EB-2004-0530

ESSEX POWER LINES CORPORATION

December 1, 2004

VIA PUROLATOR COURIER

Ontario Energy Board
P. O. Box 2319
2300 Yonge Street
Toronto, Ontario M4P 1E4

Attention: Mr. John Zych, Board Secretary

Dear Sir: To Mr

Re: Essex Powerlines' DSM Plan

Enclosed is Essex Powerlines' DSM Plan outlining the program objectives and the anticipated program budgets.

Should you require any additional information, please feel free to contact me.

Yours truly

Richard E. Dimmel
General Manager

RED/db
Encl.

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OUTLINE OF CONSERVATION AND DEMAND MANAGEMENT ACTIVITIES

2004 to 2007

Prepared November 30, 2004
by
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Forward

Essex Powerlines' Conservation and Demand Side Management Plan has been developed and submitted within the context of the Minister of Energy's May 31, 2004 letter and the procedural order issued by the Board.

It is our expectation that the Board will endorse and approve our plan, allow Essex Powerlines to apply for our third tranche of MARR in 2005 which will enable us to support and fund these initiatives. Therefore, we are applying for a final order of the Board.

Essex Powerlines is a strong supporter of this initiative and has already launched a very effective consumer and child education program. Our program focuses on being a community leader in demonstrating how a Conservation Culture can change the potential supply shortage in Ontario and make us "Industry Leaders".

Essex Powerlines leverages the local ownership strength of our Shareholders to "Doing the Right Thing" in providing community examples of how we can all effectively reduce our usage of electricity and to support local renewable and alternative energy projects.

Essex Powerlines has informally consulted with most of the distributors in the area to exchange ideas and determine if joint ventures are possible. We have decided that each distributor will submit a separate action plan to the OEB, but we will work co-operatively with other LDC's to execute common programs that will benefit from the synergies obtained through informal and formal alliances.

Essex Powerlines's plan represents $945,000 of investment in Conservation and Demand Side Management. We have distributed our investment across all sectors of our customer base realizing that change is required from everyone. Our customer base by load percentage consists of a 60/40 split between residential and light commercial < 50 kW and medium to heavy commercial/industrial >50 kW. Our program contains elements that represent the unique opportunities that exist in our area and our commitment as a locally owned community based LDC is to support our customers and their specific needs to manage their homes and businesses efficiently.

Since our plan spans a three-year period, we realize that changes and modifications of programs will occur but the overall intent and goals will remain the same. We are excited about the opportunity to demonstrate our "real value" as a locally owned distributor and look forward to the challenges ahead.

Summary

Essex Powerlines plans to invest in programs that will reduce the system demand and conserve energy. These investments will take place over the next three years, and will target all customer classes. The total budget for the three years presently exceeds the third installment of Essex Powerlines' Market Adjustment Revenue Requirement (MARR) of $696,081. However, Essex Powerlines will monitor each program and adjustments may be made as results are analyzed to ensure the expected results are being achieved and to stay within the allowed amount.

The table below summarizes the expenditures by year. Each program is explained in greater detail in subsequent sections of this document.

	2004	2005	2006	2007	Total
1. Energy Awareness Program	**$25,000**	**$15,000**	**$10,000**	**$10,000**	**$60,000**
2. Residential Conservation <50 kW		**$30,000**	**$30,000**	**$30,000**	**$90,000**
3. General Service Conservation >50 kW		**$80,000**	**$70,000**	**$60,000**	**$210,000**
4. Large User – Standby & Co-Generation		**$100,000**	**$50,000**	**$50,000**	**$200,000**
5. Municipal Green Project – "Lead by Example" and "Doing the Right Thing"		**$50,000**	**$25,000**	**$10,000**	**$85,000**
6. 4kV Conversion		**$100,000**	**$100,000**	**$100,000**	**$300,000**
Total	**$25,000**	**$375,000**	**$285,000**	**$260,000**	**$945,000**

1.0 ENERGY AWARENESS

1.1 Energy Awareness Program

Targeted Customer Class – Residential
Essex Powerlines is committed to educating the public on the wise use of electricity and has developed two informative, interactive websites for residential customers, and "Kids".

http://www.energyconservation.ca/ was developed and implemented by Essex Powerlines in October 2004. The sites were officially launched by the Minister of Energy, Dwight Duncan, on November 10th, 2004. It is an easy to use web site, and available to all residential customers. The web site provides a wealth of information from do it yourself home audits, information on appliances, home improvement tips, Innovative technologies, smart meter technologies and demand side management activities. An energy calculator is included that aids the customer in calculating the cost of any appliance, and makes the customer aware that they have the option of shifting activities into the "off peak" period.

A do it yourself energy audit will allow residential customers to take an inventory of every electrical device in their home, and estimate the amount of energy needed to operate that device every month. Simple calculations will help the customer make the right choice when choosing to use or replace electrical devices. Essex Powerlines will also provide in home audits to customers that participate in a program that allows Essex Powerlines to track and quantify the savings. In addition to this, customers will receive information with their bills outlining energy saving ideas.

Essex Powerlines believes that cultural changes have to start at early ages and has developed a very informative interactive web site for kids called http://www.kidsenergy.ca/. The site encourages kids to learn about electricity conservation through energy tips, fun & games, energy history, saving energy, and types of energy. Kids will learn energy saving tips, and pass them along to their parents. A tab is also available for teachers to access information that can be taught to students including experiments. The website will be updated with new information and external links.

Program Budget

	Expenditures
2004	$ 25,000
2005	$ 15,000
2006	$ 10,000
2007	$ 10,000
Total Cost of Program	$ 60,000

2.0 RESIDENTIAL CONSERVATION <50kw

2.1 Promotion of Compact Fluorescent Lighting

Targeted Customer Class – All Residential

A single compact fluorescent light bulb can save a customer an average of $37 per bulb in energy costs. Essex Powerlines will partner with retailers in each of our service areas, and offer the coupons at or near the point of sale. A marketing campaign will be used to promote the program, and educate the customers on the benefits of using compact fluorescent lights. The customers who take advantage of this promotion will be noted in a database, and the average annual consumption of a random number of customers will be monitored to determine the actual kWh saved. To maximize the number of customers taking advantage of this program, it may be offered each year – 2005, 2006, and 2007 and possibly more than once per year.

2.2 Promotion of LED Seasonal Lighting

Targeted Customer Class – All Residential

A single string of LED Christmas lights can save an average of $4 per year, at a cost of only $8. These lights will typically last up to ten years, but for the purposes of analysis they are assumed to last only five years. All residential customers, including residents of bulk metered apartment buildings, will be offered coupons towards the purchase of one string of LED Christmas lights in exchange for dropping off a conventional string of lights. It is envisioned that Essex Powerlines will partner with retailers in each of our service areas, and offer the coupons at or near the point of sale. A marketing campaign will be used to promote the program, and educate the customers on the benefits of LED Christmas lights. The customers who take advantage of this promotion will be noted in a database, and the average annual consumption of a random number of customers will be monitored to determine the actual kWh saved.

2.3 Energy Seminars for General Service Customers < 50 kW

This program will target general service customers, offering energy saving ideas through a series of seminars, providing information regarding strategies to reduce their energy usage. Experts on topics such as lighting, programmable thermostats, and building envelope upgrades will make presentations using case studies of similar initiatives carried out with

actual customers. These seminars will be offered to our customers free of charge, and our Key Account Executive will follow-up with the attendees to determine if any are taking steps to reduce their energy usage.

In addition to these seminars, Essex Powerlines will participate with the local Chamber of Commerce to implement seminars and initiatives targeted at small business.

2.4 Residential Load Control Pilot

Essex Powerlines will initiate a pilot project on residential load control. Load control uses a real time communications link to enable or disable customer loads. These controls are usually engaged during system peak periods or when required to relieve pressure on the system grid and may include "dispatchable" loads such as electric hot water tanks, pool pumps, lighting, air conditioners, etc.

Benefits

Load control allows customers to respond quickly to external price signals. This also provides a mechanism for utilities to relieve pressure on constrained areas within the distribution grid and also reduces the need to bring on large peaking generators.

Social Housing Program

Essex Powerlines Services will work in conjunction with the local Municipalities and offer free audits for social housing. The walk through audit will identify savings opportunities that can be implemented and the savings will be tracked. This program can be expanded to include our compact fluorescent light bulb program, Christmas lights, and possibly load control.

Program Budget

	Cost
2005	$30,000
2006	$30,000
2007	$30,000
Total	$90,000

3.0 GENERAL SERVICE CONSERVATION >50 kW

3.1 Energy Manager – Web Based Energy Management Tool

Customers with loads > 50 kW that have been converted over to interval metering will be given direct access to a "state of the art" web based energy management tool that has been specifically designed for the Ontario Electricity market and utilities' rate structures. Customers can review their load profile and respective energy costs on an hour by hour basis. The HOEP and the customers actual interval meter billing data is automatically uploaded to their web site every day so consumers can see how both load and price fluctuations are impacting their bottom line and how/why they need to react. Tools are provided to analyze their usage and learn how to manage their loads to take advantage of lower peak price periods.

3.2 Price Alert/Control Signal

Consumers will be provided with an email/page or price control signal that will warn them that the price of energy has reached a certain price level. This will allow consumers to either voluntary make immediate decisions to reduce their current demand through internal means, or completely automate the energy management decisions using pre-programmed load control actions based on the price signals received.

3.3 Energy Seminars for General Service Customers

Targeted Customer Class – Small, Medium, and Large Commercial and Institutional Customers

This program will target general service customers, offering energy saving ideas through a series of seminars. Experts on topics such as lighting design, variable speed drive motors, programmable thermostats, and building envelope upgrades will make presentations using case studies of similar initiatives carried out with actual customers. Where possible, these seminars will also promote existing programs that may benefit the customers such as *Sustainable Building Canada* (sponsored in part by Natural Resources Canada). Other potential partnerships will be explored during the development of these seminars. These seminars will be offered to our customers free of charge, and our Key Account Executive will follow-up with the attendees to determine if any are taking steps to reduce their energy usage.

In addition to these seminars, a walk through audit will be provided to identify potential savings and energy efficient projects.

3.4 Interval Metering

In 2005, Essex Powerlines will advance the interval metering program to include all customers >200kW; In 2006/07, advance the program to include customers >50kW – 200kW. These customers will then be able to benefit in additional offerings such as utilismart, Energy Manager, and price signaling.

Program Budget

	Expenditure
2005	$ 80,000
2006	$ 70,000
2007	$ 60,000
Total Cost	$ 210,000

4.0 LARGE USER – STANDBY and CO-GENERATION

4.1 Tri-Gen Pilot

Co-Generation or Combined Heat and Power (CHP) plants have a huge potential in the Essex County area due to large concentration of greenhouse operations. The greenhouse sector is a larger consumer of Natural Gas than the automotive sector, specifically for the purpose of providing their thermal and CO2 needs. These sites are ideal for hosting CHP plants plus the added benefit that they consume all the CO2 emissions from the generators within the greenhouse.

We are proposing to jointly promote and develop several key pilot projects, which we refer to as "Tri-Gen" development. This will convert existing heavy gas users into highly efficient CHP sites that provide the host thermal heat, CO2 gas to enhance the growing of their crops and finally "clean electricity" (without CO2 emission) back into the electricity grid.

4.2 Emergency Standby Response

This project will enable existing standby or emergency generation to participate in the wholesale markets and allow these assets to be dispatched by the IMO when supply is limited and peak generation response is needed.

Significant standby/emergency generation currently exists in Essex County and makes this project very attractive.

Program Budget

	Expenditure
2005	$ 100,000
2006	$ 50,000
2007	$ 50,000
Total Cost	$ 200,000

5.0 MUNICIPAL GREEN PROJECT – "LEAD BY EXAMPLE" and "DOING THE RIGHT THING"

5.1 Municipal Green Leaders

Essex Powerlines will co-ordinate a "Lead by Example" program through our four Municipal Shareholders to set the Conservation/DSM initiatives lead in our communities. We will develop programs which will be used as public information projects to demonstrate the importance and value of conservation and DSM.

Our goals will be aligned with the provincial targets to achieve a 10 % reduction across each of our municipals current aggregated usage.

5.2 Municipalities "Doing the Right Thing"

Essex Powerlines will co-ordinate and assist in developing new renewable and alternative energy supplies which will be purchased by its Municipal Shareholders and Essex Powerlines itself. This initiative will serve as a "Public Awareness Program" to promote consumers to "Doing the Right Thing" when it comes to protecting our environment and support "green or alternative energy".

Program Budget

	Expenditures
2005	$ 50,000
2006	$ 25,000
2007	$ 10,000
Total Cost	$ 85,000

6.0 4 kV CONVERSION

6.1 Reduce Distribution Losses

Targeted Customer Class – All Customers

Essex Powerlines has been working to reduce system losses by converting 4 kV distribution to higher voltages. These conversions have taken place as the infrastructure approaches 'end-of-life' status. Converting to the higher voltage reduces the losses by decreasing the amount of current needed to deliver the same amount of energy. The reduced losses will reduce the amount charged on each customer's bill for system losses.

Proposed Implementation Steps

Voltage conversions are currently planned for 2005, 2006, and 2007. Essex Powerlines will incrementally increase our conversion plan by $100,000 per year 2005-2007. Essex Powerlines will spend an estimated $1,000,000 in total conversion over this period. The savings in system losses will be calculated based on the amount of load converted to the higher voltage.

Program Budget

	Expenditures
2005	$100,000
2006	$100,000
2007	$100,000
Total Cost of Program	$300,000