Peterborough Distribution Inc.

Conservation and Demand Management

2014 Annual Report

Submitted to:

Ontario Energy Board

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Executive Summary

This annual report is submitted by Peterborough Distribution Inc. ("PDI") in accordance with the filing requirements set out in the Conservation and Demand Management ("CDM") Code for Electricity Distributors, issued September 16, 2010, Board File No. EB-2010-0215 specifically, the Appendix C Annual Report Template, as a progress report and update to Peterborough Distribution Inc.'s Strategy filed with the Ontario Energy Board ("Board" or "OEB") on November 1, 2010. Accordingly, this report outlines Peterborough Distribution Inc.'s CDM activities for the period of January 1, 2014 to December 31, 2014. It includes net peak demand and net energy savings achieved in 2011, 2012, 2013, and 2014, CDM program activities, successes and challenges.

Peterborough Distribution Inc. did not apply for any Board-approved CDM programs during 2014 however, as noted in the Guidelines for Electricity Distributors Conservation and Demand Management ("CDM Guidelines"), released April 26, 2012, the Board has deemed Time-of-Use ("TOU") pricing to be a province-wide Board-approved CDM program. The Ontario Power Authority ("OPA"), now Independent Electricity System Operator ("IESO"), has provided measurement and verification on TOU resulting in TOU savings allocated to Peterborough Distribution Inc.'s 2011 -2014 targets of 359 kW.

In 2011 – 2014, Peterborough Distribution Inc. contracted with the IESO to deliver a portfolio of IESO-contracted province-wide CDM programs ("IESO Programs") to all customer segments including residential, commercial, institutional, industrial and low income. Although many of these programs were rolled-out by the IESO in June of 2011, rules for the majority of initiatives had not been solidified and they remained in a state of flux which prevented PDI and other LDC's from bringing programs to market in 2011. The first year of program activities was centered on building a foundation for full program execution over the next three years of the program term, including staffing, procurement, and program delivery.

Additionally, PDI was tasked with the challenge of replacing defective Comverge ***peaksaver*** Thermostats and negotiating compensation from the OPA for this replacement. PDI lobbied the OPA to introduce new technology providing two-way broadband communicating thermostats for the replacement project. This responsibility averted focus from and proved to be a huge obstacle in enrollment of customers in the newer ***peaksaver***PLUS program.

In 2012, momentum started to build as a result of needed program transition and refinement by the OPA. Re-enrolling prior ***peaksaver*** participants was determined to be our primary focus in 2012 but due to a change in OPA staff and subsequent failure to communicate prior agreements and methodology secured by PDI on the affirmation of prior participants of the ***peaksaver*** program, the results of approximately 8,800 water heater control customers were not recognized. The enrollment file was blocked by the OPA preventing PDI from uploading additional net new participant information to be attributed to our targets.

Also in 2012, significant projects for one of our large use customers were placed on hold after it was determined that their anticipated savings would result in negative impact to their Global Adjustment (GA) charges. The Ministry of Energy was informed of this situation by PDI and Ministry staff, through their investigation, passed a Bill to protect all customers from negative impact to GA reclassification from participation in conservation programs.

The initial affirmation of ***peaksaver***PLUS contracts for water heater controlled customers were made in 2012 however, the OPA hold on the enrollment file remained in 2013.

The OPA was well aware of their reporting delay, but after months of enquiry by PDI to resolve this issue, the OPA was unable to provide a response and therefore, our ***peaksaver***PLUS participants were still not reflected in the 2013 results as expected, even though the load was available and utilized for curtailment since 2011. This represented a significant portion of summertime peak demand reduction for PDI and remained vastly understated into 2014.

In 2013, with the changes to the GA, our Large Use customer and Embedded Energy Manager were able to proceed with their plans for the multiple projects that were on hold in 2012. Due to the complexity of the projects, and the expansion of the scope of work being completed, work continued in 2013 and significant gains were made. However, many of the projects had not yet been finalized and we looked to 2014 for continued results as completed and attributable savings towards our targets.

In 2014, the reaffirmation of ***peaksaver*** customers were completed and results for demand reduction were finally observed albeit only in 2014 and with no cumulative kWh savings attributed.

After careful review of the four year program life, we better understand the value of community outreach from internal PDI resources directly for building and maintaining local relationships and improved program uptake and success. This learning has been taken into consideration in the planning of our new framework 2015-2020. In order to accomplish this, we have acquired two new FTE's whose main focus will be direct outreach to our local business and industry customers.

The release of the new Small Business Lighting (SBL) initiative rules reveals that all prior participants in Power Savings Blitz (PSB) and SBL from 2008 to 2015 will be eligible for participation in the new program version. PDI has determined that it will be more cost effective to resource this program using internal staff rather than outsourcing to a turnkey provider. Opportunity for additional engagement and direct relationship building with local businesses and contractors will also be extremely beneficial to the success of the program.

Aside from the challenges, PDI is noted to be one of only 13 LDC's who were able to attain an 80% or greater achievement toward each of our energy and demand targets thus allowing us to qualify for the OEB performance bonus. This was accomplished while spending only slightly more than 80% of our administration budget and with very limited internal staff resources.

To date Peterborough Distribution Inc. has achieved 7.2 MW of net incremental peak demand savings and 35 GWh of net incremental energy savings in 2014. A summary of these achievements towards the CDM targets is shown in Table 1 below:

Table 1: Final Results Summary

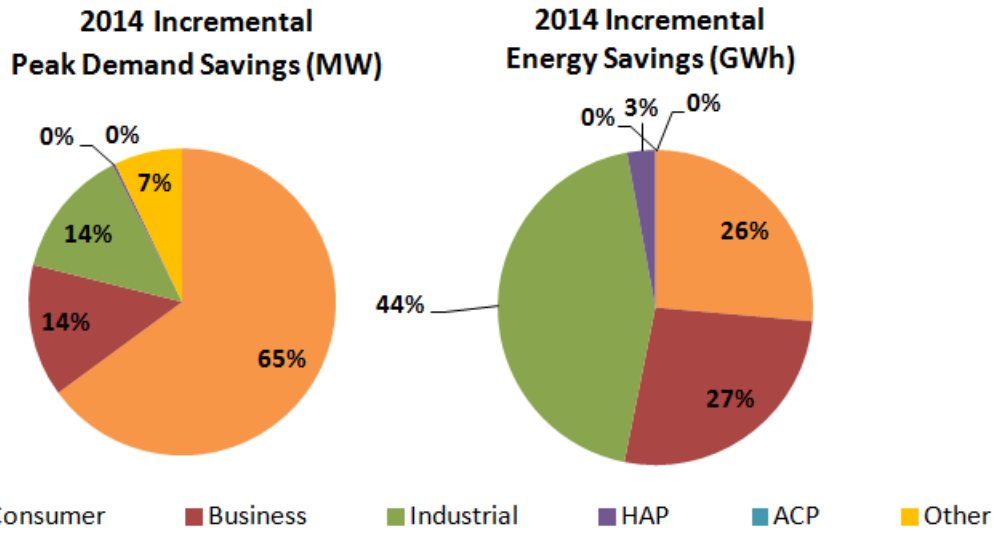
IESO-Contracted Province-Wide CDM Programs: 2011-2014 Final Results Report

LDC: Peterborough Distribution Incorporated

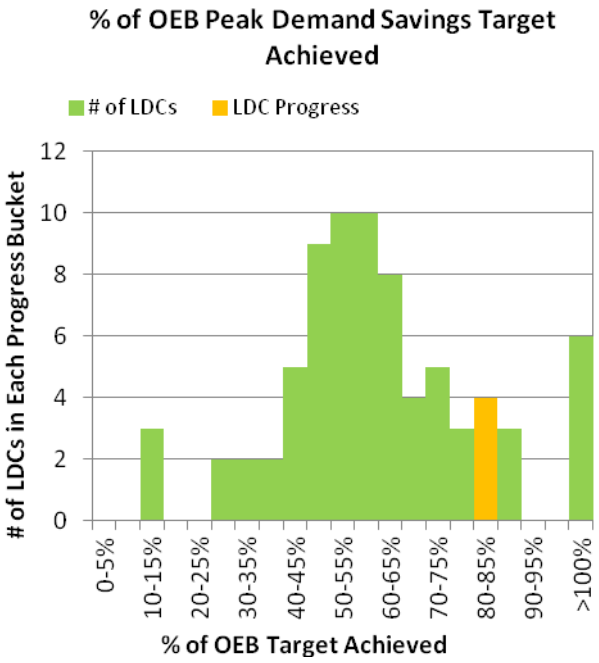
Final 2014 Achievement Against Targets	2014 Incremental	2011-2014 Achievement Against Target	% of Target Achieved
Net Annual Peak Demand Savings (MW)	5.1	7.2	**83.0%**
Net Energy Savings (GWh)	5.8	35.0	**91.0%**

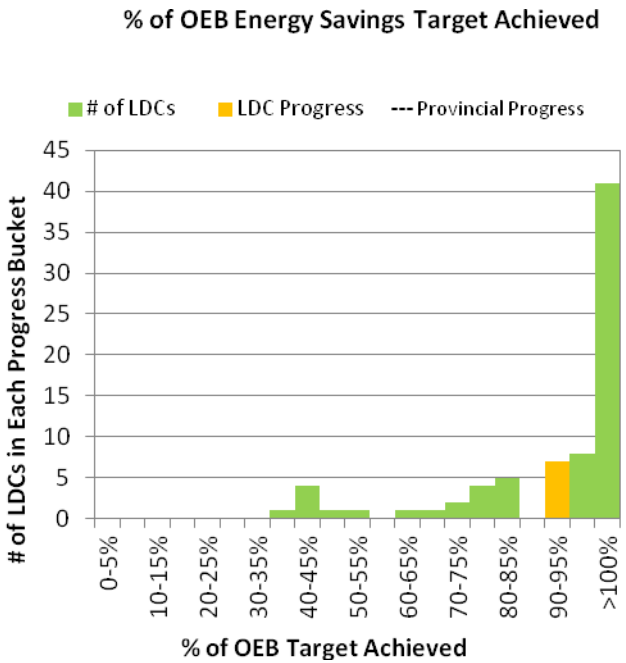
Unless otherwise noted, results are presented using scenario 1 which assumes that demand response resources have a persistence of 1 year

Achievement by Sector



Comparison: LDC Achievement vs. LDC Community Achievement (Progress to Target)





As outlined in the above table, Peterborough Distribution Inc. has achieved 7.2 MW or 83 % and 34,995 MWh or 91% towards Peterborough Distribution Inc.'s 2014 peak demand reduction target and energy consumption reduction targets respectively. The shortfall of peak demand targets were mainly due to late start of programs, cancellation of planned province wide programs including Direct Space Cooling since 2011, and to the fact that PDI participated in voluntary CDM programs prior to the 2011-2014 Program years. PDI had very high participation in the PSB and the ERIP programs. Had we known that a mandatory target was forthcoming, PDI, like many other LDC's in Ontario, may have selectively chosen a less aggressive focus on the prior programs. Notwithstanding, PDI put forth our best effort as we felt it was in the best interest of consumers to help them reduce their energy and peak demand. The OPA initially indicated that other LDCs, or the OPA, would run any program that a specific LDC was not participating in, yet ultimately this did not materialize. LDC's who did not participate in these prior programs had a significant advantage toward achieving their target over those who did.

In 2015, the Conservation First Framework (CFF) for the period 2015 -2020 will be implemented. To ensure a smooth transition, most 2011- 2014 programs and rules were extended into 2015 allowing each LDC to determine an appropriate implementation start date under the Conservation First Framework. Ours will be January 1, 2016.

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 Conservation and Demand Management ("CDM") targets to be met by electricity distributors. Accordingly, on November 12, 2010, the OEB amended the distribution license of Peterborough Distribution Inc. to require PDI, as a condition of its license, to achieve 38.45 GWh of energy savings and 8.72 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 set out the obligations and requirements with which electricity distributors must comply in relation to the CDM targets set out in their licenses. To comply with the Code requirements, Peterborough Distribution Inc. submitted its CDM Strategy on June, 10, 2011 which provided a high level description of how Peterborough Distribution Inc. intended to achieve its CDM targets.

The Code also required a distributor to file annual reports with the Board. This is the fourth Annual Report by Peterborough Distribution Inc. and has been prepared in accordance with the Code requirements and covers the period from January 1, 2014 to December 31, 2014.

Peterborough Distribution Inc. submitted its 2011 Annual Report on September 28, 2012 which summarized the CDM activities, successes and challenges experienced by Peterborough Distribution Inc. 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 IESO, and the absence of some programs altogether, negatively impacted the final 2011 results for LDCs. This issue was also highlighted in Volumes I and II of the Environmental Commissioner's Report on Ontario's Annual Energy Conservation Progress.

On December 21, 2012, the Minister of Energy directed the IESO to fund CDM programs meeting the definition and criteria for IESO-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 remained the achievement of CDM targets by December 31, 2014.

Peterborough Distribution Inc. submitted its 2013 Annual Report on September 30, 2014 which summarized the CDM activities undertaken by Peterborough Distribution Inc. for the January 1, 2013 to December 31, 2013 period. The OEB's 2013 CDM results report identified that the majority of LDCs achieved close to 50% of their net peak demand (MW) target from their 2013 results. However, LDCs generally advised the Board that meeting their peak demand (MW) target is not likely and that a shortfall is expected. PDI had anticipated that they would achieve their demand reduction target with the expected savings from the IHD's.

In 2014, LDCs collectively achieved approximately 19.5% of the energy savings (GWh) target, adding to the overall cumulative result of approximately 109% of the net energy target of 6,000 GWh.

The report identifies that although there have been improvements to programs there still remain some shortcomings to the design and delivery of certain initiatives that have resulted in a negative impact to some programs. In particular, the change management process still requires improvement to expedite enhancements

initiatives. The report also noted that certain initiatives may be reaching the point of market saturation and that new initiatives may need to be developed in order to take the place of the existing initiatives under the new framework.

1. Conservation Framework

1.1 2011-2014 Framework

Ontario's current CDM framework is a key step towards creating a culture of conservation in the Province. The Ontario Government ("Government") 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, supports the provincial integrated supply plan, and addresses local distribution and transmission supply constraints. The past framework was intended to enable customers to benefit from a suite of both Board-approved and IESO province-wide programs and provide a portfolio that would meet both broad and specific customer needs.

The state of Board-approved programs and the current suite of province-wide IESO 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, involving considerable cost and effort, which has resulted in limited benefits to customers and CDM savings.

Challenges faced by LDCs in the 2011-2014 framework, such as overbuilt governance and unnecessarily excessive legal requirements and misalignment of control and risks, have been addressed by the new directive. However, there are still many challenges to overcome and the new CDM framework should address other challenges of the current framework and build on its strengths.

1.2 Conservation First Framework

LDCs are supportive of the Government's renewed commitment for CDM in Ontario. LDCs are committed to working with the Government, IESO, Natural Gas Utilities and other stakeholders to develop programs for the new framework for CDM in the Province.

Long-term commitment for CDM funding and confirmation of the role of LDCs has been provided in the Minister's directive dated March 31, 2014, allowing LDCs to maintain current program infrastructure, including LDC staff and third party contracts as required.

The commitment also provided LDCs the program extensions required for continuity into the Conservation First Framework which was critical for all customers.

2. Board-Approved CDM Programs

2.1 Introduction

In its Decision and Order dated November 12, 2010 in EB-2010-0215 and EB-2010-0216, the OEB ordered that, to meet its mandatory CDM targets, "Each licensed electricity distributor must, as a condition of its licence, deliver Board-approved CDM programs, IESO-contracted province-wide CDM programs, or a combination of the two".

At this time, the implementation of TOU pricing is the only Board-approved CDM program that is being offered by Peterborough Distribution Inc.

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 the Ministry directive dated March 31, 2010 by the Minister of Energy and Infrastructure, the OEB is of the view that any evaluation of savings from TOU pricing should be conducted by the IESO for the Province, and then allocated to distributors. Peterborough Distribution Inc. has reported these results as provided by the IESO.

In 2013, IESO had retained the Brattle Group as the evaluation contractor and has been working with an expert panel convened to provide advice on methodology, data collection, models, savings allocation, etc. The initial evaluations were conducted in 2013 with five LDCs – Hydro One Networks Inc., Toronto Hydro-Electric System Limited, Hydro Ottawa Limited, Thunder Bay Hydro Electricity Distribution Inc. and Newmarket-Tay Power Distribution Ltd. Preliminary results from these five LDCs were issued to the five LDCs involved in the study in August 2013 and are now publically available on the IESO website. Preliminary results demonstrated load shifting behaviours from the residential customer class.

Three additional LDCs were added to the study in 2014 – Cambridge-North Dumphries, PowerStream and Sudbury. Preliminary results from this study were to be issued to the eight LDCs in September 2014. The IESO advised that the TOU study would be completed in the summer of 2015 and the final verified savings have been provided to LDCs for the 2014 Annual Report.

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 consumers 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:

Table 2: RPP TOU Pricing Summary

	Prices (cents/kWh)		
Effective Date	**On Peak**	**Mid Peak**	**Off Peak**
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
November 1, 2013	12.9	10.9	7.2
May 1, 2014	13.5	11.2	7.5
November 1, 2014	14.0	11.4	7.7

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

2.2.3 TOU Initiative Activities/Progress

Peterborough Distribution Inc. began transitioning its RPP customers to TOU billing in July, 2012. At December 31st, 2014, all RPP customers were on TOU billing.

2.3 Peterborough Distribution Inc.'s Application with the OEB

Peterborough Distribution Inc. did not submit a CDM program application to the OEB in 2014.

2.4 Peterborough Distribution Inc.'s Application with the IESO's Conservation Fund

In 2013, the IESO introduced the Conservation Fund's Program Innovation stream to help meet Peterborough Distribution Inc.'s interest in the development and launch of new local, regional and province-wide initiatives. The Conservation Fund's LDC Program Innovation Stream fast-tracked LDC-led program design and the launch of successfully piloted initiatives prior to full scale deployment. By driving program innovation through the Conservation Fund, LDCs have the opportunity to both realize additional savings through the piloting and implementation of initiatives not currently addressed by the IESO portfolio and the means to test concepts for future local or province wide programs post 2014. As per the IESO, as of March 2014, three pilots have been contracted and are underway with Toronto Hydro and Niagara Peninsula Energy and ten others are in various stages of the contracting and development process.

In addition, building on LDC interest in social benchmarking services for the residential sector, in 2013 the Conservation Fund in collaboration with Hydro One, Milton Hydro and Horizon Utilities completed the procurement of three social benchmarking pilot projects. Beginning in 2014 these services will be offered to more than 100,000 customers for a one year period, with evaluation reports published shortly thereafter.

Peterborough Distribution Inc. did not submit a CDM program application to the IESO's Conservation Fund in 2014 however, PDI has multiple projects in planning stages for submission to the conservation fund or innovation fund in the near future.

3. IESO-Contracted Province-Wide CDM Programs

3.1 Introduction

Effective February 3, 2011, Peterborough Distribution Inc. entered into an agreement with the IESO to deliver CDM programs extending from January 1, 2011 to December 31, 2014. The programs included under this agreement are listed in Table 3 below. Further program details are included in Appendix A. In addition, results include projects started pre 2011 which were completed in or after 2011:

Table 3: IESO-Contracted Province-Wide CDM Program Initiatives

Initiative	Schedule	Date schedule posted	Customer Class
Residential 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*
HVAC Incentives	Schedule B-1, Exhibit B	*Jan 26, 2011*	*All residential rate classes*
Conservation Instant Coupon Booklet	Schedule B-1, Exhibit A	*Jan 26, 2011*	*All residential rate classes*
Bi-Annual Retailer Event	Schedule B-1, Exhibit C	*Jan 26, 2011*	*All residential rate classes*
Retailer Co-op	n/a	*n/a*	*All residential rate classes*
Residential Demand Response	Schedule B-3	*Aug 22, 2011*	*All general service classes*
New Construction Program	Schedule B-2	*Jan 26, 2011*	*All residential rate classes*
Home Assistance Program	Schedule E-1	*May 9, 2011*	*All residential rate classes*
Commercial & Institutional Programs			
Efficiency: Equipment Replacement	Schedule C-2	*Jan 26, 2011*	*All general service classes*
Direct Install Lighting	Schedule C-3	*Jan 26, 2011*	*General Service < 50 kW*
Existing Building Commissioning Incentive	Schedule C-6	*Feb 2011*	*All general service classes*
New Construction and Major Renovation Initiative	Schedule C-4	*Feb 2011*	*All general service classes*
Energy Audit	Schedule C-1	*Jan 26, 2011*	*All general service classes*
Commercial Demand Response	Schedule B-3	*Jan 26, 2011*	*General Service <50 kW*
Industrial Programs			
Process & System Upgrades	Schedule D-1	*May 31, 2011*	*General Service 50 kW & above*
Monitoring & Targeting	Schedule D-2	*May 31, 2011*	*General Service 50 kW & above*
Energy Manager	Schedule D-3	*May 31, 2011*	*General Service 50 kW & above*

Key Account Manager ("KAM")	Schedule D-4	*May 31,2011*	*General Service 50 kW & above*
Demand Response 3	Schedule D-6	*May 31, 2011*	*General Service 50 kW & above*

In addition, results were realized towards Peterborough Distribution Inc.'s 2011-2014 targets through the following pre-2011 programs:

- Electricity Retrofit Incentive Program
- High Performance New Construction

As per the table below, several program initiatives are no longer available to customer or have not been launched in Table 4.

Table 4: Pre-2011 IESO Programs

Not in Market	Objective	Status
Residential Program		
Midstream Electronics	Encourages retailers to promote and sell high efficency televisions, and for distributors to distribute high efficiency set top boxes.	Did not launch and removed from Schedule in Q2, 2013.
Midstream Pool Equipment	Encourage pool installers to sell and install efficient pool pump equipment in residential in-ground pools.	Did not launch and removed from Schedule in Q2, 2013.
Home Energy Audit Tool	This is a provincial online audit tool to engage customers in conservation and help drive customer participation to CDM programs.	Did not launch and removed from Schedule in Q2, 2013.
Commercial & Institutional Program		
Direct Service Space Cooling	Offers free servicing of air conditioning systems and refrigeration units for the purpose of achieving energy savings and demand reduction.	Did not launch.
Demand Response 1 ("DR1")	This initiative allows distribution customers to voluntarily reduce electricity demand during certain periods of the year pursuant to the DR 1 contract. The initiative provides DR payment for service for the actual electricity reduction provided during a demand response event.	No customer uptake for this initiative. As a result this Initiative was removed from the Schedule in Q4, 2012.
Industrial Program		
DR1	As above	No customer uptake for this initiative. Removed in Q4, 2012.

The Master CDM Program Agreement between LDC and the IESO includes a program change management provision in Article 3. Collaboration between the IESO and LDC commenced in 2011, and continued in 2012, 2013 and 2014, as the change management process was implemented to enhance the saveONenergy program

suite. The change management process allows for modifications to the Master CDM Program 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 Descriptions

Full descriptions of IESO-contracted province-wide CDM programs are available on the IESO's intranet LDC and additional initiative information can be found on the saveONenergy website at https://saveonenergy.ca. The targeted customer types, objectives, and individual descriptions for each program initiative are detailed in Appendix A. Discussion of LDC's experience with these programs is provided below.

3.2.1 RESIDENTIAL PROGRAM

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

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

Discussion:

The addition of Light Emitting Diode ("LED") technology into the bi-annual retailer events in 2012 and the annual coupons in 2013, as well as LDC custom coded coupons, has had a positive effect on consumer engagement and provided LDC with opportunities to achieve additional savings in their service territory. The Residential Demand Response program is the main residential initiative which drives savings for LDCs and has been well received by consumers eager to utilize an In-Home Display ("IHD") to help manage their energy consumption. Unfortunately, it was determined that no savings would be associated with the Energy Display attributed to LDCs in the IESO's verified results. After much anticipation of significant savings from the deployment of IHD's, PDI was disappointed to learn that no attributed savings would be allocated, regardless of the fact that in every other jurisdiction of deployment, 5%-10% savings were confirmed.

The Heating and Cooling incentives program continues to be one of the strongest performer in the residential suite of programs. This program is mainly driven by contractors participating in the program but they may not always deliver results in the required manner (e.g. allowing customers to apply for their own incentives and tardy reporting).

The Residential Program Portfolio is predominately a carryover of initiatives from previous programs. Three new initiatives were never launched and subsequently removed from the schedule in 2013 with no new additions. Delays in communication with regards to initiative offerings and results reporting have hampered LDCs' abilities to engage customers and promote participation. Province-wide advertising has provided value in all residential programs except for ***peaksaver***PLUS® due to technological inconsistency across LDCs.

Work to revitalize and increase the effectiveness and breadth of the initiatives through the residential program needs to be a high priority. There are opportunities within the residential marketplace that need to be addressed, programs developed and offered to customers. The Version 5 schedules changes under the Master

Agreement implemented in Q1/Q2 2014 have increased the number of LDC-coded coupons available and made new installations of central heating and cooling systems eligible for the Heating and Cooling Incentive.

3.2.1.1 Appliance Retirement Initiative (Exhibit D)

Initiative Activities/Progress: PDI, along with many other LDC's began the wind down of the program when the IESO declared the program to be finished as of December 31, 2014. In May of 2015, the residential working group was informed that the appliance retirement initiative was being extended due to the wishes of a small number of LDC's in the south west region. The residential working group was concerned that this program restart would cause customer confusion and was not a worthwhile use of ratepayer dollars. The program was officially extended/restarted in July, 2015 to the end of the year. Most LDC's in the province chose not to promote this extension as they had already signaled to their customers that the program was complete.

Additional Comments:

- Due to the duration of the program, and the revised appliance eligibility requirements to a minimum age of 20 years old, this initiative appears to have reached market saturation and has been under consideration for removal from the portfolio.
- LDC results are very responsive to province-wide advertising, IESO provincial marketing should continue to play a key role.
- Better relationships with retailers may play a role in increasing participation in this initiative. Retailers can provide opportunities to capture replacement appliances and have them decommissioned after a sale has been committed.
- In an effort to capture additional savings in the perceived last year of the initiative, the eligibility requirement for refrigerators was revised from 20 years old to 15 years old in Q2 2014, prior to the conclusion of this program by December 31, 2014.
- Due to the announcement by the IESO that the Appliance Retirement program was going to cease at the end of 2014, many LDCs lowered (or removed) their marketing support for the program.
- The end of 2014 saw several events that caused disruption in the Appliance Retirement program. ARCA Canada Inc., the provincial administrator and pick-up agent of appliances, had lowered internal staffing requirements.

3.2.1.2 Appliance Exchange Initiative (Exhibit E)

Initiative Activities/Progress: Due to limited opportunities presented by retailers, PDI has not directly participated in appliance exchange events other than in its promotion through social media.

Additional Comments:

- The design of the initiatives, including eligible measures and incentives amounts are developed through the Residential Working Group. Retail partner(s) are contracted by the IESO to deliver the initiatives province-wide. Individual LDCs have the opportunity to stage in-store events to drive the distribution of LDC coded coupons and promotion of other programs in the portfolio

- This initiative, eligible measures and incentive amounts are influenced by the retail partner with very limited involvement from the LDCs. The restrictive, limited and sometimes non-participation of local stores can diminish the savings potential for this initiative.

- To date there has only been one retailer participant in the Appliance Exchange Initiative.

- Evaluation, Measurement, and Verification ("EM&V") results indicated that the value of savings for retired room air conditioners ("AC") has dropped resulting in the retail participant no longer accepting window ACs from the spring of 2013.

- Notification to LDCs 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 may benefit from the disengagement of the retailer and allowing LDCs to conduct these events, possibly as part of a larger community engagement effort, with the backing of the IESO's contractor for appliance removal.

- The initiative would require more promotion from retailers and LDCs.

3.2.1.3 HVAC Incentives Initiative (Exhibit B)

Initiative Activities/Progress: PDI continues to market this program and benefits from continued participation outside the challenges that surround this initiative as mentioned below. This program was represented in our quarterly 'Connections' newsletter circulated to all customers, as well as on our saveONenergy micro site and local Green Expo and Home Show events. We have anecdotal information based on results and customer feedback that local HVAC contractors are promoting this program. However, we also do feel that some contractors are providing incentive discounts directly to customers and not through the OPA.

Additional Comments:

- Incentive levels appear to be insufficient to prompt participants to upgrade HVAC equipment prior to end of useful life. An Air Miles incentive was introduced in 2013 to try and encourage early replacement.

- 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 central air conditioner sales to eligible units.

- There are cases where non-participating contractors are offering their own incentives (by discounting their installations to match the value of the IESO incentive) to make the sale. As this occurs outside of the initiative, savings are not credited to LDCs. IESO should consider this in future program impact evaluation studies.

- Changes to the schedules in 2014 to allow for incentives for new installations, rather than strictly replacement units, may prove to be effective in providing greater results, increasing provincial participation by 20% over 2013.

3.2.1.4 Conservation Instant Coupon Initiative (Exhibit A)

Initiative Activities/Progress: PDI continued to market this initiative through Newspaper advertising, in our quarterly 'Connections' newsletter circulated to all customers, as well as on our saveONenergy micro site, our local Green Expo and Home Show events, and social media. The upstream pilot that was supposed to occur in 2014 may provide a more cost effective solution rather than the cost associated with fulfillment and processing of coupons. Additionally, the implementation of electronic coupons could not be executed due to technical inefficiencies of the participating retailers.

Additional Comments:

- The timeframe for retailer submission of redeemed coupons vary from retailer to retailer, and in some cases has been lengthy. The delays and incomplete results reporting limits the ability to react and respond to initiative performance or changes in consumer behaviour.

- 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.

- All coupons have been provided with LDC custom coding in 2014 which allows LDCs to promote coupons based on local preferences. However, LDCs were not provided with customer coded coupon results until early 2015 and thus, had no indication of their redemption rates.

- Consumer experience varies amongst retailers offering coupon discounts which can limit redemptions. For example, a particular high volume 'participating retailer' does not accept coupons and have their own procedure. In addition, some retailers have static lists of eligible products and will not discount eligible products unless the product on the list.

- The saveONenergy programs would benefit from specific end cap displays, aisle product stands and product-specific areas. Having products throughout a retail environment weakens the impact.

3.2.1.5 Bi-Annual Retailer Event Initiative (Exhibit C)

Initiative Activities/Progress: From past experience, PDI found customer engagement to be limited and some retailer enthusiasm equally discouraging. There clearly appeared to be a lack of communication from store management to staff regarding event details, product knowledge and LDC participation. In most cases,

PDI staff attending events were treated as a barrier rather than a benefit to consumer participation by retailers. We chose not to participate directly in stores in 2014.

Additional Comments:

- This initiative is strongly influenced by the retail participants and has no direct involvement from the LDCs.
- LDCs have the opportunity to stage in-store events to drive the distribution of LDC-coded coupons and promotion of other programs in the portfolio; however, this requires cooperation from the local retailer and LDC staff resources.
- The product list has had minimal changes over the past four years.
- Limited engagement of local retailers can restrict the savings potential for this initiative.
- Program evolution, including new products and review of incentive pricing for the coupon initiatives, must be a regular activity to ensure continued consumer interest.
- 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 Residential Working Group in 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 staffs tend not to be knowledgeable regarding the products or promotion.
- This initiative may benefit from a more exclusive relationship with a retailer appropriate to the program. There should be a value proposition for both the retailer and LDC.
- Independently, the Retailer Co-op and Bi-Annual Retailer Event Initiative may not present a value for the investment of LDC resources to support these events and should be backed by a strong residential portfolio.

3.2.1.6 Retailer Co-op

Initiative Activities/Progress: PDI did not engage in this initiative

Additional Comments:

- This is a retailer initiative with no direct benefit to LDCs
- Limited engagement of local retailers can restrict the savings potential for this initiative.
- The availability of retailer and/or LDC staff with product knowledge and the ability to conduct demonstration in store during the events would be an asset. This could be a valuable role for LDCs, however many LDCs are limited by available resources and unable to participate.

3.2.1.7 New Construction Program (Schedule B-2)

Initiative Activities/Progress: PDI had hoped to re-engage local builders to participate in the revised program offering however, we were unable to entice them with the continued level of incentive versus the level of administrative effort required. Perhaps if this program was integrated with ***peaksaver***PLUS for new construction, additional value would foster increased participation. This program will be reviewed again under the new framework rules in collaboration with other initiatives.

Additional Comments:

- This initiative provides incentives to home builders for incorporating energy efficiency into their buildings. To support this, LDCs need to provide education to consumers regarding the importance of choosing the energy efficient builder upgrade options without an immediate benefit to the consumer.
- In 2012 the application process was streamlined, however continues to be too cumbersome for builders. This, combined with limited return, has resulted in this initiative continuing to under-achieve.
- Administrative requirements, particularly with individual home modeling, must align with perceived stakeholder payback.
- The addition of LED light fixtures, application process improvement, and moving the incentive from the builder to the home-owner may increase participation.
- This initiative may benefit from collaboration with the natural gas utilities or perhaps in conjunction with other existing programs like ***peaksaver***PLUS as new installations to their HVAC systems. By proactively installing these thermostats rather than replacing shortly thereafter, it will provide additional savings to HVAC contractors in supplying initial thermostats, truck roll costs associated with later replacing a thermostat, as well as a selling feature to new homeowner of benefit of smart thermostat. This will drive an increased enrollment in the ***peaksaver***PLUS program in conjunction while supporting the new Whole Home Energy Efficiency model.

3.2.1.8 Residential Demand Response Program (Schedule B-3)

Initiative Activities/Progress: Although PDI had many load control devices installed as of 2011, these installed devices were not recognized by IESO until 2014 even though they were available and utilized for demand response since 2011. Additionally, PDI was hampered by the replacement of defective thermostats and the delay in decision making by the IESO to allow PDI to install broadband, 2-way communicating devices. 2011 was spent in negotiations with IESO for compensation to the LDC's affected by the Health Canada recall on the Comverge thermostats. PDI was also tasked with reaffirmation of approximately 9,000 participants with hot water heater control devices already installed under the previous ***peaksaver*** program. The method used to affirm these customers in the previous ***peaksaver*** program was deemed unacceptable by senior management at IESO even though PDI clearly defined and received approval for the methodology to be used ahead of time. The time, effort and resources required to complete the reaffirmation according to the timeframes imposed by IESO is reflected in the seemingly poor performance of PDI in the first 3 years of the program term. The success of our reaffirmation is confirmed in our 2014 results. However, none of the resulting cumulative kWh reductions PDI achieved are reflected in the final results. On a positive note, PDI was one of the first LDC's in North America to have an IHD tethered to their AMI network providing consumers with automatic, accurate, real time consumption and up to date rate information without the consumer having to maintain it.

Additional Comments:

- Energy and demand savings have not been reported for the IHD portion of the program as 2013 EM&V results have determined zero savings associated with the IHD. IESO conducted another study in 2014, expanding its study territory beyond those included in the 2013 study to provincial rather than regional results. Results from the second study also resulted in zero savings. PDI would challenge the findings of the studies as all other jurisdictions in North America that have deployed IHD's have realized energy savings of 5%- 10%. PDI believes that the delivery model and the technology deployed have a significant influence on the results. Having the consumer install and update their IHD is not reflective of the true savings that a professionally installed, or pre-provisioned AMI imbedded IHD would reflect.

- The variable funding associated with installing a load controllable thermostat is not sufficient unless it is combined with an IHD. This might not be possible at all times or when IHD is optional.

- Smart meters installed by most LDCs do not have the capability to communicate directly to an IHD and any mass replacement of newly installed meters with communicating abilities is not fiscally responsible. When proposing technical initiatives that rely on existing LDC infrastructure or technology there should be an extensive consultative process in order to prevent this type of problem in the future.

- 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.

- Given the different LDCs' smart meter environments and needs, each LDC is positioning the initiative with subtle differences. As such, greater program flexibility is required to address unique LDC needs

- The ***peaksaver***PLUS program has not allowed for adequate funding to enhance the technology deployed in order to future proof installed devices and provide the consumer with a true connected and whole home experience. The continued funding of paging based load control technology, when the status of the paging systems is uncertain, may be considered a waste of consumer's money when available 2-way or broadband technology is the future of demand response and a connected whole home.

3.2.2 COMMERCIAL AND INSTITUTIONAL PROGRAM

Description: Provides commercial, institutional, agricultural and industrial organizations with energy-efficiency programs to help reduce their electrical costs while helping Ontario defer the need to build new generation and reduce its environmental footprint. Programs to help fund energy audits, replace energy-wasting equipment or pursue new construction that exceeds existing codes and standards. Businesses can also pursue incentives for controlling and reducing their electricity demand at specific times.

Targeted Customer Type(s): Commercial, institutional, agricultural, multi-family buildings, industrial.

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:

Throughout 2014 the Commercial and Institutional ("C&I") Working Group continued its efforts 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 results. In addition, Evaluation, Measurement and Verification (EM&V) has not yet achieved transparency. LDCs are held accountable for these results yet are mostly completely removed from the process.

LDC program management has been hampered by varying rule interpretation, limited marketing ability, a somewhat inflexible online system of checks and balances and revolving IESO support personnel.

Despite these challenges the C&I Working Group, working in cooperation with the IESO, have managed to iron out many of the issues which could be rectified. In particular, an accomplishment of 2012 was the advent of the expedited change management as a mean to accelerate certain program changes. The benefits of expedited change management process were seen in 2013 and carried over into 2014.

Looking ahead there is an opportunity to make valuable changes to the current program suite for the Conservation First Framework, but LDCs and the IESO 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.

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

Initiative Activities/Progress: PDI continued to promote the ERII program through advertising, direct marketing and events. PDI made the assumption that electrical contractors would be a reliable asset in promoting this program to their customers. Some promotion through contractors did occur organically, however, PDI realized that a local internal resource was required to engage and build relations with contractors and customers directly. In 2015 two additional FTE's were hired to fill this role.

Additional Comments:

- A large proportion of LDC savings are attributed to ERII.
- The larger more complex facilities that would qualify for Custom ERII had many internal barriers blocking their ability to proceed with actual projects. Many studies were completed in 2014 confirming the potential energy and demand savings but due to internal bureaucracy, many of these opportunities are still being considered into 2015.
- Capability building programs from industrial programs have had very positive contributions to ERII program.

- A number of customer-facing issues in iCon (the IESO's centralized application system) have been resolved; however, key LDC administrative back office processing issues continue to be a challenge. For example, currently LDCs are unable to record back office information to complete review and approval process using iCon.

- Applicants and applicant representatives continue to express dissatisfaction and difficulty with the online application system. This issue has been addressed by LDCs through application training workshops, Key Account Managers ("KAMs"), channel partner/contractor training and LDC staff acting as customer application representatives. Although this has been an effective method of overcoming these issues and encouraging submissions, it also reflects on the complexity and time consuming nature of the application process. As such, applicant representatives continue to influence the majority of applications submitted. Continued development of channel partners is essential to program success.

- Lighting is still the most popular measure. Other market sectors are not as engaged yet, specifically the mechanical sector. 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.

- A focus on demand incentives has limited some energy project opportunities. In particular, night lighting projects have significant savings potential for customers but tend to have incentives of 10% or less of project cost.

- The requirement to have a customer invoice the LDC for their incentive is very burdensome for the customer and results in a negative customer experience and another barrier to participation.

- There is redundancy in the application process as customers may need to complete a worksheet and then enter most of that information over to the online application form. This can be cumbersome.

- The application process for head office projects remains a significant barrier. Applicants need to manually enter one application per facility associated with the project which can be extremely onerous, often requiring a dedicated resource.

- IESO implemented a cut-off date of July 31, 2014 for approval of 2014 social housing adder (SHA) under ERII program. IESO had instructed that any SHA applications that will be submitted to IESO after July 31, 2014 will not be honored for SHA, however, they failed to mention that it is the timeline to submit the funding request to the IESO by the LDCs and not the submission date of the applications to IESO's ICON system by the Applicant (Customer). As a result there were some confusions and some of the applications that were submitted to IESO's iCON by July 31, 2014 but LDCs submitted the funding request to IESO at a later date (once LDCs have completed review of the applications) were not honored for SHA. Additionally, the formal letter confirming that the SHA annual allocation has been exceeded was received by conservation officers on July 15, 2014 leaving them only 15 days to inform the customers and this created a negative customer experience.

- The handling of the exterior lighting incentives was a negative customer experience. In the fall of 2014 a new section was introduced in the prescriptive lighting worksheet. It offered generous incentives for some exterior lighting projects and many municipal customers took advantage of the available incentives. Within 2

weeks of introducing the incentives, several incentives were suddenly removed for approximately 6 weeks until new incentives were created due to $/kWh incentive being too high for some of the measures. This caused a negative customer experience in several ways:

  - Some customers were planning on applying for rebates exterior prescriptive lighting measures based on the incentives offered but were suddenly not allowed to apply for prescriptive rebates.
  - The length of time from pulling out the exterior prescriptive lighting incentives to offering new incentives was too long. There should have been a temporary incentive level offered to allow LDCs to take in new applications.
  - The incentives should have been introduced at an appropriate level the first time. While market conditions can change, the incentives offered should have been researched and approved with the expectation that they would be in place for at least 6-12 months.

- Introduction of several new prescriptive measure worksheets including Plug Loads and Refrigeration were introduced in September 2014 allowed for new opportunities, albeit late in the framework.
- The Ministerial Directive provides continuity of the conservation programs for the participant, with clear direction on LDC administrative funding for 2015, which helps to avoid a gap in program delivery.

3.2.2.2 Direct Install Initiative ("DIL") (Schedule C-3)

Initiative Activities/Progress: PDI has realized over the course of this framework, the efficiencies to hiring FTE's to run programs internally rather then using funding to outsource to non-local channel partners. This provides opportunities for increased engagement, business connections, awareness and a deeper understanding of local needs. This concept has been put into play for 2015.

Additional Comments:

- LED lighting was introduced in 2013 as a new measure and has been well received by customers who may not have previously qualified for DIL eligible upgrades. This is an efficient product with a long estimated useful life.
- Successful execution of the previous version of this initiative has resulted in reduced potential for the 2011-2014 initiative in some LDC's territories. Adding prior program participants back into the eligible participant offering would be very beneficial for both customers, and additional energy saving opportunities.
- The inclusion of a standard incentive for additional measures increased project size and drove higher energy and demand savings results in some situations. However, 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.
- Many customers are not taking advantage of any additional measures, which may present an opportunity to for future savings with a new program offering.

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

Initiative Activities/Progress: PDI continued to promote this program as a package with other C&I programs to Commercial Customers but targeted market was difficult to discern and interest was lacking.

Additional Comments:

- Initiative name does not properly describe the initiative.
- 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 much of a significant 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 Activities/Progress: Enbridge continued to provide collaboration opportunities to run this program to the end of 2014. Only a handful of applications were received during the four year framework. As with the other C&I initiatives, we feel that a localized presence will benefit future opportunities. As of January 1, 2015, Enbridge has discontinued any partnership opportunities with the LDC community.

Additional Comments

- With the Ministerial Directive issued December 21, 2012, facilities with a completion date near the end of 2014 with some confidence that they will be compensated for choosing efficiency measures.
- Participants had until the end of 2014 to submit their applications for the projects that will be completed in 2015. However savings achieved will be accounted for in the new framework (2015 - 2020).
- The custom application process requires considerable customer support and skilled LDC staff. The effort required to participate through the custom stream exceeds the value of the incentive for many customers.

- There are no custom measure options for items that do not qualify under the prescriptive or engineered track as the custom path does not allow for individual measures, only whole building modeling
- The requirement to have a customer invoice the LDC for their incentive is very burdensome for the customer and results in a negative customer experience and a potential barrier to participation.

3.2.2.5 Energy Audit Initiative

Initiative Activities/Progress: This program was also promoted as a package with other C&I programs to Commercial Customers and our Embedded Energy Manager. There were no additional audits conducted in 2014 although projects coming from the previous audits conducted continue to be seen including non-incentivized process changes.

- The introduction of the new audit component for one system (i.e. compressed air), has increased customer participation.
- The energy audit Initiative is considered an 'enabling' initiative and 'feeds into' other saveONenergy initiatives.
- LDCs are receiving some savings towards their targets from an audit which is mainly attributable to operational savings.
- 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 IESO may be beneficial.
- Participants are limited to one energy audit which restricts enabling and direction to the other initiatives. This has been revised in 2014 and LDCs are now able to consider additional customer participation when presented with a new scope of work.
- Consideration should be given to allowing a building owner to undertake an audit limited to their lighting system. This way they may receive valuable information from a neutral third party regarding the appropriate lighting solution for their facility instead of what a local supplier would like to sell.
- The requirement to have a customer invoice the LDC for their incentive is very burdensome for the customer and results in a negative customer experience and a potential barrier to participation

3.2.3 INDUSTRIAL PROGRAM

Description: Owners of 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. This allows facilities to take control of their energy so they can create long-term competitive energy advantages which reach across the organization.

Targeted Customer Type(s): Industrial, Commercial, Institutional, Agricultural

Objective:

- 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.

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. The KAM and the industrial project supervisors have also been instrumental in managing the embedded energy managers ("EEM") during the first and second half of the year respectively, and promoting activity to the Class A customers.

Due to the size, scope and long lead time of these initiatives and associated projects, the December 2012 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 an LDC's current target for projects that go into service after 2014.

Extensive legal documents, complex program structure and lengthy change management have restricted the change and growth of this portfolio. While the expedited change management has benefited the commercial portfolio, the industrial portfolio has not seen the same results due to the narrow scope of the process. For 2013 the change to the threshold for small capital projects and the new small capital project agreement improved the number of projects and savings achieved within Process and Systems Upgrades Initiation ("PSUI"). Likewise, a decision to proceed with applications for natural gas load displacement generation projects also increase uptake, although the limited time to bring new projects into service is a barrier.

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

Initiative Activities/Progress: PDI is disappointed in the lack of completed projects resulting from the encouraging study findings. Many opportunities were found through both Preliminary and Detailed Engineering studies through our EEM which may still materialize in the future.

Additional internal resources are required to engage our Industrial customer base to help lead them through the opportunities and process of this initiative. This has been put into place for 2015 and beyond.

Additional Comments:

- Numerous energy studies have been submitted and completed. This is a strong indication that there is potential for large projects with corresponding energy savings. Most of these studies have been initiated through Energy Manager and Key Account Manager ("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 a long project development cycle. As such, limited results are expected to be generated in 2014. The majority of the results are expected in 2015 with a much reduced benefit to cumulative energy savings targets.
- Delays with processing funding payments have caused delayed payments to participants beyond contract requirements. In some cases, LDCs have developed a separate side agreement between the LDC and participant acknowledging that the participant cannot be paid until the funds are received.
- Given the size of the projects involved, the contract required for PSUI is a lengthy and complicated document. A key to making PSUI successful is the new agreement for 'small' projects with simplified and less onerous conditions for the customer.
- To partially address this, changes were made to the ERII program which allowed smaller projects to be directed to the commercial stream. Most industrial projects to-date has been submitted as ERII projects due to less onerous contract and M&V requirements. Therefore, PSUI engineering studies and LDC's industrial resources (e.g., Energy managers, KAMs) contribute significant savings to other programs such as ERII.
- A business case was submitted by the Industrial Working Group in July 2012 which changed the limit for a small project from 700 MWh to 1 million dollars in incentives. This would allow more projects to be eligible for the new small capital project agreement and increase participant uptake, while still protecting the ratepayer. This small capital project agreement was finalized through change management in September 2013.
- With the considerable customer interest in on-site load displacement (co-generation) projects, the initiative should be reviewed to ensure that these projects may be accepted as part of the PSUI Initiative. The IESO was reviewing waste heat projects only and all other co-generation projects were on hold prior to June 2013, when a decision was made to allow natural gas load displacement generation projects to proceed under PSUI. It is expected that a number of projects may proceed although results may not be counted towards LDC 2011-2014 framework target unless applications have been submitted before the end of 2014 and the projects are in service before December 31, 2015.
- The requirement for a customer invoice to the LDC and toprovide proof of payment to consultants for their incentive is very burdensome for the customer and results in a negative customer experience and another barrier to participation.

3.2.3.2 Monitoring and Targeting ("M&T") Initiative (Schedule D-2)

Initiative Activities/Progress: Additional internal resources are required to engage our Industrial customer base to help lead them through the opportunities and process of this initiative. This has been put into place for 2015 and beyond.

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, only five applications has been completed in 2014, province wide.
- The savings target required for this initiative can present a significant challenge for smaller customers.
- Through the change management process in 2013, changes were made to ERII to allow smaller facilities to employ M&T systems.

3.2.3.3 Energy Manager Initiative (Schedule D-3)

Initiative Activities/Progress: PDI has continued their partnership with Cambridge North Dumfries in sharing an EEM resource with one of our mutual Large Use facilities. This partnership has ceased at the end of 2014 as projects and progress is limited at the Cambridge facility. PDI feels that a better option would be a P4P model to ensure the EEM is held accountable for achieving results rather then subsidizing a FTE.

Additional Comments:

- The Embedded Energy Managers ("EEMs") have proven to be a popular and useful resource for larger customers. There are approximately 50 EEMs and 22 Roving Energy Managers ("REMs") being utilized by customers across the province. However, LDC's are at the mercy of the EEM for speed of play and bringing energy savings opportunities to fruition.
- 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.
- There have been a number of studies identified by energy managers and they have been able to build capacity and deliver energy savings projects within their respective large commercial/industrial facilities.
- The requirement that 30% of targets must come from non-incented projects is identified as an issue for most EEMs/REMs. The EDA Industrial Working Group has proposed to remove this requirement for REMs 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 (Schedule D-4)

Initiative Activities/Progress: The timelines presented to acquire a KAM and with limited large industrial potential within our distribution area (EEM already in place with one of our two large users), PDI could not find the resources or potential to share a KAM with another LDC. As of the date of this submission, and with the changes to funding model pending, 2014 did not allow PDI to explore this avenue. We hope to follow a similar model in hiring a FTE.

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 with which LDCs may be struggling.

3.2.3.5 Demand Response 3 ("DR3") (D-6)

Initiative Activities/Progress: We initially worked with closely with our Channel Partner Rodan, to uncover potential leads. As the requirements for this program are very specific and exclusive to a select number of customers, we quickly exhausted all potential within our distribution area and no additional work was done towards this initiative. IESO is in the process of a complete DR3 overhaul which is more detailed and convoluted then it has been in the past. This may preclude any existing DR3 customers from participation in the future.

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 confirm savings.
- The Industrial Working Group had a discussion with the IESO and representatives of the Ministry on proposed changes for the DR3 program. No program improvements were made in 2013. However, it was accepted that prior participants who renew their DR3 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 (five years) than the previously limited one- to two-year contracts. However on March 31, 2014 the Minister of Energy issued a directive entitled "Continuance of the IESO's Demand Response Program under IESO management" which restricts the IESO from granting any more contract schedules to aggregators, as the program is being transitioned from the OPA to the IESO. This decision will prevent the DR3 program from continuing to grow until the IESO is ready to assign DR3 capacity through a new auction process.
- Metering and settlement requirements are complicated and can reduce customer compensation amounts, and present a barrier to many customers.
- Compensation amounts have been reduced from the previous version of this program and subsequently there has been a corresponding decrease in renewal rates.

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

Initiative Activities/Progress: PDI continued through 2014 with the collaboration model of utilizing the same delivery agent as the comparable Low Income Program offered by Enbridge Gas. We continue to realize the benefits of eliminating program duplication while increasing customer benefit and satisfaction. Through this model the delivery agent is able to service all customers regardless of their heating source with a single customer audit. The program continues to run more successfully and efficiently as time goes by. We continue to source new leads through social agencies and low income housing providers. Low income customers continue to be referred through LEAP, and the Housing Resource Center has attracted customers that do not qualify through normal channels. We have refocused our efforts to senior citizens, First Nation's and students. Our marketing and outreach continues to improve with much success. Familiarity within our Distribution area has continued to gain traction with new participation.

Additional Comments:

4 The process for enrolling in social housing was complicated and time consuming. This was addressed in late 2012 and showed benefits since 2013.

5 The financial scope, complexity, and customer privacy requirements of this initiative are challenging for LDCs and most have contracted this program out. This initiative may benefit from an IESO contracted centralized delivery agent.

6 The vast majority of complete projects have been through social housing. The ability to gain traction in the landlord-tenant space continues to be a challenge. It is our hope that the revised HAP rules approved in 2015 will provide a solution to this barrier.

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 B

4. 2014 Peterborough Distribution Inc. CDM Results

4.1 Participation and Savings

Table 5: Participation and Savings

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 (excludes DR)	
		2011*	2012*	2013*	2014	2011	2012	2013	2014	2011	2012	2013	2014	2014 Net Annual Peak Demand Savings (kW) 2014	2011-2014 Net Cumulative Energy Savings 2014
Consumer Program															
Appliance Retirement	Appliances	270	207	122	163	15	12	8	13	106,537	83,226	52,368	64,018	48	844,718
Appliance Exchange	Appliances	39	22	48	46	4	3	10	10	4,184	5,724	17,733	16,994	24	83,913
HVAC Incentives	Equipment	540	517	568	638	192	115	120	144	368,523	203,798	219,437	272,932	572	2,797,291
Conservation Instant Coupon Booklet	Items	3,603	220	2,482	7,366	8	2	4	15	132,571	9,972	54,973	200,826	29	870,974
Bi-Annual Retailer Event	Items	6,791	7,567	6,738	34,412	12	11	8	57	209,601	191,016	122,532	876,584	88	2,533,102
Retailer Co-op	Items	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Residential Demand Response	Devices	15	0	28	9,343	8	0	15	3,002	0	0	32	0	3,002	32
Residential Demand Response (IHD)	Devices	0	4	22	846	0	0	0	0	0	0	0	0	0	0
Residential New Construction	Homes	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Consumer Program Total						**239**	**143**	**166**	**3,241**	**821,476**	**493,736**	**467,075**	**1,431,354**	**3,763**	**7,130,030**
Business Program															
Retrofit	Projects	15	43	61	51	66	716	243	138	413,045	2,966,599	1,291,840	1,001,962	1,081	13,698,392
Direct Install Lighting	Projects	42	167	173	160	41	157	152	122	91,318	527,343	519,098	441,916	459	3,390,071
Building Commissioning	Buildings	0	0	0	0	0	0	0	0	0	0	0	0	0	0
New Construction	Buildings	0	0	2	1	0	0	1	12	0	0	1,298	8,890	13	11,486
Energy Audit	Audits	0	11	0	0	0	0	0	0	0	0	0	0	0	0
Small Commercial Demand Response	Devices	0	7	10	613	0	4	6	194	0	25	9	0	194	35
Small Commercial Demand Response (IHD)	Devices	0	0	6	6	0	0	0	0	0	0	0	0	0	0
Demand Response 3	Facilities	0	0	1	1	0	0	347	231	0	0	4,636	0	231	4,636
Business Program Total						**108**	**878**	**749**	**697**	**504,363**	**3,493,967**	**1,816,881**	**1,452,767**	**1,979**	**17,104,619**
Industrial Program															
Process & System Upgrades	Projects	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Monitoring & Targeting	Projects	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Energy Manager	Projects	0	1	0	3	0	0	0	262	0	0	0	2,383,594	262	2,383,594
Retrofit	Projects	2	0	0	0	132	0	0	0	824,402	0	0	0	132	3,297,609
Demand Response 3	Facilities	0	1	1	1	0	0	417	417	0	0	9,487	0	417	9,487
Industrial Program Total						**132**	**0**	**417**	**679**	**824,402**	**0**	**9,487**	**2,383,594**	**811**	**5,690,690**
Home Assistance Program															
Home Assistance Program	Homes	0	175	539	288	0	16	43	15	0	157,580	396,853	156,537	73	1,414,301
Home Assistance Program Total						**0**	**16**	**43**	**15**	**0**	**157,580**	**396,853**	**156,537**	**73**	**1,414,301**
Aboriginal Program															
Home Assistance Program	Homes	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Direct Install Lighting	Projects	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aboriginal Program Total						**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Pre-2011 Programs completed in 2011															
Electricity Retrofit Incentive Program	Projects	11	0	0	0	67	0	0	0	321,610	0	0	0	67	1,286,442
High Performance New Construction	Projects	1	0	0	0	21	1	0	0	105,956	781	0	0	21	426,165
Toronto Comprehensive	Projects	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Multifamily Energy Efficiency Rebates	Projects	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LDC Custom Programs	Projects	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pre-2011 Programs completed in 2011 Total						**87**	**1**	**0**	**0**	**427,566**	**781**	**0**	**0**	**88**	**1,712,607**

Other															
Program Enabled Savings	Projects	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time-of-Use Savings	Homes	0	0	0	n/a	0	0	0	359	0	0	0	0	359	0
LDC Pilots	Projects	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Total						**0**	**0**	**0**	**359**	**0**	**0**	**0**	**0**	**359**	**0**
Adjustments to 2011 Verified Results							**-25**	**0**	**0**		**-30,586**	**0**	**0**	**-25**	**-124,497**
Adjustments to 2012 Verified Results								**102**	**31**			**402,116**	**154,389**	**133**	**1,667,850**
Adjustments to 2013 Verified Results									**58**				**256,663**	**58**	**399,602**
Energy Efficiency Total						**558**	**1,033**	**588**	**1,147**	**2,577,808**	**4,146,039**	**2,676,132**	**5,424,251**	**3,228**	**33,038,059**
Demand Response Total (Scenario 1)						**8**	**4**	**785**	**3,845**	**0**	**25**	**14,164**	**0**	**3,845**	**14,189**
Adjustments to Previous Years' Verified Results Total						**0**	**-25**	**102**	**88**	**0**	**-30,586**	**402,116**	**411,052**	**165**	**1,942,955**
OPA-Contracted LDC Portfolio Total (inc. Adjustments)						**566**	**1,013**	**1,476**	**5,080**	**2,577,808**	**4,115,478**	**3,092,412**	**5,835,303**	**7,238**	**34,995,203**
Activity and savings for Demand Response resources for each year represent the savings from all active facilities or devices contracted since January 1, 2011 (reported cumulatively).						*Includes adjustments after Final Reports were issued							**Full OEB Target:**	**8,720**	**38,450,000**
						Results presented using scenario 1 which assumes that demand response resources have a persistence of 1 year							**Full OEB Target Achieved to Date (Scenario 1):**	**83.0%**	**91.0%**

By the time the reporting detail was received from IESO as required for us to vet and confirm the discrepancies we found, there was inadequate time available to have the changes confirmed and implemented. This left us with some acheived reductions that were unaccounted for. IESO did, in the final report version, allow us recognition of our ***peaksaver***PLUS device installations, however, there are other area's that were not yet corrected in this final version, specifically the completed projects for HAP, with associated savings, as well as the kWh for ***peaksaver*** devices.

Table 6: Summarized Participation Results

#	Initiative	Activity Unit	Uptake/ Participation Units			
Consumer Programs			**2011**	**2012**	**2013**	**2014**
1	Appliance Retirement	Appliances	270	207	122	163
2	Appliance Exchange	Appliances	39	22	48	46
3	HVAC Incentives	Equipment	540	517	568	638
4	Conservation Instant Coupon Booklet	Items	3,603	220	2,482	7,366
5	Bi-Annual Retailer Event	Coupons	6,791	7,567	6,738	34,412
6	Retailer Co-op	Items	0	0	0	0
7	Residential Demand Response (switch / Programmable Thermostat)	Devices	14	0	28	9,343
8	Residential Demand Response (IHD)	Devices	0	4	22	846
9	New Construction Program	Houses	0	0	0	0
Business Programs						
10	Efficiency: Equipment Replacement – Retrofit	Projects	15	43	61	51
11	Direct Installed Lighting	Projects	42	167	173	160
12	Existing Building Commissioning Incentive	Buildings	0	0	0	0
13	New Construction and Major Renovation Incentive	Buildings	0	0	2	1
14	Energy Audit	Audits	0	11	0	0
15	Commercial Demand Response (part of the Residential program schedule)	Devices	0	7	10	613
16	Demand Response 3 (part of the Industrial program schedule)	Facilities	0	0	6	6
Industrial Programs						
17	Process & System Upgrades	Projects	0	0	0	0

18	Monitoring & Targeting	Projects	0	0	0	0
19	Energy Manager	Managers	0	1	0	3
20	Efficiency: Equipment Replacement Incentive (part of the C&I program schedule)	Projects	2	0	0	0
21	Demand Response 3	Facilities	0	1	1	1
Home Assistance Program						
22	Home Assistance Program	Homes	0	175	539	288
Pre-2011 Programs						
23	Electricity Retrofit Incentive Program	Projects	11	0	0	0
24	High Performance New Construction	Projects	1	0	0	0

Table 7: Summary Achievement against CDM Targets

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

Implementation Period	Annual			
	2011	2012	2013	2014
2011 - Verified	0.6	0.6	0.6	0.5
2012 - Verified†	0.0	1.0	1.0	0.9
2013 - Verified†	0.0	0.1	1.5	0.7
2014 - Verified†	0.0	0.0	0.1	5.1
Verified Net Annual Peak Demand Savings Persisting in 2014:				7.2
Peterborough Distribution Incorporated 2014 Annual CDM Capacity Target:				8.7
Verified Portion of Peak Demand Savings Target Achieved in 2014 (%):				83.0%

Net Energy Savings at the End User Level (GWh)

Implementation Period	Annual				Cumulative
	2011	2012	2013	2014	2011-2014
2011 - Verified	2.6	2.6	2.6	2.5	10.3
2012 - Verified†	0.0	4.1	3.9	3.8	11.9
2013 - Verified†	0.0	0.4	3.1	3.1	6.6
2014 - Verified†	0.0	0.2	0.30	5.8	6.3
Verified Net Cumulative Energy Savings 2011-2014:					35.0
Peterborough Distribution Incorporated 2011-2014 Annual CDM Energy Target:					38.5
Verified Portion of Cumulative Energy Target Achieved in 2014 (%):					91.0%

†Includes adjustments to previous years' verified results

Table 8: Verified Results - Peterborough Distribution Incorporated Realization Rate & NTG

Initiative	Peak Demand Savings								Energy Savings							
	Realization Rate				Net-to-Gross Ratio				Realization Rate				Net-to-Gross Ratio			
	2011	2012	2013	2014	2011	2012	2013	2014	2011	2012	2013	2014	2011	2012	2013	2014
Consumer Program																
Appliance Retirement	1.00	1.00	n/a	n/a	0.49	0.46	0.42	0.42	1.00	1.00	n/a	n/a	0.50	0.47	0.44	0.44
Appliance Exchange	1.00	1.00	1.00	1.00	0.52	0.52	0.53	0.53	1.00	1.00	1.00	1.00	0.52	0.52	0.53	0.53
HVAC Incentives	1.00	1.00	n/a	1.00	0.60	0.49	0.48	0.51	1.00	1.00	n/a	1.00	0.60	0.49	0.48	0.51
Conservation Instant Coupon Booklet	1.00	1.00	1.00	1.00	1.14	1.00	1.11	1.69	1.00	1.00	1.00	1.00	1.11	1.05	1.13	1.73
Bi-Annual Retailer Event	1.00	1.00	1.00	1.00	1.13	0.91	1.04	1.74	1.00	1.00	1.00	1.00	1.10	0.92	1.04	1.75
Retailer Co-op	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Residential Demand Response	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Residential Demand Response (IHD)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Residential New Construction	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Business Program																
Retrofit	0.92	0.98	0.92	0.83	0.74	0.78	0.75	0.71	1.24	1.14	1.08	0.99	0.75	0.79	0.74	0.72
Direct Install Lighting	1.08	0.73	0.82	0.78	0.93	0.94	0.94	0.94	0.90	0.86	0.85	0.83	0.93	0.94	0.94	0.94
Building Commissioning	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
New Construction	n/a	n/a	0.53	0.80	n/a	n/a	0.54	0.54	n/a	n/a	0.73	0.99	n/a	n/a	0.54	0.54
Energy Audit	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Small Commercial Demand Response	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Small Commercial Demand Response (IHD)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Demand Response 3	0.76	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1.00	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Industrial Program																
Process & System Upgrades	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Monitoring & Targeting	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Energy Manager	n/a	n/a	n/a	0.91	n/a	n/a	n/a	0.90	n/a	n/a	n/a	0.96	n/a	n/a	n/a	0.90
Retrofit																
Demand Response 3	0.84	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1.00	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Home Assistance Program																
Home Assistance Program	n/a	0.47	0.75	0.83	n/a	1.00	1.00	1.00	n/a	0.92	0.87	0.75	n/a	1.00	1.00	1.00
Aboriginal Program																
Home Assistance Program	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Direct Install Lighting	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Pre-2011 Programs completed in 2011																
Electricity Retrofit Incentive Program	0.77	n/a	n/a	n/a	0.52	n/a	n/a	n/a	0.77	n/a	n/a	n/a	0.52	n/a	n/a	n/a
High Performance New Construction	1.00	1.00	1.00	1.00	0.50	0.50	0.50	0.50	1.00	1.00	1.00	1.00	0.50	0.50	0.50	0.50
Toronto Comprehensive	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Multifamily Energy Efficiency Rebates	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
LDC Custom Programs	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Other																
Program Enabled Savings	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Time-of-Use Savings	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
LDC Pilots	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Table 9: Summarized 2014 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	**4.359**	**4.024**	**3.789**	**3.214**	**3.763**	**7.130**
Business Program Total	**2.767**	**8.679**	**2.432**	**7.268**	**1.979**	**17.104**
Industrial Program Total	**1.302**	**3.735**	**1.228**	**3.217**	**.811**	**5.690**
Home Assistance Program Total	**.092**	**.725**	**.074**	**.711**	**.073**	**1.414**
Pre-2011 Programs completed in 2011 Total	**.171**	**.832**	**.088**	**.428**	**.088**	**1.712**
Other Adjustments to Previous Year's Verified Results	**.607**	**1.153**	**.359**	**0**	**.359**	**0**
Total IESO Contracted Province-Wide CDM Programs *please make sure you complete the total line	**9.298**	**19.149**	**8.135**	**15.621**	**7.238**	**34.995**

4.2 Evaluation, Measurement and Verification ("EM&V") Findings

The following table provides a summary of the 2014 EM&V findings for the evaluated saveONenergy program initiatives. These key evaluation findings are derived from the 2014 evaluations of the saveONenergy programs and issued by the IESO.

Table 10: Key Evaluation Findings

#	Initiative	IESO Province-Wide Key Evaluation Findings
Consumer Programs		
1	Appliance Retirement	• Participation increased slightly to 22,563 (7.7%) in 2014 compared with 20,952 in 2013. • Since 2011 overall Initiative participation has decreased nearly 60%. • The greatest decrease was seen in the number of refrigerators collected year-over-year • Of appliances collected, refrigerators and freezers remain the most dominate measures accounting for 90%. However, window AC units and dehumidifiers saw a marked increase of 29.6% and 27% respectively in 2014. • Net to gross ratio (NTG) increased slightly to 47% compared to 43% as reported for 2013 and 2012 program years.
2	Appliance Exchange	• Participation in 2014 increased by 6.5% to 5,685 appliances from 5,337 compared to 2013 • Per-unit savings has increased by 36.6% as ENERGY STAR criteria increases and more participants purchase ENERGY STAR replacements appliances. This resulted in a 6.5% increase in Net Energy & Demand savings. • Net to Gross ratio (NTG) remained unchanged from 2013 at 52.6%
3	HVAC Incentives	• In 2014 net savings increased by 20% from 2013 and overall participation increased by 17% to 113,002 compared to 2013 • The ECM measure has remained the dominant source of savings since 2011 • Per unit furnace savings increased 12.7% due to a shift in the number of participants who use their furnace fan continuously both before and after the retrofit. • Per unit energy and demand savings assumptions for central air conditioners decreased by 56% due to reduced run hours Net to Gross ratio (NTG) remained unchanged from 2013 at 48%

#	Initiative	IESO Province-Wide Key Evaluation Findings
4	Conservation Instant Coupon Booklet	• Customers redeemed more than five times as many annual coupons in 2014 as in 2013. In total, approximately 500, 000 Annual Coupons were redeemed in 2014 with 110,000 being LDC Coded Coupons. • There was a further reduction in savings for lighting measures from changes in the baseline due to the phase out of 72W and 100W incandescent bulbs. • Despite the significant per unit savings reductions for lighting measure, the Net Annual Savings from Annual Coupons in 2014 was more than six times that in 2013. This is primarily because of higher participation and the inclusion of LED coupons and full year availability of all coupons. • Measured NTG ratios grew significantly in 2014. The NTG ratio is 53% higher in 2014 than in 2013 due to the inclusion of participant spillover, i.e., purchase of additional coupon initiative measures and general energy efficient measures without the use of a coupon but influenced by the coupon program.
5	Bi-Annual Coupon Event	• Over 2.5 million coupons were redeemed in 2014 compared with 2013 redemptions • The Bi-Annual Coupon Event saw a substantial increase in the number of coupons redeemed during the Spring and Fall Events in 2014 compared to 2013. The increase can be linked to a substantial increase in LED purchases with event coupons accounting for 84% of all Bi-Annual Coupons redeemed. • Reductions in per unit savings were overshadowed by the increase in coupon redemptions. Overall savings increased by approximately 85% in 2014 compared with 2013 Demand and Energy Savings. • Similar to the Annual Coupon Event measured NTG ratios rose by 53% compared to 2013 NTG ratios. The rise is due to the inclusion of participant spillover, i.e., purchase of additional coupon initiative and general energy efficient measures without the use of a coupon but influenced by the Bi-Annual Coupon event.
6	Residential Demand Response	• There were an additional 55,000 CAC load control devices enrolled in the program in 2014 relative to 2013, which increased the capacity of the residential segment of the program from 129 MW in 2013 to 143 MW in 2014. • Ex-ante impacts on a per device basis were lower than 2013 average. • There were no energy savings in 2014 because there were no system-wide events were called. • Load impact estimates for the average small and medium business and for electric water heaters among residential customers remain consistent with prior year's analysis • IHD's yielded no statistically significant energy savings.

#	Initiative	IESO Province-Wide Key Evaluation Findings
7	Residential New Construction	• The most significant growth in the initiative has been participation in the prescriptive track. MW savings in the prescriptive track increased from zero summer peak MW savings in 2011 to 352 summer peak kW savings in 2014. • The custom track saw participation for the first time in 2014. One custom project of 55 homes contributed 37 kW demand savings and 0.5 GWh of energy savings. • New deemed savings for performance track homes were developed and implemented, resulting more consistent realization rates for 2014. • ENERGY STAR New Homes was introduced as an eligible measure within the performance track in 2014. As a result, these ENERGY STAR New Homes provided 1% of peak kW savings and 4% of kWh savings.
Business Programs		
8	Efficiency: Equipment Replacement	• The number of prescriptive projects increased slightly (1.2%) in 2014 to a total of 4,812. However, total net verified savings and peak demand savings dropped significantly (19% and 30% respectively). This is due to a 19% drop in per-project net verified savings, which can be attributed to lower track level realization rate and net-to-gross ratio and is related to smaller average project sizes. • The quantity of engineered projects increased 22% to a total of 3,906 in 2014, combined with a net verified savings per project increase of 17% the track saw a dramatic 47% increase in net energy savings. • Lower demand realization rates across the program as a whole were tied to equipment differences between reported and calculated values. For lighting projects the difference was most often seen in baseline and retrofit lamp wattages and ballast factors. Non-lighting tracks exhibited lower demand realization rates due to the following factors: o Variations in load profiles where the evaluation team found equipment that operated fewer hours or at a lower capacity than expected from the project documentation. o Inconsistencies in equipment nameplate data (typically efficiency or capacity) between project documentation and equipment installed on-site. o Weather dependent control systems leading to shifts in how often the equipment operated.

#	Initiative	IESO Province-Wide Key Evaluation Findings
9	Direct Install Lighting	• 23,784 projects were completed in 2014 (34% increase from 2013) • The category of 'Other' business type projects increased 71% when compared to 2013. Agribusinesses make up 74% of the 'Other' business type category. While growth in the number of projects is good, agribusinesses projects, in particular, have a realization rate of only 58.5%. This is primarily due to the verified annual operating hours being approximately 45% less than the assumed annual operating hours. • In 2014 LED measures provide the most net savings of any other SBL measure making up 59% of net energy savings in 2014. Their long effective useful life and retention of a larger amount of savings after the baseline adjustment allow LED measures to also contribute substantially more lifetime savings than CFLs and linear fluorescents. • Overall energy and demand realization rates decreased by 1.8 and 3.1 %, respectively, from 2013. o Sampled rural projects have lower energy realization rather than urban projects (63.8% compared to 83.5%) across the 2011 – 2014 sample o Sampled rural projects have even lower demand realization rather than urban projects (49.7% compared to 74.1%) across the 2011 – 2014 sample o The annual proportion of net energy savings from rural projects has increased from 30% in 2011 to 41% in 2014
10	Audit Funding	• The number of audits carried out in 2014 decreased by 20% when compared to 2013. • The average per audit net energy savings attributable to the Audit Funding Initiative was estimated to be 65 MWh and 13 kW of summer peak demands savings. • Time series analysis quantified additional savings from measures implemented after initial program year. It was found that an additional 7.2%, 5.0% and 0.1% can be added to all previously reported projects in 2011, 2012 and 2013 projects, respectively.
11	Existing Building Commissioning Incentive	• 5 projects completed the Hand-off stage in 2014. • Energy realization rate was estimated at 116% and demand realization rate at 202%. • About 31 participants are still in the scoping stage or implementation stage.

#	Initiative	IESO Province-Wide Key Evaluation Findings
12	New Construction and Major Renovation Incentive	• Savings have increased every year of the initiative with an increased participation of 50% from 2013 • In 2014, most savings came from the custom track providing 71% of demand savings. • Participation from HVAC measures occurred for the first time in 2014 (providing 14% of summer peak kW savings and 5% of kWh savings). • The measures with the greatest impact on low realization rates for prescriptive measures were high volume low speed (HVLS) fans and variable frequency drives (VFDs). • Province-wide realization rates declined slightly for 2014, as a result of the wider variety of measures being implemented. • Key drivers for participation are: initial project cost, followed by electricity costs and expected energy savings are the key drivers to participation.
Industrial Programs		
13	Process & System Upgrades – Capital Incentive Initiative	10 PSUI Capital Incentive projects implemented in 2014, compared to 5 in2013. 4 projects are Behind the Meter Generation (BMG) projects. The remaining projects were energy efficiency improvements in pumping, cooling, compressed air systems and industrial processes. Each project received its own Net to Gross (NTG) value. NTG ratios ranged from 62% to 100% for the 10 projects Realization rates remained high in 2014, ranging from 90 to over 100%.
14	Process and Systems Energy Managers Initiative – Non incented savings	• 379 Energy Manager projects were completed in 2014 compared to 306 in 2013 • Energy Managers are important drivers of non incented savings projects. • In 2014, the Energy Mangers initiative has contributed to 35% of energy savings for Industrial Programs
15	Process and Systems Monitoring and Targeting Initiative – Non incented savings	• 5 projects were completed in 2014, compared to 3 in 2013. • Low realization rates (36% for energy savings and 59% for demand savings) are attributed to reported savings based on total potential savings rather than non-incentivized realized savings, while the verified savings only include non-incentivized savings).

#	Initiative	IESO Province-Wide Key Evaluation Findings
16	Demand Response 3	• The largest 25 contributors account for 60% of the contractual demand reduction – that is, less than 4% of contributors account for the majority of the load reductions. • A multi-year analysis indicates 2012 was the best year for program performance. After 2012, a single large contributor left the program, resulting in a decrease in overall performance in 2013 and 2014. This highlights the risk having a highly concentrated program with a few large contributors representing a large share of the program capacity. • There were no events called in 2014 and the contracted capacity was similar to 2013.
Home Assistance Program		
17	Home Assistance Program	• Participation decreased by 5 % to 25,424 participants compared with 2013 (26,756). The decrease was due to six LDCs not participating in the Home Assistance Program in 2014. • Realization rates for demand doubled in 2014 to 56% compared with 2013 (26%). However, energy realization rates decreased by 10% to 77% compared with 2013 results. • Realization rate for demand savings increased due to the adoption of the new FAST Tool which incorporated updated kW savings for weatherization measures in particular insulation measures.

4.3 Evaluation

Table 11: Evaluation Methodology

METHODOLOGY	
All results are at the end-user level (not including transmission and distribution losses)	
EQUATIONS	
Prescriptive Measures and Projects	**Gross Savings = Activity * Per Unit Assumption** **Net Savings = Gross Savings * Net-to-Gross Ratio** **All savings are annualized (i.e. the savings are the same regardless of time of year a project was completed or measure installed)**
Engineered and Custom Projects	**Gross Savings = Reported Savings * Realization Rate** **Net Savings = Gross Savings * Net-to-Gross Ratio** **All savings are annualized (i.e. the savings are the same regardless of time of year a project was completed or measure installed)**
Demand Response	**Peak Demand: Gross Savings = Net Savings = contracted MW at contributor level * Provincial contracted to ex ante ratio** **Energy: Gross Savings = Net Savings = provincial ex post energy savings * LDC proportion of total provincial contracted MW** **All savings are annualized (i.e. the savings are the same regardless of the time of year a participant began offering DR)**
Adjustments to Previous Years' Verified Results	All variances from the Final Annual Results Reports from prior years will be adjusted within this report. Any variances with regards to projects counts, data lag, and calculations etc., will be made within this report. Considers the cumulative effect of energy savings.

Initiative	Attributing Savings to LDCs	Savings 'start' Date	Calculating Resource Savings
Consumer Program			
Appliance Retirement	Includes both retail and home pickup stream. Retail stream allocated based on average of 2008 & 2009 residential throughput; Home pickup stream directly attributed by postal code or customer selection.	Savings are considered to begin in the year the appliance is picked up.	Peak demand and energy savings are determined using the verified measure level per unit assumption multiplied by the uptake in the market (gross) taking into account net-to-gross factors such as free-ridership and spillover (net) at the measure level.
Appliance Exchange	When postal code information is provided by customer, results are directly attributed to the LDC. When postal code is not available, results allocated based on average of 2008 & 2009 residential throughput.	Savings are considered to begin in the year that the exchange event occurred.	
HVAC Incentives	Results directly attributed to LDC based on customer postal code.	Savings are considered to begin in the year that the installation occurred.	

Initiative	Attributing Savings to LDCs	Savings 'start' Date	Calculating Resource Savings
Conservation Instant Coupon Booklet	LDC-coded coupons directly attributed to LDC. Otherwise results are allocated based on average of 2008 & 2009 residential throughput.	Savings are considered to begin in the year in which the coupon was redeemed.	Peak demand and energy savings are determined using the verified measure level per unit assumption multiplied by the uptake in the market (gross) taking into account net-to-gross factors such as free-ridership and spillover (net) at the measure level.
Bi-Annual Retailer Event	Results are allocated based on average of 2008 & 2009 residential throughput.	Savings are considered to begin in the year in which the event occurs.	
Retailer Co-op	When postal code information is provided by the customer, results are directly attributed. If postal code information is not available, results are allocated based on average of 2008 & 2009 residential throughput.	Savings are considered to begin in the year of the home visit and installation date.	Peak demand and energy savings are determined using the verified measure level per unit assumption multiplied by the uptake in the market (gross) taking into account net-to-gross factors such as free-ridership and spillover (net) at the measure level.
Residential Demand Response	Results are directly attributed to LDC based on data provided to IESO through project completion reports and continuing participant lists.	Savings are considered to begin in the year the device was installed and/or when a customer signed a peaksaver PLUS™ participant agreement.	Peak demand savings are based on an ex ante estimate assuming a 1 in 10 weather year and represents the "insurance value" of the initiative. Energy savings are based on an ex post estimate which reflects the savings that occurred as a result of activations in the year and accounts for any "snapback" in energy consumption experienced after the event. Savings are assumed to persist for only 1 year, reflecting that savings will only occur if the resource is activated.

Initiative	Attributing Savings to LDCs	Savings 'start' Date	Calculating Resource Savings
Residential New Construction	Results are directly attributed to LDC based on LDC identified in application in the iCon system. Initiative was not evaluated in 2011, reported results are presented with forecast assumptions as per the business case.	Savings are considered to begin in the year of the project completion date.	Peak demand and energy savings are determined using the verified measure level per unit assumption multiplied by the uptake in the market (gross) taking into account net-to-gross factors such as free-ridership and spillover (net) at the measure level.
Business Program			
Efficiency: Equipment Replacement	Results are directly attributed to LDC based on LDC identified at the facility level in the iCon system. Projects in the Application Status: "Post-Stage Submission" are included (excluding "Payment denied by LDC"); Please see page for Building type to Sector mapping.	Savings are considered to begin in the year of the actual project completion date in the iCON system.	Peak demand and energy savings are determined by the total savings for a given project as reported in the iCON system (reported). A realization rate is applied to the reported savings to ensure that these savings align with EM&V protocols and reflect the savings that were actually realized (i.e. how many light bulbs were actually installed vs. what was reported) (gross). Net savings takes into account net-to-gross factors such as free-ridership and spillover (net). Both realization rate and net-to-gross ratios can differ for energy and demand savings and depend on the mix of projects within an LDC territory (i.e. lighting or non-lighting project, engineered/custom/prescriptive track).
	Additional Note: project counts were derived by filtering out invalid statuses (e.g. Post-Project Submission - Payment denied by LDC) and only including projects with an "Actual Project Completion Date" in 2014)		

Initiative	Attributing Savings to LDCs	Savings 'start' Date	Calculating Resource Savings
Direct Installed Lighting	Results are directly attributed to LDC based on the LDC specified on the work order.	Savings are considered to begin in the year of the actual project completion date.	Peak demand and energy savings are determined using the verified measure level per unit assumptions multiplied by the uptake of each measure accounting for the realization rate for both peak demand and energy to reflect the savings that were actually realized (i.e. how many light bulbs were actually installed vs. what was reported) (gross). Net savings take into account net-to-gross factors such as free-ridership and spillover for both peak demand and energy savings at the program level (net).
Existing Building Commissioning Incentive	Results are directly attributed to LDC based on LDC identified in the application.	Savings are considered to begin in the year of the actual project completion date.	Peak demand and energy savings are determined by the total savings for a given project as reported (reported). A realization rate is applied to the reported savings to ensure that these savings align with EM&V protocols and reflect the savings that were actually realized (i.e. how many light bulbs were actually installed vs. what was reported) (gross). Net savings takes into account net-to-gross factors such as free-ridership and spillover (net).
New Construction and Major Renovation Incentive	Results are directly attributed to LDC based on LDC identified in the application.	Savings are considered to begin in the year of the actual project completion date.	
Energy Audit	Projects are directly attributed to LDC based on LDC identified in the application.	Savings are considered to begin in the year of the audit date.	Peak demand and energy savings are determined by the total savings resulting from an audit as reported (reported). A realization rate is applied to the reported savings to ensure that these savings align with EM&V protocols and reflect the savings that were actually realized (i.e. how many light bulbs were actually installed vs. what was reported) (gross). Net savings takes into account net-to-gross factors such as free-ridership and spillover (net).

Initiative	Attributing Savings to LDCs	Savings 'start' Date	Calculating Resource Savings
Commercial Demand Response (part of the Residential program schedule)	Results are directly attributed to LDC based on data provided to IESO through project completion reports and continuing participant lists	Savings are considered to begin in the year the device was installed and/or when a customer signed a peaksaver PLUS™ participant agreement.	Peak demand savings are based on an ex ante estimate assuming a 1 in 10 weather year and represents the "insurance value" of the initiative. Energy savings are based on an ex post estimate which reflects the savings that occurred as a result of activations in the year. Savings are assumed to persist for only 1 year, reflecting that savings will only occur if the resource is activated.
Demand Response 3 (part of the Industrial program schedule)	Results are attributed to LDCs based on the total contracted megawatts at the contributor level as of December 31st, applying the provincial ex ante to contracted ratio (ex ante estimate/contracted megawatts); Ex post energy savings are attributed to the LDC based on their proportion of the total contracted megawatts at the contributor level.	Savings are considered to begin in the year in which the contributor signed up to participate in demand response.	Peak demand savings are ex ante estimates based on the load reduction capability that can be expected for the purposes of planning. The ex ante estimates factor in both scheduled non-performances (i.e. maintenance) and historical performance. Energy savings are based on an ex post estimate which reflects the savings that actually occurred as a results of activations in the year. Savings are assumed to persist for 1 year, reflecting that savings will not occur if the resource is not activated and additional costs are incurred to activate the resource.
Industrial Program			
Process & System Upgrades	Results are directly attributed to LDC based on LDC identified in application.	Savings are considered to begin in the year in which the incentive project was completed.	Peak demand and energy savings are determined by the total savings from a given project as reported (reported). A realization rate is applied to the reported savings to ensure that these savings align with EM&V protocols and reflect the savings that were actually realized (i.e. how many light bulbs were actually installed vs. what was reported) (gross). Net savings takes into account net-to-gross factors such as free-ridership and spillover (net).

Initiative	Attributing Savings to LDCs	Savings 'start' Date	Calculating Resource Savings
Monitoring & Targeting	Results are directly attributed to LDC based on LDC identified in the application.	Savings are considered to begin in the year in which the incentive project was completed.	Peak demand and energy savings are determined by the total savings from a given project as reported (reported). A realization rate is applied to the reported savings to ensure that these savings align with EM&V protocols and reflect the savings that were actually realized (i.e. how many light bulbs were actually installed vs. what was reported) (gross). Net savings takes into account net-to-gross factors such as free-ridership and spillover (net).
Energy Manager	Results are directly attributed to LDC based on LDC identified in the application.	Savings are considered to begin in the year in which the project was completed by the energy manager. If no date is specified the savings will begin the year of the Quarterly Report submitted by the energy manager.	Peak demand and energy savings are determined by the total savings from a given project as reported (reported). A realization rate is applied to the reported savings to ensure that these savings align with EM&V protocols and reflect the savings that were actually realized (i.e. how many light bulbs were actually installed vs. what was reported) (gross). Net savings takes into account net-to-gross factors such as free-ridership and spillover (net).

Initiative	Attributing Savings to LDCs	Savings 'start' Date	Calculating Resource Savings
Efficiency: Equipment Replacement Incentive (part of the C&I program schedule)	Results are directly attributed to LDC based on LDC identified at the facility level in the saveONenergy CRM; Projects in the Application Status: "Post-Stage Submission" are included (excluding "Payment denied by LDC"); Please see "Reference Tables" tab for Building type to Sector mapping.	Savings are considered to begin in the year of the actual project completion date on the iCON CRM system.	Peak demand and energy savings are determined by the total savings for a given project as reported in the iCON CRM system (reported). A realization rate is applied to the reported savings to ensure that these savings align with EM&V protocols and reflect the savings that were actually realized (i.e. how many light bulbs were actually installed vs. what was reported) (gross). Net savings takes into account net-to-gross factors such as free-ridership and spillover (net). Both realization rate and net-to-gross ratios can differ for energy and demand savings and depend on the mix of projects within an LDC territory (i.e. lighting or non-lighting project, engineered/custom/prescriptive track).
Demand Response 3	Results are attributed to LDCs based on the total contracted megawatts at the contributor level as of December 31st, applying the provincial ex ante to contracted ratio (ex ante estimate/contracted megawatts); Ex post energy savings are attributed to the LDC based on their proportion of the total contracted megawatts at the contributor level.	Savings are considered to begin in the year in which the contributor signed up to participate in demand response.	Peak demand savings are ex ante estimates based on the load reduction capability that can be expected for the purposes of planning. The ex ante estimates factor in both scheduled non-performances (i.e. maintenance) and historical performance. Energy savings are based on an ex post estimate which reflects the savings that actually occurred as a results of activations in the year. Savings are assumed to persist for 1 year, reflecting that savings will not occur if the resource is not activated and additional costs are incurred to activate the resource.

Initiative	Attributing Savings to LDCs	Savings 'start' Date	Calculating Resource Savings
Home Assistance Program			
Home Assistance Program	Results are directly attributed to LDC based on LDC identified in the application.	Savings are considered to begin in the year in which the measures were installed.	Peak demand and energy savings are determined using the measure level per unit assumption multiplied by the uptake of each measure (gross), taking into account net-to-gross factors such as free-ridership and spillover (net) at the measure level.
Pre-2011 Programs completed in 2011			
Electricity Retrofit Incentive Program	Results are directly attributed to LDC based on LDC identified in the application; Initiative was not evaluated in 2011, 2012, 2013 or 2014 assumptions as per 2010 evaluation.	Savings are considered to begin in the year in which a project was completed.	Peak demand and energy savings are determined by the total savings from a given project as reported. A realization rate is applied to the reported savings to ensure that these savings align with EM&V protocols and reflect the savings that were actually realized (i.e. how many light bulbs were actually installed vs. what was reported) (gross). Net savings takes into account net-to-gross factors such as free-ridership and spillover (net). If energy savings are not available, an estimate is made based on the kWh to kW ratio in the provincial results from the 2010 evaluated results (http://www.powerauthority.on.ca/evaluation-measurement-and-verification/evaluation-reports).
High Performance New Construction	Results are directly attributed to LDC based on customer data provided to the OPA from Enbridge; Initiative was not evaluated in 2011, 2012, 2013 or 2014, assumptions as per 2010 evaluation.	Savings are considered to begin in the year in which a project was completed.	
Toronto Comprehensive	Program run exclusively in Toronto Hydro-Electric System Limited service territory; Initiative was not evaluated in 2011, 2012, 2013 or 2014, assumptions as per 2010 evaluation.		

4.4 Spending

Table 12: 2014 Spending

Initiative	PAB	PBF	PI	CBF	TOTAL
Consumer Program					
Appliance Retirement	9,297.90				9,297.90
Appliance Exchange	2,726.00				2,726.00
HVAC Incentives	8,695.92				8,695.92
Conservation Instant Coupon Booklet	9,180.92				9,180.92
Bi-Annual Retailer Event					
Retailer Co-op					
Residential Demand Response	374,574.32	1,688,747.48			2,063,321.80
New Construction Program					
Business Program					
Efficiency: Equipment Replacement	126,777.86		186,479.19		313,257.05
Direct Installed Lighting	109,021.58	40,700.00	193,778.25		343,499.83
Existing Building Commissioning Incentive					
New Construction and Major Renovation Initiative	34,966.87		31,594.24		66,561.11
Energy Audit	23,103.72		3,250.00		26,353.72
Demand Response 3 (part of the Industrial program schedule)					
Industrial Program					
Process & System Upgrades					
a) preliminary engineering study	7,651.97				7,651.97
b) detailed engineering study	6,425.32				6,425.32
c) program incentive					
Monitoring & Targeting					
Energy Manager					
Key Account Manager					
Demand Response 3					
Home Assistance Program					
Home Assistance Program	39,287.34	116,200.00	117,070.27		272,557.61
TOTAL SPENDING	751,709.72	1,845,647.48	532,171.95		3,129,529.15

Table 13: Cumulative Spending (2011-2014)

Initiative	PAB	PBF	PI	CBF	TOTAL
Consumer Program					
Appliance Retirement	19,258.57				19,258.57
Appliance Exchange	11,566.67				11,566.67
HVAC Incentives	19,566.59				19,566.59
Annual Coupons	18,255.76				18,255.76
Bi-Annual Retailer Event	9,415.21				9,415.21
Retailer Co-op					
Residential Demand Response	572,553.23	2,456,259.11			3,028,812.34
New Construction Program	25,149.20				25,149.20
Business Program					
Equipment Replacement	318,881.68		995,057.04		1,313,938.72
Direct Installed Lighting	248,894.66	122,649.99	535,485.26		907,029.91
Existing Building Commissioning Incentive	54,226.75				54,226.75
New Construction and Major Renovation Initiative	83,272.64		37,196.24		120,468.88
Energy Audit	83,013.73		24,901.30		107,915.03
Demand Response					
Industrial Program					
Process & System Upgrades					
a) preliminary engineering study	12,749.79				12,749.79
b) detailed engineering study	7,111.79				7,111.79
c) program incentive	686.47				686.47
Monitoring & Targeting	686.47				686.47
Energy Manager	686.47				686.47
Key Account Manager ("KAM")	686.47				686.47
Demand Response 3	8,931.37				8,931.37
Home Assistance Program					
Home Assistance Program	103,672.73	257,550.00	265,810.81		627,033.54
Pre 2011 Programs					
Electricity Retrofit Incentive			314,996.00		314,996.00
High Performance New Construction					
Initiatives Not In Market					
Midstream Electronics					
Midstream Pool Equipment					
Direct Service Space Cooling	3,351.14				3,351.14
Demand Response 1	686.47				686.47
Home Energy Audit Tool					
Total CDM Program Spending	1,603,303.89	2,836,459.10	2,173,446.65		6,613,209.61

5. Combined CDM Reporting Elements

5.1 Progress Towards CDM Targets

Table 14: Net Peak Demand Savings at the End User Level (MW)

Implementation Period	Annual (MW)			
	2011	2012	2013	2014
2011 – Verified by IESO	.6	.6	.6	.5
2012 – Verified by IESO	0.0	1.0	1.0	.9
2013 – Verified by IESO	0.0	0.1	1.5	.7
2014	0.0	0.0	0.1	5.1
Verified Net Annual Peak Demand Savings in 2014:				**7.2**
Peterborough Distribution Inc. 2014 Annual CDM Capacity Target:				**8.7**
Verified Portion of Peak Demand Savings Target Achieved (%):				**83.0%**

Table 152: Net Energy Savings at the End-User Level (GWh)

Implementation Period	Annual (GWh)				Cumulative (GWh)
	2011	2012	2013	2014	2011-2014
2011 – Verified by IESO	2.6	2.6	2.6	2.5	10.3
2012 – Verified by IESO	0.0	4.1	3.9	3.8	11.9
2013 – Verified by IESO	0.0	0.4	3.1	3.1	6.6
2014	0.0	0.2	0.3	5.8	6.3
Verified Net Cumulative Energy Savings 2011-2014:					**35.0**
Peterborough Distribution Inc. 2011-2014 Cumulative CDM Energy Target:					**38.5**
Verified Portion of Cumulative Energy Target Achieved (%):					**91.0%**

5.2 Variance from Strategy

The result of ongoing challenges in obtaining results from the OPA for our deployed Demand Reduction devices through ***peaksaver***PLUS, has resulted in a significant and continual delay in accurate reporting of PDI's achieved demand reduction for 2012 and 2013. PDI would be interested in knowing what the cumulative kWh reductions would have been towards our target had they been reported in any or all of the years since installation took place.

It was anticipated that our Municipality would have moved ahead with the conversion of streetlights to LED's. Due to flawed economic calculation by an AMO sanctioned turnkey provider, the Municipality found it was not economically

feasible to proceed under that model. Had this project gone ahead as anticipated, it would have provided a significant Demand and Energy reduction. PDI continues to consider this a future potential.

One of our large use customers, with whom we share an OPA funded embedded energy manager (EEM) resource, had conducted multiple studies, both funded and non funded kaizen studies. The results for attributable savings from this EEM did not materialize at the level anticipated. Projects such as a CHP initiative have been studied and were expected to be launched prior to the end of this term. We remain hopeful that this will still occur in the new framework.

Additionally, no savings were attributed to the installation of IHD's. PDI had deployed approximately 8,800 IHD's in anticipation of both the benefit to consumers as well as the attributable savings toward our energy and demand targets. PDI chose a product that utilized the AMI infrastructure ensuring the device was future proofed to any changes in rates, time, or loss of battery. Other LDC's deployed devices that become obsolete after the first rate change or Daylight Savings adjustment and were dependant on the consumer to manage any rate, date or battery replacement requirements. PDI's solution was pre-provisioned, allowing customers a failsafe plug and play device.

6. Conclusion

Over the course of 2014, Peterborough Distribution Inc. has achieved an incremental 5.1 MW in peak demand savings and 5.8 GWh in energy savings representing 58.5% and 15.1% of Peterborough Distribution Inc. 2014 target, respectively.

The overall results achieved in 2011-2014 are 7.2 MW in peak demand savings and 35.0 GWh in energy savings, which represents 83.0% and 91% of Peterborough Distribution Inc. overall 2011-2014 target, respectively. These results are representative of a considerable effort expended by Peterborough Distribution Inc., customers, channel partners and stakeholders to overcome many operational and structural issues that limited program effectiveness across all market sectors. This achievement is a success and the relationships built and knowledge gained within the 2011-2014 CDM program term will aid results in future CDM programs.

Future reports on the Conservation First Framework will be provided by LDCs to the IESO who will report annually to the OEB.

Appendix A: Initiative Descriptions

Residential Program

APPLIANCE RETIREMENT INITIATIVE (Exhibit D)

Target Customer Type(s): 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: Large refrigerators, large freezers, window air conditioners and portable dehumidifiers.

Delivery: IESO centrally contracts for the province-wide marketing, call centre, appliance pick-up and decommissioning process. LDC's provides local marketing and coordination with municipal pick-up where available.

Additional detail is available:

- Schedule B-1, Exhibit D. Available on IESO's extranet;
- saveONenergy website https://saveonenergy.ca/Consumer/Programs/Appliance-Retirement.aspx.

In Market Date: June, 2011

APPLIANCE EXCHANGE INITIATIVE (Exhibit E)

Target Customer Type(s): 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 (AC) and dehumidifiers in exchange for coupons/discounts towards the purchase of new energy efficient equipment. Window ACs were discontinued from the program in 2013.

Targeted End Uses: Window air conditioners and portable dehumidifiers

Delivery: IESO contracts with participating retailers for collection of eligible units. LDCs provide local marketing.

Additional detail is available:

- Schedule B-1, Exhibit C. Available on IESO's extranet;
- saveONenergy website https://saveonenergy.ca/Consumer.aspx.

In Market Date: June, 2011

HVAC INCENTIVES INITIATIVE (Exhibit B)

Target Customer Type(s): 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 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 central air conditioners by approved Heating, Refrigeration, and Air Conditioning Institute (HRAI) qualified contractors.

Targeted End Uses: Central air conditioners and furnaces

Delivery: IESO contracts centrally for delivery of the program. LDCs provide local marketing and encourage local contractors to participate in the initiative.

Additional detail is available:

- Schedule B-1, Exhibit B. Available on IESO's extranet;
- saveONenergy website https://saveonenergy.ca/Consumer.aspx.

In Market Date: June, 2011

CONSERVATION INSTANT COUPON INITIATIVE (Exhibit A)

Target Customer Type(s): 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: ENERGY STAR® qualified Standard Compact Flourescent Lights ("CFLs"),ENERGY STAR® 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, baseboard programmable thermostats.

Delivery: The IESO develops the electronic version of the coupons and posts them online for download. Three LDC specific coupons were made available for local marketing and utilization by LDCs. The IESO enters into agreements with retailers to honour the coupons.

Additional detail is available:

- Schedule B-1, Exhibit A. Available on IESO's extranet;
- saveONenergy website https://saveonenergy.ca/Consumer.aspx.

In Market Date: June, 2011

BI-ANNUAL RETAILER EVENT INITIATIVE (Exhibit C)

Target Customer Type(s): 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: As per the Conservation Instant Coupon Initiative

Delivery: The IESO enters into arrangements with participating retailers to promote the discounted products, and to post and honour related coupons. LDCs also refer retailers to the IESO and market this initiative locally.

Additional detail is available:

- Schedule B-1, Exhibit C. Available on IESO's extranet;
- saveONenergy website https://saveonenergy.ca/Consumer.aspx.

In Market Date: August, 2012

RETAILER CO-OP

Target Customer Type(s): Residential Customers

Initiative Frequency: Year Round

Objective: Hold promotional events to encourage customers to purchase energy efficiency measures (and go above-and-beyond the traditional Bi-Annual Coupon Events).

Description: The Retailer Co-op Initiative provides LDCs with the opportunity to work with retailers in their service area by holding special events at retail locations. These events are typically special promotions that encourage customers to purchase energy efficiency measures (and go above-and-beyond the traditional Bi-Annual Coupon Events).

Targeted End Uses: As per the Conservation Instant Coupon Initiative

Delivery: Retailers apply to the IESO for co-op funding to run special promotions that promote energy efficiency to customers in their stores. LDCs can refer retailers to the IESO. The IESO provides each LDC with a list of retailers who have qualified for Co-Op Funding as well as details of the proposed special events.

In Market Date: Not in Market

NEW CONSTRUCTION PROGRAM (Schedule B-2)

Target Customer Type(s): 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 IESO air coverage driving builders to their LDC for additional information.

Additional detail is available:

- Schedule B-1, Exhibit C. Available on IESO's extranet;
- saveONenergy website https://saveonenergy.ca/Consumer.aspx.

In Market Date: September, 2011

RESIDENTIAL DEMAND RESPONSE PROGRAM (Schedule B-3)

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 IESO-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).

Targeted End Uses: central air conditioning, electric hot water heaters and pool pumps

Delivery: LDC's recruit customers and procure technology

Additional detail is available:

- Schedule B-1, Exhibit C. Available on IESO's extranet;
- saveONenergy website https://saveonenergy.ca/Consumer.aspx.

In Market Date: June, 2012

C&I Program

EFFICIENCY: EQUIPMENT REPLACEMENT INCENTIVE (ERII) (Schedule C-2)

Target Customer Type(s): 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 into 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, ventilation and other measures

Delivery: LDC delivered.

Additional detail is available:

- Schedule C-2. Available on IESO's extranet;
- saveONenergy website https://saveonenergy.ca/Business/Program-Overviews/Retrofit-for-Commercial.aspx.

In Market Date: June, 2011

Lessons Learned:

DIRECT INSTALL INITIATIVE (DIL) (Schedule C-3)

Target Customer Type(s): 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 $1,500 to eligible owners and tenants of small 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 $1,500 at no cost to qualifying small businesses. In addition, standard prescriptive incentives are available for eligible equipment beyond the initial $1,500 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. Available on IESO's extranet;
- saveONenergy website https://saveonenergy.ca/Business.aspx.

In Market Date: June, 2011

EXISTING BUILDING COMMISSIONING INCENTIVE INITIATIVE (Schedule C-6)

Target Customer Type(s): 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. Available on IESO's extranet;
- saveONenergy website https://saveonenergy.ca/Business/Program-Overviews/Existing-Building-Commissioning.aspx.

In Market Date: June, 2011

NEW CONSTRUCTION AND MAJOR RENOVATION INITIATIVE (HPNC) (Schedule C-4)

Target Customer Type(s): Commercial, Institutional, Agricultural and Industrial Customers

Initiative Frequency: Year round

Objective: The objective of this initiative is to encourage builders/major renovators 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: New building construction, 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. Available on IESO's extranet;
- saveONenergy website https://saveonenergy.ca/Business/Program-Overviews/New-Construction.aspx.

In Market Date: June, 2011

ENERGY AUDIT INITIATIVE (Schedule C-1)

Target Customer Type(s): 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 the 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. Available on IESO's extranet;
- saveONenergy website https://saveonenergy.ca/Business/Program-Overviews/Audit-Funding.aspx.

In Market Date: June, 2011

Industrial Program

PROCESS & SYSTEMS UPGRADES INITIATIVE (PSUI) (Schedule D-1)

Target Customer Type(s): 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 project 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 pay back

Targeted End Uses: Process and systems

Delivery: LDC delivered with Key Account Management support, in some cases.

Additional detail is available:

- Schedule D-1. Available on IESO's extranet;
- saveONenergy website https://saveonenergy.ca/Business.aspx.

In Market Date: June, 2011

MONITORING & TARGETING INITIATIVE (Schedule D-2)

Target Customer Type(s): Industrial, Commercial, Institutional and Agricultural Customers

Initiative Frequency: Year round

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

Description: This initiative offers customers funding for the installation of a M&T 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: Process and systems

Delivery: LDC delivered with Key Account Management support, in some cases.

Additional detail is available:

- Schedule D-2. Available on IESO's extranet;
- saveONenergy website https://saveonenergy.ca/Business.aspx.

In Market Date: June, 2011

ENERGY MANAGER INITIATIVE (Schedule D-3)

Target Customer Type(s): 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: Process and systems

Delivery: LDC delivered with Key Account Management support, in some cases.

Additional detail is available:

- Schedule D-3. Available on IESO's extranet;
- saveONenergy website https://saveonenergy.ca/Business.aspx.

In Market Date: May, 2012

KEY ACCOUNT MANAGER (KAM) (Schedule D-4)

Target Customer Type(s): Industrial, Commercial, Institutional and Agricultural Customers

Initiative Frequency: Year round

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.

Description: This initiative provides LDCs the opportunity to utilize a KAM to assist their customers. 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: Process and systems

Delivery: LDC delivered

Additional detail is available:

- ScheduleD-4. Available on IESO's extranet.

In Market Date: Not in Market

DEMAND RESPONSE 3 (Schedule D-6)

Target Customer Type(s): Industrial, Commercial, Institutional and Agricultural Customers

Initiative Frequency: Year round

Objective: This initiative provides for Demand Response ("DR") payments to contracted participants to compensate them for reducing their electricity consumption by a pre-defined amount during a DR event.

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

Delivery: DR3 is delivered by Demand Response Providers ("DRPs"), under contract to the IESO. The IESO administers contracts with all DRPs and Direct Participants (who provide in excess of 5 MW of demand response capacity). IESO provides administration including settlement, measurement and verification, and dispatch. LDCs are responsible for local customer outreach and marketing efforts.

Additional detail is available:

- Schedule D-6. Available on IESO's extranet;
- saveONenergy website https://saveonenergy.ca/Business.aspx

In Market Date: June, 2011

It is noted that while the schedule for this initiative was not posted until May 2011, the Aggregators reported that they were able to enroll customers as of January, 2011.

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

Target Customer Type(s): 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 use measures based on results of audit (i.e., CFL bulbs)

Delivery: LDC delivered.

Additional detail is available:

- Schedule E. Available on IESO's extranet.

In Market Date: June, 2012

Appendix B: Pre-2011 Programs

ELECTRICITY RETROFIT INCENTIVE PROGRAM

Target Customer Type(s): Commercial, Institutional, and Agricultural 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 Program (ERIP) offered financial incentives to customers for the upgrade of existing equipment to energy efficient equipment. This program was available in 2010 and allowed customers up to 11 months following Pre-Approval to complete their projects. As a result, a number of projects Pre-Approved in 2010 were not completed and in-service until 2011. The electricity savings associated with these projects are attributed to 2011.

Targeted End Uses: Electricity savings measures

Delivery: LDC Delivered

HIGH PERFORMANCE NEW CONSTRUCTION

Target Customer Type(s): Commercial, Institutional, and Agricultural Customers

Initiative Frequency: Year round

Objective: The High Performance New Construction Initiative provided incentives for new buildings to exceed existing codes and standards for energy efficiency. The Initiative uses both a prescriptive and custom approach and was delivered by Enbridge Gas under contract with the IESO (and subcontracted to Union Gas), which ran until December 2010.

Description: 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.

Targeted End Uses: New building construction, building modeling, lighting, space cooling, ventilation and other measures

Delivery: Through Enbridge Gas (and subcontracted to Union Gas)