



Ms. Kirsten Walli  
Board Secretary  
Ontario Energy Board  
P.O. Box 2319, 27th Floor  
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Toronto, ON M4P 1E4

**September 30, 2015**

Dear Ms. Walli,

**RE: Brantford Power Inc. 2014 Conservation and Demand Management (CDM) Annual Report**

In accordance with Section 2.2.1 of the CDM Code for Electricity Distributors, please find enclosed Brantford Power Inc.'s 2014 CDM Annual Report. This report covers the period of January 1, 2014 to December 31, 2014.

Sincerely,

*Original Signed By*

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# **Brantford Power Inc.**

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## **Conservation and Demand Management 2014 Annual Report**

**Submitted to:  
Ontario Energy Board**

**Submitted on September 30, 2015**

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## EXECUTIVE SUMMARY

This annual report is submitted by Brantford Power Inc. (Brantford Power) 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. Accordingly, this report outlines Brantford Power 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.

Brantford Power 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 the Independent Electricity System Operator (“IESO”), is to provide measurement and verification on TOU. The TOU savings allocated to Brantford Power’s 2011 -2014 targets are 469 kW and 0 kWh.

In 2011-2014, Brantford Power 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. Most of these programs were rolled-out by the IESO in June 2011. In 2011 program activities were centered on building a foundation for full program execution over the next three years of the program term, including staffing, procurement, and program delivery.

In 2012, Brantford Power worked to improve the delivery of the saveONenergy programs and increase customer participation. Through strong customer and channel partner relationships, and cooperation with a large number of LDCs, Brantford Power was able to overcome a number of operational and structural issues to achieve strong Commercial/Institutional results.

In 2013, Brantford Power launched the peaksaverPLUS initiative and through that program was able to participate in a variety of residential outreach activities including retailer and exchange events, Canada Day celebrations and a table at the local farmer’s market. Commercial participation through the Equipment Replacement Incentive Initiative (ERII) was higher than anticipated in 2013, resulting in strong energy savings results.

In 2014, Brantford Power continued to actively engage and support customers through the saveONenergy initiatives. Residential programs were promoted via multiple outreach activities including retailer and community events, while larger commercial, institutional, industrial customers and channel partners were invited to participate in a number of sponsored learning and information sessions.

Brantford Power has achieved 9.1 MW of net incremental peak demand savings and 82.5 GWh of net incremental energy savings in 2014. A summary of the achievements towards the CDM targets is shown in the tables below.

**Table 1: Summary of CDM Demand Target Achievement**

Implementation Period	Annual (MW)			
	2011	2012	2013	2014
2011 – Verified by OPA	1.3	1.0	1.0	1.0
2012 – Verified by OPA	-0.1	1.2	0.9	0.9
2013 – Verified by OPA	0.0	0.0	1.8	1.1
2014 - Verified by IESO	0.0	0.0	0.7	6.1
<b>Verified Net Annual Peak Demand Savings in 2014:</b>				<b>9.1*</b>
<b>Brantford Power Inc. 2014 Annual CDM Capacity Target:</b>				<b>11.4</b>
<b>Verified Portion of Peak Demand Savings Target Achieved (%):</b>				<b>79.7</b>

*\*revised from 2011-2014 Final Results Report as per the IESO memo issued on September 30, 2015*

**Table 2: Summary of CDM Energy Target Achievement**

Implementation Period	Annual (GWh)				Cumulative (GWh)
	2011	2012	2013	2014	2011-2014
2011 – Verified by OPA	4.5	4.5	4.5	4.4	17.9
2012 – Verified by OPA	-0.2	5.4	5.3	5.3	15.7
2013 – Verified by OPA	0.0	0.1	5.1	5.0	10.2
2014 - Verified by IESO	0.0	0.2	2.18	36.3	38.7
<b>Verified Net Cumulative Energy Savings 2011-2014:</b>					<b>82.5*</b>
<b>Brantford Power Inc. 2011-2014 Cumulative CDM Energy Target:</b>					<b>48.9</b>
<b>Verified Portion of Cumulative Energy Target Achieved (%):</b>					<b>168.6</b>

*\*revised from 2011-2014 Final Results Report as per the IESO memo issued on September 30, 2015*

From the above table, BPI has achieved 9.1 MW or 79.7% and 82.5 GWh or 168.6% towards Brantford Power's 2014 peak demand reduction target and energy consumption reduction targets respectively. The shortfall related to the peak demand targets was mainly due to late start of programs and the cancellation of planned province wide programs including Direct Space Cooling since 2011. In regards to the energy results, 60% of the savings were achieved through the Equipment Replacement Incentive Initiative (ERII), 55% from a large industrial project and 53% from all the remaining commercial and residential initiatives.

In 2015, to ensure a smooth transition into the Conservation First Framework (CFF), most 2011-2014 Programs and Rules were extended into 2015 until the LDC CFF implementation date identified in the LDC's CDM Plan. Brantford Power's CDM Plan was submitted on April 29, 2015, approved on July 27, 2015, and identifies January 1, 2016 as the implementation date of the new Conservation First Framework.

## 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 Brantford Power to require Brantford Power, as a condition of its license, to achieve 48.92 GWh of energy savings and 11.38 MW of summer peak demand savings, over the period beginning January 1, 2011 through December 31, 2014.

In accordance with the same Minister’s directive, the OEB issued the Conservation and Demand Management Code for Electricity Distributors (the “Code”) on September 16, 2010. The Code sets out the obligations and requirements with which electricity distributors must comply in relation to the CDM targets set out in their licenses. To comply with the Code requirements, Brantford Power submitted its CDM Strategy on November 10, 2010 which provided a high level of description of how Brantford Power intended to achieve its CDM targets.

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

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

On December 21, 2012, the Minister of Energy directed the IESO to fund CDM programs which meet 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 remains the achievement of CDM targets by December 31, 2014.

Brantford Power submitted its 2013 Annual Report on September 30, 2014 which summarized the CDM activities undertaken by Brantford Power 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.

The report identifies that although there have been improvements to programs, some shortcomings still remain with respect 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 improvements to expedite enhancements to 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.

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.

# **1 CONSERVATION FRAMEWORK**

## **1.1 PAST 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, excessive legal requirements, and misalignment of control and risk 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 NEW 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 have 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 Brantford Power.

## 2.2 TOU PRICING

### 2.2.1 Background

In its April 26, 2012 CDM Guidelines, the OEB recognized that a portion of the aggregate electricity demand target was intended to be attributable to savings achieved through the implementation of TOU pricing. The OEB 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 indicated that the evaluation of savings from TOU pricing would be conducted by the IESO for the Province, and then allocated to distributors.

In 2013, the IESO retained the Brattle Group as the evaluation contractor and worked 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. The IESO completed the TOU study in the summer of 2015 and final verified savings were made available for LDCs to include in 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 in the following table.



**Table 3: RPP TOU Pricing Summary**

Effective Date	Prices (cents/kWh)		
	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
May 1, 2015	16.1	12.2	8.0

**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

Brantford Power began transitioning its RPP customers to TOU billing on November 1, 2011. At December 31<sup>st</sup>, 2014, 35,600 RPP customers were on TOU billing.

### 2.3 BRANTFORD POWER'S APPLICATION WITH THE OEB

Brantford Power did not submit a CDM program application to the OEB in 2014.

### 2.4 BRANTFORD POWER'S APPLICATION WITH THE IESO'S CONSERVATION FUND

In 2013, the IESO introduced the Conservation Fund's Program Innovation stream to help meet LDC's interest in the development and launch of new local, regional and province-wide initiatives. The Conservation Fund's LDC Program Innovation stream fast-tracks 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. Per the IESO, as of March 2014, three pilots have been contracted and are underway with Toronto Hydro, Niagara Peninsula Energy and ten others 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.

Brantford Power did not submit a CDM program application to the IESO's Conservation Fund in 2014.

### 3 IESO-CONTRACTED PROVINCE-WIDE CDM PROGRAMS

#### 3.1 INTRODUCTION

Effective February 3, 2011, Brantford Power 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 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 4: IESO-Contracted Province-Wide CDM Program Initiatives**

Initiative	Schedule	Date schedule posted	Brantford Power in Market Date
<b>Residential Programs</b>			
Appliance Retirement	Schedule B-1, Exhibit D	Jan 26,2011	January 2011
Appliance Exchange	Schedule B-1, Exhibit E	Jan 26, 2011	March 2011
HVAC Incentives	Schedule B-1, Exhibit B	Jan 26, 2011	February 2011
Conservation Instant Coupon Booklet	Schedule B-1, Exhibit A	Jan 26, 2011	February 2011
Bi-Annual Retailer Event	Schedule B-1, Exhibit C	Jan 26, 2011	March 2011
Residential Demand Response	Schedule B-3	Aug 22, 2011	June 2013
New Construction Program	Schedule B-2	Jan 26, 2011	February 2011
Home Assistance Program	Schedule E-1	May 9, 2011	February 2012
<b>Commercial &amp; Institutional Programs</b>			
Efficiency: Equipment Replacement	Schedule C-2	Jan 26, 2011	March 2011
Direct Install Lighting - General Service <50 kW	Schedule C-3	Jan 26, 2011	July 2011
Existing Building Commissioning Incentive	Schedule C-6	Feb 2011	February 2011
New Construction and Major Renovation Initiative	Schedule C-4	Feb 2011	June 2011
Energy Audit	Schedule C-1	Jan 26, 2011	February 2011
Demand Response - General Service <50 kW	Schedule B-3	Jan 26, 2011	June 2013
<b>Industrial Programs - General Service 50 kW &amp; above</b>			
Process & System Upgrades	Schedule D-1	May 31, 2011	November 2011
Monitoring & Targeting	Schedule D-2	May 31, 2011	November 2011
Energy Manager	Schedule D-3	May 31, 2011	August 2011
Key Account Manager ("KAM")	Schedule D-4	May 31,2011	August 2011
Efficiency Equipment Replacement Incentive • (part of the C&I program schedule)	Schedule C-2	May 31, 2011	March 2011
Demand Response 3	Schedule D-6	May 31, 2011	January 2011

In addition, results were realized towards Brantford Power's 2011-2014 targets through the following pre-2011 programs:

- Electricity Retrofit Incentive Program
- High Performance New Construction
- Toronto Comprehensive
- Multifamily Energy Efficiency Rebates
- Data Centre Incentive Program
- EnWin Green Suites

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

**Table 5: Pre-2011 IESO Programs**

<b>Not in Market</b>	<b>Objective</b>	<b>Status</b>
<b>Residential Program</b>		
Midstream Electronics	Encourages retailers to promote and sell high efficiency 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.
<b>Commercial &amp; Institutional Program</b>		
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.
<b>Industrial Program</b>		
DR1	As above	No customer uptake for this initiative. Removed in Q4, 2012.

The Master CDM Program Agreement between LDCs and the IESO includes a program change management provision in Article 3. Collaboration between the IESO and LDCs 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 gave 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 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. A discussion of Brantford Power's experience with these programs is provided below.

### 3.2.1 Residential Programs

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

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

**Discussion:** The Residential Program Portfolio is predominately a carryover of initiatives from previous programs. It is primarily driven by retailers and contractors. Three proposed initiatives (Midstream Electronics, Midstream Pool Equipment and Home Energy Audit Tool) were not launched and subsequently removed from the schedule in 2013.

The addition of Light Emitting Diode ("LED") measures to the Bi-Annual Retailer Event and in the Annual Coupon initiative in July 2013 had a positive impact on customer participation. There was the added benefit of LDC custom coded coupon options in 2013 and 2014.

The Residential Demand Response program continues to be the core Residential initiative. Brantford Power launched this initiative in June of 2013, utilizing the BlueLine In-Home Display (IHD) and load control switch. This offering has been generally well-received by consumers. Prior to the launch of this initiative it was not strategically advantageous or economical for Brantford Power to participate in customer outreach events. With the addition of this initiative to the local residential Portfolio, Brantford Power was able to actively promote all the residential initiatives at a number of customer events in 2013 and 2014 such as the local farmer's market, Ribfest, Canada Day and the local Cineplex.

The Heating and Cooling incentives program continues to be one of the strongest performers 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).

Efforts to revitalize and increase the effectiveness and breadth of the initiatives through the Residential Program should be a high priority, as opportunities within the Residential marketplace are identified, developed and offered to customers.

#### 3.2.1.1 Appliance Retirement Initiative (Exhibit D)

**Initiative Activities/Progress:** Brantford Power provided local customer support and promoted the Appliance Retirement initiative through on-bill messaging, bill inserts, customized website information and customer events. In addition, Brantford Power sub-licensed the commercial produced by Cambridge and North Dumfries Hydro for broadcast at the local Galaxy Cineplex.

**Additional Comments:**

- 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.
- Brantford Power has had limited and annually depreciating customer participation in this initiative due to market saturation.

### **3.2.1.2 Appliance Exchange Initiative (Exhibit E)**

**Initiative Activities/Progress:** Brantford Power provided local marketing and customer support for this initiative, including bill messaging, bill inserts and newspaper wraps. With the launch of the residential demand response initiative, Brantford Power was able to participate in activities at the local retail store level. Brantford Power worked with the retailer to collect customer postal code information so savings could be attributed directly to Brantford Power rather than to the provincial allocation. While Brantford Power's verified results have improved for this initiative, the source of these savings (direct/allocation) has not been confirmed.

#### **Additional Comments:**

- The restrictive, limited and sometimes non-participation of local stores can diminish the savings potential for this Initiative. Brantford Power outreach staff was required to perform considerable duties in store for these events.
- As there has only been one retailer participant to date, 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 ARCA for appliance removal.

### **3.2.1.3 HVAC Incentives Initiative (Exhibit B)**

**Initiative Activities/Progress:** In 2014, Brantford Power continued to build valuable relationships with local HVAC installers through membership and participation in the local chapter of the Heating, Refrigeration and Air-Conditioning Institute of Canada (HRAI). Local customer support and promotion was continued through communications, including on bill messaging, bill inserts and numerous outreach events such as soccer try-outs and in-lobby Cineplex presence. A custom commercial promoting the HVAC initiative was sub-licensed from Cambridge and North Dumfries Hydro for use at the local Galaxy Cineplex and on Brantford Power's customized conservation website.

#### **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 to 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:** Brantford Power utilized the custom coded coupons in bill inserts, as handouts during customer outreach events, and as downloads on the customized conservation website.

**Additional Comments:**

- The timeframe for retailer submission of redeemed coupons varies from retailer to retailer, and in some cases has been lengthy. The delays and incomplete results reporting limit the ability to react and respond to initiative performance or changes in consumer behaviour.
- The product list could be distinguished 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 has its own procedure. In addition, some retailers have static lists of eligible products and will not discount eligible products unless the product is 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:** The launch of the residential demand response initiative enabled Brantford Power to participate ‘in-store’ at local retail partners in the Spring and Fall of 2013 and 2014. This initiative was also promoted through bill messaging, bill inserts and newspaper wraps. The newspaper wraps seemed particularly effective at promoting these events as numerous customers brought the advertisement with them to the outreach booth at the retailer event.

**Additional Comments:**

- The Product list has changed very little over the past five years and has resulted in a limited sense of urgency or excitement from local customers.
- A more exclusive relationship with a retailer appropriate to the program may drive higher savings.
- Independently the Retailer Co-op and Bi-Annual Retailer Event Initiative did not present a value for the investment of LDC resources to support these events and need to be backed by a strong Residential portfolio.

### **3.2.1.6 Retailer Co-op**

**Initiative Activities/Progress:** As per above, Brantford Power was able to participate in retailer events in the Spring and Fall of 2013 and 2014.

**Additional Comments:**

- The availability of retailer and/or LDC staff with product knowledge and the ability to conduct demonstrations 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:** Brantford Power is a member of the Brantford-Brant Homebuilders Association, and in cooperation with Brant County Power, worked to support this initiative with the local homebuilders. This included an information session where a representative from the OPA presented details of the initiative and provided updates to the local builders. In addition, educational material supporting the importance of choosing efficiently built homes was made available at all customer outreach events. The City of Brantford has relatively limited areas of possible residential development which restricted participation within Brantford Power's service territory.

**Additional Comments:**

- In 2012 the application process was streamlined, however it continues to be cumbersome for builders.
- The addition of LED light fixtures, application process improvement, Natural Gas utility collaboration and moving the incentive from the builder to the home-owner may increase participation.

### **3.2.1.8 Residential Demand Response Program (Schedule B-3)**

**Initiative Activities/Progress:** Brantford Power launched the Residential Demand Response initiative in July 2013, utilizing the BlueLine In-Home Display (IHD) and load control switch for air conditioning units only. The launch was supported throughout 2013 and 2014 with numerous marketing endeavors including customer sign up at local outreach events combined with a prize draw. Brantford Power developed a customized commercial for use in the local Cineplex and website which was also adopted by several other utilities. While this initiative is labour intensive, it remains the only initiative in the residential portfolio generally available to most customers. With the launch Brantford Power was able to justify staff participation at local customer events and conservation ambassadors subsequently were visible in the community, promoting saveONenergy initiatives throughout 2014.

**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 have indicated not statistically significant savings resulting from the IHD.
- In Home Energy Display units that communicate with installed smart meter technology continue to mostly be in the development phase and are not ready for market deployment. As a result, there continues to be a lack of Energy Display selection in the marketplace.
- Smart Meters installed by most LDCs do not have the capability to communicate directly to an In Home Display and any mass replacement of newly installed meters with communicating abilities would not be fiscally responsible.

## 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 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.

**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 was the advent of the expedited change management as a mean to accelerate certain program changes. The benefits of the 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:** The ERII program continues to be the most successful initiative for delivering demand and energy savings for the Commercial Sector. Brantford Power has worked to support this initiative through one-on-one customer meetings, participation in business events, customer training sessions and free energy assessments. In addition, Brantford Power, like many other LDCs, has received feedback from customers and most channel partners regarding the challenges with navigating the application process. As a result, Brantford Power has taken on the task of acting as an Applicant Representative for applications, in addition to processing the application review “in house”.

#### **Additional Comments:**

- A large proportion of LDC savings are attributed to ERII, however it can be limited by the state of the economy and the ability of commercial/institutional facilities to complete capital upgrades.
- Applicants and Applicant Representatives continue to express dissatisfaction and difficulty with the online application system as it is complex and time consuming. LDCs have supported customers through application training workshops, and LDC staff acting as customer Application Representatives. As such, LDC staff and Applicant Representatives continue to influence the majority of applications submitted.
- Streamlining of the settlements systems resulted in significant improvement in the payment process.



- 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.
- 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.
- 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:** The successful execution of the previous rendition of this initiative resulted in diminished potential for the 2011-2014 initiative in Brantford Power’s service territory, with less than 250 participants in the 2011-2013 program years. In an effort to reach the few remaining eligible customers Brantford Power continues to reach out to these businesses through direct calling and site visits throughout 2014

#### **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.
- 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 upgrades has potential to provide additional energy and demand savings
- Many customers are not taking advantage of any additional measures, which may present an opportunity for future savings with a new program offering.
- Measure incentives and additional funding for fork lifts were introduced in September 2013 and were well received by installers.

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

**Initiative Activities/Progress:** While Brantford Power continued to promote this initiative with customers during one-on-one meetings and at business events, there was no customer participation in 2011 - 2014. It is anticipated that there will continue to be no customer uptake for this initiative in 2015 in Brantford Powers service territory due to the limited number of space cooling chillers.

#### **Additional Comments:**

- There was minimal participation for this Initiative province wide. 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. The particulars of the Initiative have presented a significant for many channel partners to participate.
- 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:** Through a relationship with the City of Brantford’s Economic Development group Brantford Power has been able to stay informed of new developments within the City. Unfortunately, open developable land within the City is very limited

**Additional Comments:**

- Participants have 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 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.
- 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. Consideration should be given to custom measure options that do not involve only whole building modelling.

### **3.2.2.5 Energy Audit Initiative**

**Initiative Activities/Progress:** Brantford Power has marketed this initiative through customer meetings and business events as a useful tool for identifying no cost/low cost opportunities for energy saving projects that could be achieved through the ERII program.

**Additional Comments**

- 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.
- 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.

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

**Discussion:** The Industrial Program Portfolio has been able to provide significant incentives and valuable resources to large facilities to help them with energy efficiency upgrades and process system improvements. The Engineering Studies in particular as well as the Monitoring and Targeting initiative provide a unique opportunity for a customer to complete a comprehensive analysis of an energy intensive process that they otherwise may not undertake. The Energy Manager Initiative provides customers with a skilled individual whose only role is to assist them with conservation initiatives. To date these Energy Managers have played a key role in customer participation.

Due to the size, scope and long lead time of these initiatives and associated projects, the 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 the 2011-2014 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:** Brantford Power has worked diligently to establish strong relationships with the large industrial customers who would benefit from the PSUI Initiative. The initiative has been marketed to these customers in person through customer meetings and business events with the offer of assistance with the application process. There have been seven study applications and one project underway.

**Additional Comments:**

- This initiative is limited by the state of the economy and the ability of a facility to complete large capital upgrades. There is typically a long sales cycle for these projects, and then a long project development cycle.
- 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.

#### **3.2.3.2 Monitoring and Targeting (“M&T”) Initiative (Schedule D-2)**

**Initiative Activities/Progress:** Brantford Power has provided local marketing and customer support for this initiative but has had no customer participation in 2011-2014.

**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.
- 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:** Brantford Power discussed this initiative with a number of large use customers, however the initiative was received with little to no interest. As a result, there has been no customer participation.

**Additional Comments:**

- The Energy Managers have proven to be a popular and useful resource for larger customers.

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

**Initiative Activities/Progress:** Brantford Power joined with a number of other LDCs to ‘time-share’ the services of a Key Account Manager. The value of this resource was limited for Brantford Power due to the part-time nature of the position and narrow scope of responsibilities.

**Additional Comments**

- Finding this type of skill set has been difficult. In addition, the short-term contract discourages some skilled applicants resulting in longer lead times to acquire the right resource.

**3.2.3.5 Demand Response 3 (“DR3”) (D-6)**

**Initiative Activities/Progress:** In an effort to drive for greater demand savings, Brantford Power worked to improve customer participation in the DR3 program throughout 2013. This initiative was discussed with customers at facility meetings, business events and through a focused lunch and learn session. Through this session, Brantford Power introduced the three aggregators to key customers strategically identified as potential DR3 candidates. Brantford Power provided these customers with an overview of the initiative and each aggregator presented these customers with key elements of their offering. As a result, two new customers signed demand response contracts in 2013.

**Additional Comments:**

- In 2013 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 were 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 IESO 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.

### **3.2.4 Low Income Initiative (Home Assistance Program) (Schedule E-1)**

**Initiative Activities/Progress:** Brantford Power's Home Assistance Program continued to benefit customers through a strong relationship with the City of Brantford's Social Housing department. This department worked to distribute information regarding the initiative to their local housing units and signed owner consents/applications for numerous properties. In addition, Brantford Power promoted this initiative with a custom 'stream-lined' flyer distributed with bills and at outreach events. Working with the local food bank organization also supported the distribution of this flyer in conjunction with the Christmas Basket program.

**Additional Comments:**

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

### **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 BRANTFORD POWER CDM RESULTS**

### **4.1 PARTICIPATION AND SAVINGS**

The IESO provided verified participation and savings data for Brantford Power in the 2011-2014 Final Results Report issued on September 1, 2015. In addition to that report, on September 30, 2015, the IESO issued a memo of adjustment to the 2011-2014 Final Results verifying a total Demand Savings of 9.1 MW and energy savings of 82.5 GWh, representing 79.7% and 168.6% of target respectively. The verified savings have been included in the tables below.

**Table 6: Brantford Power Inc. Verified Initiative and Program Level Net Savings by Year (Scenario 1)**

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)	2011-2014 Net Cumulative Energy Savings (kWh)
															2014
<b>Consumer Program</b>															
Appliance Retirement	Appliances	607	405	240	222	35	24	16	15	250,242	159,035	102,324	96,340	88	1,778,456
Appliance Exchange	Appliances	81	4	123	117	9	1	25	24	12,869	968	45,441	43,224	56	185,038
HVAC Incentives	Equipment	857	899	852	1,005	310	192	168	197	571,421	327,050	281,618	363,072	867	4,193,142
Conservation Instant Coupon Booklet	Items	3,762	224	2,524	8,659	9	2	4	20	149,983	10,144	55,920	242,190	35	984,397
Bi-Annual Retailer Event	Items	6,908	7,697	6,855	35,005	12	11	9	58	213,214	194,308	124,644	891,692	90	2,576,759
Retailer Co-op	Items	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Residential Demand Response	Devices	192	198	711	959	108	91	313	352	278	686	274	0	352	1,238
Residential Demand Response (IHD)	Devices	0	0	545	756	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
<b>Consumer Program Total</b>						<b>483</b>	<b>320</b>	<b>534</b>	<b>667</b>	<b>1,198,008</b>	<b>692,192</b>	<b>610,222</b>	<b>1,636,517</b>	<b>1,487</b>	<b>9,719,030</b>
<b>Business Program</b>															
Retrofit	Projects	21	53	87	106	179	712	772	643	1,194,344	4,496,823	3,875,109	4,248,483	2,259	30,070,663
Direct Install Lighting	Projects	102	64	69	122	159	69	73	120	412,361	269,848	236,782	438,916	384	3,262,671
Building Commissioning	Buildings	0	0	0	0	0	0	0	0	0	0	0	0	0	0
New Construction	Buildings	0	0	2	2	0	0	0	2	0	0	0	16,138	2	16,138
Energy Audit	Audits	0	0	7	1	0	0	18	13	0	0	96,902	65,274	31	259,077
Small Commercial Demand Response	Devices	7	5	5	5	4	3	3	3	16	18	5	0	3	40
Small Commercial Demand Response (IHD)	Devices	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Demand Response 3	Facilities	2	2	2	2	68	68	69	63	2,636	984	917	0	63	4,536
<b>Business Program Total</b>						<b>410</b>	<b>851</b>	<b>934</b>	<b>843</b>	<b>1,609,356</b>	<b>4,767,673</b>	<b>4,209,715</b>	<b>4,768,811</b>	<b>2,742</b>	<b>33,613,125</b>
<b>Industrial Program</b>															
Process & System Upgrades	Projects	0	0	0	1	0	0	0	3,054	0	0	0	27,003,930	3,054	27,003,930
Monitoring & Targeting	Projects	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Energy Manager	Projects	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Retrofit	Projects	12	0	0	0	90	0	0	0	613,727	0	0	0	90	2,454,907
Demand Response 3	Facilities	2	1	3	3	170	87	347	286	9,993	2,104	7,894	0	286	19,990
<b>Industrial Program Total</b>						<b>261</b>	<b>87</b>	<b>347</b>	<b>3,340</b>	<b>623,720</b>	<b>2,104</b>	<b>7,894</b>	<b>27,003,930</b>	<b>3,430</b>	<b>29,478,828</b>
<b>Home Assistance Program</b>															
Home Assistance Program	Homes	0	203	208	514	0	17	17	15	0	130,921	168,392	193,419	49	921,895
<b>Home Assistance Program Total</b>						<b>0</b>	<b>17</b>	<b>17</b>	<b>15</b>	<b>0</b>	<b>130,921</b>	<b>168,392</b>	<b>193,419</b>	<b>49</b>	<b>921,895</b>
<b>Aboriginal Program</b>															
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
<b>Aboriginal Program Total</b>						<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Pre-2011 Programs completed in 2011</b>															
Electricity Retrofit Incentive Program	Projects	29	0	0	0	141	0	0	0	842,905	0	0	0	141	3,371,618
High Performance New Construction	Projects	1	0	1	0	47	1	0	0	241,785	794	0	0	48	969,524
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
<b>Pre-2011 Programs completed in 2011 Total</b>						<b>188</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1,084,690</b>	<b>794</b>	<b>0</b>	<b>0</b>	<b>189</b>	<b>4,341,143</b>
<b>Other</b>															
Program Enabled Savings	Projects	0	0	2	6	0	0	0	32	0	0	0	256,700	32	256,700
Time-of-Use Savings	Homes	0	0	0	n/a	0	0	0	469	0	0	0	0	469	0
LDC Pilots	Projects	0	0	0	1	0	0	0	29	0	0	0	266,088	29	266,088
<b>Other Total</b>						<b>0</b>	<b>0</b>	<b>0</b>	<b>501</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>256,700</b>	<b>501</b>	<b>256,700</b>
<b>Adjustments to 2011 Verified Results</b>							<b>-66</b>	<b>0</b>	<b>0</b>		<b>-230,189</b>	<b>0</b>	<b>760</b>	<b>-65</b>	<b>-917,718</b>
<b>Adjustments to 2012 Verified Results</b>								<b>14</b>	<b>20</b>			<b>83,141</b>	<b>177,387</b>	<b>34</b>	<b>782,231</b>
<b>Adjustments to 2013 Verified Results</b>									<b>676</b>				<b>1,997,757</b>	<b>676</b>	<b>3,996,392</b>
<b>Energy Efficiency Total</b>						<b>992</b>	<b>1,027</b>	<b>1,100</b>	<b>4,692</b>	<b>4,502,851</b>	<b>5,589,893</b>	<b>4,987,133</b>	<b>34,125,465</b>	<b>7,725</b>	<b>78,571,003</b>
<b>Demand Response Total (Scenario 1)</b>						<b>350</b>	<b>249</b>	<b>732</b>	<b>704</b>	<b>12,923</b>	<b>3,792</b>	<b>9,090</b>	<b>0</b>	<b>704</b>	<b>25,805</b>
<b>Adjustments to Previous Years' Verified Results Total</b>						<b>0</b>	<b>-66</b>	<b>14</b>	<b>696</b>	<b>0</b>	<b>-230,189</b>	<b>83,141</b>	<b>2,175,904</b>	<b>645</b>	<b>3,860,905</b>
<b>OPA-Contracted LDC Portfolio Total (inc. Adjustments)</b>						<b>1,342</b>	<b>1,211</b>	<b>1,846</b>	<b>6,092</b>	<b>4,515,774</b>	<b>5,363,496</b>	<b>5,079,363</b>	<b>36,301,369</b>	<b>9,073</b>	<b>82,457,713</b>
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			
Results presented using scenario 1 which assumes that demand response resources have a persistence of 1 year.												Full OEB Target:			
												% of Full OEB Target Achieved to Date (Scenario 1):			
												<b>11,380</b>	<b>48,920,000</b>		
												<b>79.7%</b>	<b>168.6%</b>		

**Table 7: Summarized Program Results**

#	Initiative	Activity Unit	Uptake/ Participation Units			
			2011	2012	2013	2014
<b>Consumer Programs</b>						
1	Appliance Retirement	Appliances	607	405	240	222
2	Appliance Exchange	Appliances	81	4	123	117
3	HVAC Incentives	Equipment	857	899	852	1,005
4	Conservation Instant Coupon Booklet	Items	3,762	224	2,524	1,005
5	Bi-Annual Retailer Event	Coupons	6,908	7,697	6,855	8659
6	Retailer Co-op	Items	0	0	0	0
7	Residential Demand Response (switch)	Devices	192	198	711	959
8	Residential Demand Response (IHD)	Devices	0	0	545	756
9	New Construction Program	Houses	0	0	0	0
<b>Business Programs</b>						
10	Efficiency: Equipment Replacement – Retrofit	Projects	21	53	87	108
11	Direct Installed Lighting	Projects	102	64	69	123
12	Existing Building Commissioning Incentive	Buildings	0	0	0	0
13	New Construction and Major Renovation Incentive	Buildings	0	0	2	2
14	Energy Audit	Audits	0	0	7	1
15	Commercial DR (Residential program schedule)	Devices	7	5	5	5
16	Demand Response 3 (part of the Industrial program schedule)	Facilities	2	2	2	2
<b>Industrial Programs</b>						
17	Process & System Upgrades	Projects	0	0	0	1
18	Monitoring & Targeting	Projects	0	0	0	0
19	Energy Manager	Managers	0	0	0	0
20	Efficiency: Equipment Replacement Incentive (part of the C&I program schedule)	Projects	12	0	0	0
21	Demand Response 3	Facilities	2	1	3	3
<b>Home Assistance Program</b>						
22	Home Assistance Program	Homes	0	203	208	514
<b>Pre-2011 Programs</b>						
23	Electricity Retrofit Incentive Program	Projects	29	0	0	0
24	High Performance New Construction	Projects	1	0	0	0
25	Toronto Comprehensive	Projects	0	0	0	0
26	Multifamily Energy Efficiency Rebates	Projects	0	0	0	0
27	Data Centre Incentive Program	Projects	0	0	0	0
28	EnWin Green Suites	Projects	0	0	0	0

**Table 8: Verified Results**

#	Initiative	Realization Rate		Gross Savings		Net-to-Gross Ratio		Net Savings		Contribution to Targets	
		Peak Demand Savings	Energy Savings	Incremental Peak Demand Savings (kW)	Incremental Energy Savings (kWh)	Peak Demand Savings	Energy Savings	Incremental Peak Demand Savings (kW)	Incremental Energy Savings (kWh)	Program-to-Date: Net Annual Peak Demand Savings in 2014 (kW)	Program-to-Date: 2011-2014 Net Cumulative Energy Savings (kWh)
<b>Consumer Programs</b>											
1	Appliance Retirement	-	-	33	204,600	42%	44%	15	96,340	88	1778,456
2	Appliance Exchange	100%	100%	46	82,124	53%	53%	24	43,224	56	185,038
3	HVAC Incentives	100%	100%	413	763,953	51%	51%	197	363,072	867	4,193,142
4	Conservation Instant Coupon Booklet	100%	100%	12	141,039	163%	168%	20	242,190	35	984,397
5	Bi-Annual Retailer Event	100%	100%	34	509,714	174%	175%	58	891,692	90	2,576,759
6	Retailer Co-op	-	-	0	0	-	-	0	0	0	0
7	Residential Demand Response*	-	-	352	0	-	-	352	0	352	1238
8	Residential New Construction	-	-	0	0	-	-	0	0	0	0
<b>Business Programs</b>											
9	Efficiency: Equipment Replacement	81%	97%	830	5,491,636	71%	72%	643	4,248,483	2,259.4	30,070,663
10	Direct Install Lighting	78%	83%	124	457,116	94%	94%	120	438,916	384	3,262,671
11	Existing Building Commissioning Incentive	-	-	0	0	-	-	0	0	0	0
12	New Construction and Major Renovation Incentive	34%	64%	3	29,885	54%	54%	2	16,138	2	16,138
13	Energy Audit	96%	100%	20	97,278	68%	67%	13	65,274	31	259,077
14	Commercial Demand Response (part of the Residential program schedule)	-	-	3	0	-	-	3	0	3	40
15	Demand Response 3* (part of the Industrial program schedule)	-	-	63	0	-	-	63	0	63	4,536
<b>Industrial Programs</b>											



#	Initiative	Realization Rate		Gross Savings		Net-to-Gross Ratio		Net Savings		Contribution to Targets	
		Peak Demand Savings	Energy Savings	Incremental Peak Demand Savings (kW)	Incremental Energy Savings (kWh)	Peak Demand Savings	Energy Savings	Incremental Peak Demand Savings (kW)	Incremental Energy Savings (kWh)	Program-to-Date: Net Annual Peak Demand Savings in 2014 (kW)	Program-to-Date: 2011-2014 Net Cumulative Energy Savings (kWh)
16	Process & System Upgrades	96%	101%	3,510	31,039,000	87%	87%	3,054	27,003,930	3,054	27,003,930
17	Monitoring & Targeting	-	-	0	0	-	-	0	0	0	0
18	Energy Manager	-	-	0	0	-	-	0	0	0	0
19	Efficiency: Equipment Replacement Incentive (part of the C&I program schedule)	-	-	0	0	-	-	0	0	90	2,454,907
20	Demand Response 3*	-	-	286	0	-	-	286	0	286	19,990
<b>Home Assistance Program</b>											
21	Home Assistance Program	80%	75%	15	193,419	100%	100%	15	193,419	49	921,895
<b>Electricity Retrofit Incentive Program</b>											
22	Electricity Retrofit Incentive Program	-	-	0	0	-	-	0	0	141	3,371,618
23	High Performance New Construction	100%	100%	0	0	50%	50%	0	0	48	969,524
24	Toronto Comprehensive	-	-	0	0	-	-	0	0	0	0
25	Multifamily Energy Efficiency Rebates	-	-	0	0	-	-	0	0	0	0
26	Data Centre Incentive Program	-	-	0	0	-	-	0	0	0	0
	Program Enabled Savings	99%	99%	32	256,700	100%	100%	32	256,700	32	256,700
	Time of Use Savings	-	-	469	0	-	-	469	0	469	0

Note: Net Savings have been adjusted with the ERII and Direct Install programs for 2014 as per the IESO memo issued on September 30, 2015

**Table 9: Summarized 2014 Program Results**

Program	Gross Savings		Net Savings		Contribution to Targets	
	Incremental Peak Demand Savings (MW)	Incremental Energy Savings (MWh)	Incremental Peak Demand Savings (MW)	Incremental Energy Savings (MWh)	Program-to-Date: Net Annual Peak Demand Savings (MW) in 2014	Program-to-Date: 2011-2014 Net Cumulative Energy Savings (MWh)
Consumer Program Total	0.89	1,701.431	0.667	1,636.517	1.487	9,719.05
Business Program Total	1.043	6,075.915	0.843*	4,768.81	2.742	33,613.125
Industrial Program Total	3.796	31,039	3.34	27,003.93	3.43	29,478.828
Home Assistance Program Total	0.015	193.419	0.015	193.419	0.049	921.895
Pre-2011 Programs completed in 2011 Total	0	0	0	0	0.189	4,341.143
Other	0.501	0	0.501	256.7	0.501	256.7
Adjustments to Previous Year's Verified Results	0.85	256.7	0.696	2,175.904	0.645	3,860.905
<b>Total IESO Contracted Province-Wide CDM Programs</b>	<b>7.125</b>	<b>39,532.552</b>	<b>6.1*</b>	<b>36,301.369</b>	<b>9.1*</b>	<b>82,457.713</b>

*\*Net Savings revised from 2011-2014 Final Results Report as per the IESO memo issued on September 30, 2015*

## 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: Evaluation Findings**

### CONSUMER PROGRAM

Appliance Retirement Initiative
<ul style="list-style-type: none"> <li>• Participation increased slightly to 22,563 (7.7%) in 2014 compared with 20,952 in 2013.</li> <li>• Since 2011 overall Initiative participation has decreased nearly 60%.</li> <li>• The greatest decrease was seen in the number of refrigerators collected year-over-year</li> <li>• 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.</li> <li>• Net to gross ratio (NTG) increased slightly to 47% compared to 43% as reported for 2013 and 2012 program years.</li> </ul>
Appliance Exchange Initiative
<ul style="list-style-type: none"> <li>• Participation in 2014 increased by 6.5% to 5,685 appliances from 5,337 compared to 2013</li> <li>• 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 &amp; Demand savings.</li> <li>• Net to Gross ratio (NTG) remained unchanged from 2013 at 52.6% .</li> </ul>
Heating and Cooling Initiative
<ul style="list-style-type: none"> <li>• In 2014 net savings increased by 20% from 2013 and overall participation increased by 17% to 113,002 compared to 2013</li> <li>• The ECM measure has remained the dominant source of savings since 2011</li> <li>• 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.</li> <li>• Per unit energy and demand savings assumptions for central air conditioners decreased by 56% due to reduced run hours</li> <li>• Net to Gross ratio (NTG) remained unchanged from 2013 at 48%</li> </ul>
Annual Coupons
<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• 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.</li> <li>• 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.</li> </ul>

### **Bi-Annual Coupon Events**

- 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.

### **peaksaverPLUS**

- 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.

### **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.

## **HOME ASSISTANCE PROGRAM**

### **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.

## BUSINESS PROGRAM

### Retrofit

- 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:
  - 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.
  - Inconsistencies in equipment nameplate data (typically efficiency or capacity) between project documentation and equipment installed on-site.
  - Weather dependent control systems leading to shifts in how often the equipment operated.

### Small Business 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.
  - Sampled rural projects have lower energy realization rather than urban projects (63.8% compared to 83.5%) across the 2011 – 2014 sample
  - Sampled rural projects have even lower demand realization rather than urban projects (49.7% compared to 74.1%) across the 2011 – 2014 sample
  - The annual proportion of net energy savings from rural projects has increased from 30% in 2011 to 41% in 2014

### 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.

### Existing Building Commissioning

- 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.

### High Performance New Construction

- 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 PROGRAM

### Process and Systems – Capital Incentive Initiative

- 10 PSUI Capital Incentive projects implemented in 2014, compared to 5 in 2013.
  - 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%.

### 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

### 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).

### Demand Response - DR-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.

Note: The Key Evaluation findings are derived from the 2014 evaluations of the saveONenergy programs. These findings were developed by 3<sup>rd</sup> party evaluation contractors. Complete findings are detailed in the contractors' full evaluation reports, which will be available publicly.

## 4.3 SPENDING

Tables 11 and 12 summarize the total spending by initiative that Brantford Power has incurred in 2014 and cumulatively since 2011. It is detailed by the Program Administration Budget (PAB), Participant Based Funding (PBF), Participant Incentives (PI) and Capability Building Funding (CBF).

**Table 11: 2014 Spending**

Initiative	PAB	PBF	PI	CBF	TOTAL
<b>Consumer Program</b>					
Appliance Retirement	\$ 19,116.03				\$ 19,116.03
Appliance Exchange	\$ 19,484.11				\$ 19,484.11
HVAC Incentives	\$ 25,428.12				\$ 25,428.12
Conservation Instant Coupon Booklet	\$ 30,174.92				\$ 30,174.92
Bi-Annual Retailer Event	\$ 14,606.33				\$ 14,606.33
Retailer Co-op	\$ 17,145.44				\$ 17,145.44
Residential Demand Response	\$ 147,921.78	\$ 114,218			\$262,139.78
New Construction Program	\$ 14,245.31				\$ 14,245.31
<b>Business Program</b>					
Efficiency: Equipment Replacement	\$ 333,363.77	\$ 596,640.66			\$930,004.43
Direct Installed Lighting	\$ 23,756.35	\$ 177,472.95			\$201,229.30
Existing Building Commissioning Incentive	\$ 4,434.49				\$ 4,434.49
New Construction and Major Renovation Initiative	\$ 15,543.18		\$ 35,936		\$51,479.18
Energy Audit	\$ 17,829.35				\$ 17,829.35
Small Commercial Demand Response (part of the Residential program schedule)	\$0				\$0
Demand Response 3 (part of the Industrial program schedule)	\$0				\$0
<b>Industrial Program</b>					
<b>Process &amp; System Upgrades</b>					
a) preliminary engineering study	\$ 921.99				\$ 921.99
b) detailed engineering study	\$ 3,772.05		\$ 137,025		\$140,797.05
c) program incentive	\$ 4,485.51		\$ 1,382,265		\$1,386,750.51
Monitoring & Targeting	\$ 455.69				\$ 455.69
Energy Manager	\$ 288.36				\$ 288.36
Key Account Manager	\$ 633.61				\$ 633.61
Efficiency Equipment Replacement Incentive (part of the C&I program schedule)	\$ 0				\$ 0
Demand Response 3	\$ 1,047.74				\$ 1,047.74
<b>Home Assistance Program</b>					
Home Assistance Program	\$ 54,875.20	\$ 210,809.08			\$265,684.28
<b>TOTAL SPENDING</b>	<b>\$749,529.33</b>	<b>\$1,099,140.69</b>	<b>\$1,555,226.00</b>		<b>\$3,403,896.02</b>

**Table 12: Cumulative Spending (2011-2014)**

Initiative	PAB	PBF	PI	CBF	TOTAL
<b>Consumer Program</b>					
Appliance Retirement	\$ 67,849.47				\$ 67,849.47
Appliance Exchange	\$ 47,613.86				\$ 47,613.86
HVAC Incentives	\$ 88,851.98				\$ 88,851.98
Annual Coupons	\$ 71,385.40				\$ 71,385.40
Bi-Annual Retailer Event	\$ 34,381.18				\$ 34,381.18
Retailer Co-op	\$ 33,565.52				\$ 33,565.52
Residential Demand Response	\$ 359,854.91	\$ 260,793			\$ 620,647.91
New Construction Program	\$ 41,253.83				\$ 41,253.83
<b>Business Program</b>					
Equipment Replacement	\$ 689,147.66		\$ 1,811,686.92		\$ 2,500,834.58
Direct Installed Lighting	\$ 60,019.42	\$ 609,278.45			\$ 669,297.87
Existing Building Commissioning Incentive	\$ 13,714.69				\$ 13,714.69
New Construction and Major Renovation Initiative	\$ 38,625.63		\$ 132,299.01		\$ 170,924.64
Energy Audit	\$ 45,957.47		\$ 7,679.25		\$ 53,636.72
Small Commercial Demand Response	\$ 0				\$ 0
Demand Response	\$ 0				\$ 0
<b>Industrial Program</b>					
Process & System Upgrades					
a) preliminary engineering study	\$ 4,830		\$ 9,559		\$14,389
b) detailed engineering study	\$ 9,712		\$ 187,025		\$196,737
c) program incentive	\$ 15,437.81		\$ 5,529,060		\$5,544,497.81
Monitoring & Targeting	\$ 1,011.68				\$ 1,011.68
Energy Manager	\$ 1,173.44				\$ 1,173.44
Key Account Manager ("KAM")	\$ 2,938.68				\$ 2,938.68
Equipment Replacement Incentive	\$ 0				\$ 0
Demand Response 3	\$ 16,487.56				\$ 16,487.56
<b>Home Assistance Program</b>					
Home Assistance Program	\$ 99,022.91	\$ 423,888			\$522,910.99
<b>Pre 2011 Programs</b>					
Electricity Retrofit Incentive Program			\$ 298,594.81		\$ 298,594.81
High Performance New Construction					\$ 0
Toronto Comprehensive					\$ 0
Multifamily Energy Efficiency Rebates					\$ 0
Data Centre Incentive Program					\$ 0
EnWin Green Suites					\$ 0
<b>Initiatives Not In Market</b>					
Midstream Electronics	\$ 2,756.58				\$ 2,756.58
Midstream Pool Equipment	\$ 2,756.58				\$ 2,756.58
Demand Service Space Cooling	\$ 4,448.38				\$ 4,448.38
Demand Response 1	\$ 6,122.28				\$ 6,122.28
Home Energy Audit Tool	\$ 2,756.58				\$ 2,756.58
<b>Total CDM Program Spending</b>	<b>\$1,761,675.50</b>	<b>\$1,293,959.53</b>	<b>\$7,975,903.99</b>		<b>\$11,031,539.02</b>



#### 4.4 ADDITIONAL COMMENTS

Subsequent to the 2011-2014 Final Report issued by the IESO on September 1, 2015, Brantford Power identified additional savings towards target which were not reflected in the report. Brantford Power submitted these savings to the IESO for evaluation and inclusion in the 2014 verified results. On September 30, 2015, the IESO issued a memo verifying the inclusion of these additional savings towards target. This memo has been included in Appendix C.

Inclusion of these savings results in an overall achievement of 79.7% of the 11.38 MW demand target and 168.6% of the 48.92 GWh energy target.

**Table 13: Additional Savings Attributed to 2014 Results**

Initiative	Incremental Peak Demand Savings (kW)	Incremental Energy Savings (kWh)
Direct Install Lighting	2.1	7,457.8
Retrofit	50.4	296,447.1
<b>Total Additional Savings</b>	<b>52.5</b>	<b>303,904.5</b>

Between 2011 and 2014 Brantford Power has undertaken the following in support of achieving CDM savings:

- Working collaboratively with a large number of LDCs to improve understanding of the delivery requirements for the suite of saveONenergy programs, participate in the joint resolution of program delivery issues, share information, provide consistency in program delivery and execute group marketing efforts.
- Participation in the Electricity Distributors Association (EDA) Reporting Working Group to gain better insight into the EM&V practices, provide support to LDCs and work as a group to ensure all reporting obligations for the 2011-2014 period are adequately met.
- In 2013 and 2014, Brantford Power chaired the Reporting Working Group and works with the EDA CDM Caucus and the former OPA, now IESO, to enhance the province wide programs and work towards a future CDM framework.
- Pursuing numerous customer meetings and business events, such as tradeshow, to develop strong relationships with our customers and help them achieve their conservation goals.
- Maintaining active memberships with channel partners, including the Chamber of Commerce, HRAI, local Homebuilders and Electrical League, to build strong business relationships and encourage participant uptake through channel partners.

In an effort push towards greater savings, in 2014 Brantford Power enhanced its pursuit of quality customer engagement, especially within the Residential Sector. To date:

- Brantford Power has been active in the community promoting saveONenergy initiatives at local residential customer events throughout 2014.
- The PeaksaverPLUS initiative launched in July 2013 and was met positively by consumers. Initial forecasts for customer participation were surpassed within two months of launch and at the end of 2014 almost 1000 customers were active PeaksaverPLUS participants.

- Brantford Power focused on DR3 in 2013 and early 2014 with a number of identified customers during facility meetings, business events and at an invite only focused lunch and learn session.
- As ERII continues to provide the significant savings through commercial projects Brantford Power has worked to build positive customer relationships by visiting customers on-site, providing customer training sessions, participating in local business events, and providing free energy assessments. In addition, Brantford Power has taken on the task of acting as an Applicant Representative for its customers. As a result of this increased level of customer care, customer participation in ERII has steadily increased since 2011.

While Brantford Power continued to work diligently towards the 2014 conservation targets, a number of factors have negatively impacted the demand saving potential within the service territory. For example, one industrial customer (>5MW) announced the relocation of its Brantford plant to the United States, while another is delaying capital investment in energy efficiency upgrades. These circumstances and the reallocation of the DR3 program to the IESO have substantially reduced Brantford Power's potential to meet the demand target.

## 5 COMBINED CDM REPORTING ELEMENTS

### 5.1 PROGRESS TOWARD 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 OPA	1.3	1.0	1.0	1.0
2012 – Verified by OPA	-0.1	1.2	0.9	0.9
2013 – Verified by OPA	0.0	0.0	1.8	1.1
2014 - Verified by IESO	0.0	0.0	0.7	6.1
<b>Verified Net Annual Peak Demand Savings in 2014:</b>				<b>9.1*</b>
<b>Brantford Power Inc. 2014 Annual CDM Capacity Target:</b>				<b>11.4</b>
<b>Verified Portion of Peak Demand Savings Target Achieved (%):</b>				<b>79.7*</b>

*\*revised from 2011-2014 Final Results Report as per the IESO memo issued on September 30, 2015*

**Table 15: Net Energy Savings at the End-User Level (GWh)**

Implementation Period	Annual (GWh)				Cumulative (GWh)
	2011	2012	2013	2014	2011-2014
2011 – Verified by OPA	4.5	4.5	4.5	4.4	17.9
2012 – Verified by OPA	-0.2	5.4	5.3	5.3	15.7
2013 – Verified by OPA	0.0	0.1	5.1	5.0	10.2
2014 - Verified by IESO	0.0	0.2	2.18	36.3	38.7
<b>Verified Net Cumulative Energy Savings 2011-2014:</b>					<b>82.5*</b>
<b>Brantford Power Inc. 2011-2014 Cumulative CDM Energy Target:</b>					<b>48.9</b>
<b>Verified Portion of Cumulative Energy Target Achieved (%):</b>					<b>168.6</b>

*\*revised from 2011-2014 Final Results Report as per the IESO memo issued on September 30, 2015*

## 5.2 VARIANCE FROM STRATEGY

Brantford Power utilized the former OPA's Resource Planning Tool, as recommended, along with the Board's 2009 Yearbook data to forecast reductions in peak demand and electricity consumption for the 2011-2014 period within Brantford Power's service territory. Per the update to CDM Strategy filed on June 13, 2011, Brantford Power forecasted it would achieve 10.586 MW in Peak Demand savings and 36.218 GWh in Energy savings at the end of 2014 using only the IESO Contracted Province wide programs.

In the 2013 Annual Report to the OEB, Brantford Power updated its CDM forecast for the remainder of the 2011-2014 period. This forecast was developed in a "bottom-up manner" based on program performance to date, key findings on the IESO's EM&V process, current market analysis, and insights relative to upcoming changes to existing programs.

Based on customer participation and savings evaluations to date, Brantford Power anticipated it would achieve 6.1 MW of demand savings and 30.2 GWh of additional energy savings by the end of 2014, representing the achievement of 80% of its demand target and 151% of its energy target for the 2011-2014 period.

Brantford Power has achieved 9.1 MW in Peak Demand savings and 82.5 GWh in verified Energy savings. The results achieved in 2014 represent a positive variance of 3.021 MW for demand and 52.25 GWh in energy savings from the projections included in the 2013 Annual Report for 2014.

## 6 CONCLUSION

From 2011-2014, Brantford Power has achieved 9.1 MW in peak demand savings and 82.5 GWh in energy savings, which represent 79.7% and 168.6% of Brantford Power's 2014 targets, respectively. These results are representative of considerable effort expended by Brantford Power, in cooperation with other LDCs, customers, channel partners and stakeholders to overcome many operational and administrative issues that limited program effectiveness across all market sectors. This achievement is a success and the relationships built within the 2011-2014 CDM program term will aid results in the subsequent 2015-2020 CFF.

As outlined in the "2011-2014 Conservation and Demand Management Performance Incentive and 2014 Annual Report Frequently Asked Questions" document issued by the OEB on September 23,

2015, the OEB will allow rounding up of numbers that end in 0.5% or higher, such that the 80% threshold for a CDM Target will be considered to have been met for the purposes of the CDM Code if a distributor has achieved 79.5% to 79.9% of that CDM Target. As such, Brantford Power will be working to submit an application for a Performance Incentive to the OEB.

Future reports under the Conservation First Framework will be provided by Brantford Power 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:** January 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:** March 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:** February 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](http://www.saveoneenergy.ca).

**Targeted End Uses:** ENERGY STAR® qualified Standard Compact Fluorescent 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:** February 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:** March 2011

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 Applicable

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:** February 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:** July 2013

## **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:** March 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:** July 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:** February 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:** February 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:** November 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:** November 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:** August 2011

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:

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

**In Market Date:** August 2011

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:** January 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:** February 2011

## 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 OPA (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)

### TORONTO COMPREHENSIVE INITIATIVE

This Initiative is specific to Toronto Hydro's Service Area.

### MULTIFAMILY ENERGY EFFICIENCY REBATES

**Target Customer Type(s):** Residential Multi-unit buildings



**Initiative Frequency:** Year round

**Objective:** Improve energy efficiency of Multi-unit building

**Description:** OPA's Multifamily Energy Efficiency Rebates (MEER) Initiative applies to multifamily buildings of six units or more, including rental buildings, condominiums, and assisted social housing. The OPA contracted with GreenSaver to deliver the MEER Initiative outside of the Toronto Hydro service territory. Activities delivered in Toronto were contracted with the City.

Similar to ERII and ERIP, MEER provides financial incentives for prescriptive and custom measures, but also funds resident education. Unlike ERII, where incentives are paid by the LDC, all incentives through MEER are paid through the contracted partner (i.e. GreenSaver).

**Targeted End Uses:** Electricity saving measures

**Delivery:** OPA contracted with Greensaver

#### DATA CENTRE INCENTIVE PROGRAM

This Initiative is specific to Powerstream's Service Area.

#### ENWIN GREEN SUITES

This Initiative is specific to EnWin's Service Area.

**APPENDIX C: IESO MEMO OF ADJUSTMENT TO VERIFIED  
2014 RESULTS**

**Date:** September 30, 2015

**To:** Brantford Power Inc.

**From:** Independent Electricity System Operator (the “**IESO**”)

**Re:** Request for adjustments to Brantford Power Inc’s 2011-2014 Final Results Report pursuant to Section 8.2 of the Master CDM Program Agreement (“**Master Agreement**”) dated as of January 1, 2011 between the IESO and the LDC, as amended.

We have received your 2011-2014 Final Results Report adjustments request dated September 21, 2015 to adjust Brantford Power’s 2011-2014 Final Results Report pursuant to Section 8.2 of the Master Agreement.

The IESO Brantford Power Inc. agree that the following projects qualify for additional energy savings and peak demand savings arising from registered initiatives delivered by Brantford Power Inc.:

Initiative	Unit	Incremental Activity	Net Incremental Peak Demand Savings (kW)	Net Incremental Energy Savings (kWh)
Direct Install Lighting	Projects	1	2.1	7,457.8
Retrofit	Projects	3	50.4	296,447.1

The IESO estimates an additional 0.4% of peak demand and 0.7% of energy savings to Brantford Power Inc.’s achievement against target as a result of the abovementioned projects, this is further detailed in Appendix A, as updates to Table 4: Net Peak Demand Savings at the End User Level (MW) (Scenario 1) and Table 5: Net Energy Savings at the End User Level (GWh) of your 2011-2014 Final Results Report.

While the IESO will not reissue a 2011-2014 Final Results Report, Brantford Power Inc. may include these additional energy savings and peak demand savings at your discretion in your Annual Report to the Ontario Energy Board.

Regards,



Nik Schruder  
Manager, Program Delivery & Partner Services

Cc: Josh Wasylyk, Ontario Energy Board

## Appendix A

Table 4: Net Peak Demand Savings at the End User Level (MW) (Scenario 1)

Implementation Period	Annual			
	2011	2012	2013	2014
<b>2011 - Verified</b>	1.3	1.0	1.0	1.0
<b>2012 - Verified†</b>	-0.1	1.2	0.9	0.9
<b>2013 - Verified†</b>	0.0	0.0	1.8	1.1
<b>2014 - Verified†</b>	0.0	0.0	0.7	6.1
<b>Verified Net Annual Peak Demand Savings Persisting in 2014:</b>				<b>9.1</b>
<b>Brantford Power Inc. 2014 Annual CDM Capacity Target:</b>				<b>11.4</b>
<b>Verified Portion of Peak Demand Savings Target Achieved in 2014 (%):</b>				<b>79.7%</b>

Table 5: Net Energy Savings at the End User Level (GWh)

Implementation Period	Annual				Cumulative
	2011	2012	2013	2014	2011-2014
<b>2011 - Verified</b>	4.5	4.5	4.5	4.4	17.9
<b>2012 - Verified†</b>	-0.2	5.4	5.3	5.3	15.7
<b>2013 - Verified†</b>	0.0	0.1	5.1	5.0	10.2
<b>2014 - Verified†</b>	0.0	0.2	2.18	36.3	38.7
<b>Verified Net Cumulative Energy Savings 2011-2014:</b>					<b>82.5</b>
<b>Brantford Power Inc. 2011-2014 Annual CDM Energy Target:</b>					<b>48.9</b>
<b>Verified Portion of Cumulative Energy Target Achieved in 2014 (%):</b>					<b>168.6%</b>

*†Includes adjustments to previous years' verified results*

*Results presented using scenario 1 which assumes that demand response resources have a persistence of 1 year*