



November 1, 2010

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Kirsten Walli  
Board Secretary  
Ontario Energy Board  
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2300 Yonge Street, Suite 2700  
Toronto, Ontario M4P 1E4

**Re: CDM Strategy for Oakville Hydro Electricity Distribution Inc.**  
**File: EB-2010-0215**

Dear Ms. Walli,

Enclosed is the Conservation and Demand Management (CDM) Strategy for Oakville Hydro Electricity Distribution Inc. (OHEDI). This CDM Strategy has been developed in accordance with the *Conservation and Demand Management Code for Electricity Distributors* and provides a high-level description of how OHEDI intends to achieve its CDM Targets. In the absence of finalized targets, the Strategy is based on the proposed targets of June 22, 2010.

Sincerely,

A handwritten signature in cursive script that reads "Maryanne Wilson".

Maryanne Wilson, CGA  
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# CDM Strategy

**Distributor's Name:** Oakville Hydro Electricity Distribution Inc.

**Total Reduction in Peak Provincial Electricity Demand (MW) Target:** 21

**Total Reduction in Electricity Consumption (kWh) Target:** 75,000,000

This document was prepared for Oakville Hydro Electricity Distribution Inc. by  
IndEco Strategic Consulting Inc.

November 1, 2010

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## CDM Strategy

This document is the CDM Strategy for Oakville Hydro Electricity Distribution Inc. (OHEDI). This CDM Strategy provides a high-level description of how OHEDI intends to achieve its CDM Targets.

### About Oakville Hydro

OHEDI is the local distribution company serving the Town of Oakville. OHEDI's customer base is as follows:

- 56,419 residential customers
- 4,887 general service customers <50 kW and
- 873 general service customers > 50 kW

Oakville is a light industrial centre with over 260 national and international corporate headquarters and leading companies in the knowledge-based services, advanced manufacturing, and tourism sectors. The automotive sector is also a top employer in Oakville.

OHEDI participated enthusiastically in the OPA Standard Programs consistently achieving its targets and for some programs (e.g. Power Savings Blitz) saturating the market. OHEDI also took full advantage of the third tranche funding including designing and implementing a consumer education program, a multi-residential interval metering program, commercial/industrial information seminars and a peak demand reduction program. OHEDI also applied for and received additional CDM funding, beyond that allocated in the third-tranche. These actions reflect Oakville Hydro's commitment to the efficient use of electricity by its customers.

### Principles

This CDM Strategy is guided by the following principles.

#### *General*

- The CDM Strategy should build on OHEDI's vision and mission statements
- The CDM Strategy should be flexible enough to respond to changing circumstances, and OHEDI's understanding of its customers and their needs
- The CDM Strategy should assist in alleviating capacity constraints in the Town of Oakville

#### *Customers and shareholders*

- The CDM Strategy should address the energy priorities of the Province as these relate to OHEDI's customers
- The CDM Strategy should offer programs to all customer types where appropriate

- The CDM Strategy should make sense for OHEDI's customers and shareholder
- The CDM Strategy should enhance economic development within the Town of Oakville
- The CDM Strategy should help position OHEDI and its shareholder as leaders in the community on energy efficiency

#### *Partnerships*

- The CDM Strategy should build on existing programs and partnerships where possible
- The CDM Strategy should pursue administrative efficiencies and coordination with other distributors, natural gas distributors, social service agencies, any level of government, government agencies, the OPA and other organizations where possible
- The CDM Strategy should pursue partnerships with the other Halton Region LDCs

#### *Programs*

- The CDM Strategy should be made up of OPA programs and other programs that are complementary to and not duplicative of OPA programs
- The CDM programs should provide deep and comprehensive measures that allow OHEDI to maximize energy savings from OHEDI program offerings in a systematic and coordinated way, not in a piece-meal one
- The CDM programs within the Strategy should provide a 'one stop shop' for energy efficiency for OHEDI customers
- The CDM programs should strive to achieve market transformations in OHEDI's service territories

#### *Year by Year Plan*

Table 1 provides a year-by-year plan for how the CDM Strategy will meet OHEDI's CDM Targets.

Consumer and Business (non-DR) Program savings are calculated using the OPA Resource Planning Tool distributed by the OPA to OHEDI on September 17, 2010. Business (DR) and Industrial Program savings are based on provincial savings found in the LDC summary guides distributed by the OPA to OHEDI on October 7, 2010. Low-income savings are based on provincial savings estimates provided in a webinar hosted by the OPA<sup>1</sup>.

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<sup>1</sup> Tier 1 Conservation Program Webinar Series. Webinar 1: 2011 Industrial, Commercial/Institutional and Consumer Program Design. Delivered by the OPA 29 July 2010.

OHEDI participant rates for OPA programs are the provincial participant rates scaled down using OHEDI's portion of the province's 2008 residential and non-residential energy use. In the absence of the specific targets and budgets for OHEDI, and a description of how these were derived, it is not clear whether this scale-down approach is appropriate for OHEDI. OHEDI recognizes that participant rates will be refined over time as adjustments are made for market saturation from the success of programs in earlier years, and for targeted marketing that OHEDI may undertake to push results beyond provincial averages for certain measures. These adjustments will be monitored and reported in OHEDI's annual reports, and appropriate amendments will be made to the program mix offered to customers.

Savings from Board-Approved Programs are those required beyond the savings from OPA programs in order for OHEDI to meet 100% of both its 2011-2014 energy savings target and its 2014 summer peak demand savings target.

**Table 1 Year by year plan for meeting CDM Targets**

Program name	Energy savings (GWh)				Peak demand savings (MW)			
	2011	2012	2013	2014	2011	2012	2013	2014
Industrial	0.5	1.9	3.4	4.9	0.59	1.37	2.20	2.87
Business	2.9	6.2	8.5	10.9	1.95	3.16	4.41	5.87
Consumer	2.5	5.4	8.4	11.4	0.83	1.94	3.22	4.55
Low-income	0.2	0.4	0.7	0.9	0.02	0.04	0.07	0.09
Board-approved programs	1.3	1.2	1.6	1.9	1.867	3.98	5.86	7.63
<b>Total</b>	<b>7.5</b>	<b>15</b>	<b>22.5</b>	<b>30</b>	<b>5.25</b>	<b>10.5</b>	<b>15.75</b>	<b>21.0</b>

## Annual Milestones

Table 2 shows the annual milestones OHEDI plans to achieve.

Table 2 Annual milestones

Type of savings	2011	2012	2013	2014	Total
<b>Energy (GWh)</b>					
From programs in that year	7.5	8.4	10.2	11.7	<b>37.9</b>
From programs in previous years	0	6.6	12.3	18.3	<b>37.1</b>
<b>Total in-year savings</b>	<b>7.5</b>	<b>15.0</b>	<b>22.5</b>	<b>30.0</b>	<b>75.0</b>
<b>Peak demand (MW)</b>					
From programs in that year	5.3	6.8	7.8	8.6	
From programs in previous years	0	3.7	8.0	12.4	
<b>Total in-year demand reductions</b>	<b>5.3</b>	<b>10.5</b>	<b>15.8</b>	<b>21.1</b>	

## OPA-Contracted Province-Wide CDM Programs

OHEDI plans to participate in all of the OPA-Contracted Province-Wide CDM Programs between 2011 and 2014. A description of this participation is shown in Table 3.

Table 3 OPA-Contracted Province-Wide CDM Programs to be undertaken

Program name	Year(s) of operation	Program description	Projected budget <sup>2</sup>	Summer 2014 peak demand reductions (kW)	Electricity consumption reductions (MWh)
Industrial	2011 through 2014	See description below	NA	2,867	10,653
Business	2011 through 2014	See description below	NA	5,872	28,423
Consumer	2011 through 2014	See description below	NA	4,548	27,762
Low-income	2011 through 2014	See description below	NA	87	2,219

NA – Not available

### Industrial program

The purpose of this program is to achieve peak demand reduction and energy savings among the industrial customers of the LDC. There are four main initiatives included in this program:

- **Industrial ERIP** is targeted at industrial customers of the LDC. Its purpose is to encourage the installation of new and replacement energy efficient equipment (e.g. lighting, fans and pumps, synchronous belts).
- **LDC Industrial Accelerator** is targeted at larger industrial, commercial and institutional customers of the LDC with a level of potential savings at or above 100 MWh. Its purpose is to improve the energy efficiency of equipment and production processes.
- **DR1 Industrial** is targeted at industrial customers of the LDC with a peak demand of 50 kW or more. Its purpose is to reduce system peak demand and

<sup>2</sup> Program budgets were not available from the OPA at the time of writing this CDM Strategy

increase system reliability through the customer's voluntary reduction of electricity demand during the peak demand period, and to encourage the DR1 customers to participate in the LDC Connected Industrial DR3 initiative.

- **LDC Connected Industrial DR3** is targeted at industrial customers of the LDC with peak demand of 50 kW or more that have a minimum hourly interval meter supported by recorders with 5-minute interval capability and demand response capacity. Its purpose is to reduce system peak demand and increase system reliability through the customer's mandatory reduction of electricity demand during peak demand periods.

### Business program

The Business program covers both existing and new buildings in all business market segments. The purpose of this program is: to assist owners and operators of commercial and institutional buildings, farms, and multi-family residences to achieve reduced demand and energy savings through the purchase and operation of energy efficient equipment and to participate in demand response initiatives; to provide education to tenants and occupants regarding in-suite energy efficiency and demand response opportunities; and to achieve peak demand reduction and energy savings among the business customers of the LDC. This program also aims to facilitate a culture of conservation among these communities and the supply chains that serve them. The initiatives in the business program focus on buildings with the following descriptions/designations:

- Small Office
- Large Office
- Small Retail
- Large Retail
- Agricultural
- Multi-Family Condo
- Multi-Residential Buildings
- Elementary Schools
- Secondary Schools.

There are four main initiatives included in this program:

- **Direct Installed** is targeted at LDC customers in the General Service <50 kW account category. The program offers eligible customers up to \$1000 in measures related to lighting equipment upgrades and space cooling at no charge.
- **Small Commercial DR** is targeted at LDC customers in the General Service <50 kW account category with central air conditioning systems. Its purpose is to reduce system peak demand and increase system reliability through the reduction of electricity use during peak demand via remote load control.

Customers may also participate without remote load control, that is, customers may still access price and real-time usage information and can choose to act on their own.

- **DR1 Commercial** is targeted at LDC customers with a peak demand of 50 kW or more. Its purpose is to reduce system peak demand, increase system reliability through the customer's voluntary reduction of electricity use during peak demand periods and encourage DR1 customers to participate in the LDC Connected Industrial DR3 initiative.
- **LDC Connected Commercial DR3** is targeted at LDC customers with peak demand of 50 kW or more that have interval meters supported by recorders with 5 minute interval capability and demand response capacity. Its purpose is to reduce system peak demand and increase system reliability through the customer's mandatory reduction of electricity use during peak demand periods.

### Consumer program

The Consumer program is available to residential customers of the LDC. The purpose of the program is to help these residential customers improve the energy efficiency of their homes, empower them by giving residential customers access to consumption and price information to help them better manage their electricity use, and to achieve peak demand reduction and energy savings. There are eight main initiatives included in this program:

- **Instant Rebates** are targeted at LDC customers in single-family homes. Its purpose is to encourage residential consumers to purchase energy efficient products by providing discounts on these products.
- **Midstream Electronics Incentive** is targeted at the retailers of televisions and set-top boxes. Its purpose is to encourage retailers to promote energy efficient models of televisions and set-top boxes by offering incentives to retailers.
- **Midstream Pools Incentive** is targeted at contractors who install pool equipment. Its purpose is to encourage contractors to install "right-sized" pool equipment (i.e. pool pumps) by offering incentives to contractors.
- **HVAC rebates** are targeted at LDC customers in single-family homes with inefficient central air conditioning and/or heating systems. Its purpose is to encourage customers to replace inefficient systems by offering rebates (delivered through participating contractors) for the installation of efficient systems.
- **Appliance Retirement** is targeted at LDC customers in single-family homes with inefficient working appliances (i.e. refrigerators, freezers, room air conditioners, dehumidifiers). Its purpose is to encourage customers to decommission these appliances through free pick-up and recycling of the appliances.

- **Exchange Events** are targeted at LDC customers in single-family homes who wish to replace a room air conditioner or dehumidifier in the spring or fall. Its purpose is to encourage customers to purchase an energy efficient model by offering a coupon or gift card for a replacement unit.
- **Residential New Construction** is targeted at builders of new, single-family homes. Its purpose is to encourage builders to construct new, single-family homes that include energy efficiency standards that are above current building codes by offering incentives to the builders.
- **Residential DR** is targeted at LDC customers in single-family homes with central air conditioning systems, electric water heaters, room air conditioners, and pool pumps. Its purpose is to reduce system peak demand and increase system reliability through the shift of electricity during peak demand. Customers may also participate without remote load control, that is, customers may still access price and real-time consumption information which allows them to act voluntarily.
- **Low-income single family home conservation** is targeted at LDC customers of low-income single family households as defined by Part 9 of the Ontario Building Code as well as consumers in multi-family buildings as defined by Part 3 of the Ontario Building Code. It provides a set of services and the purchase and installation of measures in the home or in-suite measures at no cost to the low-income consumer. Services to low-income consumers include audits as well as basic, low cost measures (e.g. CFL's, hot water pipe wrap, power bar with integrated timer); extended measures: generally appliance replacement; and weatherization (e.g. draft proofing, attic/basement insulation). The initiative may also include enabling initiatives such as training for delivery partners, capability building for social housing providers and marketing and education materials.

These descriptions are based on the information available from the OPA on the OPA-Contracted Province-Wide CDM Programs<sup>3</sup> and based on output generated from the OPA CDM Resource Planning Tool. At the time of writing, the contracts for the OPA-Contracted Province-Wide CDM Programs were not available from the OPA.

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<sup>3</sup> This information was obtained from the OPA Conservation Programs Webinar Series provided by the OPA on the following dates July 29, 2010, August 12, 2010, August 26, 2010, September 9, 2010 and October 7, 2010 and from the program summary guides released by the OPA on October 8, 2010.

## Potential Board-Approved CDM Programs

The OPA expects that the OPA-Contracted Province-Wide CDM Programs will meet only 91% of the provincial energy target and only 78% of the provincial demand target. OHEDI's analysis of the proposed programs, for its service territory, based on the OPA CDM Resource Planning Tool is that in the OHEDI service territory, the OPA programs will meet 92% of the LDC energy target but only 64% of the LDC demand target.<sup>4</sup> Therefore OHEDI plans to make up the anticipated shortfall through Board-Approved CDM Programs. The potential Board-Approved CDM Programs that are under investigation by OHEDI are presented in Table 4.

Over the next few months OHEDI will be further developing and refining these programs in order to submit an application to the Board for proposed Board-Approved CDM Programs.

For the purpose of this high-level strategy, peak demand reductions and electricity consumption reductions have not yet been calculated for each individual Board-Approved CDM Program. However, Table 1 provides an estimate of what reductions would be required in order for OHEDI to meet 100% of both its 2011-2014 energy savings target and its 2014 summer peak demand savings target. The applications for specific Board-Approved Programs will address targets and budgets, including provision for contingencies.

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<sup>4</sup> The version of the tool provided September 17, 2010 does not offer provincial targets for demand response, or for the industrial programs. However, these have been estimated based on scaling down provincial estimates for these programs provided separately by the OPA.

**Table 4 Potential Board-Approved CDM Programs**

<b>Program name</b>	<b>Year(s) of operation</b>	<b>Program description</b>	<b>Projected budget</b>	<b>Peak demand reductions (kW)</b>	<b>Electricity consumption reductions (MWh)</b>
Municipal Energy Efficiency Leadership Program	2011 through 2014	See description below	NA	NA	NA
Regional Energy Efficiency Leadership Program	2011 through 2014	See description below	NA	NA	NA
Computer Management Program	2011 through 2014	See description below	NA	NA	NA
Greening Downtown Oakville	2011 through 2014	See description below	NA	NA	NA
Top 10 users pilot extension	2011 through 2014	See description below	NA	NA	NA
SME Commissioning Program	2011 through 2014	See description below	NA	NA	NA
Residential Hot Water Program	2011 through 2014	See description below	NA	NA	NA
Residential New Construction Program	2011 through 2014	See description below	NA	NA	NA
Energy Efficiency in Schools Program	2011 through 2014	See description below	NA	NA	NA
Consumer Education Program	2011 through 2014	See description below	NA	NA	NA

NA – Not available

### **Municipal Energy Efficiency Leadership Program**

This program combines the measures identified for the LDC's shareholder. It includes municipal lighting (street lighting replacement, traffic light replacement), municipal facilities (e.g. arenas) and participation in the Computer Management Program. Design and implementation of this program is being considered in cooperation with the other Halton Region LDCs (Burlington Hydro, Milton Hydro and Halton Hills Hydro).

### **Regional Energy Efficiency Leadership Program**

This program combines the measures identified for the Region of Halton. This program will be implemented in partnership with the other Halton Region LDCs. This program includes regional lighting (street lighting replacement, traffic light replacement), night-time/off-peak water pumping and other water related processes, peak-shaving using back-up/standby generators, incentives for energy efficient low-flow water devices (e.g. toilets, washing machines), and energy efficiency in Regional facilities (e.g. police stations).

### **Computer Management Program**

This program would be offered to commercial and institutional customers including the LDCs' shareholder and the Region. This program would consist of a suite of initiatives designed to reduce electricity use by computers, their peripherals and accessories. These initiatives include virtualization of servers, computer monitor replacement, automatic night-time shut down of computers, optimization of data-centre cooling equipment, and employment of smart power bars.

### **Greening Downtown Oakville**

This program would improve energy efficiency in downtown Oakville and make the downtown area a showcase for energy efficiency in the Town of Oakville. This program would include targeting 100% participation in the OPA direct install program (formerly known as the Power Savings Blitz), implementing a "doors closed" program for retailers, upgrading seasonal lighting, and installing solar film on storefront windows.

### **SME Commissioning Program**

This program would complement the OPA industrial commissioning offering by providing commissioning services to commercial, institutional and industrial facilities less than 50,000 ft<sup>2</sup>.

### **Top 10 users pilot extension**

This program would extend the pilot program that is currently being implemented by Oakville Hydro in partnership with the OPA and Union Gas.

### **Residential Hot Water Program**

This program would be offered to residential customers with electric hot water heating and would complement the OPA consumer demand response offering. This program would include more frequent control of hot water heaters, greater

incentives for participation, and provision of an energy saving kit (including pipe wrap, hot water heater blankets, low-flow shower heads and faucet aerators).

#### **Residential New Construction Program**

This program would complement the OPA new construction offering by including measures and initiatives not covered by the OPA such as default inclusion in the OPA consumer demand response program and incentives for upgrades to energy efficient appliances. A partnership with Union Gas and their Residential New Construction Program and the other Halton Region LDCs is being investigated.

#### **Energy Efficiency in Schools Program**

This program complements the OPA commercial and institutional offerings by providing additional measures and incentives not covered by the OPA to encourage all schools (private, public and Catholic) to improve their energy efficiency. A partnership with the other Halton Region LDCs is being investigated.

#### **Consumer Education Program**

This program provides education materials to consumers regarding saving electricity including providing greater support and promotion to the libraries' *lend a kill-a-watt* program and educational materials regarding consumer electronics and phantom power. Other measures under consideration include a programmable power bar give away, similar to the program offered in Fall 2010 by Toronto Hydro.

## **Program Mix**

By delivering all of the OPA programs, OHEDI offers CDM Programs to all customer types – industrial, business (commercial/institutional) and consumers (residential), including low-income consumers.

The provision of Board-Approved CDM Programs will enhance this coverage for certain groups including the local and regional municipalities, schools, residents with electric hot water heaters and small and medium sized industrial, commercial and institutional facilities to better match the market opportunities and customer base of the utility.

### **Low-income Programs**

OHEDI intends to offer the OPA Low-income Single Family Home Program when the program is available. Once information about this program is available OHEDI will also assess the need for additional low-income programming not covered by the OPA program.

## CDM Programs Co-ordination

In preparing this CDM Strategy OHEDI sought, to the extent possible, to coordinate its CDM activities to ensure administrative efficiencies, to build on existing relationships, and to ensure maximum coverage for customers while eliminating any overlap. OHEDI intends to coordinate its CDM activities with various parties including the other Halton Region LDCs (Burlington Hydro, Milton Hydro and Halton Hills Hydro), Union Gas and the OPA. OHEDI will also build on existing relationships developed during the implementation of third tranche and subsequent CDM activities including with delivery agents and channel partners (some of which are already shared with the other Halton LDCs). Partnerships with other organizations in the community (e.g. the Business Improvement Areas) are also under development.

In preparing this CDM Strategy OHEDI sought to pursue administrative efficiencies. OHEDI intends to deliver the OPA-Contracted Province-Wide CDM Programs and Board-Approved CDM Programs with some combination of internal and external resources. The exact balance of internal and external resources will be established when more is known about the programs and what can be done to maximize efficiencies. OHEDI will also deliver the CDM programs in partnership with existing delivery agents and channel partners to build on the capability already existing in the market. Administrative efficiencies will also be sought by coordinating activities with program partners including the other Halton Region LDCs and Union Gas and by expanding on existing CDM pilots currently underway including a program for the utilities largest customers offered in partnership with the OPA and Union Gas.

To ensure that administrative efficiencies are maintained and that there is continual improvement in CDM program delivery over the four year period, OHEDI will develop and implement a process to regularly monitor and enhance performance to ensure that its energy targets are met. This process will be built into EM&V plans for each Board-Approved Program.