

# CDM Strategy

**Distributor's Name:** Burlington Hydro Inc.

**Total Reduction in Peak Provincial Electricity Demand (MW) Target:** 22

**Total Reduction in Electricity Consumption (kWh) Target:** 84,000,000

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## CDM Strategy

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

### About Burlington Hydro

BHI is the local distribution company serving the City of Burlington. BHI's customer base is as follows:

- 55,578 residential customers
- 4,974 general service customers <50 kW and
- 980 general service customers > 50 kW

The City of Burlington has a broad based industrial strategy and is home to a range of industries including food processing, advanced manufacturing, motor vehicle and transportation manufacturing, chemical and pharmaceutical industries and IT services.

BHI participated enthusiastically in the OPA Standard Programs consistently achieving its targets and for some programs (e.g. Power Savings Blitz) saturating the market. BHI also took full advantage of the third tranche funding including designing and implementing a home developers residential new construction program, a residential coupon program and a very successful lighting retrofit program (a forerunner to the ERIP program). In addition BHI applied to the Ontario Energy Board for and received supplemental third tranche funding to expand these programs. Together, these actions point to BHI's commitment to helping its customers use electricity efficiently.

### Principles

This CDM Strategy is guided by the following principles.

#### *General*

- The CDM Strategy should build on BHI's vision and mission statements
- The CDM Strategy should be flexible enough to respond to changing circumstances, and BHI's understanding of its customers and their needs

#### *Customers and shareholders*

- The CDM Strategy should address the energy priorities of the Province as these relate to BHI's customers
- The CDM Strategy should offer programs to all customer types where appropriate including programs that cover multiple sectors and customer types
- The CDM Strategy should make sense for BHI customers and shareholder

- The CDM Strategy should enhance economic development within the City of Burlington and provide opportunities for working with community partners including the Burlington Economic Development Corporation
- The CDM Strategy should help position BHI 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 BHI to maximize energy savings from BHI 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 BHI customers
- The CDM programs should strive to achieve market transformations in BHI's service territories
- The CDM programs should be available to all customers with the relevant facilities or technologies; eligibility should not be based on rate class.

### *Year by Year Plan*

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

Consumer and Business (non-DR) Program savings are calculated using the OPA Resource Planning Tool distributed by the OPA to BHI 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 BHI 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.

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

Savings from Board-Approved CDM Programs are those required beyond the savings from OPA programs in order for BHI 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**

<b>Program name</b>	<b>Energy savings (GWh)</b>				<b>Peak demand savings (MW)</b>			
	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
Industrial	0.6	2.2	3.9	5.7	0.68	1.60	2.56	3.34
Business	3.4	7.2	9.9	12.7	2.27	3.68	5.14	6.84
Consumer	2.4	5.1	7.9	10.8	0.78	1.84	3.04	4.30
Low-income	0.2	0.4	0.6	0.8	0.02	0.04	0.06	0.08
Board-approved programs	1.8	1.9	2.9	3.5	1.745	3.84	5.70	7.44
<b>Total</b>	<b>8.4</b>	<b>16.8</b>	<b>25.2</b>	<b>33.6</b>	<b>5.5</b>	<b>11</b>	<b>16.5</b>	<b>22.0</b>

## Annual Milestones

Table 2 shows the annual milestones BHI plans to achieve.

Table 2 Annual milestones

Type of savings	2011	2012	2013	2014	Total
<b>Energy (GWh)</b>					
From programs in that year	8.4	9.2	11.6	13.4	<b>42.6</b>
From programs in previous years	0	7.6	13.6	20.2	<b>41.4</b>
<b>Total in-year savings</b>	<b>8.4</b>	<b>16.8</b>	<b>25.2</b>	<b>33.6</b>	<b>84.0</b>
<b>Peak demand (MW)</b>					
From programs in that year	5.5	7.4	8.4	9.4	
From programs in previous years	0	3.7	8.1	12.6	
<b>Total in-year demand reductions</b>	<b>5.5</b>	<b>11.0</b>	<b>16.5</b>	<b>22.1</b>	

## OPA-Contracted Province-Wide CDM Programs

BHI 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	3,341	12,413
Business	2011 through 2014	See description below	NA	6,842	33,122
Consumer	2011 through 2014	See description below	NA	4,297	26,230
Low-income	2011 through 2014	See description below	NA	82	2,096

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 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 currently 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. BHI's analysis of the proposed programs, for its service territory, based on the OPA CDM Resource Planning Tool is that in the BHI service territory, the OPA programs will meet only 88% of the LDC energy target and 66% of the LDC demand target.<sup>4</sup> BHI recognizes that these estimates will be refined as additional details on targets and budgets are provided by the OPA, and as BHI adjusted provincial averages to account for its success (and market saturation) during earlier CDM activities, and possible targeted marketing within the OPA programs. BHI plans to make up the anticipated shortfall through Board-Approved CDM Programs. The potential Board-Approved CDM Programs that are under investigation by BHI are presented in Table 4.

Over the next few months BHI 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 BHI 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 CDM 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

Program name	Year(s) of operation	Program description	Projected budget	Peak demand reductions (kW)	Electricity consumption reductions (MWh)
Regional Energy Efficiency Leadership Program	2011 through 2014	See description below	NA	NA	NA
Residential Enhancement Program	2011 through 2014	See description below	NA	NA	NA
Cross-sectoral Financing Program	2011 through 2014	See description below	NA	NA	NA
Standby Generators Program	2011 through 2014	See description below	NA	NA	NA
Large Customer Leadership 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

NA – Not available

#### 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 (Oakville Hydro, Milton Hydro and Halton Hills Hydro). 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, and energy efficiency in Regional facilities (e.g. police stations).

#### **Residential Enhancement Program**

This program, offered to residential customers, bundles together measures that are not covered by the OPA consumer offerings. This program provides measures for customers with and without electric space and water heating including building envelope and weatherization measures; direct install of measures including smart powerbars, CFLs, pipe wrap, hot water heater blankets, shower and faucet aerators; audits including energy efficiency and demand response audits; education and referrals; and financing. This program may be linked to the provincial Ontario Home Energy Audit Program (e.g. co-market, additional incentives for audit or installation of measures). A partnership with the other Halton Region LDCs is being investigated.

#### **Cross-sectoral Financing Program**

This program offers financing to all customer types. The program is designed to ensure that access to financing is not an obstacle to implementation of CDM programs. The specific nature of the financing program might include: providing information about financing organizations that have agreed to finance energy efficiency initiatives, buying down the interest or securing the loan, on-bill financing, or combinations of these.

#### **Standby Generators Program**

This program would use standby generators currently installed in Burlington to reduce load during peak periods.

#### **Large Customer Leadership Program**

This program complements OPA industrial and business (commercial and institutional) offerings by including measures not covered by the OPA such as financing, pre-DR audits and building commissioning for buildings <50,000 ft<sup>2</sup>. This program will focus on BHI's largest customers where the greatest potential for electricity savings exists, and who may be harder to reach with broader programs due to their decision-making procedures.

#### **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 demand response offering 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 business (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.

## **Program Mix**

By delivering all of the OPA programs, BHI 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 regional municipality, schools, and large industrial, commercial and institutional facilities to better match the market opportunities and customer base of the utility.

## **Low-income Programs**

BHI intends to offer the OPA Low-income Single Family Home Program when the program is available. Once information about this program is available BHI 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 BHI 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. BHI intends to coordinate its CDM activities with various parties including the other Halton Region LDCs (Oakville Hydro, Milton Hydro and Halton Hills Hydro), Union Gas and the OPA. BHI 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 Burlington Economic Development Corporation) are also under development.

In preparing this CDM Strategy BHI sought to pursue administrative efficiencies. BHI 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. BHI 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.

To ensure that administrative efficiencies are maintained and that there is continual improvement in CDM program delivery over the four year period, BHI 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.