



CAMBRIDGE AND NORTH DUMFRIES HYDRO INC.

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# **Cambridge and North Dumfries Hydro Inc.**

Electricity Distributor Licence ED-202-0574

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**Conservation and Demand Management**

## **2011 Annual Report**

Submitted to:

Ontario Energy Board

Submitted on September 30, 2012

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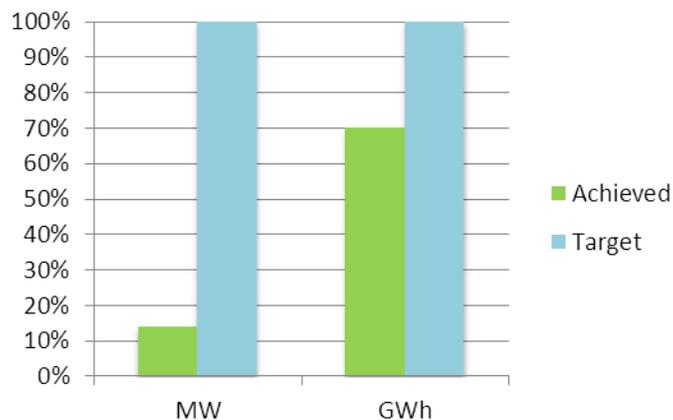
## Table of Contents

<b>EXECUTIVE SUMMARY .....</b>	<b>3</b>
<b>BACKGROUND.....</b>	<b>5</b>
<b>1 BOARD-APPROVED CDM PROGRAMS .....</b>	<b>6</b>
1.1 INTRODUCTION .....	6
1.2 TOU PRICING .....	6
1.2.1 BACKGROUND.....	6
1.3 CND’S APPLICATION WITH THE OEB .....	7
<b>2 OPA-CONTRACTED PROVINCE-WIDE CDM PROGRAMS.....</b>	<b>8</b>
2.1 INTRODUCTION .....	8
2.2 PROGRAM DESCRIPTIONS .....	11
2.2.1 RESIDENTIAL PROGRAMS .....	11
2.2.2 COMMERCIAL AND INSTITUTIONAL PROGRAMS .....	26
2.2.3 INDUSTRIAL PROGRAMS.....	37
2.2.4 PRE-2011 PROGRAMS COMPLETED IN 2011 .....	45
2.3 PARTICIPATION/UPTAKE BY INITIATIVE .....	47
2.4 SPENDING.....	49
2.5 EVALUATION .....	51
2.5.1 EVALUATION RESULTS .....	55
2.6 ADDITIONAL COMMENTS .....	58
<b>3 COMBINED CDM REPORTING ELEMENTS .....</b>	<b>59</b>
3.1 PROGRESS TOWARDS CDM TARGETS .....	59

## Executive Summary

2011 represented the first of four years of Conservation and Demand Management (CDM) program delivery under the new Ontario Energy Board CDM Code (Board File No. EB-2010-0215). The CDM Code requires that Cambridge and North Dumfries Hydro Inc. (CND) achieve 17.68MW and 73.66GWh of peak demand and energy savings during the period January 1, 2011 to December 31, 2014. This report will provide details on the achievement to date, including activities undertaken to increase participation rates. The 2011 achievements toward the 2014 target are 2.45MW and 51.34GWh and are summarized in the chart below.

**2011 Contributions to 2014 Target (MW & GWh)**



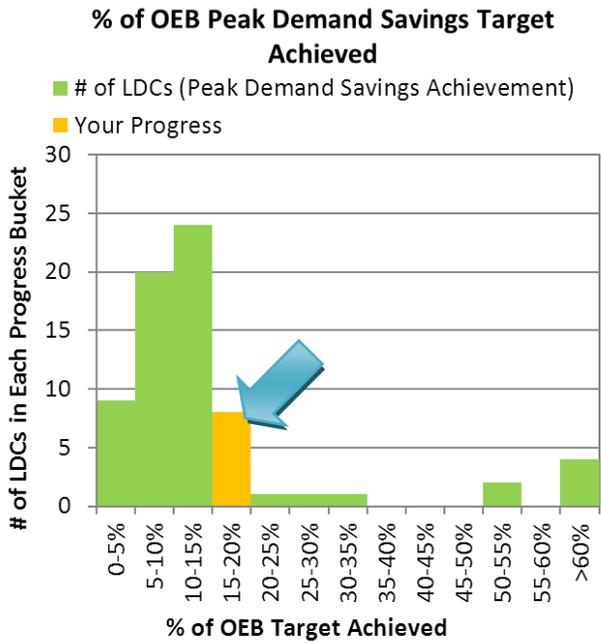
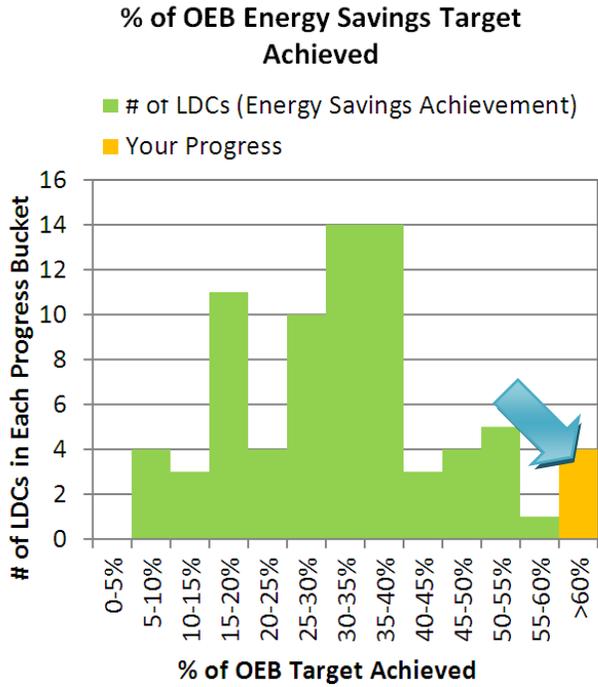
CND made the engagement of channel partners, stakeholders and customers a key priority. Efforts to provide continuity from Initiatives pre-2011 proved valuable to realizing savings early on. As demonstrated in the chart above, GWh savings have accumulated quickly, impacted heavily by results attributed to pre-2011 Initiatives.

To reduce overhead costs and improve delivery of CDM Initiatives, CND collaborated with Kitchener-Wilmot Hydro Inc. (KW) and Waterloo North Hydro Inc. (WN) our partners in the Region of Waterloo (herein known as the “CKW Group”). Additionally, where appropriate, partnership with Union Gas was sought to improve collaboration and cross promotion.

Please find on the next page, a graphical representation of CND’s performance position in relation to other CDM delivering Local Distribution Companies (LDCs). These results were provided by the Ontario Power Authority in the 2011 year-end report.

### Comparison: CND Achievement vs. LDC Community Achievement

The following graphs assume that demand response resources remain until 2014



## Background

On March 31, 2010, the Minister of Energy and Infrastructure of Ontario, under the guidance of sections 27.1 and 27.2 of the *Ontario Energy Board Act, 1998*, directed the Ontario Energy Board (OEB) to establish CDM targets to be met by electricity distributors. Accordingly, on November 12, 2010, the OEB amended the distribution licence of CND to require CND, as a condition of its licence, to achieve 73.66 GWh of energy savings and 17.68 MW of summer peak demand savings, over the period beginning January 1, 2011 through December 31, 2014.

In accordance with the same Minister's directive, the OEB issued the Conservation and Demand Management Code for Electricity Distributors (the Code) on September 16, 2010. The Code sets out the obligations and requirements with which electricity distributors must comply in relation to the CDM targets set out in their licences. To comply with the Code requirements, CND submitted its CDM Strategy on November 1, 2010 which provided a high level description of how CND intended to achieve its CDM targets.

The Code also required a distributor to file annual report with the OEB. This Annual Report is prepared accordingly and covers the period from January 1, 2011 to December 31, 2011.

# **1 Board-Approved CDM Programs**

## **1.1 Introduction**

In its Decision and Order dated November 12, 2010 (**EB-2010-0215 & EB-2010-0216**), the OEB ordered that, (to meet its mandatory CDM targets), “Each licenced electricity distributor must, as a condition of its licence, deliver Board-Approved CDM Programs, OPA-Contracted Province-Wide CDM Programs, or a combination of the two”.

At this time, the implementation of Time-of-Use (“TOU”) Pricing is the only Board-Approved CDM program that is being considered in CND’s service area. It should be noted, CND did not implement TOU pricing until May, 2012.

## **1.2 TOU Pricing**

### **1.2.1 Background**

In its April 26, 2012 CDM Guidelines, the OEB recognized that a portion of the aggregate electricity demand target was intended to be attributable to savings achieved through the implementation of TOU Pricing. The OEB established TOU prices and has made the implementation of this pricing mechanism mandatory for distributors. On this basis, the OEB has determined that distributors will not have to file a Board-Approved CDM program application regarding TOU pricing. The OEB has deemed the implementation of TOU pricing to be a Board-Approved CDM program for the purposes of achieving the CDM targets. The costs associated with the implementation of TOU pricing are recoverable through distribution rates, and not through the Global Adjustment Mechanism (“GAM”).

In accordance with a Directive dated March 31, 2010 by the Minister of Energy and Infrastructure, the OEB is of the view that any evaluations of savings from TOU pricing should be conducted by the Ontario Power Authority (OPA) for the province, and then allocated to distributors. CND will report these results upon receipt from the OPA. As of September 30, 2012, the OPA has not released its preliminary results of TOU savings to distributors.

CND began transitioning its RPP customers to TOU billing in April and May 2012 and delivered its first TOU bills August, 8 2012. As of August 31, 2012, 93% of CND’s RPP customers are on TOU billing.

### **1.3 CND's Application with the OEB**

In 2011, CND did not file an application for any Board-Approved CDM programs. It is not anticipated that any applications will be made in subsequent years.

## 2 OPA-Contracted Province-Wide CDM Programs

### 2.1 Introduction

Effective February 17, 2011, CND entered into an agreement with the OPA to deliver CDM programs as listed in Table 1 below, for the period January 1, 2011 to December 31, 2014. In addition, results will be reported from projects started pre-2011 which completed in 2011.

**Table 1: CDM Program Listing**

Initiative	Schedule	Date schedule posted	Customer Class
<b>Residential Program</b>			
Appliance Retirement	Schedule B-1, Exhibit D	Jan 26 2011	All residential rate classes
Appliance Exchange	Schedule B-1, Exhibit E	Jan 26 2011	All residential rate classes
HVAC Incentives	Schedule B-1, Exhibit B	Jan 26 2011	All residential rate classes
Conservation Instant Coupon Booklet	Schedule B-1, Exhibit A	Jan 26 2011	All residential rate classes
Bi-Annual Retailer Event	Schedule B-1, Exhibit C	Jan 26 2011	All residential rate classes
Residential Demand Response	Schedule B-3	Aug 22 2011	All general service classes
New Construction Program	Schedule B-2	Jan 26 2011	All residential rate classes
<b>Commercial &amp; Institutional Program</b>			
Efficiency: Equipment Replacement	Schedule C-2	Jan 26 2011	All general service classes
Direct Install Lighting	Schedule C-3	Jan 26 2011	General Service < 50 kW
Existing Building Commissioning Incentive	Schedule C-6	Feb 2011	All general service classes
New Construction and Major Renovation Initiative	Schedule C-4	Feb 2011	All general service classes

Cambridge and North Dumfries Hydro 2011 CDM Annual Report

Energy Audit	Schedule C-1	Jan 26, 2011	All general service classes
Commercial Demand Response (part of the Residential program schedule)	Schedule B-3	Jan 26, 2011	All general service classes
Demand Response 3 (part of the Industrial program schedule)	Schedule D-6	May 31, 2011	General Service 50 kW & above
<b>Industrial Program</b>			
Process & System Upgrades	Schedule D-1	May 31, 2011	General Service 50 kW & above
Monitoring & Targeting	Schedule D-2	May 31, 2011	General Service 50 kW & above
Energy Manager	Schedule D-3	May 31, 2011	General Service 50 kW & above
Efficiency: Equipment Replacement Incentive (part of the C&I program schedule)	Schedule C-2	May 31, 2011	General Service 50 kW & above
Demand Response 3	Schedule D-6	May 31, 2011	General Service 50 kW & above
<b>Home Assistance Program</b>			
Home Assistance Program	Schedule E-1	May 9, 2011	All residential rate classes
<b>Pre-2011 Programs completed in 2011</b>			
Electricity Retrofit Incentive Program	n/a	n/a	All general service classes
High Performance New Construction	n/a	n/a	All general service classes

Several Initiatives that were included in the schedules were not in market in 2011. The OPA has communicated that the Initiatives listed below in table 2 were not in market in 2011 and that they represent a very small percentage of the forecasted energy and demand savings. During the 2011 program year, the OPA placed emphasis on supporting the implementation of Initiatives that would offer the greatest ratepayer value and greatest amount of persisting savings.

**Table 2: Initiatives Not in Market in 2011**

<b>Initiative Not in Market in 2011</b>	<b>Objective</b>	<b>Status</b>
<b>Residential Program</b>		
Midstream Electronics	The objective of this initiative is to encourage retailers to promote and sell high efficiency televisions, and for distributors to distribute high efficiency set top boxes.	Not launched to market
Midstream Pool Equipment	The objective of this Initiative is to encourage pool installers to sell and install efficient pool pump equipment in residential in-ground pools.	Not launched to market
First Nations Program	First Nations programs are delivered by OPA and results are attributed to LDCs for reporting.	Not launched to market
Home Energy Audit Tool	This is a provincial online audit tool to engage customers in conservation and help drive customer participation to CDM programs.	Not launched to market
<b>Commercial &amp; Institutional Program</b>		
Direct Service Space Cooling	The objective of this Initiative is to offer free servicing of air conditioning systems and refrigeration units for the purpose of achieving energy savings and demand reduction.	Not launched to market in 2011. The OPA has no plans to launch this Initiative 2012
<b>Industrial Program</b>		
Demand Response 1	As above	No customer uptake for this Initiative

The Master Service Agreement (the Agreement) between CND and the OPA includes a program change management provisions in Article 3. Collaboration between the OPA and the LDCs commenced in 2011 as the change management process was implemented to enhance the saveONenergy program suite. The change management process allows for modifications to the Agreement and Initiative Schedules. The program enhancements give LDCs additional tools and greater flexibility to deliver programs in a way that meets the needs of customers and further drives participation in the Initiatives.

## 2.2 Program Descriptions

### 2.2.1 Residential Programs

#### **Appliance Retirement Initiative**

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**Target Customer Type:** Residential customers

**Initiative Frequency:** Year round

**Objectives:** Achieve energy and demand savings by permanently decommissioning certain older, inefficient refrigeration appliances.

**Description:** This is an energy efficiency Initiative that offers individuals and businesses free pick-up and decommissioning of old large refrigerators and freezers. Window air conditioners and portable dehumidifiers will also be picked up if a refrigerator or a freezer is being collected.

**Targeted End Uses:** Refrigerators, freezers, window air conditioners and portable dehumidifiers

**Delivery:** OPA centrally contracts for province-wide marketing, call center, appliance pick-up and decommissioning process. LDC provides local marketing and coordination with municipal pick-up where available. Additional detail is available:

- Schedule B-1, Exhibit D  
[http://www.powerauthority.on.ca/sites/default/files/new\\_files/industry\\_stakeholders/current\\_electricity\\_contracts/pdfs/Schedule%20B-1%20Residential%20Program.pdf](http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20B-1%20Residential%20Program.pdf) and
- saveONenergy website  
<https://saveonenergy.ca/Consumer/Programs/Appliance-Retirement.aspx>

#### **Initiative Activities/Progress:**

Below is a comprehensive list of activities undertaken by CND to promote the Residential Program offerings. Activities were commonly undertaken to promote saveONenergy FOR HOME at a holistic program level rather than at the individual Initiative level for better market penetration and to achieve cost-efficiencies. In addition to cobranding marketing between Initiatives, every effort was made to collaborate and share material, ad space and creative costs with KW and WN in our endeavour to jointly deliver the program.

- Newspaper ads ran in the Cambridge Times and Ayr News weekly from August, 2011 to December 2011.
- Full page ad in special Cambridge Times newspaper publication “Here’s My Card”; a business directory profile and community connection guide.
- Advertisement in annual Cambridge Community Magazine distributed to households in the City of Cambridge and Township of North Dumfries through the Cambridge Times.
- Cambridge Winterhawks Jr. B. hockey team sponsorship; including logo on rink boards, branded game puck, logo on player’s jersey and a special game night sponsorship including booth space.
- Brian in a Box sponsor in partnership with 107.5 DAVE FM and the United Way of Cambridge and North Dumfries; included a community fundraiser BBQ and radio advertisements.
- Program banners jointly branded with KW and WN to promote the program in our lobby and at special events.
- The CKW Group sponsored the Kitchener Rangers Jr. A hockey team on the scoreboard with a commercial supporting the saveONenergy FOR HOME programs through the mysaveONenergy Pledge.
- Promotion of the programs through mysaveONenergy Pledge stickers on all corporate vehicles.
- saveONenergy branded ice scrapers provided as a promotional item giveaway in our lobby and at community events.
- Program brochure jointly branded with KW and WN to promote the programs in our lobby and at special events.
- Sponsorship of Christmas in Cambridge and the New Year’s Eve skating event.
- Promotion of programs at retailer locations in conjunction with HVAC Incentives, Appliance Exchange and Coupon events.
- Newspaper advertisement in the Waterloo Region Record jointly branded with KW and WN to promote energy savings tips and saveONenergy FOR HOME programs during Earth Hour.

**In Market Date:** February 17, 2011

**Lessons Learned:**

- The Appliance Retirement Initiative (previously The Great Refrigerator Round-Up) has been offered by LDCs since 2007. This Initiative is approaching market saturation.
- While the OPA and the LDCs have reviewed this Initiative to assess whether to include other products, appliances have a natural life cycle and the Initiative cannot be expected to continually deliver the high level of results in perpetuity.

These lower expectations have been taken into account when developing conservation portfolios.

- This Initiative now faces some competition from independent retailers and municipalities. Locally, the Region of Waterloo offers a popular curb-side appliance pick up at no cost to customers.
- Results are very responsive to province wide advertising.

## Appliance Exchange Initiative

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**Target Customer Type:** Residential customers

**Initiative Frequency:** Spring and fall

**Objective:** The objective of this Initiative is to remove and permanently decommission older, inefficient window air conditioners and portable dehumidifiers that are in Ontario.

**Description:** This Initiative involves appliance exchange events. Exchange events are held at local retail locations and customers are encouraged to bring in their old room air conditioners and dehumidifiers in exchange for coupons/discounts towards the purchase of new energy efficient equipment.

**Targeted End Uses:** Window air conditioners and portable dehumidifiers

**Delivery:** OPA contracts with participating retailers for collection of eligible units. Additional detail is available:

- Schedule B-1, Exhibit C  
[http://www.powerauthority.on.ca/sites/default/files/new\\_files/industry\\_stakeholders/current\\_electricity\\_contracts/pdfs/Schedule%20B-1%20Residential%20Program.pdf](http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20B-1%20Residential%20Program.pdf) and
- saveONenergy website <https://saveonenergy.ca/Consumer.aspx>

**Initiative Activities/Progress:** Staff of CND attended the spring weekend event at a local retailer to coordinate the drop off and cross promote the other Initiatives to participating customers.

**In Market Date:** May 14-15 2011

### Lessons Learned:

- The spring event had the participation of 3 retailers with 300 – 400 locations across the province. However, the fall 2011 event had no retailer participation, therefore savings budgeted by the LDCs did not materialize.
- Evaluation, Measurement, and Verification (EMV) results indicated that the value of savings for retired room AC has dropped, *see table 5*.
- The Initiative may be achieving market saturation.
- The type of unit turned in is very dependent upon what is promoted by the retailers.

## HVAC Incentives Initiative

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**Target Customer Type:** Residential customers

**Initiative Frequency:** Year round

**Objective:** The objective of this Initiative is to encourage the replacement of existing heating systems with high efficiency furnaces equipped with Electronically Commutated Motors (ECM), and to replace existing central air conditioners (CAC) with ENERGY STAR qualified systems and products.

**Description:** This is an energy efficiency Initiative that provides rebates for the replacement of old heating or cooling systems with high efficiency furnaces (equipped with ECM) and Energy Star qualified CACs by approved Heating, Refrigeration, and Air Conditioning Institute (HRAI) qualified contractors.

**Targeted End Uses:** CACs and furnaces

**Delivery:** OPA contracts centrally for delivery of the program and LDCs are encouraged to convince local contractors to participate in the Initiative. Additional detail is available:

- Schedule B-1, Exhibit B  
[http://www.powerauthority.on.ca/sites/default/files/new\\_files/industry\\_stakeholders/current\\_electricity\\_contracts/pdfs/Schedule%20B-1%20Residential%20Program.pdf](http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20B-1%20Residential%20Program.pdf) and
- saveONenergy website <https://saveonenergy.ca/Consumer.aspx>

### **Initiative Activities/Progress:**

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- Promotion of programs at retailer locations in conjunction with Appliance Retirement, Appliance Exchange and Coupon events.
- Newspaper advertisement in the Waterloo Region Record jointly branded with KW and WN to promote energy savings tips and saveONenergy FOR HOME programs during Earth Hour.

**In Market Date:** February 17, 2011

**Lessons Learned:**

- Channel engagement is a highly effective method of connecting with customers; however channel partners require timeliness of the Rebate process to maintain a positive relationship between consumers, contractors, the OPA, and the participating LDC.
- There appears to be spillover from non-HRAI contractors who are ineligible for this Initiative. There are cases where smaller independent contractors are offering their own incentives (by discounting their installations to match value of the OPA incentive) to make the sale. As this occurs outside of the Initiative, these installations are not being attributed to any LDC.

## Conservation Instant Coupon Booklet Initiative

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**Target Customer Type:** Residential customers

**Initiative Frequency:** Year round

**Objective:** The objective of this Initiative is to encourage households to purchase energy efficient products by offering discounts.

**Description:** This Initiative provides customers with year round coupons. The coupons offer instant rebates towards the purchase of a variety of low cost, easy to install energy efficient measures and can be redeemed at participating retailers. Booklets were directly mailed to customers and were also available at point-of-purchase. Downloadable coupons were also available at [www.saveoneenergy.ca](http://www.saveoneenergy.ca).

**Targeted End Uses:** ENERGYSTAR® qualified standard Compact Fluorescent Lights (CFLs), ENERGYSTAR® qualified Light Fixtures lighting control products, weather-stripping, hot water pipe wrap, electric water heater blanket, heavy duty plug-in timers, advanced power bars, clothesline and baseboard programmable thermostats

**Delivery:** OPA contracts centrally for the distribution of the coupon booklets across Ontario. LDC distributes coupons at local events. The OPA enters into agreements with retailers to honour the coupons. Additional detail is available:

- Schedule B-1, Exhibit A  
[http://www.powerauthority.on.ca/sites/default/files/new\\_files/industry\\_stakeholders/current\\_electricity\\_contracts/pdfs/Schedule%20B-1%20Residential%20Program.pdf](http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20B-1%20Residential%20Program.pdf) and
- saveONenergy website <https://saveonenergy.ca/Consumer.aspx>

### Initiative Activities/Progress:

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- Sponsorship of Christmas in Cambridge and the New Year’s Eve skating event
- Promotion of programs at retailer locations in conjunction with Appliance Exchange and Coupon events.
- Newspaper advertisement in the Waterloo Region Record jointly branded with KW and WN to promote energy savings tips and saveONenergy FOR HOME programs during Earth Hour.

**In Market Date:** April 2011

**Lessons Learned:**

- The downloadable coupons had a higher rate of redemption than the mailed out booklets.
- This Initiative may benefit from an enabler such as a conservation card/loyalty card to increase customer participation.
- The timeframe for retailer submission of redeemed coupons vary from retailer to retailer. This delays the results reporting, which in turn limits the OPA and LDC abilities to react and respond to Initiative performance or changes in consumer behaviour.

## Bi-Annual Retailer Event Initiative

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**Target Customer Type:** Residential customers

**Initiative Frequency:** Bi-annual events

**Objective:** The objective of this Initiative is to provide instant point of purchase discounts to individuals at participating retailers for a variety of energy efficient products.

**Description:** Twice a year (spring and fall), participating retailers host month-long rebate events. During the months of April and October, customers are encouraged to visit participating retailers where they can find coupons redeemable for instant rebates towards a variety of low cost, easy to install energy efficient measures.

**Targeted End Uses:** Same as the conservation instant coupon booklet Initiative

**Delivery:** The OPA enters into arrangements with participating retailers to promote the discounted products, and to post and honour related coupons. LDCs also refer retailers to the OPA. Additional detail is available:

- Schedule B-1, Exhibit C  
[http://www.powerauthority.on.ca/sites/default/files/new\\_files/industry\\_stakeholders/current\\_electricity\\_contracts/pdfs/Schedule%20B-1%20Residential%20Program.pdf](http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20B-1%20Residential%20Program.pdf) and
- saveONenergy website <https://saveonenergy.ca/Consumer.aspx>

### **Initiative Activities/Progress:**

No marketing activities were undertaken at the local level for this Initiative. Results relied on spillover from the year-round coupon campaign and the marketing undertaken at a provincial and retailer level.

**In Market Date:** April 2011

### **Lessons Learned:**

- The Product list has changed very little over the past four years.
- Program evolution, including new products (for example, LED lighting) and review of incentive pricing for the coupon Initiatives, must be a regular activity to ensure continued consumer interest.

- A review conducted by the Residential Working Group in late 2011 identified three areas of need for Initiative evolution: 1) introduction of product focused marketing; 2) enhanced product selection and 3) improved training for retailers.

## New Construction Initiative

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**Target Customer Type:** Residential customers

**Initiative Frequency:** Year round

**Objective:** The objective of this Initiative is to provide incentives to participants for the purpose of promoting the construction of energy efficient residential homes in the Province of Ontario.

**Description:** This is an energy efficiency Initiative that provides incentives to homebuilders for constructing new homes that are efficient, smart, and integrated (applicable to new single family dwellings). Incentives are provided in two key categories as follows:

- Incentives for homebuilders who install electricity efficiency measures as determined by a prescriptive list or via a custom option.
- Incentives for homebuilders who meet or exceed aggressive efficiency standards using the EnerGuide performance rating system.

**Targeted End Uses:** all off switch, ECM motors, ENERGY STAR qualified central a/c, lighting control products, lighting fixtures, EnerGuide 83 whole home, EnerGuide 85 whole homes

**Delivery:** Local engagement of builders will be the responsibility of the LDC and will be supported by OPA air coverage driving builders to their LDC for additional information. Additional detail is available:

- Schedule B-1, Exhibit C  
[http://www.powerauthority.on.ca/sites/default/files/new\\_files/industry\\_stakeholders/current\\_electricity\\_contracts/pdfs/Schedule%20B-2%20New%20Construction%20Program.pdf](http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20B-2%20New%20Construction%20Program.pdf) and
- saveONenergy website <https://saveonenergy.ca/Consumer.aspx>

**Initiative Activities/Progress:**

Resistance from local home builders has stalled uptake in CND's service territory, as detailed below in the lessons learned. Proposed changes to the application process should improve participation rates in 2012 and beyond.

**In Market Date:** February 17, 2011

**Lessons Learned:**

- There were limited (5) participants in the program. Because the online application system is a one to one relationship, this program was only practical for custom builders who were building one home at a time. Tract builders who might build 250 homes in a single phase would have to submit 250 applications to qualify for incentives. This administrative challenge has deterred all tract builders from participating in the program to date.
- Administrative requirements must align with perceived stakeholder payback. Changes are being processed through change management for 2012.

## Residential Demand Response Initiative

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**Target Customer Type(s):** Residential and Small Commercial Customers

**Initiative Frequency:** Year round

**Objective:** The objectives of this Initiative are to enhance the reliability of the Independent Electricity System Operator controlled grid by accessing and aggregating specified residential and small commercial end uses for the purpose of load reduction, increasing consumer awareness of the importance of reducing summer demand and providing consumers their current electricity consumption and associated costs.

**Description:** In *peaksaver*PLUS™ participants are eligible to receive a free programmable thermostat or switch, including installation. Participants also receive access to price and real-time consumption information on an In Home Display (IHD). LDCs were given the choice to continue to offer the standard load control program (programmable thermostat or switch with a \$25 bill credit) for the first 8 months of 2011 (referred to as *peaksaver*® Extension). After August 2011, the Extension ended and the program (including marketing) ceased until new IHD products were available.

**Targeted End Uses:** CACs, water heaters and pool pumps

**Delivery:** LDC's recruit customers and procure technology. Additional detail is available:

- Schedule B-1, Exhibit C  
[http://www.powerauthority.on.ca/sites/default/files/new\\_files/industry\\_stakeholders/current\\_electricity\\_contracts/pdfs/SCHED\\_2011\\_ResDR\\_B\\_3\\_110727%28MJB%29v15\\_redacted.pdf](http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/SCHED_2011_ResDR_B_3_110727%28MJB%29v15_redacted.pdf) and
- saveONenergy website <https://saveonenergy.ca/Consumer.aspx>

**In Market Date:** Due to delays in technology availability and interoperability, this program is not yet in market.

### Lessons Learned:

- The schedule for Peaksaver Plus was posted in August 2011, but this did not provide adequate time for product procurement for 2011, and part of 2012. The product procurement process uncovered that the In Home Display units that communicate with installed smart meter technology were still in development and not ready for market deployment. Consequently, CND will not be in market with the Peaksaver Plus program until January 2013.

- Introduction of new technology requires incentives for the development of such technology. Appropriate lead times for LDC analysis and assessment, product procurement, and testing and integration into the Smart Meter environment are also required. Making seemingly minor changes to provincial technical specifications can create significant issues when all LDCs attempt to implement the solution in their individual environments.
- Where a provincial solution is not available to all participants, attention to addressing specific LDC concerns is needed.

## **Low Income Initiative (Home Assistance Program [HAP])**

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**Target Customer Type:** Income qualified residential customers

**Initiative Frequency:** Year Round

**Objective:** The objective of this Initiative is to offer free installation of energy efficiency measures to income qualified households for the purpose of achieving electricity and peak demand savings.

**Description:** This is a turnkey Initiative for income qualified customers. It offers residents the opportunity to take advantage of free installation of energy efficient measures that improve the comfort of their home, increase efficiency, and help them save money. All eligible customers receive a Basic and Extended Measures Audit, while customers with electric heat also receive a Weatherization Audit. The Initiative is designed to coordinate efforts with gas utilities.

**Targeted End Uses:** End uses based on results of audit

**Delivery:** LDC delivered. Additional detail is available:

- Schedule E

<http://www.powerauthority.on.ca/sites/default/files/page/Low%20Income%20Schedule%20-%20redacted%20version.pdf>

### **Initiative Activities/Progress:**

The CKW Group participated in a Request for Proposals (RFP) spearheaded by Brantford Power Inc. and involving 17 LDCs. A third party delivery service provider was contracted in December, 2011.

**In Market Date:** Due to the process required to bring a service provider on-board, this program was not market-ready in 2011.

### **Lessons Learned:**

- Difficulty identifying eligible customers.
- This Initiative Schedule was finalized later (May 2011) than the rest of the OPA Initiatives and in 2011 only 2 LDCs were in market.
- Centralized payment processes were not developed in 2011, but were in place mid-2012. This resulted in some LDCs delaying their launch to market, or for some pulling out of the market until the payment processes were completed.
- The financial scope, complexity, and customer privacy requirements of this Initiative resulted in a lengthy procurement process.

## 2.2.2 Commercial and Institutional Programs

### Equipment Replacement Incentive Initiative

---

**Target Customer Type:** Commercial, Institutional, Agricultural and Industrial Customers

**Initiative Frequency:** Year round

**Objective:** The objective of this Initiative is to offer incentives to non-residential distribution customers to achieve reductions in electricity demand and consumption by upgrading to more energy efficient equipment for lighting, space cooling, ventilation and other measures.

**Description:** The Equipment Replacement Incentive Initiative (ERII) offers financial incentives to customers for the upgrade of existing equipment to energy efficient equipment. Upgrade projects can be classified as either: 1) prescriptive projects where prescribed measures replace associated required base case equipment; 2) engineered projects where energy and demand savings and incentives are calculated for associated measures; or 3) custom projects for other energy efficiency upgrades.

**Targeted End Uses:** Lighting, space cooling, air compressors, motors, drives, ventilation and other measures

**Delivery:** LDC delivered. Additional detail is available:

- Schedule C-2  
[http://www.powerauthority.on.ca/sites/default/files/new\\_files/industry\\_stakeholders/current\\_electricity\\_contracts/pdfs/Schedule%20C-2%20ERII%20Initiative.pdf](http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20C-2%20ERII%20Initiative.pdf) and
- saveONenergy website  
<https://saveonenergy.ca/Business/Program-Overviews/Retrofit-for-Commercial.aspx>

#### **Initiative Activities/Progress:**

Below is a comprehensive list of activities undertaken by CND to promote the Business Program offerings. Activities were commonly undertaken to promote saveONenergy FOR BUSINESS at a holistic program level rather than at the individual Initiative level for better market penetration and to achieve cost-efficiencies. In addition to cobranding marketing between Initiatives, every effort was made to collaborate and share marketing and delivery costs with KW and WN in our endeavour to jointly deliver the program.

- CND was active in the market under the ERIP program and had built awareness and traction in the market for the launch of ERII.
- The CKW Group held a series of breakfast events for all commercial customers within the Waterloo Region, focused on topics like audits, air compressors and building the business case, etc. The objective was to communicate the availability of incentives and how to participate.
- The CKW Group advertised in the Exchange Magazine focusing on news and success stories of businesses within the region.
- The CKW Group worked closely with their channel partners, strengthening relationships and educating them on the benefits of higher efficiency technologies and saveONenergy programs. This network grew to over 300 channel partners who acted as an extended sales force to promote the programs in the market.
- In June of 2011, the CKW Group ran six hands-on training modules to channel partners to help them become knowledgeable with the application process and understanding how to spot more energy savings while on-site with customers.
- Recognizing the need for online application support the CKW Group created an application support document to help customers and channel partners navigate step by step through the on-line application process.
- The CKW Group ran two breakfast seminars to all Channel Partners (June and December) in the Region to provide program updates and rule changes.
- The CKW Group held the 2<sup>nd</sup> annual Technology Symposium, where over 50 exhibitors showcased various technologies and solutions including lighting, compressed air, energy audits, demand response as well as other technologies. In addition to the exhibition, 10 workshop sessions were held to help educate, inform, encourage and empower customers with energy conservation initiatives. Sessions topics included the following:
  - saveONenergy FOR BUSINESS initiatives – ERII, Energy Audit, Existing Building and Commissioning, Demand Response and Energy Managers,
  - Energy Audits and the Ten Most Common Problems with them,
  - Compressed Air System Opportunities,
  - Understanding the Future of Light,
  - Sub-Metering and Energy Management Systems,
  - High Velocity, Low Speed Fans,
  - ISO 50001 Certification,
  - High Performance New Construction initiative,
  - Chiller Efficiency and Optimization, and
  - Sustainable Waterloo's Regional Carbon Initiative

The event drew in over 300 business customers from across the Region of Waterloo and representatives from 7 LDCs.

- CND met its internal target in 2011 of meeting with 75% of its top 100 customers by load size. Site visits were integral to building relationships and assisting customers in understanding their usage and how best to manage it. Identification of energy savings opportunities proved to be a success factor in the ERII attributed results.
- The majority of ERII applications were processed in-house at CND. This led to better turnaround times, tighter control on incoming application quality and a chance to build the network of customers and channel partners.

**In Market Date:** April 2011

**Lessons Learned:**

- ERII (previously Equipment Replacement Incentive Program – ERIP) has been offered by LDCs for many years. It is a high performing, cost-effective program, and there were many pre-2011 projects completing in 2011 (via ERIP).
- A major challenge for the ERII program in 2011 was payment delays. The centralized electronic processes were not ready as required by the Master Agreement. The lack of having these automated processes, exasperated by a greater than expected volume of pre-2011 projects completing in 2011, caused considerable payment delays. Based on the lessons learned in the 2011 process, the centralized process review used for 2012 project payment has been streamlined.
- In March 2011, the revised iCON system was launched by the OPA. This is the major online application system implemented to aid the 2011-2014 ERII application process. With system applications of this size and functionality, it was expected that there would be various issues identified at the time of the release, and on-going, to prove that the system was “ready for market.” Unfortunately, the resolution of these issues, with the corresponding time lags and workarounds, was seen to be a barrier to some customer participation in the 2011 program year. In addition, there were also on-going issues and limitations with the back-end iCON system that affected LDCs ability to effectively review and approve applications.

## Direct Install Lighting Initiative

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**Target Customer Type:** Small Commercial, Institutional, Agricultural facilities and multi-family buildings

**Initiative Frequency:** Year round

**Objective:** The objective of this Initiative is to offer a free installation of eligible lighting and water heating measures of up to \$1,000 to eligible owners and tenants of commercial, institutional and agricultural facilities and multi-family buildings, for the purpose of achieving electricity and peak demand savings.

**Description:** The Direct Installed Lighting Initiative targets customers in the General Service <50kW account category. This Initiative offers turnkey lighting and electric hot water heater measures with a value up to \$1,000 at no cost to qualifying small businesses. In addition, standard prescriptive incentives are available for eligible equipment beyond the initial \$1,000 limit.

**Target End Uses:** Lighting and electric water heating measures

**Delivery:** Participants can enroll directly with the LDC, or would be contacted by the LDC/LDC-designated representative. Additional detail is available:

- Schedule C-3  
<http://www.powerauthority.on.ca/sites/default/files/page/Schedule%20C-3%20Direct%20Install%20Initiative%20-%20redacted.pdf> and
- saveONenergy website <https://saveonenergy.ca/Business.aspx>

### Initiative Activities/Progress:

- CND issued an extension to the existing program delivery contract with 2010 program delivery service provider to continue program delivery and momentum keep program momentum while developing an RFP for a program delivery partner. Under the extension all pending projects were reviewed and reassessed under the new program rules and incentives in order to offer customers the new standard prescriptive incentives should their assessment exceed the \$1,000 limit.
- The CKW Group issued an RFP for a program delivery services, reviewed the proposals and awarded a contract for program delivery service from September 1, 2011 to December 31, 2012.
- Under the new program delivery contract all remaining eligible program participants were contacted by an outbound call center explaining the program and setting up site assessments. In addition, field assessors were cold calling

eligible program participants and performing assessments to further increase participation.

- CND provided local marketing and customer support for the Initiative by way of distribution of Initiative promotional material at events and local Cambridge Chamber of Commerce.

**In Market Date:** May 2011

**Lessons Learned:**

- The Direct Installed Lighting Initiative is a continuation of the Power Saving Blitz Initiative offered by LDCs from 2008-2010. Successful execution of the previous rendition of this Initiative has resulted in diminished potential for the 2011-2014 Initiative in some LDC territories.
- The inclusion of a standard incentive for additional measures increased project size and drove higher energy and demand savings results.
- The ability to return to prior participants and offer a standard incentive on the remaining measures has the potential to provide additional energy and demand savings. Currently, LDCs are unable to offer standard incentives to prior participants.
- Ambiguity surrounding the definition of what is considered an eligible participant and eligible facility in the program has rendered previously eligible account ineligible. This has limited the opportunity to reach out to further businesses which may be owned by one landlord or be at one common service address, despite having separate unit numbers.
- As with the equipment replacement program, the direct install Initiative lost momentum in some LDC service territories (including CND) due to a “hard stop” of the program in 2010 and subsequent program delays in early 2011.
- The price of rare earth minerals has experienced volatility, reducing the margins of the electrical contractors and has led to a reduction in vendor channel participation in some regions.
- Due to backlogs in the payment system, participant incentive payment from the OPA to the LDC, and therefore to the customer, was frequently delayed.
- To address these issues, the LDCs have been working with the OPA through Change Management to address:
  - extending the target Initiative population to include small agricultural customers;
  - increasing the incentive envelope of \$1,000 to \$1,500 to ensure ongoing marketability of the program; and
  - reviewing the eligible measure price list to support contractor participation.

## Existing Building Commissioning Incentive Initiative

---

**Target Customer Type:** Commercial, Institutional, and Agricultural Customers

**Initiative Frequency:** Year round

**Objective:** The objective of this Initiative is to offer incentives for optimizing (but not replacing) existing chilled water systems for space cooling in non-residential facilities for the purpose of achieving implementation phase energy savings, implementation phase demand savings, or both.

**Description:** This Initiative offers Participants incentives for the following:

- scoping study phase
- investigation phase
- implementation phase
- hand off/completion phase

**Targeted End Uses:** Chilled water systems for space cooling

**Delivery:** LDC delivered. Additional detail is available:

- Schedule C-6  
[http://www.powerauthority.on.ca/sites/default/files/new\\_files/industry\\_stakeholders/current\\_electricity\\_contracts/pdfs/Schedule%20C-6%20Commissioning%20Initiative.pdf](http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20C-6%20Commissioning%20Initiative.pdf) and
- saveONenergy website  
<https://saveonenergy.ca/Business/Program-Overviews/Existing-Building-Commissioning.aspx>

**Initiative Activities/Progress:**

- To date there has been no uptake with this Initiative in CND's distribution service territory.
- As the nature of this program only lends itself to a small number of CND customers; individual, on-site discussions and engagement was utilized for Initiative promotion and customer support and the Initiative was promoted at all key account breakfasts and annual Technology Symposium

**In Market Date:** March 2011

**Lessons Learned:**

- There was no customer uptake for this Initiative. It is suspected that the scope of the Initiative being limited to space cooling contributed to the lack of participation. Accordingly, chilled water systems used for other purposes should be made eligible and considered through Change Management.
- The customer expectation is that the program will be expanded to include broader building improvements for a more holistic approach to building recommissioning.

## **New Construction and Major Renovation Initiative (HPNC)**

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**Target Customer Type:** Commercial, Institutional, Agricultural and Industrial Customers

**Initiative Frequency:** Year round

**Objective:** The objective of this Initiative is to encourage builders of commercial, institutional, and industrial buildings (including multi-family buildings and agricultural facilities) to reduce electricity demand and/or consumption by designing and building new buildings with more energy-efficient equipment and systems for lighting, space cooling, ventilation and other measures.

**Description:** The New Construction Initiative provides incentives for new buildings to exceed existing codes and standards for energy efficiency. The Initiative uses both a prescriptive and custom approach.

**Targeted End Uses:** Building modeling, lighting, space cooling, ventilation and other measures

**Delivery:** LDC delivers to customers and design decision makers. Additional detail is available:

- Schedule C-4  
<http://www.powerauthority.on.ca/sites/default/files/page/ScheduleC-4NewConstructionInitiativeV2.pdf> and
- saveONenergy website  
<https://saveonenergy.ca/Business/Program-Overviews/New-Construction.aspx>

### **Initiative Activities/Progress:**

- The CKW Group issued an RFP for the delivery and evaluation of the program. This process took longer than expected as there were new players in the market and a thorough review was required. Another hold up was due to the fact that Enbridge, a leading contender, could not finalize their contract with Union Gas as a subcontractor to our area. Once this was finalized the contract was awarded to Enbridge.
- Union Gas was familiar with HPNC generation 1 and therefore was able to hit the ground running by communicating with established design build firms in the area and continued to talk to customers in the region.
- The CKW Group offered Enbridge a presentation opening at the annual Technology Symposium to commence getting the word out on the program incentives and process.

- CND worked in partnership with Union Gas to identify potential leads and aid in getting up to speed on program details.
- The CKW Group presented to channel partners at breakfast sessions on the incentives available to customers.
- Marketing banners and sell sheets were created for promotional events and customer site visit.

**In Market Date:** November 2011

**Lessons Learned:**

- This is a continuation of the High Performance New Construction program previously delivered by Enbridge Gas under contract with the OPA (and subcontracted to Union Gas), which ran until December 2010.
- For 2011, new industry participation was limited, due to the delays in redesign of certain aspects of the Initiative such as:
  - 2011 prescriptive incentives needed to be aligned with ERII incentives
  - In the cases of delivering large projects (i.e. custom applications), 2011 participation was limited due to 1) building code changes and 2) level of documentation required.

## Energy Audit Initiative

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**Target Customer Type:** Commercial, Institutional, Agricultural and Industrial Customers

**Initiative Frequency:** Year round

**Objective:** The objective of this Initiative is to offer incentives to owners and lessees of commercial, institutional, multi-family buildings and agricultural facilities for the purpose of undertaking assessments to identify all possible opportunities to reduce electricity demand and consumption within their buildings or premises.

**Description:** This Initiative provides participants incentives for the completion of energy audits of electricity consuming equipment located in their facility. Energy audits include development of energy baselines, use assessments and performance monitoring and reporting.

**Targeted End Uses:** Various

**Delivery:** LDC delivered. Additional detail is available:

- Schedule C-1  
[http://www.powerauthority.on.ca/sites/default/files/new\\_files/industry\\_stakeholders/current\\_electricity\\_contracts/pdfs/Schedule%20C-1%20Energy%20Audit%20Initiative.pdf](http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20C-1%20Energy%20Audit%20Initiative.pdf) and
- saveONenergy website  
<https://saveonenergy.ca/Business/Program-Overviews/Audit-Funding.aspx>

### **Initiative Activities/Progress:**

- The CKW Group held a key account session focused specifically on the Initiative in June of 2011. At the session, two local energy audit firms educated customers on the value of energy audits, merits of the program and the projects that audits helped to drive.
- The CKW Group held the 2<sup>nd</sup> annual Technology Symposium, where over 50 exhibitors showcased various technologies and solutions including lighting, compressed air, energy audits, demand response as well as other technologies. In addition to the exhibition, 10 workshop sessions were held to help educate, inform, encourage and empower customers with energy conservation initiatives. Sessions topics included the following:
  - saveONenergy FOR BUSINESS initiatives – ERII, Energy Audit, Existing Building and Commissioning, Demand Response and Energy Managers,

- Energy Audits and the Ten Most Common Problems with them,
- Compressed Air System Opportunities,
- Understanding the Future of Light,
- Sub-Metering and Energy Management Systems,
- High Velocity, Low Speed Fans,
- ISO 50001 Certification,
- High Performance New Construction initiative,
- Chiller Efficiency and Optimization, and
- Sustainable Waterloo's Regional Carbon Initiative

The event drew in over 300 business customers from across the Region of Waterloo and representatives from 7 LDCs.

- CND provided ongoing local marketing and customer support for the Initiative in various forms, including promotion of the Initiative at all key account events in short presentations and take away print material, directly to customers over the phone, by mail, by email as well as at face-to-face customer meetings.
- The CKW Group actively engaged local energy audit firms in order to educate them on the Initiative and the application process, provide marketing support in the form of program focused print material as well as offered to join audit firms on customer calls to further encourage customer participation.

**In Market Date:** March 2011

**Lessons Learned:**

- Customer uptake in 2011 was minimal, CND received only three applications and as a result little if any savings were realized in 2011, but projects are expected to come forward in 2012 based on the recommendations in the audits.
- Customers expect a greater connection with other saveONenergy Initiatives as a result of completing the Energy Audit. The Initiative should be reviewed under Change Management for the means to readily incent Participants with Audits in hand to implement other electricity savings Initiatives.

### 2.2.3 Industrial Programs

#### Process & Systems Upgrades Initiative (PSUI)

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**Target Customer Type:** Industrial, Commercial, Institutional and Agricultural Customers

**Initiative Frequency:** Year round

**Objectives:** The objectives of this Initiative are to:

- Offer distribution customers capital incentives and enabling Initiatives to assist with the implementation of large projects and project portfolios;
- Implement system optimization projects in systems which are intrinsically complex and capital intensive; and
- Increase the capability of distribution customers to implement energy management and system optimization projects.

**Description:** PSUI is an energy management Initiative that includes three Initiatives: (preliminary engineering study, detailed engineering study, and project incentive Initiative). The incentives are available to large distribution connected customers with projects or portfolio projects that are expected to generate at least 350 MWh of annualized electricity savings or, in the case of Micro-Projects, 100 MWh of annualized electricity savings. The capital incentive for this Initiative is the lowest of:

- a) \$200/MWh of annualized electricity savings
- b) 70% of projects cost
- c) A one year payback

**Targeted End Uses:** Process and systems

**Delivery:** LDC delivered. Additional detail is available:

- Schedule D-1  
[http://www.powerauthority.on.ca/sites/default/files/new\\_files/industry\\_stakeholders/current\\_electricity\\_contracts/pdfs/Schedule%20D-1%20Process%20and%20Systems%20Upgrades%20Initiative.pdf](http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20D-1%20Process%20and%20Systems%20Upgrades%20Initiative.pdf) and
- saveONenergy website <https://saveonenergy.ca/Business.aspx>

#### **Initiative Activities/Progress:**

Discussions took place at an individual customer level to introduce this program. The nature of this program only lends itself to a handful of CND customers, therefore

individual, on-site engagement was utilized for promotion.

**In Market Date:** November 2011

**Lessons Learned:**

- The PSUI program targets large customers that are undertaking large capital projects. There is typically a long sales cycle to sell these projects, and then a long project development cycle. As such, results from PSUI did not appear in 2011. Limited results are expected to appear in 2012. The majority of the results are expected in 2013-2014, with a much reduced benefit to cumulative energy savings targets.
- Steps are being taken in the 2012 change management process to simplify and streamline the micro-project application process and to allow smaller projects to be directed to the ERIL stream.
- Given the size of the projects involved, the contract required for PSUI is a lengthy and complicated document. Attempts are being made through change management in 2012 to simplify the document while still protecting the ratepayer.
- With the considerable customer interest in on-site Load Displacement projects, the Initiative should be reviewed to ensure that these projects may be accepted as part of the PSUI Initiative.

## Monitoring & Targeting Initiative

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**Target Customer Type:** Industrial, Commercial, Institutional and Agricultural Customers

**Initiative Frequency:** Year round

**Objective:** This Initiative offers access to funding for the installation of Monitoring and Targeting systems in order to deliver a minimum savings target at the end of 24 months and sustain the savings for the term of the M&T Agreement.

**Description:** This Initiative offers customers funding for the installation of a Monitoring and Targeting system to help them understand how their energy consumption might be reduced. A facility energy manager, who regularly oversees energy usage, will now be able to use historical energy consumption performance to analyze and set targets.

**Targeted End Uses:** Opportunities to monitor electricity consumption and demand for better real-time management

**Delivery:** LDC delivered. Additional detail is available:

- Schedule D-2  
[http://www.powerauthority.on.ca/sites/default/files/new\\_files/industry\\_stakeholders/current\\_electricity\\_contracts/pdfs/Schedule%20D-2%20Monitoring%20and%20Targeting%20Initiative.pdf](http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20D-2%20Monitoring%20and%20Targeting%20Initiative.pdf) and
- saveONenergy website <https://saveonenergy.ca/Business.aspx>

### Initiative Activities/Progress:

Discussions took place at an individual customer level to introduce this program. The nature of this program only lends itself to a handful of CND customers, therefore individual, on-site engagement was utilized for promotion.

**In Market Date:** November 2011

### Lessons Learned:

- The M&T Initiative was originally targeted at larger customers with the capacity to review the M&T data. This review requires the customer facility to employ an Energy Manager, or a person with equivalent qualifications, which has been a barrier for some customers. Through the change management process in 2012, changes are being made to both the M&T schedule and ERII to allow smaller facilities to employ M&T systems.

## Energy Manager Initiative

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**Target Customer Type:** Industrial, Commercial, Institutional and Agricultural Customers

**Initiative Frequency:** Year round

**Objective:** The objective of this Initiative is to provide customers and LDCs the opportunity to access funding for the engagement of energy managers in order to deliver a minimum annual savings target.

**Description:** This Initiative provides customers the opportunity to access funding to engage an on-site, full time embedded energy manager, or an off-site roving energy manager who is engaged by the LDC. The role of the energy manager is to take control of the facility's energy use by monitoring performance, leading awareness programs, and identifying opportunities for energy consumption improvement, and spearheading projects. Participants are funded 80% of the embedded energy manager's salary up to \$100,000 plus 80% of the energy manager's actual reasonable expenses incurred up to \$8,000 per year. Each embedded energy manager has a target of 300 kW/year of energy savings from one or more facilities. LDCs receive funding of up to \$120,000 for a Roving Energy Manager plus \$8,000 for expenses.

**Targeted End Uses:** Individual or a grouping of customers who require additional technical resources to achieve end-use energy saving reductions

**Delivery:** LDC delivered. Additional detail is available:

- Schedule D-3  
[http://www.powerauthority.on.ca/sites/default/files/new\\_files/industry\\_stakeholders/current\\_electricity\\_contracts/pdfs/Schedule%20D-3%20Energy%20Manager%20Initiative%202011-2014.pdf](http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20D-3%20Energy%20Manager%20Initiative%202011-2014.pdf) and
- saveONenergy website <https://saveonenergy.ca/Business.aspx>

### **Initiative Activities/Progress:**

Discussions took place at an individual customer level to introduce this program. The nature of this program only lends itself to a handful of CND customers,; therefore individual, on-site engagement was utilized for promotion.

Interest has been slow but there is uptake in 2012.

**In Market Date:** November 2011

**Lessons Learned:**

- The energy managers have proven to be a popular resource.
- At the beginning, it took longer than expected to set up the energy manager application process.
- Finding qualified resources to fill these positions has proved to be a challenge in the marketplace.

## Key Account Manager Initiative

---

**Target Customer Type:** Industrial, Commercial, Institutional and Agricultural Customers

**Initiative Frequency:** Year round

**Description:** Provide funding to employ a resource to assist in managing relationships with key accounts.

**Objective:** This Initiative offers LDCs the opportunity to access funding for the employment of a KAM in order to support them in fulfilling their obligations related to the PSUI. The KAM is considered to be a key element in assisting the consumer in overcoming traditional barriers related to energy management and help them achieve savings since the KAM can build relationships and become a significant resource of knowledge to the customer.

**Targeted End Uses:** LDC(s) who require additionally funded resources to perform sales functions

**Delivery:** LDC delivered. Additional detail is available:

- ScheduleD-4  
[http://www.powerauthority.on.ca/sites/default/files/new\\_files/industry\\_stakeholders/projects\\_programs/pdfs/PSUI%20Initiative%20Schedule%20D-4.Key%20Account%20Manager.20110322.pdf](http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/projects_programs/pdfs/PSUI%20Initiative%20Schedule%20D-4.Key%20Account%20Manager.20110322.pdf)

### Initiative Activities/Progress:

The CKW Group applied jointly for KAM funding from the OPA, eligible for achieving 70% salary funding, based on eligible customers.

**In Market Date:** The CKW Group was approved in June, 2011 and went through the interview process in December, 2011. Actual contracted services were provided by the KAM starting in March 2012.

### Lessons Learned:

- Customers appreciate dealing with a single contact to interface with an LDC, a resource that has both the technical and business background who can communicate easily with the customer and the LDC. Finding this type of skill set has been difficult resulting in longer lead times to acquire the right resource.

## Demand Response 3

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**Target Customer Type:** Industrial, Commercial, Institutional and Agricultural Customers

**Initiative Frequency:** Year round

**Objective:** This Initiative provides for Demand Response (DR) payment for service to DR3 participants to compensate them for making available electricity demand response during a demand response event.

**Description:** Demand Response 3 (DR3) is a demand response Initiative for commercial and industrial customers, of 50 kW or greater to reduce the amount of power being used during certain periods of the year. The DR3 Initiative is a contractual resource that is an economic alternative to procurement of new generation capacity. DR3 comes with specific contractual obligations requiring participants to reduce their use of electricity relative to a baseline when called upon. This Initiative pays participants to be on standby and energy payments for the actual energy reduction provided during a demand response event. 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 contract.

**Targeted End Uses:** Qualified customers with the ability to perform load shedding/shifting.

**Delivery:** DR3 is delivered by Demand Response Providers, under contract to the OPA. The OPA administers contracts with all DRPs and Direct Participants that provide in excess of 5 MW of demand response capacity. OPA provides administration including settlement, measurement and verification, and dispatch. LDCs are responsible for outreach and marketing efforts. Additional detail is available:

- Schedule D-6  
[http://www.powerauthority.on.ca/sites/default/files/new\\_files/industry\\_stakeholders/current\\_electricity\\_contracts/pdfs/Schedule%20D-6%20Demand%20Response%203%202011-2014.pdf](http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20D-6%20Demand%20Response%203%202011-2014.pdf) and
- saveONenergy website <https://saveonenergy.ca/Business.aspx>

**Initiative Activities/Progress:**

- The CKW Group met with the active provincial aggregators to assess the program, customer eligibility and offerings of each company.

- Discussions took place at an individual customer level to introduce this program. The nature of this program only lends itself to a handful of CND customers, therefore individual, on-site engagement was utilized for promotion.

**In Market Date:** February 2011

**Lessons Learned:**

- Customer data is not provided by the OPA on an individual customer basis due to contractual requirements with the aggregators. This limits LDCs' ability to effectively market to prospective participants. LDCs are now approaching the Aggregators individually and working to develop agreements in order to identify potential customers of this Initiative.

## 2.2.4 Pre-2011 Programs Completed in 2011

### Electricity Retrofit Incentive Program (ERIP)

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**Target Customer Type:** Commercial, Institutional, and Agricultural Customers

**Initiative Frequency:** Year Round

**Objective:** This captures savings attributed to projects applied for prior to 2011 but completed in 2011.

**Description:** Refer to Equipment Replacement Incentive Initiative

**Delivery:** LDC delivered.

**Initiative Activities/Progress:**

CND was responsible for reviewing the post-project submissions and approving final payment. No new applications were received in 2011 for this program.

## High Performance New Construction

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**Target Customer Type:** Commercial, Institutional, and Agricultural Customers

**Initiative Frequency:** Year round

**Objective:** This captures savings attributed to projects applied for prior to 2011 but completed in 2011.

**Description:** Refer to New Construction and Major Renovation Initiative

**Delivery:** Delivered through OPA contracts with Enbridge and Union Gas.

**Initiative Activities/Progress:**

CND was not responsible for the post-project submissions associated with this program.

## 2.3 Participation/Uptake by Initiative

**Table 3: Participation/Uptake by Initiative**

Initiative	Activity Unit	Uptake/ Participation Units
<b>Consumer Program</b>		
Appliance Retirement	Appliances	440
Appliance Exchange	Appliances	23
HVAC Incentives	Equipment	1,221
Conservation Instant Coupon Booklet	Coupons	4,812
Bi-Annual Retailer Event	Coupons	8,336
Residential Demand Response	Devices	0
New Construction Program	Houses	0
<b>Business Program</b>		
Efficiency: Equipment Replacement	Projects	22
Direct Installed Lighting	Projects	118
Existing Building Commissioning Incentive	Buildings	0
New Construction and Major Renovation Incentive	Buildings	0
Energy Audit	Audits	0
Commercial Demand Response (part of the Residential program schedule)	Devices	0
Demand Response 3 (part of the Industrial program schedule)	Facilities	3
<b>Industrial Program</b>		
Process & System Upgrades*	Projects	0
a) preliminary study		0
b) engineering study		0
c) project incentive		0
Monitoring & Targeting	Projects	0

Energy Manager	Managers	0
Efficiency: Equipment Replacement Incentive (part of the C&I program schedule)	Projects	22
Demand Response 3	Facilities	6
<b>Home Assistance Program</b>		
Home Assistance Program	Units	0
<b>Pre 2011 Programs Completed in 2011</b>		
Electricity Retrofit Incentive Program	Projects	64
High Performance New Construction	Projects	0

## 2.4 Spending

**Table 4: Program Spending by Initiative**

Initiative	Program Administration Budget (PAB)	Participant Based Funding (PBF)	Participant Incentives (PI)	Capability Building Funding (CBF)	TOTAL
<b>Consumer Program</b>					
Appliance Retirement	\$37,651.86	\$0	\$0	\$0	\$37,651.86
Appliance Exchange	\$4,212.15	\$0	\$0	\$0	\$4,212.15
HVAC Incentives	\$20,479.62	\$0	\$0	\$0	\$20,479.62
Conservation Instant Coupon Booklet	\$32,055.57	\$0	\$0	\$0	\$32,055.57
Bi-Annual Retailer Event	\$0	\$0	\$0	\$0	\$0
Residential Demand Response	\$12,115.07	\$0	\$0	\$0	\$12,115.07
New Construction Program	\$4,498.68	\$0	\$0	\$0	\$4,498.68
<b>Business Program</b>					
Efficiency: Equipment Replacement	\$64,351.91	\$0	\$132,998.23	\$0	\$197,350.14
Direct Install Lighting	\$14,146.84	\$28,792	\$105,133.25	\$0	\$148,072.09
Existing Building Commissioning Incentive	\$0	\$0	\$0	\$0	\$0
New Construction and Major Renovation Initiative	\$9,422.69	\$0	\$0	\$0	\$9,422.68
Energy Audit	\$11,043.89	\$0	\$3,247.50	\$0	\$14,291.39
Commercial Demand Response (part of the Residential program schedule)	\$0	\$0	\$0	\$0	\$0
Demand Response 3 (part of the Industrial program schedule)	\$0	\$0	\$0	\$0	\$0
<b>Industrial Program</b>					
Process & System Upgrades	\$11,651.59	\$0	\$0	\$0	\$11,651.59
<i>a) preliminary study</i>	<i>\$3,623.64</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$3,623.64</i>
<i>b) engineering study</i>	<i>\$2,842.07</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$2,842.07</i>
<i>c) program incentive</i>	<i>\$5,185.88</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$5,185.88</i>
Monitoring & Targeting	\$0	\$0	\$0	\$0	\$0

<b>Initiative</b>	<b>Program Administration Budget (PAB)</b>	<b>Participant Based Funding (PBF)</b>	<b>Participant Incentives (PI)</b>	<b>Capability Building Funding (CBF)</b>	<b>TOTAL</b>
Energy Manager	\$9,294.09	\$0	\$0	\$0	\$9,294.09
Demand Response 3	\$2,842.06	\$0	\$0	\$0	\$2,842.06
<b>Home Assistance Program</b>					
Home Assistance Program	\$6,218.29	\$0	\$0	\$0	\$6,218.29
<b>Pre 2011 Programs Completed in 2011</b>					
Electricity Retrofit Incentive Program	\$0	\$0	\$0	\$0	\$0
High Performance New Construction	\$0	\$0	\$0	\$0	\$0
<b>TOTAL Province-wide CDM PROGRAMS</b>	<b>\$239,984.31</b>	<b>\$28,792.00</b>	<b>\$241,378.98</b>	<b>\$0</b>	<b>\$510,155.29</b>

## 2.5 Evaluation

Table 5 represents key findings from the OPA's province-wide evaluation of the provincial results.

**Table 5: Key Evaluation Findings from the OPA**

Initiative	Key Evaluation Findings
Appliance Retirement	<p>Overall participation continues to decline year over year</p> <ul style="list-style-type: none"> <li>* Participation declined 17% from 2010 (from over 67,000 units in 2010 to over 56,000 units in 2011)</li> </ul> <p>97% of net resource savings achieved through the home pick-up stream</p> <ul style="list-style-type: none"> <li>* Measure Breakdown: 66% refrigerators, 30% freezers, 4% Dehumidifiers and window air conditioners</li> </ul> <p>3% of net resource savings achieved through the Retailer pick-up stream</p> <ul style="list-style-type: none"> <li>* Measure Breakdown: 90% refrigerators, 10% freezers</li> </ul> <p>Net-to-Gross ratio for the Initiative was 50%</p> <ul style="list-style-type: none"> <li>* Measure-level free ridership ranges from 82% for the retailer pick-up stream to 49% for the home pick-up stream</li> <li>* Measure-level spillover ranges from 3.7% for the retailer pick-up stream to 1.7% for the home pick-up stream</li> </ul>
Appliance Exchange	<p>Overall eligible units exchanged declined by 36% from 2010 (from over 5,700 units in 2010 to over 3,600 units in 2011)</p> <ul style="list-style-type: none"> <li>* Measure Breakdown: 75% window air conditioners, 25% dehumidifiers</li> </ul> <p>Dehumidifiers and window air conditioners contributed almost equally to the net energy savings achieved</p> <ul style="list-style-type: none"> <li>* Dehumidifiers provide more than three times the energy savings per unit than window air conditioners</li> </ul> <p>Window air conditioners contributed to 64% of the net peak demand savings achieved</p> <p>Approximately 96% of consumers reported having replaced their exchanged units (as opposed to retiring the unit)</p> <p>Net-to-Gross ratio for the Initiative is consistent with previous evaluations (51.5%)</p>
HVAC Incentives	<p>Total air conditioner and furnace installations increased by 14% (from over 95,800 units in 2010 to over 111,500 units in 2011)</p> <ul style="list-style-type: none"> <li>* Measure Breakdown: 64% furnaces, 10% tier 1 air conditioners (SEER 14.5) and 26% tier 2 air conditioners (SEER 15)</li> <li>* Measure breakdown did not change from 2010 to 2011</li> </ul> <p>The HVAC Incentives Initiative continues to deliver the majority of both the energy (45%) and demand (83%) savings in the consumer program</p> <p>Furnaces accounted for over 91% of energy savings achieved for this Initiative</p> <p>Net-to-Gross ratio for the Initiative was 17% higher than 2010 (from 43% in 2010 to 60% in 2011)</p>

	<ul style="list-style-type: none"> <li>* Increase due in part to the removal of programmable thermostats from the program, and an increase in the net-to-gross ratio for both Furnaces and Tier 2 air conditioners (SEER 15)</li> </ul>
Conservation Instant Coupon Booklet	<p>Customers redeemed nearly 210,000 coupons, translating to nearly 560,000 products</p> <ul style="list-style-type: none"> <li>* Majority of coupons redeemed were downloadable (~40%) or LDC-branded (~35%)</li> <li>* Majority of coupons redeemed were for multi-packs of standard spiral CFLs (37%), followed by multi-packs of specialty CFLs (17%)</li> </ul> <p>Per unit savings estimates and net-to-gross ratios for 2011 are based on a weighted average of 2009 and 2010 evaluation findings</p> <p>Careful attention in the 2012 evaluation will be made for standard CFLs since it is believed that the market has largely been transformed</p>
Bi-Annual Retailer Event	<p>Customers redeemed nearly 370,000 coupons, translating to over 870,000 products</p> <ul style="list-style-type: none"> <li>* Majority of coupons redeemed were for multi-packs of standard spiral CFLs (49%), followed by multi-packs of specialty CFLs (16%)</li> </ul> <p>Per unit savings estimates and net-to-gross ratios for 2011 are based on a weighted average of 2009 and 2010 evaluation findings</p> <ul style="list-style-type: none"> <li>* Standard CFLs and heavy duty outdoor timers were reintroduced to the Initiative in 2011 and contributed more than 64% of the Initiative's 2011 net annual energy savings</li> <li>* While the volume of coupons redeemed for heavy duty outdoor timers was relatively small (less than 1%), the measure accounted for 10% of net annual savings due to high per unit savings</li> </ul> <p>Careful attention in the 2012 evaluation will be made for standard CFLs since it is believed that the market has largely been transformed.</p>
Residential Demand Response	<p>Approximately 20,000 new devices were installed in 2011</p> <ul style="list-style-type: none"> <li>* 99% of the new devices enrolled controlled residential central AC (CAC)</li> </ul> <p>2011 only saw 1 atypical event (in both weather and timing) that had limited participation across the province</p> <ul style="list-style-type: none"> <li>* The ex-ante impact developed through the 2009/2010 evaluations was maintained for 2011; residential CAC: 0.56 kW/device, commercial CAC: 0.64 kW/device, and Electric Water Heaters: 0.30 kW/device</li> </ul>
Residential New Construction	<p>Initiative was not evaluated in 2011 due to limited uptake</p> <p>Business case assumptions were used to calculate savings</p>
Efficiency: Equipment Replacement	<p>Gross verified energy savings were boosted by lighting projects in the prescriptive and custom measure tracks</p> <p>Lighting projects overall were determined to have a realization rate of 112%; 116% when including interactive energy changes</p> <ul style="list-style-type: none"> <li>* On average, the evaluation found high realization rates as a result of both longer operating hours and larger wattage reductions than initial assumptions</li> <li>* Low realization rates for engineered lighting projects due to overstated operating hour assumptions</li> </ul>

	<p>Custom non-lighting projects suffered from process issues such as: the absence of required M&amp;V plans, the use of inappropriate assumptions, and the lack of adherence to the M&amp;V plan</p> <p>The final realization rate for summer peak demand was 94%</p> <ul style="list-style-type: none"> <li>* 84% was a result of different methodologies used to calculate peak demand savings</li> <li>* 10% due to the benefits from reduced air conditioning load in lighting retrofits</li> </ul> <p>Overall net-to-gross ratios in the low 70's represent an improvement over the 2009 and 2010 ERIP program where net-to-gross ratios were in the low 60's and low 50's, respectively.</p> <p>Strict eligibility requirements and improvements in the pre-approval process contributed to the improvement in net-to-gross ratios</p>
Direct Install Lighting	<p>Though overall performance is above expectations, participation continues to decline year over year as the Initiative reaches maturity</p> <p>70% of province-wide resource savings persist to 2014</p> <ul style="list-style-type: none"> <li>* Over 35% of the projects for 2011 included at least one CFL measure</li> <li>* Resource savings from CFLs in the commercial sector only persist for the industry standard of 3 years</li> </ul> <p>Since 2009 the overall realization rate for this program has improved</p> <ul style="list-style-type: none"> <li>* 2011 evaluation recorded the highest energy realization rate to date at 89.5%</li> <li>* The hours of use values were held constant from the 2010 evaluation and continue to be the main driver of energy realization rate</li> <li>* Lights installed in "as needed" areas (e.g., bathrooms, storage areas) were determined to have very low realization rates due to the difference in actual energy saved vs. reported savings</li> </ul>
Existing Building Commissioning Incentive	Initiative was not evaluated in 2011, no completed projects in 2011
New Construction and Major Renovation Incentive	<p>Initiative was not evaluated in 2011 due to low uptake</p> <p>Assumptions used are consistent with preliminary reporting based on the 2010 Evaluation findings and consultation with the C&amp;I Work Group (100% realization rate and 50% net-to-gross ratio)</p>
Energy Audit	The evaluation is ongoing. The sample size for 2011 was too small to draw reliable conclusions.
Process & System Upgrades	Initiative was not evaluated in 2011, no completed projects in 2011
Monitoring & Targeting	Initiative was not evaluated in 2011, no completed projects in 2011
Energy Manager	Initiative was not evaluated in 2011, no completed projects in 2011
Demand Response 3	Program performance for Tier 1 customers increased with DR-3 participants providing 75% of contracted MW for both sectors

	<p>* Industrial customers outperform commercial customers by provide 84% and 76% of contracted MW, respectively</p> <p>Program continues to diversify but still remains heavily concentrated with less than 5% of the contributors accounting for the majority (~60%) of the load reductions. By increasing the number of contributors in each settlement account and implementation of the new baseline methodology the performance of the program is expected to increase</p>
Home Assistance Program	<p>Initiative was not evaluated in 2011 due to low uptake</p> <p>Business Case assumptions were used to calculate savings</p>

*This table was supplied by the OPA in the 2011 Final Results Report for CND.*

## 2.5.1 Evaluation Results

**Table 6: Evaluated Results by Initiative**

Initiative	NTG		Gross Savings		Net Savings		Contribution to Targets	
	kW	kWh	Incremental Peak Demand Savings (kW)	Incremental Energy Savings (kWh)	Incremental Peak Demand Savings (kW)	Incremental Energy Savings (kWh)	Program-to-Date: Net Annual Peak Demand Savings (kW) in 2014	Program-to-Date: 2011-2014 Net Cumulative Energy Savings (kWh)
<b>Residential Programs</b>								
Appliance Retirement	50%	51%	50	364,466	24	175,906	24	703,419
Appliance Exchange	52%	52%	4	5,219	2	2,690	1	9,409
HVAC Incentives	60%	60%	596	1,121,468	359	670,601	359	2,682,402
Conservation Instant Coupon Booklet	114%	111%	10	163,628	11	179,901	11	719,606
Bi-Annual Retailer Event	113%	110%	14	257,628	16	281,459	16	1,125,836
Residential Demand Response	-	-	0	0	0	0	0	0
New Construction Program	-	-	0	0	0	0	0	0
<b>Business Programs</b>								
Efficiency: Equipment Replacement	74%	76%	347	1,750,908	256	1,336,743	256	5,346,972
Direct Installed Lighting	93%	93%	148	429,688	158	398,982	130	1,515,148
Existing Building Commissioning Incentive	-	-	0	0	0	0	0	0
New Construction and Major Renovation Incentive	-	-	0	0	0	0	0	0
Energy Audit	-	-	0	0	0	0	0	0
Demand Response 3 (part of the Industrial program schedule)*	n/a	n/a	237	7,018	179	7,018	0	7,018

<b>Industrial Programs</b>								
Process & System Upgrades	-	-	0	0	0	0	0	0
Monitoring & Targeting	-	-	0	0	0	0	0	0
Energy Manager	-	-	0	0	0	0	0	0
Efficiency: Equipment Replacement Incentive (part of the C&I program schedule)	74%	76%	634	4,045,237	466	3,083,118	466	12,332,473
Demand Response 3*	n/a	n/a	645	31,908	544	31,908	0	31,908
<b>Low Income Program</b>								
Home Assistance Program	-	-	0	0	0	0	0	0
<b>Pre-2011 Programs</b>								
Electricity Retrofit Incentive Program	52%	52%	2,288	12,898,238	1,191	6,710,956	1,191	26,843,823
High Performance New Construction	50%	50%	2	9,261	1	4,631	1	18,522

\*Assumes demand response resources have a persistence of one year

**Table 7: Summary of Results**

Program	Gross Savings		Net Savings		Contribution to Targets	
	Incremental Peak Demand Savings (kW)	Incremental Energy Savings (kWh)	Incremental Peak Demand Savings (kW)	Incremental Energy Savings (kWh)	Program-to-Date: Net Annual Peak Demand Savings (kW) in 2014	Program-to-Date: 2011-2014 Net Cumulative Energy Savings (kWh)
Residential Program Total	674	1,912,135	412	1,310,556	410	5,240,672
Commercial & Institutional Program Total	732	2,187,614	594	1,742,744	386	6,869,138
Industrial Program Total	1,279	4,077,144	1,009	3,115,026	466	12,364,380
Home Assistance Program Total	0	0	0	0	0	0
Pre-2011 Programs completed in 2011 Total	2,290	12,907,499	1,191	6,715,586	1,191	26,862,345
<b>Total OPA Contracted Province-Wide CDM Programs</b>	<b>4,975</b>	<b>21,084,393</b>	<b>3,206</b>	<b>12,883,912</b>	<b>2,453</b>	<b>51,336,535</b>

## 2.6 Additional Comments

2011 should be considered a year focused on laying the groundwork for 2012-2014. The complexity of new programs, rule changes, procurement processes and resourcing, delayed the ability to offer 'market ready' initiatives as indicated in Section 2.2. The Initiatives were in start-up mode, and this was a learning curve for CND and its customers, channel partners and stakeholders. Every effort was made to encourage continuity from pre-2011 but much of the momentum from previous years was lost. Re-engaging the market has proved to be challenging.

More than half of the attributed savings to target are expected to come from the Business Initiatives and PSU. These projects have very long cycles from engagement to application and completion. The pipeline of applications is encouraging but many of these savings will not be achieved until 2013 and 2014 and are still subject to risk.

In 2012, additional internal resources have been hired to increase capacity. As well, approvals to hire a KAM, EEMs and REMs will result in a greater workforce to educate, engage and motivate participants.

Increased marketing in all sectors has been employed for 2012 and is expected to yield improved awareness and participation. One-on-one engagement for general service customers will continue to be utilized as the driving force to provide site-specific targeting of efficiency opportunities.

Based on the 2011 results, 2012 pipeline information and a maturing program structure, CND is optimistic in its ability to achieve the 2014 CDM targets.

### 3 Combined CDM Reporting Elements

#### 3.1 Progress Towards CDM Targets

**Table 8: Net Peak Demand Savings at the End User Level (MW)**

Implementation Period	Annual (MW)			
	2011	2012	2013	2014
2011 - Verified	3.21	2.48	2.48	2.45
2012				
2013				
2014				
<b>Verified Net Annual Peak Demand Savings in 2014:</b>				<b>2.45</b>
<b>CND 2014 Annual CDM Capacity Target:</b>				<b>17.68</b>
<b>Verified Portion of Peak Demand Savings Target Achieved (%):</b>				<b>14%</b>
<b>CND Strategy, Milestone submitted for 2011 (%):</b>				<b>28%</b>
Variance	5.0			<b>(14%)</b>

Variances in the 2011 Net Peak Demand Savings as reported by the OPA can be attributed to a few key items;

- Initiatives such as DR3 and Residential Demand Response weigh heavily in the success of meeting our peak demand target. These programs proved to be a challenge to deliver in 2011, as discussed earlier in the report.
- The assumed one year persistence of DR3, the results above do not reflect approximately 730kW currently under contract. Should these contracts persist until 2014 the variance would be reduced to 10%.
- Large projects that will have the most significant impact on peak demand savings will not be seen in the results until 2012 and following years.

**Table 9: Net Energy Savings at the End-User Level (GWh)**

Implementation Period	Annual (GWh)				Cumulative (GWh)
	2011	2012	2013	2014	2011-2014
2011 - Verified	12.88	12.84	12.84	12.76	51.34
2012					
2013					
2014					
<b>Verified Net Cumulative Energy Savings 2011-2014:</b>					<b>51.34</b>
<b>CND 2011-2014 Cumulative CDM Energy Target:</b>					<b>73.66</b>
<b>Verified Portion of Cumulative Energy Target Achieved (%):</b>					<b>70%</b>
<b>CND Strategy, Milestone submitted for 2011 (%):</b>					<b>30%</b>
Variance	22.35 <i>cumulative</i>				<b>40%</b>

Variances in the 2011 Net Energy Savings as reported by the OPA can be attributed to a few key items;

- Energy Savings attributed from pre-2011 Initiatives contributed to 52% of the total achieved in 2011.
- The HVAC Incentive Initiative represents the greatest portion of savings in the residential programs. This Initiative had not previously been delivered by CND and the participation rates and associated savings were best estimates at the time CND filed its strategy.
- The cumulative effect of Net Energy Savings is greater than anticipated when the strategy was written. Savings have demonstrated a significantly higher rate of persistence, resulting in a higher cumulative contribution towards the 2014 target.

### **3.2 CDM Strategy Modifications**

CND does not have any modifications to make to its strategy. Comments regarding enhancements to delivery can be found in section 2.6 Additional Comments.