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ONTARIO ENERGY BOARD

December 29, 2004

Mr. John Zych, Board Secretary
Ontario Energy Board
2300 Yonge Street, 26th Floor
Toronto, Ontario
M4P 1E4

EB-2005-0192

OEB BOARD SECRETARY	
File No:	SubFile: 1
Panel	
Licensing	AF-2C-SM
Other	
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Dear Mr. Zych:

RE: Conservation & Demand Management Plan – File No.: RP-2004-0203
Applicant – Tillsonburg Hydro Inc.

Pursuant to the filing requirements outlined in Procedural Order No. RP-2004-0203, please find attached Tillsonburg Hydro Inc.'s Conservation and Demand Management Plan (C&DM).

Should you have any questions or require clarification on any item contained in our Plan, please do not hesitate to give me a call at (519) 688-3009 ext. 2225.

Yours truly,



Bryan Drinkwater
Operations Utility Manager



CONSERVATION AND DEMAND MANAGEMENT PLAN & ACTIVITIES

2004 to 2007

December 29, 2004

Prepared By:

Bryan Drinkwater
Operations Utility Manager



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Introduction:

In a letter dated May 31, 2004 to electricity distributors, the Minister of Energy identified some of the activities that might be included in a distributor's Conservation and Demand Management Plan (C&DM), including:

- Energy efficiency;
- Behavioral and operational changes, including the application of benchmarking or "smart" control systems;
- Load management measures which facilitate interruptible and dispatchable loads, dual fuel applications, thermal storage, and demand response;
- Measures to encourage fuel switching which reduces the total system energy for a given end-use;
- Programs and initiatives targeted to low income and other hard to read consumers; and
- Distributed energy options behind a customer's meter such as tri-generation, co-generation, ground source heat pumps, solar, wind, and biomass systems.

On July 16, 2004 the Ontario Energy Board released a document entitled "Preliminary Guidelines for Electricity Distributor Conservation and Demand Management Activities". On August 30, 2004 the OEB released an Information Bulletin offering additional clarity to the expectations of distributors and encouraging distributors to apply for deferral accounts to begin planning and executing Conservation and Demand Management projects.

On October 5, 2004 the Board issued a procedural order (RP-2004-0203) setting out the process for how distributors may apply for approval of a Conservation and Demand Management Plan. It also set out the filing requirements for a distributor's plan. Distributors were given the option of applying for interim or final approval of their plan.

Tillsonburg Hydro's Conservation and Demand Management Plan has been developed within the context of the Minister of Energy's May 31, 2004 letter and the subsequent procedural order issued by the Board.

Tillsonburg Hydro has informally consulted with a number of other distributors to exchange ideas and assess the potential for joint ventures. Collectively, we decided that each distributor will submit a separate action plan to the OEB, but some LDCs will work co-operatively to execute common programs that will benefit from the synergies obtained through informal and formal alliances.

This document is intended to be Tillsonburg Hydro's application for final approval of our Conservation and Demand Management Plan for the next three years.

Summary

Tillsonburg Hydro 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 equals the last one-third installment of Tillsonburg Hydro's Market Adjustment Revenue Requirement (MARR) of \$248,000.

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

Program/Activity	2005	2006	2007	Total
1. Utility Asset Conservation Program	\$ 48,868	\$ 26,745	\$ 26,745	\$102,358
2. Customer Conservation Program				
(a) Residential & General Service	-	\$ 29,245	\$ 29,245	\$58,490
(b) Low/fixed Income Programs	\$ 4,679	\$ 7,604	\$ 7,604	\$19,887
3. Education & Information				
(a) Community Education	\$ 877	\$ 585	\$ 2,632	\$ 4,094
(b) Customer Education	\$ 4,972	\$ 5,264	\$ 3,217	\$ 13,453
4. Pilot Program	\$ 29,245	-	-	\$ 29,245
5. Partnerships Program	\$ 2,925	\$ 2,925	\$ 2,925	\$ 8,775
6. Program Research	\$ 5,849	-	-	\$ 5,849
7. Planning & Coordination	\$ 2,925	\$ 1,462	\$ 1,462	\$ 5,849
Total Program Budget				\$248,000

The first four (4) programs will promote demand reduction and energy conservation, with results that are relatively easy to calculate and monitor. The Energy Awareness Program for Residential Customers and the Energy Seminars for General Service Customers will provide educational opportunities for all customers, but the results are difficult to predict and monitor. However, each of these programs will have follow-up to determine their effectiveness.

Plan Budget and Assumptions:

Tillsonburg Hydro's third MARR installment is approximately \$248,000 thousand, exclusive of any payment in lieu of taxes.

Through a letter accompanying its Preliminary Guidelines for Electricity Distributor Conservation and Demand Management Activities, the Board has authorized that distributor conservation and demand management spending may occur until September 30, 2007.

Tillsonburg Hydro's Conservation and Demand Management Plan is therefore based on investing approximately \$248,000 thousand in a combination of capital and operating expenses during the period from January 1, 2004 to September 30, 2007.

The implementation of this plan will require re-deployment of some existing personnel. Costs associated with the use of existing resources to implement this plan have been allocated to the individual programs and are provided for in the annual budget figures.

While the current plan is well balanced, it is recognized that the industry and regulatory framework is dynamic. Tillsonburg Hydro will continue to assess and update its plan as new opportunities are presented. If necessary, Tillsonburg Hydro will re-allocate funds between programs to respond to customer demand levels. However, Tillsonburg Hydro will make best efforts to achieve the target levels of capital and operating expenditures by year.

Provincial Objectives:

The Province of Ontario is facing serious challenges in meeting its future electricity needs. Energy conservation and demand management has been identified as one of the most viable and cost-effective means of meeting the province's energy needs in the short term.

The Minister of Energy has called for the creation of a 'Conservation Culture' in the province, and has established two important objectives for the electricity sector and electricity consumers. First, he has targeted a reduction in Ontario's demand for electricity by 5% by 2007. Second, he has committed to the installation of 800,000 SMART electricity meters by 2007, and the full deployment of SMART meters for all electricity consumers by 2010.

The objective of this plan is to contribute to the emergence of a conservation culture in Ontario and, more specifically, to support the Minister's commitments to peak demand reduction and SMART meter installations.

Corporate Strategy:

In developing this plan, the following criteria were used to guide the selection of component programs:

- I. Allocation of Benefits – The overall plan should distribute benefits broadly to Tillsonburg Hydro customers.
- II. Certainty of Achieving Targeted Benefits – Preference was given to investments that offer more predictable results.
- III. Leveraging Partnerships – Partnerships will be sought to deliver 'behind the meter' programs that will benefit from greater scale for cost-effective implementation.

Overview of Programs:

1. Utility Asset Conservation Program

(a) Description of Program:

The Utility Asset Conservation Program is a broad network based initiative to drive greater efficiencies within the distribution grid. The program will identify opportunities for system enhancements. Engineering analysis and feasibility studies will be conducted in order that projects can be prioritized and selected based on the most attractive investment to results ratio. Items to be addressed may include, but are not limited to:

- Power Factor Correction - Under the Power Factor Correction initiative, a power factor assessment will be completed which will identify locations for the installation of power factor correction capacitor banks. The results and available funding will determine which projects proceed.
- Voltage Conversion- Voltage upgrades can save up to 90% of the losses associated with a feeder as higher voltages and lower current results in lower losses. The locations and value of voltage conversions have been previously identified as a long-term project.
- Power System Optimization Study - This program is an engineering study to ascertain where load shifting can occur within the grid to improve system efficiency including the location of optimized "open points". It is estimated that approximately 5% -10% of system losses could be saved.

- Transformer and Other Losses - Using infrared scans of transformers this program will help to identify additional electricity losses including overloaded equipment. "Hot" transformers will be investigated further to determine operational improvement opportunities.

(b) Target Users:

The result of this program will positively impact all of Tillsonburg Hydro customers.

(c) Benefits:

Reduced electricity distribution system delivery losses will reduce system demand, relieve network capacity to accommodate growth, and reduce the requirement for new delivery and generating capacity in the province. Reductions in these costs will therefore benefit all customers.

	2005	2006	2007	Total
Conservation Program	\$43,868	\$26,745	\$26,745	\$102,358

2. Customer Conservation Program

(a) Description of Program:

This program is intended to provide demand side management and demand response programs for residential and small commercial customers. Specific programs directed at low income and or fixed income residential customers will be initiated. Programs to be evaluated may include:

- Energy audits, weatherization assessment, blower-door testing; no charge for low income, social assisted and fixed income customers who meet qualification requirements. A fee at cost will apply to other customers. Products and services that are identified with an accepted energy savings pay back period will be arranged through pre-approved suppliers and contractors. Applicable government funding initiatives will be taken into consideration and for customers who meet qualifications up front costs will be covered through energy savings.
- Initiatives will be developed for multi-unit bulk-metered services to identify load usage by circuit and provide the ability to reduce or shift load.

(b) Target users:

Residential and small commercial customers with priority to electric heat and low income customers.

(c) Benefits:

Demand and energy reductions.

	2005	2006	2007	Total
Residential & General Service	-	\$29,245	\$29,245	\$58,490
Low/fixed Income Programs	\$4,679	\$ 7,604	\$ 7,604	\$ 19,887

3. Education and Information:

(a) Description of Program:

Programs will be developed that focus on community and specific customer information to foster an energy conservation culture. Programs and initiatives include the following:

- The ability for customers to access their usage information by consumption and cost on an up to date basis as smart meters are implemented. This will require changes to customer information systems and hardware to allow access to information at a host site or the customer site.
- Tools will be developed such as energy calculators; energy profiling, timely customer communication based on established consumption or cost parameters and conservation tips.
- Energy conservation forums will be presented for specific customer categories.
- School programs will be implemented building on our successful "Caution and Chance" safety program.
- An energy conservation position will be established.

(b) Target users:

Residential, small commercial customers, large users, primary and secondary students.

(c) Benefits:



Demand and energy reductions through an immediate awareness of energy consumption and cost as well as longer term benefits through a change in culture and knowledge.

	2005	2006	2007	Total
Community Education	\$ 887	\$ 585	\$ 2,632	\$ 4,094
Customer Education	\$ 4,972	\$ 5,264	\$ 3,217	\$ 13,453

4. Pilot Program:

(a) Description of Program:

Evaluation and implementation of smart meter technology to meet requirements of all customers having a smart meter by 2010. The pilot will focus on data collection, information interpretation, communication technology and value added services such as load control. We will determine how our current broadband project can integrate with smart meters and the role in meeting the objectives of the energy conservation program in a cost effective manner in particular for areas that are under serviced with respect to telecommunication infrastructure.

(b) Target users:

Select group of residential and commercial customers that meet the objectives of our other program offerings. A learning environment for the distribution staff in billing, customer service, metering and engineering.

(c) Benefits:

A learning tool for the utility and the opportunity to evaluate and prioritize customer needs and acceptance.

	2005	2006	2007	Total
Pilot Program	\$ 29,245			\$ 29,245

5. Partnership Programs:

(a) Description of Program:

Alliances will be formed with other organizations delivering or promoting energy efficient services and products. This will allow leveraging energy conservation resources for program delivery. Partnership opportunities will be developed with organizations as:

- Other local distribution companies for development of energy tools, common marketing and communication initiatives and information.
- Government and non-profit sectors for funding, research, and delivery or promoting of their specific programs.
- Energy Retailers for improving customer choice, aggregating customer load, and offering energy conservation programs.

	2005	2006	2007	Total
Partnerships Program	\$ 2,925	\$ 2,925	\$ 2,925	\$8,775

6. Program Research:

Program research will involve prioritizing energy conservation programs, program benefit measurement, benchmarks and return, and the documentation of the findings. Research opportunities in the short term will focus on technologies in the areas of broadband over power line or other, load control devices, reducing distribution system losses, and energy conservation tools.

	2005	2006	2007	Total
Program Research	\$5,849	-	-	\$5,849

7. Planning and Coordination:

(a) Description of Program:

Monitoring and evaluation of the Conservation and Demand Management Plan. This would ensure that the programs proceed according to plan, that standard evaluation mechanisms are in place and that the plan is refined or modified as required meeting stated objectives. Coordination is required amongst distribution companies that file jointly and shares resources as well as with partnerships that are developed. Tracking and reporting of the various programs will be required to support prudence review of expenditures by the Ontario Energy Board.

	2005	2006	2007	Total
Planning & Coordination	\$ 2,925	\$ 1,462	\$ 1,462	\$5,849

Conclusions:

Tillsonburg Hydro believes that the plan set out in this document is a prudent and effective approach in helping to achieve the Province's energy conservation and demand management goals. This plan addresses many of the potential initiatives outlined in the Minister's letter and represents a responsible first step in Tillsonburg Hydro's implementation of C&DM programs.

Tillsonburg Hydro looks forward to the Board's approval of this plan and the implementation of these initiatives.

Contact Information:

Bryan Drinkwater
Operations Utility Manager
Tillsonburg Hydro Inc.
10 Lisgar Avenue
Tillsonburg, ON
N4G 5A5

(519) 688-3009 ext. 2225