

*Renfrew Hydro Inc.* - Electric Distribution Services

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November 1, 2010

Ontario Energy Board

P.O. Box 2319

27<sup>th</sup> Floor

2300 Yonge Street

Toronto, ON M4P 1E4

Attention: Kirsten Walli

Board Secretary

**Re: Renfrew Hydro Incorporated 2011-2014 Conservation and Demand Management Strategy**

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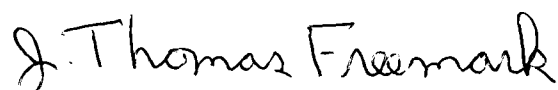
Renfrew Hydro Incorporated ("Renfrew Hydro") is pleased to submit two copies of its 2011 to 2014 Conservation and Demand Management ("CDM") Strategy in accordance with section 2.1 of the Ontario Energy Board's (the "Board") CDM Code for Electricity Distributors.

Renfrew Hydro's CDM Strategy has been prepared on the basis of best available information at the time of submission. It is expected that modifications may be needed as further clarity is provided on matters such as:

- Funding for Ontario Power Authority ("OPA") - Contracted Province-wide CDM Programs
- Final contract arrangements governing Renfrew Hydro's delivery of OPA-Contracted Province-wide CDM Programs
- The final form of the OPA-Contracted Province-wide CDM Program for low-income consumers
- The determination of peak demand reductions related to smart meters and time-of-use rates

We trust that this CDM Strategy meets the Board's requirements. However, should clarification be required on any of its contents, please do not hesitate to contact the undersigned by phone at 613-432-8785 x 224, or by email at [jtfreemark@renfrewhydro.com](mailto:jtfreemark@renfrewhydro.com).

Yours truly,



J. Thomas Freemark

President

Renfrew Hydro Inc.

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## **Conservation and Demand Management Strategy 2011 - 2014**

**Submitted to:  
Ontario Energy Board**

**Submitted on November 1, 2010**

1. **Distributor's Name:** Renfrew Hydro Inc.
2. **Total Reduction in Peak Provincial Electricity Demand Target:** 1.05 MW
3. **Total Reduction in Electricity Consumption Target:** 4.98 GWhs
4. **Conservation and Demand Management (CDM) Strategy**

#### 4.1. Overview

Renfrew Hydro Inc. (Renfrew Hydro) has prepared its CDM Strategy using the best information available at the time of submission. However, information is limited in a number of areas, as referenced throughout this document. Most importantly, there is a lack of information available at this time from which to estimate the impacts of the planned province-wide Low Income Program and the smart meter/time-of-use rates initiative. Therefore, this strategy does not include energy or demand reductions related to these programs.

Renfrew Hydro intends to deliver all available Ontario Power Authority ("OPA")-Contracted Province-wide CDM Programs within its licensed service area. As shown in section 4.5, it is estimated that these programs will enable Renfrew Hydro to meet approximately 77% of its demand reduction target, and 73% of its electricity consumption reduction target. It is possible that the target-to-savings shortfalls may be reduced once further clarity is provided on the Low Income Program and the time-of-use rates initiative. Nonetheless, Renfrew Hydro will require a range of Ontario Energy Board ("Board")-Approved programs to further support its achievement of targets. While detail regarding these potential Board-Approved Programs is not included, Renfrew Hydro may file Board-Approved CDM Program application(s) for these and other potential Board-Approved Programs at a future date if required.

#### 4.2. Projection of OPA-Contracted Province-Wide Program Results

The OPA has developed and made available a Resource Planning Tool for use by distributors. The tool assists with the allocation of aggregate province-wide savings projections to an individual electricity distributor. Renfrew Hydro has used the OPA's planning tool to project electricity demand and consumption savings related to the province-wide Consumer, Commercial & Institutional, and Industrial Programs.

In addition to the tool, the OPA has provided residential customer profile data to each distributor. The data provides a useful comparison of key customer demographic information pertinent to the distributor's service area, along with a comparison to the provincial average. Renfrew Hydro has also used this data in projecting the savings potential of the province-wide programs.

Through the use of the planning tool and the residential profile data, Renfrew Hydro has essentially prorated the OPA's projected province-wide program savings using the Board's 2009 Yearbook customer count data, with minor adjustments to reflect known deviations between its customer attributes and the provincial average. The accuracy of this methodology is clearly dependent upon the accuracy of the OPA's province-wide savings projections.

### **4.3. Treatment of Smart Meter/Time-Of-Use Rates Savings**

The CDM targets assigned to electricity distributors include, in aggregate, approximately 308 MW of savings related to smart meters and time-of-use rates. These savings projections were derived from a 2005 study commissioned by the OPA and filed with the Board as part of the Integrated Power Supply Plan (“IPSP”) proceeding.

In total, 1330 MW of electricity demand reduction targets have been assigned to electricity distributors. The 308 MW related to time-of-use rates therefore makes up more than 23% of each distributor’s demand reduction target. This is a significant component of distributor targets. However, to date, no mechanism has been put into place to accommodate the verification and recognition of time-of-use related savings as a contribution towards a distributor’s mandatory CDM targets.

It is Renfrew Hydro’s view that an assessment of the impacts of time-of-use rates on electricity demand should be done on a province-wide basis, perhaps by the OPA. It is reasonable to expect that these impacts will generally be consistent across distributor service areas. The expense of having each distributor individually assess time-of-use rate impacts does not seem cost efficient or justifiable.

### **4.4. Development of Board-Approved Programs**

Renfrew Hydro is working in cooperation with Hydro Ottawa to achieve its CDM targets. Through this affiliation, Renfrew Hydro is aware that some Coalition Of Large Distributors (CLD) members will be applying for Board-Approved CDM programs. Renfrew Hydro intends to review these programs to determine if they would pertain to its customer base, and if they could be cost effectively deployed within its service area.

Hydro Ottawa has also engaged third party resources to analyze other opportunities for cost effective Board-Approved CDM programs to provide CDM results incremental to those achievable under OPA Province-wide programs to further support accomplishment of assigned CDM targets.

Following this review, and through Hydro Ottawa’s independent assessment of the potential for Board-Approved Programs Renfrew Hydro may submit an application for Board-Approved programs.

In addition, Renfrew Hydro may seek Board approval for educational programs where there is a need for conservation educational programs, particularly targeted at customer segments not covered by the educational components of the OPA-Province-Wide programs,

### **4.5. Annual Savings Projections**

The following two tables summarize Renfrew Hydro’s current annual projections of progress towards its 2014 peak demand and electricity consumption reduction targets:

Program	Projected Peak Demand Reduction (MW)			
	2011	2012	2013	2014
OPA Consumer Program	.05	.08	.07	.05
OPA Commercial & Institutional Program	.09	.15	.13	.09
OPA Industrial Program	.01	.02	.02	.01
OPA Low Income Program	Not available	Not available	Not available	Not available
Smart meters/Time-of-Use Rates	Not available	Not available	Not available	Not available
<b>Total</b>	<b>0.15 MW</b>	<b>0.25 MW</b>	<b>0.22 MW</b>	<b>0.15 MW</b>
Cumulative Reductions	0.15 MW	0.40 MW	0.62 MW	0.77 MW
Cumulative % of Target (1MW)	14.0 %	40.0 %	62.0%	77.0%

Program	Projected Electricity Consumption Reduction (MWh)			
	2011	2012	2013	2014
OPA Consumer Program	291	505	444	291
OPA Commercial & Institutional Program	380	660	580	380
OPA Industrial Program	21	36	32	21
OPA Low Income Program	Not available	Not available	Not available	Not available
Smart meters/Time-of-Use Rates	Not available	Not available	Not available	Not available
<b>Total</b>	<b>692 MWh</b>	<b>1201MWh</b>	<b>1056 MWh</b>	<b>692 MWh</b>
Cumulative Reductions	692 MWh	1893 MWh	2949 MWh	3641 MWh
Cumulative % of Target (5 GWh)	13.8 %	37.9%	58.9%	72.8 %

## 5. OPA-Contracted Province-Wide CDM Programs

### 5.1. Consumer Program

5.1.1. Years of Operation: 2011 – 2014

5.1.2. Target Customers: Residential customers

**5.1.3.Description:** The following table summarizes and describes the elements of the OPA-Contracted Province-Wide Consumer Program. Full program details are available on the OPA’s website at <http://icon.powerauthority.on.ca/> :

Initiative	Description
Instant Discounts (Coupons)	Annual couponing and bi-annual in-store instant discounts on select energy efficient measures
Midstream Electronics Incentive	Incentives for distributors of cable and satellite TV services and retailers to stock and promote the sale of high-efficiency set top boxes and televisions
Midstream Pool Incentive	Incentives for contractors and retailers to stock, sell and install efficient pool pumps
HVAC Rebates	Contractor initiated, on-line rebates on replacement of high efficiency heating/cooling systems
Appliance Retirement	Free pick-up/decommissioning of old, working inefficient appliances
Exchange Events	Room air conditioner and dehumidifier exchange events at retailers
Residential New Construction	Incentives for builders to construct efficient, smart, and integrated new single-family homes
Residential Demand Response	Free, installed direct load control devices and in-home display systems/capability. Non-DR offers: subsidized in-home display systems/capabilities

**5.1.4.Projected Savings and Budget:** The projected energy and demand reductions for the OPA-Contracted Province-Wide Consumer Program are provided in the following table. Program budgets are not available at this time:

Consumer Program Projections	2011	2012	2013	2014
Peak demand reduction (MW)	.05	.08	.07	.05
Electricity consumption reduction (MWh)	291	505	444	291
Annual Budget	Not available	Not available	Not available	Not available

## 5.2. Commercial and Institutional Program

**5.2.1. Years of Operation:** 2011 – 2014

**5.2.2. Target Customers:** Commercial and Institutional customers, owners of multi-family buildings and agricultural facilities.

**5.2.3. Description:** The following table summarizes and describes the elements of the OPA-Contract Province-Wide Commercial and Institutional Program. Full program details are available on the OPA's website at <http://icon.powerauthority.on.ca/> :

### EXISTING BUILDING RETROFIT PROJECTS – Small Business Customers

Initiative	Description
Direct Installed Lighting	Targets customers classified as General Service <50kW. Lighting retrofit incentive of \$1,000 equipment upgrade plus further incentives available for eligible equipment beyond the base offering
Direct Serviced Space Cooling	Roof-top or ground-mounted air conditioning systems of 25 tons or less qualify for an incentive of up to \$750 service and labour for air conditioning unit(s)
Demand Response (Small Commercial)	Free, installed direct load control devices and display systems/capability. Non-DR offers: subsidized display systems/capabilities

### EXISTING BUILDING RETROFIT AND COMMISSIONING PROJECTS – Medium and Large Business Customers

Initiative	Description
Pre-Project Assessments	Eligible participants will receive incentives to complete energy audits or studies of potential energy and demand savings from equipment replacement projects, operational practices and procedures, and participation in DR initiatives.
Equipment Replacement	Traditionally categorized as ERIP, incentives will be based on type of approach taken: Prescriptive, Engineered or Custom.
Existing Building Commissioning	Existing GS>50kW or Large User accounts with single buildings/ premises greater than 50,000 sq.ft with chilled water plants are eligible. Services pertain to commissioning activities.

Demand Response 1 (DR1)	An initiative where distribution-connected electricity customers voluntarily provide DR capability to reduce system peak demand and increase system reliability
Demand Response 3 (DR3)	An initiative for distribution-connected electricity customers to provide DR capability to mandatorily reduce system peak demand and increase system reliability.

### NEW CONSTRUCTION – All Buildings and Customer Types

Initiative	Description
New Construction	For all C&I customers, this initiative provides incentives for new buildings to exceed existing codes and standards for energy efficiency utilizing Prescriptive and Custom approaches.

### CAPABILITY BUILDING

Initiative	Description
Capability Building	Three types of capability building activities will be offered to C&I customers: Training and Certification, Energy Efficiency Solutions Provider, and Education.

**5.2.4. Projected Savings and Budget:** The projected energy and demand reductions for the Commercial and Institutional Program are provided in the following table. Program budgets are not available at this time:

Commercial and Institutional Program Projections	2011	2012	2013	2014
Peak demand reduction (MW)	.09	.15	.13	.09
Electricity consumption reduction (MWh)	380	660	580	380
Annual Budget	Not available	Not available	Not available	Not available



### 5.3. Industrial Program

**5.3.1. Years of Operation:** 2011 – 2014

**5.3.2. Target Customers:** Industrial customers

**5.3.3. Description:** The following table summarizes and describes the elements of the OPA-Contracted Province-Wide Industrial Program. Full program details are available on the OPA’s website at <http://icon.powerauthority.on.ca/> :

Initiative	Description
Demand Response 1 (DR1)	An initiative where distribution-connected electricity customers voluntarily provide DR capability to reduce system peak demand and increase system reliability.
Demand Response 3 (DR3)	An initiative for distribution-connected electricity customers to provide DR capability to mandatorily reduce system peak demand and increase system reliability.
Industrial Equipment Replacement	Traditionally categorized as ERIP, incentives will be based on type of approach taken: Prescriptive, Engineered or Custom.
Industrial Accelerator (IA)/ “Accelerator”	Initiative aimed at improving the energy efficiency of equipment and production processes. Accelerator offers capital incentive and enabling initiatives.

**5.3.4. Projected Savings and Budget:** The projected energy and demand reductions for the Industrial Program are provided in the following table. Program budgets are not available at this time:

Industrial Program Projections	2011	2012	2013	2014
Peak demand reduction (MW)	.01	.02	.02	.01
Electricity consumption reduction (MWh)	21	36	32	21
Annual Budget	Not available	Not available	Not available	Not available

### 5.4. Low Income Program

The OPA is currently developing a Low Income Program to address the unique needs of this market segment. Details on program design, projected energy savings and program budgets are not available at this time.

Once available, Renfrew Hydro expects that it will contract with the OPA to make this program available to its eligible customers.

## 6. Potential Board-Approved CDM Programs

As outlined in section 4.4 of this document, in cooperation with Hydro Ottawa Renfrew Hydro will assess CLD member applications for Board-Approved CDM Programs and will conduct independent assessment of potential Board-Approved Programs. Where these programs are pertinent to Renfrew Hydro's customer base and can be cost effectively delivered, Renfrew Hydro may submit an application for Board-Approved programs at a later date to ensure accomplishment of Renfrew Hydro's CDM targets.

## 7. Program Mix

As stated in section 4.1, Renfrew Hydro intends to deliver all available OPA-Contracted Province-Wide CDM Programs within its service area. Due to the comprehensive nature of the menu of OPA programs, all customer types will be addressed. This is exhibited in the following table:

Program Coverage by Customer Type				
Initiative or Program Element	Customer Type			
	Residential	Residential Low Income	Commercial, Institutional, Multi-family Buildings & Agricultural	Industrial
Instant Discounts (Coupons)	X	X		
Midstream Electronics Incentive	X	X		
Midstream Pool Incentive	X	X		
HVAC Rebates	X	X		
Appliance Retirement	X	X		
Exchange Events	X	X		
Residential New Construction	X	X		
Residential Demand Response	X	X		
Residential Low Income		X		
Direct Installed Lighting			X	
Direct Serviced Space Cooling			X	
Demand Response (Small Commercial)			X	
Pre-Project Assessments			X	
Equipment Replacement			X	
Existing Building Commissioning			X	
Demand Response 1 (DR1) – C&I			X	
Demand Response 3 (DR3) – C&I			X	
New Construction			X	
Capability Building			X	
Demand Response 1 (DR1) - Industrial				X
Demand Response 3 (DR3) - Industrial				X
Industrial Equipment Replacement				X
Industrial Accelerator (IA)				X

## **8. CDM Programs Co-ordination**

Renfrew Hydro will provide the OPA Contracted Province Wide Programs as well as a number of OEB approved programs to all customer types within the Renfrew Hydro service territory as appropriate to ensure fair and open access for all customer types to CDM programs that will enable them to improve their energy efficiency and better manage their demand for electricity.

Renfrew Hydro will work in cooperation with Hydro Ottawa to develop efficiencies in program development and delivery through ongoing cooperation with various industry stakeholders including other Ontario Electricity Distributors, social service agencies, the Ontario Power Authority, the Coalition of Large Distributors, the Electricity Distributors Association, Enbridge and Consumers Gas, the Ministry of Energy and the Ontario Energy Board. Synergies and processes are already in place with many of these agencies to share development, procurement, legal, marketing, consulting and delivery costs where possible.