



## London Hydro's Energy Conservation and Demand-Side Management (CDM) Strategy, 2011 through to 2014

October 29, 2010



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## **1.0 INTRODUCTION**

### **1.1 Background**

Bringing new and renewable generation on-line is a central component of a long-term solution to address Ontario's electricity supply issues, but curtailing demand through conservation measures has also become a key piece of government energy policy in moving forward. Conservation and demand management activities, or CDM, has a prominent role in realizing the government's vision.

The provincial *Green Energy and Green Economy Act, 2009* created the legislative framework for the Minister of Energy & Infrastructure to issue a series of directives. On March 31<sup>st</sup>, 2010, the Minister of Energy & Infrastructure issued a directive to the Ontario Energy Board to:

- establish CDM targets for each licensed distributor,
- make such targets a condition of a distributor's licence, and
- develop a CDM Code that includes rules relating to the planning, design, approval, implementation evaluation, measurement and verification, reporting requirements and performance incentives associated of CDM programs and to such other matters as the Board considers appropriate.

There are three types of CDM programs that LDC's can consider for meeting or exceeding their targets, namely:

- Tier 1 CDM programs – are turn-key province-wide programs, developed by OPA in conjunction with LDCs, which are to be the foundation of each LDC's CDM strategy.
- Tier 2 CDM programs – are developed by groups of local distribution companies, also called multi-LDC programs.
- Tier 3 CDM programs – are unique programs designed by individual LDCs.

LDC CDM portfolios can have a mix of the different types of conservation programs.

### **1.2 Purpose**

Section 2.1, *CDM Strategy Requirements*, of the OEB publication "*Conservation and Demand Management Code for Electricity Distributors*" [Ref 4], includes a regulatory requirement that licensed distributors file their respective CDM strategy with the Board by November 1, 2010.

This document is intended to be London Hydro's filing of its CDM strategy to meet or exceed the established CDM targets over the 2011 to 2014 timeframe.

### **1.3**      **Scope**

This document identifies the CDM targets established for London Hydro over the 2011 to 2014 timeframe, provides some high level information about the various Tier 1 (or provincial) CDM programs that will be available to LDC's, and provides an estimate of the demand reduction and accumulated energy savings that Tier 1 programs might deliver against the targets.

The document further provides high-level descriptions of the Tier 2 and Tier 3 CDM programs that London Hydro is contemplating to make up the shortfall.

Finally, the document provides some high-level strategy information regarding the methodology that London Hydro will implement to meet and hopefully exceed its designated targets.

### **1.4**      **Document Structure**

The format and content of this "CDM Strategy" filing is generally as set forth in Section 2.1, *CDM Strategy Requirements*, of the OEB publication "*Conservation and Demand Management Code for Electricity Distributors*" [Ref 4].

### **1.5**      **References**

- [1]      Ontario Bill 150, *Green Energy and Green Economy Act*, 2009.
- [2]      Minister of Energy & Infrastructure directive to the Ontario Energy Board; March 31<sup>st</sup>, 2010; re: establishment of electricity conservation and demand management targets to be met by licensed electricity distributors.
- [3]      Letter, dated June 22<sup>nd</sup>, 2010, from Ontario Energy Board to All Licensed Electricity Distributors; re: *Electricity Conservation and Demand Management Targets*, EB-2010-0216.
- [4]      Ontario Energy Board publication: *Conservation and Demand Management Code for Electricity Distributors*; September 16, 2010.
- [5]      London Hydro Report EM-10-15, *Strategic Outlook for Energy Conservation and Demand-Side Management (CDM) Programs, 2011 through to 2014*; September 17, 2010.
- [6]      Ontario Power Authority publication: *2011 – 2014 OPA-Contracted Province-Wide CDM Programs – Consumer Program Summary Guide*; October 2010.
- [7]      Ontario Power Authority publication: *2011 – 2014 OPA-Contracted Province-Wide CDM Programs – Commercial and Institutional Program Summary Guide*; October 2010.
- [8]      Ontario Power Authority publication: *2011 – 2014 OPA-Contracted Province-Wide CDM Programs – Industrial Program Summary Guide*; October 2010.

- [9] Ontario Energy Board publication: *2009 Yearbook of Electricity Distributors*; August 25, 2010.
- [10] Ontario Power Authority publication “*2010 Prescriptive Measures and Assumptions*”; Release 1 dated January 2010.
- [11] Ontario Power Authority publication “*2010 Quasi-Prescriptive Measures and Assumptions*”; Release 1 dated January 2010.
- [12] E-mail, dated August 13, 2010, from James Yue, Analyst – Portfolio Performance at Ontario Power Authority, to Mark Steeves, London Hydro, re: *Estimated allocation of 2006 – 2009 provincial conservation results to Local Distribution Company service territories – update to November 2009 report*.

## **1.6 Terminology**

The definitions given below are not intended to embrace all legitimate meanings of the terms. They are applicable only to the subject treated in this Report.

***Tier 1 CDM programs*** means turn-key province-wide programs, developed by OPA in conjunction with LDCs, which are to be the foundation of each LDC's CDM strategy.

***Tier 2 CDM programs*** means CDM programs developed by groups of local distribution companies, also called multi-LDC or regional programs

***Tier 3 CDM programs*** means unique CDM programs designed by individual LDC.

## **1.7 Acronyms, Abbreviations and Symbols**

### **1.7.1 Acronyms**

Acronyms used within this report are presented following in alphabetic order:

CDM	=	Conservation & Demand-Side Management
DSM	=	Demand Side Management
LDC	=	Local Distribution Company, e.g. London Hydro Inc.
OEB	=	Ontario Energy Board
OPA	=	Ontario Power Authority

### **1.7.2 Abbreviations**

Abbreviations used in this report are presented following in alphabetic order:

GWh	=	gigawatt hour
MW	=	megawatt

These abbreviations are consistent with CSA Standard Z85-1983, *Abbreviations for Scientific and Engineering Terms*.

## **2.0**      **ESTABLISHED CDM TARGETS**

For London Hydro, the established CDM targets over the 2011 to 2014 timeframe [given in Ref 3] are:

- 41 MW of sustained summer peak demand reduction at the end of the period; and
- 161 GWh of net accumulated energy savings over the period.

In converting these targets to types and quantities of CDM measures that need be installed or otherwise implemented, London Hydro has relied on two (2) OPA publications [Ref 10 and 11] to define the annual energy savings, summer demand reduction, and expected useful life of each measure. London Hydro has further relied on information distributed by the OPA [Ref 12] to establish the latest "*net-to-gross ratio*" for each measure.

Note: It is understood that these underlying assumptions may change from time-to-time and LDC's will have to make appropriate adjustments on a go-forward basis.

### **3.0 CDM STRATEGY**

London Hydro will proceed with the planning and development of a CDM portfolio covering the 2011 to 2014 timeframe based on the following ideology:

- London Hydro will deliver all Tier 1 provincial CDM programs as soon as they are available from the OPA;
- Board-approved CDM initiatives will initially be developed as Tier 3 programs, presented to other LDC's in the region to determine interest in a multi-LDC program, and then elevated to Tier 2 program if there is sufficient and timely interest;
- All Tier 2 and Tier 3 CDM programs should be ready to be filed with the Ontario Energy Board in December 2010 for approval, primarily so that program implementation can commence as soon as possible;
- London Hydro's goal is to exceed its defined CDM targets;
- London Hydro will attempt to execute all the programs in its portfolio as early as possible over the 2011 to 2014 timeframe. With this philosophy if a particular CDM program is found to be under-performing (in comparison to expectations) there will still be time to reformulate the initiative or introduce other initiatives in its place.
- London Hydro will maintain a balanced portfolio of CDM programs for all customer classes.
- London Hydro's portfolio of CDM programs will include measures for low-income customers.
- London Hydro will continue to rely on internal resources to coordinate its CDM programs as a means to maximize program effectiveness, i.e. low program delivery costs in tandem with high participation rates and customer satisfaction.
- London Hydro's CDM program delivery methodology will continue to develop local and regional capacity and expertise amongst its channel partners.
- London Hydro's CDM program design will, where possible, include a cross-pollination element with other LDC-offered CDM programs, as well as CDM programs offered by federal agencies (e.g. NRCAN, CMHC, etc.), provincial agencies, and other entities.
- As a Canadian ENERGY STAR participant, London Hydro will continue to use its portfolio of CDM to both promote the ENERGY STAR label and affect market transformation.

## 4.0 OPA-CONTRACTED PROVINCE-WIDE CDM PROGRAMS

### 4.1 General Framework for Provincial CDM Programs

The general framework for the provincial CDM programs is illustrated in Figure 4-1 below.<sup>1</sup>

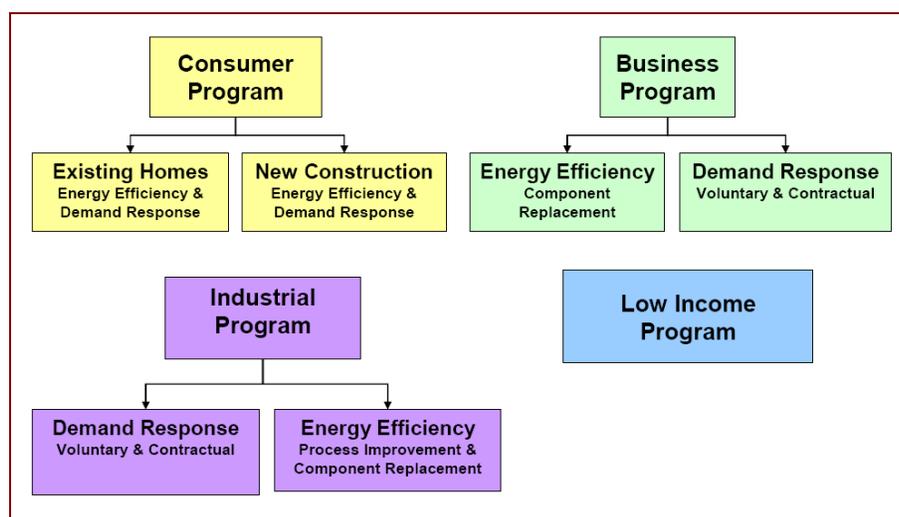


Figure 4-1, Framework for Province-Wide CDM Programs

The provincial (or Tier 1) programs targeted to the various customer sectors are defined in the subsections that follow.

### 4.2 Provincial CDM Program for Consumers

The provincial consumer program is described in the OPA publication entitled: *Consumer Program Summary Guide* [Ref 6]. This initiative is basically a carry forward of a number of familiar programs, namely:

- The *Great Refrigerator Round-Up* refrigerated appliance retirement program;
- The *Every Kilowatt Counts* coupon program;
- The *Cool Savings Rebate* program; and
- The *peaksaver*<sup>™</sup> demand response program.

New initiatives include:

- a *high-performance new construction* program for new, single-family homes, and

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<sup>1</sup> Ontario Power Authority presentation: *2011 – 2014 LDC-OPA Province-Wide Conservation Programs – Introduction*; April 15, 2010.

- some so-called mid-stream incentives that will be targeted to home electronics and swimming pool equipment.

Complete budgets have not yet been developed for London Hydro to execute the provincial CDM programs for consumers. We are still meeting with channel partners and developing “*Marketing & Execution Strategy*” documents for the “*Cool Savings Rebate*” and “*High Performance New Construction*” initiatives.

Note: As a general observation however, London Hydro notes that the monies provided by OPA for local execution of their programs has always been found to be ample. London Hydro is a low-cost service provider and every year returns unused program funding to the OPA. If the OPA's future program funding levels are comparable to the past, London Hydro foresees no problem delivering high quality CDM programs over the 2011 to 2014 timeframe.

### 4.3 Provincial CDM Programs for Businesses

The provincial business program is described in the OPA publication entitled: *Commercial and Institutional Program Summary Guide* [Ref 7]. This initiative is basically a carry forward of a number of familiar programs (with minor enhancements or modifications, or both), namely:

- *Power Savings Blitz* (PSB) direct install program for small business  
Note: It is expected that the *Power Savings Blitz* program will have run its course by the end of 2010; that is all eligible small businesses have been given the opportunity to participate in the PSB program.
- The *peaksaver*<sup>™</sup> demand response program for small business
- *Electricity Retrofit Incentive Program* (ERIP) for commercial, institutional and industrial customers and multi-tenant residential buildings.

New initiatives include:

- Direct servicing of space cooling systems, for small businesses; and
- High performance new construction, for new commercial, institutional and industrial buildings.

Complete budgets have not yet been developed for London Hydro to execute the provincial CDM programs for businesses. We are still meeting with channel partners and developing “*Marketing & Execution Strategy*” documents for the “*Direct Servicing of Space Cooling Systems*” and “*High Performance New Construction*” initiatives.

Note: As a general observation however, London Hydro notes that the monies provided by OPA for local execution of their programs has always been found to be ample. London Hydro is a low-cost service provider and every year returns unused program funding to the OPA. If the OPA's future program funding levels are comparable to the past, London Hydro foresees no problem delivering high quality CDM programs over the 2011 to 2014 timeframe.

#### **4.4 Provincial CDM Programs for Industrials**

The provincial industrial program is described in the OPA publication entitled: *Industrial Program Summary Guide* [Ref 8]. This initiative is basically a carry forward of a familiar program, namely:

- *Electricity Retrofit Incentive Program* (ERIP). Whereas previously there have been two classes of projects, namely “*prescriptive*” and “*custom*”, on a go-forward basis, ERIP will include another project class, namely “*engineered*”.

New initiatives include:

- *Industrial Accelerator* (IA) is an initiative aimed at improving the energy efficiency of industrial production processes. The program envisions two classes of projects, namely:
  - *Micro-projects, where there is an opportunity for a minimum of 100 MWh of annualized electric savings; and*
  - *Projects, where there is a minimum of 350 MWh of annualized electricity savings.*
- *Demand Response 1* (DR1) is available to customers with more than 50 kW of production load that can be turned off 4 hours at a time and that can be activated up to 100 hours per year. Registered participants need to be outfitted with an hourly interval meter. There is no obligation for registered participants to shed load each time the IESO issues a dispatch notice.
- *Demand Response 3* (DR3) is available to customers with more than 50 kW of production load that can be turned off 4 hours at a time and that can be activated up to 100 or 200 hours per year. Registered participants need to be outfitted with a 5-minute interval meter. There is an obligation for registered participants to shed load each time the IESO issues a dispatch notice, and financial penalties for participants that don't shed contracted loads.

Note: Customers with interruptible loads greater than 5 MW are eligible for a direct contract with the IESO; all others will use the services of an aggregator. Within London Hydro's franchise service territory, there are only one institutional customer and two industrial customers that even have loads greater than 5 MW.

Complete budgets have not yet been developed for London Hydro to execute the provincial CDM programs for industrial customers. We are still meeting with channel partners and developing “*Marketing & Execution Strategy*” documents for the “*Demand Response 1*” and “*Demand Response 3*” initiatives.

#### **4.5 Low-Income CDM Program**

It is understood that the only public domain information available on the OPA's low-income CDM program is that contained in a webinar presentation of August 5<sup>th</sup>, 2010 entitled: *Proposed 2011 – 2014 Low Income Consumer Offerings – Stakeholder Consultation Process*.

Nonetheless, London Hydro has enjoyed significant success with the low-income sector both with our third-tranche CDM programs and the more recent OPA CDM programs. Specific examples include, but are not necessarily limited to the following:

- 2,365 refrigerators replaced with Energy Star qualified apartment refrigerators (within apartment buildings owned and operated by London & Middlesex Housing Corporation) under the auspices of London Hydro's *Chill Out* program;
- 11,000 in-suite incandescent lamps converted to compact fluorescent lamps under the auspices of London Hydro's *CFL for Incandescent Exchange* program (that later continued as an ERIP initiative), 250 T12 linear fluorescent lamps with electromagnet ballasts converted to T5 lamps with electronic ballasts, (again, within apartment buildings owned and operated by London & Middlesex Housing Corporation).
- London Food Bank initiative – as a local extension to the OPA's ERIP initiative, London Hydro has collected the scrap metal halide lighting fixtures being replaced in several industrial and institutional facilities, delivered this material to a local metal recycler, and used the received monies in conjunction with OPA *Every Kilowatt Counts* coupons to provide some 46,000 compact fluorescent lamps (CFL's) to the London Food Bank for distribution to needy families and individuals.
- Stevenson Children's Camp is a registered charitable organization that has been providing a residential camp experience for underprivileged children for over 50 years. The facility now accommodates 768 campers each summer. For several years now, London Hydro has been providing energy conservation kits to the young campers so their respective families can also participate in the movement to a conservation culture within the province.

London Hydro has met with representatives from Union Gas concerning the opportunity of a joint low-income CDM program. It is understood that Union Gas has already completed their *Helping Homes Conserve* low-income initiative in London.<sup>2</sup> Under this initiative, Union Gas developed a target list of low-income customers through third-party postal cost data that identified neighbourhoods with a high propensity of low-income residents (i.e. customers with an income at 125% or below the Statistics Canada pre-tax, post-transfer Low-Income Cut-Off). These postal codes were then scrubbed against Union's internal customer data (to ensure customer pays a Union Gas bill) and target lists were created. Union Gas' installation contractor would then provide designated customers with the free installation of energy-efficient showerheads, pipe wrap, bathroom and kitchen faucet aerators, a programmable thermostat, and educational materials. London Hydro undertook similar measures a decade ago (when it operated its SAVE\$ and SAVE\$-Plus programs) for all customers with electric storage hot water heaters.

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<sup>2</sup> Union Gas report: *Audited Demand Side Management 2009 Annual Report*; August 17, 2010; Section 5, *Low-Income – Helping Homes Conserve*; pg 19 – 24.

In 2009, Union Gas initiated a “*Home Weatherization for Social Housing*” program in Cornwall. It is unclear at this point in time when Union Gas will bring this DSM program to London and area. It is also unclear at this point in time whether the OPA’s Tier 1 program will mirror Union Gas’ DSM program in which case the two organizations can proceed jointly, or whether there will be differences in which case London Hydro may wish to submit an application for a Tier 2 CDM program to expand the measures list.

As its name implies, the London & Middlesex Housing Corporation (LMHC) is responsible for the management of public housing and the rent supplement program both in London and throughout Middlesex County. The agency has buildings in the following communities: London, Mount Brydges, Parkhill, Strathroy, Alisa Craig, Delaware, Glencoe, Ilderton, Lucan, Melbourne, Wardsville, Thorndale, and Komoka.

As such, London Hydro’s low-income CDM program will undoubtedly be developed in partnership with Union Gas, Middlesex Power Distribution Corporation (that services Strathroy), and Hydro One Networks (that serves the other villages).

#### **4.6 Projected Results of Provincial CDM Programs**

London Hydro has carried out a gap analysis [Ref 5] to identify the shortfall between what is believed to be achievable with provincial CDM programs (assuming London Hydro continues with its aggressive approach on the CDM front) and the established demand reduction and energy savings targets given in Section 2.0 herein.

This analysis indicates that Tier 1 CDM programs will only deliver 40% of London Hydro’s net demand reduction target and 56% of its accumulated net energy savings target. The deficiency will have to be made up with Board-approved Tier 2 and Tier 3 CDM programs.

## 5.0 POTENTIAL BOARD-APPROVED CDM PROGRAMS

To meet its established CDM targets, London Hydro has a number of Tier 2 and Tier 3 CDM programs under development. Although few CDM programs have yet been assigned a formal marketing name, generic descriptions of the various initiatives follow:

### Residential CDM Initiatives -

- Home energy report card – If the provincial Smartmetering objective is to be effective, then it will be necessary for residential and small commercial customers to have access to tools or similar feedback mechanisms so they can discern their individual status and progress with respect to the efficient use of electrical energy, and information about specific energy actions that they can undertake.

The home energy report card initiative provides residential customers with energy consumption information in comparison to their neighbours with two underlying purposes in mind, namely:

- To cause customers to have an interest in their Smart-meter and the associated web-presentment tools that provide customers with feedback on their hourly energy consumption on the previous day; and
- As a catalyst to interest residential customers into undertaking energy conservation actions.

London Hydro has had discussions with other interested LDC's and plans to submit this initiative will be submitted at a Tier 2 program.

- Wash Out – this program would be a follow-up to London Hydro's third-tranche *Chill Out* program and would encourage consumers to upgrade their automatic dishwashers and automatic clothes washing machines to Energy Star qualified appliances.
- Load management control of electric storage water heaters – prior to opening of the electricity marketplace, London Hydro had some 5 MW of rental electric storage water heaters under load management control under its SAVE\$ program. The load management controller changes the operation of the water heater so that the unit is recharged during the off-peak periods and consumes no electricity during the peak periods of the day. With Smart-meters and time-of-use electricity pricing, the consumer will achieve a bill savings, and every element of the power system will benefit by shifting load from high-use periods of the day to low-use periods of the day. Under this program, the load management controls will be re-instated for interested customers with electric storage water heaters.
- Hot tub efficiency program – this initiative would be a companion program to the OPA's in-ground pool efficiency program and would target hot tubs.
- Phantom load control – "*phantom load*" is the electricity consumed by a device when it is turned off. For example, your television consumes electricity as it

waits for you to hit the “on” button on your remote. The clock on your microwave oven uses up energy 24/7 to keep track of time. These devices have a hidden energy cost that most people are never even aware of. Nationally, phantom loads make up about six percent of our energy consumption. Intelligent power strips are now coming into the marketplace that can be used effectively with the home computer and home entertainment electronics.

Business CDM Initiatives:

- Thermal energy storage air conditioning – London Hydro has been working with TD Canada Trust on the installation of an Ice Energy<sup>®</sup> Ice Bear<sup>®</sup> thermal energy storage unit for providing daytime air conditioning load to a local branch office. Whereas the intent was to develop a custom Tier 3 program for this technology, since Toronto Hydro is pilot testing this technology,<sup>3</sup> London Hydro will most likely arrange to become a participating LDC in their endeavour.
- Solar blocking window films – modern Energy Star qualified windows will generally incorporate a polarized solar blocking window film into the design of the window whereby the whereby the winter rays (when the sun is low in the sky) can penetrate the window to heat the interior and the summer rays (when the sun is higher in the sky) are reflected, thereby reducing the air conditioning load in the premises. In cases where the windows in an apartment building or other commercial building are still in good shape (i.e. replacement is still several years away), the application of solar blocking window films can be a cost-effective interim measure.
- Demand response for building automation systems – a number of larger buildings have existing building automation systems (BAS) in-place but no convenient mechanism to participate in the demand response marketplace (i.e. reduce load during system emergencies or above an established electricity pricing threshold).

Other / Specialty CDM Initiatives:

- Continuation of London Food Bank initiative – The London Food Bank initiative is a local customization of the OPA's ERIP program whereby London Hydro has arranged for scrap lighting fixtures to be disassembled and shipped to a local metal recycler. The scrap metals monies is augmented with the OPA's *Every Kilowatt Counts* coupons to procure premium-quality compact fluorescent lamps (CFL's) and have such CFL's distributed to needy individuals and families via the London Food Bank.
- Promotion of district heating & cooling – located in the core area of London is the Fort Chicago tri-generation plant that provides district heating and cooling lines to core area businesses and electricity to London Hydro's distribution grid (under an

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<sup>3</sup> See story “Toronto Hydro funds innovative ice energy storage pilot at the Toronto Zoo to help beat the peak and save the environment.” on Toronto Hydro's website at URL::  
<http://www.torontohydro.com/SITES/ELECTRICSYSTEM/ELECTRICITYCONSERVATION/BUSINESSCONSERVATION/Pages/IceBearEnergyStoragePilot.aspx>

OPA RESOP program). Under this initiative, core area businesses with aging electric chillers will be encouraged to retire their electric chillers and transfer their thermal chilling needs to the district heating/cooling plant.

As previously noted in Section 3.0 herein, most of the CDM programs listed above are being initially developed as Tier 3 programs, but will be presented to other LDC's in the region to see if there is interest in a multi-LDC (i.e. Tier 2) approach.

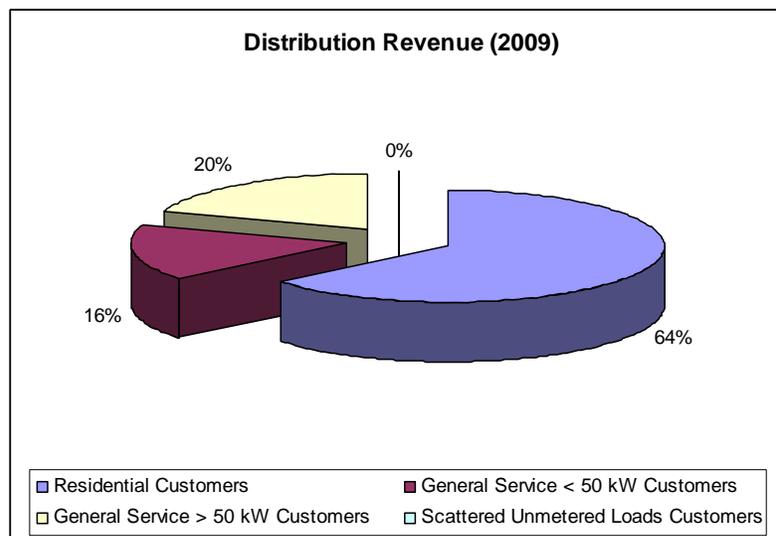
In a similar vein, London Hydro fully expects that other LDC's will be developing unique CDM programs outside of those listed above. If such a program or programs have potential in London's franchise service territory, then London Hydro is likely to request participation in such other initiatives.

## 6.0 PROGRAM MIX

Clause 3(b) of the Minister's March 31<sup>st</sup>, 2010 Directive [Ref 2] provides for a balanced CDM portfolio. Specifically:

- (b) ... the distributor must deliver a mix of CDM Programs to all consumer types in the distributor's service area, whether through Board-Approved CDM Programs, OPA-Contracted Province-Wide CDM Programs or a combination of the two, as far as is appropriate and reasonable having regard to the composition of the distributor's customer base;

Figure 6-1 below is derived from information published in the 2009 Yearbook of Electricity Distributors [Ref 9] and shows London Hydro's distribution revenue by customer classification.



**Figure 6-1, Distribution Revenue by Customer Classification**

Although London Hydro derives 64% of its distribution revenue from the “residential” customer classification, in recent years the strongest and most successful CDM programs (namely ERIP and PSB) have been targeted to other customer segments.

Clearly there is a need to augment the CDM opportunities available to the residential customer segment. It will be seen from London Hydro's proposed CDM portfolio that there is a strong focus on CDM options for the residential customer class.

## 7.0 CDM PROGRAMS CO-ORDINATION

London Hydro has traditionally operated low-cost and effective (i.e. program achievement relative to expended administrative and advertising dollar) CDM programs, and we fully expect this practice to continue for the 2011 to 2014 CDM programs in its portfolio.

One of the keys to success is determining at the outset (i.e. during the program design phase) what each channel partner is best able to contribute to the overall success of the program, and having that party deliver a quality service in that area. For example, rather than London Hydro carrying out an energy audit of all the buildings operated by London & Middlesex Housing Corporation, we rely on their "*condition assessment*" documents for each premise.

The execution of our programs will, as in the prior programs, leverage out current industry partners. Current strong relationships include, but are not limited to, NRCan, Energy Star, and other government and government-supported energy efficiency organizations. Utilizing their marketing, promotion and customer relationships, London Hydro has garnered strong partnerships and will continue to do so.

London Hydro has also been the purveyor of the largest multi-jurisdictional commercial energy-efficiency projects in Ontario and in fact several have been the largest in North America. We will continue to foster partnerships with utilities and work together to share our extensive knowledge and create economies of scale for the operation of CDM programs with other utilities. London Hydro has already initiated contact with many local LDCs and our Natural Gas distributor in order to explore opportunities and forge plans for cooperative programs such as low income, school-based programs as a few examples as many entities have facilities in several jurisdictions that reach outside our normal service territory. The OPA has supported our desires to achieve economies of scale by providing London Hydro with a project format deemed a "Head Office" model which projects have resulted in hundreds of facilities being retrofitted at a very low operational cost and low administrative burden with the cooperation of neighbouring and distant utilities. Although not perfect, we expect the current short comings of this model to be addressed in the new program designs.





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