

Cambridge and North Dumfries Hydro Inc.

Electricity Distributor Licence ED-202-0574

Conservation and Demand Management

2012 Annual Report

Submitted to:

Ontario Energy Board

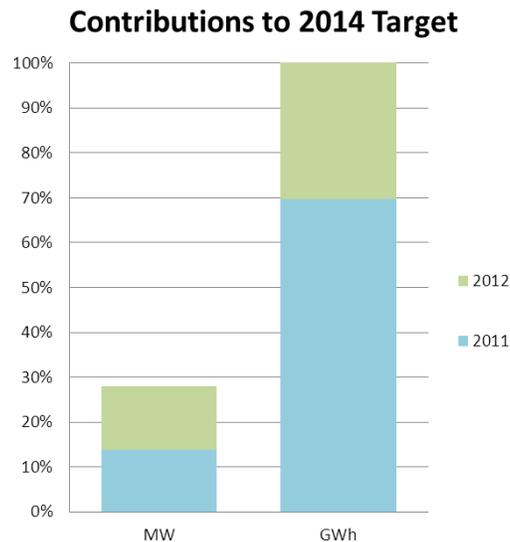
Submitted on September 30, 2013

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Executive Summary

2012 represented the second of four years of Conservation and Demand Management (CDM) program delivery under the new Ontario Energy Board (OEB) CDM Code (Board File No. EB-2010-2015). The CDM Code requires that Cambridge and North Dumfries Hydro Inc. (CND Hydro) achieve a mandated 17.68 MW and 73.66 GWh of peak demand and energy savings during the period of January 1, 2011 until December 31, 2014. This report will provide details on the achievement to date, including activities undertaken to increase participation rates. The 2011 & 2012 cumulative achievements toward the 2014 target are summarized in the chart below.



CND Hydro is pleased to report that their GWh energy reduction target for 2014 was achieved and exceeded in 2012. As with many other Local Distribution Companies (LDCs) the demand target (MW) continues to be a challenge to achieve. A diminished suite of programs, delayed launches and reduced financial reward for demand response have led to a decrease in MW savings. In an ongoing effort to propel CND Hydro towards their MW target, heavier emphasis and allocation of resources is being placed on programs that yield a high return on peak demand savings.

Based on a successful collaborative model in 2011, CND Hydro continued to strengthen a shared delivery model with its neighbouring LDCs Kitchener-Wilmot Hydro and Waterloo North Hydro. The joint approach has proven to reduce market confusion, increase cost-effectiveness and strengthen the saveONenergy brand in the Waterloo Region. Additionally, where appropriate, CND Hydro aligned their strategy with other key stakeholders such as municipalities, gas utilities and third party delivery agents.

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 OEB to establish CDM targets to be met by electricity distributors. Accordingly, on November 12, 2010, the OEB amended the distribution licence of CND Hydro to require CND Hydro, 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 Hydro submitted its CDM Strategy on November 1, 2010 which provided a high level of description of how CND Hydro intended to achieve its CDM targets.

The Code also requires a distributor to file annual reports with the Board. This is the second Annual Report by CND Hydro and has been prepared in accordance with the Code requirement and covers the period from January 1, 2012 to December 31, 2012.

CND Hydro submitted its 2011 Annual Report on September 30, 2012 which summarized the CDM activities, successes and challenges experienced by CND Hydro for the January 1, 2011 to December 31, 2011 period. The OEB's 2011 CDM Results report identified that the delay in the full suite of CDM Programs being made available by the OPA and the absence of some programs negatively impacted the final 2011 results for the LDCs. This issue was also highlighted in Volumes I & II of the Environmental Commissioner's Report on Ontario's Annual Energy Conservation Progress.

On December 21, 2012, the Minister of Energy directed the Ontario Power Authority (OPA) to fund CDM programs which meet the definition and criteria for OPA-Contracted Province-Wide CDM Programs for an additional one-year period from January 1, 2015 to December 31, 2015.

The Ministerial Directive did not amend the timelines for LDCs to achieve their energy savings and demand savings targets. Therefore, the main focus of the LDCs remains the achievement of CDM targets by December 31, 2014.

1 Conservation Framework

1.1 Current Framework

Ontario's current CDM framework is a key step towards creating a culture of conservation in the province. The Ministry's Directive to the OEB to establish CDM targets that would be met by electricity distributors recognizes the importance of CDM for both electricity customers and the electricity system. CDM helps customers manage rising energy costs, support Ontario's Integrated Power Systems Plan, as well as address local distribution and transmission supply constraints. The current framework was intended to enable customers to benefit from a suite of both Board-Approved and OPA Province-Wide programs and be a portfolio that would meet both broad and specific customer needs.

The state of Board-Approved programs and the current suite of Province-Wide OPA programs have limited CDM offerings to customers. This has produced limited savings and has restricted the associated opportunity for LDCs to meet their targets. The process to introduce changes to current program Initiatives or to pilot new Initiatives has been challenging, taking considerable cost and effort for LDCs who have pursued this track.

The Ministerial Directive provides continuity of the conservation programs and associated compensation for the participants; however the subsequent savings would not be attributed to any LDC target and in effect would be 'lost' due to misalignment of the current CDM framework and LDC Targets. In addition, the establishment of defined administrative funding for 2015 is required to avoid a "stop and start" process.

1.2 Future Framework

LDCs are supportive of the Minister's renewed commitment for CDM in Ontario. LDCs are committed to working with the Ministry and other stakeholders to develop the next framework for CDM in Ontario.

A long-term commitment for CDM funding and confirmation of the role of the LDC is needed. This will allow LDCs to maintain current program infrastructure including LDC staff and third party contracts through 2015.

Providing clarity and continuity into the next framework is critical for all customers. To ensure a seamless and smooth transition that maintains and builds upon CDM momentum beyond 2014, a new CDM framework should be in place well before the expiry of the current one. Work involving key parties including LDCs, government, customer groups, Electricity Distributor's Association (EDA) Caucus and Working Groups and the OEB should start in 2013 to allow for a new framework to be in place by early 2014. The remainder of 2014 would be utilized for program development and design, economic analysis, procurement and launching of new CDM program Initiatives.

2 Board-Approved CDM Programs

2.1 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 (the Programs), or a combination of the two”.

At this time, the implementation of Time-of-Use (TOU) Pricing has been deemed as a Board-Approved CDM program that is being offered in CND Hydro’s service area.

2.2 TOU Pricing

2.2.1 BACKGROUND

In its April 26, 2012 CDM Guidelines, the OEB recognizes 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 establishes 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 OPA for the province, and then allocated to distributors. CND Hydro will report these results upon receipt from the OPA.

At the time of preparation of this report the OPA had retained the Brattle Group as the evaluation contractor and will be working with an expert panel convened to provide advice on methodology, data collection, models, etc. The initial evaluations were conducted with five LDCs – Hydro One, Toronto Hydro, Hydro Ottawa, Thunder Bay Hydro and Newmarket Hydro.

As of September 30, 2013, the OPA has not released any verified results of TOU savings to CND Hydro. Therefore, CND Hydro is not able to provide any verified savings related to LDC’s TOU program at this time.

2.2.2. TOU PROGRAM DESCRIPTION

Target Customer Type(s): Residential and small business customers (up to 250,000 kWh per year)

Initiative Frequency: Year round

Objectives: TOU pricing is designed to incent the shifting of energy usage. Therefore, peak demand reductions are expected, and energy conservation benefits may also be realized.

Description: In August of 2010, the OEB issued a final determination to mandate TOU pricing for Regulated Price Plan (“RPP”) customers by June 2011, in order to support the Government’s expectation for 3.6 million RPP Customers to be on TOU pricing by June 2011, and to ensure that smart meters funded at ratepayer expense are being used for their intended purpose.

The RPP TOU price is adjusted twice annually by the OEB. A summary of the RPP TOU pricing is provided below:

RPP TOU	Rates (cents/kWh)		
	On Peak	Mid Peak	Off Peak
Effective Date			
November 1, 2010	9.9	8.1	5.1
May 1, 2011	10.7	8.9	5.9
November 1, 2011	10.8	9.2	6.2
May 1, 2012	11.7	10.0	6.5
November 1, 2012	11.8	9.9	6.3
May 1, 2013	12.4	10.4	6.7

Delivery: The OEB set the rates; LDCs install and maintain the smart meters; LDCs convert customers to TOU billing.

Initiative Activities/Progress: CND Hydro began transitioning its RPP customers to TOU billing in April 2012. At December 31st, 2012, 100% of CND Hydro’s RPP customers were on TOU billing.

2.3 CND Hydro’s Application with the OEB

There were no LDC programs approved by the OEB in 2012.

In 2012 CND Hydro did not file an application for any Board-Approved CDM programs. It is not anticipated that any applications will be made in subsequent years.

3 OPA-Contracted Province-Wide CDM Programs

3.1 Introduction

Effective February 17, 2011, CND Hydro entered into an agreement with the OPA to deliver CDM programs extending from January 1, 2011 to December 31, 2014, which are listed in Table 1 below. Program details are included in Appendix A. In addition, results include projects started pre 2011 which were completed in 2011.

Table 1: CDM Programs

Initiative	Schedule	Date schedule posted	Customer Class
Consumer Programs			
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
Heating & Cooling 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 residential and general service classes
New Construction Program	Schedule B-2	Jan 26, 2011	All residential rate classes
Commercial & Institutional Programs			
Efficiency: Equipment Replacement Initiative	Schedule C-2	Jan 26, 2011	All general service classes
Direct Install Lighting Initiative	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
Energy Audit Initiative	Schedule C-1	Jan 26, 2011	All general service classes
Industrial Programs			
Process & System Upgrades	Schedule D-1	May 31, 2011	GS 50 kW & above
Monitoring & Targeting	Schedule D-2	May 31, 2011	GS 50 kW & above
Energy Manager	Schedule D-3	May 31, 2011	GS 50 kW & above
Key Account Manager (“KAM”)	Schedule D-4	May 31,2011	GS 50 kW & above

Demand Response 3	Schedule D-6	May 31, 2011	General Service 50 kW & above
Home Assistance Program			
Home Assistance Program	Schedule E-1	May 9, 2011	All residential rate classes
Pre-2011 Programs			
Electricity Retrofit Incentive Program	n/a	n/a	All general service classes
High Performance New Construction	n/a	n/a	All general service classes

Table 2 outlines previous Initiatives from the OPA-Contracted Province Wide program portfolio that have been removed from the Schedule or have not been released to market as of December 31, 2012.

Table 2: CDM Programs Not in Market

Initiative Not in Market in 2012	Objective	Status
Consumer Programs		
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 Removed from Schedule in Q2, 2013.
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 Removed from Schedule in Q2, 2013.
Aboriginal Conservation Program	First Nations programs are delivered by the OPA and results are attributed to LDCs for reporting.	Launched in 2013 by OPA.
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 Removed from Schedule in Q2, 2013.
Commercial & Institutional Programs		
Direct Service Space Cooling	The objective of this Initiative is to offer free servicing of ACs and refrigeration units for the purpose of achieving energy and demand savings	Not launched to market
Industrial Program		
DR1	This Initiative allows distribution customers to voluntarily reduce electricity demand during certain periods of the year pursuant to the DR1 contract. The Initiative provides	No customer uptake for this Initiative. As a result this Initiative was removed from the Schedule in Q4, 2012.

DR payment for service for the actual electricity reduction provided during a demand response event.
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The Master CDM Program Agreement includes program change management provision in Article 3. Collaboration between the OPA and the LDCs commenced in 2011, and continued in 2012, as the change management process was implemented to enhance the OPA-Contracted Province Wide programs. The change management process allows for modifications to the Master Service 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.

3.2 Program Descriptions¹

3.2.1 CONSUMER PROGRAMS

Description: Provides residential customers with programs and tools to help them understand and manage the amount of energy they use throughout their entire home and help the environment.

Objective: To provide incentives to both existing homeowners and market channels to motivate the installation of energy efficiency measures in both existing and new home construction.

Discussion: The Consumer Program Portfolio is predominately a carryover of Initiatives from pre-2011 programs and is primarily driven by retailers and contractors. Market saturation continues to be a significant barrier to achieving the projected savings within this portfolio. Work to revitalize and increase the effectiveness and breadth of the Initiatives in the Consumer Program Portfolio continues to be of highest priority.

Program Activities Undertaken: Co-promotion and co-branding techniques are frequently used in the Consumer programs to maintain cost-effectiveness and increase overall brand awareness. Collaboration with Kitchener-Wilmot Hydro and Waterloo North Hydro on creative, printing and publishing has been effective in reaching a wider audience with consistent messaging while achieving cost-savings.

In 2012, the three LDCs in the Waterloo Region hired a communications company to develop a new creative marketing theme for the Fridge & Freezer Pickup and Heating & Cooling Incentives Initiatives. As a result, with the approval of the OPA's marketing team, a comprehensive marketing strategy was built on 'break up with ...' messaging². Thirty second commercial spots formed the backbone that led into radio and print. The feedback has been positive and the creative is still in use today, also by other LDCs.

CND Hydro made consumer engagement a priority in 2012 and hired a full time marketing coordinator in the Energy Efficiency department. The following bulleted list provides an overview of the program activities undertaken for the Consumer programs in 2012.

- Print materials such as posters, banners, brochures, bill inserts have been utilized at community events, City of Cambridge office, CND Hydro office and elsewhere.
- The commercials were shown as pre-roll footage 0-10 minutes before films at the local Cambridge Cineplex.
- Advertising with the Cambridge Times included newsprint, special edition magazines, newspaper inserts and online advertisements.

¹ Full OPA-Contracted Province Wide CDM Program descriptions are available on the OPA's website at <http://www.powerauthority.on.ca/ldc-province-wide-program-documents> and additional Initiative information can be found on the [saveonenergy](http://www.saveonenergy.ca) website at [saveonenergy.ca](http://www.saveonenergy.ca). The targeted customer types, objectives, and individual descriptions for each Program Initiative are detailed in Appendix A.

² The videos can be viewed on a joint [youtube.com](http://www.youtube.com) webpage.

- Advertising with the Waterloo Region Record included newsprint, special edition magazines and online advertisements.
- Sponsorship for the 2012/2013 season of the Ontario Hockey League Kitchener Rangers included commercial airplay on the scoreboard screen, game night sponsorship and concourse signage for the season.
- Advertising with the Cambridge Centre Mall included floor decals and mall posters.
- Community events sponsorship included; ecoFest, Sustainability in the Park, Cambridge Movie Nights and Christmas in Cambridge.
- Advertising with SNAP Cambridge included newsprint and event coverage.
- Advertising with The Weather Network included online website ads and mobile smart phone application ads.
- Advertising buy with Rogers Radio Group in the Waterloo Region included a variety of promotions for Consumer and Business Initiatives depending on the season and focus.
- Commercial videos were posted to a youtube.com channel and have received more than 33,000 views to date combined.

3.2.1.1 Appliance Retirement Initiative (Exhibit D)

Initiative Progress:

Unit	Incremental Activity	Incremental kW	Incremental kWh
Appliances	175	9	67,918

Additional Comments:

- With the increase in appliance age to 20 years in 2013, many LDCs increased marketing and outreach throughout 2012 in an effort to increase uptake and achieve savings.
- Due to the duration of the program in market and the revised eligibility requirements to a minimum of 20 years old, this Initiative appears to have reached market saturation and is under consideration for removal from the Portfolio.
- The OPA and LDCs should continue working to establish partnerships with retailers and municipalities where existing white goods collection programs are in place.

3.2.1.2 Appliance Exchange Initiative (Exhibit E)

Initiative Progress:

Unit	Incremental Activity	Incremental kW	Incremental kWh
Appliances	25	4	6,491

Additional Comments:

- In 2012, there was one retailer who participated in the Appliance Exchange Initiative, limiting the reach and effectiveness of the Initiative.
- Evaluation, Measurement, and Verification (EMV) results indicated that the value of savings for retired room air conditioner (AC) has dropped resulting in the retail participant not accepting window ACs during the Spring 2013 event. Future events will only collect eligible dehumidifiers.
- Notification regarding retailer participation and eligible measures continues to be delayed. Improved communications will aid in appropriate resource allocation and marketing of the Initiative.
- This Initiative would benefit from the disengagement of the retailer and flexibility in delivery to permit LDCs to conduct these events, possibly as part of a larger community engagement effort, with the backing of ARCA for appliance removal.

3.2.1.3 Heating & Cooling Incentives Initiative (Exhibit B)

Initiative Progress:

Unit	Incremental Activity	Incremental kW	Incremental kWh
Equipment	1072	248	428,617

Additional Comments:

- Incentive levels appear to be insufficient to prompt participants to upgrade HVAC equipment prior to end of useful life. It is hoped that the introduction of an Air Miles incentive in 2013 may help with this.
- This Initiative is contractor driven with LDCs responsible for marketing efforts to customers. More engagement with the HVAC contractor channel should be undertaken to drive a higher proportion of furnace and CAC sales to eligible units.
- Channel partners require timeliness of the incentive process to maintain a positive relationship between participants, contractors, the OPA and the participating LDC. Due to a contracting delay no incentive applications were processed from approximately the end of October 2012 to February 2013.
- LDC Heating & Cooling Incentive reports have been delayed and are not as complete and accurate as are required by LDCs to make adjustments to their marketing strategies.
- In an effort to build capacity, mandatory training has been instituted for all participating HVAC contractors. This will present a barrier for continued and future HVAC contractors. It has been noted that there are approximately 4500-5000 HVAC contractors in the province, however only 1500 are participating in program.
- There are cases where non-participating contractors are offering their own incentives (by discounting their installations to match value of the OPA incentive) to make the sale.

3.2.1.4 Conservation Instant Coupon Initiative (Exhibit A)

Initiative Progress:

Unit	Incremental Activity	Incremental kW	Incremental kWh
Items	296	2	13,391

Additional Comments:

- This Initiative was not in market for most of 2012 as the Instant Coupons (annual) were not available to consumers until September 2012. As such, savings budgeted by LDCs did not materialize.
- The timeframe for retailer submission of redeemed coupons vary from retailer to retailer. The delays and incomplete results reporting limits the ability to react and respond to Initiative performance or changes in consumer behaviour. This also resulted in the delayed launch of the Initiative in 2012.
- Coupon booklets were not printed and mailed out in 2012. As such, coupons were not widely available to consumers who do not have the ability to download and print them. Access to scan-able Coupons through a mobile phone application would be ideal.
- LDCs should be provided the opportunity to custom code all coupons to provide 100% allocation and push specific coupons based on localized needs.
- The product list could be distinctive from the Bi-Annual Retailer Event Initiative in order to gain more consumer interest and uptake.
- Program evolution, including new products and review of incentive pricing for the coupon Initiatives, should be a regular activity to ensure continued consumer interest. Coupon offerings should delve into other products for around the home that offer similar savings potential.

3.2.1.5 Bi-Annual Retailer Event Initiative (Exhibit C)

Initiative Progress:

Unit	Incremental Activity	Incremental kW	Incremental kWh
Items	10,161	14	256,502

Additional Comments:

- This Initiative is strongly influenced by the retail participants and has no direct involvement from the LDCs. More emphasis should be put on holding a participating retailer accountable to working with the LDC community.
- The product list has changed very little over the past four years. A review of incentive pricing for the coupon Initiatives should be a regular activity to ensure continued consumer interest. Coupon offerings should delve into other products for around the home that offer similar savings potential.
- The product list could be distinctive from the Conservation Instant Coupon Initiative in order to gain more consumer interest and uptake.
- A review conducted by the EDA Consumer Working Group in Q4 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 as retail staff tend not to be knowledgeable regarding the products or promotion.
- LDCs should be provided the opportunity to custom code all coupons to provide 100% allocation and push specific coupons based on localized needs.
- Communications regarding retailer participation continues to be delayed. Improved communications will aid in appropriate resource allocation and marketing of the Initiative.
- The timeframe for retailer submission of redeemed coupons vary from retailer to retailer. The delays and incomplete results reporting limits the ability to react and respond to Initiative performance or changes in consumer behaviour.

3.2.1.6 New Construction Program (Schedule B-2)

Initiative Progress:

Unit	Incremental Activity	Incremental kW	Incremental kWh
Homes	0	0	0

Additional Comments:

- This Initiative provides incentives to home builders for incorporating energy efficiency into their construction plans. To support this, LDCs need to provide education to the consumers regarding the importance of choosing the energy efficient builder upgrade options without an immediate benefit to the consumer.
- Following limited participation in 2011, the application process was revisited in 2012 to streamline administration in response to builder feedback. Participation levels are expected to grow but there will be a lag to when results materialize as homes pre-approved could take a year or more to be completed.
- Administrative requirements, in particular individual home modeling, must align with perceived stakeholder payback. As per the EDA Consumer Working Group, changes are being processed through change management for 2012. However, the lengthy change management process has resulted in continued non-participation from builders.

3.2.1.7 Residential Demand Response Program (RDR) (Schedule B-3)

Initiative Progress:

Unit	Incremental Activity	Incremental kW	Incremental kWh
Devices	0	0	0

Initiative Activity Undertaken:

Groundwork has been underway to evaluate the available technologies and infrastructure required to deliver an effective, future-proof solution to customers. CND Hydro supported an application by Energate for a pilot on Consumer Engagement for the Smart Grid which will be credited towards this Initiative in 2013. Effort continues to be made to find a worthwhile solution for our market.

Additional Comments:

- The schedule for RDR 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 (IHD) units that communicate with installed smart meter technology were still in development and not ready for market deployment. Consequently, LDCs who chose to execute an integrated solution could not be in market with RDR until 2012, or later which has resulted in delayed savings.
- Smart Meters installed by most LDCs do not have the capability to communicate directly to an IHD. When proposing technical Initiatives that rely on existing LDC hardware or technology there should be an extensive consultative process.
- 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.
- The variable funding associated with installing a load controllable thermostat is not sufficient unless it is combined with an IHD which might not be possible all the time and when IHD is optional. The variable funding should offer a second tier for LDCs who chose to install a two-way communicating device which is incrementally more expensive.
- Given the different LDCs smart meter environments, and needs, each LDC is positioning the Initiative slightly different. As such, greater program flexibility is required to address unique LDC needs.

3.2.2 COMMERCIAL AND INSTITUTIONAL PROGRAM

Description: Provides commercial, institutional, agricultural and industrial organizations with energy-efficiency programs to help reduce their electricity costs while helping Ontario defer the need to build new generation and reduce its environmental footprint. Programs offer qualified participants funding towards energy audits, replacements or retrofits of inefficient equipment or incentives for pursuing new construction that exceeds our existing codes and standards. Businesses can also receive incentives for reducing their electricity demand at specific times.

Objective: Designed to assist building owners and operators as well as tenants and occupants in achieving demand and energy savings, and to facilitate a culture of conservation among these communities as well as the supply chains which serve them.

Discussion: The Commercial and Institutional Program portfolio continues to be the flagship offering for CND Hydro's customer base. The savings attributed to participation in this portfolio are critical to the LDCs achievement of target. Building on momentum established with customer and channel partners in 2011, 2012 saw an increase in participation and quality of project submissions.

Throughout 2011 and 2012 the EDA Commercial and Institutional (C&I) Working Group has strived to enhance the existing C&I programs and rectify identified program and system deficiencies. This has proven to be a challenging undertaking, normally taking months to complete sometimes relatively minor changes due to the current CDM framework. Overbuilt governance, numerous Initiative requirements, complex program structure and lengthy change management have restricted growth without providing the anticipated improved Measurement and Verification (M&V) results. In addition, Evaluation, Measurement and Verification (EM&V) has not yet achieved transparency. LDCs are held accountable for these results yet are removed from the process.

Looking ahead there is minimal opportunity to make valuable changes to the current program suite and have these changes reflected in LDC 2014 final results. LDCs and the OPA should look beyond the current Initiatives and work to launch new programs, built on the strengths of the 2011-2014 programs, which will meet the needs of the industry and consumers.

Program Activities Undertaken: Co-promotion and co-branding techniques are frequently used in the C&I programs to maintain cost-effectiveness and increase overall brand awareness. Collaboration with Kitchener-Wilmot Hydro and Waterloo North Hydro on creative, event execution and sponsorship has been effective in reaching a wider audience with consistent messaging while achieving cost-savings.

Continuing to be the most effective activity to cultivate participation is actively engaging with customers on site-visits. CND Hydro hired a full time Energy Efficiency Advisor in 2012 to build relationships with key accounts and learn the needs of the customer base. This allows for a customized recommendations for participation opportunities across the spectrum of Initiatives.

Joint focus by the Waterloo Region LDCs on educating and training channel partners drove an increase in awareness of the saveONenergy Initiatives. Using the channel partners as an extended sales force has resulted in a year over year increase to participation.

The following bulleted list provides an overview of the program activities undertaken for the C&I programs in 2012.

- Joint delivery of five breakfast events focused on specific opportunities and end-uses.
- The saveONenergy Symposium is a one-day tradeshow style event that pairs 60+ exhibitors of products and services with customers from across the Waterloo Region. This joint event attracts more than 300 attendees and offers additional featured workshops to further enlighten customers. This was the third time running the event and featured a keynote speaker from Steamwhistle Breweries.
- Partnership with the Cambridge Chamber of Commerce offers a variety of marketing avenues; event sponsorship, printed quarterly mail stuffers and Spectrum magazine advertisement and earned media.
- Advertising in Exchange Magazine offers print and earned media opportunities.
- Email newsletter for channel partners keeps a network of more than 300 service providers motivated and informed about the saveONenergy programs.
- Sponsorship of the joint Greater Kitchener Waterloo Chamber of Commerce and Cambridge Chamber of Commerce Business to Business show on 570News offers a new engagement opportunity through live radio segments and commercials.
- Presenting sponsors of Sustainable Waterloo Region connects with local businesses that have made a pledge to reduce greenhouse gas emissions and made energy efficiency a priority in their business.
- Exhibitors at the joint Kitchener-Waterloo-Cambridge-Guelph Chamber of Commerce Business Expo.
- Produced video case studies³ on projects completed in the ERII program to showcase technology and participants and motivate others to do the same.
- Direct Install contractor breakfast provided valuable feedback on the program delivery and opportunities for enhancement and improved contractor satisfaction.
- Advertising buy with Rogers Radio Group in the Waterloo Region included a variety of promotions for Consumer and Business Initiatives depending on the season and focus.

³ The videos can be viewed on a joint [youtube.com](https://www.youtube.com) webpage.

3.2.2.1 Efficiency: Equipment Replacement Incentive (ERII) (Schedule C-2)

Initiative Progress:

Unit	Incremental Activity	Incremental Net kW	Incremental Net kWh
Projects	104	1,203	6,206,217

Additional Comments:

- The centralized process review used for 2012 project payment has been streamlined by the OPA and payments for projects were greatly improved – faster and more consistent compared to 2011.
- Capability building programs from Industrial programs have had very positive contributions to ERII program.
- Participation in this Initiative is impacted by the state of the economy and the ability of commercial/institutional facilities to complete capital improvement projects.
- Lighting is still the most popular measure. Other market sectors are not as engaged yet, specifically the mechanical world. There continues to be significant barriers to program participation from HVAC (Unitary AC) and compressed air channel partners.
- Prescriptive and Engineered worksheets provide a much needed simplified application process for customers. However, the eligible measures need to be updated and expanded in both technology and incentive amounts to address changing product costs and evolution of the marketplace.
- While the Ministerial Directive provides confirmation of continued access to incentives for participants, the establishment of defined administrative funding for 2015 is required to avoid a “stop and start” process.

3.2.2.2 Direct Install Initiative (DII) (Schedule C-3)

Initiative Progress:

Unit	Incremental Activity	Incremental kW	Incremental kWh
Projects	108	95	356,510

Additional Comments:

- Successful execution of the previous rendition of this Initiative has resulted in diminished potential for the 2011-2014 Initiative in some LDC's territories.
- The inclusion of a standard incentive for additional measures increased project size and drove higher energy and demand savings results in some situations.
- Currently LDCs are unable to offer these standard incentives to prior participants. The ability to return to prior participants and offer a standard incentive on the remaining measures has potential to provide additional energy and demand savings.
- In 2013, LED lighting measures were added to the eligible measures list which should result in a future increase in program uptake.

3.2.2.3 Existing Building Commissioning Incentive Initiative (Schedule C-6)

Initiative Progress:

Unit	Incremental Activity	Incremental kW	Incremental kWh
Buildings	0	0	0

Additional Comments:

- There was minimal participation for this Initiative. It is suspected that the lack of participation in the program is a result of the Initiative being limited to space cooling and a limited window of opportunity (cooling season) for participation.
- Participation is mainly channel partner driven, however the particulars of the Initiative have presented too significant of a barrier for many channel partners to participate.
- The customer expectation is that the program be expanded to include a broader range of measures for a more holistic approach to building recommissioning and chilled water systems used for other purposes should be made eligible and considered through Change Management.
- This Initiative should be reviewed for incentive alignment with ERII, as currently a participant will not receive an incentive if the overall payback is less than 2 years.

3.2.2.4 New Construction and Major Renovation Initiative (HPNC) (Schedule C-4)

Initiative Progress:

Unit	Incremental Activity	Incremental kW	Incremental kWh
Buildings	0	0	0

Additional Comments

- There is typically a long sales cycle for these projects, and then a long project development cycle. As the program did not launch until mid-2011 and had limited participation, results did not appear in 2011. The majority of the results are expected in 2013-2014, with a reduced benefit to cumulative energy savings targets.
- With the Ministerial Directive facilities with a completion date near the end of 2014 currently have some security that they will be compensated for choosing efficient measures where construction extends beyond the Initiative delivery window.
- Participants estimated completion dates tend to be inaccurate and are usually 6 months longer. This could result in diminished savings towards target when facilities are not substantially completed by December 31, 2014.
- The custom application process requires considerable customer support and skilled LDC staff. As there has been no defined administrative funding beyond 2014, many LDCs are unsure how these project applications will be finalized.
- The effort required to participate through the custom stream exceeds the value of the incentive for many customers.
- This Initiative has a very low Net-to-Gross ratio, which results in half the proposed target savings being discounted.

3.2.2.5 Energy Audit Initiative

Initiative Progress:

Unit	Incremental Activity	Incremental kW	Incremental kWh
Audits	1	5	25,176

Additional Comments

- Customer uptake was limited in 2011, however improved throughout 2012 especially with the new audit component for one system (i.e. compressed air).
- The Energy Audit Initiative is considered an 'enabling' Initiative and 'feeds into' other saveONenergy Initiatives. There are no savings attributed to LDC targets from an audit.
- Audit reports from consultants vary considerably and in some cases, while they adhere to the Initiative requirements, do not provide value for the Participant. A standard template with specific energy saving calculation requirements should be considered.
- Customers look to the LDCs to recommend audit companies. A centralized prequalified list provided by the OPA may be beneficial.
- Participants are limited to one energy audit which restricts enabling and direction to the other Initiatives. This Initiative should be evaluated for additional customer participation when presented with a new scope of work.

3.2.3 INDUSTRIAL PROGRAM

Description: Large facilities are discovering the benefits of energy efficiency through the Industrial Programs which are designed to help identify and promote energy saving opportunities. It includes financial incentives and technical expertise to help organizations modernize systems for enhanced productivity and product quality, as well as provide a substantial boost to energy productivity.

Objective: To provide incentives to both existing and new industrial customers to motivate the installation of energy efficient measures and to promote participation in demand management.

Discussion: The Industrial Program Portfolio has been able to provide valuable resources to large facilities such as Energy Managers and enabling Engineering Studies. The Engineering Studies in particular provide a unique opportunity for a customer to complete a comprehensive analysis of an energy intensive process that they would not otherwise be able to undertake. Energy Managers provide customers with a skilled individual whose only role is to assist them with conservation Initiatives. To date these Energy Managers have played a key role in customer participation.

Due to the size, scope and long lead time of these Initiatives and associated projects, the Ministerial Directive provides some security for the continuation of the conservation programs and associated compensation for the participant; however the subsequent savings would not be attributed to any LDC target.

3.2.3.1 Process & Systems Upgrades Initiative (PSUI) (Schedule D-1)

Initiative Progress:

Unit	Incremental Activity	Incremental kW	Incremental kWh
Projects	0	0	0

Initiative Activity Undertaken:

This Initiative is heavily dependent on direct involvement with interested customers. CND Hydro worked with a limited number of customers in this program stream. Most industrial customers pursue audit funding and project funding through the C&I programs. The following activity occurred during 2012:

- Detailed Engineering Studies: received 5, approved 5
- Preliminary Engineering Studies: received 3, approved 1
- Project Incentive Applications: received 2, approved 1, on hold 1

Additional Comments:

- Approximately 100 engineering study applications have been submitted. This is a strong indication that there is the potential for large projects with corresponding energy savings. Most of these studies have been initiated through the Energy Manager and KAM resources.
- This Initiative is limited by the state of the economy and the ability of a facility to complete large capital upgrades.
- There is typically a long sales cycle for these projects, and then a long project development cycle. As such, limited results are expected to be generated in 2012. The majority of the results are expected in 2013-2014, with a much reduced benefit to cumulative energy savings targets.
- Revisions were made to the ERII Initiative which allowed smaller projects to be directed to the Commercial stream.
- While there is considerable customer interest in on-site Load Displacement (Co-Generation) projects, in 2012 the OPA was accepting waste heat/waste fuel projects only. Natural gas generation projects were on hold awaiting a decision on whether PSUI will fund these types of projects. In June 2013, a decision was made to allow natural gas load displacement generation projects to proceed under PSUI. It is expected that a number of projects will proceed although results may not be counted towards LDC targets due to in-service dates beyond 2014.

3.2.3.2 Monitoring & Targeting Initiative (Schedule D-2)

Initiative Progress:

Unit	Incremental Activity	Incremental kW	Incremental kWh
Project	0	0	0

Initiative Activity Undertaken:

Discussions and groundwork was laid in 2012 for this Initiative but applications were not received until 2013.

Additional Comments:

- The M&T Initiative is 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. As such, a limited number of applications have been received to date.
- The savings target required for this Initiative can present a significant challenge for smaller customers.
- Through the change management process in 2013, changes are being made to ERII to allow smaller facilities to employ M&T systems.

3.2.3.3 Energy Manager Initiative (Schedule D-3)

Initiative Progress:

Unit	Incremental Activity	Incremental kW	Incremental kWh
Projects	0	0	0

Initiative Activity Undertaken:

This Initiative was presented to a variety of customers with great support for the Roving Energy Manager (REM) role and interest in the Embedded Energy Manager (EEM) role. The following activity occurred during 2012:

- Embedded Energy Manager: approved 2, hired 1 (satellite facility in Peterborough), on hold 1
- Roving Energy Manager: shared with Waterloo North Hydro, hired 1

Additional Comments:

- The Energy Managers have proven to be a popular and useful resource for larger customers. There are approximately 70 EEMs and 25 REMs being utilized by customers across the province.
- LDCs that are too small to qualify for their own REM are teaming up with other utilities to hire a REM to be shared by the group of utilities.
- At the beginning, it took longer than expected to set up the Energy Manager application process and unclear communication resulted in marketing and implementation challenges for many LDCs.
- Some LDCs and Customers are reporting difficulties in hiring capable REMs and EEMs, in some instances taking up to 7 months to have a resource in place.
- New Energy Managers require training, time to familiarize with facilities and staff and require time to establish credibility. Energy Managers started filling their pipeline with projects but few projects were implemented in 2012.
- Delays with processing EEM payments causing LDCs to delay payments to Participants beyond contract requirements.
- There have been a number of studies identified by Energy Managers and they have been able to build capacity and deliver energy saving projects within their respective large commercial/industrial facilities.
- Requirement that 30% of target must come from non-incented projects is identified as an issue for most REMs. The EDA Industrial Working Group has proposed to remove this requirement for REM's only as they are not resident full time at a customer facility to find the non-incented savings.

3.2.3.4 Key Account Manager (KAM) (Schedule D-4)

Initiative Progress:

A shared Key Account Manager was hired by CND Hydro, Kitchener-Wilmot Hydro and Waterloo North Hydro in March 2012. The contract was terminated in July and the position was refilled in November.

Additional Comments

- 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. In addition, the short-term contract and associated energy targets discourage some skilled applicants resulting in longer lead times to acquire the right resource.
- This resource has been found by some LDCs to be of limited value due to the part-time nature of the position and limited funding. In addition, the position role has been too narrow in scope to provide assistance to the wider variety of projects LDCs may be struggling with.

3.2.3.5 Demand Response 3 (D-6)

Initiative Progress:

Unit	Incremental Activity	Incremental kW	Incremental kWh
Facilities	7	705	16,979

Initiative Activity Undertaken:

As a standard deliverable in a site visit, opportunities and customer interest to participate in the Demand Response 3 (DR-3) program is always investigated. Aggressive sales tactics by the aggregators has turned some customers off of participating. This Initiative will be a key focus for 2013 and 2014 as CND Hydro strives to achieve the peak demand targets.

Additional Comments:

- Until early 2013 customer data was not provided on an individual customer basis due to contractual requirements with the aggregators. This limited LDCs' ability to effectively market to prospective participants and verify savings.
- Market conditions and just-in-time delivery continue to dissuade customers from participating in the program due to the nature of long-term contractual requirements.
- Aggressive sales techniques coupled with poor customer services by the Aggregators has deterred many of CND Hydro's customers from considering participating. Greater emphasis should be placed on LDC engaged delivery and formal partnerships with Aggregators.
- No program improvements were made in 2012 however, it was accepted that prior participants who renew their DR-3 contract within the 2011-2014 term will contribute to LDC targets.
- As of 2013, Aggregators are able to enter into contracts beyond 2014. This has allowed them to offer a more competitive contract price (5 year) than if limited to 1 or 2 year contracts.
- Metering and settlement requirements are expensive and complicated and can reduce customer compensation amounts, and present a barrier to smaller customers.
- Compensation amounts for new contracts and renewals have been reduced from the initial launch of this program (premium zones and 200 hour option have been discontinued) and subsequently there has been a corresponding decrease in renewal revenue.

3.2.4 LOW INCOME INITIATIVE (HOME ASSISTANCE PROGRAM) (Schedule E-1)

Initiative Progress:

Unit	Incremental Activity	Incremental kW	Incremental kWh
Homes	14	1	11,421

Initiative Activity Undertaken:

CND Hydro engaged with Greensaver late in 2011 to offer third party delivery of the Home Assistance Program (HAP) in partnership with REEP Green Solutions. 2012 kicked off with an introductory event to a variety of social agencies across the Waterloo Region. Additional effort was put into working with the Municipality of the Region of Waterloo to retrofit their qualifying housing stock but proved a lengthier process than first anticipated.

For the HAP Initiative a variety of print marketing was produced to educate residents and social agencies about the offers.

Additional Comments:

- Awareness of the program amongst social agencies took time to develop. Benefits started to become evident in late 2012.
- Centralized payment processes were not developed in 2011. The payment process was established in 2012 but is not necessarily reflected in the incremental activity.
- The process for enrolling in social housing was complicated and time consuming. This was addressed in late 2012 and is showing benefits in 2013.
- The financial scope, complexity, and customer privacy requirements of this Initiative are challenging for LDCs and most have contracted this program out.

3.2.5 PRE-2011 PROGRAMS

Savings were realized towards LDC's 2011-2014 target through pre-2011 programs. The targeted customer types, objectives, descriptions, and activities of these programs are detailed in Appendix A.

4 2012 LDC CDM Results

The following Tables were provided by the OPA and represent the net verified CDM results and contributions toward 2014 target for CND Hydro in 2012.

Table 3: 2012 LDC CDM Results

Initiative	Unit	Incremental Activity (new program activity occurring within the specified reporting period)				Net Incremental Peak Demand Savings (kW) (new peak demand savings from activity within the specified reporting period)				Net Incremental Energy Savings (kWh) (new energy savings from activity within the specified reporting period)				Program-to-Date Verified Progress to Target	
		2011	2012	2013	2014	2011	2012	2013	2014	2011	2012	2013	2014	2014 Net Annual Peak Demand Savings (kW)	2011-2014 Net Cumulative Energy Savings (kWh)
														2014	2014
Consumer Program															
Appliance Retirement	Appliances	440	175			24	9			175,906	67,918			33	907,172
Appliance Exchange	Appliances	23	25			2	4			2,690	6,491			4	28,881
Heating & Cooling Incentive	Equipment	1,221	1,072			359	248			670,601	428,617			606	3,968,254
Conservation Instant Coupon Booklet	Items	4,812	296			11	2			179,901	13,391			13	759,780
Bi-Annual Retailer Event	Items	8,336	10,161			16	14			281,459	256,502			30	1,895,342
Retailer Co-op	Items	0	0			0	0			0	0			0	0
Residential Demand Response	Devices	82	0			46	0			0	0			0	0
Residential Demand Response (IHD)	Devices	0	0			0				0					
Residential New Construction	Homes	0	0			0	0			0	0			0	0
Consumer Program Total						458	277			1,310,556	772,919			687	7,559,429
Business Program															
Retrofit	Projects	22	104			256	1,203			1,336,743	6,206,217			1,437	23,855,207
Direct Install Lighting	Projects	118	108			158	95			398,982	356,510			224	2,581,663
Building Commissioning	Buildings	0	0			0	0			0	0			0	0
New Construction	Buildings	0	0			0	0			0	0			0	0
Energy Audit	Audits	0	1			0	5			0	25,176			5	75,529
Small Commercial Demand Response	Devices	1	0			1	0			0	0			0	0
Small Commercial Demand Response	Devices	0	0			0				0				0	0
Demand Response 3	Facilities	3	3			180	180			7,018	2,621			0	9,639
Business Program Total						595	1,483			1,742,744	6,590,523			1,666	26,522,038
Industrial Program															
Process & System Upgrades	Projects	0	0			0	0			0	0			0	0
Monitoring & Targeting	Projects	0	0			0	0			0	0			0	0
Energy Manager	Projects	0	0			0	0			0	0			0	0
Retrofit	Projects	22				466				3,083,118				466	12,332,473
Demand Response 3	Facilities	6	7			544	705			31,908	16,979			0	48,886
Industrial Program Total						1,009	705			3,115,026	16,979			466	12,381,359
Home Assistance Program															
Home Assistance Program	Homes	0	14			0	1			0	11,421			1	34,264
Home Assistance Program Total						0	1			0	11,421			1	34,264
Pre-2011 Programs completed in 2011															
Electricity Retrofit Incentive Program	Projects	64	0			1,191	0			6,710,956	0			1,191	26,843,823
High Performance New Construction	Projects	1	0			11	1			57,223	1,049			12	232,038
Toronto Comprehensive	Projects	0	0			0	0			0	0			0	0
Multifamily Energy Efficiency Rebates	Projects	0	0			0	0			0	0			0	0
LDC Custom Programs	Projects	0	0			0	0			0	0			0	0
Pre-2011 Programs completed in 2011 Total						1,202	1			6,768,179	1,049			1,203	27,075,862
Other															
Program Enabled Savings	Projects	0	0			0	0			0	0			0	0
Time-of-Use Savings	Homes														
Other Total							0				0			0	0
Adjustments to Previous Year's Verified Results							63				517,468			63	2,069,872
Energy Efficiency Total						2,494	1,582			12,897,579	7,373,292			4,022	73,514,426
Demand Response Total (Scenario 1)						770	885			38,926	19,599			0	58,525
OPA-Contracted LDC Portfolio Total						3,264	2,530			12,936,504	7,910,359			4,085	75,642,823
Activity & savings for Demand Response resources for each year and quarter represent the savings from all active facilities or devices contracted since January 1, 2011.												Due to the limited timeframe of data, which didn't include the summer months, 2012 IHD results have been deemed inconclusive. The IHD line item on the 2012 annual report will be left blank. Once a full year of data is available			
												Full OEB Target:		17,680	73,660,000
												% of Full OEB Target Achieved to Date (Scenario		23.1%	102.7%

Table 4: Summarized Program Results

Program	Gross Savings		Net Savings		Contribution to Targets	
	Incremental Peak Demand Savings (MW)	Incremental Energy Savings (GWh)	Incremental Peak Demand Savings (MW)	Incremental Energy Savings (GWh)	Program-to-Date: Net Annual Peak Demand Savings (MW) in 2014	Program-to-Date: 2011-2014 Net Cumulative Energy Savings (GWh)
Consumer Program Total	0.54	1.33	0.28	0.77	0.69	7.56
Business Program Total	1.73	8.76	1.48	6.59	1.67	26.52
Industrial Program Total	0.88	0.02	0.71	0.02	0.47	12.38
Home Assistance Program Total	0.00	0.01	0.00	0.01	0.00	0.03
Pre-2011 Programs completed in 2011 Total	0.15	0.67	0.00	0.00	1.20	27.08
Total OPA Contracted Province-Wide CDM Programs	3.31	10.78	2.53	7.91	4.09	75.64

4.1 Evaluation

The following has been provided by the OPA from the document “Final 2012 EM&V Findings” posted on the IESO web portal on August 30th, 2013.

4.1.1 CONSUMER PROGRAM

Bi-Annual Coupons

- 15% lower net savings due to a change in the net-to gross factors (increased free-ridership, less participant behavior spillover, and less non participant spillover).
- Majority of participation, energy, & demand savings are from standard CFLs.
- 15% of net savings due to ~73,000 coupons for new LED measures

Annual Coupons

- The number of coupons associated with the redemption of 2012 Annual Coupons was 90% lower than 2011 Instant Coupon Booklet. Key factors for the decrease include:
 - Shorter duration of available coupons (September 2012 – December 2012)
 - In 2012, only online coupons were available
 - 2011 had both online coupons AND coupon mailing booklets.

Heating & Cooling Incentive

- Small decrease (10%) in per unit savings assumptions for furnaces with ECM due to changes in 2012 customer mix and furnace fan usage.
- Small increase (10%) in free-ridership related to the furnace with ECM measure.
- Participation remains relatively steady once 2011 true-up values are included.

Appliance Retirement

- Decrease in 2012 participation by 39% compared to 2011.
- In-suite metering provided updated per unit assumptions:
 - Small decrease (3.5%) in savings for refrigerators; and
 - Sizeable increase (17.5%) in savings for freezers

Appliance Exchange

- Increase of 30% for exchanged dehumidifiers over 2011, leading to an increase of 4% in overall participation.
- Higher per unit savings for dehumidifiers drove the overall increase in 2012 savings.

PeaksaverPLUS

- Province-wide per-unit ex ante estimates for a 1-in-10 August peak day were determined to be 0.50 kW for residential CACs and 0.64 kW for small commercial CACs.
- Evaluation to date has indicated savings from IHDs are not statistically significant (in and around zero).
- However, since 2012 evaluation did not include full year analysis (specifically the summer months), these results have been deemed inconclusive.
- The IHD offer had a positive influence on enrollment and re-enrollment with between 20 to 35% of new enrollees said they wouldn't have enrolled without the IHD offer.

Residential New Construction

- All projects are opting for the prescriptive or performance path - there have been no custom project applications to date.

4.1.2 BUSINESS PROGRAMS

Retrofit

- Reported savings for prescriptive lighting projects continue to be overstated:
 - Verified wattage reductions were 15% higher than assumed; and
 - Verified operating hours were 11% higher than assumed.
- A lower realization rate in the engineered measure track can be partially explained by overstated lighting operation hour assumptions reported on the application.
- Net-to-gross ratios for the Initiatives were above 75% in 2012, which is consistent with 2011.

Small Business Lighting

- Reported hours of usage continue to be inaccurate - only 12% of site visits had verified annual hours of use within +/-10% of the assumed value.
- The saturation of eligible customers and preferred business types are resulting in participation from building types that may not fully operate during the summer peak period.

- This trend contributes to lower realization rates for demand savings in 2012.
- Due to changing regulations in lighting measures, the assumed baseline technology will eventually be phased out. This regulation impacts the persistence of savings over the lifetime of lighting measures.

Existing Building Commissioning

- There were no applications in 2012.
- Market feedback suggests that focus on chilled-water space-cooling systems may be too narrow, and participation could be expanded by incenting a wider range of measures.

New Construction

- Custom projects account for 66% of program savings, with the remainder coming from the prescriptive track

Audit Funding Program

- Through Audit Funding, 280 projects were completed in 2012 based on recommendations from the auditors, resulting in 1.4 MW and 7 GWh of Program Enabled Savings.
- Office buildings represented the largest portion of applicants for 2012.

4.1.3 INDUSTRIAL PROGRAMS

Process and Systems Upgrade Initiative

- Energy managers are seen as important drivers of Program Enabled savings projects.
 - 88% of survey respondents indicated that the assistance provided by Energy Managers was “somewhat” or “very” important to implementing projects.
- Energy Managers indicated that additional support (additional training and guides) may further help influence the adoption of energy efficiency measures by the participants.
- Documentation for Program Enabled Savings projects varied substantially by LDC. More guidance on documentation requirements would be beneficial to all parties.

DR-3

- 2012 saw improvements in the performance of DR-3 participants resulting higher ex ante realization rates, particularly for the industrial participants.

4.1.4 HOME ASSISTANCE PROGRAM

- Participation in the Initiative ramped up in 2012, with over 5,000 homes participating in the Initiative.
- Majority of energy savings (62%) comes from lighting measures, while 21% of energy savings resulting from refrigerator and freezer replacements.

4.2 Spending

Table 5: 2012 Spending by Initiative

Initiative	Program Administration Budget (PAB)	Participant Based Funding (PBF)	Participant Incentives (PI)	Capability Building Funding (CBF)	TOTAL
Consumer Program					
Appliance Retirement	\$67,224.65	\$0	\$0	\$0	\$67,224.65
Appliance Exchange	\$0	\$0	\$0	\$0	\$0
Heating & Cooling Incentives	\$67,004.02	\$0	\$0	\$0	\$67,004.02
Conservation Instant Coupon Booklet	\$39,747.73	\$0	\$0	\$0	\$39,747.73
Bi-Annual Retailer Event	\$0	\$0	\$0	\$0	\$0
Residential Demand Response	\$29,993.98	\$0	\$0	\$0	\$29,993.98
New Construction Program	\$0	\$0	\$0	\$0	\$0
Business Program					
Efficiency: Equipment Replacement	\$180,734.70	\$0	\$1,300,694.44	\$0	\$1,481,429.14
Direct Installed Lighting	\$35,353.69	\$26,352.00	\$105,452.50	\$0	\$167,158.19
Existing Building Commissioning Incentive	\$0	\$0	\$0	\$0	\$0
New Construction and Major Renovation Initiative	\$8,536.14	\$0	\$0	\$0	\$8,536.14
Energy Audit	\$24,246.42	\$0	\$3,535.60	\$0	\$27,782.02
Industrial Program					
Process & System Upgrades	\$12,195.56	\$0	\$0	\$0	\$12,195.56
a) preliminary engineering study	\$1,107.15	\$0	\$0	\$0	\$1,107.15
b) detailed engineering study	\$8,874.10	\$0	\$0	\$0	\$8,874.10
c) program incentive	\$2,214.31	\$0	\$0	\$0	\$2,214.31
Monitoring & Targeting	\$0	\$0	\$0	\$0	\$0
Energy Manager	\$3,240.41	\$0	\$0	\$0	\$3,240.41
Key Account Manager ("KAM")	\$8,973.39	\$0	\$0	\$0	\$8,973.39

Demand Response 3	\$3,321.46	\$0	\$0	\$0	\$3,321.46
Home Assistance Program					
Home Assistance Program	\$30,289.37	\$0	\$740.00	\$0	\$31,029.37
Pre 2011 Programs					
Electricity Retrofit Incentive Program	\$0	\$0	\$0	\$0	\$0
High Performance New Construction	\$0	\$0	\$0	\$0	\$0
Initiatives Not In Market					
Midstream Electronics	\$0	\$0	\$0	\$0	\$0
Midstream Pool Equipment	\$0	\$0	\$0	\$0	\$0
Demand Service Space Cooling	\$0	\$0	\$0	\$0	\$0
Demand Response 1 (Commercial)	\$0	\$0	\$0	\$0	\$0
Demand Response 1 (Industrial)	\$0	\$0	\$0	\$0	\$0
Home Energy Audit Tool	\$0	\$0	\$0	\$0	\$0
TOTAL Province-wide CDM PROGRAMS	\$511,041.52	\$26,352.00	\$1,410,422.54	\$0	\$1,959,831.62

Table 6: Cumulative Spending (2011-2014)

Initiative	Program Administration Budget (PAB)	Participant Based Funding (PBF)	Participant Incentives (PI)	Capability Building Funding (CBF)	TOTAL
Consumer Program					
Appliance Retirement	\$104,876.51	\$0	\$0	\$0	\$104,876.51
Appliance Exchange	\$4,212.15	\$0	\$0	\$0	\$4,212.15
Heating & Cooling Incentives	\$87,483.64	\$0	\$0	\$0	\$87,483.64
Conservation Instant Coupon Booklet	\$71,803.30	\$0	\$0	\$0	\$71,803.30
Bi-Annual Retailer Event	\$0	\$0	\$0	\$0	\$0
Residential Demand Response	\$42,109.05	\$0	\$0	\$0	\$42,109.05
New Construction Program	\$4,498.68	\$0	\$0	\$0	\$4,498.68
Business Program					

Efficiency: Equipment Replacement	\$245,086.61	\$0	\$1,433,692.67	\$0	\$1,678,779.28
Direct Installed Lighting	\$49,500.53	\$55,144.00	\$210,585.75	\$0	\$315,230.28
Existing Building Commissioning Incentive	\$0	\$0	\$0	\$0	\$0
New Construction	\$17,958.83	\$0	\$0	\$0	\$17,958.83
Energy Audit	\$35,290.31	\$0	\$6,783.10	\$0	42,073.41
Industrial Program					
Process & System Upgrades	\$23,847.15	\$0	\$0	\$0	\$23,847.15
a) preliminary engineering study	\$4,730.79	\$0	\$0	\$0	\$4,730.79
b) detailed engineering study	\$11,716.17	\$0	\$0	\$0	\$11,716.17
c) program incentive	\$7,400.19	\$0	\$0	\$0	\$7,400.19
Monitoring & Targeting	\$0	\$0	\$0	\$0	\$0
Energy Manager	\$12,534.50	\$0	\$0	\$0	\$12,534.50
Key Account Manager ("KAM")	\$8,973.38	\$0	\$0	\$0	\$8,973.38
Demand Response 3	\$6,163.52	\$0	\$0	\$0	\$6,163.52
Home Assistance Program					
Home Assistance Program	\$36,507.66	\$0	\$740.00	\$0	37,247.66
Pre 2011 Programs					
Electricity Retrofit Incentive Program	\$0	\$0	\$0	\$0	\$0
High Performance New Construction	\$0	\$0	\$0	\$0	\$0
Initiatives Not In Market					
Midstream Electronics	\$0	\$0	\$0	\$0	\$0
Midstream Pool Equipment	\$0	\$0	\$0	\$0	\$0
Demand Service Space Cooling	\$0	\$0	\$0	\$0	\$0
Demand Response 1 (Commercial)	\$0	\$0	\$0	\$0	\$0
Demand Response 1 (Industrial)	\$0	\$0	\$0	\$0	\$0
Home Energy Audit Tool	\$0	\$0	\$0	\$0	\$0
TOTAL Province-wide CDM PROGRAMS	\$1,044,863.96	\$26,352.00	\$1,410,422.54	\$0	\$1,959,831.62

4.3 Additional Comments

Overall, 2012 proved to be a successful year for CND Hydro in CDM. The hard work, early customer engagement and collaborative delivery in 2011 built a solid foundation to roll into 2012 on. Incremental activity in ERII was up 245% over the previous year and the average kW per project also increased. CND Hydro was pleased to note that the net verified results provided with the OPA confirmed that the four year energy target had been achieved in 2012.

This year also saw the internal dedicated resources of CND Hydro increase from 1.5 full time equivalents to 3 by mid-year. Third party delivery agents and contractors were also an important component to the delivery of turn-key ready programs such as Direct Install and HAP. Engaging with local business to secure resources such as Energy Managers played a part in driving further results and more process related projects.

CND Hydro's collaborative effort in developing a new marketing theme for the key consumer Initiatives proved successful in increasing awareness of the brand and offerings. A direct to the customer engagement strategy continues to be the most effective means to drive participation in the C&I and Industrial portfolios. This will continue to be a primary focus and driver to achieve the MW peak demand target.

CND Hydro remains optimistic about their CDM results and the 2014 targets.

5 Combined CDM Reporting Elements

5.1 Progress Towards CDM Targets

The following Tables (7 & 8) report on the final verified results for CND Hydro towards the 2014 target. CND Hydro is pleased to report achievement of the Net Energy Savings (GWh) target as of 2012.

Table 7: Net Peak Demand Savings at the End User Level (MW)

Implementation Period	Annual (MW)			
	2011	2012	2013	2014
2011 – Verified by OPA	3.3	2.5	2.5	2.5
2012 – Verified by OPA		2.5	1.6	1.6
2013				
2014				
Verified Net Annual Peak Demand Savings in 2014:				4.1
CND Hydro 2014 Annual CDM Capacity Target:				17.7
Verified Portion of Peak Demand Savings Target Achieved (%):				23.1%

Table 8: Net Energy Savings at the End-User Level (GWh)

Implementation Period	Annual (GWh)				Cumulative (GWh)
	2011	2012	2013	2014	2011-2014
2011 – Verified by OPA	12.9	12.9	12.9	12.8	51.5
2012 – Verified by OPA		7.9	7.9	7.8	24.1
2013					
2014					
Verified Net Cumulative Energy Savings 2011-2014:					75.6
CND Hydro 2011-2014 Cumulative CDM Energy Target:					73.7
Verified Portion of Cumulative Energy Target Achieved (%):					102.7%

5.2 Variance from Strategy

The net verified results in this report demonstrate a variance from the original strategy submitted to the OEB on November 1, 2010. The 2012 results for peak demand savings continue to fall short of the annual milestone mark but the results for cumulative energy have surpassed even the 2014 prediction.

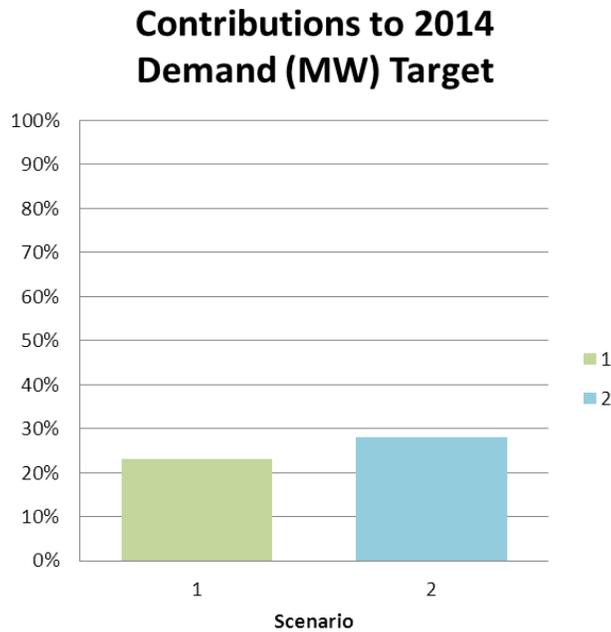
The gap in forecasted versus actual can be attributed to a few key points:

- Initiatives such as DR-3 and RDR weigh heavily into the success of meeting our MW target. These programs have proven to have a significant barrier to entry into the market.
- Large projects currently pre-approved and underway require an extended timeline for implementation and completion. The groundwork for projects of this nature has already been laid and savings should begin to appear in 2013 and by 2014.
- Inconsistent direction regarding the eligibility of natural gas fired co-generation projects in the PSUI stream has delayed implementation of a large project that was applied for in 2011. If the project is unable to complete before December 31, 2014 this will also have an impact on CND Hydro's target achievement.

5.3 Outlook to 2014 and Strategy Modifications

The cumulative effect on net energy savings combined with a strong attribution of savings from pre-2011 programs played a large role in CND Hydro achieving the energy target in 2012. Emphasis in 2013 and 2014 will be applied to Initiatives and measures that provide the greatest demand reduction. CND Hydro is currently working on the roll out of RDR and anticipates strong results from that to be realized in 2014.

The outlook to 2014 is encouraging. When the persistence of demand response programs is factored in, CND Hydro is further along in the MW savings than this report would indicate, see chart below. There is also a pipeline of projects in ERII, PSUI and Direct Install which will also assist in driving towards achieving the demand target.



APPENDIX A

Initiative Descriptions

CONSUMER PROGRAMS

Appliance Retirement Initiative

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 and
- saveONenergy website
<https://saveonenergy.ca/Consumer/Programs/Appliance-Retirement.aspx>

In Market Date: February 17, 2011

Appliance Exchange Initiative

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 and
- saveONenergy website <https://saveonenergy.ca/Consumer.aspx>

Heating & Cooling Incentives Initiative

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 and
- saveONenergy website <https://saveonenergy.ca/Consumer.aspx>

In Market Date: February 17, 2011

Conservation Instant Coupon Booklet Initiative

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.

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 and
- saveONenergy website <https://saveonenergy.ca/Consumer.aspx>

In Market Date: April 2011

Bi-Annual Retailer Event Initiative

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 and
- saveONenergy website <https://saveonenergy.ca/Consumer.aspx>

In Market Date: April 2011

New Construction Initiative

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 and
- saveOnEnergy website <https://saveonenergy.ca/Consumer.aspx>

In Market Date: February 17, 2011

Residential Demand Response Initiative

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 and
- saveONenergy website <https://saveonenergy.ca/Consumer.aspx>

In Market Date: Due to delays in technology availability and interoperability, this program was not in market in 2012.

Low Income Initiative (Home Assistance Program [HAP])

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>

In Market Date: March 2012

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 and
- saveONenergy website
<https://saveonenergy.ca/Business/Program-Overviews/Retrofit-for-Commercial.aspx>

In Market Date: April 2011

Direct Install Lighting Initiative

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>

In Market Date: May 2011

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 and
- saveONenergy website
<https://saveonenergy.ca/Business/Program-Overviews/Existing-Building-Commissioning.aspx>

In Market Date: March 2011

New Construction and Major Renovation Initiative (HPNC)

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>

In Market Date: November 2011

Energy Audit 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 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 and
- saveONenergy website
<https://saveonenergy.ca/Business/Program-Overviews/Audit-Funding.aspx>

In Market Date: March 2011

INDUSTRIAL PROGRAMS

Process & Systems Upgrades Initiative (PSUI)

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 and
- saveONenergy website <https://saveonenergy.ca/Business.aspx>

In Market Date: November 2011

Monitoring & Targeting Initiative

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
and
- saveONenergy website <https://saveonenergy.ca/Business.aspx>

In Market Date: November 2011

Energy Manager Initiative

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 and
- saveONenergy website <https://saveonenergy.ca/Business.aspx>

In Market Date: November 2011

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

In Market Date: March 2012

Demand Response 3

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 DR-3 participants to compensate them for making available electricity demand response during a demand response event.

Description: Demand Response 3 (DR-3) 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 DR-3 Initiative is a contractual resource that is an economic alternative to procurement of new generation capacity. DR-3 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: DR-3 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
- and
• saveONenergy website <https://saveonenergy.ca/Business.aspx>

In Market Date: February 2011

3.1.1 Pre-2011 Programs Completed in 2011

Electricity Retrofit Incentive Program (ERIP)

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.

High Performance New Construction

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.