launched a commercial lighting audit program, with great response in this area.

He said 10 audits have been completed, with five projects confirmed and two completed.

Musyj said Leamington Towers East recently converted to compact fluorescents and T8 Technology. He said they should see a lighting reduction of 66,000 kilowatt hours a year — an estimated savings of $6,700 in operating costs.

He said he will continue with his efforts to conserve energy. His next undertaking is a Christmas light exchange program in conjunction with Canadian Tire for customers of Essex Powerlines.

Musyj said EPL customers can bring in a string of the 75 or more old style bulbs and receive a new string of 75 LED Christmas free.

He said there will be 300 boxes available locally and it will be limited to one per customer on a first come first serve basis.

Musyj said they will also have coupons available for those customers who wish to purchase additional lights.

He said LED lights have a much longer life and save up to 90 per cent of the energy used by the old-style bulb.

A date for the light exchange will be announced at a later date.

Overall, Musyj said he is quite impressed with Leamington's efforts to conserve energy.

In addition to replacing 5,500 Christmas lights last year with LED lights, Musyj said they are also planning to replace 70 wreaths, with those using LED lights.

Mayor John Adams said the municipality's efforts have also extended to the Leamington Kinsmen Recreation Complex. He said they spent $80,000 to retrofit the complex.

Mayor John Adams looks on as Dan Nantais checks the new lights with homeowners Cheryl and Terry Fysh, and Lawrence Musyj of Essex Powerlines. *(Leamington Post photo)*

ADVERTISING PROOF

Proof # 4

Publication Date: AUG 06	**Client:** ESSEX POWER	**Client Approval:**
Typesetter: KEITH	**Account Rep:** MC	

This proof is for typographical errors and omissions. Please double check all dates, names, email and web addresses for accuracy. Once you sign off on this artwork, any errors become the responsibility of the client. Please check carefully and initial the Client Approval box prior to returning this proof to your rep. Thank you for advertising with In Business.

Essex Power Lines is now offering

FREE IN-HOME ELECTRICAL AUDIT

This is a service we will be providing for Essex Powerlines customers only. We will come to your home or small business to provide you with an electrical savings proposal, cost of installation and material. If accepted we will change bulbs, timers, etc. on the spot!

Sample savings based on a 1500 sq. ft. house/business:

16 - 75w pot lights
50 - 60w incandescent bulbs
10 - 40w candelabra bulbs
10 - 40w incandescent bulbs

Existing 5kw by converting to compact flourescents = 1.3kw = 75% savings

For your FREE Audit call

519-776-8900 ext. 475

1-866-776-8900

(Amherstburg customers only)

www.essexpowerlines.ca

ESSEX POWER LINES

Appendix B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** Essex Powerlines EnerGuide Home Audit Program

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

Administered through Essex Powerlines with Amerispec for our service territory. Identify EE upgrades that can take place in a home to save customer energy and lower their bills.

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:	79		
Measure life (years):	20		
Number of Partipants or unites delievered lfe to date			

B. **TRC Results:**

	Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*	-$ 2,400.00	
[2] *TRC Costs ($):*		
Utility program cost (excluding incentives):	$ 6,000.00	
Incremental Measure Costs (Equipment Costs)	$ 5,000.00	
Total TRC costs:	11,000	
Net TRC (in year CDN $):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	-$ 0.22	

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

Cumulative Results:

Conservation Programs:

Demand savings (kW):	*Summer*	1		
	Winter	1		
	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):	*173,760*	5,792		
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:*	$ 5,000.00	
	Incremental O&M:	$ 6,000.00	
	Incentive:	$ -	
	Total:	$ 11,000.00	
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:	0	

E. Assumptions & Comments:

Excellent Program, great enery awareness. More benefit on gas savings then the electrical side.

[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.

Net Present Value$_{TRC}$

Utility

Name of Utility:	**Essex Powerlines Corp.**
Number of years in study:	**20**

Project Description

Name of Project:	Energuide for Houses Program
Description:	**Identify energy savings in Residential homes through and audit**

- ○ **OEB Residential Table**
- ○ **OEB Commercial Table**
- ○ **OEB Industrial Table**
- ◉ **Direct Input**

- ◉ **k$**
- ○ **$**

User Inputs

Discount rate	**7.73%**	
Unit Annual Energy Savings	**0**	kW/unit
Number of Units Delivered		
Free Ridership Rate		

Output

NPV ($k)	**(2.4)**

$k LDC Avoided Costs	**Present**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
Avoided Energy		1	1	1	1	1	1	1
Avoided Generation Capacity		-	-	-	-	-	-	-
Avoided Transmission Capacity		-	-	-	-	-	-	-
Avoided Distribution Capacity		-	-	-	-	-	-	-
Avoided Distribution Losses		-	-	-	-	-	-	-
Other Avoided Costs								
Other Benefits								
Total (undiscounted) Avoided Costs	-	1	1	1	1	1	1	1
$k LDC Program Costs								
LDC OM&A Costs	(6)							
LDC Capital Costs								
Incremental Equipment Costs	(5)							
Participant Costs								
Total Program Costs	(11)	-	-	-	-	-	-	-
Total Avoided Costs less Program Costs	(11)	1	1	1	1	1	1	1

			2007	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
Present value factor	7.7%	1.000	0.963	0.894	0.830	0.771	0.715	0.664	0.616
Present value of cash flows		(11.0)	0.7	0.7	0.6	0.5	0.5	0.5	0.5
Accumulated present value of cash flows		(11.0)	(10.3)	(9.6)	(9.1)	(8.5)	(8.0)	(7.5)	(7.0)

$k NPV TRC	**(2.4)**

Net Present Value$_{TRC}$

Utility

Name of Utility:	
Number of years in study:	

Project Description

Name of Project:	
Description:	

- ○ OEB Residential Table
- ○ OEB Commercial Table
- ○ OEB Industrial Table
- ◉ Direct Input

User Inputs

Discount rate	
Unit Annual Energy Savings	
Number of Units Delivered	
Free Ridership Rate	

$k LDC Avoided Costs	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
Avoided Energy	1	1	1	1	1	1	1	1	1	1
Avoided Generation Capacity	-	-	-	-	-	-	-	-	-	-
Avoided Transmission Capacity	-	-	-	-	-	-	-	-	-	-
Avoided Distribution Capacity	-	-	-	-	-	-	-	-	-	-
Avoided Distribution Losses	-	-	-	-	-	-	-	-	-	-
Other Avoided Costs										
Other Benefits										
Total (undiscounted) Avoided Costs	1	1	1	1	1	1	1	1	1	1
$k LDC Program Costs										
LDC OM&A Costs										
LDC Capital Costs										
Incremental Equipment Costs										
Participant Costs										
Total Program Costs	-	-	-	-	-	-	-	-	-	-
Total Avoided Costs less Program Costs	1	1	1	1	1	1	1	1	1	1

	2014	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
Present value factor	0.572	0.531	0.493	0.458	0.425	0.394	0.366	0.340	0.315	0.293
Present value of cash flows	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.3
Accumulated present value of cash flows	(6.5)	(6.0)	(5.6)	(5.1)	(4.7)	(4.3)	(4.0)	(3.6)	(3.3)	(3.0)

$k NPV TRC

Appendix B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** 2006 Spring Every KiloWatt Counts Campaign

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

Administered through Energyshop for our service territory

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:	7112		
Measure life (years):	various life cycles		
Number of Partipants or unites delievered lfe to date			

B. **TRC Results:**

		Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*	$	179,700.00	
[2] *TRC Costs ($):*			
Utility program cost (excluding incentives):	$	4,000.00	
Incremental Measure Costs (Equipment Costs)	$	19,000.00	
Total TRC costs:		23,000	
Net TRC (in year CDN $):			
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	$	7.80	

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

Conservation Programs:

Demand savings (kW):	*Summer*	0
	Winter	241

	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):	*3,555,000*	711,000		
Other resources saved :				
Natural Gas (m3):				
Other (specify):				

Demand Management Programs:

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

Demand Response Programs:

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

Power Factor Correction Programs:

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

Line Loss Reduction Programs:

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

Distributed Generation and Load Displacement Programs:

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

Other Programs (specify):

Metric (specify):	

D. **Actual Program Costs:**

		Reporting Year	Cumlative Life to Date
Utility direct costs ($):	*Incremental capital:*	$ 19,000.00	
	Incremental O&M:	$ 4,000.00	
	Incentive:	$ -	
	Total:	$ 23,000.00	
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:	0	

E. Assumptions & Comments:

Excellent Program, good results.

[1] Benefits should be estimated if costs have been incurred and the technology has been deployed. Benefits reflect the present value of the measure for the number of units deployed in the year, i.e. the 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.

Net Present Value$_{TRC}$

Utility

Name of Utility:	**Essex Powerlines Corp.**
Number of years in study:	**5**

Project Description

Name of Project:	Spring Every kilowatt Counts
Description:	**Results from 2006 spring Campaign**

- (•) **OEB Residential Table**
- ( ) **OEB Commercial Table**
- ( ) **OEB Industrial Table**
- ( ) **Direct Input**

- (•) **k$**
- ( ) **$**

User Inputs

Discount rate	**7.73%**	
Unit Annual Energy Savings	**0**	kW/unit
Number of Units Delivered	**7112**	
Free Ridership Rate		

Output

NPV ($k)	**179.7**

$k LDC Avoided Costs		**Present**	**2007**	**2008**	**2009**	**2010**	**2011**
Avoided Energy			54	56	53	54	54
Avoided Generation Capacity			-	-	-	-	-
Avoided Transmission Capacity			-	-	-	-	-
Avoided Distribution Capacity			-	-	-	-	-
Avoided Distribution Losses			-	-	-	-	-
Other Avoided Costs							
Other Benefits							
Total (undiscounted) Avoided Costs		-	54	56	53	54	54
$k LDC Program Costs							
LDC OM&A Costs		(4)					
LDC Capital Costs							
Incremental Equipment Costs	(19.1)	(19)					
Participant Costs		(23)					
Total Program Costs		(46)	-	-	-	-	-
Total Avoided Costs less Program Costs		(46)	54	56	53	54	54

			2007	**2008**	**2009**	**2010**	**2011**
Present value factor	7.7%	1.000	0.963	0.894	0.830	0.771	0.715
Present value of cash flows		(46.1)	51.6	49.8	44.3	41.6	38.5
Accumulated present value of cash flows		(46.1)	5.5	55.4	99.7	141.3	179.7

$k NPV TRC	**179.7**

Spring Every Kilowatt Counts Final Results

LDC # 63

Table1 - Direct Mail Totals	All products	CFLs	Timers	Pstats	Fans
Essex Powerlines Corporation direct mail	531	384	70	50	27

Table 2 - In-Store Coupon Totals	All products	CFLs	Timers	Pstats	Fans
Amherstburg	373	308	24	12	29
Leamington	1525	1470	27	5	23
Tecumseh	786	761	11		14
Lasalle	3897	3846	27	4	20
Total -In-Store Coupons	6581	6385	89	21	86
Total -In-Store Coupons + Direct Mail	**7112**	**6769**	**159**	**71**	**113**

Appendix B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** 2006 Fall Every KiloWatt Counts Campaign

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

Administered through Energyshop for our service territory

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:	5965		
Measure life (years):	various life cycles		
Number of Partipants or unites delievered lfe to date			

B. **TRC Results:**

		Reporting Year	Life-to-date TRC Results:
[1]	*TRC Benefits ($):*	*$ 357,895.00*	
[2]	*TRC Costs ($):*		
	Utility program cost (excluding incentives):	$ 2,000.00	
	Incremental Measure Costs (Equipment Costs)	$ 29,957.00	
	Total TRC costs:	$ 127,700.00	
	Net TRC (in year CDN $):		
	Benefit to Cost Ratio (TRC Benefits/TRC Costs):	$ 178.95	

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

Cumulative Results:

Conservation Programs:

Demand savings (kW):	*Summer*	15.51			
	Winter	249.63			
	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings	
Energy saved (kWh):	*7,069,256*	1,059,293		1,059,293	
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:*	$ 29,957.00	
	Incremental O&M:	$ 2,000.00	
	Incentive:	$ -	
	Total:	$ 31,957.00	
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:	0	

E. Assumptions & Comments:

Excellent Program, good results.

[1] Benefits should be estimated if costs have been incurred and the technology has been deployed. Benefits reflect the present value of the measure for the number of units deployed in the year, i.e. the 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.

Fall EKC		
Technology	**Number of Participants**	**Free Ridership**
Compact Fluorescent Bulbs	9615	10.00%
LED Christmas Lights (indoor or outdoor) Replacing 5w Christmas Lights C-7 (25 Lights)	1107	5.00%
LED Christmas Lights (indoor or outdoor) Replacing Incandescent Mini Lights	1107	5.00%
Programmable Thermostat - Space Heating, Existing Single Family Detached	41	10.00%
Programmable Thermostat - Space Cooling, Existing Single Family Detached	106	10.00%
pStat Baseboard	5	10.00%
Dimmer	98	10.00%
Motion Sensor	35	10.00%

Fall EKC					
Technology	**Summer Peak kW Savings**	**Winter Peak kW Savings**	**Annual kWh Savings in Year**	**Measure Life**	**Lifecycle kWh Savings**
Compact Fluorescent Bulbs	0	199.04	903,455	4	3,613,821.87
LED Christmas Lights (indoor or outdoor) Replacing 5w Christmas Lights C-7 (25 Lights)	0.00	19.98	44335.35	30	1,330,060.50
LED Christmas Lights (indoor or outdoor) Replacing Incandescent Mini Lights	0.00	7.36	16937.10	30	508,113.00
Programmable Thermostat - Space Heating, Existing Single Family Detached	0.00	6.33	53651.18	18	965,721.31
Programmable Thermostat - Space Cooling, Existing Single Family Detached	15.51	0.00	15142.34	18	272,562.17
pStat Baseboard	0.00	4.73	6928.27	18	124,708.82
Dimmer	0.00	7.94	12259.80	10	122,598.00
Motion Sensor		4.25	6583.50	20	131,670.00
Total	**15.51**	**249.63**	**1,059,293**		**7,069,256**

Fall EKC					
Technology	**TRC Benefits**	**Incremental Equipment Costs**	**Program Costs**	**TRC Net Benefits**	**TRC B/C Ratio**
Compact Fluorescent Bulbs	$204,025.10	$15,576.82		$188,448	13.10
LED Christmas Lights (indoor or outdoor) Replacing 5w Christmas Lights C-7 (25 Lights)	$52,935	$2,103		$50,832	25.17
LED Christmas Lights (indoor or outdoor) Replacing Incandescent Mini Lights	$20,173	$2,103		$18,070	9.59
Programmable Thermostat - Space Heating, Existing Single Family Detached	$42,553	$2,195		$40,357	19.38
Programmable Thermostat - Space Cooling, Existing Single Family Detached	$21,370	$5,711		$15,660	3.74
pStat Baseboard	$5,982	$284		$5,698	21.10
Dimmer	$6,541	$1,764		$4,777	3.71
Motion Sensor	$4,316	$221		$4,095	19.57
Utility Program Costs			$ 2,000.00		
Total	**$357,895**	**$29,957**	**$2,000**	**$325,938**	**178.95**

Appendix B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** Essex Powerlines Staff Conservation Challenge Program

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

Presentation to all staff on EE opportunties for the home. Each employee were given a EE kit, and had the opportunity to enter into a EE challenge, with grand prizes awarded to the winners.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:		926,687 kwh	
Efficient technology:		545110 kwh	
Number of participants or units delivered for reporting year:	60		
Measure life (years):	5		
Number of Partipants or unites delievered lfe to date			

B. **TRC Results:**

		Reporting Year	Life-to-date TRC Results:
[1] *TRC Benefits ($):*	$	20,000.00	
[2] *TRC Costs ($):*			
Utility program cost (excluding incentives):	$	6,000.00	
Incremental Measure Costs (Equipment Costs)	$	2,000.00	
Total TRC costs:		8,000	
Net TRC (in year CDN $):			
Benefit to Cost Ratio (TRC Benefits/TRC Costs):	$	2.50	

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

Cumulative Results:

Conservation Programs:

Demand savings (kW):	*Summer*	5
	Winter	23

	lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):	*1,907,885*	381,577		
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:*	$ 2,000.00	
	Incremental O&M:	$ 6,000.00	
	Incentive:	$ -	
	Total:	$ 8,000.00	
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:	0	

E. Assumptions & Comments:

Excellent Program, great energy awareness, excellent savings.

[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.

Net Present Value$_{TRC}$

Utility

Name of Utility:	**Essex Powerlines Corp.**
Number of years in study:	**5**

Project Description

Name of Project:	Staff Conservation Challenge
Description:	**Energy Awareness for Employees and Energy Challenge**

- (•) **OEB Residential Table**
- ( ) **OEB Commercial Table**
- ( ) **OEB Industrial Table**
- ( ) **Direct Input**

- (•) **k$**
- ( ) **$**

User Inputs

Discount rate	**7.73%**	
Unit Annual Energy Savings	**0**	kW/unit
Number of Units Delivered	**608**	
Free Ridership Rate		

Output

NPV ($k)	**20.1**

$k LDC Avoided Costs		**Present**	**2007**	**2008**	**2009**	**2010**	**2011**
Avoided Energy			7	8	7	7	7
Avoided Generation Capacity			-	0	0	0	0
Avoided Transmission Capacity			-	0	0	0	0
Avoided Distribution Capacity			-	-	0	0	0
Avoided Distribution Losses			-	-	-	-	-
Other Avoided Costs							
Other Benefits							
Total (undiscounted) Avoided Costs		-	7	8	8	8	8
$k LDC Program Costs							
LDC OM&A Costs		(6)					
LDC Capital Costs							
Incremental Equipment Costs	(2.1)	(2)					
Participant Costs		(4)					
Total Program Costs		(12)	-	-	-	-	-
Total Avoided Costs less Program Costs		(12)	7	8	8	8	8

			2007	**2008**	**2009**	**2010**	**2011**
Present value factor	7.7%	1.000	0.963	0.894	0.830	0.771	0.715
Present value of cash flows		(12.1)	7.0	7.2	6.4	6.0	5.6
Accumulated present value of cash flows		(12.1)	(5.1)	2.1	8.5	14.5	20.1

$k NPV TRC	**20.1**

STAFF CONSERVATION CHALLENGE

On Nov 9th Lawrence Musyj hosted an Energy Conservation seminar for all staff, and introduced the "Staff Conservation Challenge".

Dan from Neighborhood Electric focused on the opportunities to reduce electric consumption in the home, while Rob from Amerispec focused on ways to improve the building envelope of the home in order to save energy. Maryann from WestBurne Ruddy Electric explained the benefits of retrofitting from Incandescent bulbs to Compact fluorescents, and had samples on hand demonstrating the latest technology. The staff was now challenged to take home all the information, and participate in making changes to their homes in order to save energy. Children between the ages of 6-16 can also participate in the Children's Conservation Challenge. Both Challenges end on Nov 30th, and Grand Prizes will be awarded to the winner in each Category.

The 1st phase was filling out a self evaluation on the existing status of your house. At the end of the survey is a rating chart which helps you identify if there is further opportunity for the individual to save energy within the residence.

The second part was the energy challenge. The employee had 2 weeks to incorporate Energy Efficiency changes in their home, record the results, and submit with receipts. These individuals were then entered into a draw for a chance to win a number of Energy Efficient products for their home.

Children between the ages of 6-16 could also enter their own division, with a different set of rules, and a chance to win a MP3 player.

Results

16 participants, each participant saved an estimated 2000 kwhr/yr
16* 2000 kwhr/yr = **23,000 kwhr/yr**

Costs

Prizes	$800.00
Exomedia formatting	$400.00
Energy Kits	$600.00
Staff Time	$3000.00

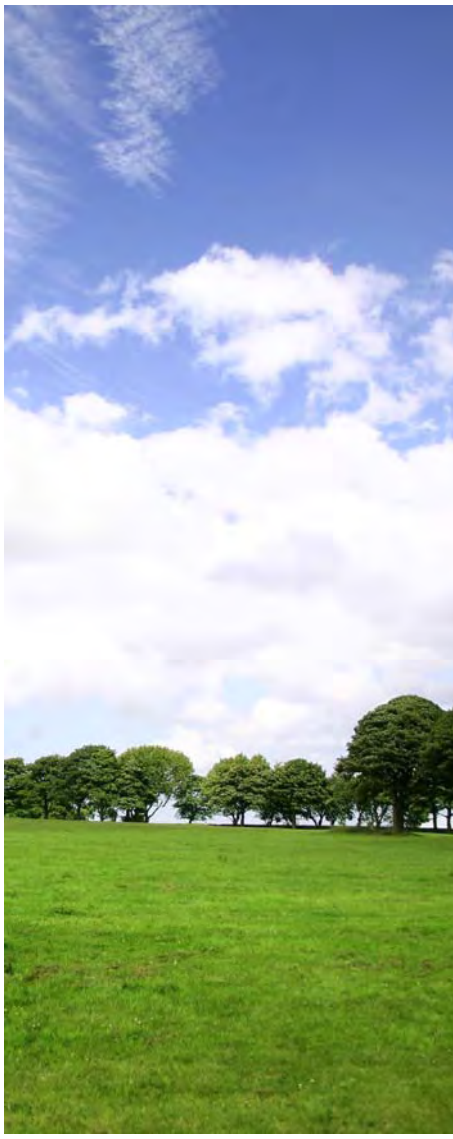
Total costs $4800.00

- Employees learned from speakers
- Employees were educated, and spread the word to family, friends and customers
- Employees save money on their personal energy bills
- Very Positive program

ESSEX POWER LINES CORPORATION

Staff Conservation Challenge

Energy Self Evaluation



About Your Home

Check the appropriate answer or fill in the blank.

1. **What type of home do you have?**
   - ☐ Detached
   - ☐ Semi-Detached
   - ☐ Town House
   - ☐ Apartment: Low Rise, High Rise

2. **Is your home?**
   - ☐ Rented
   - ☐ Owned

3. **What is the square footage of your home?**
   - ☐ <1200sq. ft.
   - ☐ 1200-2500sq. ft.
   - ☐ >2500 sq. ft.

4. **What is the age of your home?**
   _____ Years

5. **How is your home heated?**
   Electric
   Gas
   Oil
   Geothermal
   Other (specify) _____

6. **How many people live in your home?**
   _____ Adults
   _____ Children (<12)
   _____ Teens

Appliances and Use - Energy Self Evaluation Exercise

Circle the letter that applies. Answer each set of a, b, c or leave blank if it is not applicable.

Air Conditioner:

A	B	C
☐ I use it all summer ☐ I need a sweater in my house	☐ I use it only during the day ☐ It keeps my house comfortable	☐ I rarely use it ☐ Fans and cross breezes instead

Furnace:

A	B	C
☐ It is really old ☐ You need shorts in the winter	☐ It is fairly new ☐ It keeps my house comfortable	☐ It is Energy Star ☐ I use a programmable thermostat

Air Filters:

A	B	C
☐ I have air filters?	☐ I change them sometimes	☐ Changed regularly

Water Heater

A	B	C
☐ My water is scalding ☐ My heater is uncovered ☐ Long Hot Shower… mmm	☐ My water is just right ☐ Covered and pipes wrapped ☐ I take short showers	☐ Tankless!!! ☐ Low flow fixtures

Clothes Washer

A	B	C
☐ It is really old ☐ I run loads at any time ☐ I wash in hot or warm	☐ It is fairly new ☐ I only do full loads ☐ I sometimes wash in cold water	☐ It is front loading! ☐ Cold wash Cold rinse

Clothes Dryer

A	B	C
☐ It is really old ☐ I never empty my lint trap	☐ It is fairly new ☐ I empty lint every few dryer uses	☐ I hang dry Empty after every use of the dryer

Dishwasher

A	B	C
☐ It is really old ☐ I run loads at any time	☐ It is fairly new ☐ I only wash full loads	☐ It is Energy Star ☐ I run on a conserving cycle

Refrigerator

A	B	C
☐ It is really old	☐ It is fairly new	☐ It is Energy Star

Stove

A	B	C
☐ It is really old	☐ It is fairly new	☐ Less than 3 years old

Freezer

A	B	C
☐ It is really old ☐ It is rarely full	☐ It is fairly new ☐ I keep it full	☐ It is Energy Star

Freezer

A	B	C
☐ It is on all the time	☐ It is on when I am using it	☐ My power bar is off now

Television

A	B	C
☐ It is on all day	☐ It is on when I watch	☐ My power bar is off now

Lights

A	B	C
☐ Regular incandescent lights	☐ Some compact fluorescent	☐ All compact fluorescent

Pool

A	B	C
☐ My pump runs continuously ☐ I have it heating all the time	☐ My pump only runs 8 hours a day ☐ I heat when I need to	☐ Pump is on a timer ☐ I use a solar blanket

Essexpowerlines.ca

A	B	C
☐ Never seen it	☐ Seldom visit site	☐ Regularly visit site

EnerGuide – For Home Audit

A	B	C
☐ No I have not	☐ I have had the first evaluation	☐ Done… YAY Saving $$

How did you do?

Now, count out the number of a's, b's and c's you answered

Totals

A	B	C

If you have more than eight a's then you could lower your energy bill considerably by making some simple changes.

If you have less than eight a's but not many c's, you could still lower your energy bill by making some changes.

If you have more than eight c's keep up the good work!

Energy Self Evaluation Exercise

We hope that this Energy Self Evaluation Exercise gave you some more ideas on how to save energy, and money. Now fill out the pledge to begin your first step towards earning a chance to win a prize.

Thank you for participating and good luck.

Contest Entry Form & Adult Pledge

This is your contest entry form & pledge form. Fill this form out and submit with the **Energy Self Evaluation** form to Lawrence Musyj at 360 Fairview Ave. W. Suite 318 Essex, Ontario N8M 3G4 or interoffice mail. You will be entered in our draw to win a prize.

Why are you interested in energy conservation? (List a few reasons.)

_____

_____

_____

Below is a list of energy saving activities. You can choose your level of involvement by pledging to follow some or all of these tips. Check in the pledge box which activities you will do or have done and sign the bottom of the form. The number one rule is to have fun fulfilling your pledges while saving money at the same time.

Activity	Pledge
Install at least 6 Compact Fluorescent Light Bulbs	
Turn off lights, electronics and small appliances at home and work when not in use	
Turn off computers when not in use or the powerbar they are plugged into	
Do laundry at night	
Do laundry on cold-water cycle	
Hang-dry clothes	
Cook using a microwave or toaster oven whenever possible	
Use fans instead of air conditioners	
When using air conditioners, set 25°C and use a programmable thermostat	
Do only full loads of laundry and full loads in my dishwasher	
Take short showers and half baths	
Insulate my hot water pipes and cold supply into hot water tank	
Reduce my consumption during peak hours (summer 11am-5pm, winter 7am-11am, 5pm-8pm)	
Develop a home conservation plan when there is a 'call for cutback'	
I will visit the Essex Power web site at www.essexpower.ca	
I will help spread the conservation message to others at home & work	

I _____ , pledge to reduce my energy consumption by actively engaging in the energy saving activities that I have indicated above.

Name: _____ Phone: _____

Signature: _____

Date: _____/_____/_____

Contest Entry Form & Kids Pledge

If you have more than four children (< 16 years old) just add their names & age to the form below. Have each child check off the pledge. If you have to read the questions that's okay too!

Below is a list of energy saving activities. You can choose your level of involvement by pledging to follow some or all of these tips. Check in the pledge box which activities you will do or have done and put your name at the bottom of the form. This sheet becomes your entry form in our staff conservation challenge contest.

Activity	Pledge
Turn off lights before I leave the Bedroom, Bathroom, etc.	
Turn off my radio, TV, and games when I'm done	
Turn off lights, electronics and small appliances in my room before I go to school	
Turn off computers or the powerbar they are plugged into when I'm done	
Do only full loads of laundry and full loads in the dishwasher	
Take shorter showers and fill the bath only half way	
Avoid electricity use at peak times (before dinner 5:00 pm). Play outside, read, do homework instead of TV or computer use	
Help with a home conservation plan when there is a 'call for cutback'	
I will visit the Essex Power web site at www.essexpower.ca	
I will help spread the conservation message to others at school and home	

I /we
Name: _____ Age: _____ ,
Name: _____ Age: _____ ,
Name: _____ Age: _____ ,
Name: _____ Age: _____ ,

pledge to reduce my/our energy consumption by actively engaging in the energy saving activities that I/we have indicated above.

I/we think conserving energy is important because: (List some reasons below.)

_____

_____

_____

_____

Appendix B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** Commercial Lighting Incentive Program

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

Essex Powerlines offers a lighting incentive to Commercial and Industrial customers of $13.79 Mwh to convert from older technology to a more energy efficient source of lighting. Many Commercial properties participated in the program.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	150	818431 kwh	
Efficient technology:	88	481430 kwh	
Number of participants or units delivered for reporting year:	1232 Units		
Measure life (years):	7		
Number of Partipants or unites delievered lfe to date			

B. **TRC Results:**

		Reporting Year	Life-to-date TRC Results:
[1]	*TRC Benefits ($):*	*$ 61,700.00*	
[2]	*TRC Costs ($):*		
	Utility program cost (excluding incentives):	$ 10,000.00	
	Incremental Measure Costs (Equipment Costs)	$ 56,000.00	
	Total TRC costs:	$ 127,700.00	
	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*	82			
	Winter	77			
		lifecycle	*in year*	*Cumulative Lifecycle*	Cumulative Annual Savings
Energy saved (kWh):		*33,700,010*	481,430 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:

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

Distributed Generation and Load Displacement Programs:

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

Other Programs (specify):

Metric (specify):	

D. **Actual Program Costs:**

		Reporting Year	Cumlative Life to Date
Utility direct costs ($):	*Incremental capital:*	$ 56,000.00	
	Incremental O&M:	$ 10,000.00	
	Incentive:	$ 6,000.00	
	Total:	$ 72,000.00	
Utility indirect costs ($):	*Incremental capital:*		
	Incremental O&M:		
	Total:	0	

E. Assumptions & Comments:

Excellent Program. Commercial customers extremely haapy with the incentive, and because of the educational aspect provided by Essex powerlines, they did get involved with the program.

[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.

Net Present Value$_{TRC}$

Utility

Name of Utility:	**Essex Powerlines Corp.**
Number of years in study:	**7**

Project Description

Name of Project:	Commercial Lighting Incentive Program
Description:	**Commercial Lighting retrofits**

- ○ **OEB Residential Table**
- ◉ **OEB Commercial Table**
- ○ **OEB Industrial Table**
- ○ **Direct Input**

- ◉ **k$**
- ○ **$**

User Inputs

Discount rate	**7.73%**	
Unit Annual Energy Savings	**0**	kW/unit
Number of Units Delivered	**1232**	
Free Ridership Rate		

Output

NPV ($k)	**127.7**

$k LDC Avoided Costs		**Present**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
Avoided Energy			29	30	29	29	29	30	32
Avoided Generation Capacity			-	6	6	6	7	6	5
Avoided Transmission Capacity			-	0	0	0	0	0	0
Avoided Distribution Capacity			-	-	1	1	1	1	1
Avoided Distribution Losses			-	-	-	-	-	-	-
Other Avoided Costs									
Other Benefits									
Total (undiscounted) Avoided Costs		-	29	37	36	36	36	38	38
$k LDC Program Costs									
LDC OM&A Costs		(10)							
LDC Capital Costs									
Incremental Equipment Costs	(55.5)	(56)							
Participant Costs									
Total Program Costs		(66)	-	-	-	-	-	-	-
Total Avoided Costs less Program Costs		(66)	29	37	36	36	36	38	38

			2007	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
Present value factor	7.7%	1.000	0.963	0.894	0.830	0.771	0.715	0.664	0.616
Present value of cash flows		(65.5)	28.2	32.8	30.1	27.4	26.1	24.9	23.6
Accumulated present value of cash flows		(65.5)	(37.3)	(4.5)	25.7	53.1	79.1	104.1	127.7

$k NPV TRC	**127.7**

2006 OEB LIGHTING SPREADSHEET

Project	Retro- Fitted Fixture Type	# of fixtures	kwh Total Savings	Total costs
Ramada Inn Leamington	2 Lamp T-5	96	32707	2287.26
Village Grove Tecumseh	2 Lamp T-8	65	14196	3000
Village Grove Tecumseh	1 Lamp T-8 w/reflector	50	1950	
Pickering Tower - A'Burg	2 Lamp T-8 w/reflector	18	24727	8977
Pickering Tower - A'Burg	1 Lamp T-8 w/reflector	76	35642	
Leamington Towers east - Leamington	2x2 & 1x4 T8	139	79978	8820.5
Frank Lutsch Apts - Leamington	T8 Lamp w/reflector	58	24618	3643
Fiore Tower - Leamington	T8 Lamp w/reflector	24	14938	10642
Fiore Tower - Leamington	15w CFL	73	33258	
Country Court Apts - Leamington	20w Cfl	14	2902	1867
Beach Grove Golf & Country Club Tecumseh	2 Lamp T-8 w/reflector	69	43325	9260.5
Beach Grove Golf & Country Club Tecumseh	1 Lamp T-8 w/reflector	101	26911	
Sandcastle Recreation LaSalle	T8 Lamp w/reflector	67	36059	2100
Sandcastle Recreation LaSalle	4 lamp T-5 HO	43	42495	
Sandcastle Recreation LaSalle	23w CFL	173	34004	
Sun Parlor Home - Leamington	20w CFL	165	33720	800
		1231		
Total			**481430**	**51397.26**

	Summary		
	2 Lamp T-5	96	32707
	2 Lamp T-8	152	14196
	1 Lamp T-8 w/reflector	275	140118
	2 Lamp T-8 w/reflector	87	68052
	2x2 & 1x4 T8	139	79978
	15w CFL	73	33258
	20w Cfl	179	36622
	4 lamp T-5 HO	43	42495
	23w CFL	187	34004
		1231	
Total			**481430**

Lighting Retrofit Report

December 22, 2006

Affiliate : Jack Craig
Conserve Energy Services Inc.
735 Lynn Street
Windsor, ON N9G 1G6
966-9577

Client : Brian Taylor
Beach Grove Golf & Country Club
14134 Riverside Drive
Tecumseh, ON N8N 1B6
326-3287

Current Installment

	Fixtures	Annual KWh Used	Monthly Costs	Annual Costs
4 Lamp T-12	69	65552.8	$ 655.53	**$ 7,866.33**
3 Lamp T-12				
2 Lamp T-12	101	38381.6	$ 383.82	**$ 4,605.79**
Incandescent				
HID				
Other				
TOTALS	**170**	**103934.4**	**$ 1,039.34**	**$ 12,472.13**

Retrofit Installment

	Fixtures	Annual KWh Used	Monthly Costs	Annual Costs
2 Lamp T-8				
2 Lamp T-8 w/Reflect	69	22227.7	$ 222.28	**$ 2,667.32**
FL 4-Lamp T-5 HO				
FL 6-Lamp T-5 HO				
1 Lamp T-8 w/Reflect	101	11470.4	$ 114.70	**$ 1,376.44**
Pulse Start HID				
TOTALS	**170**	**33698.0**	**$ 336.98**	**$ 4,043.76**

Retrofit Savings

	Fixtures	Annual KWh Saved	Monthly Savings	Annual Savings
2 Lamp T-8				
2 Lamp T-8 w/Reflect	69	43325.1	$ 433.25	**$ 5,199.01**
FL 4-Lamp T-5 HO				
FL 6-Lamp T-5 HO				
1 Lamp T-8 w/Reflect	101	26911.2	$ 269.11	**$ 3,229.35**
Pulse Start HID				
TOTALS	**170**	**70236.3**	**$ 702.36**	**$ 8,428.36**

Total Cost : **$ 9,491.53**

Load Reduction & Savings : **67.79%**

Customer ROI : **13.5 month(s)**

Lighting Retrofit Report

July 5, 2006

Affiliate : Jack Craig
Conserve Energy Services Inc.
735 Lynn Street
Windsor, ON N9G 1G6
966-9577

Client : Cole Cacciavillani
Country Court Apts
280 Sherk
Leamington, ON N8H 3L1
326-0320

Current Installment

	Fixtures	Annual KWh Used	Monthly Costs	Annual Costs
4 Lamp T-12				
3 Lamp T-12				
2 Lamp T-12	5	3800.2	$ 31.67	**$ 380.02**
Incandescent				
HID				
Other	9	2632.5	$ 21.94	**$ 263.25**
TOTALS	**14**	**6432.7**	**$ 53.61**	**$ 643.27**

Retrofit Installment

	Fixtures	Annual KWh Used	Monthly Costs	Annual Costs
2 Lamp T-8				
Lamp T-8 w/Reflector				
FL 4-Lamp T-5 HO				
FL 6-Lamp T-5 HO				
Compact Flourescent	14	3530.3	$ 29.42	**$ 353.03**
Pulse Start HID				
TOTALS	**14**	**3530.3**	**$ 29.42**	**$ 353.03**

Retrofit Savings

	Fixtures	Annual KWh Saved	Monthly Savings	Annual Savings
2 Lamp T-8				
Lamp T-8 w/Reflector				
FL 4-Lamp T-5 HO				
FL 6-Lamp T-5 HO				
Compact Flourescent	14	2902.4	$ 24.19	**$ 290.24**
Pulse Start HID				
TOTALS	**14**	**2902.4**	**$ 24.19**	**$ 290.24**

Total Cost : **$ 432.00**

Load Reduction & Savings : **44.76%**

Customer ROI : **17.9 month(s)**

Lighting Retrofit Report

July 5, 2006

Affiliate : Jack Craig
Conserve Energy Services Inc.
735 Lynn Street
Windsor, ON N9G 1G6
966-9577

Client : Cole Cacciavillani
Fiore Tower
226 Erie Street South
Leamington, ON N8H 4X6
326-4622

Current Installment

	Fixtures	Annual KWh Used	Monthly Costs	Annual Costs
4 Lamp T-12				
3 Lamp T-12				
2 Lamp T-12	73	55482.3	$ 462.35	**$ 5,548.23**
Incandescent				
HID				
Other	24	18031.1	$ 150.26	**$ 1,803.11**
TOTALS	**97**	**73513.4**	**$ 612.61**	**$ 7,351.34**

Retrofit Installment

	Fixtures	Annual KWh Used	Monthly Costs	Annual Costs
2 Lamp T-8				
Lamp T-8 w/Reflector	24	12370.2	$ 103.08	**$ 1,237.02**
FL 4-Lamp T-5 HO				
FL 6-Lamp T-5 HO				
Compact Flourescent	73	22224.4	$ 185.20	**$ 2,222.44**
Pulse Start HID				
TOTALS	**97**	**34594.6**	**$ 288.29**	**$ 3,459.46**

Retrofit Savings

	Fixtures	Annual KWh Saved	Monthly Savings	Annual Savings
2 Lamp T-8				
Lamp T-8 w/Reflector	24	5660.9	$ 47.17	**$ 566.09**
FL 4-Lamp T-5 HO				
FL 6-Lamp T-5 HO				
Compact Flourescent	73	33258.0	$ 277.15	**$ 3,325.80**
Pulse Start HID				
TOTALS	**97**	**38918.9**	**$ 324.32**	**$ 3,891.89**

Total Cost : **$ 4,836.00**

Load Reduction & Savings : **52.94%**

Customer ROI : **14.9 month(s)**

Lighting Retrofit Report

July 5, 2006

Affiliate : Jack Craig
Conserve Energy Services Inc.
735 Lynn Street
Windsor, ON N9G 1G6
966-9577

Client : Cole Cacciavillani
Fiore Tower
226 Erie Street South
Leamington, ON N8H 4X6
326-4622

Current Installment

	Fixtures	Annual KWh Used	Monthly Costs	Annual Costs
4 Lamp T-12				
3 Lamp T-12				
2 Lamp T-12	73	55482.3	$ 462.35	**$ 5,548.23**
Incandescent				
HID				
Other	24	18031.1	$ 150.26	**$ 1,803.11**
TOTALS	**97**	**73513.4**	**$ 612.61**	**$ 7,351.34**

Retrofit Installment

	Fixtures	Annual KWh Used	Monthly Costs	Annual Costs
2 Lamp T-8				
Lamp T-8 w/Reflector	24	3092.5	$ 25.77	**$ 309.25**
FL 4-Lamp T-5 HO				
FL 6-Lamp T-5 HO				
Compact Flourescent	73	22224.4	$ 185.20	**$ 2,222.44**
Pulse Start HID				
TOTALS	**97**	**25316.9**	**$ 210.97**	**$ 2,531.69**

Retrofit Savings

	Fixtures	Annual KWh Saved	Monthly Savings	Annual Savings
2 Lamp T-8				
Lamp T-8 w/Reflector	24	14938.6	$ 124.49	**$ 1,493.86**
FL 4-Lamp T-5 HO				
FL 6-Lamp T-5 HO				
Compact Flourescent	73	33258.0	$ 277.15	**$ 3,325.80**
Pulse Start HID				
TOTALS	**97**	**48196.5**	**$ 401.64**	**$ 4,819.65**

Total Cost : **$ 4,836.00**

Load Reduction & Savings : **52.94%**

Customer ROI : **12 month(s)**

Lighting Retrofit Report

January 26, 2006

Affiliate : Jack Craig
Conserve Energy Services Inc.
735 Lynn Street
Windsor, ON N9G 1G6
966-9577

Client : Ravi Patel
Ramada Limited
201 Erie Street
Leamington, ON N8H 3A5
325-0260

Current Installment

	Fixtures	Annual KWh Used	Monthly Costs	**Annual Costs**
4 Lamp T-12				
3 Lamp T-12				
2 Lamp T-12	96	70447.1	$ 587.06	**$ 7,044.71**
Incandescent				
HID				
Other				
TOTALS	**96**	**70447.1**	**$ 587.06**	**$ 7,044.71**

Retrofit Installment

	Fixtures	Annual KWh Used	Monthly Costs	**Annual Costs**
2 Lamp T-8				
Lamp T-8 w/Reflector				
FL 4-Lamp T-5 HO				
FL 6-Lamp T-5 HO				
Compact Flourescent	96	37739.5	$ 314.50	**$ 3,773.95**
Pulse Start HID				
TOTALS	**96**	**37739.5**	**$ 314.50**	**$ 3,773.95**

Retrofit Savings

	Fixtures	Annual KWh Saved	Monthly Savings	**Annual Savings**
2 Lamp T-8				
Lamp T-8 w/Reflector				
FL 4-Lamp T-5 HO				
FL 6-Lamp T-5 HO				
Compact Flourescent	96	32707.6	$ 272.56	**$ 3,270.76**
Pulse Start HID				
TOTALS	**96**	**32707.6**	**$ 272.56**	**$ 3,270.76**

Total Cost : **$ 6,336.00**

Load Reduction & Savings : **46.43%**

Customer ROI : **23.2 month(s)**

Garage
with
Sensors

Lighting Retrofit Report

September 28, 2006

Affiliate : Jack Craig
Conserve Energy Services Inc.
735 Lynn Street
Windsor, ON N9G 1G6
966-9577

Client : Maurice VanHooren
Pickering Tower
130 Pickering Drive
Amherstburg, ON N9V 3N6
736-3389

Current Installment

	Fixtures	Annual KWh Used	Monthly Costs	Annual Costs
4 Lamp T-12				
3 Lamp T-12				
2 Lamp T-12	70	53202.2	$ 443.35	**$ 5,320.22**
Incandescent				
HID				
Garage & Elevator Ltg	24	29405.4	$ 245.04	**$ 2,940.54**
TOTALS	**94**	**82607.6**	**$ 688.40**	**$ 8,260.76**

Retrofit Installment

	Fixtures	Annual KWh Used	Monthly Costs	Annual Costs
2 Lamp T-8				
2 Lamp T-8 w/Refl	18	2319.4	$ 19.33	**$ 231.94**
FL 4-Lamp T-5 HO				
FL 6-Lamp T-5 HO				
1 lamp T-8/Refl	76	19918.1	$ 165.98	**$ 1,991.81**
Pulse Start HID				
TOTALS	**94**	**22237.5**	**$ 185.31**	**$ 2,223.75**

Retrofit Savings

	Fixtures	Annual KWh Saved	Monthly Savings	Annual Savings
2 Lamp T-8				
2 Lamp T-8 w/Refl	18	24727.2	$ 206.06	**$ 2,472.72**
FL 4-Lamp T-5 HO				
FL 6-Lamp T-5 HO				
1 lamp T-8/Refl	76	35642.9	$ 297.02	**$ 3,564.29**
Pulse Start HID				
TOTALS	**94**	**60370.1**	**$ 503.08**	**$ 6,037.01**

Total Cost : **$ 6,361.00**

Load Reduction & Savings : **64.66%**

Customer ROI : **12.6 month(s)**

Lighting Retrofit Report

September 28, 2006

Affiliate : Jack Craig
Conserve Energy Services Inc.
735 Lynn Street
Windsor, ON N9G 1G6
966-9577

Client : Maurice VanHooren
Pickering Tower
130 Pickering Drive
Amherstburg, ON N9V 3N6
736-3389

Current Installment

	Fixtures	Annual KWh Used	Monthly Costs	Annual Costs
4 Lamp T-12				
3 Lamp T-12				
2 Lamp T-12	70	53202.2	$ 443.35	**$ 5,320.22**
Incandescent				
HID				
Garage & Elevator Ltg	24	29405.4	$ 245.04	**$ 2,940.54**
TOTALS	**94**	**82607.6**	**$ 688.40**	**$ 8,260.76**

Retrofit Installment

	Fixtures	Annual KWh Used	Monthly Costs	Annual Costs
2 Lamp T-8				
2 Lamp T-8 w/Refl	18	9277.6	$ 77.31	**$ 927.76**
FL 4-Lamp T-5 HO				
FL 6-Lamp T-5 HO				
1 lamp T-8/Refl	76	19918.1	$ 165.98	**$ 1,991.81**
Pulse Start HID				
TOTALS	**94**	**29195.7**	**$ 243.30**	**$ 2,919.57**

Retrofit Savings

	Fixtures	Annual KWh Saved	Monthly Savings	Annual Savings
2 Lamp T-8				
2 Lamp T-8 w/Refl	18	17769.0	$ 148.08	**$ 1,776.90**
FL 4-Lamp T-5 HO				
FL 6-Lamp T-5 HO				
1 lamp T-8/Refl	76	35642.9	$ 297.02	**$ 3,564.29**
Pulse Start HID				
TOTALS	**94**	**53411.9**	**$ 445.10**	**$ 5,341.19**

Total Cost : **$ 6,361.00**

Load Reduction & Savings : **64.66%**

Customer ROI : **14.3 month(s)**

Actual Retrofit Report

Lighting Retrofit Report

October 26, 2006

Affiliate : Jack Craig
Conserve Energy Services Inc.
735 Lynn Street
Windsor, ON N9G 1G6
966-9577

Client : Egon & Bert von Westerholt
Leamington Towers East
234 Erie Street South
Leamington , ON N8H 4C6
519-326-6570

Current Installment

	Fixtures	Annual KWh Used	Monthly Costs	Annual Costs
4 Lamp T-12				
3 Lamp T-12				
2 Lamp T-12	80	15200.6	$ 126.67	**$ 1,520.06**
Incandescent				
HID				
U-Lamp T-12	59	90443.8	$ 753.70	**$ 9,044.38**
TOTALS	**139**	**105644.4**	**$ 880.37**	**$ 10,564.44**

Retrofit Installment

	Fixtures	Annual KWh Used	Monthly Costs	Annual Costs
2 Lamp T-8				
Lamp T-8 w/Reflector				
FL 4-Lamp T-5 HO				
FL 6-Lamp T-5 HO				
2x2' & 1x4' T-8	139	25666.4	$ 213.89	**$ 2,566.64**
Pulse Start HID				
TOTALS	**139**	**25666.4**	**$ 213.89**	**$ 2,566.64**

Retrofit Savings

	Fixtures	Annual KWh Saved	Monthly Savings	Annual Savings
2 Lamp T-8				
Lamp T-8 w/Reflector				
FL 4-Lamp T-5 HO				
FL 6-Lamp T-5 HO				
2x2' & 1x4' T-8	139	79978.1	$ 666.48	**$ 7,997.81**
Pulse Start HID				
TOTALS	**139**	**79978.1**	**$ 666.48**	**$ 7,997.81**

Total Cost : **$ 8,491.50**

Load Reduction & Savings : **64.54%**

Customer ROI : **12.7 month(s)**

Actual Retrofit Report

Lighting Retrofit Report

October 26, 2006

Affiliate : Jack Craig
Conserve Energy Services Inc.
735 Lynn Street
Windsor, ON N9G 1G6
966-9577

Client : Frank Lutsch
Frank Lutsch Apartments
6-10 Elizabeth Crescent
Leamington, ON N8H 4Y1
322-2606

Current Installment

	Fixtures	Annual KWh Used	Monthly Costs	Annual Costs
4 Lamp T-12				
3 Lamp T-12				
2 Lamp T-12	44	33441.4	$ 278.68	**$ 3,344.14**
Incandescent				
HID				
Other	14	5503.7	$ 45.86	**$ 550.37**
TOTALS	**58**	**38945.1**	**$ 324.54**	**$ 3,894.51**

Retrofit Installment

	Fixtures	Annual KWh Used	Monthly Costs	Annual Costs
2 Lamp T-8				
Lamp T-8 w/Reflector	4	2061.7	$ 17.18	**$ 206.17**
FL 4-Lamp T-5 HO				
FL 6-Lamp T-5 HO				
Lamp T-8 w/Reflector	54	12265.3	$ 102.21	**$ 1,226.53**
Exit Lamps				
TOTALS	**58**	**14327.0**	**$ 119.39**	**$ 1,432.70**

Retrofit Savings

	Fixtures	Annual KWh Saved	Monthly Savings	Annual Savings
2 Lamp T-8				
Lamp T-8 w/Reflector	4	978.4	$ 8.15	**$ 97.84**
FL 4-Lamp T-5 HO				
FL 6-Lamp T-5 HO				
Lamp T-8 w/Reflector	54	23639.6	$ 197.00	**$ 2,363.96**
Exit Lamps				
TOTALS	**58**	**24618.0**	**$ 205.15**	**$ 2,461.80**

Total Cost : **$ 3,113.20**

Load Reduction & Savings : **63.21%**

Customer ROI : **15.2 month(s)**

Essex Powerlines Corporation
(519) 776-8900
1-866-776-8900

Essex Powerlines: Your Power is Our Priority

Leading by Example – Doing the Right Thing….

Essex Powerlines has aggressively taken on this CDM initiative and is committed to driving local projects designed to decrease overall consumption and benefit the customer. We are pleased to announce that your Building Management Team has taken a proactive role in the push to increase energy efficiency, and is working with us to implement a number of initiatives, including a Compact Florescent Lighting Retrofit Plan for this facility. CFL's use up to 75% less energy and last 10 times longer than incandescent bulbs; therefore, by participating in this program, you are contributing to a reliable, stable and environmentally conscious method of conserving energy within your living facility.

A New Culture of Conservation….

The future of Ontario's Energy Supply is in our hands, and it is our responsibility to incorporate energy efficient practices into our daily routines so as to truly become a *culture of conservation*. While your Building Management team has initiated the process of decreasing overall power consumption, there are a number of low or no cost ways that you yourself can save energy in your home.

- Don't overload your washer, dryer, or dishwasher. Use the washer spin cycle twice to save energy when drying clothes, and air dry dishes instead of using your dishwasher's drying cycle.
- Cooking more than one thing at a time in your oven saves energy, and using glass or ceramic cookware in the oven allows you to lower your temperature by 25°F.
- Turn off your computer and monitor when not in use.
- Take showers instead of baths to reduce hot water use.
- Use a reading lamp where you are seated instead of lighting the whole room.
- Avoid dark-coloured lampshades.

We congratulate you, and your Building Manangement team, in joining Essex Powerlines in becoming a leader in Energy Conservation.

Lessons Learned

Our Customers whether Residential, Commercial, or Industrial 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 many complements from customers who are surprised by the fact that we take a passion in helping them conserve electricity, and showing them how. How do we do this, we are visible in our 4 Municipalities, and will continue to do so. The following programs have been well received, successful, and will be part of our on going 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.

Electrical Home Audit Program

Teaming up with a reputable Electrical company enabled us to offer Electrical Home Audits for a limited Time. The electrician would walk around the house with the home owner and conduct an audit of the existing electricity usage. He would then propose recommendations on opportunities to reduce there usage, and save $$$ on there electricity bills. The electrician was equipped to make changes on the spot at a contracted price. The customer received a written report for the electrician when completed.

Estimated savings = 14,500 kwh/yr

OPA Every Kilowatt Counts Campaign

Essex powerlines participated in the OPA in store, and mail coupon campaign. Customers were given coupons to use towards Energy Savings devices to retrofit in their homes. As a result of the Spring/Fall coupons Essex Powerlines customers saved 1,770,293 kwh/yr.

Seminars for Commercial and Industrial User

Organizations are realizing the importance of managing energy costs. But in order to manage these costs organizations need to understand their facility's energy consumption patterns, the pricing structure in their particular electricity marketplace and how this information can be used to improve their bottom line.

Essex Powerlines Seminars for Commercial and Industrial User (cont)

Essex Powerlines has developed seminars for large commercial and industrial users, focusing on the competitive value of **metering, monitoring and management**. Participants learn about market conditions in Ontario and how to develop an electricity monitoring and management program that will provide results-oriented insight into the benefits and cost savings that come with energy conservation—simple, industry-savvy steps that will give large users a competitive advantage.

Offering efficiency seminars to large users has been great way for Essex Powerlines to increase visibility in the communities we serve and promote conservation in business operations.

Industrial and Commercial Audits and Load Reduction Incentives

Helping our largest energy users better manage their energy consumption means understanding their needs as large users, and what is required of our programs, so we can recommend a specific and effective course of action when it comes to auditing their business operations.

Essex Powerlines has worked in cooperation with service providers in specific energy industry sectors to provide an audit and 'best business case' energy efficiency solution. Together, we establish a utility baseline, identify energy saving opportunities, and determine the best means to move forward.

Essex Powerlines has established a load reduction Incentive program providing funding to assist companies in Load Reduction projects discovered during the audit process.

Christmas Light Exchange Program and Energy Innovators Program

Essex Powerlines sponsored a Christmas light exchange program for each municipality. The replacement LED lights consume on average 90% less energy than standard 5W Christmas bulbs.

Essex Powerlines is helping Industry and Municipalities cut costs and become leaders in corporate citizenry. Essex Power has local companies and each Municipality registered as Industrial Energy Innovators. In becoming an Innovator the financial bottom line will benefit as well as helping to reduce greenhouse gas emissions and help create a healthier environment. The Innovator program is part of the Canadian Industry Program for Energy Conservation (CIPEC), a joint industry-government program sponsored by Natural Resources Canada's Office of Energy Efficiency.

Essex Powerlines hosted a xmas light exchange program with all 4 municipalities. 300 customers from each community could exchange 1 box of old style lights for 1 box of 70 new led lights.

Employee Energy Savings Pilot Project

In order to test market an energy savings project that potentially can be conducted within an entire municipality, Essex Powerlines employees embarked upon an energy savings pilot project in their own homes. Armed with energy savings kits provided by Essex Powerlines each employee was challenged to reduce energy consumption in their own homes.

Each employee was required to complete a home energy audit survey as well make low or no cost home energy saving improvements. The pilot project saved an estimated 381,577 kwh/yr

Energy Conservation and Kid's Energy Conservation Portal

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.

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.

For 2006 Essex Powerlines Corporation has offered Utilismart to all interval meter 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.

Utilismart (cont)

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.

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

Wholesale Embedded Generation Power Pool (Tri-Gen and Cogen Standby Power)

Wholesale Embedded Generation Power Pool (Tri-Gen and Cogen Standby Power) The Distributed Generation project is the first of its kind in the province. The concept emanated from the August 14, 2003 black out. Immediately following the blackout a Province wide request was made to customers to reduce power by 25%. Our area was able to achieve 30 to 40% load reduction due to the availability of distributed standby power created by emergency generators. The business model is to Aggregate the standby generation assets in our area and bid, dispatch and control the total capacity as a single market participant into the wholesale electricity market and provide demand response to constrained transmission and distribution infrastructure.

The existing Generators are in Hydro One territory and not part of our CDM Results, but as we go forward we will be including Essex Powerlines Customers. This is included to explain how the program works and we will continue to expand into Essex Powerlines Territory.

Project Details and Results
Testing on the system with the IESO took place Dec 12 – 21, 2005.
Entered Market December 22, 2005
Starting hours in Market 6am – 11pm – Dec 22- Jan18, 2006
Essex Power Rep has to be on call at all times while in the Market
Changed Hours as Market Participant as of midnight Jan 18, 2006
Now 24 hrs/day
Called on for Energy +/- 18 times
Total Generation for 2006 = 50,000 kWh

Commercial Audit Program

Essex Powerlines has developed a commercial audit program for Commercial and industrial customers. Essex Powerlines sends an auditor to provide an evaluation of the existing lighting and a proposal to change to Energy Efficient lighting.

Approximately 25 facilities were audited and 10 projects completed. An incentive of $13.79 Mwh savings is being offered to our customers.

Home Audits

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 $375 off the price of a professional home energy audit along with three compact fluorescent lights as an add incentive, we are able to assist homeowners in identifying areas for improvement and increased energy efficiency. The overall effect is educating the customers, lowering their bills, and lowering peak demand on the entire power system.

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 seventy nine homes within the Essex Powerlines service territory have taken advantage of the Home Energy audit program resulting in an estimated 6,000 kwh/yr reduction.

Essex Powerlines Energy Conservation Web Sites

From our web site www.essexpower.ca, you can access to powerful, very informative websites, which we have received very positive feedback on. We will continue to update these web sites as we go 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.essexpower.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.essexpower.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 program for 2006 was evaluated as a great success! With programs addressing the Residential, Commercial, and Industrial markets, it has strengthened our relationship as a utility, and provided good basics for the future.

	2006 acc. CDM Expenditures	Total approved CDM
1. Energy Awareness Program	c – 28,808 o – 59,198	c – 20,000 o – 30,000
2. Residential Conservation <50 kW	c – 0 o – 97,388	c – 25,000 o – 55,000
3. General Service Conservation >50 kW	c – 0.00 o – 59,671	c – 60,000 o – 85,000
4. Large User – Standby & Co-Generation	c – 0.00 o – 69,923	c – 15,000 o – 135,000
5. Municipal Green Project – "Lead by Example" and "Doing the Right Thing"	c – 0.00 o – 68,922	c – 20,000 o – 80,000
6. 4kV Conversion	c – 114,607 o – 25,906	c – 139,904 o – 35,000
Total	$524,423	$699,904

Essex Powerlines Sponsored Home Audit Program - Residential

Since the programs inception in early 2005 seventy nine homes within the Essex Powerlines service territory have taken advantage of the Home Energy audit program resulting in an estimated 6,000 kwh/yr reduction.

Public Awareness and Trade Show Representation

In 2006 we attended the Leamington Home show, and the OSUM conference held in Leamington, hosting a light bulb give away of 300 CFL's , with a reported savings of 29,565 kwh/yr.

Essex Powerlines Sponsored Commercial and Industrial Audit Program

Have completed 1 Industrial audit which received the 5 k funding through NRcan, 20 Commercial audits, and more scheduled for 2006-2007.

Seminars for Commercial and Industrial User

Essex Powerlines participated in the Ministry of Economic Development and Trade forum to provide Local manufacturing and Industrial customers with energy saving opportunities.

Essex Powerlines sponsored an Energy Savings Seminar for commercial and industrial customers.

Sponsored and presented at an Ontario Greenhouse Growers seminar.

In 2006 co-sponsored the “bottom line on energy management” seminar for our large users

Hosted a smart meter seminar for our 4 shareholders

Christmas Light Exchange Program

Essex Powerlines hosted a xmas light exchange program with all 4 municipalities. 300 customers from each community could exchange 1 box of old style lights for 1 box of 70 new led lights.

Employee Energy Savings Pilot Project

In order to test market an energy savings project that potentially can be conducted within an entire municipality, Essex Powerlines employees embarked upon an energy savings pilot project in their own homes. Armed with energy savings kits provided by Essex Powerlines each employee was challenged to reduce energy consumption in their own homes.

Each employee was required to complete a home energy audit survey as well make low or no cost home energy saving improvements. The pilot project saved an estimated 381,577 kwh/yr

Essex Power Energy Conservation Web Sites

In 2005 there were 3819 visitors to our 2 Energy Conservation Web Sites, which we will enhance and continue to promote in 2006. We combined this with school presentations for elementary grade students.

Utilismart Program

Utilismart also offers a Cost Prediction model to assist end users of electricity in reducing their consumption and demand, and 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.

Great tool to establish baseline, and to evaluate peak shaving, load shifting, power factor correction, and energy savings. This will lead to energy saving projects which may qualify for an incentive from Essex Powerlines.

Wholesale Embedded Generation Power Pool (Tri-Gen and Cogen Standby Power)

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Essex Power Rep has to be on call at all times while in the Market
Changed Hours as Market Participant as of midnight Jan 18, 2006
Now 24 hrs/day
Called on for Energy +/- 18 times
Total Generation since Dec/05 = 50,000 kWh

The existing Generators are in Hydro One territory and not part of our CDM Results, but as we go forward we will be including Essex Powerlines Customers. This is included to explain how the program works and we will continue to expand into Essex Powerlines Territory.

We are adding to the aggregation in 2006-2007, and exploring the opportunity with our 4 municipalities.

Essex Powerlines is continuing with all of our programs, and will be a Leader in Energy Conservation in Essex County. We did not allocate all of our CDM dollars to 4 Kv conversion, or Smart meters, we spread it over sectors of our market in order for us as a utility demonstrate we want to have a relationship with our customers and help them achieve energy efficiency.

We believe we are building a strong base of programs to incorporate into our rate structure, with the customer sharing in the benefits.

It's a Win Win situation!

Commercial Audit Program

Essex Powerlines has developed a commercial audit program for Commercial and industrial customers. Essex powerlines sends an auditor to provide an evaluation of the existing lighting and a proposal to change to Energy Efficient lighting.

Approximately 25 facilities were audited and 10 projects completed. An incentive of $13.79 Mwh savings is being offered to our customers.
Results

Total savings for 2006 = 481,430 kwh.