



September 27, 2013

Ms. Kirsten Walli  
Board Secretary  
Ontario Energy Board  
P.O Box 2319  
2300 Yonge Street  
27th Floor  
Toronto, ON M4P 1E4

*via RESS and regular mail*

Dear Ms. Walli:

**Re: 2012 Conservation and Demand Management Annual Report  
PowerStream Inc.**

PowerStream Inc. ("PowerStream") hereby files with the Ontario Energy Board ("Board") a copy of its 2012 Conservation and Demand Management Annual Report ("Report"), pursuant to the Board's Conservation and Demand Management Code for Electricity Distributors.

Also as required, the Report has been filed electronically via the Board's e-filing web portal and a copy has been made available for public viewing at PowerStream's offices.

Please contact me by telephone at 905-417-6900 ext. 25186 or by e-mail at [colleen.richmond@powerstream.ca](mailto:colleen.richmond@powerstream.ca) if you require further information on this matter.

Yours truly,

*[Original Signed]*

Colleen Richmond  
Manager, Regulatory & Government Affairs

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**PowerStream Inc.**

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**Conservation and Demand Management**

**2012 Annual Report**

**Submitted to:**

**Ontario Energy Board**

**September 30, 2013**

## Executive Summary

This annual report is submitted by PowerStream Inc. in accordance with the filing requirements set out in the CDM Code (Board File No. EB-2010-0215), specifically Appendix C Annual Report Template, as a progress report and modification to its September 28, 2012 Strategy.

Accordingly, this report outlines PowerStream's CDM activities for the period of January 1, 2012 to December 31, 2012. It includes 2012 verified resource savings (demand and energy savings), 2012 participation and spending, successes and challenges and an updated outlook to 2014.

PowerStream did not apply for any Board-Approved CDM Programs during 2012; however, as noted in the CDM guidelines, released April 26, 2012, the Ontario Energy Board (OEB) has deemed Time-of-Use (TOU) pricing a Province-wide Board-Approved CDM Program. The Ontario Power Authority (OPA) is to provide measurement and verification on TOU and PowerStream will report these results upon receipt from the OPA. The OPA has indicated that verified results for TOU savings will not be available until August 2015.

PowerStream initiated the design of a Board-Approved CDM Program in Fall 2012 and filed an application (EB-2013-0070) with the OEB on March 13, 2013. On June 21, 2013, the OEB approved PowerStream's application as filed. PowerStream launched the Business Refrigeration Incentives Program<sup>1</sup> on September 20, 2013 and will provide 2013 verified results for this program in PowerStream's 2013 Annual Report.

With respect to OPA-Contracted Province-wide CDM Programs, PowerStream accepted the OPA's Master Agreement in late February 2011. In 2011, PowerStream focused on building a foundation for CDM delivery, including planning, recruitment of staffing, and procurement of third party vendors. With this foundation established, PowerStream's focus in 2012 was the successful delivery and execution of the Province-wide CDM Programs. Six provincial initiatives, which were included in original portfolio of Province-Wide Programs, did not deliver savings in 2012 as they were either discontinued or removed from the Master Agreement.

The OPA conducted Evaluation, Measurement, and Verification (EM&V) for the 2012 OPA-Contracted Province-wide Programs. PowerStream's verified achievements for 2012 were an incremental demand savings of 17.1 MW, of which 8.6 MW is guaranteed to persist to 2014, and 41.6 GWh of incremental energy savings, which cumulates to 124.9 GWh at the end of 2014. Combined with 2011 results, PowerStream has achieved, as of the end of 2012, a total of 17.4 MW and 271.5 GWh in verified savings, representing 18.2% and 66.6% of PowerStream's 2011-2014 demand and energy savings targets, respectively. Table 1 provides a comparison of the

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<sup>1</sup> In the application to the OEB, this program was referred to as the Direct Install Refrigeration Program. In order to better market the program and reach targeted participants, the program was renamed. The program design has not changed.

2011-2012 verified results against the milestones identified in PowerStream’s 2011 CDM Annual Report filed on September 28, 2012.

**Table 1: 2012 Verified Results vs Milestones**

Cumulative Progress to date	2012 Milestone as per 2011 Annual Report		2012 Verified Results		Variance to 2012 Milestone	
	MW/GWh	% to Target	MW/GWh	% to Target	MW/GWh	% to Target
2014 Net Demand Savings (MW)	18.5	19.4%	17.4	18.2%	-1.4	-1%
2011-2014 Net Cumulative Energy Savings (GWh)	296.2	72.7%	271.5	66.6%	-24.7	-6%

As shown in Table 1 above, PowerStream’s 2012 results were quite positive. As of the end of 2012, PowerStream actual progress towards its four year targets is very close to the milestones set out in the 2011 Annual Report, with a variance of only 1% for demand and 6% for energy. Additional details on 2012 actual results, including a discussion of key drivers of variance compared to forecasted results, is provided in Section 3.1.

PowerStream has updated its CDM Strategy, incorporating lessons learned and results achieved to date in delivering Province-wide Programs, developing new forecasts using inputs from CDM staff, program performance to date, key findings from the OPA’s 2012 EM&V process, current market analysis, and insights of upcoming program changes. PowerStream is forecasting to achieve approximately 100% of its energy target and 80% of its demand target by the end of 2014. This forecast includes savings from OPA-Contracted Province-wide Programs, PowerStream’s Business Refrigeration Incentive Program (Board Approved Program) as well as TOU rates. The two largest contributors to PowerStream’s projected shortfall against its demand savings target are TOU rates and the Demand Response 3 Program. Both of these initiatives, which are either entirely or mostly outside of PowerStream’s control, are likely to contribute far fewer demand savings than was contemplated during the setting of LDC targets and the design of the provincial CDM programs in 2010.

As with any forecasting exercise, there are known risks to achieving the CDM targets. In some cases these risks can be mitigated by PowerStream while in other cases, PowerStream has little to no control over the risks, such as TOU savings results. PowerStream has developed a risk assessment and mitigation accordingly. As a result, PowerStream is planning to re-visit and update the forecast, if necessary, upon release of the verified 2013 results in September 2014.

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## Background

On September 16, 2010, the Ontario Energy Board (OEB) issued a Conservation and Demand Management (CDM) Code for Electricity Distributors<sup>2</sup> (Code). The Code sets out the obligations and requirements with which Local Distribution Companies (LDCs) must comply in relation to the CDM targets set out in their licenses. PowerStream's target is to achieve 95.57 MW of demand savings by December 31, 2014 and 407.3 GWh of energy savings over the period January 1, 2011 to December 31, 2014. To comply with the Code requirements, PowerStream filed a CDM Strategy Document<sup>3</sup> (Strategy) to the OEB on October 29, 2010 which laid out a high-level description of how it intended to achieve its CDM targets. The Strategy projected an achievement of 100.2% of its demand target and 101.8% of its energy target through the delivery of Ontario Power Authority (OPA)-Contracted Province-Wide CDM Programs starting January 1, 2011. The Code also requires LDCs to file an Annual Report with the OEB. PowerStream submitted its 2011 Annual Report<sup>4</sup> on September 28, 2012. In the report, PowerStream demonstrated its progress and modifications to the original Strategy. In that updated "2012 Strategy" PowerStream maintained a projected achievement of 100% of the demand and energy savings targets, although it was noted that the demand savings forecast included 21.6 MW from TOU savings and that there was high uncertainty and risk with these savings coming to fruition.

PowerStream has prepared this document as its second Annual Report, in accordance with the Code requirements, and to demonstrate its progress and modifications to the 2012 Strategy. This report covers the period of January 1, 2012 to December 31, 2012.

In relation to the 2011-2014 program term, the Minister of Energy on December 21, 2012, directed the OPA to fund CDM programs which meet the definition and criteria of OPA-Contracted Province-Wide CDM Programs for an additional one-year period from January 1, 2015 to December 31, 2015. The Ministerial Directive did not amend the timelines for LDCs to achieve their energy and demand savings targets. Therefore, PowerStream's main focus will remain on achieving CDM savings within the 2011-2014 timeframe.

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<sup>2</sup> [http://www.oeb.gov.on.ca/OEB/Documents/EB-2010-0215/Conservation%20and%20Demand%20Management%20\(CDM\)\\_Code.pdf](http://www.oeb.gov.on.ca/OEB/Documents/EB-2010-0215/Conservation%20and%20Demand%20Management%20(CDM)_Code.pdf)

<sup>3</sup> [http://www.ontarioenergyboard.ca/OEB/Documents/EB-2010-0215/PowerStream\\_CDM%20Strategy\\_20101029.pdf](http://www.ontarioenergyboard.ca/OEB/Documents/EB-2010-0215/PowerStream_CDM%20Strategy_20101029.pdf)

<sup>4</sup> [http://www.rds.ontarioenergyboard.ca/webdrawer/webdrawer.dll/webdrawer/rec/367872/view/2011%20PowerStream%20Annual%20CDM%20Report\\_Additional%20Information\\_20121012.PDF](http://www.rds.ontarioenergyboard.ca/webdrawer/webdrawer.dll/webdrawer/rec/367872/view/2011%20PowerStream%20Annual%20CDM%20Report_Additional%20Information_20121012.PDF)

# 1 Board-Approved CDM Programs

## 1.1 Introduction

PowerStream did not seek approval from the OEB for implementation of any Board-Approved CDM Programs in 2012. Although, as planned and mentioned in the 2011 CDM Annual Report, PowerStream initiated the design of a Board-Approved CDM Program in Fall 2012 and filed an application (EB-2013-0070<sup>5</sup>) with the OEB on March 13, 2013. On June 21, 2013, a Decision<sup>6</sup> was made and the OEB approved PowerStream's application as filed. PowerStream anticipates that this program will generate 3.33 MW demand savings and 19.6 GWh of energy savings. This represents an additional 3.5% and 4.8% towards PowerStream's demand and energy targets, respectively. PowerStream launched the Business Refrigeration Incentives Program<sup>7</sup> on September 20, 2013 and will provide 2013 verified results for this program in PowerStream's 2013 Annual Report.

In addition, in its April 26, 2012 CDM Guidelines<sup>8</sup>, the OEB has deemed the implementation of Time-Of-Use (TOU) pricing to be a Province-wide Board-Approved CDM Program for the purposes of achieving the CDM targets. The OEB recognizes that a portion of the aggregate electricity demand target was intended to be attributable to savings achieved through the implementation of TOU Pricing. The OEB established TOU prices and has made the implementation of this pricing mechanism mandatory for distributors. On this basis, the OEB has determined that distributors will not have to file a Board-Approved CDM Program application regarding TOU pricing.

## 1.2 Program Description

### 1.2.1 BUSINESS REFRIGERATION INCENTIVES (BRI) PROGRAM

**Description:** The Business Refrigeration Incentives (BRI) Program promotes the identification and implementation of energy efficient equipment upgrades and maintenance measures to commercial refrigeration equipment. Participants receive significant value for participation. Program incentives include a comprehensive on-site electricity audit providing recommendations for equipment retrofit and maintenance; up to \$2,500 in materials and labour to retrofit commercial refrigeration equipment performed by an authorized, licensed refrigeration or electrical contractor; and benchmarking of the facility to understand energy consumption versus other businesses of a similar size and operation. Eligible measures include:

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<sup>5</sup> [http://www.rds.ontarioenergyboard.ca/webdrawer/webdrawer.dll/webdrawer/rec/386474/view/PowerStream\\_APPL\\_CDM\\_2013\\_0313.PDF](http://www.rds.ontarioenergyboard.ca/webdrawer/webdrawer.dll/webdrawer/rec/386474/view/PowerStream_APPL_CDM_2013_0313.PDF)

<sup>6</sup> [http://www.rds.ontarioenergyboard.ca/webdrawer/webdrawer.dll/webdrawer/rec/400644/view/dec\\_order\\_PowerStream\\_20130621.PDF](http://www.rds.ontarioenergyboard.ca/webdrawer/webdrawer.dll/webdrawer/rec/400644/view/dec_order_PowerStream_20130621.PDF)

<sup>7</sup> In the application to the OEB, this program was referred to as the Direct Install Refrigeration Program. In order to better market the program and reach targeted participants, the program was renamed. The program design has not changed.

<sup>8</sup> [http://www.ontarioenergyboard.ca/OEB/Documents/EB-2012-0003/CDM\\_Guidelines\\_Electricity\\_Distributor.pdf](http://www.ontarioenergyboard.ca/OEB/Documents/EB-2012-0003/CDM_Guidelines_Electricity_Distributor.pdf)

anti-sweat heater controls for coolers and freezers, strip curtains for walk-in coolers and freezers, night curtains on display cases, coil cleaning, Electronically Commutated Motor (ECM) upgrades, and LED display case lighting.

**Target Customer Type(s):** General Service customers with an average annual demand of less than 250 kW; must have commercial grade refrigeration equipment used to cool products.

**Objectives:** The objective of the program is to offer installation of commercial refrigeration products and services of up to \$2500. The purpose of this program is to assist customers in achieving electricity demand savings, by upgrading to more energy-efficient refrigeration equipment.

**Delivery:** PowerStream will market the program and will conduct the energy audit and benchmarking aspects of the program. PowerStream has engaged a third party contractor to conduct the assessment and installation of the commercial refrigeration measures. PowerStream has also engaged a third party evaluator (from OPA’s Vendor of Record list) to conduct Evaluation, Measurement and Verification (EM&V) of the program.

**Initiative Activities/Progress:** As the program was not in market until 2013, there are no savings to report for 2012. Progress and activities for this program will be provided in PowerStream’s 2013 CDM Annual Report to be submitted to the OEB by September 30, 2014.

### 1.2.2 TOU IMPLEMENTATION

**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.

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

**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.

The RPP TOU price is adjusted twice annually by the OEB. A summary of the RPP TOU pricing, per kWh, is provided in Table 2.

**Table 2:** RPP TOU Pricing

Effective Date	On Peak	Mid Peak	Off Peak
November 1, 2010	9.9	8.1	5.1
May 1, 2011	10.7	8.9	5.9
November 1, 2011	10.8	9.2	6.2
May 1, 2012	11.7	10.0	6.5
November 1, 2012	11.8	9.9	6.3
May 1, 2013	12.4	10.4	6.7

**Delivery:** The OEB sets the TOU rates. Distributors install and maintain the smart meters and convert customers to TOU billing.

**Initiative Activities/Progress:** PowerStream began transitioning its RPP customers to TOU billing on August 2009. There are 321,392 PowerStream customers enrolled in TOU billing as of December 31, 2012 which represent 99.35% of PowerStream's mandated customer base.

### **1.3 Participation**

There were no BRI Program participants in 2012. The program was launched September 20, 2013.

There are 321,392 PowerStream customers enrolled in TOU billing as of December 31, 2012, representing 99.35% of PowerStream's mandated customer base. Of those, 294,892 are residential customers and 26,500 are non-residential customers.

### **1.4 Spending**

As detailed in PowerStream's Board-Approved Program application to the OEB, PowerStream incurred approximately \$78,000 in program development costs related to the Business Refrigeration Incentives Program in 2012. These costs include staff time, program design consultants and customer focus groups.

PowerStream does not have any expenses to report for the period of January 1, 2012 to December 31, 2012 in relation to TOU billing as a Board-Approved CDM Programs. Costs associated with the implementation of TOU pricing are recoverable through distribution rates, and not through the Global Adjustment Mechanism (GAM).

### **1.5 Evaluation**

The BRI Program launched on September 20, 2013. Pursuant to the CDM Code, PowerStream has procured a third-party EM&V contractor from the OPA's EM&V Vendor of Record list. PowerStream will provide 2013 verified results for the BRI Program in its 2013 Annual CDM Report to the OEB in September 2014.

In accordance with CDM Guidelines dated April 26, 2012 (Board File No. EB-2012-0003), the OEB requires that any evaluations of savings from TOU pricing should be conducted by the OPA for the province then allocated to distributors. PowerStream will report these results upon receipt from the OPA. As of September 30, 2013, the OPA has not released its preliminary results of TOU savings to distributors. The OPA has indicated that verified results for TOU savings will not be reported to LDCs until August 2015. As such, PowerStream is not able to provide any verified savings related to TOU program at this time.

## **1.6 CDM Variance Account**

PowerStream did not offer any Board-Approved CDM Programs from January 1, 2012 to December 31, 2012 and therefore did not create a CDM Variance Account to address any Board-Approved Program costs.

## **1.7 Additional Comments**

While the OEB's CDM Guidelines clarified that savings from TOU rates, as verified by the OPA, will contribute towards LDCs' CDM targets, significant uncertainty remains as to actual amount of savings that will be achieved from TOU rates. The OPA has indicated that LDCs will not receive verified results until 2015 and as such this uncertainty presents a significant risk to LDCs with respect to their demand savings targets. At this time, PowerStream is forecasting 12.5MW of demand savings from TOU implementation. This updated forecast is significantly lower than the approximately 22MW of savings included in the previous year's CDM Strategy, however it still represents more than 15% of the total demand savings forecasted to be achieved over the 2011-2014 period.

## 2 OPA-Contracted Province-Wide CDM Programs

### 2.1 Introduction

Effective February 25, 2011, PowerStream entered into an agreement (Master Agreement) with the OPA to deliver OPA-Contracted Province-Wide CDM Programs from January 1, 2011 to December 31, 2014. Table 3 summarizes the OPA-Contracted Province-Wide Programs that were in market and delivering results in 2012 and their targeted customers. It also includes the references to this document where their descriptions, objectives, and activities are detailed. In addition to the OPA-Contracted Province-Wide CDM Programs, pre-2011 Programs, 2010 Programs extended into 2011, were added to the list.

**Table 3:** Summary of OPA-Contracted Province-Wide Programs and pre-2011 Programs

Initiative	Description/Reference	Customer Class
<b>Consumer Program</b>		
Appliance Retirement	Appendix A - A	All residential rate classes
Appliance Exchange	Appendix A - B	All residential rate classes
HVAC Incentives	Appendix A - C	All residential rate classes
Conservation Instant Coupon Booklet	Appendix A - D	All residential rate classes
Bi-Annual Retailer Event	Appendix A - E	All residential rate classes
Residential Demand Response	Appendix A - G	All residential rate classes
New Construction Program	Appendix A - F	All residential rate classes
<b>Commercial &amp; Institutional Program</b>		
Equipment Replacement Incentive Initiative	Appendix B - A	All general service classes
Direct Install Lighting	Appendix B - B	General Service < 50 kW
Existing Building Commissioning Incentive	Appendix B - C	All general service classes
New Construction and Major Renovation	Appendix B - D	All general service classes
Energy Audit	Appendix B - E	All general service classes
<b>Industrial Program</b>		
Process & System Upgrades	Appendix C - A	General Service 50 kW & above
Monitoring & Targeting	Appendix C - B	General Service 50 kW & above
Energy Manager	Appendix C - C	General Service 50 kW & above
Key Account Manager	Appendix B - D	All general service classes
Demand Response 3	Appendix C - E	General Service 50 kW & above
<b>Low Income Program</b>		
Low Income Program	Appendix D	All residential rate classes
<b>Pre-2011 Programs completed in 2011-14</b>		
Electricity Retrofit Incentive Program	Appendix B - A	All general service classes
High Performance New Construction	Appendix B - D	All general service classes

The initiatives that were either officially removed from the Master Agreement or discontinued and were not delivering savings in 2012 are listed in Table 4.

**Table 4:** OPA-Contracted Province-Wide Program Initiatives not In-market in 2012

<b>Initiatives Not in Market in 2012</b>	<b>Status</b>
<b>Consumer Program</b>	
Midstream Electronics	Removed from Master Agreement
Midstream Pool Equipment	Removed from Master Agreement
First Nations Program	Launched in 2013 by OPA
Home Energy Audit Tool	Removed from Master Agreement
Retailer Co-op	Discontinued
<b>Commercial &amp; Institutional Program</b>	
Direct Service Space Cooling	Not launched to market in 2011 and 2012. OPA has no plan to launch this initiative in 2013.
Demand Response 1	Removed from Master Agreement
<b>Industrial Program</b>	
Demand Response 1	Removed from Master Agreement

## 2.2 Program Descriptions

OPA-Contracted Province-Wide CDM Program descriptions and additional initiative information can be found on the saveONenergy website at <https://saveonenergy.ca>

### 2.2.1 CONSUMER PROGRAM

**Description:** Provides residential customers with programs/tools to help them understand and manage the amount of energy they use throughout their entire home. By reducing the household's energy consumption while also helping the environment.<sup>9</sup>

**Targeted Customer Type(s):** Residential Customers

**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.

**Activities:** PowerStream's activities specific to the Consumer Program are summarized in Table 5.

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<sup>9</sup> <https://saveonenergy.ca/Consumer.aspx>

**Table 5:** Activities – Consumer Program Level

Activities
<p>PowerStream’s main strategy in delivering Consumer Program Initiatives in 2012 was to use market research to enhance PowerStream’s understanding of the consumer segment and to inform marketing execution. A number of the market research activities and marketing activities in 2012 are summarized below:</p> <p>Market research:</p> <ul style="list-style-type: none"><li>• Conservation, Awareness, Satisfaction and Attitudes Study (CASA). The purpose of this study is to track and understand the marketing impacts, barriers to program participation, and satisfaction of program participants. Results: high baseline awareness levels; traditional participation barriers being challenged; and strong satisfaction across all Consumer Initiatives.</li></ul> <p>Marketing and promotion:</p> <ul style="list-style-type: none"><li>• Participated in 13 community events (e.g. Kempenfest, Markham Fair, Vaughan Earth Hour Event) to promote all Consumer Initiatives</li><li>• Held 49 in-store events (e.g. Home Depot, Lowes)</li><li>• Distributed approximately 1,000 handouts promoting Consumer Program Initiatives</li><li>• Reached approximately 4,000 customers and gathered over 1,000 sign ups during events</li><li>• Placed 114 print advertisements in local newspapers within PowerStream’s service territory</li><li>• Distributed 600,000 bill inserts to PowerStream customers</li><li>• Ran 5 radio/television advertisements over 30 week period</li><li>• Sent letters out to 16,750 existing <i>peaksaver</i> customers inviting them to upgrade to <b><i>peaksaver PLUS</i></b></li></ul>

The targeted customer types, objectives, descriptions, and activities of each Consumer Program Initiative are detailed in Appendix A. The Appendix also includes additional comments, provided by the OPA-LDC Residential Working Group, regarding some of the lessons learned and future opportunities for each Consumer Program initiative.

## 2.2.2 COMMERCIAL AND INSTITUTIONAL (C&I) PROGRAM

**Description:** Businesses across Ontario can benefit from an array of programs offered throughout the province. There are energy-efficiency programs to assist organizations from the smallest of retail stores to the largest industrial complexes. There are programs to help fund energy audits, to replace energy-wasting equipment and to pursue new construction that exceeds our existing codes and standards. Businesses can also pursue incentives for controlling and reducing their electricity demand at specific times. The bottom line is that there are innovative programs that can help businesses reduce their electricity costs, while helping Ontario defer the need to build new generation and reduce its environmental footprint.<sup>10</sup>

**Targeted Customer Type(s):** Commercial, Institutional, Agricultural, Multi-family buildings, Industrial

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

**Activities:** PowerStream's activities specific to the Commercial and Institutional (C&I) Program are summarized in Table 6.

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<sup>10</sup> <https://saveonenergy.ca/Business/Programs-By-Sector.aspx>

**Table 6:** Activities – C&I Program Level

Activities
<p>PowerStream’s main strategies for delivering the C&amp;I Program, and increasing program participation, in 2012 were three fold: develop relationships with key business customers, develop and maintain relationships with key channel partners, and integrate market research results to improve sales and marketing execution. A number of the market research activities, sales and marketing activities in 2012 are summarized below.</p> <p>Market research:</p> <ul style="list-style-type: none"><li>• Business to Business Profiling Study. This study was conducted to better understand our business customers, to identify appropriate contact person for CDM, and to generate ‘warm leads’. Results: obtained detailed profiling information for 600 business customers (over 50kW); and uncovered opportunities to learn more about PowerStream’s business customers (e.g. desired communication channels).</li><li>• Customer Awareness, Satisfaction, and Attitudes Study (CASA). The purpose of this study is to track and understand the marketing impacts, barriers to program participation, and satisfaction of program participants. Results: PowerStream’s sales forces are driving program awareness; PowerStream’s highest priority initiatives have highest levels of awareness; and key drivers/barriers of participation are money, environment, relevance, and impact on business operations.</li></ul> <p>Marketing, promotion and sales:</p> <ul style="list-style-type: none"><li>• PowerStream sales staff contacted/met 1,485 business accounts</li><li>• Hosted 22 events/workshops/information sessions</li><li>• Participated in 9 community/industry events (trade shows, chamber events, business events, shareholder events, etc.) for both large and small business sectors to promote the suite of C&amp;I Programs</li><li>• Placed 9 print advertisements on local newspapers within PowerStream’s service territory</li><li>• Distributed bill inserts to all General Service customers with less than 50 kW demand to promote Small Business Lighting</li><li>• Sent out 6,000 direct mailers to customers eligible for Small Business Lighting</li><li>• Ran 8 radio/television advertisements</li><li>• Sent out e-blasts to over 1,000 customers and applicant representatives</li><li>• Launched CDM Champions recognition program for channel partners</li><li>• Implemented a Customer Relationship Management (CRM) tool to track sales activities</li></ul>

The targeted customer types, objectives, descriptions, and the activities of each C&I Program Initiative are detailed in Appendix B. The Appendix also includes additional comments, provided by the OPA-LDC C&I Working Group, regarding some of the lessons learned and future opportunities for each C&I Program initiative.

### 2.2.3 INDUSTRIAL PROGRAM

**Description:** Businesses across Ontario can benefit from an array of programs offered throughout the province. There are energy-efficiency programs to assist organizations from the smallest of retail stores to the largest industrial complexes. Programs to help fund energy audits, to replace energy-wasting equipment or to pursue new construction that exceed our existing codes and standards. Businesses can also pursue incentives for controlling and reducing their electricity demand at specific times. The bottom line is that there are innovative programs that can help businesses reduce their electricity costs, while helping Ontario defer the need to build new generation and reduce its environmental footprint.<sup>11</sup>

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

**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.

**Activities:** PowerStream’s activities specific to the Industrial Program are summarized in Table 7. Most of the C&I activities listed in Table 6 are also applicable to the Industrial Program since these program’s target audiences overlap and most initiatives are available to both C&I and Industrial customers.

**Table 7:** Activities – Industrial Program Level

Activities
<p>PowerStream’s main focus in 2012 for the Industrial Program was the procurement of Roving Energy Managers and Embedded Energy Managers and greater involvement and direct marketing of the Demand Response 3 Program.</p> <ul style="list-style-type: none"><li>• Hired 2 Roving Energy Managers to work with 6 PowerStream key business/industrial customers</li><li>• Managed 5 Embedded Energy Managers to work with PowerStream and non-PowerStream customers</li><li>• Built relationships and worked with Demand Response aggregators in promoting Demand Response 3 Program</li><li>• Utilized PowerStream’s CDM Key Account Specialist in conducting Demand Response 3 sales activities</li></ul>

The targeted customers, objectives, descriptions, and activities of each Industrial Program Initiative are detailed in Appendix C. The Appendix also includes additional comments, provided by the OPA-LDC Industrial Working Group, regarding some of the lessons learned and future opportunities for each Industrial Program initiative.

<sup>11</sup> <https://saveonenergy.ca/Business/Programs-By-Sector.aspx>

## 2.2.4 LOW INCOME PROGRAM (Home Assistance)

**Description:** This is a turnkey program 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 program is designed to coordinate efforts with gas utilities.

**Targeted Customer Type(s):** Income qualified Residential Customers

**Objective:** To offer free installation of energy efficient measures to income qualified households for the purpose of achieving electricity and peak demand savings.

**Activities:** PowerStream's activities specific to the Low Income Program are summarized in Table 8.

**Table 8:** Activities – Low Income Program

Activities
<p>PowerStream launched this Program within its service territory in 2012. Major program delivery activities undertaken in 2012 were:</p> <ul style="list-style-type: none"><li>• Hired a third party service provider to implement the program</li><li>• Held 46 outreach events/meeting</li><li>• Distributed 10,500 brochures to qualified customers</li><li>• Distributed 150 sell sheets for homeowners and 150 sell sheets for Social Housing</li><li>• News release at program launch on March 26, 2012</li><li>• Letters mailed to PowerStream customers who received LEAP grant. Letter sent through social agencies that manage LEAP on PowerStream's behalf Housing Help Centre (South) sent out in May 2012 to 212 customers and United Way Simcoe County (North) sent out in August 2012 to 348 customers</li><li>• Mail out through Simcoe Ontario Works - all Simcoe County on September 25, 2012</li></ul>

The targeted customers, objectives, descriptions, and activities of the Low-Income Program Initiative are detailed in Appendix D. The Appendix also includes additional comments, provided by the OPA-LDC Residential Working Group, regarding some of the lessons learned and future opportunities for the Home Assistance Program.

### 2.2.5 Portfolio level activities

PowerStream’s 2012 activities that are common to all programs are summarized in Table 9 below.

**Table 9:** Activities – Common to all Programs

Category	Activities
Planning	Updated 2011-2014 Strategic Plan and Program Delivery Plans, which includes budget, procurement, marketing, human resources and monitoring plans and annual demand and energy milestones
Procurement	<ul style="list-style-type: none"> <li>• Closed five Request for Proposals (“RFPs”) and awarded contracts to qualified third party service providers for Residential Demand Response, Direct Install Lighting, New Construction, Home Assistance Program and Technical Reviewers</li> <li>• Issued and closed Request for Proposal and awarded contracts to 2 Marketing Firms (one for Consumer and one for Business)</li> <li>• Hired a third party service provider to provide events management services on Consumer sector</li> </ul>
Staff Resourcing	Hired 8 additional CDM staff in 2012

### 2.3 Participation

Table 10 includes the number of participants in each initiative that was offered by PowerStream in 2012. These results were quality controlled and verified by the OPA. It also includes true-up analysis and reporting for 2011 program year. The true-up analysis and reporting will continue each year until the end of 2011-2014 reporting period. This true-up analysis ensures that energy and demand savings are properly categorized in the year that they were achieved and that any omissions and/or errors identified after the release of the verified results are properly accounted and reported for. While these results will be identified in the reporting year, the cumulative energy savings will commence from the year they were achieved.

During the data verification and reconciliation process between LDCs and OPA for 2012 results (during month of August 2013), PowerStream identified a number of projects which were missing from the OPA’s list of verified 2012 projects. These projects were primarily from the Electricity Retrofit Incentive, Program Enabled Savings and Small Business Lighting Initiatives. PowerStream was informed by the OPA that there was insufficient time to capture these missing projects in the 2012 EM&V report and that they would be accounted for in the 2012 True-Up in the 2013 EM&V Report to be provided by OPA in September 2014. As such, PowerStream anticipates that it will receive a positive true-up for 2012 results in the OPA’s 2013 EM&V Report.

**Table 10: Participation**

<b>Initiative</b>	<b>Activity Unit</b>	<b>2012 Uptake / Participation Units</b>	<b>Cumulative 2011-2012 Uptake / Participation Units</b>
<b>Consumer Program</b>			
Appliance Retirement	Appliances	1,664	4,650
Appliance Exchange	Appliances	110	262
HVAC Incentives	Equipment	7,614	16,154
Conservation Instant Coupon Booklet	Products	2,051	37,221
Bi-Annual Retailer Event	Products	70,426	133,633
Retailer Co-op	Items	-	134
Residential Demand Response (thermostat)	Devices	7,780	7,780
Residential Demand Response (IHD)	Devices	6,227	6,227
Residential New Construction	Houses	-	9
<b>Commercial and Institutional Program</b>			
Equipment Replacement Incentive Initiative	Projects	388	562
Direct Install Lighting	Projects	1,628	3,573
Existing Building Commissioning Incentive	Buildings	-	-
New Construction	Buildings	-	1
Energy Audit	Audits	10	17
Small Commercial DR (thermostat)	Devices	-	-
Small Commercial Demand Response (IHD)	Devices	-	-
Demand Response 3	Facilities	11	11
<b>Industrial Program</b>			
Process & System Upgrades	Projects	-	-
Monitoring & Targeting	Projects	-	-
Energy Manager	Managers	4	4
Equipment Replacement Incentive	Projects	-	34
Demand Response 3	Facilities	12	12
<b>Low Income Program</b>			
Low Income Program	Homes	258	258
<b>Pre-2011 Programs completed in 2011-14</b>			
Electricity Retrofit Incentive Program	Projects	-	195
High Performance New Construction	Projects	9	22
Multifamily Energy Efficiency Rebates	Projects	-	1
Data Centre Incentive Program	Projects	-	5
<b>Other</b>			
Program Enabled Savings	Projects	11	11
Time of Use Savings	Homes	-	-

## 2.4 Spending

Table 11 itemizes PowerStream's expenses, by funding category, for each Program Initiative that was offered in 2012. Program Administration Budget (PAB) expenses are further detailed by expense category (as stipulated in the CDM Code, Appendix A) and are shown in Table 12. Participant Based Funding (PBF) and Participant Incentive Payments (PIP) are based on actual participation in applicable initiatives. PowerStream's Capability Building Funding (CBF) expenses reported for 2012 do not represent a full year of costs as the Key Account Manager (KAM) commenced work in April and Roving Energy Managers (REM) were not hired until July. In addition, Pre-2011 Programs were not funded by the 2011-2014 Program terms, they were funded as per their respective program agreements.

In 2012, with the roll out of additional initiatives (i.e. peaksaver PLUS and Low Income), marketing and program execution at full force, and a fuller staff complement, PAB spend on OPA-Contracted Province-wide Programs increased 46% as compared to 2011. Moreover, PIP expenditures nearly doubled and PBF spend was more than three times the amount compared to 2011 (this does not factor in spend on pre-2011 initiatives).

**Table 11: 2012 Spending by Initiative (\$)**

<b>Initiative</b>	<b>Program Administration Budget (PAB)</b>	<b>Participant Based Funding (PBF)</b>	<b>Participant Incentives Payments (PIP)</b>	<b>Capability Building Funding (CBF)</b>	<b>TOTAL</b>
<b>Consumer Program</b>	<b>1,306,900</b>	<b>1,566,859</b>			<b>2,873,759</b>
Appliance Retirement	153,458	-	-	-	153,458
Appliance Exchange	10,458	-	-	-	10,458
HVAC Incentives	118,074	-	-	-	118,074
Conservation Instant Coupon Booklet	49,763	-	-	-	49,763
Bi-Annual Retailer Event	3,789	-	-	-	3,789
Residential Demand Response	928,292	1,566,859	-	-	2,495,151
Residential New Construction	43,067	-	-	-	43,067
<b>Commercial and Institutional Program</b>	<b>1,741,236</b>	<b>431,935</b>	<b>4,639,051</b>		<b>6,812,223</b>
Equipment Replacement Incentive Initiative (ERII)	1,481,938	-	2,877,095	-	4,359,033
Direct Install Lighting	85,509	431,935	1,702,953	-	2,220,397
Existing Building Commissioning Incentive	35,804	-	-	-	35,804
New Construction and Major Renovation Initiative	55,441	-	-	-	55,441
Energy Audit	82,545	-	59,003	-	141,548
Small Commercial Demand Response	Included in Residential Demand Response				
Demand Response 3	Included in Industrial Demand Response 3				
<b>Industrial Program</b>	<b>284,259</b>			<b>174,572</b>	<b>458,831</b>
Process & System Upgrades					
a) preliminary study	55,597	-	-	-	55,597
b) engineering study	55,659	-	-	-	55,659
c) program incentive	27,202	-	-	-	27,202
Monitoring & Targeting	13,601	-	-	-	13,601
Energy Manager (REM's and EEM's)	87,905	-	-	103,880	191,786
Equipment Replacement Incentive Initiative	Included in Commercial and Institutional ERII				
Demand Response 3	44,641	-	-	-	44,641
Key Account Manager	(345)			70,692	70,347
<b>Low Income Program</b>	<b>221,601</b>		<b>184,610</b>		<b>406,210</b>
Low Income Program	221,601	-	184,610	-	406,210
<b>TOTAL Province-wide CDM PROGRAMS</b>	<b>3,553,996</b>	<b>1,998,794</b>	<b>4,823,661</b>	<b>174,572</b>	<b>10,551,023</b>

**Table 12: 2012 PAB Spend by Expense Category (\$)**

Program	Labour Costs	Customer Care, Advertising, Marketing	IT	Other Service Providers	Other	Total
Consumer	678,948	419,747	30,759	7,754	169,693	1,306,900
Commercial & Institutional	1,028,072	191,093	36,039	315,942	170,091	1,741,236
Industrial	217,066	28,089	5,465	2,577	31,062	284,259
Low Income	78,022	4,972	3,347	121,524	13,735	221,601
<b>TOTAL</b>	<b>2,002,108</b>	<b>643,901</b>	<b>75,609</b>	<b>447,797</b>	<b>384,581</b>	<b>3,553,996</b>

Table 13 and Table 14 below identify PowerStream's cumulative spend by Initiative and by expense category for the period 2011-2012.

**Table 13: Cumulative 2011-2012 Spending by Initiative (\$)**

Initiative	Program Administration Budget (PAB)	Participant Based Funding (PBF)	Participant Incentives (PIP)	Capability Building Funding (CBF)	TOTAL
<b>Consumer Program</b>	<b>2,294,787</b>	<b>1,566,859</b>			<b>3,861,646</b>
Appliance Retirement	341,826	-	-	-	341,826
Appliance Exchange	179,167	-	-	-	179,167
HVAC Incentives	299,649	-	-	-	299,649
Conservation Instant Coupon Booklet	221,534	-	-	-	221,534
Bi-Annual Retailer Event	5,858	-	-	-	5,858
Retailer Co-op	9,178	-	-	-	9,178
Residential Demand Response	1,180,483	1,566,859	-	-	2,747,342
Residential New Construction	57,093	-	-	-	57,093
<b>Commercial and Institutional Program</b>	<b>2,542,723</b>	<b>861,910</b>	<b>6,330,054</b>		<b>9,734,688</b>
Equipment Replacement Incentive Initiative (ERII)	2,036,622	-	2,994,657	-	5,031,279
Direct Installed Lighting	193,556	861,910	3,264,570	-	4,320,036
Existing Building Commissioning Incentive	36,585	-	-	-	36,585
New Construction and Major Renovation	128,211	-	5,324	-	133,535

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Initiative					
Energy Audit	147,750	-	65,503	-	213,253
Small Commercial Demand Response	Included in Residential Demand Response				
Demand Response 3	Included in Industrial Demand Response 3				
<b>Industrial Program</b>	<b>361,973</b>			<b>174,572</b>	<b>536,545</b>
Process & System Upgrades					
a) preliminary study	63,233	-	-	-	63,233
b) engineering study	63,294	-	-	-	63,294
c) program incentive	57,744	-	-	-	57,744
Monitoring & Targeting	15,510	-	-	-	15,510
Energy Manager	98,719	-	-	103,880	202,599
Equipment Replacement Incentive Initiative	Included in Commercial and Institutional ERII				
Demand Response 3	52,355	-	-	-	52,355
Key Account Manager	11,118			70,692	81,810
<b>Low Income Program</b>	<b>258,997</b>			<b>184,610</b>	<b>443,606</b>
Low Income Program	258,997	-	184,610	-	443,606
<b>Pre-2011 Programs Completed in 2011-14</b>	<b>145,460</b>	<b>742,957</b>	<b>3,135,145</b>		<b>4,023,562</b>
Electricity Retrofit Incentive Program	-	-	3,003,110	-	3,003,110
High Performance New Construction	-	-	-	-	-
Multifamily Energy Efficiency Rebates	-	-	-	-	-
Data Centre Incentive Program	-	-	83,260	-	83,260
PeakSaver Extension	145,460	742,957	48,775		937,192
<b>TOTAL Province-wide CDM PROGRAMS</b>	<b>5,603,940</b>	<b>3,171,726</b>	<b>9,649,809</b>	<b>174,572.38</b>	<b>18,600,047</b>

**Table 14:** Cumulative 2011-2012 PAB Spend by expense category (\$)

Program	Labour Costs	Customer Care, Advertising, Marketing	IT	Other Service Providers	Other	Total
Consumer	1,133,966	814,285	57,548	64,046	224,942	2,294,787
Commercial & Institutional	1,554,427	264,964	67,420	389,324	266,588	2,542,723
Industrial	275,580	28,181	10,216	6,144	41,852	361,973
Low Income	100,598	5,212	3,347	123,677	26,162	258,996
<b>TOTAL</b>	<b>3,064,571</b>	<b>1,112,642</b>	<b>138,531</b>	<b>583,191</b>	<b>559,545</b>	<b>5,458,479</b>

## 2.5 Evaluation

In order to assess the impacts (energy and demand savings) and the effectiveness of the conservation programs on its participants and/or market, the OPA conducted EM&V of the OPA-Contracted Province-Wide Programs on a provincial level. The key findings on the process/effectiveness evaluation as summarized and provided by the OPA are included in Table 15 below. The results of the impact evaluations are summarized in Table 16 (net-to-gross ratios and realization rates) and Table 17 (net demand and net energy savings).

**Table 15: Evaluation Findings**

Initiative	Evaluation Findings – Provincial Level (Source: 2012 EM&V Summary Report from the OPA)
<b>Consumer Program</b>	
Appliance Retirement	<ul style="list-style-type: none"> <li>• Participation was 39% lower in 2012 than in 2011.</li> <li>• Per unit savings estimates per unit of refrigerators dropped this year by 3.5% based on the in situ metering conducted. This suggests the population of refrigerators collected in 2012 was more efficient than in 2011.</li> <li>• Per unit savings estimates per unit for freezers increased this year by 17.5% based on the in situ metering conducted. This suggests the population of freezers collected in 2012 was less efficient than in 2011.</li> </ul>
Appliance Exchange	<ul style="list-style-type: none"> <li>• Overall participation increased by 4% in 2012 versus 2011, and dehumidifier participation was up 30% from 2011.</li> <li>• Higher per unit savings for dehumidifiers drive an increase in savings.</li> </ul>
HVAC Incentives	<ul style="list-style-type: none"> <li>• Change in measure and usage patterns caused per unit savings for furnace with ECM to drop from 1,279 annual kWh to 1,139 annual kWh.</li> <li>• NTG decreased by 10% from 0.6 in 2011 to 0.5 in 2012 due to an increase in free-ridership related to the furnace with ECM measure.</li> </ul>
Conservation Instant Coupon Booklet	<ul style="list-style-type: none"> <li>• The number of coupons associated with the redemption of 2012 Annual Coupons was 90% lower than 2011 Instant Coupon Booklet. Factors include:               <ul style="list-style-type: none"> <li>○ Shorter duration (September – December) of availability</li> <li>○ In 2012, only online coupons were available, versus in 2011, there were coupon booklets and online coupons.</li> </ul> </li> </ul>
Bi-Annual Retailer Event	<ul style="list-style-type: none"> <li>• 15% lower net savings due to a change in the net-to-gross factors (increased free-ridership, less participant behaviour spillover, and less non-participant like spillover)</li> <li>• Majority of participation, energy, and demand savings are from standard CFLs</li> <li>• 15% of net savings due to approximately 73,000 coupons for new LED measures</li> </ul>
Residential Demand Response	<ul style="list-style-type: none"> <li>• The event impact for the average residential peaksaver PLUS customer in Ontario is estimated to be 0.41kW. For the average small business customer, the impact was 0.46kW.</li> <li>• Ex ante values for residential Central Air Conditioners (CACs) were calculated using 2012 events. Specifically, the estimated impact of 0.49 kW per unit on a 1-in 10 August peak day was used.</li> <li>• Customer Information Display (CID) impact analysis produced very small and highly uncertain impact estimates.</li> </ul>

	<ul style="list-style-type: none"> <li>The offer of the CID had a positive influence on enrollment and re-enrollment. 20% to 35% of new enrollees said they wouldn't have enrolled without the IHD offer.</li> </ul>
Residential New Construction	Not available. Summary of provincial evaluation findings was not provided by the OPA.
<b>Commercial and Institutional Program</b>	
Equipment Replacement Incentive Initiative	<ul style="list-style-type: none"> <li>Prescriptive lighting projects had verified wattage reductions 15% higher than assumed and verified operating hours 11% higher than assumed.</li> <li>The low realization rate in the engineered measure track can be partially explained by overstated lighting operation hour assumptions claimed on participant applications.</li> <li>Net-to-gross ratios for the initiatives were above 75% in 2012.</li> </ul>
Direct Installed Lighting	<ul style="list-style-type: none"> <li>Only 12% of site visits had verified annual hours of use within +/-10% of the assumed value.</li> <li>The saturation of eligible customers and preferred business types are leading to buildings and applicants that don't necessarily operate during the summer peak period. This is leading to very low realization rates for demand in 2012.</li> <li>Due to changing regulations the assumed baseline technology will eventually be phased out. This impacts the persistence of the energy and demand savings over the lifetime of the measure.</li> </ul>
Existing Building Commissioning Incentive	<ul style="list-style-type: none"> <li>Initiative was not evaluated in 2012, no completed projects in 2012.</li> </ul>
New Construction	Not available. Summary of provincial evaluation findings was not provided by the OPA.
Energy Audit	Not available. Summary of provincial evaluation findings was not provided by the OPA.
Small Commercial Demand Response	<ul style="list-style-type: none"> <li>See Residential Demand Response within Consumer Program.</li> </ul>
Demand Response 3	<ul style="list-style-type: none"> <li>See Demand Response 3 within Industrial Program.</li> </ul>
<b>Industrial Program</b>	
Process & System Upgrades	<ul style="list-style-type: none"> <li>Not applicable. No 2012 results.</li> </ul>

Monitoring & Targeting	<ul style="list-style-type: none"> <li>Not applicable. No 2012 results.</li> </ul>
Energy Manager	<ul style="list-style-type: none"> <li>Energy Managers are seen as important drivers of program enabled savings projects. 88% of survey respondents indicated that the assistance provided by Energy Managers was very important or somewhat important to implementing the projects.</li> <li>Energy Managers indicated it would be beneficial if they received additional support in terms of training and guides to help them influence the adoption of energy efficiency measures by participants.</li> <li>Program enabled savings projects varied substantially in how well they were documented. More guidance on documentation requirements would be beneficial to all parties.</li> </ul>
Equipment Replacement Incentive Initiative	<ul style="list-style-type: none"> <li>See Equipment Replacement Incentive Initiative under C&amp;I Program.</li> </ul>
Demand Response 3	<ul style="list-style-type: none"> <li>2012 saw improvements in the performance of DR3 participants resulting in higher ex ante realization rates, particularly for the industrial participants.</li> </ul>
<b>Low Income Program</b>	
Low Income Program	Not available. Summary of provincial evaluation findings was not provided by the OPA.
<b>Pre-2011 Programs completed in 2011-2014</b>	
Electricity Retrofit Incentive Program	<ul style="list-style-type: none"> <li>Initiative was not evaluated in 2012</li> <li>Net-to-Gross ratios used are consistent with the 2010 evaluation findings (multifamily buildings 99% realization rate and 62% net-to-gross ratio and C&amp;I buildings 77% realization rate and 52% net-to-gross ratio)</li> </ul>
High Performance New Construction	<ul style="list-style-type: none"> <li>Initiative was not evaluated in 2012</li> <li>Net-to-Gross ratios used are consistent with the 2010 evaluation findings (realization rate of 100% and net-to-gross ratio of 50%)</li> </ul>
Multifamily Energy Efficiency Rebates	<ul style="list-style-type: none"> <li>Initiative was not evaluated in 2012</li> <li>Net-to-Gross ratios used are consistent with the 2010 evaluation findings</li> </ul>
Data Centre Incentive Program	<ul style="list-style-type: none"> <li>Initiative was not evaluated in 2012</li> </ul>

**Table 16:** Verified Realization Rates and Net-to-Gross Ratios by Initiative (Source: 2012 PowerStream Final Report provided by the OPA)

Initiative	Demand				Energy			
	Realization Rate		Net-to-gross ratio		Realization Rate		Net-to-gross ratio	
	2011	2012	2011	2012	2011	2012	2011	2012
<b>Consumer Program</b>								
Appliance Retirement	1	1	0.5	0.46	1	1	0.5	0.47
Appliance Exchange	1	1	0.52	0.52	1	1	0.52	0.52
HVAC Incentives	1	1	0.6	0.5	1	1	0.6	0.49
Conservation Instant Coupon Booklet	1	1	1.14	1	1	1	1.11	1.05
Retailer Co-op	1	1	n/a	n/a	1	1	1.1	0.92
Residential Demand Response (tstat)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Residential Demand Response (IHD)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Residential New Construction	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<b>Commercial &amp; Institutional Program</b>								
Efficiency: Equipment Replacement	0.93	0.93	0.73	0.76	1.23	1.05	0.75	0.76
Direct Install Lighting	1.08	0.69	0.93	0.94	0.9	0.85	0.93	0.94
Existing Building Commissioning Incentive	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
New Construction	n/a	1	n/a	0.5	n/a	n/a	n/a	n/a
Energy Audit	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Commercial Demand Response (tstat)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Commercial Demand Response (IHD)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Demand Response 3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<b>Industrial Program</b>								
Process & System Upgrades	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Monitoring & Targeting	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Energy Manager	n/a	1.21	n/a	0.9	n/a	1.21	n/a	0.9
<b>Low Income Program</b>								
Home Assistance Program	n/a	0.23	n/a	1	n/a	0.99	n/a	1
<b>Other</b>								
Program Enabled Savings	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Time-of-Use Savings	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

**Table 17:** Verified Energy and Demand Savings by Initiative (Source: 2012 PowerStream Final Report provided by the OPA)

Initiative	2012 Incremental Net Savings		Program to Date Contribution to Targets	
	Peak Demand Savings (kW)	Energy Savings (kWh)	Net Annual Peak Demand Savings (kW) in 2014	2011-2014 Net Cumulative Energy Savings (kWh)
<b>Consumer Program</b>	<b>5,731</b>	<b>5,351,253</b>	<b>5,041</b>	<b>54,470,737</b>
Appliance Retirement	94	662,323	250	6,628,924
Appliance Exchange	16	28,384	22	152,440
HVAC Incentives	1,635	2,761,285	4,019	25,794,410
Conservation Instant Coupon Booklet	15	92,817	96	5,532,261
Bi-Annual Retailer Event	98	1,777,858	217	13,716,695
Retailer Co-op	-	-	-	9,339
Residential Demand Response (thermostat)	3,873	28,587	-	31,826
Residential Demand Response (IHD)	-	-	-	-
Residential New Construction	-	-	-	9,745
<b>Commercial and Institutional Program</b>	<b>7,411</b>	<b>31,528,415</b>	<b>8,719</b>	<b>143,200,352</b>
Equipment Replacement Incentive Initiative	4,690	25,834,397	6,094	113,079,046
Direct Install Lighting	1,437	5,424,343	2,767	34,731,484
Existing Building Commissioning Incentive	-	-	-	-
New Construction	-	-	10	159,544
Energy Audit	52	251,763	57	855,993
Small Commercial DR (thermostat)	-	-	-	-
Small Commercial Demand Response (IHD)	-	-	-	-
Demand Response 3	1,232	17,913	-	66,448
<b>Industrial Program</b>	<b>3,205</b>	<b>112,793</b>	<b>520</b>	<b>13,192,311</b>
Process & System Upgrades	-	-	-	-
Monitoring & Targeting	-	-	-	-
Energy Manager	19	36,000	19	108,000
Equipment Replacement Incentive	-	-	501	12,852,927
Demand Response 3	3,186	76,793	-	231,384
<b>Low Income Program</b>	<b>36</b>	<b>313,102</b>	<b>36</b>	<b>939,307</b>
Low Income Program	36	313,102	36	939,307

<b>Pre-2011 Programs completed in 201-2014</b>	<b>644</b>	<b>2,745,770</b>	<b>2,970</b>	<b>53,639,280</b>
Electricity Retrofit Incentive Program	-	-	1,958	38,160,095
High Performance New Construction	644	2,745,770	1,186	15,502,532
Multifamily Energy Efficiency Rebates	-	-	75	778,138
Data Centre Incentive Program	-	-	81	2,132,152
<b>Other</b>				
Program Enabled Savings	-	-	-	-
Time of Use Savings	-	-	-	-
Adjustments to 2011's Verified Results				
<b>Total Province Wide CDM Programs</b>	<b>17,134</b>	<b>41,560,083</b>	<b>17,391</b>	<b>271,472,689</b>

### 3 Combined CDM Reporting Elements

#### 3.1 Progress Towards CDM Targets

PowerStream achieved a total of 17.1 MW of verified demand savings, of which 8.6 MW is guaranteed to persist to 2014, and 41.6 GWh of verified energy savings, which cumulates to 124.9 GWh at the end of 2014. Combined with 2011 results, PowerStream has achieved, as of the end of 2012, a total of 17.4 MW and 271.5 GWh in verified savings, representing 18.2% and 66.6% of PowerStream's demand and energy savings targets, respectively. Table 18 illustrates the net peak demand and energy savings by Program with their contribution towards the 2014 target.

**Table 18:** Summarized Program Results

	2012 Incremental Net Savings		Program to Date Contribution to Targets	
	Peak Demand Savings (MW)	Energy Savings (GWh)	Net Annual Peak Demand Savings (MW) in 2014	2011-2014 Net Cumulative Energy Savings (GWh)
Consumer Program	5.73	5.35	5.04	54.47
Commercial and Institutional Program	7.41	31.53	8.72	143.20
Industrial Program	3.21	0.11	0.52	13.19
Home Assistance Program	0.04	0.31	0.04	0.94
Pre-2011 Programs	0.64	2.75	2.97	53.64
Adjustments to 2011's Verified Results	0.11	1.51	0.11	6.03
<b>Total Province-Wide CDM Programs</b>	<b>17.13</b>	<b>41.56</b>	<b>17.39</b>	<b>271.47</b>

As shown in Table 19 below, PowerStream's 2012 results were quite positive. As of the end of 2012, PowerStream actual progress towards its four year targets is very close to the milestones set out in the 2011 Annual Report, with a variance of only 1% for demand and 6% for energy.

**Table 19:** 2012 Results vs 2012 Milestones

Cumulative progress to date	2012 Milestone as per 2011 Annual Report		2012 Verified Annual Results		Variance to 2012 Milestone	
	MW/GWh	% to Target	MW/GWh	% to Target	MW/GWh	% to Target
2014 Net Demand Savings (MW)	18.5	19.4%	17.4	18.2%	-1.4	-1%
2011-2014 Net Cumulative Energy Savings (GWh)	296.2	72.7%	271.5	66.6%	-24.7	-6%

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The key factors contributing to lower than forecasted results were:

- Temporarily stopped **peaksaver PLUS** installations pending firmware upgrades to the in-home display sensors – completely out of market for around 6 weeks until the upgraded sensors arrived
- Average actual size of 2012 Retrofit and Small Business Lighting projects lower than forecasted
- Actual MW contracted by Demand Response 3 aggregators lower than forecasted
- Delay in hiring of Embedded Energy Managers by host organizations
- Average size of Home Assistance project due to actual mix of measures installed caused lower savings than forecasted

In addition to the key drivers above, the 2012 verified net-to-gross and realization rates for several initiatives (e.g. Small Business Lighting) were significantly lower than forecasted based on 2011 EM&V results. These factors are primarily a function of program design or customers' input and are outside of PowerStream's control. As such, PowerStream has identified these risks in its risk assessment and mitigation plan for its CDM forecasts, as set out in Table 22 of Section 3.2 of this document.

### 3.2 CDM Strategy Modifications

PowerStream updates its demand and energy savings forecasts twice a year – in December and September. At the end of each calendar year (also PowerStream's fiscal year), an internal estimate of year-end CDM results is made as well as updated outlook for remainder of CDM target period. In September of each year, PowerStream updates its 2011-2014 CDM outlook based on EM&V results of previous year received from OPA and progress within the current program year.

The updated forecast included in this report, referred to as "2013 Strategy", was developed in September 2013. It was developed by incorporating the lessons learned over the first two and a half years of delivering OPA Province-wide CDM Programs, and by using inputs from CDM staff, program performance to date, key findings from the OPA's 2012 EM&V process, current market analysis, and insights of upcoming program changes.

In order to achieve the updated forecast, PowerStream updated its Strategy to 2014 which includes the following:

- For Consumer Program, an even bigger focus on **peaksaver PLUS** – increasing the 2014 marketing budget and forecasted participation;
- For C&I Program, a successful rollout out of the Business Refrigeration Incentives Program and a focus on penetrating the bulk meter market in 2014 for Small Business Lighting program; and

- For Industrial Program, by working directly with identified potential DR3 participants at the senior management and executive level to encourage them to sign up by the end of 2014.

PowerStream is forecasting to achieve approximately 100% of its energy target and 80% of its demand target by the end of 2014. This forecast includes savings from OPA-Contracted Province-wide Programs, PowerStream's Business Refrigeration Incentive Program (Board Approved Program) as well as TOU rates.

In its 2011 Annual CDM Report, filed in September 2012, PowerStream was still forecasting to achieve 100% of its demand savings targets. The single biggest contributor to the reduction in forecasted demand savings is TOU rates. Up until recently, PowerStream had been estimating the contribution from TOU rates implementation at approximately 22MW. This assumption was based on the provincial savings estimate of 308MW that was used to set the LDCs' aggregate 2011-2014 CDM target of 1330MW and based on PowerStream at approximately 7% of the province. While verified TOU savings from the OPA will not be available until mid-2015, preliminary TOU evaluation findings for 4 LDCs (not including PowerStream) were recently presented to all LDCs by OPA at its 2012 EM&V workshop in early September 2013. Based on these preliminary findings, PowerStream has lowered its TOU savings forecast by approximately 10MW.

The other large contributor to PowerStream's projected shortfall against its demand target is the Demand Response 3 (DR3) Initiative. In the original (2010) provincial forecasts for the OPA-Contracted Province Wide Programs, it was anticipated that Demand Response initiatives within the Industrial and C&I Programs would contribute approximately 223MW across the Province, representing approximately 40% of the total demand savings (1037MW) forecasted for the OPA-Contract Province Wide Program Portfolio. Based on results to date and information from working directly with Demand Response 3 (DR3) aggregators, PowerStream is currently forecasting just over 10MW of savings from DR3 which represents less than 17% of PowerStream's total forecasted demand savings from OPA-Contracted Province Wide Programs. PowerStream believes there is still significant market potential for a contractual demand response program. As the DR subject matter expert on the OPA-LDC Industrial Program Working Group, PowerStream spearheaded the development of a business case for improvements to the DR3 Program. This business case was presented to the OPA by the Working Group in 2012. While a few of the Working Group's recommendations have since been adopted, several challenges with the program design and operations remain (see Appendix C for more details). While not formally communicated, PowerStream understands that there may be a number of issues preventing these program improvements, including limited OPA procurement authority for Demand Response resources beyond 2014 and the current surplus of electricity capacity in the province over the next few years. While the lower than anticipated performance of the DR3 Program presents a near term challenge for PowerStream, and other LDCs, in achieving 2014 targets, PowerStream believes that the primary driver for improving the DR3 program (and the opportunity that could be missed if the program is not renewed or enhanced) should be the cost effective and reliable contribution that DR resources can make towards Ontario's Long Term Energy Plan.

Table 20 and Table 21 below provide more detailed illustrations of the updated forecasts; showing the amount of demand savings persisting from one year to the next and the amount of energy that cumulates to 2014.

**Table 20:** Revised 2011-2014 Milestones, Demand

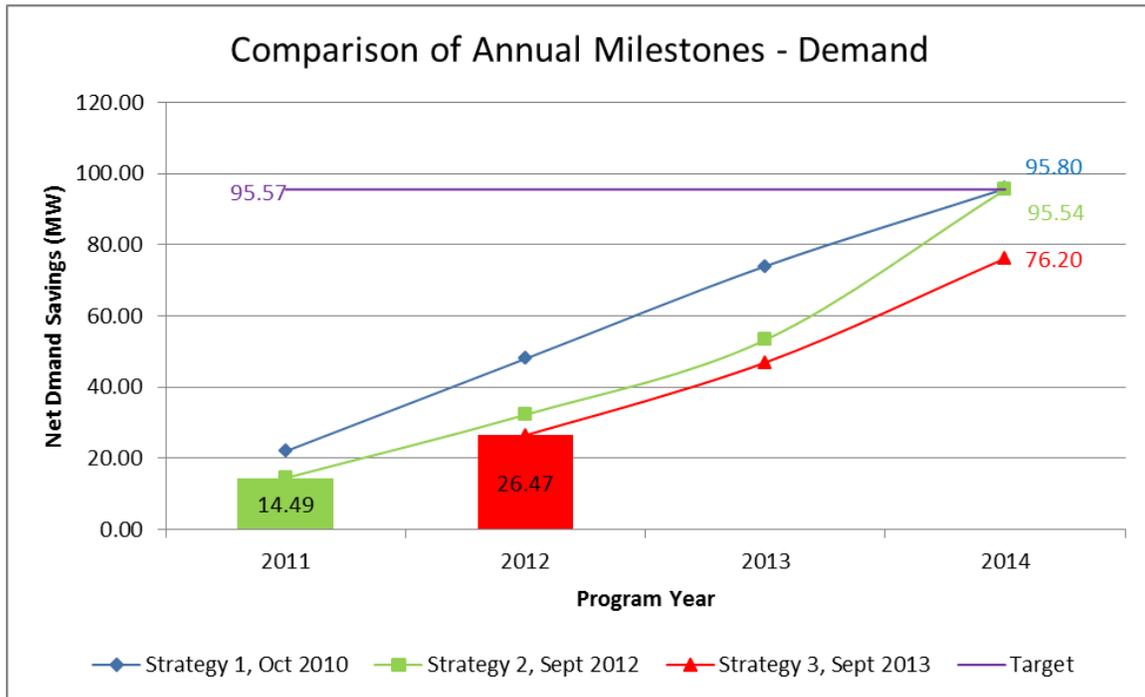
Year	Status	Program	Net Annual Demand Savings (MW)				Progress Against OEB Target (95.57 MW)	
			2011	2012	2013	2014	Running Total (MW)	%
2011	Verified	Province-Wide Programs	14.5	9.4	9.3	8.8	8.8	9.2%
2012	Verified	Province-Wide Programs		17.1	8.8	8.6	17.4	18.2%
2013	Forecasted	Province-Wide Programs			27.9	6.9	24.3	25.5%
		BRI Program (Board Approved)			1	0.9	25.2	26.4%
2014	Forecasted	Province-Wide Programs				36.1	61.3	64.1%
		BRI Program (Board Approved)				2.4	63.7	66.6%
		Time of Use Rates				12.5	<b>76.2</b>	<b>79.8%</b>

**Table 21:** Revised 2011-2014 Milestones, Energy

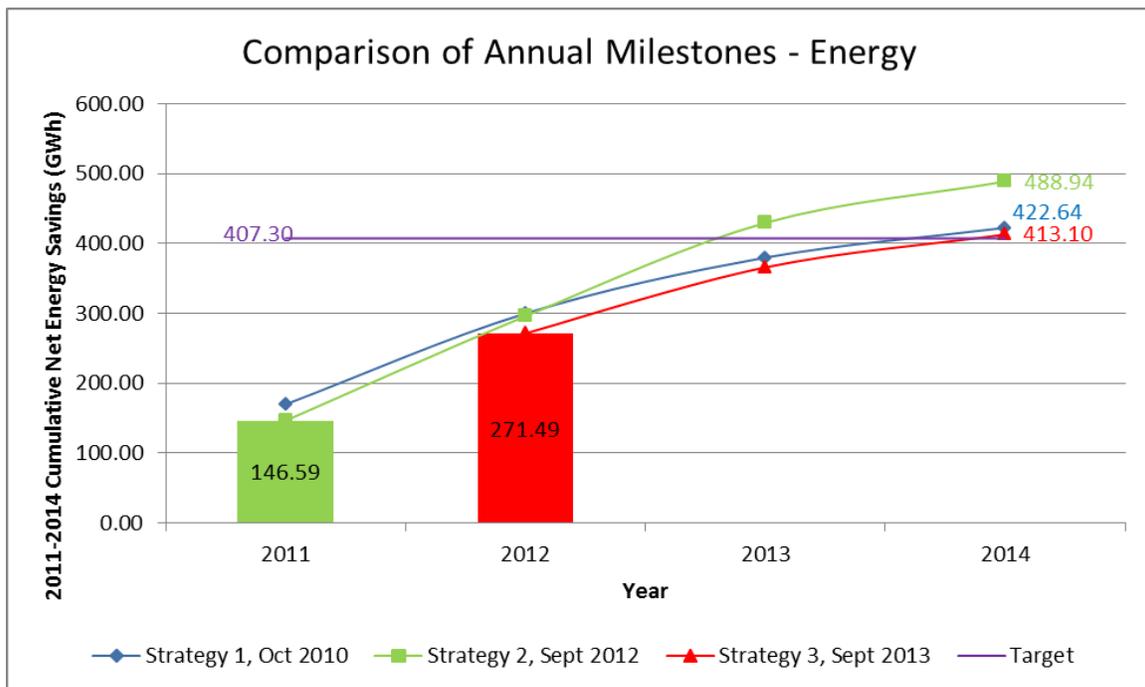
Year	Status	Program	Net Annual Energy Savings (GWh)				Cumulative Energy Savings (GWh)	Progress Against OEB Target (407.3 GWh)	
			2011	2012	2013	2014		2011-2014	Running Total (GWh)
2011	Verified	Province-Wide Programs	37.3	37.1	36.9	35.4	146.6	146.6	36.0%
2012	Verified	Province-Wide Programs		41.6	41.4	40.5	124.9	271.5	66.7%
2013	Forecasted	Province-Wide Programs			40.5	40.3	86.3	357.8	87.8%
		BRI Program (Board Approved)			4.9	3.3	8.2	366.0	89.9%
2014	Forecasted	Province-Wide Programs				35.8	35.8	401.8	98.6%
		BRI Program (Board Approved)				11.4	11.4	<b>413.1</b>	<b>101.4%</b>

To summarize the modifications to the Strategy, Figure 1 and Figure 2 are provided to illustrate the comparison of demand and energy savings forecast from the original Strategy (Oct 2010) to the 2012 Strategy (Sep 2012) and to the 2013 Strategy (Sep 2013).

**Figure 1: Comparison of Demand Savings Forecasts**



**Figure 2: Comparison of Energy Savings Forecasts**



As with any forecasting exercise, there are known risks to achieving the CDM targets. In some cases these risks can be mitigated by PowerStream while in other cases, PowerStream has little to no control over the risks, such as TOU savings results. PowerStream has developed a risk assessment and mitigation accordingly. These risks, together with their impact and mitigation plan are summarized in Table 22 below.

**Table 22:** Risk Assessment and Mitigation Plan

Risks	Likelihood	Impact	Mitigation strategies
EM&V uncertainty – results much lower than planned due to Net-to-Gross adjustments (e.g. free ridership, realization rates)	Low	High	<ul style="list-style-type: none"> <li>Primarily outside of PowerStream control</li> <li>Make conservative estimates using most up to date data assumptions</li> </ul>
Time of Use (TOU) savings lower than forecasted	Medium	Medium	<ul style="list-style-type: none"> <li>Entirely outside of PowerStream control</li> <li>Significantly reduced forecast from previous years’ strategy based on preliminary information from OPA</li> </ul>
Forecasted program participation levels are not achieved	Low	Medium	<ul style="list-style-type: none"> <li>Not seen as a major risk as participation forecasts are based on several years of actual data</li> </ul>
Business Refrigeration Incentives Program - demand and/or energy savings lower than planned	Medium	Low	<ul style="list-style-type: none"> <li>Onsite monitoring and verification of actual savings, include equipment metering, will begin right after program launch</li> <li>Interim process review of program within 2 months of launch</li> </ul>
Zero (or very small) energy savings from <b>peaksaver PLUS in-home displays</b> (IHDs) <ul style="list-style-type: none"> <li>OPA had insufficient data to provide verified result for 2012; results for IHDs to be provided in Sept 2014</li> <li>Currently assuming annual energy savings of 3%</li> </ul>	Medium	High	<ul style="list-style-type: none"> <li>Outside of PowerStream’s control</li> <li>Advocate with OPA for early release of EM&amp;V results for IHDs in 2014 (i.e. as soon as available)</li> <li>Reviewing evaluation reports from other jurisdictions to confirm 3% is reasonable estimate</li> </ul>
OPA extension of commercial Equipment Replacement Incentive (ERII) to end of 2015 <ul style="list-style-type: none"> <li>Customers now have until end of 2015 to complete their projects, but only those completed in 2014 will count to our OEB target</li> <li>Reduces sense of urgency for customers in 2014</li> </ul>	High	Medium to High	<p>Exploring a number of options to encourage projects to be completed in 2014, including:</p> <ul style="list-style-type: none"> <li>Communications/messaging with customers</li> <li>Providing incentives to applicant reps/ channel partners for project completion</li> <li>Prioritizing processing of applications (and payment of incentives) based on project completion dates</li> </ul>

PowerStream revised its budget to align with the new forecasts. Table 23 shows the annual budget per program which includes Program Administration Budget, Participant Based Funding, Participant Incentive Payment, and Capability Building Funding.

The budgets were updated to factor in the expenses to date, remaining funds available from the OPA, the detailed marketing and execution plans, and the new forecast. PBF and PIP values, shown below, are estimates based on the projected number of participants in the applicable OPA-Contracted Province-wide Program Initiative. Similar to the demand and energy forecasts, the budgets include actual expenses incurred in 2011 and 2012 and forecasts for 2013 and 2014.

**Table 23:** Revised 2011-2014 Budget, OPA-Contracted Province Wide Programs (\$)

		Residential	C&I	Industrial	Home Assistance	Total, by Year
2011	PAB	\$987,887	\$801,487	\$77,714	\$37,396	\$1,904,483
	PBF/PIP	-	2,120,978	-	-	2,120,978
	CBF	-	-	-	-	-
	2011 total	987,887	2,922,465	77,714	37,396	\$4,025,462
2012	PAB	1,306,900	1,741,236	284,259	221,601	3,553,996
	PBF/PIP	1,566,859	5,070,986	-	184,610	6,822,455
	CBF	-	-	174,572	-	174,572
	2012 total	2,873,759	6,812,223	458,831	406,210	\$10,551,023
2013	PAB	2,040,996	2,421,928	363,955	217,199	5,044,078
	PBF/PIP	4,225,000	7,596,368	-	600,000	12,421,368
	CBF	-	-	788,828	-	788,828
	2013 total	6,265,996	10,018,296	1,152,783	817,199	\$18,254,274
2014	PAB	2,247,156	2,724,683	446,038	228,896	5,646,774
	PBF/PIP	5,292,000	6,948,418	-	382,480	12,622,898
	CBF	-	-	861,263	-	861,263
	2014 total	7,539,156	9,673,102	1,307,301	611,376	\$19,130,936
<b>Total, by Program</b>		<b>\$17,666,799</b>	<b>\$29,426,086</b>	<b>\$2,996,629</b>	<b>\$1,872,181</b>	<b>\$51,961,695</b>

Comparing the 2012 actual spend to the 2012 budget provided in the 2011 Annual Report resulted in an overall spending variance of -11.5% as detailed in Table 24. This variance has been taken into consideration and factored into the 2013-2014 budget build. The main reason for the PAB and CBF variances are due to longer than planned recruitment processes for staff resources, including those within PowerStream as well as Embedded Energy Managers hired by our customers. The ability to find experienced and capable CDM personnel, who are willing to accept temporary contract positions, continues to be a challenge. Other reasons for PAB variances were efficiencies generated through third party contract negotiations, and modifications to the marketing plans. PBF/PIP was underspent in 2012 due to less than estimated participation levels in the programs.

**Table 24: 2012 Spend VS. 2012 Budget**

	2012 Budget per 2011 Annual Report	2012 Actual Spend	Variance to 2012 Budget	% Variance to 2012 Budget
PAB	\$ 3,990,276	\$3,553,996	\$(436,280)	-10.9%
PBF/PIP	7,589,442	6,822,455	(766,987)	-10.1%
CBF	343,424	174,572	(168,852)	-49.2%
2012 total	\$ 11,923,142	\$ 10,551,023	\$( 1,372,118)	-11.5%

In addition to the budget above, PowerStream received an OEB approval on June 21, 2013 to deliver the Business Refrigeration Incentives Program at a cost of up to \$4.1 Million. The forecasted breakdown of the approved program delivery budget, as set out in PowerStream's application to the OEB, is provided in tables Table 25 and Table 26.

**Table 25: Board Approved CDM Program 2013-2014 Forecast (\$)**

	2012	2013	2014	Total
Fixed Program Costs	78,204	538,215	582,042	1,198,461
Variable Program Costs	-	36,000	84,000	120,000
<b>Subtotal - Program Costs</b>	<b>78,204</b>	<b>574,215</b>	<b>666,042</b>	<b>1,318,461</b>
Customer Incentives	-	839,490	1,958,810	2,798,300
<b>Total Delivery Costs</b>	<b>78,204</b>	<b>1,413,705</b>	<b>2,624,852</b>	<b>4,116,761</b>

**Table 26: Board Approved CDM Program Forecasted Fixed Spend by Expense Category**

Program Costs	Amount
Program Development	\$ 104,422
Legal	50,000
Program Administration	805,701
Marketing	200,000
Evaluation, Measurement & Verification	158,337
<b>Total</b>	<b>\$1,318,461</b>

## Appendix A: Activities by Initiative – Residential Program

### A. APPLIANCE RETIREMENT INITIATIVE (Fridge and Freezer Pick-Up)

**Target Customer Type(s):** Residential Customers

**Initiative Frequency:** Year-round

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

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

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

**In Market Date:** March 2011 – PowerStream began offering Appliance Retirement soon after the Master Agreement was signed. Since Appliance Retirement is an initiative that was familiar to the customers, and there was minimal change to the initiative design compared to its predecessor program (The Great Refrigerator Roundup), the transition and launch of this initiative was simple and fast.

**Initiative Activities/Progress:** Please refer to Table 5 of this document.

**Additional Comments (as provided by LDC-OPA Program Working Group):**

- With the increase in appliance age to 20 years in 2013, many LDCs increased marketing and outreach throughout 2012 in an effort to increase uptake and achieve savings.
- Due to the duration of the program, and the revised eligibility requirements to a minimum of 20 years old, this Initiative appears to have reached market saturation.
- Rather than strictly removing this Initiative from the Master Agreement, the OPA and LDCs could review what opportunities there are to include other measures such as stoves, dishwashers, washers and dryers. The framework of this Initiative may be a suitable foundation for a more holistic residential appliance retirement program. As such, the Residential Program could be straightened through program evolution rather than weakened through diminished program offerings.
- As results are very responsive to province wide advertising, OPA provincial marketing should continue to play a key role.
- The OPA and LDCs can continue working to establish partnerships with independent retailers and municipalities.

## B. APPLIANCE EXCHANGE INITIATIVE (Exchange Events)

**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 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.

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

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

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

**In Market Date:** May 2011 – PowerStream, together with the participating retailers in PowerStream’s service area, began offering Appliance Exchange in the spring of 2011.

**Initiative Activities/Progress:** Please refer to Table 5 of this document.

**Additional Comments (as provided by LDC-OPA Program Working Group):**

- This Initiative, eligible measures and incentive amounts are influenced by the retail partner with no direct involvement from the LDCs. The restrictive, limited and sometimes non-participation of local stores can diminish the savings potential for this Initiative.
- As of writing this report, there has only been one retailer participant in the Appliance Exchange Initiative. The Fall events have not had retailer participation, therefore savings budgeted by the LDCs have not materialized.
- Evaluation, Measurement, and Verification (EM&V) results indicated that the value of savings for retired room AC has dropped resulting in the retail participant not accepting window ACs during the Spring 2013 event.
- Notification regarding retailer participation and eligible measures continues to be delayed. Improved communications will aid in appropriate resource allocation and marketing of the Initiative.
- This Initiative 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.
- The Initiative appears to require more promotion from retailers and LDCs.

## C. HVAC INCENTIVES INITIATIVE (Heating and Cooling Incentives)

**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 (CAC) with ENERGY STAR® qualified systems and products.

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

**Targeted End Uses:** Central air conditioners and furnaces

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

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

**In Market Date:** March 2011 – PowerStream began offering HVAC Incentives Initiative (HVAC) soon after the Master Agreement was signed. Since HVAC is an initiative that is familiar to the customers, and there was minimal change to the initiative design compared to its predecessor program (Heating and Cooling Rebates), the transition and launch of this initiative was simple and fast.

**Initiative Activities/Progress:** Please refer to Table 5 of this document.

**Additional Comments (as provided by LDC-OPA Program Working Group):**

- Incentive levels appear to be insufficient to prompt participants to upgrade HVAC equipment prior to end of useful life. It is hoped that the introduction of an Air Miles incentive in 2013 may help with this.
- This Initiative is contractor driven with LDCs responsible for marketing efforts to customers. More engagement with the HVAC contractor channel should be undertaken to drive a higher proportion of furnace and CAC sales.
- Channel partners require timeliness of the rebate process to maintain a positive relationship between consumers, contractors, the OPA, and the participating LDC. Due to a contracting delay, no applications were processed from approximately the end of October 2012 to February 2013.
- In an effort to build capacity, mandatory training has been instituted for all participating HVAC contractors. This could present too much of a barrier for participation for some contractors as the application process already presents a restriction to contractor sales. It has been noted that there are approximately 4,500-5,000 HVAC contractors in the province, however only 1,500 are participating in program.
- There are cases where non-participating contractors are offering their own incentives (by discounting their installations to match value of the OPA incentive) to make the sale. As this occurs outside of the Initiative, these installations should be attributed to the appropriate LDC.

## D. CONSERVATION INSTANT COUPON BOOKLET INITIATIVE (Coupons)

**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, and baseboard programmable thermostats

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

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

**In Market Date:** March 2011 – PowerStream official launch of the Coupon Initiative was when the OPA began mailing out the year-round conservation booklets to PowerStream customers.

**Initiative Activities/Progress:** Please refer to Table 5 of this document.

**Additional Comments (as provided by LDC-OPA Program Working Group):**

- This Initiative was ineffective for most of 2012 as the Instant coupons (annual) were not available to consumers until September 2012. As such, savings budgeted by LDCs did not materialize.
- The timeframe for retailer submission of redeemed coupons vary from retailer to retailer and in some cases has been lengthy. The delays and incomplete results reporting limits the ability to react and respond to Initiative performance or changes in consumer behaviour. This also resulted in the delayed launch of the Initiative in 2012.
- Coupon booklets were not printed and mailed out in 2012. As such, Coupons were not widely available to consumers without the ability to download and print them.
- Without Provincial coupon distribution, and delay in Initiative launch, consumers may not have been aware of the online coupons. This Initiative could benefit from provincial marketing as a substitute to distribution.
- LDCs should be able to custom code all coupons to provide 100% allocation and push specific coupons based on localized needs.
- The product list could be distinctive from the Bi-Annual Retailer Event Initiative in order to gain more consumer interest and uptake.
- Program evolution, including new products and review of incentive pricing for the coupon Initiatives, should be a regular activity to ensure continued consumer interest.

## E. BI-ANNUAL RETAILER EVENT INITIATIVE (Retailer Events)

**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:** Same as the conservation instant coupon booklet initiative

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

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

**In Market Date:** May 2011 – PowerStream official launch of the Retailer Event is when the participating retailers held their Spring events in 2011.

**Initiative Activities/Progress:** Please refer to Table 5 of this document.

**Additional Comments (as provided by LDC-OPA Program Working Group):**

- This Initiative is strongly influenced by the retail participants and has no direct involvement from the LDCs.
- The product list has changed very little over the past four years.
- Limited engagement of local retailers can restrict the savings potential for this Initiative.
- Program evolution, including new products and review of incentive pricing for the coupon Initiatives, must be a regular activity to ensure continued consumer interest.
- The Product list could be distinctive from the Conservation Instant Coupon Initiative in order to gain more consumer interest and uptake.
- A review conducted by the Residential Working Group in Q4 2011 identified three areas of need for Initiative evolution: 1) introduction of product focused marketing; 2) enhanced product selection and 3) improved training for retailers as retail staff tend not to be knowledgeable regarding the products or promotion.
- LDCs should be able to custom code all coupons to provide 100% allocation and push specific coupons based on localized needs.
- Communications regarding retailer participation continues to be delayed. Improved communications will aid in appropriate resource allocation and marketing of the Initiative.
- This Initiative may benefit from a more exclusive relationship with a retailer appropriate to the program. There should be a value proposition for both the retailer and LDC.

## F. NEW CONSTRUCTION PROGRAM (New Home Construction)

**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 to homebuilders who install energy efficient measures as determined by a prescriptive list or via custom options, or by meeting or exceeding the EnerGuide performance rating system.

**Targeted End Uses:** All-off switch, ECM motors, ENERGY STAR® qualified CAC, lighting control products, lighting fixtures, EnerGuide 83 whole home, EnerGuide 85 whole homes

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

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

**In Market Date:** January 2012 – Although the Schedule was out in 2011, PowerStream was not able to launch the initiative until early 2012. PowerStream placed emphasis on implementing initiatives that are effective and familiar to customers, and offer the greatest ratepayer value and greatest amount of persisting savings.

**Initiative Activities/Progress:** Please refer to Table 5 of this document.

**Additional Comments (as provided by LDC-OPA Program Working Group):**

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

## G. RESIDENTIAL DEMAND RESPONSE PROGRAM (*peaksaver* and *peaksaver* PLUS™)

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

**Initiative Frequency:** Year-round

**Objective:** The objectives of this initiative are to enhance the reliability of the Independent Electric System Operator (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). LDCs were given the choice to continue to offer the standard load control program (programmable thermostat or switch with a \$25 incentive) for the first eight months of 2011 (referred to as *peaksaver*® Extension). After August 2011, the Extension ended and the program (including marketing) ceased until new IHD products were available.

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

**Delivery:** PowerStream manages the initiative, procure the technology, install the control devices (through procured service provider), and promote/market the initiative. Additional detail is available:

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

**In Market Date:** January 2011 – This is one initiative that was not halted even though PowerStream did not sign the Master Agreement until end of February 2011. The predecessor program was offered prior to 2011 and was extended until August 31, 2011. The *peaksaver*PLUS™ initiative was not launched until May 2012 even though the Schedule was out in August 2011. The cause of the delay was primarily the lengthy time spent on studying which IHD technology would best meet both PowerStream and its customers' needs.

**Initiative Activities/Progress:** Please refer to Table 5 of this document.

### **Additional Comments (as provided by LDC-OPA Program Working Group):**

- The schedule for Peaksaver Plus was posted in August 2011, but this did not provide adequate time for product procurement for 2011, and part of 2012. The product procurement process uncovered that the In Home Display units that communicate with installed smart meter technology were still in development and not ready for market deployment. Consequently, LDCs could not be in market with the Peaksaver Plus program until 2012, or later which has resulted in delayed savings.
- Smart Meters installed by most LDCs do not have the capability to communicate directly to an In Home Display. When proposing technical Initiatives that rely on existing LDC hardware or technology there should be an extensive consultative process.
- Introduction of new technology requires incentives for the development of such technology. Appropriate lead times for LDC analysis and assessment, product procurement, and testing and integration into the Smart Meter environment are also required. Making seemingly minor changes to provincial technical specifications can create significant issues when all LDCs attempt to implement the solution in their individual environments.

- The variable funding associated with installing a load controllable thermostat is not sufficient unless it is combined with an In Home Display (IHD) which might not be possible all the time and when IHD is optional.
- This is the main Initiative within the Residential portfolio that drives demand savings for LDCs.
- Given the different LDCs smart meter environments, and needs, each LDC is positioning the Initiative slightly different. As such, greater program flexibility is required to address unique LDC needs.
- Provincial wide marketing needs to be sensitive to the variations of the Initiative and provide solid, consistent messaging.
- There currently is not an avenue for participants without the ability to provide demand response capabilities to obtain an IHD and gain energy saving benefits.

## Appendix B: Activities by Initiative – C&I Program

### A. EFFICIENCY: EQUIPMENT REPLACEMENT INCENTIVE (Retrofit Program)

**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:** PowerStream manages the initiative, reviews and approves applications, conducts site visits (via third party service providers), pays approved applications, and promotes/markets the initiative. Applications are submitted online via the saveONenergy website. Additional detail is available:

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

**In Market Date:** March 2011 – PowerStream began offering ERII soon after the Master Agreement was signed. Since ERII is an initiative that is familiar to the customers, because it was relatively similar to its predecessor program (ERIP), it did not take long to launch this initiative.

**Initiative Activities/Progress:** Please refer to Table 6 of this document

**Additional Comments (as provided by LDC-OPA Program Working Group):**

- It appears that the marketplace largely understands the programs now and a large proportion of LDC savings are attributed to ERII.
- The centralized process review used for 2012 project payment has been streamlined by the OPA and payments for projects were greatly improved – faster and more consistent compared to 2011.
- Capability building programs from Industrial programs have had very positive contributions to ERII program.
- This Initiative is limited by the state of the economy and the ability of commercial/institutional facility to complete capital upgrades.
- A number of customer facing issues in CRM (the OPA centralized application system) have been resolved; however key LDC administrative back office processing issues continue to be a challenge.
- Applicants and Applicant Representatives continue to express dissatisfaction and difficulty with the online application system. This issue has been addressed by LDCs through application training workshops, Key Account Managers, channel partner/contractor training and LDC staff acting as customer Applicant Representatives. Although this has been an effective method of

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overcoming these issues and encouraging submissions, it also reflects on the complexity and time consuming nature of the application process. As such, Applicant Representatives continue to influence the majority of applications submitted. Continued development of Channel Partners is essential to program success.

- Lighting is still the most popular measure. Other market sectors are not as engaged yet, specifically the mechanical world. There continues to be significant barriers to program participation from HVAC (Unitary AC) and compressed air channel partners.
- Prescriptive and Engineered worksheets provide a much needed simplified application process for customers. However, the eligible measures need to be updated and expanded in both technology and incentive amounts to address changing product costs and evolution of the marketplace.
- Expanding the capacity of the engineered applications can offer customers an opportunity to maximize savings and incentives. Recognizing this, Toronto Hydro and London Hydro worked together to develop and provide the OPA with compressed air engineered worksheets for inclusion in the Initiative in Q3, 2012. To date, these have not been accepted and provided to LDCs for use.
- An identified deficiency in the various renditions of the equipment replacement is the “hard stop” of the program as of a specific date. Without a streamlined transition into a new program, many customers become frustrated and refused to participate. LDCs struggle to repair customer and channel partner relationships and gain momentum in the market place once again.
- While the Ministerial Directive provides continuity of the conservation programs for the participant, unclear direction on LDC administrative funding could result in many LDCs ‘ramping down’ programs in 2015. The establishment of defined administrative funding for 2015 is required to avoid a “stop and start” process.

## B. DIRECT INSTALL INITIATIVE (Small Business Lighting)

**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 \$1,000 to eligible owners and tenants of commercial, institutional and agricultural facilities and multi-family buildings, for the purpose of achieving electricity savings and peak demand savings.

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

**Target End Uses:** Lighting measures and hot water pipes

**Delivery:** PowerStream, through a third party service provider, conducts door-to-door blitz on eligible small businesses to encourage participating in the initiative. Participants may also enrol directly with PowerStream. PowerStream's service provider conducts the energy audit/walk-through, the installation of the efficient measure, and the disposal of the old equipment. PowerStream, together with the service provider, were also responsible for marketing and promotion. Additional detail is available:

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

**In Market Date:** March 2011 – PowerStream began offering DIL soon after the Master Agreement was signed. Since DIL is an initiative that is familiar to the customers, because it was very similar to its predecessor program (Power Savings Blitz), the transition and launch of this initiative was simple and fast.

**Initiative Activities/Progress:** Please refer to Table 6 of this document

### **Additional Comments (as provided by LDC-OPA Program Working Group):**

- Successful execution of the previous rendition of this Initiative has resulted in diminished potential for the 2011-2014 Initiative in some LDC's territories.
- The inclusion of a standard incentive for additional measures increased project size and drove higher energy and demand savings results in some situations.
- Electrical contractor's margins have been reduced due to no labour rate increase, increase cost of materials, greater distances between retrofits, more door knocking required before a successful sale and no funding for lifts. This has led to a reduction in vendor channel participation in some regions.
- Ambiguity with regard to eligibility resulted in large lists of customers rejected following installation due to preserved ineligibility. Due to this, some LDCs were forced to carry considerable financial burden while this was worked through.
- The eligibility requirements have now been revamped and expanded however there has been limited communication and documentation of this to the marketplace.
- Currently LDCs are unable to offer these standard incentives to prior participants. The ability to return to prior participants and offer a standard incentive on the remaining measures has potential to provide additional energy and demand savings.

## C. EXISTING BUILDING COMMISSIONING INCENTIVE INITIATIVE (Commissioning)

**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 participant incentives for scoping study phase, investigation phase, implementation phase, and hand off/completion phase of the project

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

**Delivery:** PowerStream manages the initiative, reviews and approves applications, conducts site visits (via third party service providers), pays approved applications, and promotes/markets the initiative. Paper-based applications are submitted directly to PowerStream. Additional detail is available:

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

**In Market Date:** March 2011 – PowerStream began offering Commissioning soon after the Master Agreement was signed.

**Initiative Activities/Progress:** Please refer to Table 6 of this document

**Additional Comments (as provided by LDC-OPA Program Working Group):**

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

## D. NEW CONSTRUCTION AND MAJOR RENOVATION INITIATIVE (New Construction)

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

**Initiative Frequency:** Year-round

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

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

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

**Delivery:** PowerStream manages the initiative, reviews and approves applications, conducts site visits (via third party service providers), pays approved applications, and promotes/markets the initiative. Paper-based applications are submitted directly to PowerStream. Additional detail is available:

- saveONenergy website <https://saveONenergy.ca/Business/Program-Overviews/New-Construction.aspx>

**In Market Date:** March 2011 – PowerStream began offering New Construction soon after the Master Agreement was signed. Though the initial approach is to implement it internally, it was re-launched in quarter one 2012 when PowerStream finalized the procurement of a third party service provider to implement the initiative on its behalf.

**Initiative Activities/Progress:** Please refer to Table 6 of this document

**Additional Comments (as provided by LDC-OPA Program Working Group):**

- There is typically a long sales cycle for these projects, and then a long project development cycle. As the program did not launch until mid-2011 and had limited participation, results did not appear in 2011. Minimum results are expected to appear in 2012. The majority of the results are expected in 2013-2014, with a reduced benefit to cumulative energy savings targets.
- With the Ministerial Directive facilities with a completion date near the end of 2014 currently have some security that they will be compensated for choosing efficient measures.
- Participants estimated completion dates tend to be inaccurate and are usually 6 months longer. This could result in diminished savings towards target when facilities are not substantially completed by December 31, 2014.
- The custom application process requires considerable customer support and skilled LDC staff. As there has been no defined administrative funding beyond 2014, many LDCs are unsure how these project applications will be finalized.
- The effort required to participate through the custom stream exceeds the value of the incentive for many customers.
- This Initiative has a very low Net-to-Gross ratio, which results in half the proposed target savings being 'lost'.

## E. ENERGY AUDIT INITIATIVE (Audit Funding)

**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 measures

**Delivery:** PowerStream manages the initiative, review and approve applications, conduct site visits (via third party service providers), pay approved applications, and promote/market the initiative. Paper-based applications are submitted directly to PowerStream. Additional detail is available:

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

**In Market Date:** March 2011 – PowerStream began offering Energy Audit Initiative soon after the Master Agreement was signed.

**Initiative Activities/Progress:** Please refer to Table 6 of this document

**Additional Comments (as provided by LDC-OPA Program Working Group):**

- Customer uptake was limited in 2011, however improved throughout 2012 especially with the new audit component for one system (i.e. compressed air).
- The Energy Audit Initiative is considered an ‘enabling’ Initiative and ‘feeds into’ other saveONenergy Initiatives.
- Audit reports from consultants vary considerably and in some cases, while they adhere to the Initiative requirements, do not provide value for the Participant. A standard template with specific energy saving calculation requirements should be considered.
- Customers look to the LDCs to recommend audit companies. A centralized prequalified list provided by the OPA may be beneficial.
- Participants are limited to one energy audit which restricts enabling and direction to the other Initiatives. This Initiative should be evaluated for additional customer participation when presented with a new scope of work.

## Appendix C: Activities by Initiative – Industrial Program

### A. PROCESS& SYSTEMS UPGRADES INITIATIVE (PSUI)

**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 (PES), Detailed Engineering Study (DES), and Project Incentive Initiative (PII)). 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 project cost
- c) A one year payback

**Targeted End Uses:** Processes and systems

**Delivery:** PowerStream’s Key Account Manager (KAM) works with targeted customers to identify possible projects that will be eligible for PSUI. Additional detail is available:

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

**In Market Date:** June 2011 – PowerStream began offering PSUI soon after the release of the Industrial Schedules. However, the Industrial Program Manager was not hired until September 2011 and the KAM until April 2012. As a result, the initiative was not fully executed until quarter two 2012.

**Initiative Activities/Progress:** Please refer to Table 6 of this document and Table 7 of this document

**Additional Comments (as provided by LDC-OPA Program Working Group):**

- Approximately 100 engineering study applications have been submitted. This is a strong indication that there is the potential for large projects with corresponding energy savings. Most of these studies have been initiated through the Energy Manager and KAM resources.
- This Initiative is limited by the state of the economy and the ability of a facility to complete large capital upgrades.
- There is typically a long sales cycle for these projects, and then a long project development cycle. As such, limited results are expected to be generated in 2012. The majority of the results are expected in 2013-2014, with a much reduced benefit to cumulative energy savings targets.
- Delays with processing funding payments have caused delayed payments to Participants beyond contract requirements. In some cases, LDCs have developed a separate side agreement between

the LDC and Participant acknowledging that the Participant cannot be paid until the funds are received.

- Given the size of the projects involved, the contract required for PSUI is a lengthy and complicated document. A key to making PSUI successful is a new agreement for 'small' projects which is a simplified with less onerous conditions for the customer.
- To partially address this, changes were made to the ERII Initiative which allowed smaller projects to be directed to the Commercial stream.
- A business case was submitted by the Industrial Working Group in July 2012 which would change the limit for a Micro Project from 700 MWh to 1 million dollars in incentives. This new Small Capital Incentive Participant Agreement would allow more projects to be streamlined with simplified documentation and M&V requirements and should increase participant uptake, while still protecting the ratepayer. This change was not implemented in 2012. The Small Capital Incentive Participant Agreement was made available on August 20, 2013.
- With the considerable customer interest in on-site Load Displacement (Co-Generation) projects, the Initiative should be reviewed to ensure that these projects may be accepted as part of the PSUI Initiative. Currently the OPA is reviewing waste heat projects only and all other co-generation projects are on hold awaiting a decision from the Ministry of Energy on whether PSUI will fund these types of projects.

## B. MONITORING & TARGETING INITIATIVE (M&T)

**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 systems in order to deliver a minimum savings target at the end of 24 months and sustain for the term of the M&T Agreement.

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

**Targeted End Uses:** Various measures

**Delivery:** PowerStream's Key Account Manager (KAM) works with targeted customers to identify possible projects that will be eligible for M&T. Additional detail is available:

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

**In Market Date:** June 2011 – PowerStream began offering M&T soon after the release of the Industrial Schedules. However, the Industrial Program Manager was not hired until September 2011 and the KAM until April 2012. As a result, the initiative was not fully executed until quarter two 2012.

**Initiative Activities/Progress:** Please refer to Table 6 of this document and Table 7 of this document

**Additional Comments (as provided by LDC-OPA Program Working Group):**

- The M&T initiative is targeted at larger customers with the capacity to review the M&T data. This review requires the customer facility to employ an Energy Manager, or a person with equivalent qualifications, which has been a barrier for some customers. As such, a limited number of applications have been received to date.
- The savings target required for this Initiative can present a significant challenge for smaller customers.
- Through the Change Management Process in 2013, changes are being made to ERII to allow smaller facilities to employ M&T systems.

## C. ENERGY MANAGER INITIATIVE (Energy Managers)

**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:** Various measures

**Delivery:** PowerStream was responsible for encouraging large customers to take opportunity of the Energy Manager initiative.

**In Market Date:** June 2011 – PowerStream began offering Energy Manager soon after the release of the Industrial Schedules. However, the Industrial Program Manager was not hired until September 2011 and the KAM until April 2012. As a result, the initiative was not fully executed until quarter two 2012.

**Initiative Activities/Progress:** Please refer to Table 6 of this document and Table 7 of this document

**Additional Comments (as provided by LDC-OPA Program Working Group):**

- The Energy Managers have proven to be a popular and useful resource for larger customers. There are approximately 70 Embedded Energy Managers (EEMs) and 25 Roving Energy Managers (REMs) being utilized by customers across the province.
- LDCs that are too small to qualify for their own REM are teaming up with other utilities to hire an REM to be shared by the group of utilities.
- At the beginning, it took longer than expected to set up the energy manager application process and unclear communication resulted in marketing and implementation challenges for many LDCs.
- Some LDCs and customers are reporting difficulties in hiring capable Roving and Embedded Energy Managers (REM/EEM), in some instances taking up to 7 months to have a resource in place.
- New Energy Managers required training, time to familiarize with facilities and staff and require time to establish "credibility". Energy Managers started filling their pipeline with projects but few projects were implemented in 2012.
- Delays with processing EEM payments causing LDCs to delay payments to participants beyond contract requirements.
- There have been a number of studies identified by Energy Managers and they have been able to build capacity and deliver energy saving projects within their respective large commercial/industrial facilities.
- Requirement that 30% of target must come from non-incented projects is identified as an issue for most EEMs/REMs, although final targets not due to 2013. Working group has proposed to

remove this requirement for REM's only as they are not resident full time at a customer facility to find the non-incented savings.

- This is an important Initiative which should continue beyond 2014.

#### D. KEY ACCOUNT MANAGER (KAM)

**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. 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.

**Description:** The funding will be available for an LDC or a group of LDCs servicing a minimum of five Distribution Consumers each having at least 5MW of Annual Peak Demand. Funding for KAM is allocated on the basis that a fully-employed KAM is one who is employed on a full-time basis servicing ten Distribution Consumers each having at least 5MW of Annual Peak Demand.

**Targeted End Uses:** Various measures

**Delivery:** PowerStream was responsible for applying and receiving approval to hire a KAM. PowerStream's KAM is responsible for working with large customers in identifying energy savings opportunities and encouraging them to participate in the most appropriate programs.

**In Market Date:** April 2012 – PowerStream hired a KAM in April 2012. As a result, the initiative was not fully executed until quarter two 2012.

**Initiative Activities/Progress:** Please refer to Table 6 of this document and Table 7 of this document

**Additional Comments (as provided by LDC-OPA Program Working Group):**

- Customers appreciate dealing with a single contact to interface with an LDC, a resource that has both the technical and business background who can communicate easily with the customer and the LDC.
- Finding this type of skill set has been difficult. In addition, the short-term contract and associated energy targets discourage some skilled applicants resulting in longer lead times to acquire the right resource.
- This resource has been found by some LDCs to be of limited value due to the part-time nature of the position and limited funding. In addition, the position role has been too narrow in scope to provide assistance to the wider variety of projects LDCs may be struggling with.
- It is believed that the migration of the KAMs into REM roles may be more effective for achieving results.

## E. DEMAND RESPONSE 3 (DR3)

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

**Initiative Frequency:** Year-round

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

**Description:** Demand Response 3 (DR3) is a demand response Initiative for commercial and industrial customers, of 50 kW or greater to reduce the amount of power being used during certain periods of the year. The DR3 Initiative is a contractual resource that is an economic alternative to procurement of new generation capacity. DR3 comes with specific contractual obligations requiring participants to reduce their use of electricity relative to a baseline when called upon. This Initiative makes payments for participants to be on standby and energy payments for the actual energy reduction provided during a demand response event. Participants are scheduled to be on standby approximately 1,600 hours per calendar year for possible dispatch of up to 100 hours or 200 hours within that year depending on the contract.

**Targeted End Uses:** Various measures

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

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

**In Market Date:** June 2011 – PowerStream began offering DR3 soon after the release of the Industrial Schedules. Most DR3 aggregators delivering DR3 in PowerStream’s service area had already established relationships and contracts with PowerStream’s customers prior to the launch of this initiative.

**Initiative Activities/Progress:** Please refer to Table 6 of this document and Table 7 of this document

**Additional Comments (as provided by LDC-OPA Program Working Group):**

- Until early 2013 customer data was not provided on an individual customer basis due to contractual requirements with the aggregators. This limited LDCs’ ability to effectively market to prospective participants and verify savings.
- The Industrial Working Group had a discussion with the OPA and representatives of the Ministry on proposed changes for the DR3 program. No program improvements were made in 2012 however, it was accepted that prior participants who renew their DR3 contract within the 2011-2014 term will contribute to LDC targets.
- As of 2013, Aggregators are able to enter into contracts beyond 2014. This has allowed them to offer a more competitive contract price (5 years) than the previously limited 1 to 2 year contracts.
- Metering and settlement requirements are complicated and can reduce customer compensation amounts, and present a barrier to some customers.
- Compensation amounts have been reduced from the previous rendition of this program and subsequently there has been a corresponding decrease in renewal rates.

## Appendix D: Low Income Program (Home Assistance Program)

**Target Customer Type(s):** Income Qualified Residential Customers

**Initiative Frequency:** Year-round

**Objective:** The objective of this program 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 program 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 program is designed to coordinate efforts with gas utilities.

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

**Delivery:** PowerStream, through a third party service provider, conducts outreach to eligible participants in collaboration with social agencies. Participants may also enrol directly with the PowerStream. PowerStream's service provider conducts the energy audit/walk-through, the installation of the efficient measure, and the disposal of the old equipment. PowerStream, together with the service provider, were also responsible for marketing and promotion.

**In Market Date:** April 2012 – Although the Schedule was released midway through 2011, PowerStream was not able to launch the program until quarter two 2012. Even though the procurement process started in 2011, the contract with third party service provider was executed in 2012.

**Initiative Activities/Progress:** Please refer to Table 8 of this document.

**Additional Comments (as provided by LDC-OPA Program Working Group):**

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