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THE NIAGARA ERIE PUBLIC POWER ALLIANCE (NEPPA)



CANADIAN NIAGARA POWER
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Niagara
On-The-Lake
HYDRO



Conservation and Demand Management Plan NEPPA Coalition Members

Ontario Energy Board File No. RP-2004-0203

November 30, 2004

November 30, 2004

Mr. Howard Wetston, Board Chair
Mr. John Zych, Board Secretary
Ontario Energy Board
P.O. Box 2319, 26th Floor
2300 Yonge Street
Toronto, ON M4P 1E4

By Courier and Fax (416.440.7656)

RE: Application for Approval of Conservation and Demand Management (PF-2004-0203) from the NEPPA Coalition Members

Dear Mr. Wetston and Mr. Zych:

The NEPPA Coalition members are requesting approval of our Conservation and Demand Management (C&DM) plan. As a group we represent 225,000 customers with a combined C&DM investment of \$5,477,368. Our C&DM initiatives support the clear objective put forth by the government to create a "conservation culture" in Ontario.

Enclosed is a singular plan outlining eleven C&DM menu items. Each NEPPA member has selected a range of programs from the menu that best meet the needs of their individual customer demographics and distribution systems. Outlined in the attached Schedules are the nine individual NEPPA Coalition Members' menu selections including budget and timelines by project. Each NEPPA Coalition member will be responsible for their own budget and project implementation. The following LDCs are included in this C&DM plan; Canadian Niagara Power Inc. (Port Colborne Operations Only), Grimsby Power Inc., Haldimand County Hydro Inc., Niagara Falls Hydro Inc., Niagara-on-the-Lake Hydro Inc., Norfolk Power Distribution Inc., Peninsula West Utilities Limited, St. Catharines Hydro Utility Services Inc. and Welland Hydro-Electric System Corp. Brant County and the City of Brantford though part of the NEPPA Coalition, will submit separate plans.

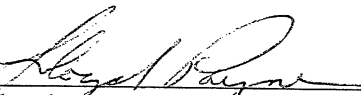
In July 2004, the NEPPA members created a C&DM steering committee to investigate and develop our action plan in response to the Minister of Energy's directive. This committee will continue to work together as we explore joint ventures to maximize efforts, improved customer communications, joint training and leverage our combined size for cost effective solutions. The effectiveness of this coalition is well demonstrated

by the completion of developing this submission to the Board. Effectively, this committee saved tens of thousands of dollars working together in the research & development of this submission. This money will be put to better use by spending it on actual C&DM initiatives that will benefit our customers. We will continue to work together on the rollout of the identified common initiatives in this plan.

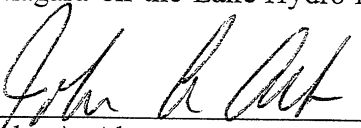
We are confident that our application meets the requirements set out in the Board's RP-2004-0203 Procedural Order of October 5, 2004. Please contact us individually for review of our application.

Regards,


Bill Daley
President, CEO
Canadian Niagara Power Inc.,


Lloyd Payne
President, CEO
Haldimand County Hydro Inc.

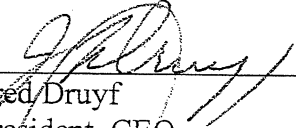

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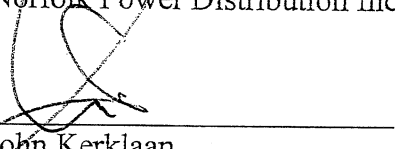

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Brian Weber
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Grimsby Power Inc.,


Brian Wilkie
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Niagara Falls Hydro Inc.


Fred Druyf
President, CEO
Norfolk Power Distribution Inc.


John Kerklaan
President
St. Catharines Hydro Utility Services

THE NIAGARA ERIE PUBLIC POWER ALLIANCE (NEPPA)



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Conservation and Demand Management Plan

Ontario Energy Board File No. RP-2004-0203

November 30, 2004

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Introduction

The Niagara Erie Public Power Alliance (NEPPA) Coalition is a group of 11 Local Distribution Companies (LDCs) located in the areas of the Niagara Region, Haldimand County, Norfolk County, Brant County and the City of Brantford. The members of NEPPA consist of Brant County Power Inc., Brantford Power Inc., Canadian Niagara Power Inc., Grimsby Power Inc., Haldimand County Hydro Inc., Niagara Falls Hydro Inc., Niagara-on-the-Lake Hydro Inc., Norfolk Power Distribution Inc., Peninsula West Utilities Limited, St. Catharines Hydro Utility Services Inc. and Welland Hydro-Electric System Corp. collectively serving approximately 225,000 customers. The NEPPA members have worked together on many similar initiatives and have found it prudent to leverage their collective size to comply with this regulatory requirement.

The NEPPA Coalition felt it was prudent, cost effective and timely to prepare and submit a joint Conservation and Demand Management plan. The C&DM plan list a menu of potential initiatives, pre-approved by the NEPPA members that each individual NEPPA LDC would choose to roll-out in their respective communities. Where there are similar initiatives amongst the plans, the NEPPA group is committed in working with one another to leverage our collective size for the benefit of our individual LDC members and their respective communities.

Ontario's Minister of Energy has authorized electricity distributors to apply to the Ontario Energy Board (Board) for 2005 rate implementation of their third installment of market adjusted revenue requirement (MARR), on the condition that an equivalent amount of incremental revenue be invested by those distributors in conservation and demand management activities. In a letter dated May 31, 2004 to electricity distributors, the Minister identified some of the activities that might be included in a distributor's Conservation and Demand Management Plan, including:

- Energy efficiency;
- Behavioral and operational changes, including the application of benchmarking or "smart" control systems;
- Load management measures which facilitate interruptible and dispatch able 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 reach 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.

The NEPPA Coalition's C&DM plans have been drafted on the foundation of the Board's October 5, 2004 Procedural Order (RP-2004-0203), which sets out the process for how distributors may apply for approval of a Conservation and Demand Management Plan, and stipulating the filing requirements for a distributor's plan. The procedural Order specifically describes the Distributor's options of applying for interim or final approval of their plan.

The NEPPA Coalition requests the Board's approval of and final order authorizing its C&DM plan as being appropriate and effective in discharging its C&DM investment obligation, subject to issuance in due course of an order for distribution rates including the final tranche of the market adjusted revenue requirement (MARR).

Plan Budget and Assumptions

The NEPPA member LDCs total third MARR installment is approximately \$5.5 million, exclusive of any payments in lieu of taxes. The individual NEPPA Member LDC third tranche values are listed as follows:

Canadian Niagara Power (Port Colborne):	\$ 159,214
Grimsby Power:	\$ 221,745
Haldimand County Hydro:	\$ 437,478
Niagara Falls Hydro:	\$ 900,071
Niagara-on-the-Lake Hydro:	\$ 198,440
Norfolk Power Distribution Inc.:	\$ 581,776
Peninsula West Utilities:	\$ 454,460
St. Catharines Hydro Utility Services:	\$1,830,854
Welland Hydro:	\$ 694,106
Total	\$5,478,928

Brant County Power & Brantford Power's third MARR installment is not listed as they have elected to submit their own individual plans. However, as members of NEPPA both LDCs will continue to work with the Coalition on many planned C&DM initiatives.

The attached Schedule 1, outlines each individual NEPPA member LDC's investments in Conservation and Demand Management Plan and their respective timelines for the investment. It is the intention of all members to have their proposed investment within the period of January 1, 2005 to September 30, 2007.

The implementation of this plan may require re-deployment of some existing personnel, which may result in additional staff. Costs associated with the C&DM including the use of existing resources have been allocated to the programs detailed in this plan, 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. NEPPA Coalition Members will continue to assess and update its plan as new opportunities are presented. If necessary, NEPPA Coalition Members will re-allocate funds between programs to respond to customer demand levels. However, NEPPA Coalition Members will make best efforts to achieve the target level expenditures by year.

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, the Minister has targeted a reduction in Ontario's demand for electricity by 5% by 2007. Second, the Minister 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.

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 NEPPA Coalition members' 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.
- iv. Monitor and measure the impact of the programs for future development of Conservation and Demand Management for the longterm in Ontario.

Programs

Conservation and Demand Management (C&DM)

Residential and Small Commercial (< 50 KW)

Co-branded Mass Market Program

Description

This flagship co-branded mass-market program (e.g. *powerWISE™*) is a multifaceted approach to fostering the conservation culture in Ontario. Through development of a significant cooperative effort amongst six of the largest municipal LDC's, this program will become synonymous with specific initiatives such as Compact Fluorescent Lighting (CFL) change out programs, LED (light emitting diodes) Christmas Lights, Energy Star™, Multi-Choice, energy audits, water heater blanket wraps, school based education and a host of other programs aimed at providing customers tools and education to reduce their energy usage. Access to online services such as energy consumption calculators, an energy expert, and personalized energy audit services are contemplated as components of this program. The NEPPA Coalition members share the views of other LDCs in Ontario and plan to endorse co-branding initiatives. The NEPPA coalition believes that co-branding of such products leads to stronger customer identification and accepted conservation products & services.

Target Users

Mass-market including residential and small commercial

Benefits

Increased awareness, improved product supply, culture shift, and significant demand and energy reductions

SMART Meter/Prepayment Meters

Description

A program for residential SMART meters and/or Prepayment Meters will be deployed to enable the assessment of metering, communications, settlement and other technologies that may be used to accommodate the universal application of SMART meters in the future. Further, sub-metering opportunities for the purposes of customer information in a bulk-metered situation (i.e. condominiums) may be considered.

It has been demonstrated that pay as you go meters reduce a consumer's load by 15%. This is the result of the greater interaction required by this technology. We assume this to be attractive to our 750 kWh hour a month residential customers. We see this program as a turning point as it brings us to the critical mass required to make this a standard product in the Ontario market. These initiatives will only commence upon the release of a formal definition of a SMART meter by the Board and in conjunction with the Smart Meter Initiative, RP-2004-0196 and Regulated Price Plan, RP-2004-0205.

Target Users

Residential and small commercial customers

Benefits

This program supports the Minister of Energy's commitment to the installation of 800,000 SMART meters across Ontario by 2007. It will provide NEPPA Coalition Members with the experience and knowledge needed to efficiently expand the use of SMART meters over the next several years.

In conjunction with appropriate rate structures, the program will also provide customers participating in the programs with an incentive to conserve or shift energy use.

Energy Audit Program

Description

The NEPPA Coalition members plan to provide conservation information and make specific recommendations for energy savings in such areas as major appliances, lighting, air leakage, hot water, heating and cooling. Incentives may also be provided. Neppa Coalition members may collaborate with external agencies, such as NRCan to promote and or deliver an audit program to our residential and small commercial customers. Services could be further tailored for specific social housing applications. NEPPA Coalition members plan to develop an energy audit program, which may include an on-line web-based service, allowing customers to complete their own audits and receive advice on reducing their energy consumption at no cost to the consumer.

Target Users

Residential and small commercial customers

Benefits

The consumer receives a report and/or tools identifying opportunities for energy savings as well as the associated costs and payback period (as applicable).

Social Housing Program

Description

A province wide centralized energy management service for the social housing sector will be developed in collaboration with the Provincial Government, utilities (e.g. Enbridge, Union Gas) and others such as the 'Share The Warmth' initiative.

A program may be conducted to determine feasibility with an expectation that a full-scale provincial program would follow. NEPPA may consider expanding on current industry programs.

Target Users

Local social housing corporations, non-profit homes and co-op housing

Benefits

Synergies will be created through the combined initiatives of the various agencies.

Commercial, Industrial and Institutional (> 50 KW)

SMART Meter/Interval Meter Program

Description

NEPPA Coalition Members may expand the use of SMART or interval meters to include commercial industrial and institutional customers greater than 50 kW.

Initially, the current Interval Meter technologies will be deployed however, further smart metering technologies initiatives will commence upon the release of a formal definition of a SMART meter by the Board.

All programs will commence and follow the direction provided the Ministry of Energy on lowering the current interval meter threshold.

Target Users

Commercial, Industrial and Institutional customers

Benefits

This program supports the Minister of Energy's commitment to the installation of 800,000 SMART meters across Ontario by 2007. These meters are seen as an important means of establishing a 'conservation culture' in Ontario. In conjunction with appropriate rate structures, they will encourage customers to conserve or shift energy use.

Energy Audits and Feasibility Studies

Description

The NEPPA members plan to develop an energy program to assist large users identify energy reductions. Initiatives may include seminars, onsite audits, training, energy analysis and incentives. Strategic partnerships will be analyzed for incentives or other synergies. NEPPA Coalition members plan to develop an energy audit program, which may include an on-line web-based service, allowing customers to complete their own audits and receive advice on reducing their energy consumption. We see this program encouraging corrections to power factors as well as demand reduction through technology and education.

Target Users

Large consumers over 50 kW including schools, large commercial facilities, institutional facilities, industrial, and municipal facilities like recreation centres, arenas, and libraries.

Benefits

Include increased awareness, skills development, benchmarking energy data, establishing best practices, fostering the conservation culture within this sector and significant reductions in demand and energy consumption.

LED Retrofits for Traffic Lights

Description

This initiative involves replacing traffic signals at intersections to LED technology, which is now fairly common in many U.S. municipalities.

Target Users

Municipalities

Benefits

This program results in significant energy savings since the LED technology uses approximately 80% less electricity. Other benefits include reduced maintenance (LED's last longer) and improved visibility.

Leveraging Energy Conservation and/or Load Management Programs and Load Control Initiative

Description

Existing energy conservation and/or load management programs such as NRCan's Energy Innovators and industry initiatives will be promoted and incentives may be provided to advance market uptake of these programs and implementation of the recommendations. The LDC's are well positioned to introduce such programs to their customer base such as the MUSH sector. Work will be conducted with the existing program providers to maximize leverage opportunities. Promotion will potentially include face-to-face meetings, conferences and seminars.

Load control uses a real time communications link to enable or disable customer loads at the discretion of the utility. These controls are usually engaged during system peak periods or when required to relieve pressure on the system grid. Additional load control technologies may be offered to customers, allowing them to disable or adjust industrial/commercial equipment for the industrial, commercial and institutional customers or home appliances by the residential customer.

Target Users

Large consumers over 50 kW including schools, residential, large commercial facilities, institutional facilities, industrial, and municipal facilities

Benefits

Customer awareness and additional incentives will help to advance market uptake of audit services, feasibility studies and retrofit opportunities. Demand control provides lower costs and increased stability for customers and utilities.

Distribution Loss Reduction

Distribution Loss Reduction

Description

The Distribution Loss Program is a broad network based initiative to drive greater efficiencies within the distribution grid. This program will identify opportunities for system enhancements. Next steps will be to complete the engineering analysis and feasibility studies. Projects will 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 may be completed which would identify locations for the installation of power factor correction capacitor banks.

Voltage Conversion - Voltage upgrades reduce losses associated with a feeder as higher voltages and lower current results in lower losses. This study will ascertain the locations and value of voltage conversions. This program could also involve changing out all the meters on a particular feeder to Smart Meters so that the exact losses can be determined.

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".

Voltage Profile Management - Changing voltage profiles at the distribution station level can result in as much as a 3% peak reduction at the controllable distribution stations. This is in addition to the IMO's voltage reduction program and will not interfere with the effectiveness of that program.

Line Loss Reductions - Replacement of smaller-sized conductor with larger-sized conductor will reduce line losses.

Transformer Efficiency and Other Losses – Using infrared scans of electrical distribution equipment, connectors and transformers. This program will help to identify additional electricity losses including overloaded equipment.

Target Users

The results of this program will positively impact all of NEPPA Coalition members' customers.

Benefits

Benefits include cost savings and efficiencies for all, as existing system loss costs are shared by all customers. As losses are reduced, costs of running the grid will also be reduced.

Distributed Energy

Load Displacement

Description

Distributed generation behind the customer's meter provides an excellent opportunity to displace load from the local distribution system's grid in a very effective manner. Load displacement technology, such as combined heat and power systems provide increased energy efficiency. For example, this may be combined with existing or new district heating distribution system technology, contributing to the development of sustainable energy networks within Ontario's communities.

Other technologies such as micro-turbines, wind, biomass, fuel cell and solar provide additional options to meet the customer's needs. This initiative should facilitate the development and implementation of these opportunities. Financial incentives may be considered based on the project's viability.

Development of educational and technology programs in conjunction with local colleges and universities may be considered. Small demonstration projects to promote alternative and renewable energy sources may also be considered.

Target Users

Commercial, industrial, residential, and institutions

Benefits

Benefits include additional capacity within the grid. Cleaner technologies result in reductions in greenhouse gas emissions. Other benefits include improved system reliability, reduced harmonics, and backup power possibilities, education and skills development.

Conclusion

The NEPPA Coalition members believe 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 the NEPPA Coalition Member's implementation of C&DM programs.

The NEPPA Coalition views this joint submission as a proactive and cost effective approach to the planning and delivery of C&DM programs, benefiting our respective communities. The Coalition will continue to work together on the development of outreach programs to educate and encourage customers to take advantage of the conservation and demand management initiatives offered by the LDCs that will allow customers in all classes to reduce their overall energy consumption.

The NEPPA Coalition looks forward to the Board's approval of this plan and the implementation of these initiatives. The NEPPA Coalition requests that the Board;

- approve the NEPPA Coalition member's C&DM Plan,
- confirm the NEPPA Coalition member's ability to invest an amount equivalent to its third tranche MARR, subject to *ex post* review by the Board with respect to planned versus actual C&DM spending.

C & DM Program Budget and Timeline Summary

The following nine schedules represent the NEPPA Coalition members participating in a joint C&DM application. Each LDC is individually responsible for their menu selections, budget allocation, target users and timelines. As a group we will leverage our resources to maximize results.

Schedule 3 - Haldimand County Hydro Inc.

The following is a list of proposed C&DM projects and initiatives. It is the intent of Haldimand County Hydro Inc. to extend these programs to September 2007. Our plan recognizes the need to deliver safe and reliable electricity, while taking a proactive approach to conservation.

Project	Target User	Timeline	Budget
Co-branded Mass Market Program	Residential & Small Commercial (<50kW)	January 2005 to September 30, 2007	\$ 45,000
Smart Metering/Prepaid Metering Program	Residential & Small Commercial (< 50 KW)	January 2005 to September 30, 2007	\$ 15,000
Energy Audits Programs	Residential & Small Commercial (< 50 KW)	January 2005 to September 30, 2007	\$ 10,000
Social Housing Programs	Residential - Non-Profit & Social Housing	January 2005 to September 30, 2007	\$ 20,000
Smart Metering/Interval Metering Programs	Large User, Industrial/General Service & Institution Facilities	January 2005 to September 30, 2007	\$ 37,500
Energy Audits/Feasibility Audits	Large User, Industrial/General Service & Institution Facilities	January 2005 to September 30, 2007	\$ 10,000
Distribution Loss Reduction	LDC programs aimed to benefit all Customer Classes	January 2005 to March 2006	\$ 299,978
Total			\$ 437,478

Contact Information:

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