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November 1, 2010

By RESS and Courier

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

Dear Ms. Walli:

**Re: EB-2010-0215 Conservation and Demand Management Code  
Distribution License ED-2003-0017**

Please find enclosed the Conservation and Demand Management Strategy for the period 2011-2014 of Enersource Hydro Mississauga Inc. pursuant to the requirements of the Ontario Energy Board's Conservation and Demand Management Code.

If you should have any questions about this submission, please do not hesitate to contact the undersigned.

Sincerely,

*Original signed by*

Gia M. DeJulio  
Director, Regulatory Affairs  
[gdejulio@enersource.com](mailto:gdejulio@enersource.com)  
905-283-4098

cc: Tom Wasik, Enersource Hydro Mississauga Inc.





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# **Energisource Hydro Mississauga Inc.**

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

**Submitted to:  
Ontario Energy Board  
November 1, 2010**

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**1. Distributor's Name:**

Enersource Hydro Mississauga Inc.

**2. Total Reduction in Peak Provincial Electricity Demand Target:**

93 MW

**3. Total Reduction in Electricity Consumption Target:**

427 GWh

**Introduction**

On March 31 2010, the Minister of Energy and Infrastructure issued a directive (the "CDM Directive") to the Ontario Energy Board (the "OEB" or "Board") under sections 27.1 and 27.2 of the *Ontario Energy Board Act, 1998* (the "Act"). The Directive set out the total provincial Conservation and Demand Management ("CDM") reduction targets of 1,330 MW and 6,000 GWh to be achieved by the end of 2014. Furthermore, the Directive specified that the CDM targets are to be allocated among the province's licensed electricity distributors that have CDM Targets (the "CDM Targets") as a condition of their license.

On September 16, 2010, the Board issued the CDM Code for Electricity Distributors (the "CDM Code") under Section 70.2 of the Act in accordance with the CDM Directive. The purpose of the CDM Code is to set out the obligations and requirements with which licensed distributors must comply in relation to the CDM Targets to be set out in their licenses, including the filing of a CDM strategy from 2011 to 2014 ("CDM Strategy"). The CDM Code also sets out the conditions and rules that licensed distributors are required to follow if they choose to use Board-Approved CDM programs to meet CDM Targets. This CDM Strategy of Enersource Hydro Mississauga Inc. ("Enersource") was prepared in accordance with the filing requirements set out by the CDM Code, including the CDM Strategy Template provided in Appendix B.

The specific energy and peak savings CDM Targets allocated by the Board to Enersource are 427 GWh and 93 MW, respectively. Enersource's CDM Strategy provides a description of how Enersource intends to achieve its CDM Targets over the 2011-2014 period, identifies the factors considered during the development of the strategy, provides an overview of the OPA-Contracted Programs, describes how programs will be offered to all customer-types and how Enersource coordinates efforts with other distributors and stakeholders. This CDM Strategy is consistent with the Ontario Government's vision to establish a conservation culture as outlined in the *Green Energy and Green Economy Act, 2009*.

## 4. CDM Strategy

### 4.1. Overview

Enersource's plans to meet its CDM Targets through the delivery of OPA-contracted programs ("OPA Programs") for the four-year period ending December 31, 2014. Consistent with the CDM Directive, once the OPA Programs are finalized, Enersource intends to perform a comprehensive evaluation of Tier 2 and/or Tier 3 programs within its service territory, and may pursue the implementation of such OEB-Approved CDM programs, recognizing that co-ordination of effort and cost effectiveness are critical to the success of CDM program delivery.

Enersource has prepared its CDM Strategy using the best information available at the time of submission. However, OPA Programs have not been finalized and information is limited in a number of areas as referenced throughout this document. Specifically, there is a lack of information available at this time in order to estimate the impacts of the planned Low Income Residential Program, as well as the treatment of expected conservation reduction as a result of the implementation of Time of Use ("TOU") rates. Therefore, this CDM Strategy does not include energy nor demand reductions related to these initiatives.

Enersource plans to meet its CDM Targets by delivering all OPA Programs available starting January 1, 2011 within its service area. It is estimated, dependent on the factors outlined in section 4.3, that these programs will enable Enersource to meet 100% of its demand reduction target and 97% of its electricity consumption reduction target as illustrated in Table 1.

**Table 1: Annual CDM Target Milestones**

	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>Total (Cumulative)</b>
Annual MW	36	42	58	93	<b>93</b>
Annual GWh	57	84	119	156	<b>416</b>
Budget (\$'000)	\$ 25,215	\$ 22,078	\$ 17,792	\$ 17,345	<b>\$ 82,430</b>

Source: Enersource Hydro Mississauga Inc.

The total budget illustrated in Table 1 above is a "best estimate" for the 2011-2014 OPA Programs. At the time of submission of this CDM Strategy, OPA Programs, including the funding, have not been finalized. Therefore, the budget has been estimated with the inclusion of Enersource's program administration costs, participant-based funding, and customer incentives based on the CDM Target proportion of the approved OPA Program portfolio budget. The OPA Programs have been developed by the OPA for the 2011 to 2014 period and are not envisioned as separately deployed year by year plans.

## 4.2. Methodology

In 2010, Enersource participated in an OPA study to investigate the conservation potential and market capability in the West Greater Toronto Area (“West GTA Study”). In doing so, Enersource provided the OPA and the third party consultant performing the study with most up to date customer data. The study provided an analysis of current market delivery trends, capability and barriers to CDM while identifying opportunities for conservation and potential energy savings.

In support of developing the 2011-2014 CDM Strategies, the OPA has developed and made available a Resource Planning Tool (RPT) for distributors. The purpose of the RPT is to assist distributors in allocating the province-wide savings projections to individual electricity distributors. The RPT includes the province-wide input estimates of likely participants, building archetypes, initiatives, measures and assumptions for each program initiative.

Since the OPA has designed the programs, including program assumptions, measures and savings projections, Enersource believes that the RPT provides the best available method to determine initiative projections upon which this CDM Strategy is built.

Enersource’s annual milestones were developed from the RPT by pro-rating the province wide-totals using Enersource’s target share derived from the *Ontario Energy Board 2009 Yearbook of Electricity Distributors*. Through the use of the RPT results, conclusions from the OPA’s West GTA Study, and Enersource’s CDM experience in delivering programs to date, Enersource updated the pro-rated province-wide totals to derive the program savings projections upon which this CDM Strategy is based.

These minor adjustments to projected CDM savings reflect the differences between Enersource’s customer attributes and the RPT’s default provincial averages. The accuracy of this methodology is clearly dependent upon the accuracy of the OPA’s province-wide participation rates anticipated for each province-wide CDM Program and the associated electricity savings projections over the four-year period.

## 4.3. Dependencies

Enersource’s CDM Strategy and the achievement of Enersource’s CDM Targets are dependent upon the following factors:

### 4.3.1. Sufficient Program Funding

Enersource’s CDM Strategy has been developed under the assumptions that the required funding for customer incentives, program administration, and customer participation will be adequate and timely for implementation of the OPA-contracted province-wide programs without restrictions of OPA-imposed caps. More specifically, the budgetary figures provided (utilizing the best information available) were derived from apportioning province-wide OPA Program-approved budgets based on Enersource’s CDM Targets to those of the entire province. At the time of submission of this CDM Strategy, program funding has not been

finalized by the OPA. If the funding parameters deviate from those used to determine Enersource's budget, Enersource's program participation levels may need to be revised.

#### 4.3.2. Net to Gross Ratios

Enersource utilized the OPA's established net to gross ratios in developing the CDM Strategy. It has been assumed that the ratios will remain constant throughout the time period of 2011-2014 for each OPA Program. Since these ratios significantly impact actual demand and energy consumption savings, any changes will impact Enersource's achievements towards its CDM Targets.

#### 4.3.3. Residential and Small Commercial Demand Response Initiative

OPA Program initiatives are expected to be updated from time to time in order to better align with changing external factors and initiative success. The consumer and small commercial demand response program is expected to be revised in mid-2011. This CDM Strategy is dependent upon the program update to be completed within this timeline; should delays occur it is expected that the OPA will continue with the existing residential and small commercial demand response initiative.

#### 4.3.4. Achieving Centrality for OPA Commercial and Industrial Demand Response Initiatives

This CDM Strategy includes savings attained from all OPA province-wide CDM programs implemented in its service territory. To be clear, Enersource is assumed to meet the test of centrality when participating in OPA Programs including, but not limited to, DR (demand response) 1 and DR (demand response) 3 initiatives within its service territory.

#### 4.3.5. Finalization of OPA Programs for 2011-2014 Period

At the time of submission of this CDM Strategy, not all OPA Programs have been finalized and no contracts have been executed. This CDM Strategy is dependent upon the OPA finalizing the OPA Programs for 2011-2014 and executing all relevant agreements and schedules. Any delays will directly impact the start of program implementation and hence constrain Enersource's ability to meet projected milestones.

#### 4.3.6. Economic Conditions in Ontario

Enersource's CDM Strategy recognizes that all CDM programs being offered within its service territory are voluntary for customers. If economic conditions change during the period 2011-2014, Enersource's CDM programs may need to be revised and adjusted to reflect its customers' financial abilities to participate.

#### 4.4. Annual Projections of Electricity Demand Reductions

Table 2 below illustrates the annual projections of peak (MW) demand reductions in Enersource's service delivery area:

**Table 2: Annual Projections – Peak Demand Reductions (MW)**

	2011	2012	2013	2014
Consumer (Residential)	3.5	8.1	13.2	18.5
Commercial and Institutional	23.1	20.9	27.3	47.9
Industrial	9.7	12.5	17.4	26.4
Total MW (Annual)	<b>36.3</b>	<b>41.5</b>	<b>57.9</b>	<b>92.8</b>
% of Target (93 MW)	<b>39%</b>	<b>45%</b>	<b>62%</b>	<b>100%</b>

Source: Enersource Hydro Mississauga Inc.

#### 4.5. Cumulative Annual Projections of Electricity Consumption Reductions

Table 3 below illustrates the cumulative annual projections of energy consumption (GWh) reductions in Enersource's service delivery area:

**Table 3: Annual Projections – Energy Consumption Reductions (GWh)**

	2011	2012	2013	2014	Total Cumulative
Consumer (Residential)	13.1	22.7	35.8	51.8	<b>123.4</b>
Commercial and Institutional	34.5	42.7	55.1	65.2	<b>197.5</b>
Industrial	9.3	18.8	27.6	39	<b>94.7</b>
Total GWh (Annual)	<b>57</b>	<b>84.2</b>	<b>118.5</b>	<b>156</b>	<b>415.7</b>
Cumulative % of Target (427 GWh)	<b>13%</b>	<b>33%</b>	<b>61%</b>	<b>97%</b>	<b>97%</b>

Source: Enersource Hydro Mississauga Inc.

#### 4.6. Implementation Strategy

In alignment with the *Green Energy and Green Economy Act, 2009*, to promote energy conservation and energy efficiency for all consumers, in a manner consistent with the policies of the Government of Ontario and to build a green economy, Enersource will be procuring contracts with service providers to deliver OPA Programs within its service territory. Enersource staff will maintain the company's focus on program contract administration, monitoring, reporting, quality assurance and quality control.

### 5. OPA Contracted Province-Wide Programs

#### 5.1. OPA Consumer Programs

Program Name	Consumer Program
Years of Operations	2011-2014
Program Description	The Consumer Program will provide incentives to existing home owners to motivate them to install energy efficiency measures, and to new homebuilders to encourage the construction of energy efficient single family homes. The Consumer Program also includes

	<p>the tenant or suite owner space in multi-unit residential buildings.</p> <p>The key components of the Consumer Program initiatives include:</p> <ol style="list-style-type: none"> <li>a. Year round and bi-annual instant rebates in stores for high efficiency equipment.</li> <li>b. Midstream incentives to retailers and supply chain inclusive of consumer electronics and pool equipment.</li> <li>c. HVAC on-line rebates, appliance retirement, exchange programs for room air conditioners and dehumidifiers.</li> <li>d. Residential new construction initiatives.</li> <li>e. Demand Response (DR) initiatives for Central Air Conditioning, Home Energy Interface (HEI), In Home Display (IHD) including switch and demand response.</li> <li>f. Enabling tools including online audits and training.</li> </ol> <p>The new construction aspect of the program seeks to incent builders to construct single family homes that meet the EnerGuide 80 standard, and eventually the EnerGuide 83 standard, through the installation of energy efficiency measures and better design.</p> <p>Also, the residential DR initiative will offer consumers a few choices (two to three) to allow the local distributor to control some consumer loads. These choices will combine higher value technology and/or incentive options to attract higher value loads based on the following main end-uses that will be targeted in 2011:</p> <ol style="list-style-type: none"> <li>a. central air-conditioners;</li> <li>b. window air-conditioners;</li> <li>c. electric water heaters; and</li> <li>d. pool pumps.</li> </ol>
Projected Budget (\$'000)	16,994
Projected Reduction in Peak (MW)	18.54
Projected Reduction in Energy (GWh)	123.38

## 5.2. Consumer Program - Low Income

Program Name	Consumer Program – Low Income
Years of Operations	2011-2014
Program Description	The Low Income Program targets low income residents living in single family housing and social housing properties, and building owners and social housing providers by offering education and tenant engagement support, as well as financial incentives to improve the energy efficiency of homes and energy end use assets.
Projected Budget (\$'000)	TBD
Projected Reduction in	TBD

Peak (MW)	
Projected Reduction in Energy (GWh)	TBD

### 5.3. Commercial & Institutional Program

Program Name	Commercial and Institutional Program
Years of Operations	2011-2014
Program Description	<p>The Commercial and Institutional (“C&amp;I”) Program is designed to assist building owners, operators, tenants and occupants in identifying energy savings opportunities and financial incentives to support conservation and demand management investment. The program is also designed to facilitate a culture of conservation in these market segments as well as the supply chains that serve them.</p> <p>The C&amp;I program umbrella encompasses the following market segments:</p> <ol style="list-style-type: none"> <li>a. Commercial – offices, retail stores, grocery stores, restaurants, hotels/motels, warehouses;</li> <li>b. Institutions – municipal, hospitals, health care, universities, colleges and schools; and</li> <li>c. Multi-family and agricultural facilities.</li> </ol> <p>The C&amp;I program offers incentives for the primary end-use measures that represent the greatest potential for reduced electricity use including, but not limited to: lighting, space cooling and ventilation, auxiliary plug load, and space and water heating.</p> <p>The C&amp;I program components are summarized below:</p> <ol style="list-style-type: none"> <li>a. Direct Installed Initiatives for Existing Building Retrofits – Small Buildings <ol style="list-style-type: none"> <li>i. Direct Installed Lighting: offers customer incentive up to \$1,000 in lighting equipment upgrades;</li> <li>ii. Direct Serviced Space Cooling: offers incentive up to \$750 to service air conditioning units or roof-top or ground-mounted air conditioning systems with a capacity of 25 tons or less;</li> <li>iii. Small Commercial Demand Response: for Central Air Conditioning, Home Energy Interface (HEI), In Home Display (IHD) including switch, and demand response.</li> </ol> </li> <li>b. Electricity Retrofit Incentive (ERI) initiative for Existing Building Retrofits – Medium and Large Buildings including prescriptive, engineered and custom approaches.</li> <li>c. Building Commissioning Initiatives (for buildings &gt; 50,000 square feet).</li> <li>d. New Construction Initiatives: the initiative provides incentives for new buildings under the New Construction initiative through both the Prescriptive and Custom approaches.</li> <li>e. Pre-Project Assessments: applicable for prescriptive, engineered and custom approaches with incentive of \$0.05/square foot or \$0.10/square foot, up to a maximum of</li> </ol>

	<p>f. Capability Building:</p> <ul style="list-style-type: none"> <li>i. Building operator training; and</li> <li>ii. Energy manager certification.</li> </ul> <p>Demand Response 1 (DR 1) and Demand Response 3 (DR 3) Initiatives:</p> <ul style="list-style-type: none"> <li>a. DR 1 - no obligation on customers to participate and is a demand response initiative for industrial and commercial customers, of 50 kW or greater to reduce the amount of power being used during certain periods of the year; and</li> <li>b. DR 3 – Contractual obligation on industrial and commercial customers to provide demand response capability to reduce system peak demand and increase system reliability. DR 3 is available to customers with peak demand of 50 kW or more that have interval meters supported by recorders with 5 minute interval capability. The OPA contracts with aggregators or directly with loads providing DR capacity of greater than 5 MW.</li> </ul> <p>Distributor will deploy these program components as they apply to the customer segments in its service territory with the focus on customer segments that have the largest demand reduction and energy savings potential.</p>
Projected Budget (\$'000)	52,526
Projected Reduction in Peak (MW)	47.9
Projected Reduction in Energy (GWh)	197.5

#### 5.4. Industrial Program

Program Name	Industrial Programs
Years of Operations	2011-2014
Program Description	<p>The Tier 1 program for the industrial sector includes the following components:</p> <ul style="list-style-type: none"> <li>a. Industrial Accelerator;</li> <li>b. Industrial ERIP; and</li> <li>c. Demand Response 1 and 3.</li> </ul> <p>a. Industrial Accelerator</p> <p>This program is based on the rules and provisions of the OPA-developed program for “direct connect customers”. This program provides incentives per kWh of annualized savings up to 70% of project cost or a one year payback. This program applies to projects that have annualized savings greater than 100 MWh and requires applicants to provide a declining security deposit to ensure sustained performance.</p>

This program is designed to motivate process improvements and is structured to overcome the barriers that industrial energy efficiency traditionally has faced, which include short payback thresholds and long periods between project implementation and incentive receipt.

Within the Industrial Accelerator program there are provisions for capability building that include training, metering loan service, monitoring and targeting and provision for up to 60 energy managers to be funded via the program.

b. Industrial ERIP

Projects that fall below the savings threshold of the Industrial Accelerator program will be eligible for incentives based on the ERIP process. The OPA is developing a list of specific industrial prescriptive measures that will be eligible for incentives.

c. Demand Response 1 and 3 (DR1/DR3)

The commercial and industrial DR program includes two initiatives: DR1 and DR3. DR1 is available for industrial and commercial customers, of 50 kW or greater and with interval meters, to reduce the amount of power being used during certain periods of the year. This initiative has a schedule of 1600 hours per year where activations of up to 100 hours may occur with no customer participation obligation. The program provides payments to the customer for actual load reduction only.

The DR3 Initiative includes specific contractual obligations that require commercial and industrial participants to reduce their use of electricity for a 4-hour dispatch period based on OPA program and dispatch requirements. Participants are scheduled to be on standby approximately 1,600 hours per calendar year for possible dispatch of up to 100 hours or 200 hours within that year, depending on the specific contract signed by the participant.

The DR3 initiative provides participants standby payments as well as energy payments for the actual energy reduction provided during a demand response event. Failure to comply with contractual requirements will result in financial offsets against any potential revenue from the initiative. Material non-performance could result in contract termination.

Enersource will not be acting as a DR3 aggregator, but will be forming relationships with the registered aggregators that are active in its service territory to develop demand response capability.

Projected Budget (\$'000)	\$ 12,910
Projected Reduction in Peak (MW)	26.41
Projected Reduction in Energy (GWh)	94.7

## 6. Potential OEB Approved CDM Programs

In accordance with the CDM Code, Enersource will assess opportunities for potential Board-approved CDM programs once OPA Programs are finalized. Where programs are pertinent to Enersource's customer base and can be cost-effectively delivered, Enersource may submit an application for Board-approved programs at a later date to ensure accomplishment of Enersource's CDM Target.

## 7. Program Mix

Enersource intends to deliver all available OPA Programs within its service area providing offerings to all customer types as identified in Table 4 below.

**Table 4: CDM Program by Customer Type**

		Customer Type			
		Residential	Residential Low Income	Commercial & Institutional	Industrial
OPA Province Wide Program					
1	Year Round Instant Rebates	✓	✓		
2	Bi-Annual Instant Rebate Events	✓	✓		
3	Appliance Retirement Initiative	✓	✓		
4	Bi-Annual Appliance Exchange Events	✓	✓		
5	HVAC On-line Rebates Initiative	✓	✓		
6	New Construction Initiative	✓	✓		
7	Midstream Incentives Initiative	✓	✓		
8	Consumer Enabling Initiatives	✓	✓		
9	Low Income Initiative		✓		
10	Residential Demand Response	✓	✓		
11	Commercial & Institutional ERIP			✓	
12	Direct Install			✓	
13	Demand Response 1 - Commercial			✓	
14	Demand Response 3 – Commercial			✓	
15	Industrial Accelerator				✓
16	Industrial ERIP				✓
17	Demand Response 1 – Industrial				✓
18	Demand Response 3 – Industrial				✓

Source: Enersource Hydro Mississauga Inc.

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

Enersource continues to support and participate in the development of conservation activities in Ontario with active participation on different industry working groups involving the OPA, the Electricity Distributors Association, and other distributors, among other participants. Enersource maintains its commitment to making OPA Programs successful, and will provide constructive input and support as resources permit.

Working closely with the Coalition of Large Distributors plus Hydro One Networks Inc., as well as gas distributors, Enersource continues to share learning and best practices to generate cost efficiencies. Additional synergies with the gas distributors are also being investigated to further enhance CDM program delivery concepts to customers with the intent to increase customer engagement and cost efficiency. Enersource will continue with this collaborative approach with other industry stakeholders including the OPA, electricity and gas distributors, and service providers to achieve this CDM Strategy and meet the needs of its customers. As described above, Enersource will continue to explore opportunities for synergies and cost savings with program expansion under potential Board-Approved programs once OPA Programs are finalized.