Chatham-Kent Hydro Inc.

RP-2004-0203

Conservation and Demand Management Plan

Submission to

Ontario Energy Board

January 13, 2005

Contact for the Plan

Mr. Dave Kenney

President, Chatham-Kent Hydro

320 Queen St

Chatham, On

N7M 5K2

Phone 519-352-6300 (261)

Fax 519-352-6980

Email davekenney@ckenergy.com

Overview

Chatham-Kent Hydro Inc. (CK H) has attached their Conservation and Demand Management (CDM) plan as required in RP-2004-0203.

This plan is being provided by CK H to meet the directive from The Minister of Energy for local distribution companies (LDCs) to promote energy conservation in their service territories.

The approval of this plan by the Ontario Energy Board (OEB) should allow CK H to increase their distribution rates in April 2005 in order to finance the plan.

CDM Plan (Appendix A)

The plan being submitted by CK H covers many activities that will reduce the energy consumption in the service territory. The activities range from before the customer meter to after the customers meter. The plan is also a balance between operating expenditures and capital expenditures. The budgeted expenditures of the plan are $1,000,000 (page 16 of plan).

CK H believes that this plan meets the objectives of The Minister of Energy's Directive.

Revenue Recovery

CK H requires a rate change in April 2005 in order to finance the CDM projects. In RP-2000-0033 CK H had applied for only a 6.05% return on equity (ROE). In the decision the OEB approved a phase three rate change of $95,515 (Appendix B).

The decision by the shareholder to apply for the lower ROE was to manage the rate shock for the customers. It was always intended that CK H would apply for the maximum ROE in a future application. Applying for the lower ROE did not anticipate financing significant CDM expenditures.

In order for CK H to finance the CDM expenditures a rate increase of $969,000 is required. This rate increase is no more than the customers would have paid had CK H applied for the maximum ROE (Appendix C).

CK H has applied to The Minister of Energy on September 20, 2004 requesting approval to apply to the OEB for the rate change (Appendix D).

CK H obtained approval from the Minister of Energy dated October 20, 2004 (Appendix E) to apply to the OEB for the increase in distribution rates.

Final Order

CK H is requesting that this rate change be a final order as outlined in the Procedural Order.

CK H also requests that the OEB confirm that;

- The CDM plan presented meets the Directive of The Minister of Energy
- If minor changes to the plan are made that this will not invalidate the total plan
- Any costs for this application can be included in the CDM expenditures.

CHATHAM-KENT HYDRO™

CONSERVATION and DEMAND MANAGEMENT PLAN

Chatham-Kent Hydro 2005 Conservation and Demand Management (CDM) Plan

Contents

1 Executive Summary

Chatham-Kent Hydro Inc. is committed to the initiatives undertaken by the Ontario Government to reduce the consumption and demand of electricity in Ontario. The goal is not only to reduce consumption or shift demand but also to assist our customers in achieving higher levels of energy efficiency and energy conservation.

Our plan is defined as the CDM Plan and includes initial programs designed to support, enhance and expand on Chatham-Kent Hydro's efforts in public education and interval metering. The plan will also introduce other CDM programs including smart metering, real time monitoring and load control, line loss improvements, power factor correction, and load displacement.

The energy efficiency programs will use education and financial incentives to help consumers save energy. Educational programs explain the benefits of energy efficiency to consumers and service providers. These programs will also provide consumers with the information necessary to pursue energy efficiency measures, and train service providers to increase their ability to provide efficiency services. Financial incentives will be used to make the purchase of efficient technologies more economically feasible, and to encourage consumers to pursue energy efficiency measures.

Before implementation, CDM programs will be evaluated on the following criteria:

- Clearly defined project or initiative.
- Calculated annual energy savings for each project.
- Projected future energy costs and calculated annual financial savings.
- Estimated project costs.
- Evaluated merit of each project.
- Prioritized projects.
- Monitored and evaluated the performance.

This document outlines Chatham-Kent Hydro's CDM plan for 2005, while taking into account the new policy directions for CDM that have occurred in the last 18 months.

The plan will include programs that implement or support:

- Energy efficiency initiatives that are economically beneficial and good for the environment
- Demand (load) Shifting
- Customer behavioural and operational changes, including the application of smart control and monitoring systems
- Smart Metering systems to encourage consumers to manage demand and energy

- Programs and initiatives targeted to low and fixed income consumers
- Education programs targeting students in local elementary and secondary schools
- Distributed energy options behind a customer's meter such as tri-generation, co-generation, ground source heat pumps, solar, wind, and biomass systems.
- Building partnerships and alliances to develop and deliver CDM programs

2 Chatham-Kent Hydro's 2005 CDM Portfolio – The Programs

This section includes a description of the proposed programs of Chatham-Kent Hydro's 2005 CDM Plan.

For each program, the following information is provided:

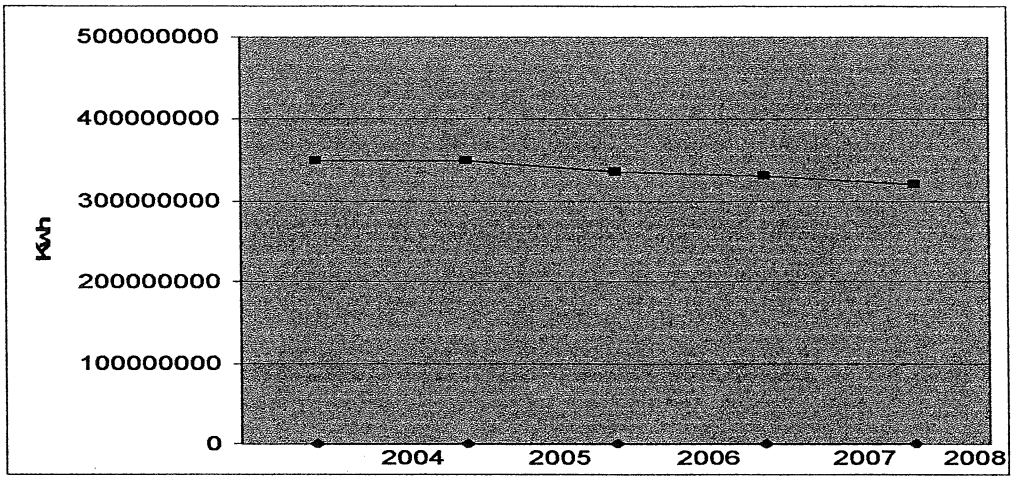
- A brief **description** of the program, its key measure, major objectives and outcomes, and the rationale behind the program.
- The **implication** of the program for Chatham-Kent Hydro, its customers, and the marketplace.
- The proposed **budget** for the program, including budget assumptions.

2.1. *Customer Awareness Program*

Chatham-Kent Hydro distributes electricity to 32,000 customers, and as a local LDC has the ability to communicate to a population of 110,000. There are several studies completed over the years including the "Sarah Darby Study with the University of Oxford". These studies have proven that simply educating customers about their electricity consumption habits will cause them to reduce their energy consumption. Several methods of feedback were analyzed in the studies with direct feedback achieving the highest results. This involves using tabletop interactive cost and power display units etc. that will provide real-time feedback. This should be followed by educational material that will assist customers in making wise energy choices. The energy savings from this type of program will be in the 5%-20% range.

In Chatham-Kent the overall annual residential consumption is approximately 350,000,000 KWH. The graph below identifies the reduction in KWH, should an effective customer awareness program be implemented.

GRAPH



The customer awareness program includes the following components:

Public Awareness Conservation Program; (See attachment 1)
A conservation campaign was kicked off in June 2004 with a theme and a slogan. It is a made-in-Chatham-Kent Program called "The three T's of Hydro Conservation"

- Turn if off
- Turn it down
- Trade it in

The program focuses on wise energy use in the home and on taking advantage of energy saving tips and government programs aimed at replacing appliances with more energy-efficient models. Chatham-Kent Hydro staff members are heard live on the local radio stations (which reach 65% of the homes in Chatham-Kent) twice a month during the morning drive-time audience. Conservation tips and the latest industry news are provided to listeners. This program is becoming well known in Chatham-Kent. The goal is to increase awareness through the print media and signs and attendance at local trade and home shows.

Other Public awareness campaigns and promotions include:

- Signs and billboards located throughout the community including the C-K Hydro main office with conservation messages promoting C-K Hydro's three T's of conservation.

- A conservation kick-off event on November 8, 2004 with a live broadcast by the local radio stations from our main office and promotions during the day to encourage conservation activities

- Participation at local community trade shows promoting energy conservation and demonstrating programs available to C-K Hydro customers

The Public awareness program will not provide immediate results, but will be designed to change the culture of energy use, primarily focussing on the residential market. Measuring the results of the program will be achieved over a long-term trend of declining energy consumption, and by surveying customers. The target of a reduction in energy consumption of 5% by 2007 is achievable, but will require a continuous public awareness program.

The costs of the program will be:

2004 - $20,000
2005 - $30,000
2006 - $30,000
2007 - $30,000

Total - $110,000

2.2. *Price Response Program Design*

2.2.1 Smart or Interval/Time of Use Meters

Interval meters have been a component of Chatham-Kent Hydro's initiatives in recent years. The above 500 kW demand group has previously been the target for interval metering. Chatham-Kent Hydro is participating in the Smart meter working group with the OEB and intends to proceed with a smart meter program that is consistent with the Minister's Initiatives and the OEB's recommendations. To fully capture the demand reduction and energy savings opportunities that smart meters can offer, they must be part of an overall system that includes:

- A supportive rate structure
- Availability and testing of the technology
- Information for customers to help them to understand how they can benefit by reducing or shifting their electricity loads.

New rate structures will not be available until after March 2005, however Chatham-Kent Hydro wants to prepare itself and its customers for these new rate structures. Therefore, during 2004 and 2005, the focus of the CDM initiative will be on two of the components identified above: availability of the technology, and customer information and education.

"The Smart Meter Pilot program"

Chatham-Kent Hydro has been researching Smart meter technology for the residential market since January 2004. The initiatives announced by the Government to install smart meters in every home by 2010 has been taken seriously, and research has led C-K Hydro to some basic principles, which are;

1. That we are in step with the Ontario Energy board regarding the technical specifications of the Interval or Time of use meters
2. That we consider the existing metering assets and reduce the potential to strand significant metering assets
3. That the meter will support a time of use rate structure
4. That we search for opportunities to partner with other LDC's and/or companies
5. That our preference is for non-proprietary systems
6. That the communication infrastructure to support smart meters may be used for other applications, such as: load control, AMR, outage management and/or revenue generating systems.
7. That we establish ongoing cost efficiency and flexibility as a priority

Our research involved in-depth reviews of various product lines and communication protocols including: power line carrier, radio, cell and landline communication. Chatham-Kent Hydro has significant experience and expertise in the area of radio communication as we have operated our SCADA system using a 900 MHZ frequency communications for many years.

Based on our metering and communications experience, and in consideration of the above 7 principles, we believe the Tantalus Inc. Smart Meter system technology closely meets the intent of the Minister of Energy.

The Tantalus Technology is a retrofit option to convert our existing watt-hour meters to smart interval meters. The communication protocol is wireless radio technology using a hybrid 900/220 MHZ system. The infrastructure technology is more economical for Chatham-Kent than power line carrier systems and provides two-way communications with the customer.

Tantalus has been selected by C-K Hydro as the provider and partner in a pilot program to retrofit 1000 of Chatham-Kent Hydro's 30,000 residential meters to interval meters with a wireless communication backbone. The pilot will also test the Automated Meter Reading (AMR) and outage management capabilities of this system.
The infrastructure costs of the Tantalus system are relatively low when the potential customer benefits are considered. In addition to providing interval data to residential consumers and assisting them in developing new consumption habits, the pilot will also be used to identify system-wide operational savings. The system has the potential of significantly reducing meter reading and other customer support functions.

The cost of the Tantalus pilot program is:

2004 - $50,000
2005 - $275,000
Total - $325,000

2.3 Customer Price Alert Information

Chatham-Kent Hydro has offered next business day load and price information to our interval customers since market opening via the Internet. Though several of our larger customers have taken advantage of this, our goal now is to provide real time price information.

Programs to assist customers in understanding how to use their interval meters to reduce their energy costs will be offered. These programs will be immediately relevant to customers who are paying the market rates, and will benefit other customers as soon as time-of-use or market rates are available to smaller users.

A pilot program to provide price alert and encourage demand response will be implemented. The pilot will be in partnership with **NRGen Inc**. Chatham-Kent Hydro will leverage NRGen's price alert technology to raise customer awareness to the wholesale market, and to engage customers in demand response activities that will see decreased demand particularly during price peak periods. It will also enable Chatham-Kent Hydro to exploit new revenue opportunities, based on participation in programs such as the IMO's Transitional Demand Response Program.

The Price Alert pilot will include:

- Customer tracking of electricity consumption over the Internet. This will enable customers to see how much electricity they are using and how much it is costing them.

- An alert system, which will signal the customers up to 3 hours before the price, exceeds a predetermined amount.

- A help-line for customers to assist with understanding and using the tracking service. This service would cover telephone queries about the customer consumption tracking system, ranging from usage (e.g. what is my password?) to interpretation of the information provided.

- Provide customers who take part in the price alert with an energy audit and advice on what loads can be shifted when a price alert signal is received.

- Provide Chatham-Kent hydro with the customer support required to participate in the IMO's transitional demand response initiative.

The number of participants and the comparison of the customers' load profiles and demand response will measure the effectiveness of the price alert pilot during the trial period.

The overall cost of the Price Response Program design is estimated at:

2004 - $5,000.
2005 - $20,000

Total - $25,000

2.4 The Commercial/Industrial Energy Efficiency Program

Chatham-Kent Hydro will develop an Energy Efficiency Program targeting Commercial and Industrial customers who have a greater impact on the overall efficiency of the C-K Hydro distribution system. Improving energy efficiency of the larger customers will translate into a more efficient distribution system with a higher power factor and lower system losses. This program will include:

- Initiating energy audits of a few selected customers. Soliciting volunteers to participate in the audits with a commitment to address deficiencies and provide feedback to measure the success of the programs.

- Developing protocols and procedures appropriate to different sectors (e.g. institutional, educational or commercial).

- Implementing a program that will include an initial audit; training for involved staff members, and occasional follow-up once the program is in place, to ensure smooth operation. The program will include an evaluation of power factor improvement and energy savings that resulted.

- Evaluation and refinement of protocols, procedures and notification procedures, based on the results of the program, for broader rollout in 2006.

Chatham-Kent Hydro will search for additional funding sources, which could be accessed to offset the costs of developing and piloting the Energy Efficiency Program.
Though grant funds are not available directly for Chatham-Kent Hydro, there are programs such as the Green Municipal Funds (GMF) which provide grants of up to $350,000 for planning, feasibility studies and/or field tests related to environmental infrastructure projects in six service areas: buildings/facilities, energy services, sustainable in community development, water services, transportation services and waste management. Natural Resources Canada, through its Energy Innovators Initiative (EII), provides grants of up to $25,000 and $250,000 for the energy retrofit planning and implementation, respectively. This Energy Retrofit Assistance (ERA) program is available only to commercial businesses and public institutions that are EII members.

Overall, the cost of developing and piloting The C/I Energy Efficiency program is estimated at:

2005 –$10,000
2006 - $10,000

Total - $20,000

2.5 Distribution System Optimization and Line Loss Reduction

Reducing distribution system line losses will make the system more efficient and will contribute to demand and energy conservation. Some initial evaluation has concluded that a reduction in line losses of approximately 1% will reduce Chatham-Kent Hydro's monthly demand by approximately 2,000 KW. A more efficient distribution system will also translate to lower costs to customers.

A Voltage conversion program is one initiative that will reduce distribution system line losses. This involves eliminating the 4000-volt distribution stations and supplying customers directly from the 27,600-volt system. This eliminates the transformer losses of the substations. In order to quantify this loss reduction, more studies will be required on this program. Once completed, Chatham-Kent Hydro will be able to produce a guide that can quantify the loss saving by conversion dollar spent and/or kVA converted.

The study will progress as follows:

1. Choose 3 or 4 existing 4 kV Feeders.
2. Calculate existing losses based on loading data from meter read information from Harris.
3. Re-design the system as if a conversion were about to take place.
4. Calculate new losses based on the new design.
5. Perform the study for individual feeders and for one whole substation and feeder system.

To complete the study, the data from the Automated Mapping Facilities Management (AM/FM) information will need to be exported into the analysis software that will calculate the loss values. As the export features from AM/FM are limited, it will require an upgrade to permit the exporting to the analysis software.

Until the vendor is selected and the upgrade of the AM/FM system is completed, some preliminary studies will be undertaken to gather an approximate answer. This will involve some expenditure in software to help in data conversion from the CIS system.

The cost to upgrade the existing AM/FM system and analysis software and to complete the analysis is:

Based on the assumption that the analysis will justify voltage conversion projects, a strategy will be developed to accelerate voltage conversions in Chatham Kent Hydro.

The initial expenses will be to complete the analysis identified above. Should the analysis demonstrate significant reduction in demand and consumption, C-K Hydro will accelerate the voltage conversion program, by approximately 10% annually.
Other loss reduction initiatives will involve an analysis of the power factor of our larger customers. If our customer's power factor is improved, it translates to a more efficient distribution system. The audits referred to in item # 2.4 of this plan will also focus on power factor status and improvement recommendations. Incentives will be provided to customers to make power factor corrections either through higher penalties for poor power factor or a contribution by Chatham-Kent Hydro to install power factor improvement equipment.

Overall costs of the Line loss Improvement program will be:

2005 - $100,000
2006 - $100,000
2007 - $100,000
Total - $300,000

2.6 Distributed Generation and Renewable Energy Program

In the OEB preliminary guidelines for Electricity Distributor Conservation and Demand Management activities, distributed energy options like co-gen, wind and biomass systems are the type of new expenditures the Minister of Energy is encouraging to help meet the energy conservation targets. Chatham-Kent Hydro is in an area of the province that has been targeted as a prime area for investment in wind energy.

Chatham-Kent Hydro is considering renewable energy sources that would fit with Chatham-Kent's environment and economy. We have had discussions with America's Wing Energy Inc. (AWE) who offers low cost wind turbines that can be used for small load displacement uses up to 80 KW.

In order to determine the value of or the most effective location a wind generation program will require wind propagation studies and location analysis. Chatham-Kent Hydro is considering the installation of one of the small units provided by AWE as a load displacement unit in partnership with our Municipality. The data from this installation may be used in lieu of an expensive propagation study to assist C-K Hydro in the decision to move forward with larger wind generation projects.

Chatham-Kent Hydro will also analyze other renewable energy sources including the use of solar panels on our substations.

2005 costs: - $130,000
2006 costs - $20,000

Total - $160,000

2.7 Low and Fixed Income Customer Program

Initially this program will focus on identifying "all electric" customers in this group and develop programs to reduce energy consumption costs. Programs will include building retrofits and fuel switching.

Low and Fixed Income Customers can reduce energy consumption if they utilize the information and incentives available for:

1. Taking no cost, energy-saving actions. **(Turn it off)**
2. Installing low-cost, energy-saving measures. **(Turn it Down)**
3. Investing in energy-efficient equipment, appliances and building shell retrofits. **(Trade it in)**

2.8 Program Development Research

Research will be required to assist in the design of new CDM programs for 2005 and beyond. The research program will involve identification of priority research areas, investigation of these areas, and documentation of findings.

Chatham-Kent Hydro has identified three areas where it may wish to research opportunities in the short term:

- Technologies for automatic load shedding from appliances, such as pool filters or air conditioners by putting these under the control of the utility. The research will include a review of where they have been implemented, and the associated programs that have been designed around them (e.g. whether or how customers can override thermostat adjustments, financial incentives offered to customer, etc.)

- Identification of distribution system standards and determination of how these might contribute to reducing electricity losses. These could include consideration of how to optimize the power system, using load flow software, or investigating standards for low-loss transformers.

These, and possibly other, research areas will be considered and the specific work to be undertaken will be selected.

The research study for the CDM Plan is budgeted at:

2005- $20,000

2.9 All Sector Programs

2.9.1 Municipal Street lighting

The Municipality has over 10,000 streetlights that our all maintained by Chatham-Kent Hydro via a Service Level agreement. An analysis of the lights has concluded that 13% of them are the less efficient Mercury vapour lights.

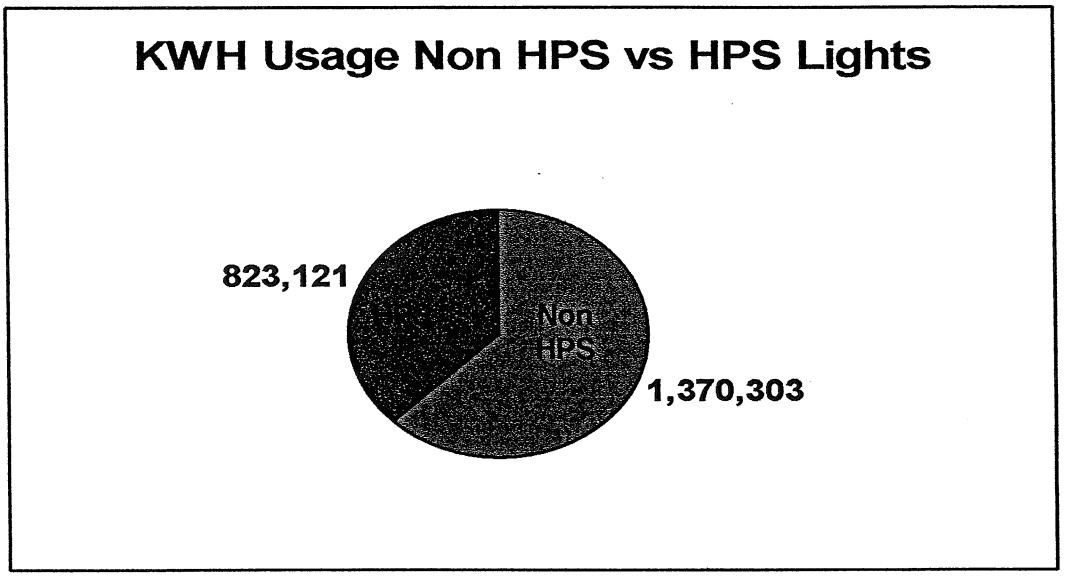
There are primarily 3 types of streetlights used by Municipalities. They are:

Mercury Vapour – (least efficient) 25 – 50 lumens per watt
Metal Halide – (moderately efficient) 50 –115 lumens per watt
High pressure Sodium (most efficient) – 40-140 lumens per watt

In C-K Hydro's analysis a conversion of the lights to high-pressure sodium can be completed at a cost of approximately $180,000. The energy savings will provide a return on this investment in 5 years. The energy consumed by the existing non-efficient lighting will be reduced by 40% if they are converted to high-pressure sodium lights.

C-K Hydro has proposed to the Municipality a 1-year conversion program of all these lights.

GRAPH



Chatham-Kent Hydro will also work with the Municipality on a conversion of the traffic light fixtures to high efficient LED lighting. The Municipality currently installs LED traffic lights in new installations but has not considered replacement the existing fixtures. Chatham-Kent Hydro plans to complete a study on the benefits of converting these fixtures.

Costs for a streetlight/traffic light conversion program

2005 - $20,000
2006 - $10,000

Total - $30,000

2.9.2 Lighting & Appliances

The lighting and appliance programs will be designed to (1) improve consumer awareness of the energy and non-energy benefits of efficient lighting and appliances, (2) increase the availability and demand for these products, and (3) promote emerging technologies. The programs will include:

- Promoting ENERGY-STAR rated products
- Offering direct rebates (financial incentives) to consumers to purchase energy efficient products
- Educating consumers and distributors of energy efficient products using web-sites, bill inserts, newsletters, educational workshops, and on site auditing
- Showcasing new technologies at consumer locations and events

2.9.3 Heating, Ventilation and Air Conditioning (HVAC) Systems

HVAC programs will be designed to: (1) encourage the replacement of inefficient systems with efficient ones, (2) increase consumer recognition of ENERGY-STAR products, (3) increase training of trade professionals in efficient HVAC systems, (4) support the improvement of efficiency standards. These programs will include:

- Educating consumers through web-sites, bill inserts, newsletters, educational workshops, on site auditing and call centre
- Providing efficiency information to HVAC contractors and distributors,
- Offering direct rebates (financial incentives) to residential customers for energy efficient HVAC projects

2.9.4 High Efficiency Motors

The High Efficiency Motor program will be designed to: (1) promote optimal motor system design and sizing, (2) facilitate consumer purchase of efficient motors and (3) increase the understanding of motor life-cycle costs. These programs will include:

- Educating consumers through web-sites, bill inserts, newsletters, educational workshops, on site auditing and call centre
- Providing efficiency information to motor contractors and distributors,
- Offering direct rebates (financial incentives) to residential customers for energy efficient HVAC projects
- Offering information and assistance to encourage optimal system design and life-cycle cost analysis

2.9.5 Building Retrofits and Renovations

The Retrofit and Renovation program will be designed to: (1) increase energy efficient investments at the time of retrofit, renovation, or sale, (2) link interested customers with providers of energy retrofit services and (3) increase the knowledge of professionals who perform energy efficient retrofits.

Many different market participants can increase the likelihood of an energy efficiency retrofit. These programs not only target residential and commercial customers who either own or are buying a building (including multifamily houses, large energy customers, and governments) but also trade professionals (including engineers, designers, contractors, and energy consultants), real estate agents, mortgage professionals, and home inspectors. These programs will include:

- Providing energy efficiency information to customers planning to buy, sell or renovate a building. Efficiency information on windows, equipment, motors, lighting, appliances, etc.
- Making energy audits available to customers to assist them in determining their efficiency retrofit needs.
- Providing product energy efficiency information and assistance for trade professionals through workshops, libraries, and trade shows.
- Offering direct rebates (financial incentives) customers for energy efficient retrofit/renovation projects.

2.9.6 New Construction

The New Construction program will be designed to (1) increase the number of energy efficient new homes and buildings being built, (2) promote construction exceeding the R2000 home design, (3) raise awareness and benefits of energy efficient home when applying for a mortgage, (4) promote energy efficiency in the professions of architecture and engineering

Market participants include consumers looking to buy new homes and decision makers in new construction projects; builders, contractors, and manufacturers; real estate agents and mortgage professionals; and architects, engineers and students. Programs include:

- Targeting information to customers to promote energy efficient homes and buildings
- Recognizing new developments that include exemplary energy efficient homes.
- Offering energy efficiency information to trade professionals.
- Offering energy efficiency information sales agents to enable them to more effectively sell efficiency upgrades to home-buyers

Costs of all sector programs: (some of the costs will be included in the Customer awareness programs)

2005 - $10,000

3.0 Customer Energy Specialist

To ensure Chatham-Kent Hydro's commitment to deliver CDM programs, Chatham-Kent Hydro will put in place a full time Energy Specialist to:

- Develop, implement, manage and measure results of the CDM programs undertaken by C-K Hydro
- Evaluate new and existing energy efficiency technologies
- Provide energy efficiency training and educational programs
- Provide customers technical advice and guidance with respect to energy technologies
- Monitor and evaluate CDM programs

3 CDM Budget Summary

Table 1 presents a summary of the total Chatham-Kent Hydro CDM budget for 2004 – 2007.

Additional funding will be provided directly or indirectly by other programs. These include programs offered by Natural Resources Canada, the Federation of Canadian Municipalities, and through the contribution of various program participants.

Table 1

Customer Awareness Program	$ 110,000
Smart Meter Pilot Program	325,000
Price Alert Pilot	25,000
C/I Energy Efficiency Program	20,000
System Losses Reduction Program	300,000
Renewable Energy Program	160,000
Research	20,000
All Sector Programs	40,000
Total CDM Program	**$1,000,000**

Revenue Requirement necessary to achieve the elected Target Rate of Return on Common Equity, exclusive of Payment in Lieu of Taxes. The Revised Application (with amendments) also indicated that, for the average residential customer, the percentage increase in the total bill in the first year of the phase-in plan is 3.0%. The first year impact for the average general service customer with a monthly consumption of 2,000 kWh is an electricity bill increase of 0.9%.

Copies of the Application, including the evidence filed in this proceeding, are available for review at the Board's offices.

Board Findings

While the Board has considered all of the evidence filed in this proceeding, the Board has only referenced the evidence to the extent necessary to provide background to its findings.

Chatham-Kent Hydro Inc. results from the amalgamation of 11 former municipalities in 1998. Chatham-Kent Hydro filed 11 separate rate schedules and did not use the Board's Rate Unbundling and Design Model ("the RUD Model") to determine its unbundled and MARR-based rates. While it did not use the RUD Model, the filing was based on the principles of the Board's Rate Handbook. The Board finds the methodology used by Chatham-Kent Hydro in determining its distribution rates to be reasonable.

The Board finds that Chatham-Kent Hydro's election of a 6.05% Target Rate of Return on Common Equity, and its plan to implement the recovery of the incremental revenue in the form of $1,077,000 in the first year, $1,077,000 in the second year and the remainder, $95,515 in the third year, is acceptable.

The Board notes that Chatham-Kent Hydro has submitted a harmonization plan to implement unbundled rates and harmonize rates across their 11 different former service territories over a five year period. The Board approves this plan for the first 3 years to cover the period of the first PBR

CHATHAM-KENT HYDRO
MARKET ADJUSTED REVENUE REQUIREMENT (MARR) FOR ROE @ 9.88%
NO PIL'S

Line No.				
1	Rate base	NBV Fixed assets		$ 36,093
		Working Capital in Rate Base		
2		1999 COP	$ 58,483	
3		1999 OM&A	$ 5,256	
4			$ 63,739	
5		Working Capital in Rate Base	15%	$ 9,561
6		Rate Base		$ 45,654
	1999 Return on Rate Base			
7		1999 Net Income		$ 845
8		1999 One-time Extraordinary Revenue		$ (69)
9		1999 Debenture Interest		$ 10
10		1999 Adjusted Net Income		$ 786
11		1999 Return on Rate Base		1.72%
12	1999 Revenue			$ 65,949
13	1999 Margin			$ 7,466
14	2000 Return on Equity			9.88%
15	2000 Debt Rate			7.25%
16	2000 Equity Ratio			50.0%
17	2000 Debt Ratio			50.0%
18	Tax rate			0.00%
19	WACC (PRE-TAX)			8.57%
20	Market Based Rate of Return for 2000			$ 3,909
21	Market Based Rate of Return for 1999			$ 786
22	Additional Revenue for MARR			$ 3,123
23	% of 1999 Total Revenue			4.7%
24	Modified Phase-In			
25		Year 1		$ 1,077
26		Year 2		$ 1,077
27		Year 3		$ 969
28		Total		$ 3,123

CHATHAM-KENT HYDRO
A Chatham-Kent Energy Company

September 20, 2004

The Honourable Minister Duncan
Minister of Environment and Energy
Hearst Block, F4
900 Bay Street
Toronto Ontario
M7A 2E1

Dear Minister Duncan:

Re: Approval to Apply to the Ontario Energy Board for a Demand Side Management Rate Increase

Chatham-Kent Hydro Inc (CK H) is requesting your approval to apply to the Ontario Energy Board (OEB) for a Demand Side Management (DSM) rate increase.

CK H

CK H is a medium size utility in South-western Ontario that was formed in 1998 after the amalgamation of 11 Municipal Electric Utilities (MEU) which was part of the municipal amalgamation of the Municipality of Chatham-Kent. CK H serves approximately 32,000 customers in 11 non-contiguous service territories (Appendix A – map of service territory).

CK H has been very customer responsive during the transition period of the Ontario electricity deregulation. Some of the ways that CK H has been customer oriented are as follows;

- Initial rate application requested a return on equity of 6.05%, limit rate impacts to customers
- Provided the small customers with the fixed price for the commodity during the period of significant volatile commodity prices

Request

CK H's initial rate application of 6.05% was phased in over two years rather than the OEB's recommended three years in. Due to this fact CK H does not have any rate increase in 2005 to meet the DSM directive.

CK H is very eager to do their part in providing the customers with DSM programs. In order to do so a rate increase in 2005 is required. The amount of the increase that is being requested is $1.5 M, which includes corporate taxes. The customers of CK H will not pay any more than they would have had CK H initially applied for and received approval of the allowable maximum ROE.

Customer impacts are as follows;

- Overall increase 2.2%
- Residential increase 1.9%
- Residential increase per month $1.22

CK H's DSM program

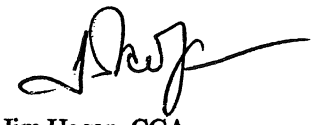
CK H is designing their DSM program, some of the activities that are being reviewed or started are;

- Customer awareness program
  - CK H has begun a conservation promotion and slogan (Appendix B – Promotion logo)
    - Three T's of Conservation
      - Turn it off
      - Turn it down
      - Trade it in
  - Letter to all customers in their bills during the summer months with a conservation theme
  - Live radio spots which reaches 65% of residents in Chatham-Kent
  - Elementary School program
  - Develop conservation programs and tips for the fixed income customers (Seniors, Social Assistance)
- Smart meters are being analysed
  - Participation on OEB working group
  - Pilot project is being studied that will test wireless communication to the meter and will convert 2% of our residential meters to smart meters
- Real time monitoring and load control devices
  - Partnership with a third party in providing customers advance notice of commodity prices
  - Working on programs to assist the customers in responding to the price signals, load shifting
- Line losses projects
  - Engineering staff are reviewing and prioritizing projects that would reduce line losses
  - Voltage conversions and removal of substations are some of the projects being reviewed
- Power factor correction
  - CK H will implement programs that will assist the larger customers to improve their load factor.
  - Improvements will provide more efficient use of the power and reduce losses
- Load displacement
  - Studies will be undertaken to encourage small generation projects

Summary

CK H is a progressive utility that could provide assistance to our customers in conserving energy. In order to provide superior DSM programs a rate increase is required. Your approval for the rate increase will allow CK H the resources to provide the DSM programs.

Sincerely,



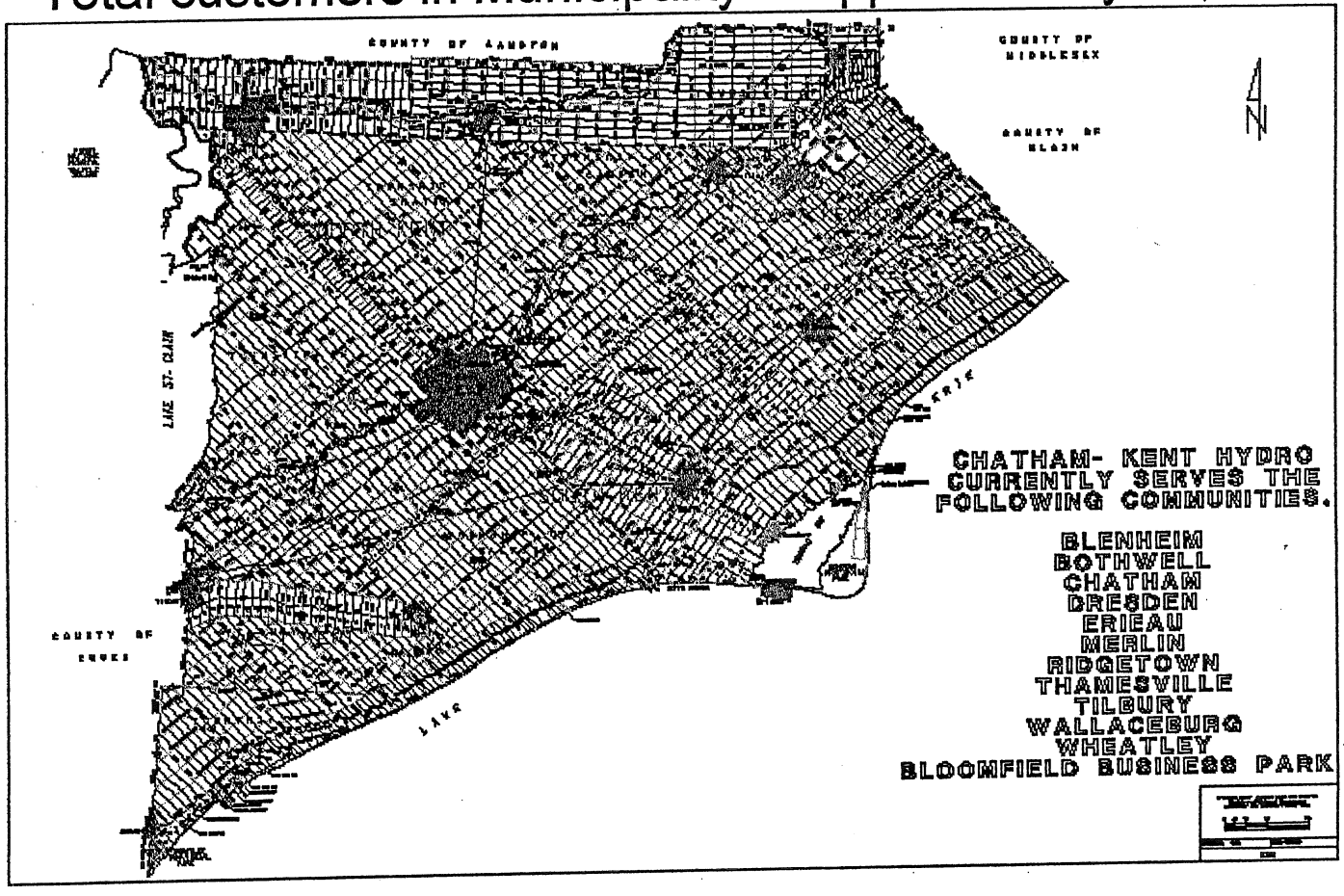
Jim Hogan, CGA
Chief Financial and Regulatory Officer
Chatham-Kent Energy Inc.

C. Rosalyn Lawrence
Director, Consumer & Regulatory Affairs Branch

Chatham-Kent Hydro

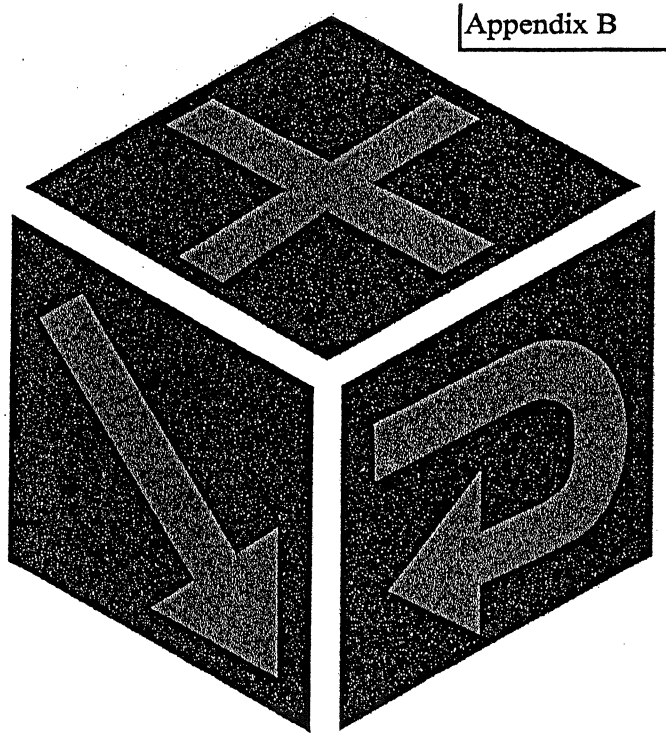
Serves Approximately 32,000 customers

Total customers in Municipality is approximately 50,000



Appendix B

Turn it Off
Turn it Down
Trade it In



CHATHAM-KENT HYDRO™

Minister of Energy

Hearst Block, 4th Floor
900 Bay Street
Toronto ON M7A 2E1
Tel.: 416-327-6715
Fax: 416-327-6754

Ministre de l'Énergie

Édifice Hearst, 4e étage
900, rue Bay
Toronto ON M7A 2E1
Tél.: 416-327-6715
Téléc.:416-327-6754

Ontario

OCT 2 0 2004

Mr. Jim Hogan
Chief Financial and Regulatory Officer
Chatham-Kent Hydro Inc.
320 Queen Street
Chatham, Ontario
N7M 5K2

Dear Mr. Hogan:

Thank you for your letter seeking approval to make an application to the Ontario Energy Board (OEB) pursuant to section 79.6 of the Ontario Energy Board Act, 1998 for an order to adjust Chatham-Kent Hydro's distribution rates in order to fund demand side management initiatives.

As you know, I wrote to all local distribution companies (LDCs) late last year granting them approval to proceed to the OEB with an application to recover prudently incurred costs associated with their regulatory assets. At the same time, I conveyed the government's intention to permit LDCs to apply to the OEB for the next instalment of their allowable return on equity beginning March 1, 2005. I also indicated that the OEB's approval in regard to the final instalment should be conditional on a financial commitment to reinvest an amount equal to one year's incremental returns in conservation and demand management initiatives.

It is my understanding that Chatham-Kent opted to include a lower return on common equity in its rates than was allowed by the OEB. It is also my understanding that the utility subsequently recovered this amount through two installments, in 2001 and 2002. As a result, I understand that the utility requires incremental revenues in 2005 to invest in conservation and demand management initiatives, pursuant to my letter to all utilities, dated December 19, 2003.

.../cont'd

After assessing your request within the context of the government's policy objectives with respect to conservation and demand management, I am pleased to grant my permission to apply to the OEB for a one-time increase in distribution rates to recover an amount that is equivalent to what would have been the utility's final installment had Chatham-Kent Hydro initially applied for a 9.88 per cent return on equity. Of course, my approval is conditional on the utility applying this financial commitment to conservation and demand management initiatives.

I expect the application to be considered expeditiously by the OEB. I appreciate your desire to support Ontario's conservation culture.

Sincerely,

Dwight Duncan
Minister

c: Howard Wetston, Chair, Ontario Energy Board